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FH JOANNEUM University of Applied Sciences

Competences in Health Network Management

Intellectual Output I: National Competence Profile

Country:	**AUSTRIA**
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Institution:	**FH JOANNEUM University of Applied Sciences**
Project-ID:	2019-1-DE01-KA203-005025 (*)
Date:	November 2020

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Core Tasks and Activities (from a Health Network Manager)	Competences and qualifications required to perform these tasks / activities
Management	
• Project Management	• Project resources management (e.g. Resource planning, resource control) • Strategies for conflict prevention and conflict resolution • Time management • Project risk management • Division (or delegation) of tasks • Project planning and documentation (e.g. Project phases, process and coordination of dates and deadlines) • Project budgeting as well as applying for funds (especially in terms of health promotion projects) • Evaluation skills (especially process and results evaluation) • Quality management in terms of project management
• Controlling, financial planning and budgeting	• Internal accounting (cost and performance accounting) • Controlling instruments (e.g. cost management) • Information supply as basis for decision-making • Budgeting and billing in general
• Public relations & Marketing	• Public relations (e.g. media work in terms of print or social media) • Information processing (for people who are working within the health region, but also for the different target groups)

	• Product, price, sales and communication policy (classic instruments of the marketing mix) • Marketing strategies (especially health related marketing) • Event management (planning, organization and implementation of events)
• Strategic network management	• Network management / lobbying • Information processing (for people who are working within the health region, but also for the different target groups)

Core Tasks and Activities (from a Health Network Manager)	Competences and qualifications required to perform these tasks / activities (Double entries are possible)
Health (Public Health, Health Promotion, …)	
• Public Health, Health Promotion and disease prevention	• Concepts and strategies of public health, health promotion and prevention • Knowledge about the Austrian health care system • Knowledge of regional and nationwide Policies and (health) targets • Basic Knowledge in terms of (health) needs assessment • Goal setting and goal clarification of individual health targets • Advisory/ consultancy

Core Tasks and Activities (from a Health Network Manager)	Competences and qualifications required to perform these tasks / activities
Social skills and communication	
• Communication & Social Skills	• Communication with different stakeholders and decision makers as well with different target groups of the population • Conducting discussions • Moderating groups • Conflict resolution skills and mediation • Consultation skills • Negotiation skills • Presentation skills • Teamwork skills • Interdisciplinary cooperation ability

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FDIBA
Fakultät für Deutsche Ingenieur- und Betriebswirtschafts-Ausbildung

Competences in Health Network Management

Intellectual Output I: National Competence Profile

Country:	**BULGARIA**
Authors:	Dr Nadezhda Todorovska, PhD
Institution:	**Technical University Sofia**
Project-ID:	2019-1-DE01-KA203-005025
Date:	November 2020

Core Tasks and Activities (from a Health Network Manager)	Competences and qualifications required to perform these tasks / activities (Double entries are possible)
Health (Public Health, Health Promotion) (Percentage of total education: 40%)	
• Organisation of the health services/health promotion in the region	• Health care management • Knowledge in health systems (e.g., structuring of regional networks), models and projects • Health analysis and assessment • Economics of the healthcare system • Awareness of global trends in public health (Socio-medical problems in a globalized society) • IT in e-health management and software products integration • Health promotion strategies and interventions • Healthcare marketing • Healthcare legislation and standards • Administrative law; labour law and social security law; health law • Health insurance law
• Cooperation with local and national authorities, social services and international organisations	• Knowledge of social services • Microeconomics of the healthcare system • Awareness of global trends in public health (Socio-medical problems in a globalized society) • Healthcare marketing • Knowledge in the medicine distribution system
• Management of resources	• Statistics in medicine • Medical standards • Finance management and accounting • Knowledge and management of international projects and funds • Andragogy (Pedagogy for continuing education of staff in the organisation of health care) • Health insurance law
• Risk management	• Analysis of different risk factors • Civil and administrative law • Medical services in *force majeure* circumstances • Healthcare legislation • Epidemiology • Social security law and labour law
• Support the specialised medical personnel	• Health analysis and assessment

Core Tasks and Activities (from a Health Network Manager)	Competences and qualifications required to perform these tasks / activities (Double entries are possible)
Management (Percentage of total education: 40%)	
• Planning	• IT in e-health and software products integration • Time management • Microeconomics of the health system • Methodology of research • Healthcare marketing
• Organisation and control	• Leadership • Management and business ethics • Microeconomics of the health system • Awareness of global trends in public health (Socio-medical problems in a globalized society) • IT in e-health management and software products integration • Labour market awareness
• Coordination among stakeholders (e.g., patients, doctors (incl. GPs), nurses, hospitals, outpatient care facilities, national and regional authorities, NGOs, medical associations etc.)	• Leadership • Social skills • Communication skills
• Monitoring	• Awareness of global trends in public health (Socio-medical problems in a globalized society) • IT in e-health management
• Assessment	• Methodology of research • Health profile of the region

Core Tasks and Activities (from a Health Network Manager)	Competences and qualifications required to perform these tasks / activities (Double entries are possible)
Social skills and communication (Percentage of total education: 20%)	
• Motivation of stakeholders	• Communication techniques and skills • Inter-personal skills • Inter-cultural awareness • Psychology • Linguistic qualifications
• Analysis of the population's characteristics and habits	• Medical sociology • Health profile of the region • Knowledge of minorities traditions and religion
• Mediation among stakeholders	• Negotiation techniques • Inter-personal skills • Psychology

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Competences in Health Network Management

Intellectual Output I: National Competence Profile

Country:	GERMANY
Author:	Yvonne Behrens
Institution:	FOM University of Applied Sciences
Project-ID:	2019-1-DE01-KA203-005025
Date:	November 2020

Core Tasks and Activities (from a Health Network Manager)	Competences and qualifications required to perform these tasks / activities (Double entries are possible)
Health (Public Health, Health Promotion, …) (Percentage of total education: 15%)	
Assessment of regional needs	• Public Health knowledge • Interdisciplinary knowledge • Basic medical knowledge

Core Tasks and Activities (from a Health Network Manager)	Competences and qualifications required to perform these tasks / activities (Double entries are possible)
Management (Percentage of total education: 28,33%)	
Political Consultancy	• Open diplomatic nature • Confident demeanour • Interdisciplinary knowledge
Development of the health network	• Knowledge in medical economics • Comprehensive knowledge in the health sector • Knowledge of group dynamics • Strategies for conflict prevention and conflict resolution
Network Management	• Strategies for conflict prevention and conflict resolution • Mediation skills
Project Management	• Time Management
Monitoring	• Evaluation skills (especially process and result evaluation)
Transition management between individual stations	• Knowledge in medical economics • Comprehensive knowledge in the health sector

Core Tasks and Activities (from a Health Network Manager)	Competences and qualifications required to perform these tasks / activities (Double entries are possible)
Social skills and communication (Percentage of total education: 28,33%)	
Health Communication	• Professional communication competences
Moderation	• Professional communication • Organisational talent • Professional preparation of protocols • Diplomatic being • Role understanding & assumption of responsibility
Motivation of the actors	• Empathy • Assertiveness • Frustration Tolerance • Enthusiasm • Persuasion • Intrinsic motivation
Negotiation or division of responsibilities	• Assertiveness • Diplomatic being • Frustration Tolerance • Sense for possible courses of action

Core Tasks and Activities (from a Health Network Manager)?	Competences and qualifications required to perform these tasks / activities (Double entries are possible)
Other Competences (Percentage of total education: 28,33%)	
Public Relations	• Confident writing of scientific and popular scientific texts • Open-mindedness and confident appearance • Digitization skills
Fundraising	• Knowledge of business administration • Professional writing of grant applications • Formulation of objectives • Independent and structured work
Legal aspects	• Knowledge of the topic of data protection
Development of a platform for different actors	• Basic knowledge of computer science for software management
Identification of regional needs for action	• Fast access to scientific literature • Independent and structured work

Resources

- 5 expert interviews in Germany
- Buck, C.; Burster, S.; Sarikaya, S.; Thimmel, J.; Eymann, T. (2019): Digitale Gestaltung innovativer Gesundheitsnetzwerke – Erfolgreiches Netzwerkmanagement im Gesundheits- und Dienstleistungssektor. In: Digitale Transformationen von Dienstleistungen im Gesundheitswesen VI. Wiesbaden.

More information can be found in the detailed report.

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ELTE EÖTVÖS LORÁND UNIVERSITY

Competences in Health Network Management

Intellectual Output I: National Competence Profile

Country: **HUNGARY**

Authors: Zsófia Kollányi PhD, Gábor Horváth

Institution: **ELTE**

Project-ID: 2019-1-DE01-KA203-005025

Date: November 2020

Core Tasks and Activities (from a Health Network Manager)	Competences and qualifications required to perform these tasks / activities (Double entries are possible)
Health (Public Health, Health Promotion, …) (Percentage of total education: 20%)	
• Health needs assessment	• Public health • Epidemiology • Knowledge of health-related environment and organizational arrangements • Data collection methods • Statistical analysis of health data • Knowledge in participative methods • Facilitation skills
• Health promotion program planning	• Public health • Epidemiology • Effectiveness and efficiency of public health interventions
• Evaluation of public health interventions	• Public health • Epidemiology • Knowledge of health-related environment and organizational arrangements • Data collection methods • Statistical analysis of health data • Reporting skills

Core Tasks and Activities (from a Health Network Manager)	Competences and qualifications required to perform these tasks / activities (Double entries are possible)
Management (Percentage of total education: 30%)	
• Public health program implementation	• Implementation science • Change management • Project management • Communication skills
• Health network management	• Stakeholder analysis • Communication and PR skills • Information management • Knowledge transfer • Database building and managing
• Organizational management	• Resource management • Change management • Communications • Community (and civil) organization skills

Core Tasks and Activities (from a Health Network Manager)	Competences and qualifications required to perform these tasks / activities (Double entries are possible)
Social skills and communication (Percentage of total education: 40%)	

• Extending the network	• Stakeholder analysis
	• Communication
	  ○ Motivation
	  ○ Persuasion
	  ○ Moderation
	  ○ Mediation
	  ○ Coordination
	• Knowledge of health-related environment and organizational arrangements

• Facilitating involvement of network partners	• Public health knowledge
	• Communication
	  ○ Motivation
	  ○ Persuasion
	  ○ Moderation
	  ○ Mediation
	  ○ Coordination
	• Knowledge of health-related environment and organizational arrangements
	•

• Facilitating the external recognition of network and network activities	• Public health knowledge
	• Communication
	  ○ Consultation
	  ○ Advocation
	  ○ Persuasion
	  ○ Mediation
	• Knowledge of health-related environment and organizational arrangement….

• Facilitating the involvement of broad range of local stakeholders in assessment of health needs and health program planning	• Public health knowledge
	• Knowledge of health-related environment and organizational arrangements
	• Stakeholder analysis
	• Organizational skills
	• Communication skills
	  ○ Motivation
	  ○ Facilitation
	  ○ Mediation

Core Tasks and Activities (from a Health Network Manager)?	Competences and qualifications required to perform these tasks / activities (Double entries are possible)
Other Competences (Percentage of total education: 10%)	
• Business management	• Basic business management knowledge
• Organization of local health-related events for different audience	• Event organization skills
• Direct service provision towards the population	• Event organization skills • Specialized knowledge in different service areas

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Śląski Uniwersytet Medyczny w Katowicach

Competences in Health Network Management

Intellectual Output I: National Competence Profile

Country:	**POLAND**
Authors:	Piotr Romaniuk, Klaudia Alcer, Krzysztof Kaczmarek, Katarzyna Brukało
Institution:	**Medical University of Silesia in Katowice**
Project-ID:	2019-1-DE01-KA203-005025
Date:	September 2020

Core Tasks and Activities (from a Health Network Manager)	Competences and qualifications required to perform these tasks / activities (Double entries are possible)
Health (Public Health, Health Promotion, Health care organisation, Health care financing) (Percentage of total education: 35%)	
• Developing health programmes adjusted to the health needs of population in a given region	• Defining health needs of the population • Mapping health needs • Epidemiology: basic terms and methods • Demography: basic terms and methods • Epidemiological and demographic processes and projections • Social and economic determinants of health • Health promotion, health education, health prevention: terms and methods • Development of health programmes: aims, intervention, evaluation • Theoretical models of behaviour change • Target group specific communication
• Reducing the waiting time for health services	• Knowledge of infrastructure and human resources in a given region • Defining health needs of the population • Mapping health needs • funding sources in the regional health system • Knowledge of organisational and financial solutions applied in other countries' health care systems • Ability to work with limited funding – methods or cost rationalisation
• Promoting participation in preventive actions in the local/regional population	• Health promotion, health education, health prevention: terms and methods • Development of health programmes: aims, intervention, evaluation • Epidemiological and demographic processes and projections • Social marketing • Public relations • Social psychology • Knowledge on the non-profit organization acting in a given region
• Equalization of access to health care, in particular for excluded groups or in neglected areas	• Defining health needs of the population • Mapping health needs • Epidemiological and demographic processes and projections • Social exclusion in theoretical and practical aspects • Knowledge on the non-profit organization acting in given region

Core Tasks and Activities (from a Health Network Manager)	Competences and qualifications required to perform these tasks / activities (Double entries are possible)
Management (Percentage of total education: 35%)	
• Creating a vivid cooperation network	• Negotiation skills • Team management skills • Project management skills • Funds management • capability to cooperate with multidisciplinary institutions

• Generating the financial resources for regional healthcare system and cost rationalisation	• Theoretical and practical knowledge about functioning the healthcare system
	  ○ Knowledge about the prices of services and medical equipment
	  ○ methods of valuation of the costs of services
	  ○ knowledge about the payment methods
	  ○ cost effectiveness assessment methods
	  ○ funding sources in the regional health system
	• Knowledge of the infrastructure in a given region
	• Ability to work with limited funding – methods or cost rationalisation
	• Outsourcing
	• Labour law and regulations on medical professions

• Developing clear structures of health system governance	• Planning and organizational skills
	• Long-term goal orientation
	• Acquaintance of the existing structure
	  ○ Knowledge of the law determining regional level health system
	  ○ Knowledge of the infrastructural and human resources in the regional health system
	  ○ Knowledge of organizations and institutions acting in a given region
	• Knowledge of recent and historical developments and transitions in the Polish health care system
	• Knowledge of organisational solutions applied in other countries' health care systems
	• Systematic workforce planning

Core Tasks and Activities (from a Health Network Manager)	Competences and qualifications required to perform these tasks / activities (Double entries are possible)
Social skills and communication (Percentage of total education: 30%)	
• Creating an information exchange mechanisms inside and outside the network	• Strategic communication • Marketing • Public relations • Target group specific communication
• Convince others of the legitimacy of health network managers	• Leadership abilities • Motivation skills • Psychology • Knowledge of presentation techniques • Long-term goal orientation
• Communication with decisionmakers	• Leadership abilities • Motivation skills • Negotiations skills • Psychology • Basics of knowledge translation • Informal communication skills

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UCAM Universidad Católica de Murcia

Competences in Health Network Management

Intellectual Output I: National Competence Profile

Country:	**SPAIN**
Authors:	
Institution:	**UCAM**
Project-ID:	2019-1-DE01-KA203-005025
Date:	November, 2020

Core Tasks and Activities (from a Health Network Manager)	Competences and qualifications required to perform these tasks / activities (Double entries are possible)
Health (Public Health, Health Promotion, …) (Percentage of total education: 50%)	
• Health promotion	• Health care training • Creativity • Innovation
• Provide early diagnosis and action for healthcare demand	• Training and economic management tools • Health care training • Creativity • Innovation
• Health education	• Health care training
• Public health	• Health care training • Socio-cultural knowledge: ○ Comparative analysis of public policies ○ Understanding disease behaviors and seeking medical attention ○ Recognition pluralism economy
Core Tasks and Activities (from a Health Network Manager)	**Competences and qualifications required to perform these tasks / activities (Double entries are possible)**
Management (Percentage of total education: 25%)	
• Organizing health services	• administrative capacity • Decision-making ability • ability to work the goals

• Running health services	• techniques for executing tasks • means of executing tasks • the ability to lead an organization • contextualized understanding of practice management and institutional opportunities/limitations

• Controlling health services	• ability to analyse to use tools
	  ○ Plan
	  ○ Computer
	  ○ Statistics
	• ability to lead an organization
	• the ability to approach problems

• Coordinate health services	• techniques for executing tasks • means of executing tasks • know the company • know your departments or areas • recognize its elements • recognize interactions • recognize changes that exist or may exist

• Analyzing the situation and information	• ability to analyse to use tools
	  ○ Plan
	  ○ Computer
	  ○ Statistics
	• ability to resolve difficulties
	• ability to set priorities
	• ability to control the quality of activities

Core Tasks and Activities (from a Health Network Manager)	Competences and qualifications required to perform these tasks / activities (Double entries are possible)
Social skills and communication (Percentage of total education: 25%)	
• Working as a team	• Participation • Communication • Leadership • talent management • Creativity • Innovation • Motivation

• Relationship care (with the government, board of directors, customers or patients and providers).	• Participation
	• Communication
	• Socio-cultural knowledge:
	  ○ Comparative analysis of public policies
	  ○ Understanding disease behaviors and seeking attention
	  ○ Recognition of pluralism economy

Core Tasks and Activities (from a Health Network Manager)?	**Competences and qualifications required to perform these tasks / activities (Double entries are possible)**
Other Competences (Percentage of total education: XX%)	
• Company financing and health economics	• *Training and economic management tools* • Research
• Network management and work	• *Training in clinical management* • *Training in quality tools* • *Training in procurement management tools* • *Training in innovation tools* • Research

• Information technologies and systems	• Information system training and tools • Training and technology management tools • Research
• Health management and policies	• *Training and tools in clinical management* • Health policy training and tools • Research

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FH JOANNEUM University of Applied Sciences

Competences in Health Network Management

IO I: Circumstances, Structures and Challenges

Country:	**Austria**
Authors:	Madlene Movia, Sascha Fink, Silvia Tuttner, Frank M. Amort
Institution:	**FH JOANNEUM University of Applied Sciences**
Project-ID:	2019-1-DE01-KA203-005025 (*)
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Contents

1. Introduction

The present paper refers to the Erasmus Plus Project Com.HeNet - Competences in Health Network Management. This project aims to determine competences of regional health network managers and consequently building a common European curriculum. However, international experiences reveal advantages in terms of the establishment of Regional Health Networks (short: RHN) within respective regions of countries. For example, Germany has integrated several health networks and health regions in recent years (Pfannstiel, Focke, & Mehlich, 2016) and Austria noticed the conceptual advantages of regional health networks too (Danube University Krems, 2020a). According to the Com.He.Net project, health regions are *geographically defined clusters that aim to ensure a coordinated health and social care of the population through a network of all stakeholders involved in the supply process.* On this background, it has to be mentioned, that local health and preventive services as well as nursing care structures, can be very different within a country and even within a federal state. Therefore, local actors can best assess the situation and develop tailored measures for the respective region. Such locally developed solutions also have a higher binding effect and acceptance (Beiwinkel, 2019).

1.1. Aim of the present paper

The aim of the present paper represents among others a summary of the national context in terms of the implementation of a Regional Health Network Manager in Austria. First, the paper focus on circumstances, general structures and challenges in terms of regional health management in Austria, this includes for example main health challenges or health targets. The reason behind, is to gather broader information about the background of the general situation in Austria. The Second part of the document focus on the subject matter around regional health network management within Austria. This part includes information from empirically gathered data throughout interviews with experts from the field of public health within Austria. It contains a summary of the expert's opinion regarding the health system, it´s structure as well as challenges in Austria in terms of regional health management. Further, it contains information regarding competences expected from people who will work as regional health network managers in Austria. The present paper should provide groundwork for a national competence profile for health network management in Austria.

1.2. Research Questions

Preliminary, two main Research Questions have been defined which are aimed to be answered within the present paper.

1. **What kind of Circumstances, Structures and Challenges do Health Network Managers face in Austria?**
2. **Which Competences do Health Network Managers in Austria need?**

2. Methods

The present paper consists of two different parts and therefore two different methods have been used in order to gather the required information. In terms of the first part, a literature search was conducted. Relevant existing papers and reports as well as officially released documents from public facilities or e.g. reports from governmental authorities have been included. Furthermore, also grey literature from online websites and resources were accessed. The searches were performed using a time restriction of 10 years. The language restrictions referred to German as well as English. The results of the literature search were filtered for relevance and duplication; non-relevant literature has been excluded. Please find some examples for key words, which have been used throughout the literature search within the appendix (page 26). The second method refers to qualitative research and represents semi-structured expert interviews. As a first step, researchers as well as lecturers and professors from the fields of Public Health, Sport Science and Tourism Management from Austria created the interview guideline. Further, an expert from Germany who is already working within the field of regional health management was consulted for feedback. After revision, the interview guideline was sent via email to all project partners from Bulgaria, Spain, Hungary, Poland and Germany. Feedback was also gathered and consequently incorporated within the interview guideline. The final guideline was pre-tested in Austria and classified as suitable. The English version of the interview guideline can be found within the appendix. Afterwards relevant experts and stakeholders from the fields of public health, health promotion and disease prevention as well as from university sector were consulted for the semi-structured interviews. The interviews were carried out via MS Teams or via telephone call (Microsoft Corporation, 2020). Afterwards the interviews have been transcribed and consequently analysed using the method of a summary-based content analysis (Mayring, 2015). Further information on the interviews can be found in Chapter 4.

3. Circumstances, Structures and Challenges in Austria

Within this chapter, main health challenges as well as key institutions of the Austrian health system will be presented. Further, the Austrian health care system and its key policies will be introduced. Finally, the health targets will be described.

3.1. General information

Austria is a landlocked state with nine federal states and topographically shaped by the Alps. Overall, Austria has 8.901.064 inhabitants and it should be mentioned, that one third of the total population is located in rural areas. More precisely, Austria has a population density of 106 inhabitants per square kilometre (Bachner et al., 2019; Statistik Austria, 2020c).

With reference to economic aspects, Austria achieved a gross domestic product of € 385.7 billion in 2018, which means € 43.640 per inhabitant (Statistik Austria, 2019a,b). The population growth in 2019 was 42.289 people. This growth is mainly due to international migration and less due to birth rate. Therefore, Austria has a birth rate around 1.48 children per women, this is slightly below the European average of 1.55 per women. As a result, about 20% of the population in Austria have migration background (Statistik Austria, 2020a, 2020b).

Further, children born in 2018 have a life expectancy of 81.4 years (women: 84 years; men 79.5 years). Therefore, life expectancy corresponds to the European average. In general, 70% of the population in Austria describe their state of health as good. However, life expectancy in terms of life without disability was 57 years, which is below the EU average of 64 years (OECD, 2019).

3.2. Main health challenges

The health status of the general population in Austria is improving within resent years, however, behavior-related risk factors and an aging population continue to pose challenges for the health system in Austria. Risk factors in Austria are mainly behavioural, such as poor nutrition (19%), tobacco smoking (15%), alcohol consumption (6%) and low physical activity (3%). In addition, about 40% of deaths in Austria are attributable to the health behaviour of the population. Cardiovascular diseases (38.9%) were cited as the main cause of death in 2018 and cancer (24.5%) as the second most frequent cause of death (OECD, 2019). Moreover, in terms of health literacy, half of the Austrian population (50%) describes limited health literacy (HLS-EU Consortium, 2012).

Apart from this, demographic change possesses a major challenge to the health care system in Austria. While the proportion of people within the working age is decreasing, the proportion of people in long-term care is increasing. Currently, 18% of the total population refers to the age group over 65 and this number tends to increase. Therefore, according to estimates, the age group over 65 will represent 25% of the population by 2030. Accordingly, the proportion of those who finance the health care system will decrease in the next few years, with a simultaneous increase in expenditure on long-term care. Further, the demographic change not only affects the financing of the health care system but also the

rate of chronic diseases and favours a shortage of medical personnel. Currently, 47% of those over the age of 65 years reported having at least one chronic disease and 17% report restrictions in everyday life. Furthermore, in Austria, many challenges for the health care system arise especially in rural areas, due to the migration of young adults in general as well as doctors to urban areas (OECD, 2019).

3.3. Key institutions of the Austrian health system

The Austrian health care system is regulated by the public sector and shaped by various actors: In addition to the federal government (ministries), the federal states and social insurance, statutory professional associations, interest groups, public health institutions and private organizations are involved in the health care system (Federal Ministry for Social Affairs, Health, Care and Consumer Protection, 2020b). However, some key institutions of the Austrian health system are summarized below:

Social Insurance:

Social security is one of the most important pillars for the cohesion of modern societies. In Austria, 99,9% of the inhabitants have social insurance. The Austrian social insurance is organized in independent self-administration under state supervision. Five social security agencies have been responsible for health, pension and accident insurance since January 1, 2020 (Federal Ministry for Social Affairs, Health, Care and Consumer Protection, 2020b).

Federal Ministry for Social Affairs, Health, Care and Consumer Protection:

In Austria, Legislation is made by the Federal Ministry for Social Affairs, Health, Care and Consumer Protection (BMSGPK), among others this ministry responsible for social policy, social security, care, senior policy, health and consumer policy (Federal Ministry for Social Affairs, Health, Care and Consumer Protection, 2020b).

Federal Ministry for Education, Science and Research:

The Federal Ministry of Education, Science and Research, with its responsibility for university education, is an important factor in terms of education within the health care sector (Federal Ministry for Social Affairs, Health, Care and Consumer Protection, 2020b).

Health administration of the federal states:

The federal states and the municipalities provide some of the services of the Austrian health system. In addition to medical care in hospitals, the federal states take on public health services, administer

social assistance and offer comprehensive offers of health promotion, counselling and prevention (Federal Ministry for Social Affairs, Health, Care and Consumer Protection, 2020b).

Federal Health Agency:

The Federal Health Agency (BGA) is a fund under public law and takes on tasks that arise due to the partnership-based target control health at the federal level (Zielsteuerung-Gesundheit). It also distributes the federal funds for the joint management of the structure, organization and financing of Austrian health care (Federal Ministry for Social Affairs, Health, Care and Consumer Protection, 2020b).

The Austrian National Public Health Institute:

The Austrian National Public Health Institute (Gesundheit Österreich GmbH - GÖG) is the national research and planning institute for the health system as well as the competence and funding center for health promotion in Austria. The shareholder of Gesundheit Österreich GmbH is the federal government, represented by the Federal Minister for Labor, Social Affairs, Health and Consumer Protection (Federal Ministry for Social Affairs, Health, Care and Consumer Protection, 2020b). Further, the Austrian National Public Health Institute is divided into three business areas:

- The Austrian National Institute for Health Services Research (ÖBIG):
  A central task of the institute is the development of methods for data acquisition that should provide information about the health of the population.

- The Austrian National Institute for Quality in Health Care (BIQG):
  The BIQG is responsible for the development, implementation and regular evaluation of a nationwide quality system on behalf of the federal government.

- The Austrian Health Promotion Fund (FGÖ):
  FGÖ promotes health and supports initiatives in order to establish and improve knowledge, competences and networks by granting financial assistance and offering guidance (The Austrian National Public Health Institute, 2020).

Regional Health Funds:

In Austria, every federal state has its own health fund (Landesgesundheitsfonds). These funds assume duties at federal level for the comprehensive planning, controlling and financing of the health system (Federal Ministry of Social Affairs, Health, Care and Consumer Protection, 2020).

However, until now, there is no uniform regulation in terms of the administration of regional health network management in Austria.

3.4. Health Care System

In general, the Austrian social insurance is built on basis of solidarity and self-administration and is mainly financed from social insurance contributions. Further, the Austrian health care system is characterized by the interaction of different actors at various legislative and administrative levels [federal government, provinces, districts, local authorities] and from the self-administration sector [social insurance] (Federal Ministry of Labour, Social Affairs, Health and Consumer Protection, 2019). The graphic below shows the three main actors within the Austrian healthcare system:

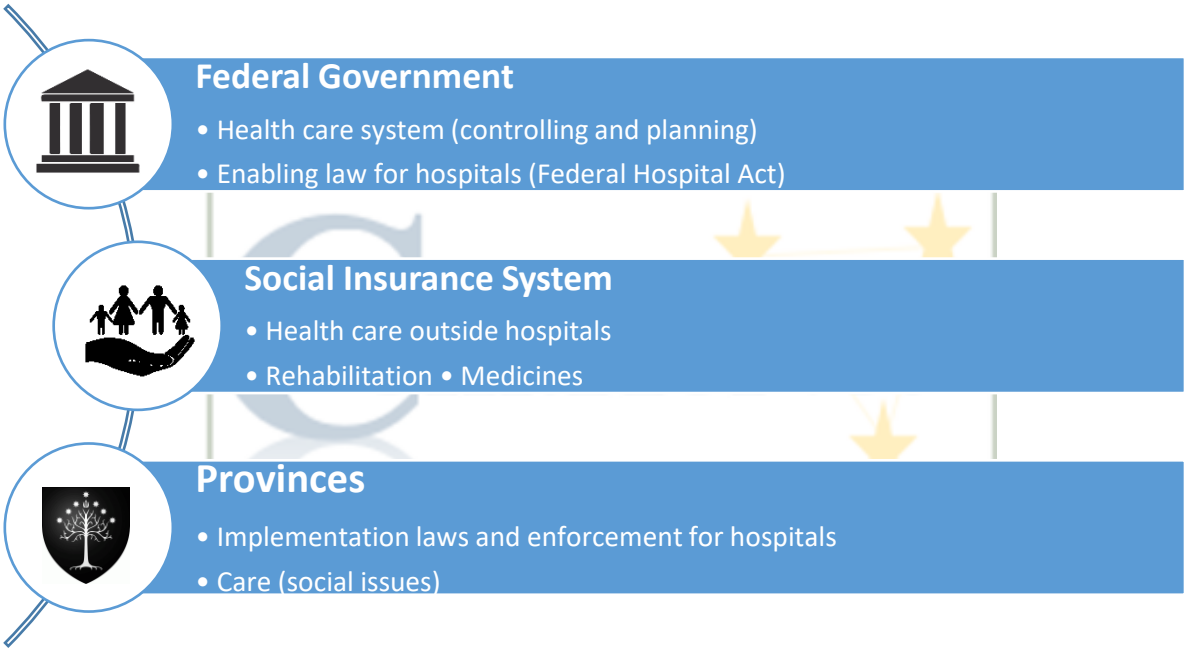

Figure 1: Main actors in the Austrian health system (Federal Ministry of Labour, Social Affairs, Health and Consumer Protection, 2019)

The government is responsible for legislation and enforcement in the health sector. However, the implementation of health insurance is carried out by the social insurance in its own sphere of activity on basis of federal regulations. This includes in particular the provision of contractual services in the extramural area, the provision of medication and medical aids as well as in- and outpatient rehabilitation (Federal Ministry of Labour, Social Affairs, Health and Consumer Protection, 2019).

Further, the three main actors of the Austrian health care system decided to implement a "Partnership-based target control system" (Zielsteuerung Gesundheit). The main goal represents among others counteracting the significant fragmentation of the health care system by means of joint and cross-

sectoral management of the structure, organisation and financing of health care. The tasks which result from the target-based health governance agreement are firstly carried out by the Federal Health Agency at federal level; and secondly, by the Regional Health Fund at a provincial level [both institutions are mentioned within chapter 3.3] (Federal Ministry of Labour, Social Affairs, Health and Consumer Protection, 2019).

Moreover, Austria has an extensive network of healthcare institutions. Therefore, Austria has got 7.6 hospital beds per 1 000 inhabitants, this represents the fourth highest rate among the OECD countries (OECD, 2017). Overall, there are 64,800 beds in 271 hospitals in total. Furthermore, the Austrian healthcare system is characterized by a high density of doctors (especially in urban areas). Accordingly, 2017 there were 1.6 general practitioners, 2.7 specialists, 0.9 doctors undergoing training and 0.6 dentists per 1,000 inhabitants in Austria. Further, in 2017 there were 0.27 pharmacies per 1,000 inhabitants in Austria. Overall, 13 contacts with doctors, despite from hospitals, per 1,000 inhabitants could be determined (Federal Ministry of Labour, Social Affairs, Health and Consumer Protection, 2019).

Within this context, a nationwide framework was jointly introduced by the federal government, all of the provinces and the social insurance. The so called “Austrian Structural Plan for Healthcare (ÖSG)”, focus on a joint vision of the further development of the Austrian health care system. The framework concentrates on planning statements for different areas of outpatient and acute/inpatient care, for rehabilitation, and for technical equipment within the medical context. Further, it focus on developed quality criteria, which aim to achieve uniform standards in different care-related structures throughout the country (Federal Ministry of Labour, Social Affairs, Health and Consumer Protection, 2019).

In terms of public health and health promotion, the Austrian National Public Health Institute as well as the associated Austrian Health Promotion Fund, which were mentioned above, play an important role (The Austrian National Public Health Institute, 2020). The ten health targets build the basis when it comes to health promotion in Austria. These targets follow the Health-in-All-Policies approach and will be presented in detail within the next chapter.

3.5. Health targets

In 2011 the Austrian Council of Ministers and the Federal Health Commission started the development of health targets at federal level. These health objectives will be in force for the next 20 years. They describe several approaches aiming to increase health within the general public. However, the health targets are mentioned in two government programmes and are an important basis for the health reform process.

- ✓ To provide health-promoting living and working conditions for all population groups through cooperation of all societal and political areas
- ✓ To promote fair and equal opportunities in health, irrespective of gender, socio-economic group, ethnic origin and age
- ✓ To enhance health literacy in the population
- ✓ To secure sustainable natural resources such as air, water and soil and healthy environments for future generations
- ✓ To strengthen social cohesion as a health enhancer
- ✓ To ensure conditions under which children and young people can grow up as healthy as possible
- ✓ To provide access to a healthy diet for all
- ✓ To promote healthy, safe exercise and activity in everyday life through appropriate environments
- ✓ To promote psychosocial health in all population groups
- ✓ To secure sustainable and efficient health care services of high quality for all (Federal Ministry for Social Affairs, Health, Care and Consumer Protection, 2020a)

In terms of the implementation of the Austrian Health objectives, working groups were prompted to identify sub-targets and particular action plans. Further, all relevant organisations and institutions were included within in these working groups, so that the proposed targets and measures can be implemented in the respective regions. However, in context of regional health network management, it should be mentioned, that regional health network manager could support the Austrian Council as well as the Health Commission in order to reach the health targets within their region of responsibility (Federal Ministry for Social Affairs, Health, Care and Consumer Protection, 2020a).

4. Health Network Manager

In Austria there is no general applicable definition of Health Network Manager. However, Danube University in Krems, as the first University which is offering an academic course for regional health coordination, tried to define it as:

> *"[…] people who have the skills to strengthen health promotion and prevention in the communities and regions. Their task […] is to reach people in their everyday life in the communities and to inform them in a comprehensible and target-group-appropriate manner about what can be done in the communities to improve health. In addition, they will work with the population, professionals (politicians, doctors, ...), groups (clubs, ...) and organizations (schools, hospitals, companies, ...) to build successful partnerships and networks and take professional and sustainable measures on a regional level Implement health strengthening. (Danube University Krems, 2020c, p.23) "*

4.1. Status Quo in Austria

In Austria, there are several Universities and Universities of Applied Sciences which are offering courses in the field of Health Management. These Universities are located within different federal states in Austria and have different focus areas e.g. tourism management, health promotion or health care management. The table below contains a summary of the respective course programmes:

Table 1: Overview of Health Management Course Programmes in Austria. (Online Akademie, n.y.)

University	Course title	Federal state
Bachelor Programmes:		
UMIT Tirol	Public Health	Tirol
FH JOANNEUM – University of Applied Sciences	Health Management in Tourism	Styria
FH Kärnten – Carinthia University of applied Sciences	Health Care Management	Carinthia
FH Burgenland – University of Applied Sciences	Health Management and Health Promotion	Burgenland
Master Programmes:		
FH Oberösterreich – University of Applied Sciences Upper Austria	Healthcare Social and Public Management	Upper Austria
FH JOANNEUM – University of Applied Sciences	Health Management and Public Health	Styria
FH JOANNEUM – University of Applied Sciences	Health Tourism and Leisure Management	Styria
FH Kärnten – Carinthia University of applied Sciences	Health Management	Carinthia
FH Burgenland – University of Applied Sciences	Health management and integrated care	Burgenland
Danube University Krems	Health Care Management/Health Management and Public Health	Lower Austria
FH Gesundheit – Health University of Applied Sciences Tyrol	Master of Business Administration in Health Care	Tyrol
MCI The Entrepreneurial School	International Health & Social Management	Tyrol

Only Danube University Krems, located in the federal state Lower Austria, which was mentioned above, offers an academic course for regional health coordination. This course takes two years and is organized on a part-time basis, accordingly, there are 4-6 appointments per semester. Graduates will receive 60 ECTS (European Credit Points). There are 15 university places left and the language of the course is German. Graduates receive the title "Academic Expert (AE) for regional health coordination". Entry requirements include written application and an admissions interview. Applicants should have an Austrian or equivalent foreign university degree and a positive assessment in the selection process. If applicants do not have a university degree, they should have at least 2 years of professional experience of which at least half a year refers to the community or health sector (training and further education periods can also be included). If applicants do not have a general university entrance qualification, they should have at least 5 years of relevant professional experience in a community [training and further education periods can also be taken into account] (Danube University Krems, 2020b).

However, the course is based on six different modules. The modes refer to Health promotion and prevention, Project management in health promotion and prevention as well as evidence-based health promotion and prevention. Further, Networking and regional policy, Communication, presentation and advice as well as Public relations. At the end, it is also necessary to complete an internship within the relevant field and to write a thesis as well as passing an Exam. The following graph contains the relevant Modules (Danube University Krems, 2020b).

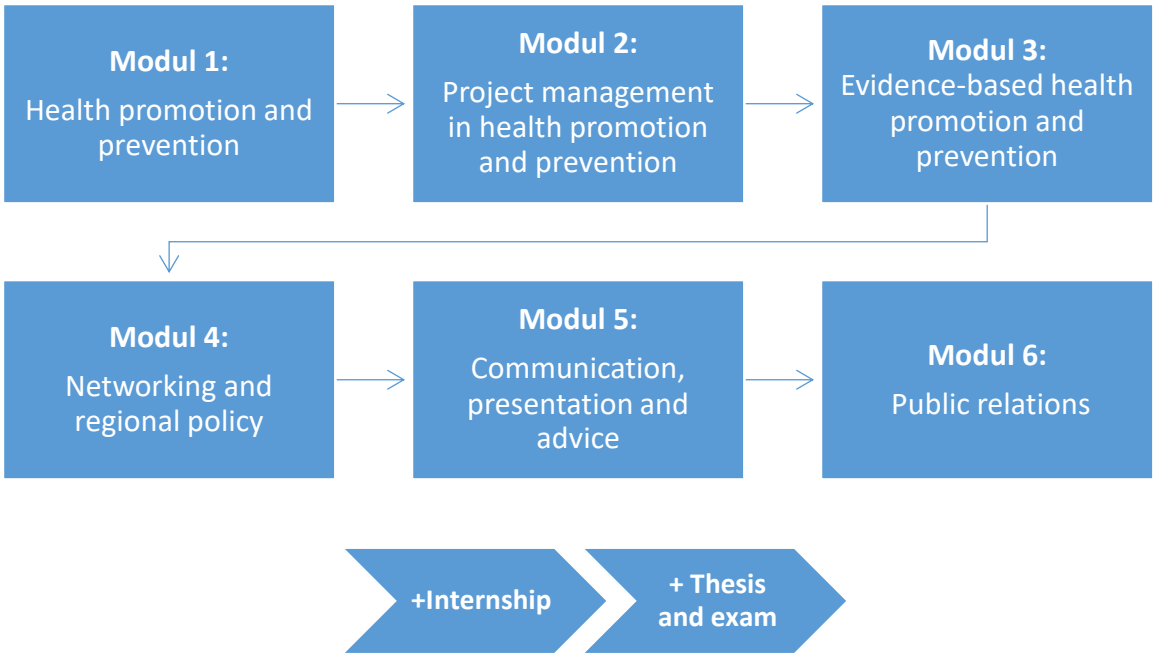

Figure 2: Competence Modules (Danube University Krems, 2020b)

4.2. Results of the conducted Interviews

Within this chapter, the results from the empirically conducted interviews will be present in full detail. First, the table below contains descriptive data from all interview partners:

Table 2: Descriptive Data from Interview partners

No.	Age	Gender	Residence	Highest educational attainment	Area/ field of business	Interview com-pleted	Trans-cribbed & analyzed
1	33	Female	Vienna (Capital City)	University	Funding agency for Public Health in Austria	✓	✓
2	32	Female	Burgenland	University	Rural regional health promotion	✓	✓
3	62	Male	Vienna	Academy	Health promotion in urban „health regions“ / districts	✓	✓
4	37	Female	Lower Austria	University	University Sector/ Strategic Head of Regional Health Coordination & Training	✓	✓
5	59	Male	Carinthia	University	Health Promotion and Disease Prevention	✓	✓

4.3. Descriptive description of the interviews and interview partners

Overall, five experts and stakeholders from the field of Public Health in Austria were consulted regarding the interviews. 60% of the interview partners were female (3 women; 2 men) and the mean age of all individuals was 44,6 years (range from 32 to 62 years). Interview partners were assigned on a convenient basis and it was aimed to provide experts from a wide range of different federal states. Therefore, two individuals are from Vienna and one person each from Burgenland, Lower Austria and Carinthia. Further, the interview partners provide a good combination of rural versus urban settings. The expert´s field of business refers among others to health promotion and disease prevention [in urban as well as rural settings]. Further, one expert from the funding agency for Public Health in Austria was interviewed in order to gather information from a broader perspective. Moreover, an expert from the University Sector was also interviewed which has also function as strategic Head of Regional Health Coordination and was also involved within coordination of training in terms of regional health network management in lower Austria. The majority of the participants (80%) prescribed as highest educational attainment a University degree. As mentioned above, interviews were conducted via MS Teams (Microsoft Corporation, 2020) as well as telephone calls, subsequently transcribed and analysed using

the method of a summary-based content analysis (Mayring, 2015). The interviews took place from June till August 2020.

4.4. Regional assessment of Austria

The following paragraphs include gathered information based on the conducted interviews, concerning the health care system within Austria, topics around health promotion and prevention as well as information in terms of resources for health care in Austria.

The health care system:

In terms of the health care system at regional level in Austria, majority of the respondents agreed, that people in Austria are adequately supplied within the healthcare system. Nevertheless, it was mentioned that the health care system is lacking, when it comes to overcoming access barriers, reaching target groups that are rather difficult to access (e.g. socio-economically disadvantaged groups) and in terms of the transparency in health care. Some respondents mentioned also, that there are differences within Austria, e.g. when comparing rural and urban settings. For example, there is a lack of general practitioners within rural settings in Austria. Further, it was mentioned there are certainly many individual initiatives within Austria, what is missing, however, are nationwide uniform concepts. Finally, respondents rated the health care system at regional level in Austria on average Ø 7 (0= very bad and 10= excellent).

Health Promotion and Prevention:

Regarding the topics health promotion and prevention, respondents mentioned that there are fewer offers and that they are fragmented within Austria. Therefore, different regions have different concepts and priorities regarding health promotion and prevention. Respondents mentioned that there should be better collaboration as well as exchange between regions. Further, the interviewees specified, that those programmes who do exist often hit the same track and mostly address similar target groups. Reaching specific target groups is also a very big issue and is rather difficult, especially when it comes to vulnerable target groups and the challenge if people even accept the prevention and health promotion offers. Finally, respondents rated the topics health promotion and prevention at regional level in Austria on average Ø 6 (0= very bad and 10= excellent). Thus, need for action becomes visible.

Resources for health care:

Furthermore, respondents were asked, regarding their opinion about the resources for health care at the regional level in Austria in terms e.g. of infrastructure, material resources, project funds acquired,

knowledge and information, social resources. Interviewees mentioned that there is already happening a lot at this level, for example, some clinics have been merged regionally and purchasing is managed centrally. Material resources and knowledge have been bundled and these are communicated from a central point. Nevertheless, there are also areas in need of improvement, therefore, there is too little funding for accompanying research (regardless of whether it is about health promotion research or health care research). In terms of practical implementation, respondents mentioned need for action, especially in the area of health promotion.

4.5. Assessment of the competences of health network managers in Austria

This chapter provides gathered information concerning key challenges and problems in terms of the development of a regional health network. Further, core tasks and activities as well as key topics and subjects are summarised. Afterwards, challenges and problems which regional health network manager may face in course of their work are listed. Further, possible cooperating organizations and stakeholders are provided. Core competences and qualifications are also presented within this chapter. Finally, it is described which dimensions and determinates of health the work of regional health network managers relates to.

Key challenges and problems when developing RHN:

Respondents were also asked what kind of key challenges and problems may arise when developing a health network within Austria. Therefore, it was mentioned that there are too little financial resources, in terms of the personnel for RHN, infrastructure as well as e.g. regarding public relations. Moreover, it should be kept in mind to involve all important stakeholders. In terms of that, further challenges represent the recruitment of partners and cooperating institutions, and also the competitiveness in-between institutions and systems. Additionally, tasks and areas of responsibility within the personnel as well as in terms of cooperating institutions should be clearly assigned right from the beginning. It is also important to recognize regional individual resources in terms health care and health promotion. Another challenge might be the political part; therefore, it is crucial that all parties act in concern and have the same targets in mind.

Core tasks and core activities:

In terms of the core tasks and core activities regional health network managers should fulfil, it was specified that networking activities are very important. Further, also (project-) management tasks, as well as project controlling activities are crucial in terms of achieving set goals and keeping also the budget on point. Further, another task represents communication with different stakeholder and decision makers. In this context, public relations were also mentioned, as well as publicizing the topics

health promotion and disease prevention. Further, regional health network managers should also perform advisory activity for the general population. Therefore, information processing represents an important task, for everyone who is involved in the health region as well as for the different population groups. Another core activity to ascertain the demand in the respective region / municipality. Consequently, activities should be tailored to the respective needs of the population. Finally, it is important to ensure clear communication structures, transparency and a successful exchange between everyone who is involved within a health region.

Topics and subjects:

In terms of the topics or subjects regional health network managers should deal with, it was mentioned, that it is strongly related to the respective needs of a population. Every region or community is different in terms of size, infrastructure, age and population. It is also important to determine target groups or settings e.g. schools, kindergartens, companies or societies. Further, focus should be on building up sustainable structures within a regional health network and not only carrying out behavior-related activities. Finally, regional health network managers should also have e.g. Austrian health targets in mind when planning activities for target groups.

Challenges and problems within the course of the work:

Concerning challenges and problems, regional health network managers may face in course of their work, respondents answered the following: First, within this context, politics should be mentioned again. Therefore, new elections within a community can bring about changes in structures e.g. a result might be a shift in priority away from health-oriented topics. Another problem probably represents too little support or even discrepancy concerning partners and stakeholders. It is also possible that people or target groups do not accept the provided offers. Further, it can be challenging if there is no team in the background to delegate tasks, one single person can be overload. Additionally, getting an overview of offers which are already provided within a region can be certainly time intensive. More precisely, if there is no central homepage or platform where offers are shared, they are often spread just through word-of-mouth within small regions. However, double-offers should be avoided.

Organizations and stakeholders:

In terms of organizations and stakeholders with which regional health network managers should cooperate, it was specified, that it is important to find out what kind of services and (health-) providers already exist within a respective region. Further cooperating partners can be social institutions, associations, clubs or the social insurance. Moreover, the community population itself is important, as well as health care professionals, doctors, hospitals, care homes, schools, companies or regional

development organisations. In addition, people from politics and the community such as mayors are important partners. Finally, there should be also a cooperation between the state and federal government as well as its institutions and funds e.g. FGÖ (Fonds Gesundes Österreich) or the funds of the respective federal states.

Competences and qualifications:

In terms of competences and qualifications, regional health network managers in Austria need, first of all, management know-how and also project-management skills were specified as essential. Additionally, controlling skills as well as communication skills are crucial. This include also competences in terms of consulting and conducting discussions as well as moderating groups. Further, regional health network managers should also have good networking skills and should also be able to negotiate. Within this context, conflict management skills are also important. Additionally, skills on how to perform public relations respectively media reports and also knowledge on how to organize events were also mentioned. Further, social skills in general should definitely be taken into account. Respondents also mentioned core knowledge in applied Health promotion and prevention as well as Public Health. Further, a regional health network manager should have knowledge in terms of regional and nationwide Policies respectively should know how to gather this information. In this context, also the community structure of the respective region should be known very well. Moreover, also soft skills should be taken into account. This includes e.g. resilience, flexibility, perseverance and assertiveness. A health network manager should enjoy working with people and should have proactive personality. Finally, empathy is also crucial within this context, as health network managers work with many different groups of people. For more information regarding the competences of regional health network manager in Austria please see the competence profile.

Dimensions of health:

Overall, respondents mentioned, that the activities of regional health network manager should include all dimensions of health within their work. Therefore, it should refer to physical, social, mental, spiritual, emotional and also to sexual level. It is important to act from the few of "health in all policies" and look across various fields of activity.

Determinates of health (according to Dahlgren & Whitehead, 1991)

At level one (age, gender, inheritance), assessment of needs is particularly important. The following should be ascertained: what is the age in the community; is the need more for younger or older people; which people live in this region, etc . The second level (individual way of life) is about behavior and the associated knowledge / attitudes. It is also about nutrition, exercise, mental health and relaxation.

Health network managers should do a lot of educational work, implement tailor-made projects in the region and possibly establish health-promoting facilities in communities. Level three (social and communal networks) also relates to social support. It's about the residents feeling comfortable, accepted and belonging to the community. Stakeholders in the health sector should also feel accepted and valued. It is also important that the offers made are available to all social classes. The fourth level (living and working conditions) includes medical care as well as work and living. This is primarily about prevention. It is also about creating the right conditions in order to be able to implement projects effectively. At level five (the general conditions of the socio-cultural and physical environment), strong emphasis should be placed on climate protection as it is a topical and important issue. What also belongs to this level, refers to city and spatial planning, infrastructure, resources, values and norms. However, health network managers should be involved in all decisions within a region. So when it comes to building a new street, bike path or even a new gym. Health network managers should be included in all decisions in order to make a health-oriented decision.

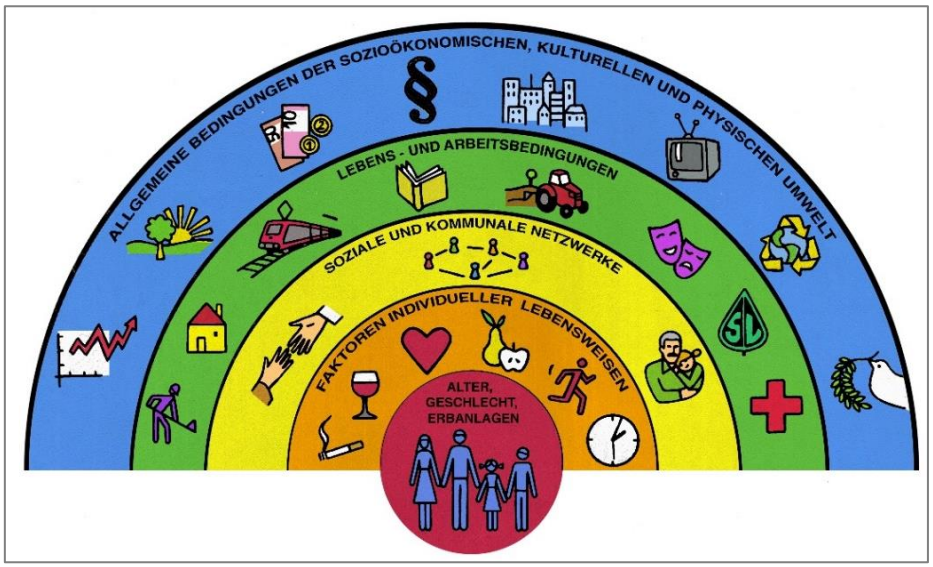

Figure 3: Health determinants. Fonds Gesundes Österreich nach (Dahlgren, G., Whitehead, M., 1991)

4.6. Assessment of training and job of regional health managers in Austria

Within this chapter, needed requirements to complete a training as regional health network manager will be discussed. Afterwards, education opportunities as well as possible institutions in order to employ regional health network managers will be presented. Finally, this chapter deals with administration of regional health networks and discusses general importance of regional health networks within Austria.

Needed requirements:

In terms of needed requirements in order to complete a training as regional health network manager, it was recommended they should have university entrance qualification (A-Level) or some years of professional experience. Therefore, university degree seems not compulsory. At least [practical] experience in some fields might be useful, f.e. medical, therapeutic, social or health science. Further, regional health network managers should not be lateral entrants

Education opportunities:

As mentioned above, there are several Universities of Applied Sciences in Austria which are offering Health Management Courses. They are located within different federal states in Austria and have different focus areas e.g. tourism management, health promotion or health care management. Only Donau University, located in Krems - lower Austria, offers a training opportunity which is called "Academic course for regional Health coordination".

Possible employers:

Concerning possible employers who are suitable to hire a regional health network manager, it could be found out, that the federal state agency or the social security agency seem appropriate. Further, there is also the possibility to constitute it on community level like local authorities or at district administrations. In addition, if there are structures like regional management existing, these could also be a possible organisation as employer. Moreover, it should be mentioned, that Austria is currently investing in Primary care units and these organisations seem also possible in order to employ a regional health network manager.

Administration:

In terms of the administration of regional health networks, it could be determined that it should be public financed. Further, it is recommended to establish some pilot regions in order to see what works well and what does not. Therefore, regional health networks should be first voluntary. If there is evidence its effect, it would be worth considering whether to settle it on the state or federal level and thus oblige to build such networks.

Importance:

Regional health networks are helpful and valuable, although it should be mentioned, that it is above all important that there are enough offers in the field of health care within a region. Otherwise there are no possibilities in order to network.

5. Discussion & Conclusion

First of all, it has to be noted that all interviews were carried out based on telephone calls or via MS Teams (Microsoft Corporation, 2020). Due to the Covid 19 pandemic, it was not possible to conduct the interviews face-to-face. Further, throughout literature search it could be found out that information in terms of regional health network management in Austria is mainly based on grey literature. Therefore, it was beneficial that two approaches [literature search as well as qualitative expert interviews] were used to overcome this gap. However, based on the used methods, both research questions could be adequately answered. Firstly, in terms of circumstances structures & challenges and secondly, concerning needed competences of regional health network managers in Austria. In conclusion, it can be stated that although the Austrian health system is regulated by the public sector, it is nonetheless shaped by various actors. These actors include among others the federal states, the social insurance, different interest groups, public health institutions as well as private organizations. However, this may represent a main challenge when it comes to a uniform implementation of regional health networks within Austria. Nonetheless, it could be determined, that regional health network managers play a crucial role in order to address the individual health challenges of different regions and populations within Austria. Therefore, several core competences of possible regional health network managers could be identified. These include project management, controlling and budgeting, public relations, strategic network management, knowledge in terms of Public Health, Health Promotion and disease prevention as well as communication and social skills.

Finally, the following recommendations to Austrian stakeholders and policy makers can be made: It seems not only important to enhance financial resources in terms of the personnel of regional health networks, but also to delegate a clear distribution of responsibilities when it comes to a uniform implementation of regional health networks within Austria.

6. List of Tables and Figures

6.1. Tables

6.2. Figures

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Appendix

Key words literature search

Main term	Synonym
Competence*	Qualification*
	Skill*
	Capability*
	Expertise*
	Know-how
Regional	Local
	Territorial
	Provincial
	Sectional
Manager*	Administrator*
	Controller
	Organizer
	Coordinator
	Official
Health	Well-being
	Healthiness
	Healthcare
	Health Promotion
	Welfare
Network	Structure
	System
	Arrangement
	Interlacement
Challenge*	Difficulty
	Doubt
	Objection
	Argument
	Crisis
	Trouble
Circumstances	Background

	Conditions
	Situation
	Case
	Factor
	Setup

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Fakultät für Deutsche Ingenieur- und Betriebswirtschafts-Ausbildung

Competences in Health Network Management

IO I: Circumstances, Structures and Challenges

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Table of Contents

List of abbreviations

BAHCP	Bulgarian Association of Health Care Professionals
Com.He.Net	Competences in Health Network Management project
EU	European Union
EUR	European currency (Euro)
GP	General practitioner (doctor)
HCP	Healthcare professional
IT	Information technology
NGO	Non-governmental organisation
NHIF	National Health Insurance Fund (Bulgaria)
OECD	Organisation for Economic Co-operation and Development
OOP	Out-of-pocket payments (Bulgaria)
RHI	Regional Health Inspectorates (Bulgaria)
SHI	Social Health Insurance (Bulgaria)
UN	United Nations
VHI	Voluntary Health Insurance (Bulgaria)
WHO	World Health Organisation

1. Introduction

1.1. Aim of the present paper

This paper aims to summarise the results of the research conducted within the framework of the Competences in Health Network Management ("**Com.He.Net**") project with respect to the Republic of Bulgaria.

1.2. Research Questions

The concept of Health Network Manager is new to the Bulgarian national health system. As described further in this paper, Bulgaria has a decentralised governance system which allows for the development of local structures that could facilitate the operation of regional health care and translate the needs of the local population and health establishments in a given region to the respective authorities. To this end, the current Bulgarian educational system has also laid down the foundation for training of healthcare managers which needs to be further facilitated in order to address current challenges effectively. In order to utilise the available structural and human resources and harness the full potential of the system, a Health Network Manager must be aware of the particularities of the national (regional) health care structure and the respective outstanding and immediate challenges. For this reason, the present report aims to provide an answer to two main questions:

1. *What kind of Circumstances, Structures and Challenges do Health Network Managers face in Bulgaria?*
2. *Which Competences do Health Network Managers in Bulgaria need?*

2. Methods

The present paper has been drawn based on literature desktop research and qualitative interviews. A systematic structured literature review was conducted to identify and characterise the national health care system in Bulgaria and identify its status, structures, and challenges that would be ultimately faced by Health Network Managers. Using general online research engines, the main literature sources consisted of articles and reports produced by national professionals in the course of projects by international organisations outlining Bulgaria's health care profile. The search strategy consisted of the following free search terms in Bulgarian and English, *inter alia*: qualification*, expertise*, know-how*, local*, regional*, territorial*, coordinator*, well-being*, healthcare*, health promotion*, prevention*, structure*, system*, challenge(s)*, risks*, development*, conditions*, organise*, inpatient*, outpatient*, costs*.

In addition, the literature research was complemented by five qualitative interviews. The information provided during the interviews conducted with professionals active in the fields of public and private health care (including education) in Bulgaria gave valuable insights into the practical perspectives and challenges faced within the national health care system.

3. Circumstances, Structures and Challenges in Bulgaria

By way of background, the Republic of Bulgaria has a population of just below 7 million people. Close to 2 million citizens live in the capital city Sofia. Main ethnic groups of the population in Bulgaria are: Bulgarians, Turks and Roma people. Ethnic Bulgarians make up 84.8% of the population and the

remaining part is represented by the minority groups: Turks 8.8% and Roma people 4.9%.[1] As per 2018 there were around 428 physicians in total per 100 000 inhabitants, around 60 of which are general practitioners ("**GPs**").[2] Practicing nursing professionals in 2018 per 100 000 inhabitants were around 490 practicing nursing professionals, while the same figure for Europe was 800.[3]

Bulgaria's health care system operates based on a decentralised model. The country is divided into 28 regions (or "provinces"), which are the first level administrative subdivision of the country. Within each of the regions, there are a number of municipalities.[4] The state health policy on the territory of each region is organised and implemented by the so-called Regional Health Inspectorates ("**RHI**"). For the sake of avoiding confusion with regard to terminology, the term "region" (and hence "regional") is often used in English to signify the decentralised aspect of governance of Bulgaria. Therefore, for the purposes of the present paper the terms "province" and "region" will be used interchangeably. More details about the work of the RHIs are provided in section 3.1 below.

Map of the 28 regions (provinces) in Bulgaria
Source: Wikipedia (Author identification: CC BY-SA 3.0)

3.1. Health Care System and Key Institutions

The present sub-section aims to describe briefly the health care system of Bulgaria and how it is financed. It also introduces the key institutions in the field of public health and health promotion in

[1] Population: Demographic Situation, Languages and Religions of Bulgaria, EACEA National Policies Platform, Eurydice, December 2019, available at: <https://eacea.ec.europa.eu/national-policies/eurydice/bulgaria/population-demographic-situation-languages-and-religions_en >, accessed on 01.10.2020.

[2] Physicians, by speciality, 2018, Health20, Eurostat, available at: < https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Physicians,_by_speciality,_2018_Health20.png> accessed on 01.10.2020.

[3] Practising nursing professionals, 2013 and 2018 (per 100 000 inhabitants) Health20, Eurostat, available at: < https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Practising_nursing_professionals,_2013_and_2018_(per_100_000_inhabitants)_Health20.png >, accessed on 01.10.2020.

[4] There are overall 265 municipalities in Bulgaria.

Bulgaria and describes whether there is any relation to regional health management in the health system.

The main legislative acts with relevance to healthcare are the Health Act[5], the Health Insurance Act[6], the Health Establishments Act[7], the Social Services Act[8] (in its part on integrated social-health services). As briefly mentioned above, the Bulgarian health care system is functioning based on a decentralised model. In general, it can be divided in two aspects: 1) provision of medical services; and 2) public health activities. At a regional level, both of these flows are managed by the RHIs, which are the successors of the former Hygienic and Epidemiological Inspectorates and the Regional Health Centres. The activities of RHIs are laid down in the Health Act. Pursuant to Article 10 of the Health Act, RHIs are responsible for, *inter alia*, exercising state control in the respective region on the registration and activities of medical and health establishments, health promotion and prevention, collection and analysis of health data, monitoring lifestyle factors, forecasts of demographic-health processes, development and implementation of national and international health programmes and projects, and others.

In the different regions, the health network varies with respect to its density and size. Hospitals in Bulgaria are registered as companies. Depending on their ownership they are state-, regional-, and privately owned. There is always one regional hospital per region, which is financed both by the state budget and the municipalities, the latter having also legal participation. There are also a couple of specialised and municipal hospitals in the various municipalities within a region, which are financed by the municipalities. In addition, there are six large health centres encompassing the structures of the so-called university hospitals, *i.e.* hospitals linked to medical universities, which have a better developed health care network and diagnostics capabilities. There are also some additional specialised health structures such as the psychiatric hospitals, pulmonary hospitals etc. In addition to these state health establishments, in many cities there are also private health establishments, hospitals and non-hospital care services.[9] The state owns all university hospitals and national centres, specialised hospitals at national level, centres for emergency medical care, psychiatric hospitals, centres for transfusion haematology and dialysis, as well as 51% of the capital of regional hospitals.[10] Last but not least, the national primary care network, meaning the general practitioners ("**GPs**"), operates on a fully private basis. All GPs, medical centres and hospitals provide health services and use public resources pursuant to the National Framework Agreement concluded between the Bulgarian Medical Association and the National Health Insurance Fund.[11]

On a state level, the Ministry of Health is responsible for national health policy and the overall organisation and functioning of the health system and coordinates with all ministries with relevance to public health. Bulgaria has a compulsory Social Health Insurance ("**SHI**") scheme, with a small role

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5 Health Act (Bulgarian: *Закон за здравето*), promulgated in State Gazette No. 70/10.08.2004, last amended State Gazette No. 67/28.07.2020.

6 Health Insurance Act (Bulgarian: *Закон за здравното осигуряване*), promulgated in State Gazette No. 70/19.06.1998, last amended and supplemented State Gazette No.67/28.07.2020.

7 Health Establishments Act (Bulgarian: *Закон за лечебните заведения*), promulgated in State Gazette No.62/09.07.1999, last amended State Gazette No. 85/02.10.2020.

8 Social Services Act (Bulgarian: *Закон за социалните услуги*), promulgated in State Gazette No. 24/22.03.2019, last amended and supplemented State Gazette No. 71/11.08.2020.

9 The information in this paragraph contains summarised responses from Interview No. 5 with the Chief State Health Inspector of the Republic of Bulgaria.

10 A. Dimova *et al.*, *Bulgaria - Health system review*, European Observatory on Health Systems and Policies, Health Systems in Transition, Vol. 14 No. 3, 2012, ("**Bulgaria - Health system review 2012**"), p. 18.

11 Interview No. 5 with the Chief State Health Inspector of the Republic of Bulgaria.

for Voluntary Health Insurance ("**VHI**") companies.[12] Within the SHI, the National Health Insurance Fund ("**NHIF**") and its regional branches are the core purchasers of health services.[13] While the insurance system covers diagnostic, treatment and rehabilitation services, as well as medications for insured individuals, the Ministry of Health is responsible for providing and funding public health services, emergency care, transplantations, transfusion, haematology, tuberculosis treatment and inpatient mental health care.[14]

Bulgaria has a mixed-public health care financing system. Health care is financed from the compulsory SHI contributions, taxes, out-of-pocket ("OOP") payments, VHI premiums, corporate payments, donations, and external funding. OPP payments represented 46.6 % of health expenditure in 2017, the highest share in the EU. The drivers of OPP expenditure are payments for services not covered by the benefit package (including most dental and long-term care), as well as cost-sharing for a range of services and prescription medicines. Informal payments are estimated to make up a considerable share of all OOP spending on health and add to the pressure on private household spending.[15] Public financing of the health system accounted for 52.1 % of total health spending in 2017. SHI contributions are made by individuals and employers – and the state makes tax-financed contributions for children, pensioners, the poor. Other tax-financed revenues are allocated via annual budgets to the Ministry of Health and municipalities[16]. Health spending per person more than doubled between 2005 and 2017, with an annual average growth rate of 5.3% since 2009. In 2017, Bulgaria spent EUR 1 311 per capita on health. As a share of the gross domestic product (GDP), Bulgaria spent 8.1 % on health in 2017, below the EU average of 9.8 %.[17] The 2020 NHIF budget is set at EUR 2,4 mln, *i.e.,* 10,3% higher than in 2019.

The majority of health spending is accounted for pharmaceuticals and inpatient care. In 2017, pharmaceuticals and medical devices, and inpatient care together accounted for three quarters of Bulgaria's health expenditure. Bulgaria's spending on pharmaceuticals was the highest in the EU (over 40%) when measured as a proportion of total expenditure – EUR 567 per person. Inpatient care accounted for 34% of health spending reflecting the significance of the hospital sector in Bulgaria. As such, inpatient care features a high level of activity, with by far the highest rate of hospital discharges (around 31 700 per 100 000 population) in the EU in 2017, and almost double the EU average (17 000).[18]

In conclusion, health services are delivered by a network of various health care providers, operating in the public or in the private sector. Public health services are provided by the state and organised and supervised by the Ministry of Health. The GPs are the central figure in primary care and acts as a gatekeeper for specialised ambulatory and hospital care. Ambulatory care is also provided by specialised outpatient facilities, including individual and group practices, medical centres, diagnostic-consultative centres and medico-diagnostic or medico-technical laboratories. They are autonomous health care establishments, most of them with a contractual relationship with the NHIF pursuant to

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12 In contrast, VHI accounted for only 0.5 % of current health expenditure in 2017.

13 State of Health in the EU – Bulgaria – Country Health Profile 2019, European Commission, OECD & European Observatory on Health Systems and Policies ("**State of Health 2019**"), p. 10.

14 Bulgaria - Health system review 2012, pp. 15-18.

15 Pharmaceuticals and medical devices, through direct payments and co-payments, account for the overwhelming bulk of OOP spending, followed by outpatient care and inpatient care, See State of Health 2019. P. 17).

16 State of Health 2019, p. 11.

17 State of Health 2019, p. 10, See also: B Zahariev & L. Georgieva, "*ESPN Thematic Report: Inequalities in Access to Healthcare – Bulgaria*", May 2018, European Commission, Directorate-General for Employment, Social Affairs and Inclusion ("**Zahariev & Georgieva, 2018**"), pp. 9-10, 12.

18 State of Health 2019, p. 11.

the National Framework Agreement. Inpatient care is delivered mainly through a network of public and private health establishments, divided into multi-profile and specialised hospitals. Regional centres for emergency care and hospitals' emergency wards are the key units in the organization of emergency care.[19]

3.2. Main health challenges

There are four main challenges identified during the literature review and confirmed throughout the interviews. They can be grouped into the following categories: 1) organisation of primary care and the uneven distribution of HCPs; 2) demographic and socioeconomic deficits; 3) health promotion and prevention; 4) outpatient care. These challenges may vary among the provinces in Bulgaria and their persistence and solution would depend on successful regional policies adapted to the needs of the particular area and its population. For this reason, the following points could be of a particular importance for the activities of a regional Health Network Manager.

1) Organisation of primary care and the uneven distribution of HCPs across the countries

GPs are independent practitioners contracted by the NHIF, operating in individual or group practices. A referral by the GP is needed in order to get access to specialist care, diagnostic tests and hospital care. However, monthly quotas for patient referrals are in place and GPs often reach these quotas before the end of the month, meaning that remaining patients either have to wait or visit a specialist directly (without a referral) and pay out of pocket.[20] Authors suggest this as an explanation why up to a third of all patients, including the uninsured, bypass primary care doctors by calling an ambulance or going directly to hospital emergency departments.[21]

Against this background, there are marked regional disparities in the distribution of all health care personnel, posing ongoing challenges for accessibility.[22] Although Bulgaria has a comparatively high density of HCPs (except for nurses), their distribution is uneven. To this end, the number of GPs in Bulgaria has been declining slowly and their geographical distribution is reported to be unable to reflect the needs of the population.[23] The GPs are reported to favour urban and more affluent provinces, which leads to considerable shortages in others.[24] Disadvantaged areas – often remote rural areas or small towns – are perceived as unattractive to settle in, and entail high workloads as patient lists are longer (more than 2 700 patients per GP in regions such as Kardzhali). Strategies such as increasing the numbers of medical and nursing graduates, as well as financial incentives to settle in underserved areas, have been implemented. In 2016, Bulgaria registered the highest number of graduates in both professions since 2002. However, the trend of emigration and urbanisation is likely to decrease the number of available HCPs in areas of need.[25]

[19] Bulgaria - Health system review 2012, p. 20.
[20] Zahariev & Georgieva, 2018, p. 11.
[21] State of Health 2019, p. 12.
[22] Ibid.
[23] National Health Strategy 2020, p. 92; Bulgaria - Health system review 2012, p. 20. In 2016, 15.5 % of doctors were GPs, below the EU average of 27.3 % (State of Health 2019, p. 12).
[24] National Health Strategy 2020, p. 79.
[25] State of Health 2019, p. 18.

2) Demographic and socioeconomic challenges.

By way of background, in recent years Bulgaria has been facing the challenge of a demographic crisis.[26] Bulgaria's population fell from 9 million at the end of the 1980s to just over 7 million in 2018.[27] The UN Population Division report estimates that between 2019 and 2050 Bulgaria will face around 23% decline in population which makes it one of the fastest shrinking nations in the world.[28] Among the reasons for this trend are the negative birth-rate ratio, *i.e.* sustained low levels of fertility, as well as the dynamic outbound migration occurring at an increasing rate.[29]

Bulgaria's population is both ageing (currently one fifth of inhabitants are 65 years or over) and shrinking due to a natural decline and continued emigration.[30] The main reasons for the latter, among others, are better remuneration and work conditions, as well as high life standards.[31] Close to 50% of doctors and healthcare specialists who leave the country are between 46 and 60 years old.[32] Unless this trend is reversed, the proportion of people of working age will continue to decline, leading to fewer contributors to the revenue base of the NHIF in the years to come.

In terms of number of medical specialists, in recent years Bulgaria maintains a level above the average for the EU countries. However, the current age structure of the medical professionals envisages growing future deficit. The regional distribution of medical specialists is disproportionate and unbalanced, which leads to difficult access of the population to health care, challenges the quality of medical care and affects the efficiency and effectiveness of medical work.[33]

In addition, a study showed that socioeconomic inequalities in the various regions contribute to health risks.[34] Many behavioural risk factors in Bulgaria are more prevalent among people with lower education and/or income – and the higher prevalence of risk factors among socially disadvantaged groups contributes significantly to inequalities in health and life expectancy. For example, almost 14 % of people with lower education levels were obese, compared to 11 % of those with a higher education in 2017. The exception is smoking, where the rate among adults is almost the same regardless of educational level (23-24 %).

3) Health promotion and prevention

A significant part of the population is reported to live with behavioural risk factors.[35] Both preventable and treatable causes of mortality are among the highest in the EU, indicating a large scope for

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[26] Eurostat, Population and population change statistics, July 2019, available at: https://ec.europa.eu/eurostat/statistics-explained/index.php/Population_and_population_change_statistics , accessed on 01.10.2020.

[27] National Statistical Institute of Bulgaria, information available at: < https://www.nsi.bg/en/content/17130/%D0%BF%D1%80%D0%B5%D1%81%D1%81%D1%8A%D0%BE%D0%B1%D1%89%D0%B5%D0%BD%D0%B8%D0%B5/population-and-demographic-processes-2018>, accessed on 01.10.2020; See also: D. Hruby, *How to slow down the world's fastest-shrinking country*, BBC Generation Project, September 2019, available at <https://www.bbc.com/worklife/article/20190913-how-to-slow-down-the-worlds-fastest-shrinking-country>, accessed on 20.01.2020.

[28] World Population Prospects 2019 – Highlights, United Nations – Department of Economic and Social Affairs, New York, 2019, p. 12.

[29] Ibid. pp. 12, 35.

[30] State of Health 2019, p. 19.

[31] National Health Strategy 2020, p. 93.

[32] Ibid.

[33] National Health Strategy 2020, p. 93-94.

[34] State of Health 2019, p. 9.

[35] National Health Strategy 2020, p. 107.

improving disease prevention and effectiveness of care.[36] In absolute terms, Bulgaria spends around EUR 34 per person on preventive care – which amounts to 2.6 % of health spending.[37] About two fifths of life after age 65 is lived with some health problems or disabilities. Just over half of the people aged 65 and over reported having at least one chronic disease, a proportion that is slightly below the EU average.[38] As such, the Bulgarian government recognised that there is untapped potential for achieving better health of the population in Bulgaria, respectively for the prevention of a large part of diseases and premature mortality.[39] One of the measures identified by the government to overcome this issue is envisaged to be applied on regional level – namely, improving the knowledge and capacity of the RHIs in the area of health promotion and prevention with the possibility to consult the local population and thus enhance the flow of information, the skills and motivation of the population in that respect.[40]

4) Outpatient care

Bulgaria is characterised by its hospital-cantered care model (*i.e.,* inpatient care).[41] It is reported that outpatient care does not utilise its full capacity to ensure immediate access of patients to primary and specialised care, especially in remote areas.[42] In those areas, the emergency care service is the only possibility for timely access both to emergency and basic care. Ambulatory (or outpatient) care amount to EUR 234 per capita in 2017. Conversely, the number of outpatient contacts in 2017 was relatively low – 6.1 visits per year per person on average compared to 7.2 in the EU.[43] Planning of outpatient health care is based on a territorial principle. Specialised outpatient activities are delivered mainly by a network of private specialist practices, centres for diagnostics and treatment, and diagnostic laboratories.[44]

In addition, long-term care services are excluded from the benefit package and is generally underdeveloped. While many older people are cared for informally by family members, those needing residential care are either placed in the few designated long-term care beds in inpatient care, or in residential care centres that are financed either by municipal social assistance or privately (e.g., hospices). As the Bulgarian population is ageing more rapidly, accessible and affordable long-term care will become a key challenge.[45]

The National Health Strategy 2020 (see below Section 3.3) acknowledges that an important supporting measure for the development of outpatient care is the integration of conteporary IT solutions which may provide prompt access to comprehensive clinical information so that medical specialists and patients can take the right deicision at the right moemnt without a delay. This would also avoid duplication of services, care not specifically tailored to the needs and unnecessary expenses. In this respect, the development of tele-medicine covering e-consultations and e-monitoring for patients in hard-to-reach and remote regions is a necessity.[46]

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[36] State of Health 2019, p. 3. Age-standardised mortality rate in 2016 was 232 persons per 100 000 population.
[37] State of Health 2019, p. 11.
[38] Ibid., p. 6.
[39] Ibid. p. 107.
[40] National Health Strategy 2020, p. 109.
[41] State of Health 2019, p, 1.
[42] National Health Strategy 2020, p. 72.
[43] State of Health 2019, p. 12.
[44] State of Health 2019, p. 12.
[45] Bulgaria - Health system review 2012, p. 21.
[46] National Health Strategy, Ministry of Health, available at (in Bulgarian): <https://www.mh.government.bg/bg/politiki/strategii-i-kontseptsii/strategii/nacionalna-zdravna-strategiya-2020/ >, accessed on 01.10.2020, p .21.

3.3. Key policies

This section presents a brief overview of the active national health care strategies, concepts and policies. Since the concept of health network management has not yet penetrated the national system, the strategies do not reflect developments in that regard. However, much of the policies are suitable and/or depend on implementation at a regional level. For this reason, a Health Network Manager should be able to identify the following strategies and operate within their frameworks with the local stakeholders.

The National Health Strategy 2020 is the leading and most recent strategic document, which specifies targets for the development of the health care system for the period 2014-2020. The strategy contains priorities and policies for overcoming health challenges faced by Bulgarian citizens. It contains three main priorities: 1) creation of healthy conditions with respect to the profile of four age groups (0-1y, 1-19y, 20-65y, >65y); 2) development of a fair, sustainable and effective health care system; and 3) improving public health care capacity. The methods of linking health policies with the measures ensuring equality, the necessary impacts on the social determinants of health and the main prerequisites for the functioning of the health system are presented therein. The strategy is accompanied by an action plan which contains the measures for implementation of the respective health policies, the activities for the implementation of the measures, indicators for monitoring etc.

The Concept "Objectives for Health 2020"[47] was developed in 2015 in response to the strategic objectives laid out by the WHO Health 2020 policy framework.[48] The concept recognises, among others, the need to facilitate outpatient care through better structures and coordination between public health services and other health and social services.[49] In addition, the concept clarifies that "*the most distinctive features of an effective primary healthcare targeted at people, which should be built in Bulgaria, include focusing on health needs; maintaining personalised relationships through care coordinators who use approaches to chronic care case management; taking responsibility for health and lifelong health determinants, and integrating people as partners in the management of their health problems*" (emphasis added).[50]

The National Strategy for Long-term Care[51] was approved in 2014 with the aim to develop long-term care for elderly people and people with disabilities, and improve their quality of life. Overall, the strategy sets forth measures to tackle some of the challenges presented in section 3.2 above. In view of the need for reform in outpatient and long-term care, it aims at the provision of accessible, high-quality community-based and home-based services to enable the social inclusion of people with disabilities and elderly people in a deinstitutionalised environment. It places special focus on the development of home-based services and support to families, with increased responsibility towards the care for dependent family members. The strategy promotes the interaction with social and health services and the implementation of an integrated approach. One of the key priorities of the strategy is to establish a more effective financing mechanism for long-term care and to achieve sustainable increase of funds for community-based and home-based services.

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47 Concept "Objectives for Health 2020", Ministry of Health, available at (in Bulgarian and English): < https://www.mh.government.bg/bg/politiki/strategii-i-kontseptsii/koncepcii/koncepciya-celi-za-zdrave-2020/ >, accessed on 01.10.2020.

48 Health 2020 – A European policy framework and strategy for the 21st century, WHO, 2013. Available at: < http://www.europeanpublichealth.com/governance/who-europe/health-2020/ >, accessed on: 01.10.2020.

49 Concept "Objectives for Health 2020", p. 33.

50 Ibid.

51 National Strategy for Long-term Care, Ministry of Labour and Social Policy, available at: <https://www.mlsp.government.bg/eng/deinstitutionalisation-of-care-for-the-elderly-and-people-with-disabilities >, accessed on 01.10.2020.

The Strategy for reducing the risk of radon radiation 2018-2027 exists within the overall obligation of Member States pursuant to Directive 2013/59/Euratom[52] to establish national reference levels for indoor radon concentrations, not to exceed 300 Bq / m3.[53] The implementation of this legislation depends on information campaigns and promotion targeting local population.

In 2018 the government adopted a **National Health Map**.[54] It determines and plans, based on a territorial principle of operation, the population's needs for access to outpatient and inpatient medical care and implements the national health policy. The main goal of the National Health Map is to adapt the structure of the health network to the needs of the population with the ultimate goal to guarantee every Bulgarian citizen equal access to health services. The Map identifies the need for doctors, dentists and specialists in the professional field of "Health Care" for outpatient care. Necessary beds for inpatient treatment, demographic data for the regions, medical activities by types and levels of competence for all areas, as well as the outstanding needs for high-tech medical equipment and methods for diagnosis and treatment are also identified.

Pursuant to the Health Establishments Act[55] the National Health Map is prepared by a national committee chaired by the Minister of Health. The committee includes the manager of the NHIF, the director of the National Centre for Public Health and Analyses, the manager of the Medical Audit Executive Agency, the chairman of National Association of Municipalities of the Republic of Bulgaria, and representatives of the Bulgarian Association of Doctors, the Bulgarian Association of Dentists, the Bulgarian Association of Healthcare Professionals, national patient organisations, and the Ministry of Health. In view of this setting, a representative from the respective regional health networks could also contribute to the presentation of accurate and locally relevant information collected based on an inter-personal approach by the managers.

The large volume of numerical data within the National Health Map (approx. 560 pages) could be a useful and indispensable source of information for the Health Network Managers on a regional level since it presents precise and contemporary data on illnesses and diseases, the health care system's conditions and needs in terms of equipment and human resources.

3.4. Health targets

Naturally, the strategies and concepts described in section 3.3 above, set concrete targets with respect to any particular challenge identified therein. In more general terms, pursuant to the National Health Strategy 2020, based on the analysis of the health and demographic condition of the population, Bulgaria determines its National Health Targets, which objectively emphasise on the sustainable improvement of the health of Bulgarian citizens in the following age groups:

- Reduction of mortality in children at 0-1 years of age to 6.8 per 1000 live births;
- Reduction of mortality in children at 1-9 years of age to 0.24 per 1000;
- Reduction of mortality in adolescents and young people aged 10-19 years to 0.28 per 1000;

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[52] Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom; OJ L 13, 17.1.2014, p. 1–73.

[53] Strategy for reducing the risk of radon radiation 2018-2027, Ministry of Health, available at (in Bulgarian): < https://www.mh.government.bg/bg/politiki/strategii-i-kontseptsii/strategii/strategiya-za-namalyavane-na-riska-ot-oblchvane-ot-radon-2018-20/ >, accessed on: 01.10.2020.

[54] National Health Map, Ministry of Health, available (in Bulgarian) at: <https://www.mh.government.bg/bg/politiki/nacionalna-zdravna-karta/>, accessed on 03.11.2020.

[55] Health Establishments Act (Bulgarian: *Закон за лечебните заведения*), promulgated in State Gazette No.62/09.07.1999, last amended State Gazette No. 85/02.10.2020.

- Reduction of mortality in persons in the economically active groups from 20-65 years of age to 4.19 per 1000;
- Increasing the average life expectancy of people after the age of 65 to 16.4 years.

Achieving the five national health targets by 2020, while ensuring the sustainability of the implemented policies and measures, is projected to help Bulgaria reach the current average European levels of these 5 indicators by 2025. There have not been identified targets in relation to the development of health network management.

4. Health Network Manager

Local health and preventive services as well as nursing care structures can be very different within a country. Therefore, local actors can best assess the situation and develop tailored measures for the respective region. Such locally developed solutions also have a higher binding effect and acceptance.[56] Germany has introduced health regions in order to address local health needs of the population. They describe health regions as geographically defined clusters that aim to ensure a coordinated health and social care of the population through a network of all stakeholders involved in the supply process. The people to manage these networks are called Regional Health Network Manager.[57]

In the USA, for instance, a person similar to the Health Network Manager is responsible for curating and maintaining on a collaborative technology platform a network of individuals and group practice providers in a specific territory to serve local needs.[58] They should be able to manage ongoing relationships with key health stakeholders (public and private), and should be responsible for supporting healthcare providers in identifying appropriate workflows to facilitate seamless integration of technology into clinical practice. They also partner cross-functionally to monitor referral volume and provider quality in their given territory, and develop appropriate strategies in order to maintain a robust network of engaged providers. Candidates must reside within the geographical territory.

4.1. Status Quo in Bulgaria

As mentioned in section 3.3 above, the concept of Health Network Manager in Bulgaria has not yet been introduced. As such, there is no defined set of competences for Health Network Managers on a national level. In practice, however there are some roles within the healthcare system which share common traits with the concept of health network management. For instance, directors and deputy directors of RHI (described above in Section 3.1 above) must be Master graduates in "Health management" as part of the overall professional qualification of "Public Health", and must have three years of professional experience.[59] A number of universities across the country offer this discipline at both Bachelor and Master level.[60] The curriculum and the academic requirements for this programme are set forth in an Ordinance issued by the Ministry of Education ("**Healthcare Management Ordinance**").[61] It includes mandatory subjects such as statistical management methods, health

[56] FH Joanneum University of Applied Scineces, *Competences in Health Network Management (Com.HeNet), Info sheet: Regional Health Network Manager*, p. 1.

[57] Ibid.

[58] Job description available at: <https://lensa.com/behavioral-health-network-manager-jobs/chicago/jd/0498fb32539c372636516c47318714b2 >, accessed on 01.10.2020.

[59] Health Act, Article 9.

[60] E.g. Sofia, Plovdiv, Varna, Burgas, Stara Zagora etc.

[61] Ordinance on the uniform state requirements for acquiring higher education in the specialisation "Healthcare Management" for the academic and qualification degrees "Master" and "Bachelor" as part of the professional programme "Public Health" [Bulgarian: *НАРЕДБА за единните държавни изисквания за придобиване на висше образование по специалността "Управление на здравните грижи" за образователно- квалификационните степени "магистър" и "бакалавър" от професионално*

analyses and projects, civil law and civil procedure, organisation of the healthcare system, business management and ethics, economics, finance, medical sociology , IT in healthcare, strategies in prevention and promotion, and others.[62]

For instance, the Sofia Medical University offers a couple of specialisations in the field of public health.[63] The Bachelor programme stream "Public Health and Health Management" offers training with an interdisciplinary nature and provides an opportunity for students to acquire general and specialised training in health, medical, economic, legal, management and social-behavioural sciences. The Master qualification degree in the same programme further provides students with the opportunity to acquire general and specialised training in social medicine, epidemiology, informatics and biostatistics, health management and health policy, economics, healthcare legislation, ethics of health policy, etc. In addition, the specialisation "Health Care Management" entails managerial competences, organisational culture and pedagogical skills in providing effective health care in a changing social, economic and health environment. Graduates acquire general and specialised knowledge in health policy, management, behavioural, communication and information systems.

4.2. Results of the conducted Interviews

In the course of the Com.He.Net project five interviews have been conducted. The interviewees are stakeholders active at different levels of the Bulgarian national healthcare system (public and private). The interviews were carried out between June and July 2020 and the list of interviewees includes:

- (**Interview No. 1**) The Chairman of the Bulgarian Association of Health Care Professionals ("**BAHCP**")
- (**Interview No. 2**) A professor in nursing care subjects at the Sofia Medical University;
- (**Interview No. 3**) A general practitioner (GP);
- (**Interview No. 4**) The Chairman of the National Patients' Organisation (Bulgaria);
- (**Interview No. 5**) The Chief State Health Inspector of the Republic of Bulgaria.

The following sub-sections sets out a summary of the answers provided by the interviewees. All views, opinions and conclusions shared in the following sub-sections are those of the professionals who were interviewed.

Interview No. 1

The overall assessment by the interviewee in relation to the current health care system, as well as the progress on health promotion and prevention at regional level in Bulgaria is around 5 out of 10. While the interviewed stakeholder believed that patients have "*decent access*" to medical care in general, their access to primary health care is limited. As the desktop research has indicated, the explanation provided by the interviewee is two-fold: one the one hand, the unfavourable geographical distribution of medical personnel and, on the other, the shortage of medical personnel – doctors, as well as nurses and accoucheurs. Progress in health promotion and prevention is fostered by the BAHCP and relies on regional programmes which are subordinate to national programmes, as well as on activities organised non-governmental organisations ("**NGOs**"). Overall, the interviewee emphasised on the importance of secondary and subsequent examinations related to the prevention of diseases, and the need for well-developed outpatient/home care as key factors for the health care system to

направление "Обществено здраве"], promulgated in State Gazette No. 70/29.08.2006, last amended and supplemented State Gazette No. 87/07.10.2008 ("**Healthcare Management Ordinance**").

[62] Healthcare Management Ordinance, Articles 5-7.

[63] Sofia Medical University, information available at: < https://www.mu-sofia.bg/en/admission/faculty-of-public-health/ >, accessed on 01.10.2020.

operate on a full scale. In addition, financial deficit and the distribution of available resources to incentivise HCPs were identified as issues in relation to the overall health care system

It is in the interviewee's opinion that Health Network Managers must make a distinction between the different needs related to hospital and outpatient care. The former is regulated by the Health Establishments Act which codifies the applicable rules on management of health establishments and the subsequent educational/training requirements, and it is a distinct structure from the latter. The interviewee expressed the view that outpatient care is "*the foundation for the organisation of a health care network in a given health region because the number of people using these services is higher than those who need hospital care*". As such, communication (both vertical and horizontal) between health establishments at a regional level and outpatient care facilities must be fostered by a coordinating unit whose duties extend beyond monitoring functions. In terms of competences, Health Network Managers must have comprehensive knowledge on the organisation of the healthcare system in their region, qualification in health management and public health, as well as proper communication skills vis-à-vis various stakeholders and professionals/officials at different levels, such as medical persons, patients and health authorities (at national, provincial and municipal level), educational institutions and NGOs. The main challenges that a regional Health Network Manager would face were said to be related to the financing of projects at regional level and the distribution of medical personnel, especially in remote and hard-to-access regions. Last but not least, the interviewee stressed on the need for a multi-dimensional management profile and the ability to work with different ethnic communities across Bulgaria. Due to the importance of managers at regional level, municipalities were said to be best suited to control their activities pursuant to a regulatory framework.

Interview No. 2

The overall assessment by the interviewee in relation to the current health care system is around 5 out of 10, while the progress on health promotion and prevention at regional level in Bulgaria was estimated at 8 in the large urban areas, and 3 in smaller urban areas where people are less informed. The person stressed on the uneven distribution of general practitioners and medical specialists among the various provinces (e.g., more attractive facilities and remuneration in larger cities), as well as the demographic aging of the HCPs (average HPC age: around 55 years[64]), which altogether makes the access to health care in those areas difficult. In the person's view, health promotion and prevention are largely dependent on the GP practices and education in that regard should be improved. At a regional level, the material and human resources was said to be diverse and to vary from very good in large cities to quite limited in smaller urban areas. The interviewee emphasised on the developments of the academic programmes for health management personnel in the last 25 years; however, the potential of the existing human resources in this field is not seen to be utilised rationally due to the lack of opportunity for graduates to apply their knowledge in practice.

In the view of the interviewee, Health Network Managers should perform management activities: planning the scale of the activity, assessment of the regional demand for human resources, organisation and coordination between the provider and recipient of health services and care, communication with medical and social authorities, motivation, assessment and control of the health care services and conditions over a given period of time. Health managers should be able to comply with the unitary government requirements for health care management. They should have in-depth knowledge in aspects related to health projects, HR management, material resources, time management and inter-personal skills. The importance on working cohesively with stakeholders such

[64] In 2018, more than half of all physicians in Italy and Bulgaria were aged 55 years and over. Source: <https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Healthcare_personnel_statistics_-_physicians&oldid=497518>, accessed on 01.10.2020.

as GPs, RHIs, social services, municipal authorities and minorities was also indicated as a crucial factor. The main challenges for network managers identified by the interviewee were financial and organisational. An interesting observation made by the professional was that from a spiritual point of view, the strong spirit is linked with physical healthiness; hence, the spiritual, psychological and physical support is the trinity which predetermines one's health and social welfare. Municipalities, and more specifically local health care committees, were identified as the most suitable employer for a regional Health Network Manager.

Interview No. 3

The overall assessment by the interviewee in relation to the current health care system, as well as the progress on health promotion and prevention at regional level in Bulgaria is between 3 and 4. Nevertheless, the interviewee stressed that a well-manged and up-to-date GP practice is able to facilitate full access to the health care system. The current infrastructure/material resources and remoteness of some difficult-to-access regions was identified as an overall challenge. The professional stressed on the need for an integrated IT system with electronic patient dossiers, e-health cards and e-prescriptions which GPs, hospitals and pharmacies should have access to.

From the perspective of GPs, a health network manager would be of help in relation to the communication which is a crucial factor. The social skills are also of primary importance for this role. Regional Health Network Managers should be able to work with all specialists in order to become fully aware of the issues and problems in all details in our health care system, for instance: the BAHCP, the RHIs, as well as NGOs. In relation to the qualifications, the interviewees opinion suggested to follow the best practices and experience of the regions with the best health care systems. The data to which Health Network Managers must have access in order to perform their functions properly concern medical examinations, prevention, medical discharge summaries, consultations in order to fully understand the issues of the respective regional network. Municipal level was identified once again to be the most appropriate level for employment with additional support from NGOs and primary health units.

Interview No. 4

The overall assessment by the interviewee in relation to the current health care system, as well as the progress on health promotion and prevention at regional level in Bulgaria is between 3 and 4. The interviewee identified the lag in the digitalisation of the health system, the lack of specific policies tailored for the population in the various regions and the absence of flexibility of municipalities to add various services in addition to those provided by the national health insurance system as key drawbacks of the overall health care system. The geographic characteristics of Bulgaria, *i.e.*, the hard-to-reach regions, the uneven distribution of medical professionals, health establishments and the ratio of hospital/outpatient care services were also brought up as existing issues. With regards to health promotion and prevention, the professional noted that there are differences among the various municipalities and the programmes targeting the specificities of the respective population. Overall, from the perspective of HR, financing, and knowledge resources the regions in Bulgaria are in a great need for enhancement, according to the interviewee.

For a regional health network to function properly, the interviewee stressed on the importance of a robust analysis of customers' needs (including patients, doctors and nurses), the health profile and specificities of the population, including the ethnic, linguistic and all other challenges existing in every region, such as age categories and predominant risk factors. Moreover, they must be aware of opportunities for financing and development of novel structures, different from the expensive hospital centres, that can integrate necessary services including medico-social services and others, which could meet the needs of the population more effectively and efficiently. The competences must be

comprehensive. Basic knowledge in health management and health systems is indispensable. The regional health managers must be well aware of different models which could be applied or adapted in the various regions in the country and abroad. A health network must be a multi-stakeholder one, *i.e.*, to consist of regional and national health experts, and managed by a person with acute leadership skills.

Interview No. 5

The overall assessment by the interviewee in relation to the current health care system, as well as the progress on health promotion and prevention at regional level in Bulgaria is 4. The professional identified the existence of significant differences among the various regions with an overall struggle in least-developed and remote regions and municipalities (e.g., in North-West Bulgaria). The interviewee emphasised on the overall deficit in personnel and staff in some provinces and specialisations which leads to closure of entire structures, while it was recognised that in general access to health care in terms of time needed to receive a medical consultation is not limited.

In order to cope with health network management, the respective candidates must possess management, finance, digital health qualifications and experience in the organisation of health care. Taking into account the overall development in the field of medicine and the introduction of the tele-medicine, data processing and remote diagnostics, the qualification for such managers must be at level of digital services. The interviewed professional deemed that an inter-cultural approach is very important in the approach towards minorities, which might necessitate working with mediators who can pass on the information in an understandable manner to the respective recipients. Health Network Managers should cooperate with the regional authorities of the Ministry of Labour and Social Policy, the regional educational bodies which are active in programmes for youth education, all regional authorities and bodies such as the regional governor, various local councils, the Ministry of Interior, the city halls and others. They should be aware of data on (child) mortality, lifetime expectancy, chronic illnesses, and the need for specialists in fields such as psychiatry, child and maternal health care. The interviewee expresses the view that regional health networks should be regulated by the national legal framework. They must follow common objectives and be applied as part of the policy, projects and programmes of the Ministry of Health. Within these objectives, other opportunities could also be used: public-private partnership, as well as other European projects and programmes. Last but not least, health network managers would face some budgetary constraints. Such a regional network model cannot be developed based only on the national budget. In this case, the interviewee believes that the solution would be to search for financing opportunities through European projects.

5. Discussion & Conclusion

Overall, the research allowed to draw some specific conclusions on the current status and challenges of the national and regional health care system in Bulgaria, as well as the improvements that could be introduced through a regional Health Network Manager. Still, the lack of such a concept in the national system at present was a prerequisite for some inherent limitations.

The desktop research was limited by the small number of local publications that could provide a relatively elaborate overview of the entire health care system. No publications were identified in relation to the role of a potential regional Health Network Manager. Nevertheless, recent international reports, some of which were drawn in cooperation with Bulgarian HCPs, provided a summarised overview of the national system and the respective outstanding challenges. The conclusions therein overlapped to a large extent with the views shared by some of the interviewees in the course of the Com.He.Net project. The discussions with the interviewed stakeholders were of great importance as

they resulted in a comprehensive summary characterised by the various perspectives involved, and shed light on the most recent developments and challenges. The interviews did not experience any specific limitations.

The interviews largely confirmed and covered the findings of the desktop research. They also supplemented the information by providing real-life examples from the daily practice of the stakeholders who were all currently active in their respective fields. The variety in the occupational fields of the interviewees allowed for a holistic and objective overview which encompassed the contemporary views and needs of relevant stakeholders and the overall status of the health care system in Bulgaria. It is worth noting that the added value of the interviews was in fact to have a first impression on how various HCPs perceive the idea of a regional health network management. Since this concept has not yet been identified either in the literature, nor in the national legislation, it was particularly useful to receive feedback from stakeholders regarding the creation of such a structure at regional level. As far as RHIs are concerned, they perform mainly monitoring functions and it can be noted that there is insufficient management of communication between various interested groups.

The Bulgarian health care system faces a number of challenges that can be surmounted with the involvement of all stakeholders. Regional Health Network Managers would have the possibility to harness the full potential of the existing structures and opportunities by bringing together all interested parties, identifying a clear plan applicable to the specific needs of a local population and coordinating the communication among various stakeholders in order to enhance both the effectiveness and efficiency in the treatment and care of patients. Such a structure should be codified in and regulated by the national legislation, and policy makers could follow the best practices of other partner countries where this model has already been active. In addition, such a model would strongly depend on a robust digitalised system that is well integrated at all levels of the national health care system allowing for prompt access to both HCPs and patients. Currently, Bulgaria has a limited improvement in the development of such digitalised system. Nevertheless, there are incentives to create a unified information system in 2021.[65]

There is a good prospect for the introduction of regional Health Network Managers in Bulgaria. As identified above, the country has already laid down the foundations in terms of essential structures (e.g., RHIs), facilities (e.g., a platform created by BAHCP for a post-graduate education to maintain the level of professional qualification for HCPs) and academic programmes. In fact, there is a potential to crate a number of job opportunities across the country for graduates who have obtained the requisite degree in health management. Rolling out a programme of such a scale would need close cooperation with the Ministry of Health and regional authorities in order to identify the needs of local population and stakeholders per province, and devise a roadmap which sets out specific solutions. In addition, a common platform for network managers at a European level would be a useful tool to reach out for best practices, without prejudice to the peculiarities of each national health care system.

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Competences in Health Network Management

IO I: Circumstances, Structures and Challenges

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Contents

1. Introduction

1.1. Aim of the present paper

The present paper is part of the Competences in Health Network Management (Com.HeNet) project. This project pursues the goal of determining the required competencies of a regional health network manager as well as a following transfer to a curriculum according to European standards. This paper includes research results of literature research and expert interviews, which were conducted to determine the competencies of a regional health network manager in Germany. After presenting the research questions and the methods used, the literature research and expert interviews are presented and discussed. The paper closes with a conclusion and recommendations for future regional health network managers as well as stakeholders and policy makers.

1.2. Research Questions

The aim of the first intellectual output of the project Com.HeNet is to determine the required competencies of a regional health network manager. The following research questions are analysed:

1. **What kind of Circumstances, Structures and Challenges do Health Network Managers face in Germany?**
2. **Which Competences do Health Network Managers in Germany need?**

2. Methods

In order to answer the formulated research questions, two different research methods have been used.

Method: literature research

A comprehensive literature review was undertaken to investigate the research questions. Scientific databases such as PubMed were examined for literature research. Most of the articles, however, were identified using the so-called dirty search. For both methods, keywords such as *competence*, *regional*, *manager* and *health* were searched for. The search was carried out in both German and English language. In the interest of this work, only results on the status quo in Germany were examined more closely. Articles as well as practical and political guides were used. Internet resources were furthermore used. These include the homepages of ministries or the EU.

A total of 14 articles and guidelines on the management of health regions in Germany were identified. These come from the fields of science, business and practice. All sources are from the years 2015 to 2020. The sources therefore reflect the current status of health region management in Germany.

Method: Expert interviews

Structure

The consortium of the Competences in Health Network (Com.HeNet) project has developed key questions for the qualitative interviews. The questionnaire initiates with questions about the respondent's profession and continues with the evaluation of the specific regional health system. This block of questions also includes the assessment of the health system and health promotion / prevention on a scale from 0-10, whereby0 is very poor and 10 is excellent. In the third part of the questionnaire, the test subjects are asked to assess the competencies of health network managers in Germany. This is followed by questions, which aim to evaluate the training and workplace of regional health network managers in Germany. Finally, the test subjects evaluate the software used in German regional health regions. If they like to, the test subjects can make further comments regarding health regions in Germany. The interview concludes with a survey of the demographic data (age, sex and residence).

Implementation

In total, five test subjects are interviewed. The interviews are conducted via video conference (n = 3), telephone (n = 1) and in person (n = 1). Due to the corona pandemic, personal meetings are sometimes not possible. Due to institutional regulations, the use of video conferences is sometimes not possible. The interviews last an average of 65.6 minutes. All interviews were conducted between June 2020 and August 2020.

Presentation of the subjects

Interviews are held with five male test subjects. The average age is 67.5 years. Four subjects have a university degree. One subject has completed vocational training as the highest educational qualification.

The subjects work in three different occupational areas: university (n = 2), public health service (n = 1) and health regions (n= 1). Two of the test persons hold a professorship and another works as a research assistant. Two subjects are more likely to be located in the practice. One subject works in the social department, another as a representative of the work council of a health region. The latter actively built up the health region. The professional tasks of the test subjects concern health planning, public health care and the health economy. Each subject is an expert for one/two of these federal states: Lower Saxony, North Rhine-Westphalia, Hesse, Rhineland-Palatinate and Bavaria. Two of the respondents are already retired. However, they are still actively involved in the development of health regions.

In order to guarantee the data protection of the test persons, they receive an abbreviation for anonymization. These are named EXP_1 to EXP_5.

3. Circumstances, Structures and Challenges in Germany

Within this chapter, main health challenges as well as key institutions of the German health system will be presented. Further, the German health care system and its key policies will be introduced. Finally, the health targets will be described.

3.1. Main health challenges

Demographic change is one of the greatest challenges for the German health system. The higher the life expectancy, the greater the likelihood of multimorbidity. This in turn requires more specialist staff in care and treatment (Buck et. al 2019, p. 448). There are unnecessary diagnostic and therapeutic measures. This creates costs for patients and the health system

(Behrens et. al 2018 p. 4). The highest health risk factors are primarily based on the population's behaviour. In 2015, the number of behavioural induced illnesses was 28% of all cases. The main problems include alcohol consumption, tobacco use, and obesity. The alcohol consumption per adult in Germany is at over 11 liters. Over 21% of the German population smoke and over 16% are obese (2015). It is striking that behaviour-related risk factors occur particularly frequently in deprived population groups (OECD / European Observatory on Health Systems and Policies 2017, p.4-5).

3.2. Key institutions

In Germany, the principle of solidarity exists. This means that all those with statutory health insurance jointly bear medical costs in Germany. The German management principle is complex in the health sector. The German state sets the framework and tasks in medical care in the form of laws and regulations. The exact organization and design is handled by the joint self-administration in the health care system. This includes representatives of the medical, dental and psychotherapeutic professions, hospitals, health insurance companies and the insured (Bundesministerium für Gesundheit 2020, p. 10). The highest decision-making body is the Federal Joint Committee (G-BA) (OECD/European Observatory on Health Systems and Policies 2017, p. 6). Governmental tasks in Germany are divided according to the principle of subsidiarity. The municipalities are initially responsible for the population. This is partly because the municipalities are in close contact with the citizens. They are also responsible for local health care and prevention services. An important task is to ensure equal opportunities for the population in the health sector. The federal states can draft and implementate their own laws. Finally, the state provides the political framework (Bundesministerium für Gesundheit 2020, p. 13).

There are no consistent regulations for the administration or management of German health regions. In Germany, health regions work with ministries (Bayerische Staatskanzlei 2019) such as the Bavarian State Ministry of Health and Care, or closely with health authorities (source: interviews with experts, see Chapter 4.2).

3.3. Key policies

There is no nationwide consistent legal situation for health regions. As an example, the legal regulation of the federal state of Bavaria will be outlined. This concerns the guideline for the promotion of health regions plus (GRplusFöR). The announcement was made under the reference number P2a-G8010-2019/35-69. The regulations are valid for the period 2019 to 2022 and the object of the funding is the establishment and maintenance of functioning cooperation and coordination structures at municipal level. Cross-sectoral cooperation on site is desired. Possible recipients of funding are counties, independent cities and associations of counties as well as independent cities. The funding is tied to various conditions.

- Establishment of an office, health forum and working groups
- Implementation of the fields of action health promotion and prevention, health care and nursing
- Annual submission of an implementation plan
- Biannual progress report at the State Office for Health and Food Safety (LGL)
- Participation in the overall evaluation of all Gesundheitsregionen^{plus} by the State Office for Health and Food Safety (LGL)

A grant is awarded for a maximum of four years. The subsidy for the branch offices is up to 50,000 euros a year. This is the case if a full-time position is implemented. If it is a part-time position, the amount will be adjusted accordingly.

The internal relationship of health regions must be regulated by a cooperation agreement. The agreement clarifies the question of representation and liability. The liability for reimbursement claims lies with all members of the network (Bayerische Staatskanzlei 2019).

3.4. Health Care System

The German health care system has a complex structure. The legal framework is determined by the German government. The regulatory details are determined via guidelines by the joint federal committee. This is the highest self-governing body. The federal states monitor the self-governing bodies at the state level. In Germany, the federal states are responsible for hospital planning, investments and medical training (Behrens et. al 2020, p.7-8).

Each day, the German health care system provides approximately one billion euros (Goldschmidt 2020, p.90). With more than 369.8 billion euros, the German health care system is one of the largest economic sectors in Germany (Buck et. al 2019, p.448). A relatively strong sector separation leads to difficulties in outpatient and inpatient care (Goldschmidt 2020, p.90), causing, among others, financial burdens and increasing pressure for efficiency. This leads to interface, coordination, communication and cooperation problems. One consequence may be poorer treatment of patients (Buck et. al 2019, p. 449). Better networking could improve patient care and administrative procedures could be simplified burden (Goldschmidt 2020, p. 90).

Structural problems in the health sector are particularly prevalent in rural areas. Here, the existing lack of care offers often leads to the closure of practices and clinics. In addition, patients sometimes have to travel very long distances to specialists and clinics. Better networking among the actors in the health care system could also be helpful here (Buck et. al 2019, p. 449-450).

The structure of the Bavarian Gesundheitsregionen^{plus} is presented as an example for the management of a health region. In the state of Bavaria, the establishment of health regions has been supported since the year 2015 under review. The health regions are anchored at the municipal level and should not be implemented in administrative districts that are below the administrative level of a district (Kreis) or independent city (Kreisfreie Stadt). The aim of the funding is to strengthen the networking of health care stakeholders. The Gesundheitsregionen^{plus} have a three-part structure: coordinating office, establishment of a health forum, and establishment of topic-related working groups.

The office is the contact partner for the actors in the regional health care system. It should be attached to the District Office or the Health Office. It is responsible for managing the health region, which includes coordinating the health region, transferring information between the committees and monitoring the implementation plan. The Health Forum is the central management and control instrument of the health region. It is a body in which different actors from the regional health care system participate. The Health Forum should take place at least once a year. Policy-relevant topics on health promotion and health care are discussed. The orientation of the topic-related working groups is determined here. These are dedicated to individual topics. The relevant actors and experts discuss the present problems and develop proposals for solutions (Eicher et. al 2016, p.2-5).

3.5. Health targets

In Germany, health objectives are understood to be agreements between the responsible actors in the health care system, with the health of the population as the overarching goal. The aims are formulated as recommendations based on proved evidence. They integrate various health policy aspects and are developed by representatives of politics, funding agencies, service providers, self-help and patient organizations, science and research. Since 2000, nine goals have been formulated, which are still of great importance.

Table 1 Presentation of health objectives in Germany including explanation of the objectives (own presentation, by Gesellschaft für Versicherungswissenschaft- und gestaltung e.V..

Health objectives	
Diabetes mellitus type 2	Reduction of disease risk, early detection and treatment
Breast Cancer	Reduction of mortality, increase in quality of life
Reduction of tobacco consumption	Protection from passive smoking, increase in smoking cessation in all age groups
Growing up healthy	Life skills, exercise, nutrition
Increasing health literacy, strengthening patient sovereignty	Increasing transparency in health care, development and expansion of health literacy
Depressive diseases	Prevention, Early detection, Sustainable treatment
Getting older healthy	Social participation, reduction of health risks, appropriate dementia care
Reduction of alcohol consumption	Increasing the awareness of problems, early detection of alcohol problems
Health around the birth	Health care, health aftercare

In 2020, the main focus of work is on "Growing up healthy" and "Growing older healthy". In addition to the national health targets, there are also health targets or priority fields of action that are specific to each federal state (Gesellschaft für Versicherungswissenschaft- und gestaltung e.V.).

Health regions can influence health targets. For example, the Gesundheitsregion^{plus} in the district of Ansbach formulates regional health goals at the Health Forum. The latter is the central steering committee of the health regions (Gesundheitsregion^{plus} Landkreis Ansbach und Stadt Ansbach). Here, regional needs and states of health are recorded in the areas of health care, prevention and health promotion and subsequently identified as health targets (Gesundheitsregion Bäderland Bayerische Rhön). The Gesundheitsregion^{plus} in the district of Günzburg also develops regional health goals. This region has, for example, formulated the visualization of the health offers and the attractiveness of the district as regional health objectives (Landkreis Günzburg. Die Familien- und Kinderregion). In 2020, the main focus of work will be on "Growing up healthy" and "Growing older healthy" (Gesellschaft für Versicherungswissenschaft- und gestaltung e.V.)

4. Health Network Manager

The following chapter presents the results of the literature search with regard to Health Network Managers.

Description

> "[...] is a service provider and consultant for services, [...] cannot and does not have to be an expert in the individual topics - his task lies elsewhere: it is to create spaces in which all or as many as possible contributions and motivations from the various sectors can be accommodated. We [sic] are not additive, but integrated". (Heckes 2016, S. 62)

In Germany there is no uniform definition for the profession of a regional health network manager. However, Heckes' description can be considered generally valid. Above all, it illustrates the coordination task of the manager.

A health region is understood as an association of health care players active on the administrative level of a district or district-free city as well as other areas of regional services of general interest (Landesvereinigung für Gesundheit and Akademie für Sozialmedizin 2018, p. 7). The goals of a health region are to expand regional competencies, increase regional added value and also to secure the participating companies (Rundholz 2016, p.31; Jedamzik 2017, p. 58). The following actors are recommended as members of a health region: Representatives of the community, Association of Statutory Health Insurance Physicians, Statutory Health Insurance Funds, Medical Association of the local hospitals, resident doctors, outpatient and inpatient care facilities, self-help organizations as well as district administrations (Landesvereinigung für Gesundheit and Akademie für Sozialmedizin 2018, p. 10). The networking of the players in the health care system can pool competencies, create synergies and, if necessary and possible, save costs. The value of the network is significantly influenced by its coordination. This is where the regional health network manager comes in. The manager functions as a mediator within the network (Buck et. al 2019, p. 451). This also applies when members are competing with each other. Competition can be avoided by deliberately excluding issues that are defined as competing (Behrens et. al 2018, p. 5-15).

4.1. Status Quo in Germany

In Germany, there is no consistent curriculum for the training of regional health network managers. However, there are guidelines for the establishment and management of health regions.

Challenges

The strong separation of individual health actors in Germany is a challenge for regional health network managers. The reason for this separation is the high complexity of the German health system. (Buck et. al 2019, p. 451). A further challenge is the strong selection of the sectors and industries involved. Within the network, roles must be distributed and structures developed (Kettener-Nikolaus 2017, p. 24). The challenges also include overcoming mistrust among partners and technical hurdles in communication (Angerer et. al 2017, p.9).

Competencies/tasks

For a successful establishment of a health region as well as a successful management, versatile competencies are needed. The range of tasks of regional health network managers is wide. Central tasks include the initiation, planning, implementation and professional support of regional development processes. Additional tasks involve, among others, the strengthening of skills of specialists (Rundholz 2016, p. 33).

According to Buck et. al (2019), part of these tasks are *infrastructure*, *moderation*, *promotion* and *governance*.

Infrastructure	moderation	promotion	governance
• Resource Management • IT Strategy • Information systems & communication channels	• Role understanding & responsibility • Intensity of cooperation • Communication & Collaboration • Service offer for network members • Network Culture	• Member recruitment & administration • Promotion strategy • Networking with external interest groups	• Legal form & contracts • Decision-making mechanisms • Network strategy & goals • Sustainable financing model • Performance monitoring

Figure 1 Overview of the core functions of network management (after Buck et. al 2019, p. 10-17.)

The *infrastructure* includes the management of resources, which contains finances, and personnel and physical resources (Buck et. al 2019, p.452). The securing of financial resources should be targeted through systematic and targeted acquisition of finance. In this way long-term networking can be achieved. An annual investment and project plan should be drawn up to provide a sound basis for discussion (Behrens et. al 2018, p. 10). Furthermore, the IT strategy and suitable communication tools for the network are developed or selected in this area.Clear communication of the selected channels is crucial to avoid misunderstandings (Buck et. al 2019, p. 452-453). In addition to virtual communication, personal exchange is very important in face-to-face meetings. These offer good opportunities to build a relationship of trust (Behrens et. al 2018, p. 11).

The *moderation* of the network is usually done by the managing director. This field of action includes a sensible allocation of resources. In addition, tasks are allocated to the individual actors in a way that is tailored to their needs. It should be noted that the actors have the appropriate skills and capacities. The area moderation is characterized by operational management. Both internal and external inquiries are handled here. It is a neutral support of the communication processes. This can also be understood as a mediator. In order to relieve the actors, surveys can be conducted to determine the need for support (Buck et. al 2019, p. 454-456). In addition, the transfer of information between the individual committees is also important (Eicher et. al 2016, p. 4). It is recommended that a code of conduct is agreed upon and processes are clearly defined (Behrens et. al 2018 p. 15).

Governance includes the strategic level of the network. An overarching network strategy is developed together with the stakeholders. Other tasks include the institutionalization of forms and mechanisms of governance. The responsibility structure is decentralized, as it is oriented towards the network. In addition, the formal and informal rules of cooperation within the network are defined and contractually agreed upon. This is particularly important at the beginning of cooperation in the network. In this way responsibilities can be assigned and reliable structures can be established network. Governance also includes the control and documentation of events in the network (Buck et. al 2019, p. 454- 455). In the Gesundheitsregion^{plus} (Bavaria), for example, a semi-annual progress report must be produced (Eicher et. al 2016, p. 4). Initially, most health regions are founded as associations, then an organization with its own legal form is established. The following legal forms are recommended for managing a health region: GmbH and GmbH & Co KG (Buck et. al 2018, p. 12).

The area of *promotion* deals with public relations work. It includes the creation of a uniform corporate design, the perception of trade fair appearances or the network's Internet presence. In addition, new members are solicited here. It is important to determine an overarching promotion strategy for the network (Buck et. al 2019, p. 456) and to communicate it. Good public relations work can result in financial support for the network, for example, through close contact with public institutions. At no time, the sponsors' interests should have precedence before those of the network (Buck et. al 2019, p. 457). Promotion also includes the organization of events that inform the public about the network and its work. These events could be conferences, symposia or further training courses. For active maintenance of the network, the creation and distribution of a newsletter is recommended (Behrens et. al 2018, p. 16-17).

Regional health network managers need particular personal attributes. These include good coordination, communication and interpersonal skills as well as empathy. The stakeholder's different kinds of interests have to be understood and taken into account. For that purpose, periodic evaluations could be helpful (Buck et. al 2019, p. 452-456). Furthermore, a regional health network manager needs to be convincing, to spread his motivation to the associated partners. Thereby, the manager can strengthen collaboration and commitment within the network (Heckes 2016, S. 62).

Financing/ Administration

Regional health networks are financed variously. They are either publicly funded within the scope of third party projects, or by capital contributions subscribed the actors or it is paid by membership fees or income from the network's own economic activities. It is advisable to track project progress using key figures and interactions. (Buck et. al 2019, p. 454-455)

Software

A digital connection of the individual players can improve the infrastructure and processes in the network (Bergh et. al 2017, p. 17). For successful management of health regions, it is important to store contact data in a consistent and professional manner. A well-maintained contact database with high data quality is recommended for this purpose (Behrens et. al 2018, p. 17). To optimize the exchange of information within a health region, it is recommended to strengthen digital networking. It is also important to pursue a consistent IT strategy and to take data protection into account. A high-quality digital infrastructure may require high investments in the beginning, but clear advantages, like growing cohesion and a more effective collaboration in the network, will be worth the effort in the long run.. Ultimately, patients will benefit from this investment. The work of the regional health network manager can be supported by different software. For example, data exchange software, which is rather cost-effective and already sufficient for some networks. By all means, the scope of the IT system should be measured against the strategy of the network. (Buck et. al 2019, p. 450-453).

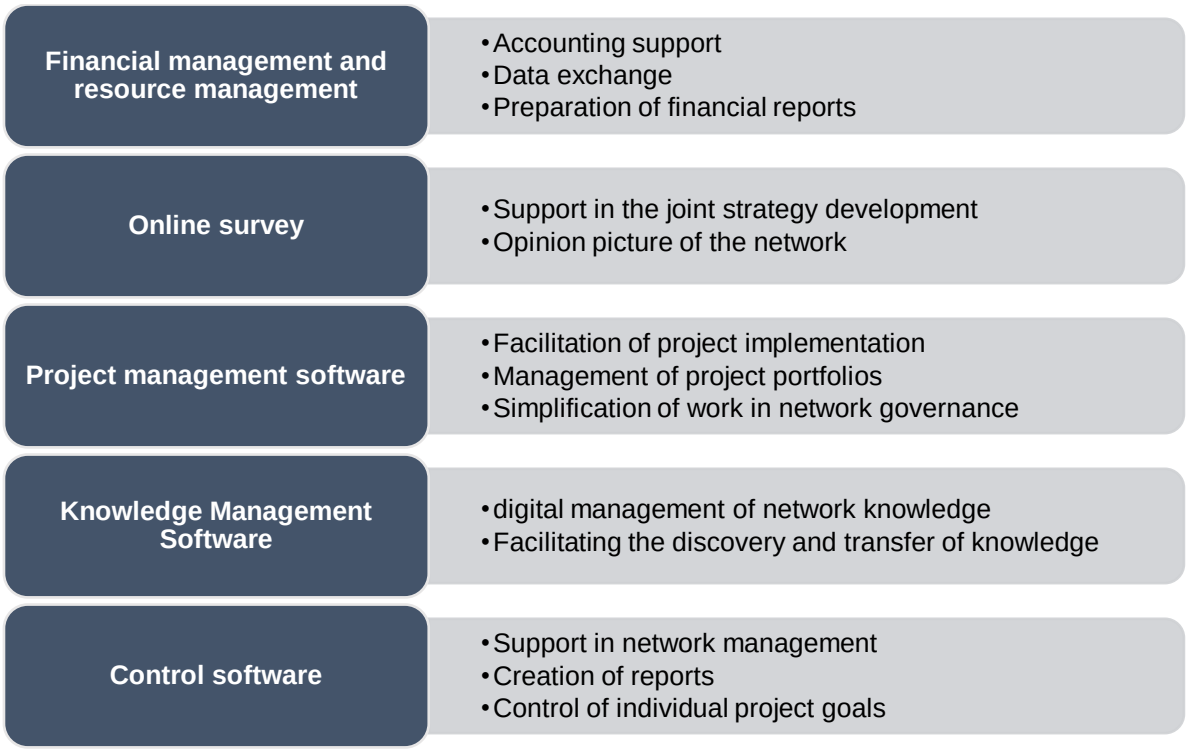

Figure 2 Support potential through software solutions in the management of health regions (own presentation, after Buck et. al 2019, p. 460-463)

4.2. Results of the conducted Interviews

The presentation of the results is done separately for each federal state. The highlights of the interviews are marked. Finally, all interviews are summarized together.

Interview Rhineland-Palatinate / Hesse

The interview was conducted with the test subject EXP_1 about the federal states of Rhineland-Palatinate and Hesse. The federal state Rhineland-Palatinate has an area of 19 858 km^2 (Statistisches Bundesland 2020) and has a total of 4 093 300 inhabitants (2019) (Rheinland-Pfalz Statistisches Landesamt 2020). The state of Hesse has an area of 21 116 km^2 (Statistisches Bundesamt 2020) and a population of 6 288 080 (2019)(Hessisches Statistisches Landesamt 2020).

State-specific information on the health care system was provided. The respondent rated the health care system on an international level with 7-8. A major difference between Hesse and Rhineland-Palatinate is the agglomeration. While Hesse is relatively centrally structured, Rhineland-Palatinate has many small medium-sized centres and is more rural in structure. In both states, there are barriers accessing the health care system, especially in rural areas. This is due to the great distance to the central providers. Overall, however, there are only few financial barriers to access the health system and health facilities are generally well equipped. The respondent EXP_1 rates health promotion and prevention with a5-6. There is too little investment in public health. In addition, the understanding of the term public health is too fragmented. In the field of resources, EXP_1 names a large backlog of renovation. In terms of information, there is a large supply. Patients can obtain information on health topics of their own motivation, for example on the Internet. Here, however, the problem of quality assessment

must be taken into account. For patients with a migration background, many clinics offer multilingual specialists.

Different central challenges arise in the development of health regions. On the one hand, regional health network managers must initiate a transition management between individual wards. On the other hand, the challenge lies in public relations work. The managers are always under public observation and assessment. It is therefore particularly important to report on positive developments from their work. The core tasks of the regional health network managers include management and specialist tasks.

> Management: project management
>
> Technical tasks: medical economics, health, informatics

The regional health network manager should deal with chronic disease patterns. The respondent EXP_1 recommends cooperation with actors from the health care system, the economy and politics.

> Healthcare system: State medical associations, service providers, state nursing association, associations of panel doctors at state and regional level, hospitals, pharmacies, state hospital association, public health service, public health system
>
> Economy: banks, insurance companies, logistics, IT providers, construction industry, producers, pharmaceutical manufacturers, service providers
>
> Politics: Regional Council

Cooperation with the state medical associations can lead to an increase in the quality of continuing education. The respondent also recommends using health congresses to establish contacts.

The required competencies can be categorized as professional knowledge and personal characteristics.

> Professional knowledge: Health communication, basic knowledge of IT, legal aspects (especially data protection), fund raising, basic pedagogical training in dealing with patients and relatives
>
> Personal characteristics: communication skills

The regional health network manager should comprehend the connection between health and disease. The different living environments of the population must be taken into account. Both positive improvements and concrete problem areas should be considered. In this way, quality parameters can be developed and prepared for future projects.

The respondent EXP_1 considers the completion of a master's program to be a necessary qualification. He advocates this, among other things, because of regular communication with doctors. A certain amount of practical experience is also profitable. The respondent suggests a dual study program, which offers both theory parts and room for practice, and recommends a generalist education. The respondent EXP_1 states that there are already educational opportunities for regional health network managers. However, these are not specifically tailored to the needs of the managers. Potential employers are physician networks and health insurance companies. For the future, the respondent would like to see this professional group legally established. Health regions should be administered by the public sector. Regional health network managers have a very important role in health care, which they can improve. Among other things, they can improve the referral of patients.

The respondent EXP_1 emphasises that a newly developed software for regional health network managers must be based on existing structures. He reasons this with the encryption of data and the laws on data protection. He would consider software for monitoring the health status of the population to be profitable.

Interview Bavaria

The interview was conducted with subject EXP_2 on the state of Bavaria. The federal state has an area of 70 542 000 km^2 and a population of 13 125 000 (as of 2019) (Statistisches Bundesamt 2020). EXP_2 rates the current health care system at the regional level as 7th best. The respondent describes the sectoral separation in the care structures as very pronounced. This causes communication problems, among other things. The respondent rates health promotion and prevention as 6th best. He regrets that only 2% of the budget of the statutory health insurance funds is spent on health promotion and prevention measures. Many resources are needed for networking in a health region. Currently, there is one person per health region in Bavaria who coordinates and supervises networking. This is always associated with funding, but the municipalities cannot finance the jobs themselves.

The central challenges in building a health region derive from the strong sectoral separation, which makes it difficult to identify the relevant persons in the respective municipality. For successful development, it is important to identify the central problems and to create an awareness of the problems among the involved actors. Good public relation work must be done in a networked health region. The creation of and participation in regional working groups can be helpful to promote and identify (common) problems. Core tasks include management, scientific work and moderation.

> Management: network management, translation function between actors and politics, political consulting, conflict prevention and resolution, acquisition of funding
>
> Scientific work: professional technical support, process evaluation, evaluation of results
>
> Moderation: professional moderation, meeting preparation, preparation of minutes

Regional health network managers in Bavaria should pay special attention to the disease of obesity and the vaccination fatigue of the population. Other problems are the understaffing of family doctors and unequal opportunities for elderly people. The respondent EXP_2 recommends that the subjective perception of the problems of the actors in the health care system should be supplemented by in-depth analyses. Regional health indicators and data can be used for this purpose.

After the successful establishment of a health region, challenges can also arise. These lie primarily in the management of the health regions. It is important to strengthen and motivate the actors in their projects, also to promote the willingness to participate in the individual working groups. However, it is also important that the regional health network manager withdraws from the projects at some point. He or she is not responsible for the management or the conduction of the projects.

For a successful health region, EXP_2 recommends cooperation with a wide range of actors from the health care system, science, society and politics.

> Health care system: regional medical associations, health and nursing care insurance companies, self-help, providers of facilities (e.g. Caritas), nursing care, psychotherapists, hospital associations, pharmacies
>
> Science: Research, educational institutions, adult education centres

Society: Citizens' representations, senior citizens' representatives, sports associations, sports clubs

Politics: Specialist representatives of health policy, district administration

The required knowledge and skills of a regional health network manager can be divided into scientific, practical and personal categories. It is clear that, above all, personal qualities play an important role in the daily routine of a regional health network manager.

Scientific skills: Knowledge of public health (study), independent and structured work

Practical experience: Work experience, network expansion, public relations, project management, time management

Personal qualities: social skills, empathy, openness to other points of view, communication, assertiveness, moderation skills, frustration tolerance

Subject EXP_2 recommends dealing with the social health dimensions. Here it is important to involve politics. In this way, health-promoting structures and framework conditions can be established. The respondent conceives, for example, of sports equipment in the park.

Subject EXP_2 works in the public health service. There, regional health network managers are employed in the upper and higher services. For the higher service, interested parties need a Bachelor's degree in health sciences, management, health promotion or a similar qualification. At this level, managers work mainly cooperatively and in committees. For employment in the higher service, interested parties require a Master's degree. Their tasks are of professional and strategic nature. They independently conduct scientific analyses and give lectures on their work. There are already training opportunities for the work of a regional health network manager. However, these are not specifically tailored to this profession. A potential employer is the health department. It is important that the employer is a neutral body. In this way, collisions of interests and sensitivities can be avoided. The administration of a health region should be in public hands. According to EXP_2, regional health managers make a very valuable contribution to the health care of the population. Complex influencing factors arise. This is also noticeable in politics. According to the respondent, the communication of local politics improves. The participants coordinate their actions better and can therefore act more effectively.

In Bavaria, regional health network managers use standard office programs at the time the interview was conducted. According to EXP_2, other programs would be useful. These include digital tools for communication, budget management, documentation and monitoring. Furthermore, a tool for successful public relations would be useful.

Interview Lower Saxony

The interview was conducted with subject EXP_3 on the federal state of Lower Saxony. The federal state has an area of 47 710 km^2 (Statistisches Bundesamt 2020,) and a population of 7 993 608 (2019) (Landesamt für Statistik Niedersachsen 2020). His information refers mainly to the city of Braunschweig. The respondent rates the health care system at the regional level with a 7-8. In Braunschweig, the special needs of migrants are addressed. These can be difficult to meet through conventional systems. For this reason, an intercultural service center was set up in Braunschweig that deals specifically with health education and support for migrants. The respondent rates the area of health promotion and prevention as 8-9. The city of Braunschweig has good addiction prevention programs. In general, EXP_3 considers the area of health promotion and prevention underdeveloped and underfinanced. The latter applies especially to the sustainability and evaluation of projects. Resources for health care are sufficiently

available, especially for doctors and hospitals. However, nursing care is chronically under-financed. A further problem is that acquiring resources requires a very high level of human resources, which in turn requires financial resources.

According to EXP_3, the central challenge in the development of a health region lies primarily in the location of the manager. A position close to the department is recommended. This can increase the impact of the initiatives. The core tasks of the regional health network manager are both scientific and coordinating.

Scientific tasks: Formulation of objectives, evaluation

Coordinative tasks: Project Management

The regional health network manager should deal with midwifery care and mental health of the population in Braunschweig in particular and Lower Saxony in general. Especially in Lower Saxony, there are very long waiting times for patients in need of medical treatment. Health in old age and child health are also important topics. Especially the last phase of life in a hospice needs more attention.

Once the health region has been established, different challenges may arise for the regional health network manager. The manager must always keep up to date with the latest scientific findings. To do this, it is important that he can access scientific literature quickly and independently. He or she must also develop an understanding of the interests of the stakeholders. In order to initiate and implement projects, the manager needs knowledge in fund raising.

Respondent EXP_3 names actors from the health care system as important participants in a health region. This includes all actors from the health care sector and the prevention chain. The following actors should be emphasized:

outpatient and inpatient doctors, nursing home directors, nursing service providers, health education providers (e.g. adult education centers), self-help groups

The required competencies of a regional health network manager can be categorized into vocational training and personal characteristics.

Vocational training: primary education, basic public health studies, knowledge of group dynamics

Personal qualities: open diplomatic communication, enthusiasm, persuasiveness, persuasive power, diplomatic equipment

Regional health network managers should address physical, social, mental, spiritual, emotional and sexual health dimensions. It is important to know and consider the respective needs of the cohorts. This means lifelong learning and regular self-reflection. Holistic offers should be created.

As a prerequisite for training as a regional health network manager, EXP_3 recommends a degree program. In this program, comprehensive skills for analytical demiological and evaluation skills should be acquired. In addition, knowledge of management should be taught. A high proportion of self-learning processes and practical experience are also desirable. According to EXP_3, there are already educational programs for regional health network managers available. However, these are not specifically tailored to the needs of this professional group. The local authority is appropriate for hiring a regional health network manager. Here it needs a neutral employer with neutral interests. The administration of health regions should be in public hands, as otherwise conflicts of interest could impend. Country-specific law should be applied.

At the time of the interview, regional health network managers use standard office programs. In some cases SPSS, a program for data processing, is used. Specific programs of the health office are also used. Digital tools that facilitate non-personal communication would be desirable.

North Rhine-Westphalia

The interview with subject EXP_4 was conducted about the federal state of North Rhine-Westphalia. This federal state has an area of 34 112 km^2 and a population of 17 947 000 (status 2019) (Statistisches Bundesamt 2020). He rates the health care system at the regional level at 8.7. There is a wide range of services. However, the health care system at the regional level is unfair to vulnerable groups. The system is confusing both for patients and for the actors. He rates health promotion and prevention at the regional level with 5.5. Here too, vulnerable groups are particularly affected. They have problems accessing the services because they are sometimes less able to assert themselves and articulate their views. In some cases, they do not recognize their needs. These groups include cohorts with low salaries and often people with a migration background. Their special needs are not sufficiently addressed because there is no patient-oriented approach for vulnerable groups. In addition, there is neither a preventive patient orientation nor an integrated approach. Another problem in the health care system are the resources, of which there are too few. In addition, the available resources are not used appropriately.

The central challenges lie mainly in the management of the network. The regional health network manager must facilitate cooperation between the network and the funding agencies. The difficulty also lies in the cooperation of very diverse actors. The manager must provide orientation for the actors and motivate them to work well together in the long term. A further challenge lies in identifying regional health problems. To do this, the regional health network manager must create programs that are patient- and target group-oriented. The core tasks of the regional health network manager include administrative and practical tasks.

> Administrative tasks: creation of a platform for different actors (place for exchange of motives and interests), monitoring
>
> Practical tasks: provision of design perspectives

Regional health network managers in North Rhine-Westphalia should address a wide variety of issues. These include prevention, the needs of vulnerable groups and the integration of patient-oriented care structures. In addition, the potential of digitization should be used. In order to strengthen the healthcare system, more attention must be paid to the initial and further education of skilled workers. In this way, the supply of skilled workers can be ensured.

Challenges can also arise after health regions have been established. These include social communication, political bureaucracy and political democracy. The regional health network manager must understand the subsidy system. A health region consists of a wide variety of actors. Their vanities must be taken into account. EXP_4 recommends the inclusion of the following groups.

> Economy: public, private, electrical engineering, cyber security
>
> Healthcare: Service providers, supply providers
>
> Politics: Municipalities, landscape association, district governments
>
> Science

The regional health network manager needs personal skills and professional knowledge for a successful management of health regions.

> Personal skills: intrinsic motivation, sense of action,
>
> Professional knowledge: understanding of health science issues, interdisciplinary knowledge, knowledge of business administration, knowledge of digitization, understanding of life sciences

The regional health network manager should pay special attention to the population's health-related self-consciousness, health orientation and vulnerable groups.

Respondent EXP_4 recommends the completion of a master's degree or doctorate in the field of social science, organization science or innovation science. Practical experience could also be useful.

The respondent reports on a training program for regional health network managers. But it was not positively accepted, because of the unprofessional organization.

Potential employers are cities and municipalities. In addition, there are employment opportunities in health management, at missionized chambers of commerce and health insurance companies. The administration of health regions should be regulated by civil services. Financing could be based on membership fees. Respondent EXP_4 estimates that the work of a regional health network manager could trigger forward orientation and help to improve the health system, health products and health services.

According to subject EXP_4, regional health network managers use common office programs.

Saarland

The interview with subject EXP_5 was conducted about the situation in the federal state of Saarland. The federal state has an area of 2571 km^2 and a population of 987 000 (status 2019) (Statistisches Bundesamt 2020). The respondent rates the health care system in Saarland with a 7-8. Due to the small size of Saarland, communication in the health care system is very good. Health promotion and prevention, which is particularly important for school children and the elderly population, is rated with a 6. The financial and human resources in Saarland are very good. There is a partial overcapacity of these resources. This mainly affects hospitals. Respondent EXP_5 recommends fewer clinics instead of small clinics rather specialized clinics. There is a lack of family doctors in Saarland. The federal state government already reacts to the lack of family doctors by supporting medical students financially, who commit to remain in Saarland after finishing university. There is a good infrastructure in the health region Saarland. Waiting times for specialized doctor´s appointments are sometimes long.

One of the central challenges in the development of a health region is to find compromises between the individual players. Different interests must be considered and negotiated and politicians should be involved. The core task of a regional health network manager is linking the health sector. To do this, he or she needs comprehensive knowledge of the health system and an open mind. Regional health network managers should pay particular attention to the nature of the target group. According to EXP_5, the manager does not carry out his own projects, but delegates them much more. One of the challenges after building up the health region is that the manager has to keep up to date with the latest developments in health care. For this he can consult the press or institutions.

Respondent EXP_5 recommends cooperation with actors from the health care system, politics and economy. These include.

Health care: Hospital owners, health insurance companies, medical profession, medical association, nursing advice, association of panel doctors

Politics: State governments

Economy: Industry

For successful work as a regional health network manager, professional and personal knowledge is required.

Professional knowledge: basic medical knowledge, basic economic knowledge

Personal characteristics: social competence

Subject EXP_5 hopes that regional health network managers will improve the image of the health care system. He recommends the regular examination of current research findings and the intensive study of the topic of nutrition.

On the one hand, EXP_5 considers a degree course to be a prerequisite for training as a regional health network manager. However, he emphasizes that personality is more important. The respondent states that there is currently no training program for regional health network managers. A potential employer is the municipality. However, at the time of the survey, the municipality is not recruiting regional health network managers in the Saarland. Health regions should be privately administered. Currently, the respondent considers regional health network managers to be well integrated into the health care system.

The respondent EXP_5 states that there is no use of specific software in health regions in Saarland.

Summary of the interviews

In total, 5 interviews were conducted with representatives of health science, health organizations and health regions. Diverse and interesting information about the management of health regions is the result. The focus is on the federal states of Lower Saxony, North Rhine-Westphalia, Hesse, Rhineland-Palatinate, Bavaria and Saarland.

The interviews show that there are access barriers for patients in the German health system. On the one hand, these are based on problems with the infrastructure, especially in rural areas. On the other hand, access barriers arise for vulnerable groups. These arise especially for people with a migration background due to language problems and the understanding of their own health. The conventional systems for addressing patients are often of little use here. However, many clinics are showing approaches of solving language-related problems and deploy multilingual staff. The sectoral separation in the health care system is described as very pronounced. At this point, successful management of health regions could improve the care of the population. Health promotion and prevention are partly underfinanced. Care in particular is chronically underfinanced.

The respondents recommend the inclusion of actors from the health care system, business, politics, science and society in regional health networks. The successful development of a health region can be promoted by identifying central problems and creating awareness of these

circumstances. This represents one of the greatest challenges and certainly claims many resources. Another difficulty is the cooperation with actors from different areas.

The following overview shows the identified competencies of a regional health network manager.

Table 2 Competencies of a regional health network manager

Professional	Knowledge of digitalization, basic knowledge of IT, knowledge of business administration Health communication, basic pedagogical training in dealing with patients and relatives, basic medical knowledge, understanding of health science issues Fund raising, legal aspects (especially data protection), knowledge of group dynamics
Scientific	Knowledge in public health, independent and structured work
Practical	practical work experience, network expansion, public relations, project management, time management
Personal	Empathy, social competence, open diplomatic communication Enthusiasm, persuasiveness, frustration tolerance, intrinsic motivation Assertiveness, moderation skills, sense of action

The test persons recommend a generalist education that includes administrative and technical knowledge as well as management content. There are already training opportunities for regional health network managers. These are not specifically developed for this professional group. A regional health network manager must constantly educate and reflect himself.

When creating the post of a regional health network manager, it is important to ensure that it is a neutral body. A potential employer is, for example, the public health department.

The test persons show interest in the development of a software that supports regional health network managers. It is recommended to build on existing structures. Tools for communication, budget management, documentation and monitoring would be helpful for future regional health network managers.

5. Discussion & Conclusion

Strengths and weaknesses of the research methods

Due to the lack of a consistent job description of a regional health network manager, it is difficult to find literature on the required competencies and skills. During the literature research it became clear that the publications concerning regional health networks are mostly grey literature or political contributions. However, the practical relevance of these contributions also offers a real insight into the activities of a regional health network manager. Due to the Covid-19 pandemic, it was difficult to conduct the interviews in a consistent manner. This is due to distance rules and different institute rules regarding the use of video conferencing.

Summary of the results

The research questions regarding the circumstances, structures, challenges and competencies of a regional health network manager in Germany could be answered comprehensively. The results of the literature review and the expert interviews show similar trends with regard to the German health care system and regional health network managers. Both methods describe the strong sectoral separation in the health care system. This can lead to poorer patient care. The difficulties of rural health care are also defined as challenging. The current national health goals of "growing up healthy" and "growing older healthy" are reflected in the experts' responses to the survey of relevant topics in health regions. The research methods revealed that there is no consistent administrative strategy for health regions. Both the literature research and the interviews show that there is neither a uniform definition nor a curriculum for regional health network managers in Germany. Cooperation with all actors in the health sector is recommended: health, economy, politics, science and society. The literature research and interviews result in tasks that can be assigned to the areas of infrastructure, moderation, promotion and governance. The regional health network manager needs versatile competences. These are found in the literature research only as a marginal topic. In contrast, the expert interviews provide a comprehensive picture of the required competencies. These can be classified as professional, scientific, practical and personal competencies. These include empathy, open diplomatic communication and intrinsic motivation. Particularly the personal authority of a regional health network manager is defined in detail.

For the development of a software for the management of health regions, a consistent strategy as well as compliance with data protection is recommended as particularly important. The interviews revealed that tools to support budget management, documentation and monitoring would be useful.

Recommendations for stakeholders and policy makers

The following recommendations refer to stakeholders and political decision makers:

- Increase financial resources for human resources in the management of health regions
- Observance of country-specific law in the development of health regions
- Long term legal establishment of managers for health regions
- Employment of regional health network managers in the upper and higher service
- clear definition of the term Public Health

Recommendations for regional health network managers in Germany

For regional health network managers in Germany, the following recommendations apply:

- Identification of key problems in the region, taking into account health reporting and regional health indicators
- Attention to the needs of vulnerable groups
- Attendance of health congresses to establish new contacts
- strong public relations work about positive work in the health region
- Involvement of politics to increase the establishment of health-promoting structures and framework conditions

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ELTE EÖTVÖS LORÁND UNIVERSITY

Competences in Health Network Management

IO I: Circumstances, Structures and Challenges

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Contents

1. Introduction

1.1. Aim of the present paper

In this paper, we describe the broader environment a prospective Health Network Manager has to face and deal with in Hungary. Currently, there is no such position in the country, however, there are actors fulfilling functionally similar positions. First, we present the general health status of the Hungarian population, the structure of public health and health care system with special focus on the institutional arrangements of health promotion and prevention activities. Then, we present the results of several expert interviews, focusing on the challenges and needed competencies of people working in health promotion and prevention locally.

1.2. Research Questions

1. **What kind of Circumstances, Structures and Challenges do Health Network Managers face in Hungary?**
2. **Which Competences do Health Network Managers in Hungary need?**

2. Methods

The first part of the paper is based on desktop research. Different statistical databases, as well as a body of scientific and grey literature were used to describe the health status of the population and the structure and properties of the health care and public health system in the country.

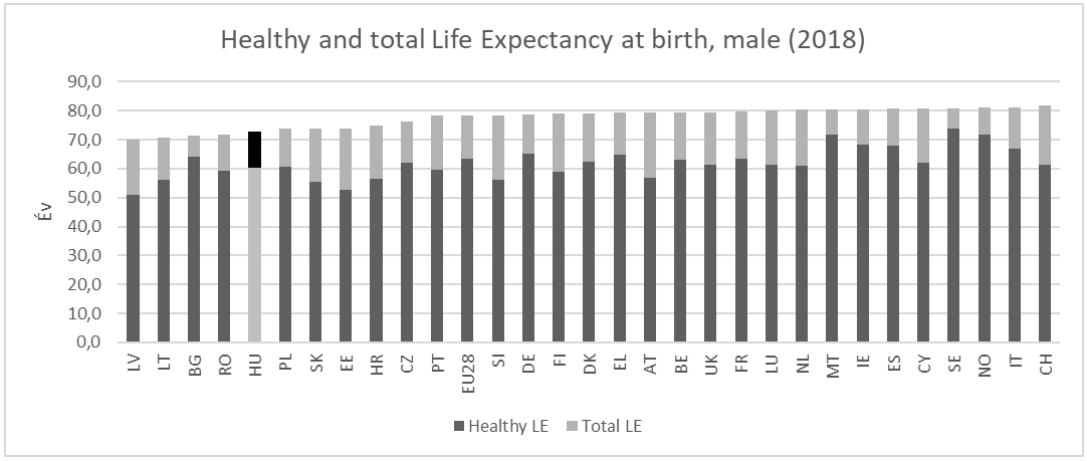
The second part of the paper is based on five semi-structured qualitative interviews, conducted with experts from different fields, related to health promotion and prevention. The transcripts of the interviews are available at the authors. The interview guide is attached. In the interviews, we mainly focused on the current activities (where it was applicable), and we also aimed to learn what the interview subjects were thinking about the necessary competencies of a prospect health network manager in the country.

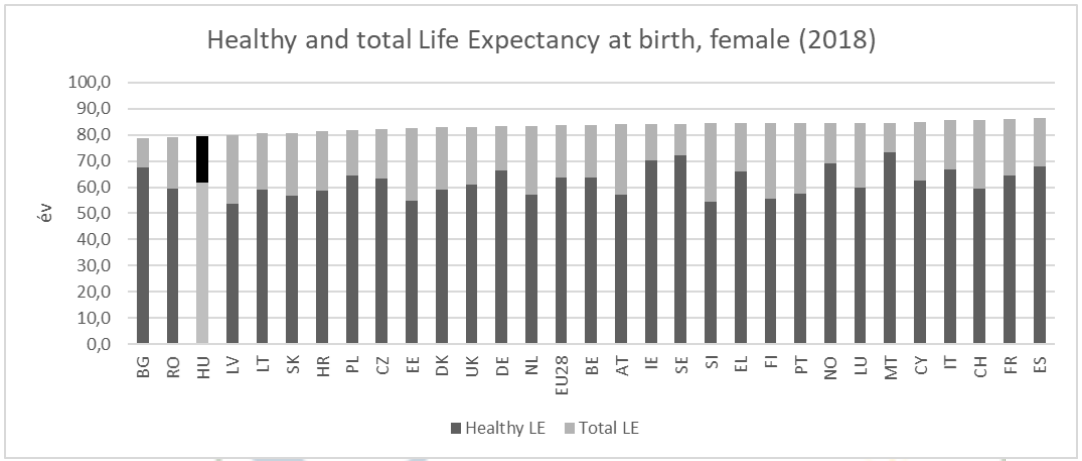
3. Circumstances, Structures and Challenges in Hungary

3.1. Main health challenges

The average health status of the Hungarian population is far beyond of the “average” European in terms of most health status indicators. Life expectancy at birth in Hungary is the 5th lowest for males and 3rd lowest for females in Europe; Hungarian males are lagged behind the best performing Italian men by 8.5, Hungarian females behind Spanish women by 6.7 years (*Figure 1*). In terms of healthy life expectancy, the situation of the country looks better, however, reporting better health may not only be the consequence of actual better health, but also that of a different reference group.

Figure 1: Health and total Life Expectancy at birth in the EU, males and females (2018)

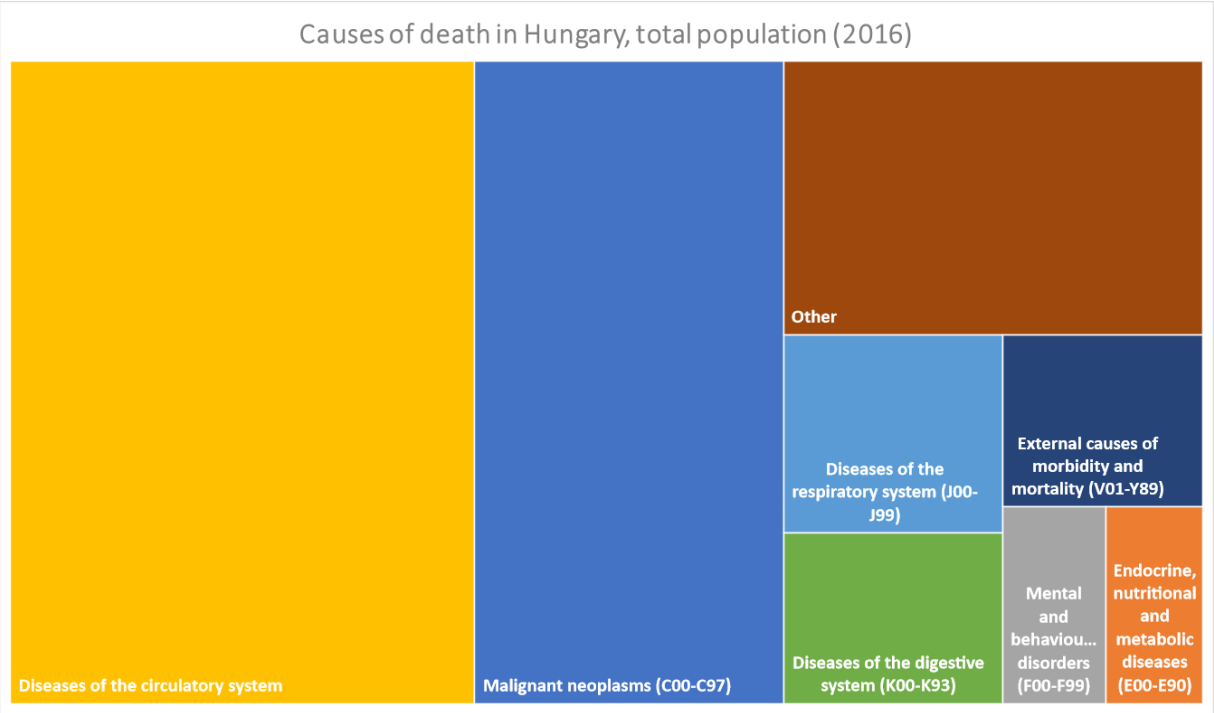




Source of data: Eurostat database, [hlth_hlye] and [demo_mlexpec] datasets

As seen on *Figure* 2, leading causes of death are the diseases of the circulatory system (39% of all deaths), with ischemic heart diseases alone causing almost one quarter of total mortality; malignant neoplasms (causing 26% of total mortality); and diseases of the respiratory system other than cancers (responsible for 5,7% of all deaths).

Figure 2: Causes of death in Hungary, total population (2016)



Source of data: Eurostat database, [hlth_cd_aro] dataset

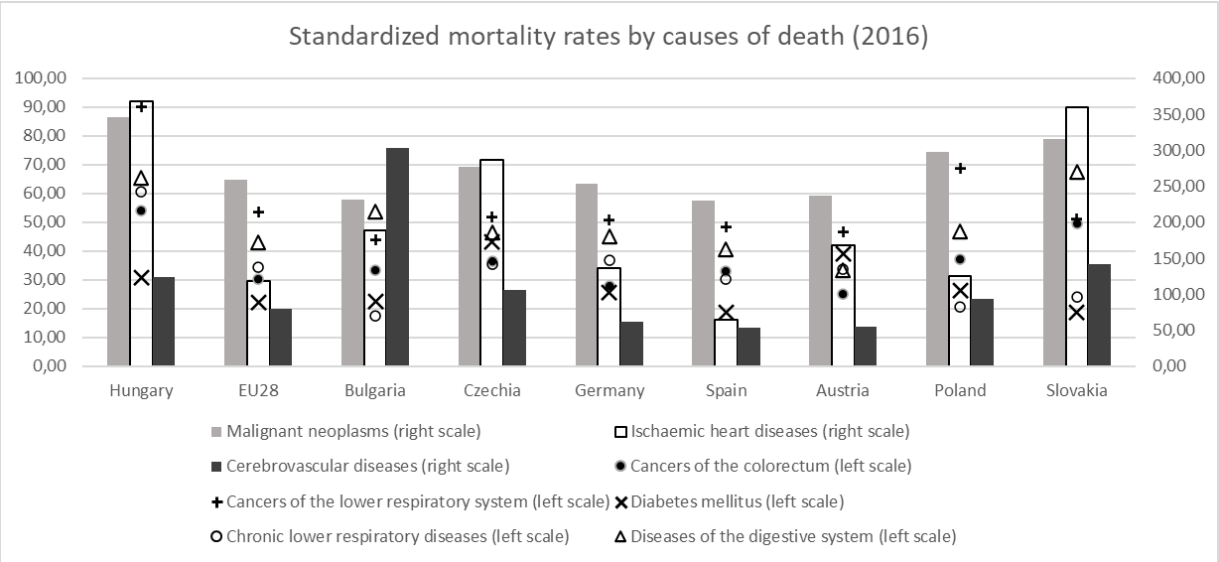
According to healthdata.org[1], between 2007 and 2017, the number of deaths occurring due to Alzheimer's disease and of COPD has increased substantially: in 2017, 16% more people died of Alzheimer's and 8% more people of COPD than 10 years earlier. Though, the absolute number of deaths-related to these causes are still relatively low, compared to other causes, the increasing trend projects the upcoming concerns of the future. Number of deaths due to most other causes (including IHD, stroke, lung cancer, and colorectal cancer) have decreased during the same period, with a tremendous 16% decrease in stroke-related mortality.

Despite of the improvements, Hungary's relative position compared to the EU average and most individual countries in terms of overall and cause specific mortality in many diseases is still highly disadvantageous.

[1] Institute for Health Metrics and Evaluation (IHME). **Hungary profile**. Seattle, WA: IHME, University of Washington, 2018. Available from http://www.healthdata.org/Hungary. (Accessed on August 19, 2020.)

Figure 3 shows standardized mortality rates according to the leading causes of death. Taken into consideration the different age structures as well, 3 times as many people die due to ischemic heart diseases, and almost twice as many due to colorectal cancers, cancers of the respiratory system (e.g., lung cancer), and lower respiratory diseases (e.g., COPD) in Hungary than in the EU28. In comparison with individual countries, even on similar or lower level of economic development, Hungary doesn't perform well: though Bulgaria has a much higher cerebrovascular mortality rate and Slovakia has similar or even slightly higher values in digestive, IHD and cerebrovascular mortality, while Czechia and even Austria have higher diabetes-related mortality, in 60 out of 64 comparisons, Hungary performs worse.

Figure 3: Standardized mortality rates by causes of death (2016)



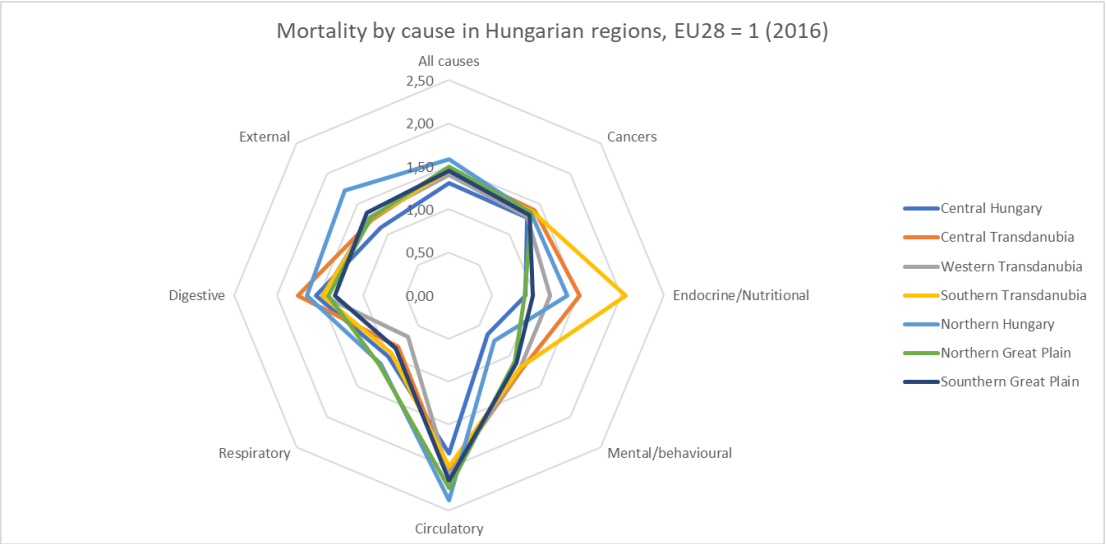
Source of data: Eurostat database, [hlth_cd_asdr2] dataset

The greatest challenge for Hungary regarding health status, however, is lying beyond the population average: in the deep inequalities between population groups with different social status. According to the latest OECD report "Health for Everyone" (OECD, 2019a), the difference in life expectancy at birth between social groups with the highest and lowest educational level was almost 10 years in Hungary, while only 6 years on average in the OECD. In case of Hungary, this means that most of the country's lag in terms of life expectancy comes from the enormous disadvantage of those with low education (even 10–12 years less than Western Europeans peers), while those with secondary or tertiary education may expect 3 to 5 years shorter life than their counterparts in Western Europe[2]. The gap is similarly high in post-socialist countries, but it is only in Slovakia higher than in Hungary (reaching almost 11 years). These inequalities result also in harsh geographical differences, following the differences in social structure between the regions.

[2] Data source: Eurostat [demo_mlexpecedu] dataset

Figure 4 shows the share of standardized mortality rates by main disease categories in Hungarian regions, compared to the EU28 average.

Figure 4: Mortality by cause in Hungarian regions (2016)



Source of data: Eurostat database, [hlth_cd_asdr2] dataset

Note: EU28 average = 1 in all disease categories, while the individual values of the Hungarian regions shows how much times higher or lower the region's value is than the EU28 average.

Besides the overall higher mortality rates in Hungary, tremendous differences can be spotted between the regions. For example, mortality due to the problems of the endocrine system (referring mostly to diabetes) is twice as high in Southern Transdanubia than in the EU28, while in the central part of the country has even better values that the EU average. Similarly, Central Transdanubia has a disadvantage in digestive diseases; the northern part of the country in circulatory and respiratory diseases; and in overall mortality Northern Hungary is in the worst status.

Behind these figures lie the overall inequalities of the society, which then takes effect in different forms of social determinants of health: financial circumstances, knowledge and motivation, access to products and services, health behavior, psychosocial environment. These factors may affect the health status directly, or through the intentions and actions of individuals. Regarding the most concerning factors, smoking rates and the proportion of obese individuals are almost twice as high in Hungary than in the EU average (OECD, 2019b). According to the OECD report cited above, smoking is one of the highest in the EU among Hungarian males with low level of education (OECD, 2019a, old.: 20). Nutritional habits of the Hungarian population is also of concern due to the low amount of fruits and vegetables included (OECD, 2019b, old.: 8).

3.2. Key institutions

Please mention key institutions in the field of Public Health and Health Promotion in your country and describe whether their work is related in any way to health network management.

At the highest level of policy making and operation, the Ministry of Human Resources is at the top of the structure, referring for health care, education, social care, culture, and religious issues. This could be an ideal position from the point of view of health promotion and prevention as a complex activity, making the area of health directly connected to many other relevant areas. However, the experiences show that the area of health in general weakened a lot as a results of becoming part of a broader institution. The operation and communication of the government-related to the COVID-19 pandemic demonstrates this clearly: the health government appears very rarely to the public, it is mostly military

and police officers and the PM himself who communicates COVID-19-related information and messages (Élő, 2020).

Before 2017, several independent public organizations were operating in the field of public health and health promotion: the Public Health Authority (Országos Tisztifőorvosi Hivatal, OTH), the National Institute for Health Promotion (Nemzeti Egészségfejlesztési Intézet, NEFI), the Public Health Center (Országos Közegészségügyi Központ, OKK), the National Center for Epidemiology (Országos Epidemiológiai Központ, OEK), the Institute of Environmental Health (Környezetegészségügyi Intézet), and the Institute for Food and Drug Safety (Országos Gyógyszerészeti és Élelmezésegészségügyi Intézet). Most of these had a wide scope of activities from regulation to research and communication. In 2017, these institutions got reorganized: all of their functions got blended into other institutions: on the one hand, into regional Governmental Offices, on the other hand, into other, national level institutions. The National Institute for Health Promotion, for instance, got blended into the National Center for Health Care Provision (Állami Egészségügyi Ellátó Központ, ÁEEK), an institute the main profile of which is the operation and monitoring of the health care system and its institutions. In 2019, the government created another national level institution, named the National Center for Public Health (NNK, Nemzeti Népegészségügyi Központ). NNK now integrates the functions previously operated by many of the above mentioned national level organizations in the field of public health, apart from the Institute for Drug and Food Safety—the only institution remained independent. As a result of the reorganization, different functions related to health promotion and prevention now belong to different branches and different levels of the system.

Key actors in the field of Public Health and Health Promotion at the local level in Hungary include primary care physicians (GPs), maternity nurses, schools and workplaces, and municipalities. In more than half of the microregions (in 116 out of 197), there are also Health Promotion Offices in place, with great potentials, however, currently confused, mixed background and practice. At a higher, county and country level, there is a highly centralized structure of public health institutions, accompanied by a broad network of professional institutions and associations. These have a great impact on the opportunities available for the local actors of health promotion, however, have no direct contact with them (Túri, Horváth, Kasza, & Csizmadia, 2018).

At the local level, the above mentioned actors have the following circumstances and legal obligations:

1. Maternity nurses provide wide preventive services for the non-adult population. Their activities are focused mainly on pregnant women and children under school age; once the children start school (or pre-school), maternity nurses referred to these institutions will take care of them on site. Nurses provide strong support to the expecting families during the pregnancy, and after the childbirth mostly by sharing information, teaching skills, and regular check-ups regarding the healthy development of the child. As maternity nurses are directly connected to the families they care for and usually have a good and trustful relationship, their role is crucial in the early child and maternal health. However, the overall shortage of health professionals refers to them as well: as a consequence, many nurses are heavily overloaded.

2. Primary care physicians are distributed across the population so that every GP has an average of 1000 to 2000 registered patients. They are located close to the homes of patients, though, as patients can choose a GP freely, patients also can be registered elsewhere. According to the GPs' legal obligations, they are responsible for constantly monitoring the health status of their patients and provide them with information and counselling on how to improve or preserve their health status (Act LXXXIII of 1997. on the Services of the Compulsory Health Insurance System, 1997). These activities are also supported by a financial incentive system called "Indicator System for Primary Care Physicians" (Decree 11 of 2011. (III. 30.) of the Ministry of National Resources). However, this financial incentive

system focuses mostly on prevention (e.g., vaccination) and the proper care of chronic patients; and not on health promotion, e.g., counselling provided for the "healthy" population. Also, according to the general experience of the respondents in the interviews, health promotion activities of primary care physicians is moderate at most, especially in its effect, due to several reasons. For one: their relationship with patients is occasional: they meet patients only when the patients show up at their office with an already existing health problem. Also, as the gate keeping function of GPs is not very strong in Hungary, many times patients will go directly to a higher level of the health care system, consequently, the GP won't even know of the occurring health problem. Most importantly of all, the problems related to the shortage of health professionals is highly prevalent among GPs: more than 10% of the administrative GP districts are lacking an actual GP, and as the average age of GPs is more than 58 years (Székely, 2019), this problem is about to escalate in the upcoming years.

3. Municipalities' legal obligations cover the organization of primary health care (including maternity nurses and GPs), and the provision of services promoting and enabling for citizens to lead a healthy lifestyle (Act CLXXXIX of 2011 on Hungary's local governments). This implies a wide range of fields of activities from providing actual services to ensuring health and health promoting environment. However, the possibilities of municipal governments are very unequal in this concern on the one hand, and the resources available for municipalities are many cases scarce. Consequently, municipal activities in this concern mostly depend on and are also restricted by the availability of resources, and can be regarded rather as accidental than regular and well established. This is so in spite of the fact that during the past decades, many municipalities participated in different programs aiming to develop systematic local health promotion plans. Creating such plans and motivating the municipalities and the microregions to establish more systematic health promoting activities for their citizens now seems to be an aim of the central level decision makers. However, the area of local policy forming of municipalities has narrowed a lot in recent years, due to the centralization inside of the health care system (and other functional areas like education) and the reduction in the municipal resources. This altogether resulted in the decrease of municipal autonomy (Bordás, 2019), which also affects the opportunities of local municipalities in planning and operating locally designed programs in the field of health promotion and prevention.

4. Educational institutions (schools, pre-schools) are also obliged to provide a healthy environment, promote healthy lifestyle, and include health-related information in their curriculum. Since 2012, legal documents referring to the operation of educational institutions include the obligation to perform the so called "Full Health Education" (Teljeskörű Egészségfejlesztés, TIE) program (Act CXC. of 2011. on the National Education; Decree 20/2012 (VIII. 31.) on the Operation of Educational Institutions and their Nomenclatura). This program covers a full range of health education, from exercising every day in school through the basic knowledge on personal health and health care to the mental health of students. However, according to experts monitoring the program, in many concerns, schools don't respond to this obligation. The currently strongly centralized field of public education faces similar problems as health care, with huge shortage of teachers and resources in general. The lack of resources and the decreased autonomy of the institutions in many cases does not create an encouraging environment for developing activities which take the actual needs of the student population into consideration. The case is different for workplaces, however, health promoting activities cannot be regarded as systematic in this scene either.

5. Health Promotion Offices (Egészségfejlesztési Iroda, HPO) are a new and not yet widely recognized organization in the field of public health in Hungary, bearing, however, great opportunities. These have been established since 2013—currently 116 HPOs are in operation across the country. Their activities currently cover a wide range from providing personal services to the population (e.g., exercise classes) to the management of local health network to the participation of strategic planning of improvement

of the health of local population. This is mostly a consequence of a conceptional, as well as organizational confusion around HPOs: at the moment, they vary greatly in their organizational structure, financing and supervisory arrangement, and basic goals and aims (Túri, Horváth, Kasza, & Csizmadia, 2018). Regardless of all these circumstances, HPOs would be the perfect candidate for health network management.

3.3. Key policies

Please describe key policies in your country, for example, based on laws in relation to health network management.

In general, the area of health promotion and prevention is rather neglected in Hungary. Since the economic and political change in 1989–90, four long-term, comprehensive national programs were introduced, all supposed to determine health promotion in the country for at least a decade: the Kertai-program in 1994, the Future of our Health program in 1998, the Program of Public Health for a Healthy Nation in 2001, and the Decade of Health National Program in 2004–05 (Kökény, 2015), which means that every new government invented their own, long term, and comprehensive public health program, aborting the previously initiated activities and processes, tearing down institutions and building new ones. This is reflected in the above described process of the reorganization of the public health field since 2017, a process the outcomes of which are still unclear.

From the point of view of health network management, the key (local) actors in the country could be the Health Promotion Offices (HPOs) (currently 116 in number). These institutions fulfil most of the expected features and would be perfect candidates for managing local health networks, however, due to certain circumstances of their establishment and the non-straightforward and volatile intentions of the policy maker described above, at the moment, they are not completely ready for these purposes. Also, HPOs are responsible for the provision of full microregions, meaning 10 to 70 thousand people distributed across 10–30 municipalities, while HPOs have on average 2–3 employees, which makes it nearly impossible for them to cater for the whole referred population properly.

3.4. Health Care System

Please describe briefly the Health Care System within your country and how it is financed. Discuss if there is any relation to regional health management in the health system included.

Public health care in Hungary is financed dominantly by social health insurance and increasing taxes with nearly full coverage in terms of population, services, and costs. Typical exemptions are (prescribed) drugs with only partial cost coverage for most of the population (though, with full coverage for some a discretional, means-tested basis), and certain services like most of dental care and cosmetic surgeries. The uptake of private health services is also prevalent, though, no clear data is available on the utilization of privately operated services. Private health insurance coverage is low, which means that private health services are mostly financed in an out of pocket manner. Also, because of the level of public health spending per capita is one of the lowest in the EU, the amount and share of private spending, dominantly OOP, is high. (OECD/European Observatory on Health Systems and Policies , 2019)

Public health services—defined as services financed by public resources—are provided by actors of a wide variety of institutional forms and in a complex public-private mix. GPs are dominantly private entrepreneurs, while specialized care is dominantly provided by public institutions with professionals

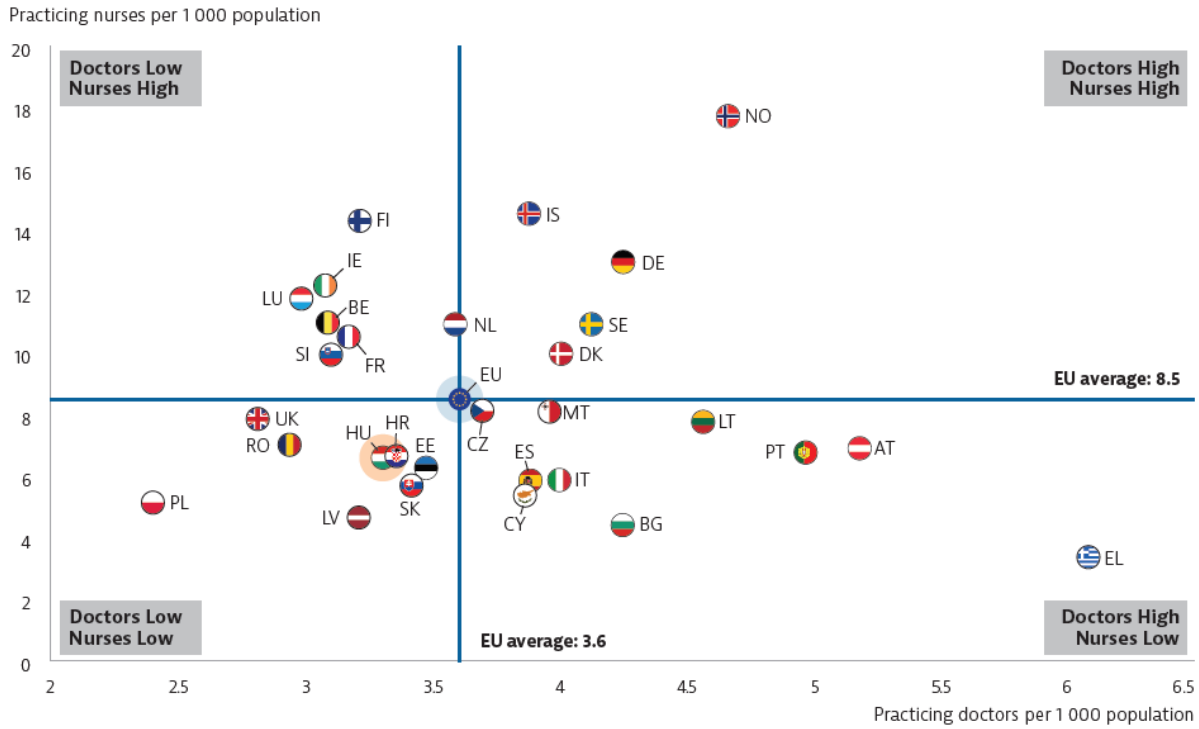
as employees. However, there are also privately owned and operated, while publicly financed outpatient clinics, and certain services (e.g., diagnostics) inside public hospitals are also provided by contracted private actors. Also, most publicly financed actor provides additional services not covered by the social health insurance (e.g., non-compulsory vaccination, extra hotel services in inpatient facilities).

The primary level of the service provision consists of GPs, with 1500–2000 people served by one physician. In November 2020, there were almost 600 districts without a GP assigned in the country, dominantly, in the disadvantaged regions, leaving 740 000 people, nearly 8% of the population without stable provision of GP services (NEAK, 2020).

The next level of the provision is an extensive network of outpatient specialists. Many of such services are accessible only on a prescription basis with the GP serving as a gate keeper, however, many of them are directly accessible, primarily based on the nature of the service. Most of the private, non-publicly financed services are available as outpatient specialized care as well. A network of public hospitals is available mostly in cities, with significant reduction in the number of active hospital beds in smaller hospitals in the recent decade. Highly specialized care is available in great hospital centers and clinics attached to medical universities.

Due to the low level of public financing, the Hungarian public health care system struggles with a general lack of resources, especially in the field of health care personnel. The number of nurses and doctors per capita is one of the lowest in the country compared to the EU, even if the number of hospital beds is relatively high.

Figure 5: Practicing nurses per 1000 population



Source: (OECD/European Observatory on Health Systems and Policies , 2019, old.: 11)

3.5. Health targets

In Hungary currently there are no national-level health targets. Local and autonomous institutional and professional actors, however, may define certain targets to achieve in the field of health, health promotion and prevention.

4. Health Network Manager

Description

Health Network Manager in our understanding is the actor coordinating and enhancing the health-related activities of different actors in a region in order to improve the population's health status. Relevant activities of a Health Network Manager consist of building partnership between relevant actors, monitoring, supervising, and coordinating health-related activities of partners, advocating for health and the network activities and recognition in- and outside of network, and developing, organizing, and implementing health promotion and prevention programs.

In Hungary, there is currently no such position or institution as a Health Network Manager. Locally, Health Promotion Offices and/or the corresponding colleagues/organizational units coordinate the health promotion activities, though this coordination does not necessarily cover the activities of independent organizations—the focus is mainly on service provision rather than coordination and management.

4.1. Status Quo in Hungary

Currently there is no defined curriculum for Health Network Managers in Hungary. Relevant educational programs available are:

1. Bachelor level
    a. Recreation and lifestyle BSc
    b. Health care and prevention BSc
2. Master level
    a. Public health MSc
3. Postgraduate level
    a. Health promotion specialization
    b. Project management in health care specialization
    c. Public health specialization

4.2. Results of the conducted Interviews

In our research, we conducted altogether 5 interviews between August and September 2020, with the following subjects:

	Institution	Profession	Position	Region	Age, Gender
Subject1	Health Promotion Office	general practitioner	Head of Office	Southern Great Plain	32, male
Subject2	Health Promotion Office	maternity nurse, public health expert in training	Head of the Public Health Department in the Office	Northern Great Plain	28, female

Subject3	Health Promotion Office	health policy analyst	Head of Office	Southern Transdanubia	34, female
Subject4	NGO in community psychiatrics	social worker	Volunteering Head Coordinator of Reintegration Services for Voice-Hearers	not specified	49, female
Subject5	Research institute	sociologist	Researcher	not specified	45, female

Subject 1 is in a double role as the head of a HPO and a GP at once. He described the main activities of a HNM as consisting mostly of building the network (finding and contacting possible network partners and institutions having obvious impact on population health, like, schools and workplaces), motivation and persuasion of network partners for cooperation, and negotiating with actors having possibly great impact on health status of the population. He pointed out several aspects of great importance he encounters during his own work:

- the general lack of involving the population itself into program planning and implementation;
- the lack of interest from the side of the population towards programs and projects developed, for example, low participation, which he regards as the consequence of the previously listed lack of involvement;
- the importance of the knowledge on the operation of different partners, which is inevitable to know, in order to be able to motivate them;
- the general lack of coordination between different parties, for example schools or workplaces, which—especially if the geographical region in question is too big—makes coordination of activities very hard;
- the dominantly health care centered focus of the whole society, population, as well as institutional actors and decision makers, which makes it very hard for someone outside of health care or without a medical profession to be heard in relation with any kind of health issue.

Subject 2 is a young female worker at a HPO, currently in public health training (master level), with a maternity nurse diploma. She emphasized the importance of direct service provision towards the population. She also mentioned the hardships resulting from the confused organizational and financing situation of HPOs in Hungary, and pointed out that a clarification of legal status and fields of responsibility would inevitably be necessary. In her description of the needed skills and knowledge she listed many medical kind of competencies, however, eventually she herself reflected on the contradiction between the emphasis on this kind of knowledge and the everyday experience of missing basic management skills in the office that would be needed for proper and flawless operation.

Subject 3 is also a young female without medical training, who is a leader of an HPO. She reflected a lot on how hard it is to get accepted in the field without medical background, while such recognition from a wide variety of actors is the ultimate precondition of such kind of work. She said that very stable communication skills, familiarity with the competences and interests of different actors, and necessary attitudes of openness, empathy, and determination are inevitable. She also pointed out that the general lack of coordination, respect, and unclear structures of responsibility and supervision makes it hard to find solution for certain problems revealed during her work: for example, when it turns out

that a particular GP most probably provides a poor quality care and neglects some of his responsibilities, there is no way to intervene. She emphasized the importance of clear structures in the field related to that, and also pointed out that though a HNM can do a lot for its own recognition, but this comes with multiplied effort until, on higher levels, the communication of and about health promotion and prevention focuses so much on solely health care and health care professionals.

Subject 4 is an "outlier", coming from a very different area of profession. She is an influential leader in an NGO in the field of community psychiatric services, being related to many municipalities and other NGOs in the field. She mostly emphasized the importance of involvement of communities (municipalities, neighborhoods, and families) in the process of mental health care, prevention, and promotion. However, it was really interesting to see how she, who is, though being involved directly in service provision, has a very hard time to widen her scope and think about the—at the moment theoretical—actor of a health network manager, and about how such an actor could be attached to the work she is doing.

Subject 5 is a researcher in the field of community health and participative methods. She also highlighted the hardship of such a work under the feudalistic circumstances of health care in Hungary, accompanied with the health care centered thinking of the Hungarian society (related to health). She also reflected on her experiences with HPO leaders complaining about the lack of interest from the side of the target population towards their programs. She pointed out that these programs operate on a good old "central planner" basis (only without actual planning), and basically no effort is ever made to improve their access rates—despite the fact that, from participative involvement methods to plain marketing strategies, many tools are available to do that, only "outside" of the land of traditional public health. She also emphasized that there is a wide lack of planning and monitoring activities in the field of public health.

Based on the experiences of the interviews, Health Network Managers in Hungary will have to deal with the following circumstances:

- In relation of health, the whole society has a highly health care focused thinking: health equals health care (and, anyway, health care equals hospitals and hospitals equal surgery).
- Someone without a medical training will have very hard times to be recognized.
- Also, because health equals health care, it would be a challenge in itself to build and get recognized in a partnership of different actors outside of health care.
- Depending on the size of the population covered, it could be very challenging to organize the network because of the lack of coordination between actors even in the same field (e.g., schools).
- A high level of familiarity and knowledge regarding the organizational and financial environment of different actors will be necessary to be able to involve and motivate these actors for cooperation.
- The general interest of the population (especially those with lower SES) in health promotion activities is low, which means that extra effort will have to be put in to increase access to any kind of programs developed.
- A strong knowledge base will be necessary for health needs assessment, planning and assessing any kind of program implemented.
- Strong skills will be needed to manage change and for a successful establishment of the network, and implementation of any kind of program.

Based on the experiences of the interviews, Health Network Managers in Hungary will have to acquire the following competencies:

- Health needs assessment—public health and epidemiology, methodology of sampling, data collection and data analysis, participative methods
- Program planning, implementation, and assessment—methodology of assessment, managing a program cycle (in addition)
- Network management—strong communication skills in different areas, administering, communication, coordination and monitoring of network activities (in addition), assertivity, pro-activity, excellent people's skills, and many other relevant soft skills
- Administrative skills
- ICT skills
- Fund raising and project management skills
-

5. Discussion & Conclusion

In this paper, we attempted to reveal the relevant circumstances and current situation in Hungary, regarding health status and health needs of the population, the institutional environment of a prospective Health Network Manager, and experts' perception related to the probable scope of activities and competencies needed to fulfil the tasks. Our research was based on desktop research and semi-structured interviews.

Regarding the interviews as primary information sources, we were in the lucky situation to have interview subjects from different parts of the country and from different professional fields. Also, they seemed to have very similar experiences working *in* the field of health promotion but *outside of* the health care system, which suggests that we have a reason to believe that these experiences are generalizable, regardless of the actual location and position. However, the low number of interviews raises the concern of the lack of any kind of representability.

Seeking an answer to the original research questions, and comparing evidence from desktop research and the interviews, several points stand out. For one, it seems rather obvious, that the current organizational form of health care, and especially health promotion in Hungary does not provide stability and clarity in terms of responsibilities and competence areas for those working in the field. This means that in any kind of institutional arrangement would the position of a Health Network Manager established, it would be crucial to clarify their competences related to health care, to the municipal and higher levels of governance, and to other relevant areas. Also, a focal point related to the position of a Health Network Manager derived from the interviews, and not independent from the above mentioned, was the issue of broader legitimacy and acceptance. Almost every interview subject mentioned the problem of the "outsider" (someone claiming to be an expert in the field of health but not being a health care professional). The issue is related to the perception of "health" as a function and responsibility almost exclusively of the health care system, and as a consequence, to the fact that "health care system" is considered to be the only relevant and competent field related to "health." Despite of the rich and widely recognized literature and scientific knowledge related to the non-health care determinants of health, this assumption is still prevalent across the society—and could be especially burdening and challenging to overcome. These issues, also considering the deep health inequalities present in the Hungarian society, suggest that a much broader and bigger scale work is also ahead of the country in getting the wider social determinants of health, and the importance of health culture and health literacy recognized—a goal for which Health Network Managers can do a lot, but which they won't be able to reach alone.

The general lessons learnt from the interviews is that a prospect Health Network Manager should be equally competent as a program- and as a network manager, equipped with a broad range of public health-, management- and communication-related knowledge and skills. One part of the supposed job description, and necessary competencies consequently, referred to the development and monitoring of the health-related content and the assessment of outcomes and programs themselves; for which a reliable knowledge is needed in public health, epidemiology, quantitative and research methods, program planning and evaluation techniques. Related to this kind of tasks, the development and implementation of actual program run by their own was also mentioned by some of the interview subjects, which requires another, different set of skills. The other great part of the required activities covers the network management-related tasks, beginning with the development and building of the network, through coordination and organization of network activities, and also advocating for the network in its internal and external environment. To be able to perform all these, however, more general management and communicational tasks were also mentioned. The detailed list of tasks and competencies see in the attached National Competence Profile.

Now, in Hungary there is no such position as a Health Network Manager—not even health networks are recognized as a thing. Obviously, this does not mean that there is no need for such a position: on the contrary, being aware of the complex nature of health and the system determining it, the fact that no effort is made to monitor, coordinate, and enhance the local activities and actions supposedly or actually affecting the population health, is the ultimate proof of the immense need for Health Network Managers to be introduced at last. However, for them to be able to work effectively, not only a well-established and sound curriculum is needed, but also a supportive environment which understands the ways and nature how health is formulated. In Hungary, this means a shift in the basic assumptions of public health from the siloed approach narrowing the scope of health promotion to certain areas to a more open, all-society approach, where all members of the society, individuals and institutions, are considered as stakeholders and partners related to health—and where a Health Network Manager is recognized as the competent person making cooperation happen.

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Śląski Uniwersytet Medyczny w Katowicach

Competences in Health Network Management

IO I: Circumstances, Structures and Challenges

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1. Introduction

1.1 Aim of the present paper

The presented document aims at summarizing the national context for implementation of the "Competences in Health Network Management" project in Poland, especially in terms of organisational structure of the health system, epidemiological background and current key public health-related policies and legal regulations. Second part of the document summarizes results of interviews with public health and health care management experts in terms of their perception of health system structure and challenges in Poland, as well as the basic competences expected from individuals potentially acting as managers in regional health networks in Poland. The study constitutes a basis for national competence profile for health network managers.

1.2 Research Questions

The key research questions for the presented study were as following:

1. what is the epidemiological background for health system operation in Poland, especially in terms of key health challenges and external and internal determinants of the population's health status
2. what are the key institutions and structure features of the health system in Poland
3. what are the basic legal regulations and public policies related to health
4. what is the perception of the concept of health network among public health specialists and practicians
5. what is the perception of basic tasks and competences the health network managers should bear and have, as perceived by the public health specialists and practicians.

2. Methods

In the first part of the study a method of narrative review has been applied, assuming utilization of existing scientific reports and documents, official reports published by the public bodies, as well as grey literature addressing issues constituting background for the study questions. Due to dynamic nature of health system transition and demographic processes, we assumed the search to concentrate on the most recent documents, published in last 10 year, having extended this rule to older publication or legal acts in case this was justified with the subject of the document, or lack of more recent regulation in case of legal acts.

For the second part of the study we applied a method of direct semi-structured interviews with public health experts and practicians, selected based on the combination of convenient and random sampling. The assumption determining selection of interview partners was to obtain possibly wide perspective of viewpoints, as presented by public health system participants of various sectors, including the Academia, management of health services provision of various levels, third sector organisations involved in patients' representation or health services provision and public administration acting at local and regional level. The reviews were conducted based on the interview guideline developed by Public Health, Sport Science and Tourism Management researchers and lecturers from Austria, and then consulted with the regional health management experienced expert from Germany. Additional feedback was collected from Com.He.Net project partners from Bulgaria, Spain, Hungary, Poland and Germany. The final guideline was pre-tested in Austria, then, for the purpose of our study, translated into Polish. The interviews were carried out via telephone call, and then transcribed and consequently analysed using the method of a topic-centered content analysis.

3. Circumstances, Structures and Challenges in Poland

3.1. Main health challenges

As it appears in the pan-European trends, also in Poland, the aging of the society and changes in the economic background for households are making the basis for health status and its transitions in recent decades, especially after the fall of communism and during the post-communist transformation. Despite the fact that, compared to the European Union, Poland is a country with a great demographic potential, from the beginning of this century, a visible process of population decline began[1]. Current estimations say that the elderly people account for 18% of the total population in Poland, and within next 30 years this percentage will increase even up to 35%. By adding the decrease in birth rate, which has been observed since late 80's of XX century, and extending the average life expectancy, we are dealing with many new challenges for the health care system, those related to service delivery, profile of treatment to be in line with changing epidemiological profile of the population, as well as touching the economic foundation for the health system and rising of funds to cover the costs of services and overall system operation[2][3]. However Polish people are expected to live a higher proportion of their lives in good health compared with other EU inhabitants.[4]

1 GUS (2017) Sytuacja demograficzna Polski na tle Europy. Rządowa Rada Ludnościowa. Warszawa [In Polish: Demographic situation of Poland as compared to Europe]
2 Waligórska M. et al. (2009) Prognoza ludności na lata 2008-2035. Zakład Wydawnictw Statystycznych. Warszawa [In Polish: A projection of population for years 2008-2035]
3Michalski T. (2010) Sytuacja zdrowotna w europejskich krajach postkomunistycznych w dobie transformacji. Wydawnictwo Uniwersytetu Gdańskiego. Gdańsk str.37-43.
4 Sowada C. et al. (2019) Poland: Health system review. Health Systems in Transition. 21(1)

The high level of chronic non-communicable diseases prevalence constitute a heavy burden on the health system in Poland, being at the same time the most important cause of mortality. In 2017, the most common cause of deaths were cardiovascular diseases, with mortality level of 43.5 per 10,000 of population, followed by neoplasms with total mortality of 27.8 per 10,000 population[5]. Although malignant neoplasms are the second cause of death, they play crucial role in generating the lost years of life, especially in case of women, being the leading cause here. Additionally, while the mortality due cardiovascular diseases have been decreasing in recent years, which is at least in part a result of extensive prevention programmes being part of national health policy, as well as investments in the treatment infrastructure, the statistics for cancer incidence and especially mortality, are visibly less optimistic. In the last twenty years, the cancer incidence has increased by over 5% in Poland and is expected to keep rising, according to the National Cancer Registry. The mortality and incidence of cancer largely determine the life expectancy in Poland. Although the latter one remains still relatively low compared to other European countries, the mortality remains among the highest, especially in young and middle-aged people. So is the 5-year survival rate, which demonstrates one of the basic gaps in the system of diagnostics and treatment in Polish health care system[6].

Figure 1 and 2 present trends in mortality due to basic causes in Poland in years 1980 – 2018 per 10 thousand population[3],[7]. The decreasing trend is visible for cardiovascular diseases and external causes, while constant growing trend for malignant neoplasms appears throughout the entire period. The numbers for remaining causes presented on Figure 2 are visibly lower, although rising trend for diabetes and mental disorders should be noted. The same appears for diseases of the digestive system, which, similarly as most of the other dominating causes of death in Poland, in most cases is connected with health behaviours and nutrition.

5 GUS (2019) Rocznik Demograczny. Zakład Wydawnictw Statystycznych. Warszawa [In Polish: Demographic Yearbook of Poland]

6 Mazurek J (2018) Zagrożenie Nowotworami Złośliwymi W Polsce Jako Zasadniczy Czynnik Determinujący Średnią Długość Życia. Przedsiębiorczość i Zarządzanie [In Polish: The malignant neoplasms in Poland as the main factor determining life expectancy]

7 GUS (2020) Mały rocznik statystyczny. Zakład Wydawnictw Statystycznych. Warszawa [In Polish: Concise Statistical Yearbook of Poland]

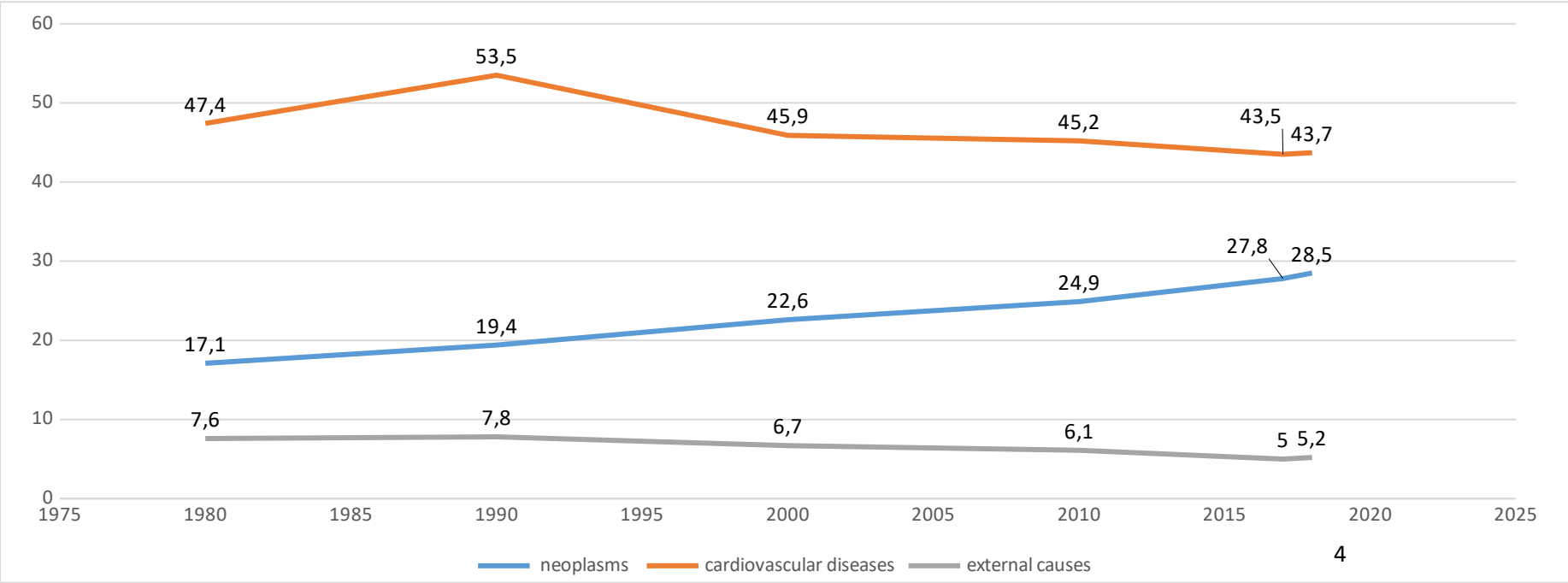

Figure 1 Mortality due to basic causes in Poland in years 1980 – 2018

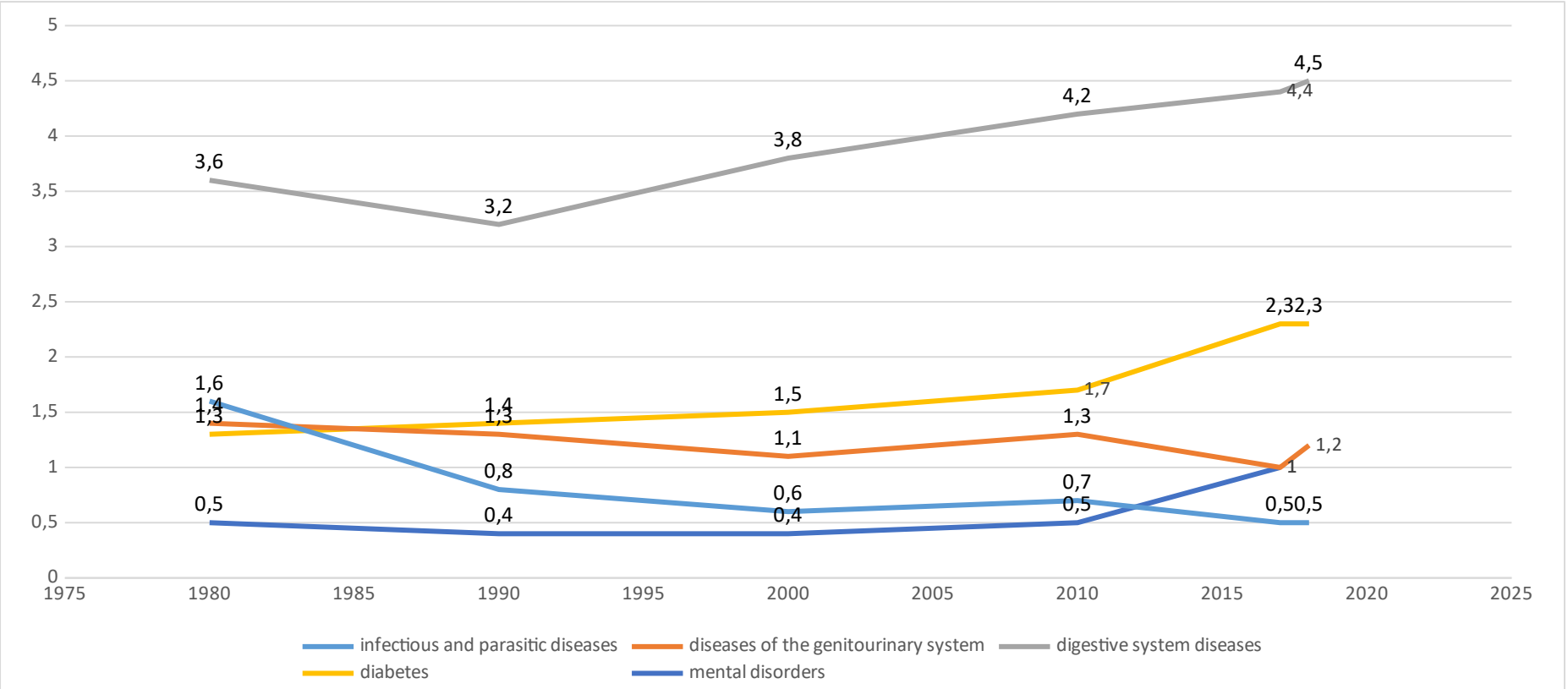

Figure 2 Mortality due to basic causes in Poland in years 1980 – 2018 (continued).

Despite the high burden that these diseases cause to the health system, they do not pose the sole challenge for Poland. In connection with these problems, the dilemma of good health care management and financing seems to be the most significant for the system performance, being perceived as insufficient and defective for many years, despite number of reforms that has been applied to the system during post-communist transition period. The issues related to financing should be placed in the foreground. Public expenditure on health care in Poland amounts to 4.6% of GDP, which is half of that spent by European leaders.[8] High level of out-of-pocked private spendings, constituting 25-30% of total health spendings in Poland are being raised as serious challenge as well. Finally, significant shortages in health care specialists, especially physicians and nurses, along with their insufficient wages and underinvested medical education has been raised many times. The number of practicing doctors per 1000 population remained at constantly low level in Poland since 2000, reaching 2,3 in 2017, which is the last place among the recorded EU countries.[9] In the same year the number of practising nurses per 1000 population was 5,1 which was one of the three worst results among the EU Member States.[10] Additionally, the demographic structure of employed nurses and midwives in Poland is also problematic, with the lack of generational replacement being a real threat. It is estimated that in 2018-2035 there will be a shortage of 69,886 nurses and midwives in the system.[11] Figure 3 shows the age structure of employed nurses and midwives in Poland.

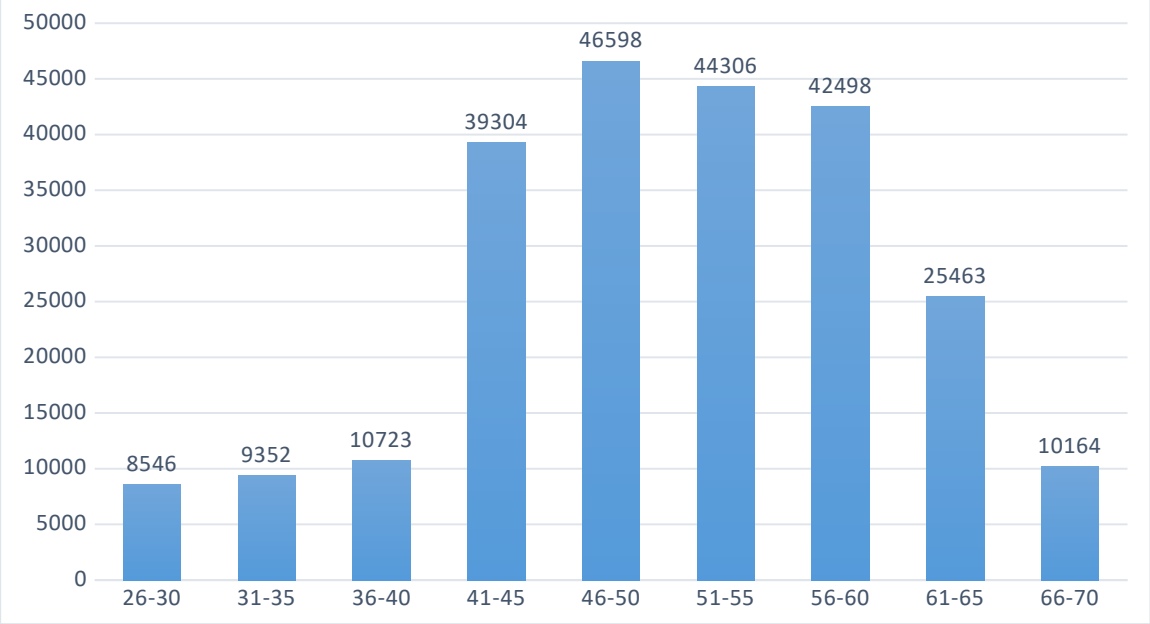

Figure 3 The age structure of nurses in Poland

8 Sowada C. et al. (2019) Poland: Health system review. Health Systems in Transition. 21(1)
9 Polakowski M. et al. (2019) Ochrona zdrowia w Polsce. Warszawskie debaty o polityce społecznej [In Polish: Healthcare in Poland]
10 OECD (2020), nurses (indicator). Doi: 10.1787/283e64de-en (accessed on september 2020)
11 Kuziara T. et al. (2018) Raport naczelnej rady pielęgniarek i położnych. Naczelna Izba Pielęgniarek i Położnych [In Polish: Report of the Supreme Council of Nurses and Midwives]

Establishing a modern governance structure is an important challenge too. The existing institutions do not have clearly defined scope of their competence and responsibility, which produces a number of ambiguities in their mutual relations and reduces the effectiveness of cooperation, as well as does not allow to utilise the full potential of public health specialists.[12] [13]

The aspect of households economic inequalities appear to be among the important determinants of existing health challenges and inequities in health status among different social groups, which manifest themselves in social structure, but also in territorial approach, with differences in health status between individual regions. This seem to be progressing in XXI Century[14]. The key challenge is to correctly identify the health needs in regional aspect in an efficient way, where the measures taken in this regards in recent times seem to fail, so was the effort to adjust health system's resources to the regional specifics.[15] [16]

3.2. Key institution

The key institutions for the Polish health care system are:

Ministry of Health – central government administration unit. The head of the ministry is being nominated by the President of Poland, based on the political decision of the Prime Minister. The ministry is the main institution that initiates and controls the national health policy. The ministry's scope of responsibilities includes mapping the health needs, setting rules for reimbursement of drugs and other medical devices or foodstuffs, supervision over medical professions, the National Emergency Services and spa treatment. It also supervises the National Health Fund. The responsibilities of the ministry also include the development of health programmes, i.e. safe, evidence-based, effective, wide-ranging activities in the field of health care. The funding of the programmes is based on public resources.[17]

The National Health Fund is a public organizational unit, formally excluded from the structure of public administration, that is set as health insurance institution and the most important payer in the Polish health care system. This means that the basic role of the National Health Fund is contracting health care providers and covering the costs of health services provided by the entities that has signed the contract. The resources being at disposal of the National Health Fund are derived mainly from health insurance

12 Golinowska S. et al. (2020) Alert zdrowotny. Open Eyes Economy Summit

13 Sowada C. et al. (2019) Poland: Health system review. Health Systems in Transition. 21(1)

14 Łyszczarz B (2014) Dynamika regionalnych nierówności w zdrowiu w Polsce. Nierówności społeczne a wzrost gospodarczy [In Polish: Dynamics of regional health inequalities in Poland]

15 Dymyt T (2018) Mapy potrzeb zdrowotnych w procesie niwelowania nierówności w zdrowiu. Zeszyty Naukowe. Organizacja i Zarządzanie / Politechnika Śląska. Wydawnictwo Politechniki Śląskiej str. 205—220.[In Polish: Mapping health needs to support the process of health inequalities leveling]

16 OECD/European Observatory on Health Systems and Policies (2019) Poland: Country Health Profile 2019, State of Health in the EU. OECD Publishing. Bruksela.

17 https://www.gov.pl/web/zdrowie

contributions, which is being paid by each person having an insurance title, unless the title is the insurance of a family member or the contribution is being paid by another subject (i.e. Labour Office for unemployed people). In practice, over 90% of population is being covered by the health insurance, although based on the national legal regulation the entitlement to get access to health services financed from public sources is citizenship-based. The contribution rate is 9% of the salary, of which a part equal to 7,75% is included in the income tax, while the remaining 1,25% of the salary is paid directly by the insured person. No employer share in the contribution has been applied. The National Health Fund gets funds from other sources as well, mainly subsidies from the central budget for special purposes. This may be e.g. salaries for some groups of medical staff or subsidies for salaries in all public health care units, when negotiated by professional unions with the government. This makes the financing model of Polish health system a hybrid one, with some features typical for insurance model, and some more fitting the Beveridge pattern.

The other tasks of the National Health Fund include determining the quality and availability of services, as well as analysing their costs. The Fund is responsible for organising open tender competition, negotiations and concluding contracts for the provision of healthcare services. The Fund organizes and covers joint procedures for the purchase of drugs, foodstuffs for particular nutritional uses and medical devices.[18]

The Social Insurance Institution and the Agricultural Social Insurance Fund are social policy units, the first one serving general population, and the second designed for individual farmers, that are responsible for general social insurance. In the health care they act as a kind of intermediary, being responsible for measuring and collecting health insurance contributions, which are then transferred to the National Health Fund. They both also cover some scope of health services, which are mainly spa treatment and therapeutic rehabilitation for insured persons at risk of long-term inability to work, which is settled in the system as disability prevention. Health services not being covered by the basket of services guaranteed by the public health insurance, but necessary in case of accident at work or occurrence of occupational disease are also covered from the social insurance, not the health insurance. This may apply e.g. to some types of vaccination.[19] [20]

The Public Sanitary Inspection is the central governmental administration structure operating in the field of public health and, in accordance with the Act of 14 March 1985 on the State Sanitary Inspection (Journal of Laws of 2019, item 59), it is reporting to the Minister of Health. Its mission is to supervise and provide activities aimed at the public welfare and public health of the population, and to minimize the effects of adverse events. The sanitary inspection deal with tasks such as:

- quality of food, nutrition, materials and articles intended to come into contact with food, and cosmetics;

18 https://www.nfz.gov.pl
19 https://www.zus.pl/
20 https://www.krus.gov.pl/

- prevention and elimination of infections and infectious diseases in humans;
- controlling the quality of drinking water, swimming pools, bathing areas;
- preventive sanitary supervision;
- medical waste;
- sanitary condition of public utility facilities;
- supervision of sanitary and hygienic conditions of the labour environment and chemicals;
- radiation hygiene;
- supervision of the sanitary condition of institutions for children and youth;
- health education and health promotion;
- the safety of dietary supplements;
- sanitary and epidemiological safety of country's border.

The Head of the structure is the Chief Sanitary Inspector. The advisory body is the Sanitary and Epidemiological Council appointed as opinion-making body composed of scientific specialists and people with outstanding practical knowledge in the field of public health and epidemiology. Subordinate to the Chief Sanitary Inspector are lowe level bodies Regional and then County-Level Sanitary and Epidemiological Stations, as well as a Border Department.[21]

Voivode (or wojewoda in Polish) – regional representative of the government acting at the level of voivodship, which is administrative region in Poland. He is also the head of the combined governmental administration in the voivodship (region). He supervises the local self-government administration units, being responsible for creating conditions for their effective and legally sound operation. His competences include issues related to health protection, especially in terms of prevention of threats to life and health of the population.[22]

Local Self-Government Units – the public administration reform implemented in 1999 increased significantly the role of local self-government, being an important step towards deeper decentralisation of the public authorities structure. While previously the self-government was present only on the lowest level of gmina (parish/town), after the reform the middle level of powiat (county) has been established, as well as the structure of self-government at the level of voivodeship (województwo) has been added. In result at the regional level the structure of administration has dual nature, with parallel structures of governmental (voivode) and self-governmental (Marshall and Council, or Sejmik in Polish, acting as legislative body) administration. Local self-governments have been obliged to create new development strategies as entities that are able to more accurately define the problems of their communities. However, since the self-government structures of subsequent levels act independently and are not hierarchically linked, it is

21 https://www.gov.pl/web/gis
22 https://www.katowice.uw.gov.pl/

difficult to create a coherent development plan, especially that the self-government units declare lack of appropriate implementation instruments and funds.

When it comes to health care and health protection, local self-government units are responsible for organisation, creation of health care institutions providing services to the population. They may withdraw this role in case the access to services is sufficient via the non-public providers network, but still this is their responsibility to secure the adequate accessibility in case of any deficiencies. The self-government acts as payer in some cases, especially in case of services delivered to non-insured persons, who are under assistance of local social welfare institutions. Self-governments may also provide own health promotion, education and prevention or programmes or provide services not included in the basket guaranteed by the National Health Fund. The units are obliged to develop, implement and evaluate the effects of health programs implemented in accordance with the identified health problems of the local populations. Currently, the legal regulations also require intervention in the financial management of health care units in case of their serious financial problems, which in practice means the local self-governments are responsible to cover financial deficits of the units remaining under their direct management. Modification of the way of the financial governance or even liquidation the given entity is also required in such situation.[23]

National Institute of Public Health – a central research institution, whose mission is to find solutions enabling people to live healthy, long and active lives. The basic areas of expertise for the institute is hygiene, epidemiology, bacteriology, immunology and parasitology. The institute provides scientific research, development works, as well as service the field of public health, conducts opinion-giving activities in various health-related areas, monitors the health status of the population of Poland and conducts health protection assessment, determines the directions and scope of health promotion and health education, and issues hygienic certificates and approvals. The institute was established as the National Institute of Hygiene in 1927. Recently a similar institution, previously independent, the Institution of Food and Nutrition, has been incorporated into the National Institute of Public Health. As a research body, the institute is supervised by the Minister of Health.

The Director is responsible for the implementation of the statutory tasks, being assisted by the Scientific Council, which is the decision-making, initiating, consultative and advisory body of the Institute.[24]

3.3. Key policies

The key principles and legal foundations of the health care system in Poland are included in the following acts:

23 Szetela P. (2015) Rola samorządu terytorialnego w polskim systemie ochrony zdrowia: organizator, podmiot tworzący oraz płatnik. Zdrowie publiczne i zarządzenie. 13 (1) str. 55-68 [In Polish:
The Role of Local Government in the Polish Health Care System: Organizer, Entity That Creates and Payer]

24 https://www.pzh.gov.pl/

The Law on Public Health[25]

The act defines the public health tasks, the actors involved, their responsibilities and how these issues are financed.

The main tasks in the field of Public Health include:

- monitoring and assessment of population's health status,
- health education,
- health promotion,
- disease prevention,
- activities in the field of improving the environments for living, education, work and recreation,
- analysis of the adequacy and effectiveness of the provided healthcare services,
- initiating and conducting scientific activities and international cooperation,
- staff development,
- reducing inequalities in health.

The tasks are coordinated by the Minister of Health, with the help of the Public Health Council as a consultative and advisory body. The minister's tasks include monitoring tasks and checking their consistency, reporting problems to appropriate institutions, collecting reports and creating a summary report.

The Law on medical activity[26]

The act defines the principles of performing medical activities along with the principles of functioning of the entities that provide this kind of activity. Additionally, it defines the rules of keeping registers, supervision, and regulates the working time of the medical staff.

According to the act, the medical activity consists of providing health services. This includes provision of services via teleinformation systems or other remote communication systems. It may also consist of health promotion activities or the implementation of teaching or research tasks.

The bodies that provide medical activity may be:

- Entrepreneurs,
- Independent Public Healthcare Institutions,
- Budget Units, Including State Budget Units,
- Research institutes,
- Foundations and Associations,

25 Ustawa z dnia 11 września 2015 r. o zdrowiu publicznym.
26 Ustawa z dnia 15 kwietnia 2011 r. o działalności leczniczej

- Legal entities and organizational units operating on the basis of the provisions on the relationship between the State and the Catholic Church in the Republic of Poland, on the relationship between the State and other churches and religious associations, and on the guarantees of freedom of conscience and religion,
- Military Units.

The types of medical activity are:

- In-patient and 24-hour health services:
- Hospital treatment,
- 24-hour health care services including nursing and rehabilitation,
- Other services aimed at restoring and improving health,
- Services providing comprehensive health, psychological and social care for terminally ill patients and care for the families of these patients.
- outpatient health services.

The law on healthcare services financed from public funds[27]

The actspecifies the conditions for the provision and scope of healthcare services financed from public funds, along with the principles of their financing, the procedure for qualifying and supervision of these services. It also regulates the tasks of public authorities in the scope of ensuring equal access to the health services and the principles of universal (compulsory) and voluntary health insurance. It also defines the principles of operation, organization and tasks of the National Health Fund and the Agency for Health Technology Assessment and Tariff System.

The Law on the rights of patients and the Patient's Rights Ombudsman[28]

This regulation defines the patient's rights and the resulting obligations of service providers. They also describe the work of the Patient's Rights Ombudsman and the procedures applied in case of practices violating patients' rights, along with the compensation system.

The Law on spa treatment[29]

The Act defines the principles and conditions for providing, financing and supervising spa treatment, along with establishing treatment areas. Spa treatment remains integral part of the health care system in Poland, being included in the scope of services financed from public sources. There are long historical traditions of providing this type of service in Poland and the spa treatment remains an important contribution to local

27 Ustawa z dnia 27 sierpnia 2004 r. o świadczeniach opieki zdrowotnej finansowanych ze środków publicznych
28 Ustawa z dnia 6 listopada 2008 r. o prawach pacjenta i Rzeczniku Praw Pacjenta
29 Ustawa z dnia 28 lipca 2005 r. o lecznictwie uzdrowiskowym, uzdrowiskach i obszarach ochrony uzdrowiskowej oraz gminach uzdrowiskowych

economies in some areas of the country, especially cities that obtained legally acknowledged status of spa-protected municipality. Currently there are 45 municipalities and communities that are recognized as having this status.

The Pharmaceutical Law[30]

The act regulates the rules for manufacturing, sales, supervision, testing and advertising of medicinal products. It sets out the requirements for pharmacies, pharmaceutical wholesalers and non-pharmacy outlets.

The laws on the professions of nurse and midwife, doctor and dentist[31] [32]

These are legal acts that set out the rules for practicing the medical professions in question, along with rules for obtaining the right to practice these professions and the definition of training standards for each of them.

The laws on the voivode and government administration in the voivodship, and on the self-government of all levels[33]

Local government level acts regulating the duties of local self-governments (at the level of commune/municipality, poviat and voivode) and voivodes as representative of central governmental administration in the region, including their responsibilities in terms of health care.

- **National Health Program**[34]

One of the most important tasks is also the development of the National Health Program as a document established in order to implement public health policy and determine the basis of Poland's health policy. As part of it, the strategic goal, operational goals and individual tasks and entities responsible for their implementation are established. The program is prepared for a period not shorter than 5 years. The current one covers the years 2016-2020. The Steering Committee of the National Health Program supervises the ongoing coordination of activities and solving problems related to the implementation of the NHP.

The key priorities of the National Health Program are:

- Improvement of the diet, nutritional status and physical activity of the society
- Prevention and solving problems related to the use of psychoactive substances, behavioral addictions and other risky behaviors

30 Ustawa z dnia 6 września 2001 r. Prawo farmaceutyczne.
31 Ustawa z dnia 5 grudnia 1996 r. o zawodach lekarza i lekarza dentysty
32 Ustawa z dnia 15 lipca 2011 r. o zawodach pielęgniarki i położnej
33 Ustawa z dnia 23 stycznia 2009 r. o wojewodzie i administracji rządowej w województwie
34 Rozporządzenie Rady Ministrów z dnia 4 sierpnia 2016 r. w sprawie Narodowego Programu Zdrowia na lata 2016–2020

- Prevention of mental health problems and improvement of the mental well-being of the society
- Reducing health risks resulting from physical, chemical and biological hazards in the external environment, workplace, residence, place of recreation and study.
- Promotion of healthy and active aging
- Improving reproductive health

Current health policy programs:[35]

- Health policy program for the implementation of the comprehensive support program for families "For life" for the years 2017-2021 - addressed to children diagnosed with severe and irreversible disability or an incurable life-threatening disease, which arose in the prenatal period of development or during childbirth.
- Ensuring Poland's self-sufficiency in blood and its components for 2015-2020 - the program aims to ensure Poland's self-sufficiency in terms of blood and its components and improve their safety by maintaining a sufficiently high number of donations, improving the use of blood and its components in hospitals and improving issues related to with blood transport
- Antiretroviral treatment of people living with HIV in Poland for 2017-2021 - the main assumption of the program is to reduce morbidity, improve quality of life and extend life expectancy in HIV-infected and AIDS patients.
- National Antibiotic Protection Program for 2016-2020 - aims to improve the safety of patients exposed to infections with bacteria resistant to many types of antibiotics, and difficult to treat non-hospital, invasive bacterial infections by reducing the overuse of antibiotics in medicine.
- Comprehensive reproductive health care program in Poland for 2016-2020 - the main goal of the program is to increase the availability of high-quality services in the field of diagnosis and treatment of infertility. The program is aimed mainly at people struggling with the problem of infertility, who are in a marriage or partner relationship and have not previously been diagnosed for infertility. In addition, the program will also be aimed at medical personnel in the field of training
- Depression prevention program in Poland for 2016-2020 - the program aims to raise awareness of depression in Poland and to show how to detect it and how to prevent it. The program is aimed in particular at groups with an increased risk of developing the disease.
- The POLKARD Program for the Prevention and Treatment of Cardiovascular Diseases for 2017-2020 - thanks to the program, mortality from cardiovascular diseases will be reduced. The program is a continuation of previous editions and introduces screening tests and preventive measures that raise public awareness of these diseases. The main goal of the program is to provide hospitals with

35 https://www.gov.pl/web/zdrowie/programy-polityki-zdrowotnej1

medical equipment and apparatus, to keep medical records and to increase access to new therapies

- National program to reduce mortality from chronic lung diseases by creating non-invasive mechanical ventilation rooms 2016-2019 - the aim of the program is to reduce the mortality rate of patients with chronic respiratory insufficiency and improve their quality of life by equipping rooms with appropriate equipment and adhibit adequate rehabilitation.
- The program of comprehensive intrauterine diagnostics and therapy in the prevention of the consequences and complications of developmental defects and diseases of the fetus - as an element of improving the health condition of fetuses and newborns for 2018-2020 - the program aims to improve access to intrauterine treatment and to improve mother and child care during pregnancy as well as after childbirth by introducing comprehensive diagnostics and therapy of the fetus, so that the sign of proper treatment will be to bring home a healthy child - home taken baby (HBT).
- Monitoring the oral health of the Polish population for 2016-2020 - the program aims to assess the oral health of children and adults in Poland. As part of it, nationwide epidemiological and socio-medical research is conducted every year.
- Improving the availability of dental services for children and adolescents in schools in 2018 - The main goal of the program is to increase the accessibility of children and adolescents to dental services provided in dental offices in public schools and to cover the largest possible group of children and adolescents with effective dental care and educational activities in oral health. As part of the program, systematic control of the condition of the oral cavity will be carried out with the provision of preventive dental services and health education of children and their parents.
- National Program for the Treatment of Patients with Hemophilia and Related Hemorrhagic Diseases 2019-2023 - the aim of the program is to provide care and improve the standard of treatment of patients with hemophilia and related bleeding disorders by e.g. assisting in the purchase and use of clotting factor concentrates, introducing appropriate medical records.
- Newborn screening program in Poland for 2019-2022 - the aim of the program is to reduce the mortality of newborns, infants and children due to metabolic defects and to prevent severe disabilities, both physical and intellectual, resulting from these defects.

3.4. Health Care system

The health care system in Poland is a group of people and institutions that provide health care to the population. According to Art. 68 of the Constitution of the Republic of Poland, everyone has the right to health protection. Citizens, regardless of their financial situation, shall be guaranteed by the public

authorities to have equal access to healthcare services financed from public funds. The terms and scope of the provision of services are specified by law. In addition, the Constitution provides, in line with global trends in health promotion, the possibility of maintaining or improving the individual health potential and shaping appropriate individual attitudes towards health. As discussed in previous sections, the Polish health care system is based on the insurance model, where the health insurance is recognized as separate one from other types of social insurance. In practice, the accessibility rules and the diversified financing structure makes it rather a hybrid one, with some features typical for Beveridge model.[36]

The main source of financing health care are public funds (public health insurance contributions, national central budget and the budgets of local self-government units). About 98% of the population is covered by the public health insurance system, and contributions are mainly deducted from income tax (for some groups, contributions are covered by the state budget). They are collected by intermediary institutions such as ZUS (Social Insurance Institution) and KRUS (Agricultural Social Insurance Fund), and then they are transferred to the central health insurance fund, i.e. the National Health Fund (NFZ). This institution is responsible for negotiating and concluding contracts with both public and non-public service providers. Its financial activities are controlled by the minister responsible for public finances, and in terms of substantive activities – by the minister responsible for health.[37]

The system of services provision include both public and non-public institutions, with the first being mainly driven by local or regional self-governments. Non-public units are allowed to sign contracts with the National Health Fund and other paying institutions, where applicable. Units of lower levels used to be responsible for maintaining outpatient care units and general hospitals, while regional level administration drives the specialist hospitals. Units of the highest level of reference are in some cases being driven directly by the Ministry of Health. Some remainings of the older Semashko model of health care are still present, with a number of health care units (hospitals, spa and rehabilitation treatment facilities) being formally owned by ministries of defence and internal affairs. In most cases they provide services to general public now, based on contracts with the National Health Fund, with a limited scope of services still provided exclusively for the uniformed services, like army and police. A kind of hybrid ownership model also exists, where the health care units formally act as entrepreneurs, i.e. stock companies, but in reality they are fully owned by public bodies, mainly local self-governments. The share of public units is higher in case of hospital care, while outpatient care is predominantly privatised. The solutions applied to remunerate providers for services include a variety of schemes, with capitation rates being the basic model applied in primary care, some variants of fee-for-service in out-patient specialist care, and combination of DRG and fixed payment in case of in-patient care.

36 Romaniuk P. et al. (2015) Ochrona zdrowia jako obowiązek państwa. Ewolucja polskiego ustroju konstytucyjnego w aspekcie przepisów dotyczących zdrowia Roczniki nauk społecznych. 7(43) str. 101-124 [In Polish: Health Care as a Duty of the State. Evolution of the Polish Constitutional System in Terms of Health Rules]

37 Sowada C. et al. (2019) Poland: Health system review. Health Systems in Transition. 21(1)

The patient's/eligible person first contact with health care is in most cases the Primary Health Care (POZ) clinic. In case the consultation or intervention of specialist outpatient care or in-patient care is necessary, the primary care physician issues a referral, which allows the patient to get adequate service within the scheme of guaranteed services. In case that any basic diagnostics is required to define the condition of the patient, the primary care physician is required to cover the costs of such diagnostics. In case the patient is referred to higher level of care, no financial participation of the primary care is assumed. In case of some specialists, no referral is needed. This applies to the services provided by psychiatrist, oncologist, venereologist, dentist, gynaecologist and obstetrician. The patient may also decide to go to specialist without the referral issued by a primary care physician, but in this case the service will be fully covered by the patient himself.

The care for chronically ill patients, disabled or elderly people, is mainly done in an informal way by the patient's family. There is a system of institutions providing this kind of service as well, but the system remains chaotic and vague, while including different types of institutions, like nursing and treatment facilities or nursing and care facilities, or social welfare homes. There is no clear distinction in terms of the basis for qualifying patients to a given type of institution, as well as no uniform system for financing their operation exists, as some of them are being contracted by the National Health Fund, while the others are being maintained and financed by local self-governments. Usually the waiting time for their services is also perceived as too long.[38]

A number of changes and reforms have been applied in Poland to improve the health care system in recent years. This include efforts to increase accessibility of selected categories of services (i.e. oncology), implement an integrated/coordinated care model, with the dominating role of hospitals, as well as to increase the role of modern information technologies in administration of the system and service provision. Since 2016 the system of e-sickness leaves has been applied, which accelerated the process of information flow between engaged institutions, including health service provider, social insurance institution and the patient's employer, as well as limited the possibility of misuses and extortions. In the following years other form of electronic documentation has been implemented, including e-prescriptions (fully in operation) and e-referrals (implementation in progress with full implementation planned for 2021).[39] [40]

38 Sagan A. et al. (2012) Polska: Zarys Systemu Ochrony Zdrowia. European Observatory on Health Systems and Policies. Warszawa. [In Polish: Poland: Outline of the Healthcare System]

39 Czerska I. et al.(2019) Przyszłość opieki zdrowotnej w Polsce – Nowe Horyzonty. Zdrowie i style życia: wyzwania ekonomiczne i społeczne str. 197-21 [In Polish: The future of healthcare in Poland -new horizons]

40 OECD/European Observatory on Health Systems and Policies (2019) Poland: Country Health Profile 2019, State of Health in the EU. OECD Publishing. Bruksela.

3.5. Health targets

Health targets in Poland are defined mainly by the Ministry of Health based on its own activity plan established for each year and as part of the National Health Program. Beginning with the annual plan, the ministry for 2020 set the following goals to be achieved:

- Increasing the number of medical students,
- Improving the quality of education in the fields of nursing and obstetrics and developing mechanisms enabling the increase in the number of nurses and midwives in the Polish health care system,
- Computerization of the healthcare system,
- Improving access to medical rehabilitation services for people with certified disability,
- Development of innovative activities in healthcare, with particular emphasis on the development of non-commercial clinical trials,

The National Health Program is a strategic document for Public Health in Poland. The main goals defined in the NHP are to extend the life expectancy of Polish population, to improve the quality of life related to health and to reduce social inequalities in health. To achieve the main goals for the period 2016-2020, the following strategic goals were adopted:[41]

- Improving the diet, nutritional status and physical activity of the population,
- Prevention and solving problems related to the use of psychoactive substances, behavioural addictions and other risky behaviours,
- Prevention of mental health problems and improvement of the mental well-being of the population,
- Reduction of health risks resulting from physical, chemical and biological hazards in the natural environment, work settings, living environment, areas of recreation and education,
- Promotion of healthy and active aging,
- Improving reproductive health.

A new National Health Program is expected to be developed for the following years, which should take into account the current problems, including the existing COVID-19 pandemic. Both Poland, but also other developed countries, in their efforts to maximize promotion and preventive health measures, omitted the issue of infectious diseases, which consequently produced important limitations in dealing with the existing situation. In the case of Poland the pandemics has revealed the negligence related to underestimating

41 Rozporządzenie Rady Ministrów z dnia 4 sierpnia 2016 r. w sprawie Narodowego Programu Zdrowia na lata 2016–2020

importance of public health perspective and background, along with a lack of institutional facilities and the lack of appropriate defined education pathways in this area, with a deficit of adequate financial resources. Polish experts propose a number of system-wide recommendations that should be taken in order to prevent system failure in case of appearance crisis like the one observed due to COVID-19 pandemics. These include[42]:

- Taking action to create a modern public health structure;
- Preparation of a legal, organizational and institutional framework enabling preparation of a strategy to combat a possible epidemic threat;
- Establishing an independent research and consultation centre;
- To initiate efforts to empower public health as a scientific and professional discipline;
- Increasing investment in research on threats to population health;
- Undertaking activities to effectively implement all types of modern health education in schools.
- Modernizing the health care system in the work settings;
- Preparation of a new law on public health.

4. Health Network Manager

4.1. Results of the conducted Interviews

Following the initial assumption, we invited to the interview 10 individuals representing various institutions involved in the health system operation. Eventually 7 of them agreed to take part in the study, which included:

- 2 directors of the hospitals, of which 1 is general specialistic hospital subordinate to regional authorities, and 1 is a hospital specialising in treatment of mental disorders. The unit is also subordinate to regional authorities. One of the interviewed individuals was chief director of the hospital, while the second one was deputy director responsible for development. One of the interviewed individuals has academic degree and experience.
- 1 director of public primary and occupational health institution. The person has academic experience.
- 1 university professor specialising in health care management research, especially related to the spa treatment sector.
- 1 representative of the 3rd sector institution specialising in providing support for people suffering from multiple sclerosis.

42 Golinowska S. et al. (2020) Health Alert. Open Eyes Economy Summit

- 2 representatives of the public administration, of which one from the municipal level self-government and 1 from regional level governmental administration.

Of the total number of interviewed individuals, 4 were women and 3 were men.

While describing the current health care system at regional level in Poland most commonly mentioned advantages was the medical professionals and their competence and engagement. Most commonly mentioned disadvantage was underfinancing and its consequences, including long waiting time, limited accessibility of services and unsatisfactory professionals salaries. Inadequate structure of management, including wrong money flows were also mentioned several times. The average rating for the regional health system on a scale from 1 to 10 was 4,83, but 2 of respondents were not able to give the rating. Some of them made a reservation that the Upper Silesian region is a specific one, relatively rich compared to the average for Poland, and with well-developed and relatively modern infrastructure, which is not necessarily applicable to other regions. On the other hand, one of respondents mentioned, that based on his experience and knowledge he can declare that the health system performance in Poland generally do not demonstrate significant differences between individual regions in terms of quality or accessibility of services.

While describing the health promotion and prevention system at regional level respondents commonly declared that they observe improvement in recent years, although still this is not sufficient yet, with many gaps and deficiencies existing in the system. Health programmes are being perceived as important, but too much focused on particular areas, while others are being omitted completely, or touched just pro forma, which results in failing to address actual health needs of the population, as well as making the intervention ineffective. Still the average rating for this area was higher than for the general health system, reaching the score of 5,6 on the scale from 1 to 10. As in the previous case, two of respondents did not provide their rating.
In both cases respondents representing public administration tended to give more favourable opinions than those representing providers.

Most respondents noticed significant improvement in resources for health in recent years, especially in terms of infrastructure. It has been noted that it is definitely less optimistic when it comes to staff, with significant shortages in this respect, as well as inadequate mechanisms of staff selection and training in some of specialties. Mental health and rare diseases has been mentioned as especially requiring more attention. Still the usage of the infrastructure is being mentioned as insufficient, due to other reasons, like

the financial limitations or wrong bureaucratic procedures on the side of public administration or the health insurance institution. Possible differences between individual regions are being mentioned.

None of respondents indicated structures analogous to the health region to be existing in Poland. Several of them, however, pointed that there are business clusters, which are somewhat similar, when it comes to aims and assumptions, although their activity is often not in the scale, that might be expected and sufficient to reach the aims, as they are expected from health regions. They also differ in terms of activity they provide, while some concentrate on common purchases of medical supplies to cut the costs, while other concentrate on very particular health issues they are engage in. They do not provide actual activity related to coordination of service provision or aim focus on providers aims rather, than the patients and population's health needs. One of the respondents mentioned, that existing health system institutions and structures might fill the role, which is expected to be conducted by the heath regions, and there is no need to create new structures.

All of respondents, except one, found health networks as good idea that might positively contribute to the performance of the health system in Poland. However, this would require strong support from the state/public financing, and good legal background. Without such backing they would be nothing more, but empty facade. Some of them expressed scepticism regarding the actual feasibility of such project. While addressing the key challenges and problems when developing a health region, except for legal and financial limitations, the respondents mentioned mental limitations, especially related to trust deficit and lack of willingness to cooperate, which may be connected with the lack of common interests between players to be involved in the networks, and too high focus on particularly understood aims. The lack of political backing was also mentioned and lack of legal regulation that would clearly support and stimulate the operation of health regions.

While describing core tasks and core activities for health network managers, soft skills were mentioned most often. The leader must have good skills and competence in terms of communication, negotiations, distribution of duties and convincing for the need of cooperation within the network. Good knowledge about the structure of health system in Poland was also often mentioned. When it comes to systemic issues, coordination and social exclusion were the most often mentioned ones.

Respondents had some problems with distinction between what topics or subjects should regional health managers in Poland deal with and one described in the previous paragraph. Answers were pretty similar in both cases. Physical and mental health or health programmes implementation also appeared.

In theme of challenges and problems that regional health network managers may be facing, again social mentality and resistance was mentioned and some systemic limitations to overcome. Respondents also mention conflict of interest among different stakeholders in the health system and implementation of modern technologies to the management of the health system at regional level. Most respondents declared that in their opinion all bodies and stakeholders related to the health system should be taken into consideration for managers to cooperate with.

Although there were different answers about what competences and qualifications do regional health managers in Poland need to be able to perform the core tasks, most respondents agree that managers and economist or public health specialists would be better to fill these tasks than physicians or nurses. One of them mentioned that a nurse of other professional having additional training might be also a good candidate for the network manager, but most of them found clear distinction of tasks between management and treatment as necessary.

Physical and mental were the most often mentioned dimensions to witch the activity of regional health network managers should related to. Usually the respondents agreed that all determinants of health should be of interest for the managers. One of respondents mentioned that those related to health care organisation should play crucial role.

When it comes to the training model, many respondents pointed that full study programme would be more adequate for health network manager, than just a course or training. On the other hand, some of them mention that soft skills are more important than diplomas and formal knowledge, especially when supported with experience in working in health system. The respondents declared they do not know any kind of training that would fit the profile expected for health managers, although some of them pointed that some study programmes could be relatively easily transformed into this kind of training, or might incorporate elements of the competence profile expected for the health network managers. These are courses in public health or health care management first of all.

We found no consensus or dominating view with regard to the model of health networks administration to be applied in Poland, with very diversified answers from the respondents. Some respondents preferred public financing and stimulation, while other stated that mixed public-private model would be better. Option for non-territorial, but thematic consolidation also appeared. Again good legal and financial basis are being mentioned as key determinant for the network operation and controllability. At the same time, the respondents commonly agreed that in general, in case the health regions exist in Poland the health managers might play a crucial role in the health system.

Finally, with regard to software solutions, respondents declared they do not use any software products that could be used for the process of health region management. They found it as potentially useful, although in their opinion using or adapting the existing solutions, i.e. those related to project management, would be sufficient, while creating something from beginning would be an ineffective action.

The study has several limitations, of which the most important ones are the phone-call based interview model and the fact that interview guideline has been developed based on different experiences and system-related contexts, which are not fully comparable between countries included in the Com.He.Net project. As a result, a risk of misunderstanding on the side of interviewed subjects appeared in relation to some of the issues being subject of investigation, as they cannot be fully embedded in the context of the Polish health system. Phone-call based interviews have been decided to be applied due to COVID-19 pandemics restrictions and limitations, which coincided with the data collection time frame. This model might have an impact on the interaction between the researcher and the interviewed subjects, and in consequence – the answers they gave for the interview questions. Nonetheless, this limitation was probably causing only minor bias, if any, and did not affect the substance of the results.

5. Concluding remarks and recommendations

There is a number of challenges the Polish health care system need to face, especially related to chronic diseases and ageing of the population, accompanied by the ageing structure of health professionals and their increasing deficit in the system. These issues will constitute basic determinants for the operation of the system in the forthcoming decades, as of the current state of knowledge. In this context, and having regard to limited financing, applying mechanisms to the rationalisation of spendings, better coordination of service provision appear to be mechanisms expected to be implemented in the system, along with a stronger shift towards early prevention interventions, like those addressing health behaviours, which in current circumstances, although quite commonly applied, tend to be out of control in terms of their effectiveness and rational planning. Both the context-oriented desk research and the conducted interviews prove the prospect for implementing regional health networks as possible reply to the identified system's deficiencies. Nonetheless, this appears to require obligatory strict legal support, with precise definition of duties the health network manager is to be charged with. Possible reluctance on the side of the representatives of public administration structures also appears as a potentially strong obstacle in the process of implementing the discussed institution, as well as general lack of trust among assumed stakeholders involved in the networks, which, except for well-designed legal foundations, rises clear need to include in the competency profile of health network managers highly exposed components relating to soft competences and interpersonal skills.

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UCAM Universidad Católica de Murcia

Competences in Health Network Management

IO I: Circumstances, Structures and Challenges

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Institution:	UCAM
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Contents

1. Introduction

1.1. Aim of the present paper

The objective of this research paper is to establish the required competence profile for the Health Network Manager in Spain.

1.2. Research Questions

1. **What kind of Circumstances, Structures and Challenges do** Health **Network Managers face in SPAIN?**
2. **Which Competences do Health Network Managers in SPAIN need?**

2. Methods

Please describe the Methods of the present paper (desktop research and qualitative interviews).

The qualitative methodology has been used; and at the same time designing an observational cross-sectional descriptive research.

The population studied is comprised of the regional and national health managers in Spain.

The population comprised both health professionals (e.g. doctors and nurses) and non-health professionals (e.g. economists, sociologists, and the like). According to the criteria used, both groups must either previously have held or currently hold a senior position in the Spanish health management. Those excluded from these criteria were those who refused to participate.

The sampling technique used was that of convenience sampling and snowball sampling.

The final sample size was 6 individuals.

Interview 1	Doctor, Computer Engineer major in Management, with a background in Training in Business Senior	• Director of Management and General Services of the Virgen de la Arrixaca Hospital for 3 years. • Manager of the Virgin Hospital of Arrixaca for 2 years. • Manager Hospital USP S. Carlos Murcia for 2 years

	Management and Health Institutions.	• Manager Hospital USP S. Jaime Torrevieja for 8 years • Currently, Deputy Director of Development, Grupo Ribera Salud as well as Academic Coordinator for Health Management and Planning Master, UCAM.
Interview 2	Doctor, Physician Specialist in Family and Community Medicine. Training in Health Management.	• Team Coordinator for Primary Care in Primary Care Management for 1 year • Director Manager Primary Care Health Area I Murcia (INSALUD) for 5 years • Medical Director of two Geriatric Residences for 14 Currently, Director-Coordinator for the Primary Care Team and Medical Director for the Municipal Geriatric Residence.
Interview 3	Doctor, Specialist Physician in Internal Medicine. GP for 40 years. Training in Health Management.	Director Manager Primary Care Health Area II in Murcia (INSALUD) for 8 years, Coordinator of different Primary Care Teams for 10 years. Currently SMS Management Advisor.
Interview 4	Nurse, Social and Cultural Anthropologist. Extensive training in Health Management.	• Supervisor of the Teaching, Quality and Research Area for 7 years in two SMS hospitals • 3 years as Assistant Director in Nursing Hospital Morales Meseguer • 7 years as Director of Nursing Hospital Morales Meseguer. Currently Nursing Coordinator for Primary Care Team, for 8 years.
Interview 5	Nurse, Master's Degree in Quality Management of Health Services. Extensive training in Health Management.	• Supervisor of Hospital Unit for 4 years • 2 years as Director of Nursing Foundation Hospital de Cieza • Attached to the Directorate of Nursing Operations in the Torrevieja Health Area for 7 years.

		• since 2015, she is Regional Coordinator of Nursing in the Directorate General of Health Care, Central Services of the SMS.
Interview 6	Doctor, Specialist Physician in Allergology and Clinical Immunity. Extensive and varied training in Health Management.	• For 20 years the position of Managing Director in different public hospitals of the Spanish Health System (until 2004). • Expert in International Development Cooperation. • Currently, Director of School of Management of Socio health services, UCAM • Professor of Management and Planning of Health Services UCAM • Secretary General Board of Directors of the Spanish Society of Health Directors, SEDISA • Vice President of the Board of Trustees of the • member of the Board of Directors of CEDE: State Conference of Directors and Entrepreneurs and Spanish Association of Foundations. • Management Professor and Master's degree coordinator at 12 Spanish universities.

Source: Own elaboration.

The collection of information was carried out through an in-depth semi-structured interview and bibliographic review.

Interviews with health management experts were carried out by video call, in person and over the phone; all of them were transcribed in Spanish and subsequently, translated into English.

The data was processed by analyzing the contents of the texts of the transcribed interviews, assisted by the Maxqda18 qualitative data analysis program.

Simultaneously a thoroughly bibliographic search was carried out by selecting articles from the databases and academic search engines, using the following descriptors: Organization and Administration, Health Services Administration, Clinical Management, Intersectoral Collaboration, National Health Systems, Comprehensive Health Care, Health Goals, Health Institution Administrators,

Accessibility to Health Services, Health Resources, Health Services Needs and Demands, Health Manager, Health Services Circumstances, Health Structures, Health Challenges for Health Care Network, and Health Care Network Management. The descriptors were combined to support the purpose of the search using the logical operators: Or and And.

3. Circumstances, Structures and Challenges in SPAIN

3.1. Main health challenges

For example, based on the WHO descriptions.

According to WHO (2015) health care networks are integrated health services which are services that are managed and provided in such a way that people receive a continuum of health care services, the promotion, prevention of diseases, diagnosis or treatment of diseases, their treatment and management, rehabilitation or palliative care, at different care levels and health care places within the health system and according to specific needs throughout life.

Integrated Health Services Networks as defined by the Panamerican Health Organization (2010)

(2010) are :

> *A network of organizations that provide or arrange to provide equitable and comprehensive health services to a defined population and are willing to be held accountable for their clinical and economic outcomes and for the health status of the population it serves. (*Panamerican Health Organization,2010, pp. 9, 31.70)

According to the World Health Organization, Health Care Networks are made up of the following integration features: a large group of preventive and curative interventions aimed at the population, the place of integration of various services, long-term continuity of care, vertical integration of different levels of care, the union between management and policy-making in health , and cross-sectoral work. This creates the definition of integrated health services such as

> the management and offering of health services so that people receive a continuum of preventive and curative services, according to their needs, over time and through different levels of health care. (World Health Organization,2008, p. 80)

The World Health Organization (WHO) presents a change strategy focused on integrating health services based on the financing, management and delivery of health services. The change in the current paradigm is urgent due to population changes such as increased longevity, chronicity, and preventive diseases that require a multitude of very complex and costly interventions for the health system. In addition, health systems must be better prepared to respond to health emergencies through integrated services.

Available health services should be able to coordinate and provide safe, effective, efficient, and ongoing healthcare that addresses all health needs throughout life in an integrated manner. In addition, they must be focused on attention from different perspectives: individuals, families and communities. In addition to being the recipients of health care, they must also be participants in the health system that responds to the needs of the population in a holistic way. Therefore, the education of the population, aid in decision-making and self-care is essential. Integrated health services must also ensure that people obtain a continuum in the promotion of health, prevention, diagnosis, treatment, and management of diseases, in rehabilitation and palliative care, according to the needs of their lives. To this end, it is essential that the coverage of integrated health services is based on universal health coverage and on primary health care.

Strategic lines of advancement focus on the citizens' empowerment and participation; strengthening governance and accountability to promote decision-making transparency; reorienting the health care model to provide efficient and effective services by integrating different health care levels; prioritizing Primary Health Care Policy; the coordination of health care between different levels of health care and health promotion; and reorganizing to bring together an appropriate environment in which different parties participate to make the necessary changes such as in the legislative framework, financing, inventiveness...(World Health Organization, 2015)

The main challenges that Spain is facing as far as WHO recommendations are concerned, are the need to promote the processes of participation for both social actors and citizens so that they may collaborate actively and not only as recipients of the system. To do this, it is necessary to direct health services towards the primary care level and community health. In this way, the fairness, efficiency, and sustainability of the Spanish National Health System (SNHS) will be ensured. The principles for guiding community health services are: developing healthy policies through health promotion; adapting community care to improve the complementation and coordination of local activities and processes to improve collective health; Initiating intermediate determinants of health from Primary Care;

promoting critical reflection and individual development; promoting Community decision-making to develop public policies, through mechanisms of participation; creating new forms of qualitative and subjective measurement and evaluation of the processes; coordinating and integrating Primary Care and Public Health Care for community development; training professionals to develop strategies; increasing the budget for research, resources and actions in Primary Care (Cía,et al., 2018).

Thus, Spain has one of the highest rates of aging and chronicity in Europe, so it is developing tools to address the chronicity differently and the Autonomous Communities are developing such strategies. Moreover, in 2012, the Ministry of Health, Social Services and Equality developed a Timeline Strategy. Scientific societies have also promoted the Seville Declaration on Chronic Patients (Bengoa, 2015). The increase in aging and chronicity has an impact on the multimorbidity and multipathology faced by an increasing sector of the population. To this end, it is essential to use research to develop health systems to generate quality measures to care for people with multiple pathologies as well as to develop clinical practice guidelines for the diseases that usually appear together. It is also paramount to use information systems and information technologies to achieve the integration of all patient data and make it accessible to all professionals.

Healthy aging by adapting assistance to the elderly; health promotion and prevention based on social determinants of health such as socio-economic conditions, cultural policies, and the environment in which people develop; the integration of health and social services to take into account patients' disabilities and help them in their daily lives.

Funding and universal coverage through initiatives to increase the efficiency of the system by avoiding waste, prioritizing budgets, financing in certain products such as tobacco, alcohol, sugary drinks... to reduce their consumption, and to contribute to the health development of low-income countries.

Last, but not least, the health care system should focus on training professionals on health promotion (Román and Ruiz, 2017).

Finally, it is essential to address one of the challenges in the health system, which is to provide quality care to terminally ill patients. Thus, sufficient resources are provided in palliative care (Altisent and Júdez,2016).

3.2. Key institutions

Please mention key institutions in the field of Public Health and Health Promotion in your country and describe whether their work is related in any way *to health network management.*

The key institutions in the field of public health and health promotion in Spain:

- The social sector: provides social-care services in coordination with the health-care system. (Botija, Botija and Navarro, 2018)
- The primary care practices: it is the strategic axis of the health system that addresses health-disease in an integrated way, reducing inequalities, overcoming health inequities. (Co, et al., 2018)
- Hospital sector: where specialized assistance is located, and which contains technological advances (Aller, et al., 2013).
- Areas of unified management: based on the coordination of the different levels of care, Primary Care and Specialized Care, by geographical territories (Merino, Zabala, Amengual, Marquez and Manuel, 2015).
- the Autonomous Communities which, through health plans, coordinate the health and social sector (Botija, Botija and Navarro, 2018). The Autonomous Communities assume the health competences, planning and organization of their health system. The Autonomous Communities must ensure the minimum common benefits for SNHS and they can also expand the service portfolio (Alonso, 2013). Due to decentralization, regional health services were created to develop the health management of the Autonomous Communities (Del Castillo, 2007). There is also the Health Concierge which is the body of the Regional Administration that is responsible for the exercise of authority at the health level and the management and coordination of health functions (Gobierno Castilla-La Mancha, 2020).
- The municipal (city hall) sector promotes equable health policies at the local level. Although the influence of municipalities on management is minimal in Spain (Ruiz, et al., 2018).
- Cabinets of the Ministry (Spanish Government): make intersectoral coordination possible and improve the coordination between the Health Ministry and that of Education, among others. Health and Education competences are transferred from the central government to the Autonomous Communities (McQueen, Wismar, Lin, Jones and Davies, 2015).
- Non-governmental organizations have an intermediary role between the SNHS and the population. They are responsible for helping the citizen interact with the different health organizations (Sánchez, 2019). In addition, they collaborate with the health system educating

patients and families, as well as raising the population's awareness on different pathologies (Aguerrebere, 2012). Promote mutual aid groups, community reciprocity and expert patient movement.

3.3. Key policies

Please describe key policies in your country, for example, based on laws in relation to health network *management.*

Spain's key policies regarding the management of health networks are:

- The General Law on Health 21/2001 in which the transfers of the National Institute of Health (centralized health system) to the Autonomous Communities took place, decentralizing the health system (Criado, Repullo and García, 2011).
- Law 16/2003 on Cohesion and Quality of the National Health System, which established the basic and common conditions for continuous, comprehensive and timely care, including appropriate public health benefits. (Villalbí, Carreras, Martín y Hernández, 2010) It also includes private health, related to information activities, public health, training and research and safety and quality. The role of Private Health is complementary to Public Health (Girela, 2014)..
- Law 14/1986, April 25, General Health Law, states that the National Health System is the set of health services of the State Administration and the Autonomous Communities, besides integrating all health functions and benefits that are the responsibility of the public authorities for the proper fulfillment of the right to health protection (Ministerio de sanidad, consumo y bienestar social, s.f.).
- Royal Decree 347/1993, March 5, on the organization of the Territorial Services of the National Institute of Health, in which the services managed by the National Health Institute, not transferred to the Autonomous Communities, are re-managed (Agencia Estatal Boletín Oficial del Estado, 1993).
- Law 39/2006, of December 14, on the Promotion of Personal Autonomy and Care for People in a Dependent Situation. Its aim is to regulate the basic conditions to ensure equality of the citizens' right to promote their autonomy and care for the dependent, so that, the System for Autonomy and Attention to the Dependence ensures action in a coordinated and cooperative

manner with the state and the Autonomous Communities (Agencia Estatal Boletín Oficial del Estado, 2006).

- The National Plan for Chronicity presents a Strategy to address Chronicity in the National Health System, which sets out the objectives and recommendations necessary to organize services, so that the health of the population and its determinants, the prevention of their health conditions and limitations on the activities of chronic and comprehensive care can be improved (Ministerio de Sanidad, Servicios Sociales e Igualdad, 2012).
- The General Nursing Council develops a competency framework for nursing professional's expert in the school sector to establish and define the competences and need for the development of the specialty (Consejo General de Enfermería, 2018).

3.4. Health Care System

Please briefly describe the Health Care System within your country and how it is financed. Discuss if there is any relation to regional health management in the health system included.

The National Health System (NHS) is very complex and of great importance for the development of modern-day society. The approval of the General Health Act of 1986 and the health transfers of the Spanish State to the Autonomous Communities laid the foundations for an integrated health system model; subsequently, health transfers have bolstered diverse work initiatives with integrated health networks. The NHS aims to coordinate and integrate the health functions and benefits of state health services and autonomous communities. Health services are regulated and coordinated statewide, but the competence and responsibility belongs to the Autonomous Communities (Tabarquino, 2016) Much of the responsibility for the expenditure to cover public needs has been derived to the Autonomous Communities to guarantee their social welfare and there has been an economic and financial decentralization of public expenditure with services such as health, education and social services. (Martinez, 2017)

Although there is a collaboration between primary care and specialized care, it is insufficient to achieve adequate and integrated continuum of care. The transfer of information and cooperation is inadequate. (Montes, Canosa, Castilla y Montero, s.f.)

Clinical management is an organizational technique and a management criterion that ensures that managers and clinicians establish and achieve the common objectives to present patients with the best feasible results, i.e. to achieve effectiveness, according to scientific information to change the

clinical

course of the disease achieving better results (effectiveness) at the lowest cost and inconvenience, both for the patient and society in general. Clinical management is responsible for directing care units through the active and responsible participation of health care professionals in achieving objectives and resource management (Alvarez and Rodriguez, 2016)

Therefore, managers of different levels of health management are responsible for organizing, directing, controlling, and coordinating health services in hospitals, clinics, public health agencies and the like, to achieve maximum efficiency. They establish the necessary strategies to organize the objectives and management plans. (Alamillos y Collazos, 2015).

3.5. Health targets

Do you have health targets in your Country? Please describe them and discuss if there is a relation to *regional health network management.*

Among the health objectives in Spain which stand out is developing health education so that the population has the knowledge and skills necessary to maintain and protect their health. (Riquelme, 2012)

Coordination in healthcare has become a goal due to the increasing complex patients in Spain who need a multitude of resources. Providing assistance continuity, lowering costs and improving quality of care is currently a priority. (Allapuz, Gallardo, Perona and Grup de Coordinació entre nivells del Garraf, 2012)

Another priority is the creation of a unique medical history for the different levels of care in order to facilitate the integration of the different care institutions and provide the practitioners with the patient's information. (Medrano and Pacheco, 2015)

Clinical integration is one of the key objectives; to be carried out it is necessary to ensure cooperative and coordinated work between the different providers and system environments to ensure person-centered health care, including the family, social and community resources. Creating new roles, increasing the competencies of family doctors/general practitioners in certain processes, and modifying certain assistance services are essential to ensure services that meet the needs of chronic patients. (Herrera, Asencio, Kaknani and Mayor, 2016)

Health promotion and prevention are the priorities in the NHS. To this end, voluntary adherence to local entities is encouraged to develop health promotion and prevention by forming an inter-sectoral coordination table and identifying the necessary resources at the municipal level. (Mirales, et al., 2018)

Network managers have a primary role in the development and operation of health care in Spain. Therefore, it is important to create a competency profile for a health network manager in Spain and to standardize a training program according to the competence profile.

The Quality Plan for the National Health System focuses on 6 areas:

1. Health promotion, prevention, and protection
2. Equity promotion
3. Support for human resources planning
4. The boost of clinical excellence
5. Information technologies to improve care services for the population
6. Increase transparency

(Ministerio de Sanidad, consumo y bienestar social, s.f.)

On the other hand, in the regional health plan of the Region of Murcia, 3 areas of action are developed: Health and Population, Health and Health System, and Patient involvement and chronic ailments.

The lines of action in the health sector and population are:

1. Promote the citizens' involvement in their health by promoting healthy behaviors and lifestyles.
2. Develop and strengthen health and cross-sectoral policies to promote health in the population, create healthy living environments, improve the quality of the environment, and enhance prevention and safety mechanisms for the collective health.
3. Act on health inequalities that condition unfavorable outcomes.

The lines of action in the health sector and health system are as follow:

1. Strengthen Primary Care, which is the basis of the health system and the interlocutor of the patient and health manager, and promoter of public health.
2. Improve clinical practice by reducing variability, continuum care and clinical safety.
3. Strengthen coordination with social assistance and dependency enabled devices to promote citizens' autonomy.

4. Strengthen the management system to improve the response of organizations and professionals.

The lines of action in Patient Involvement and Chronic Ailments are:

1. Strengthen addressing chronic pathologies based on the development and evaluation of comprehensive clinical lines between care levels, improve the effectiveness of palliative, curative and rehabilitative treatments.
2. Promote the patient's capacity and involvement and their environment with their disease through individual and group interventions.
3. Strengthen and improve approaches to cancer prevention, diagnosis and treatment.

(Conserjeria de Sanidad y Consumo de la Región de Murcia, 2015)

4. Health Network Manager

Description

If there is an existing definition of Health Network Manager or equivalent in your country, please describe it. Otherwise, use an international definition and mention that there is no existing definition in your country.

Health managers in Spain are responsible for providing effective and efficient health services to the population. This involves the management of hospitals, general health services and practices. Health managers collaborate with health professionals such as doctors, nurses, scientists, local authorities, media, etc. The profile of such a professional must include leadership skills, organizational and planning skills, communicative and financial skills, as well as skills in information and communication technology, etc. alongside with the official studies to exert the profession

Health managers are responsible for organizing, directing, controlling, and coordinating health services in hospitals, clinics, public health agencies and the like, to achieve maximum system efficiency. They also establish the necessary tactics to organize objectives and management plans. (Alamillos y Collazos, 2015). The functions of a hospital manager include company funding, staff management and administration, communication, information analysis, business and labor relations improvement (with government, board of directors, customers, or patients and providers). The manager must possess

certain **technical skills** (either information technology or statistics, to use tools to plan); **administrative skills** as well as the resources to perform tasks, **analytical skills** (follow healthcare regulations and adapt quickly to new laws); **interpersonal skills** (work well with a variety of professionals) and **conceptual ones** (to know the company, its departments or areas, to recognize its elements, its interactions, and the changes that exist or may exist, that is, to understand the entity as an indivisible set). These skills can be achieved through training or personal experience (Heredia, 2013)

4.1. Status Quo in SPAIN

Is there a defined curriculum or are there defined competences regarding Health Network Managers in your country? If yes, please describe it. If there are Health Network Managers in your country, how does their training and education work?

Managers have two different types of profiles. On the one hand, managers with a clinical management profile, with a background in health training. And, on the other hand, managers with a management profile in finance, with a background in economic management. Their training depends on the degree they possess (Naranjo-Gil, 2016). In addition, as part of the doctors' training, there are educational programs that train and promote their development as health managers. (Morán, 2013)

There are various training programs from the academic environment: official master's degrees and other training courses of a more informal nature at the postgraduate level, but it does not exist as a recognized specialty; there is great influence on political aspects. It is one of the recognized functions within Nursing and Medicine.

4.2. Results of the conducted Interviews

Please describe within this chapter the following points:

- *The number of the conducted interviews:* The number of interviews conducted has been 6.
- *The field of work of each interview partner*

Roberto Ferrándiz Gomis: Doctor, Computer Science Engineer specialty Management, Training in Senior Business Management and Health Institutions.

He has held the positions of Director of Management and General Services of the Virgen de la Arrixaca Hospital, for 3 years. Manager of the Virgin de la Arrixaca Hospital for 2 years. Manager of the USP S. Carlos Hospital in Murcia for 2 years, Manager of the USP S. Jaime Hospital in Torrevieja, for 8 years.

Currently Deputy Director of Development of Grupo Ribera Salud. Master's Academic Coordinator for Health Management and Planning UCAM.

Esteban Granero Fernández: Doctor, Physician Specialist in Internal Medicine. Family Doctor for 40 years. Training in Health Management.

He has held the positions of Managing Director Primary Care Health Area II in Murcia (INSALUD) for 8 years, Coordinator of different Primary Care Teams for 10 years.

Currently SMS Management Advisor.

Enrique José Ortín Ortín: Doctor, Specialist Physician in Family and Community Medicine. Training in Health Management.

He has held the positions of Coordinator of Primary Care Teams in Primary Care Management for 1 year, Managing Director Primary Care Health Area I Murcia (INSALUD) for 5 years, Medical Director of two Geriatric Residences for 14 years.

Currently Director-Coordinator Primary Care Team and Medical Director Municipal Geriatric Residence.

Mariano Guerrero Fernandez: Doctor, Physician Specialist in Allergology and Clinical Immunity. Extensive and varied training in Health Management.

He has held the position of Managing Director in different public hospitals of the Spanish Health System for 20 years (until 2004). Expert in International Cooperation for Development.

Currently, Director of School of Management of Socio-health services, UCAM, Director of Management and Planning of Health Services UCAM, Secretary General Board of Directors of the Spanish Society of Health Directors, SEDISA, Vice President of the Board of Trustees of the SEDISA Foundation, member of the Board of Directors of SCDE (State Conference of Directors and

Entrepreneurs) and Spanish Association of Foundations. Management Professor of Bachelor's degree and Master's degree at 12 Spanish universities.

Antonio Paredes Sidrach de Cardona: Nurse, Social and Cultural Anthropologist. Extensive training in Health Management.

He has held the positions of Supervisor of the Teaching, Quality and Research Area for 7 years in two SMS hospitals, 3 years as Assistant Director of Nursing Hospital Morales Meseguer, 7 years as Director of Nursing Hospital Morales Meseguer.

Currently Nursing Coordinator Primary Care Team, for 8 years.

Aurora Tomas Lizcano: Nurse, Master in Quality Management of Health Services. Extensive training in Health Management.

She has held the positions of Supervisor of Hospital Unit for 4 years, 2 years as Director of Nursing Foundation Hospital de Cieza, Deputy to the Directorate of Nursing Operations in the Torrevieja Health Area for 7 years.

Currently and since 2015 she is Regional Coordinator of Nursing in the General Directorate of Health Care, Central Services of the SMS.

- *The period in which they were carried out:* The study was carried
- between February and June 2020

- *Summarize each interview separately in a short paragraph and highlight the <u>main key messages</u>* from these *interviews*

  INTERVIEWEE 1:

  The figure of the manager of Health Care Networks channels all the actions to achieve the objectives of the organization itself, so it must be from simpler organizations to more complex organizations, freelancers, primary care units, municipalities... The issues that regional managers should prioritize are prevention, early diagnosis, and cure. The use of co-payment to more health services, in addition to outpatient pharmacy, would be an option to eliminate unreal demand and lack of public commitment. Health care training is not necessary for a health care manager because they responsibilities may not require them to work directly with

patients. There is currently an empowerment of the promotion and prevention of regional health in Spain, although it is insufficient. The complex chronic patient must be in Specialized Care.

INTERVIEWEE 2:

In our healthcare environment, the Health Care Networks model is applied. Integration is one of the main tasks that the health manager has to carry out. The health structure in Spain is public and organized vertically and horizontally. The network manager is responsible for setting the criteria, addressing problems and setting priorities. Managers are elected from the political field, which causes a large disparity in the functioning of structures in some autonomous communities or others. The scheme of social determinants is scarce because the important thing is the health aspect relationship with the rest. Networks can slow down negotiation processes and consensus, although the benefit posed by networks is so important that it compensates. The network model is the best model, and it is essential today. The coordination between Social and Health Services is insufficient. The co-payment will be essential and necessary, due to the social awareness it generates and the improvement of the funding system. The Primary Care level has sufficient resources to meet most of the population's health needs, although it should have more technological resources.

INTERVIEWEE 3:

The Health Care Networks model is partially applied in our healthcare environment. The appropriate organizations to employ a network manager as an entry-level position would be the health areas. Managers must have their own professional competence, for this it is necessary to professionalize the position. A regional health manager should analyze the situation and set priorities. Differences in health service catalogues exist in all regional services and in all Spanish regions. With the implementation of the health co-payment, the solidarity of the public service is lost. Health care resources at the regional level in Spain are insufficient and the current funding model is insufficient to finance health services. Due to its complexity, having a medical degree to complete training as a regional health manager is absolutely necessary. Most health managers in Spain began their professional development without training or prior knowledge.

INTERVIEWEE 4:

The Health Care Networks model in our health environment is sometimes carried out on special occasions and it is related to communication between Primary Care and Specialized Care. Primary Care units are the appropriate organizations to include a health care manager as they are the closest organizations to the population. The network manager must be the most complete professional in the entire network, and that is why their training is important. Networks facilitate and promote the dissemination of expert knowledge to the population. Unified area management is an option for some situations, but this is not always the case. The co-payment should be used in very specific cases and as a penalty for the misuse of health resources. The current funding model is sufficient, if they are restructured and directed towards the needs, as resources are limited. New technologies are an essential tool to implement in health networks. The Primary Care level does not have sufficient resources to meet most of the population's health needs, although more and more resources are available.

INTERVIEWEE 5:

Health Care Networks are not developed in all contexts because the social and welfare sphere are sectorized. The work of regional health network administrators relates to the dimensions of physical health and leave the rest aside. Networks do not promote the dissemination of expert knowledge to the population. Networks can slow down negotiation processes and consensuses especially when making decisions due to the participation of large numbers of people involved. The unified management model does not always meet the integration needs of healthcare services. there is not enough vertical coordination between the two levels of care. Coordination between social and health services is inadequate. Co-payment should be applied as it influences the efficient use of both professionals and patients.

INTERVIEWEE 6:

The health care network model is beginning to develop in relation to Primary Care and Specialized Care. Population health is one of the main tasks that health network administrators must perform in Spain. The health care provider must know all the aspects of health. Topics that should be prioritized by regional health managers would be to conduct a population health analysis, provide a health plan and services efficiently. To be trained as a regional health manager it is necessary to have the skills, the certification is not important. There is a master's degree in management training. The key problems for regional health network administrators when developing a health region are fundamentally organizational. Partnerships are necessary to create social structure, but only at the collaborative level.

- *Summarize the interviews in relation to the research questions*

Networks

What main tasks and activities should health network administrators perform in SPAIN?

I1: Above all, the development of the objectives of these organizations, which should seek improvement in patient care. Trying is complicated, as it can impact on the improvement of the citizens' health.

I2: Basically, the integration; what health care managers must do is to be very clear about what the goal of the system is. The goal of the system can be nothing more than to improve health indicators, improve quality of life indicators, have clear criteria based on that, set targets, which are already set by WHO, or those set by political structures, and from there, based on those objectives, work. And to set those goals we have to build backwards, and what we have is what we have, to try to integrate them into those networks, in order to make them more effective and more efficient, that is to get closer to the proposed objective and at a reasonable cost is what a network manager must try to do.

I3: According to the definition you have provided and literature I have read, it seems that the administrators of these hypothetical networks must therefore comply with those fundamental objectives, those of integration of services, temporary integration, the management of all those circumstances, which raise the achievement of the objectives of the networks, which is to connect and integrate a whole series of activities , levels, services, which I find very interesting from the point of view of improving and maintaining citizens' health.

I4: They must flow-generate activities between different members of the network and must have sufficient knowledge about different levels of care and above all the social structure, as well as leadership skills to manage the interaction of those levels.

I5: I guess there are many, from prevention, coordinating all levels of assistance, meeting citizens' health needs, sharing resources, allocating certain resources where there are more needs, we have many tasks.

I6: Tasks focused on population health.

Which organizations would be suitable to employ a regional health network administrator in _ SPAIN _? (e.g. municipality, primary health units, self-employed professionals, etc.) From which

organization where they can integrate a health network would it be appropriate to include an administrator?

I1: Functions, tasks, and issues are likely to be similar, although the structure is larger; the larger it is, because the problems are similar, the greater the impact may be. So, I think it makes sense to have such a figure in any of them. Probably there must be a scale, i.e. from simpler organizations to more complex ones.

I2: Well I think the general idea in Spain is that the structure is public, which is the base. And on the basis of that public structure which is established from the bottom up in a more or less pyramidal or more horizontal way, and all the indicators that each of those systems, of those services, of those components, have to do their work. In Spain, what we have is a public service with managers at the autonomous community level, who have that function. Perhaps we suffer that the private structure has not always been properly integrated into the system. The indicators which generated this private health structure are often not generally known to what extent they improve the overall public health or the public health of the whole population. Perhaps the only thing we have is that "disintegration" of the private structure, except for moments like the ones now, that there is an integration even if it is due to a special situation like that of the Covid, which has broken that dynamic a little bit. But I think the overall dynamics in Spain is well made, a public structure that controls the set and that has some parts of what the health product that does not control so well , because they depend on private structures that often depend on town halls, in other words, the local administration. And that stays a bit peripheral and not always integrated into the set of services.

I3: To my mind, in the current situation in Spain, clearly the regional health services, i.e. the geographical distribution of the population, which currently constitutes a basis for the areas of health.

I4: I believe that the adequate organization would be primary care units, which are the closest to the population and that they can know, to a greater extent, more about their family structure and especially the risk groups, as well as the needs of these risk groups.

We could also consider the town hall level, which is also so close and many social and health needs can be detected and which may not be available otherwise.

I5: I believe that municipal entities may pool all these resources, and you establish those networks between the social, the municipal and the health part. I believe that the bodies and security forces, all the associations in the municipalities you can establish networks that really

have an impact on better health for the population , it would be in municipal entities where it may be able to centralize more health care, without other entities outside what is a local administration or a public administration.

I6: Since you have training in health management, common sense is very interesting, but it only works for the first few months. Then you have to have training in health planning, in health outcome analysis, and also have organizational skills, first and foremost focusing on health as a fundamental element, since health services are an instrument, but the final aim is the health.

I like the word health manager more. There must be health managers with a more strategic vision and others with a more operational one. But the networks must be formed exactly the same as other health organizations, they must form a network of strategic health managers and operational health managers with clinical health managers and that all must be integrated within the same objective.

How important are health network administrators/managers to regional health care in _ SPAIN?

I1: I understand that the role of administrators in health networks is essential because they are the ones who channel all the actions to achieve the objectives of the organization itself. I understand that any organization, in this case, also health networks, requires a management structure that requires an administrator or manager in this area.

I2: I think they are fundamental, and they are the ones who right now set the criteria, not only from what situation we face but how we address the problems and to what extent we set priorities and quality control of what is being done. I mean, that those indicators are the ones that we really have to assess, to what extent we are getting things better or not; those who have it centralized right now are the regional managers, and in the last extreme in an already more political area the councilors, which I think right now are the basis. If the system works from above, the structure works in general.

I3: I believe that now it is high and fundamental. At present, the managers of what we might consider health networks, which would be the management of health services of the areas have enormous importance and significance in the population.

I4: In the event of such health networks, the position of common objectives would be very important, without these administrators it would almost never be possible to agree on the different levels of care and coordination between these members of the network.

I5: They are very important because if we really want health to be a whole, we know that there are many factors that it determines it. Health is not only about the health system but many others that influence much more, it is essential.

I6: Without a doubt, it is fundamental.

What dimensions of health do you think the work of regional health network administrators in _ SPAIN _ is related? [If the interviewee has difficulty answering the question, list the dimensions: physical, social, mental, spiritual, emotional, or sexual]

I1: No, I have been administrator of the health region and the sexual issue..., emotional yes, because you work with people, if this is where you are heading..., but sexual, no.

I2: Well basically health, health education, and to some extent, emotional integration. I believe that it covers many areas, as many as medicine itself covers, which the healthcare professional covers within their consultations plus the socio-health aspects that carry out social work or administrative support units. But what we're basically focusing on is prevention, on the one hand, more and more on attention, attention to the problem, the care demand we face. That is the basis and there are many things that are being coordinated, that are being routed, but let's say that the problem for me is uniformity, depending on where you are, the geographical location or even the health area you are in, and as well as in the autonomous community, the services differ a little, it is certainly not the same to be in a place near a hospital, that being in a farther place, but well, basically the general idea goes a little towards the aspect of prevention and attention to the disease.

I3: Well, I would say that with all the levels we have talked about, from the point of view of being able to make preventive, curative or care interventions and in the integration from the different services, and in the assurance that health surveillance is carried continuously, even between the transfer of political power, when the political norms need to be implemented on population bases. I think that is the health dimensions which are important nowadays. And naturally it leaves others untouched: everything related to food or road safety or with other kinds of psychological problems, possibly social or family issues because it does not touch them so extensively.

I4: Above all, at all levels, that is, I speak as a nurse, and we are used to having a little more joint training than what the population's needs really are. So I think that all aspects of the population should be taken into account and they have to be integrated into those needs, in their resources, and this is where the administrator of that health network gets involved, we

do not only talk about pathologies, or communication, we talk about social, mental, or lifestyles aspects, they have to be a much broader thing, than what it really is to talk about is pathology. Currently, only the patient's or the population's health needs have been focused on.

I5: They are more dedicated to the physical part and omit other aspects, which should also be contemplated. We focus on what physical health is and not others, we don't consider all other aspects.

I6: I believe that the health manager must know all the dimensions of health, its components, its most physical aspects, especially the most social ones, since what the health manager should focus fundamentally on is the concept of population health. Since the concept of individual health is considered when clinicians see a patient. I mean this would be a more psycho-social concept, fundamentally focused on this new concept that is called population health.

What organizations and stakeholders should regional health network managers work/cooperate with in _ SPAIN_?

I1: With actors participating in patient associations, patients within associations, with industry, with suppliers, logically with training structures, universities, institutions, town halls. With any establishment within the network, hospitals, primary schools, mental health centers, logically with any of the units that are part of that network.

I2: I believe that the problem is the integration in the ordinances at a general government level, at a country level, where the regional ordinances, and the local ordinances, are more important in the integration in the same work fields. The use of all resources in a more uniform way, so that we do not have certain things coming from the central government, and we could use other resources that are isolated at a local level. In my opinion, the foundation for this is to try to achieve integration. Clearly, what you should have are social and socio-economic relations, since there are many resources outside the public structure that could also be used and integrated, both in terms of research, and of health products. There is one thing that I believe is not adequately addressed and could be interesting, which is the research aspects related to the use of resources, produced by private enterprises, that could be elements of financing, and of improving resources. Since in some way many synergies could be obtained, among what is now the private and the public sector.

I3: Following the previous answer, I would like to comment that from my point of view, there are some that are clearly being carried out. As I mentioned before, we should extend this to maintaining contact and integration with other organizations or other sectors that deal with social, psychological or family creditors, which today we are not able to do. I consider perhaps less important, situations in which spiritual or emotional determinants could have an impact on health. From my point of view, it would be a little bit beyond what a network organizer or network-based health monitoring would do.

I4: Basically they should work with the primary care teams, as well as with the specialty centers which are a little forgotten and it seems that it is an intermediate step between the hospital level and the primary level. Furthermore, as we mentioned before, we should work with the local pharmacy communities, neighborhood associations, volunteers, NGOs, town halls, etc. In other words, all these private clinics which are in the health area, are the ones which should be taken into account when establishing a major health network.

I5: Practically all of them should work together, from partnerships with health systems, local entities, to state security forces. I think that if you really want to establish a network, everyone, with education, fundamental work, with the basic and fundamental concierges or schools, even the industries in the region, must be taken into account. I believe that all these operators must take everyone into account.

I6: Clearly, with the health authorities, but one must also work with clinical and nursing organizations. Health managers are between the health authority and the clinical authority. That middle ground is where the health managers are.

What competencies and qualifications do regional health managers need in _ SPAIN to be able to perform the central tasks/activities mentioned above?

I1: The ability to make decisions, to work in a team, to lead an organization, to focus well on problems, the ability to go to the problem, to focus that situation well, to the ability to work the objectives. These are competences, qualifications that currently coexist in our degree system, (now I do not know what they are called). A few years ago their names were: middle grade, higher degree, university degrees, etc.

I2: Therefore, what they need right now, as they are basically elected from the political field, is to have a qualification, obviously, but in reality, a designation, are freely appointed duties, where there is no clear opposition or way of arriving at them on the basis of clearly established merits. The situation is currently like this, which is why there is a great disparity in the way

some structures operate in some autonomous communities and others. To the extent to which government positions are better prepared, I believe that they also generate much more beneficial and much deeper dynamics.

The qualities (management, leadership, research, health technologies, communication) are essential, the health sector has to have an overview of the situation, it has to know the system, how to sell a sanitary product, and it has to understand the quality with which it provides that service, it has to be at a cost, and it has to evaluate and assess. This requires highly trained people with a certain amount of experience. However, this is not for people without the adequate training. A hospital manager could be managing, for example, an enormous resource, with 5, 6 or 7 thousand people working in a hospital. In other words, an aircraft carrier has a brutal amount of resources, which are generated by it. Whoever manages this has to know what it is, has to understand why it is there, has to answer the questions and establish priorities. Not just anyone can do this. They must have a very good training and a very clear idea of where to take this large aircraft carrier.

I3: I think that the fundamental characteristic is that there should be a compendium of established procedures that can help this type of people, to have their own professional competence, that is to say, to professionalize in the aspect of health managers or administrators, to professionalize when it comes to health networks.

I4: As we spoke before, I believe that this professional must be possibly the most qualified person in the whole network, in other words, he must be a professional who is committed to his job. Must be a person who has a very complicated and difficult job, and it is in fact very rare to find such professional, who appears from a spontaneous generation. So I think that he should be trained beforehand to be able to access that job.

I5: Above all, you will need to have a very broad qualification (management training, technology training, environmental training), not only in management, but also in many other aspects, especially if you are going to manage health. You must have training and experience and above all, the ability to look beyond knowledge, especially the resources we have. They should have many qualities, not just management skills.

I6: Mainly, they should have training and experience. They should have training in health management, in accredited health programs, and experience which should be taken up at the beginning, as well as the appropriate skills.

What determinants of health are important in terms of work as administrator of the regional health network in _ SPAIN _? [In the sense of the determining model according to Dahlgren and Whitehead, 1991 - If the interviewee has difficulty answering the question, show the model in printed form.]

I1: A health manager has no capacity to influence housing quality, sanitation, or unemployment. At the moment, they have no influence at all, but perhaps they might influence education, because it can somehow empower or encourage education to patients. From this I understand what health services, and education are. There is a work environment, but for health network workers, not for the rest of the citizens.

I2: The famous scheme of the determinants falls a little short to some extent for me, because in the end, what we are talking about is the health aspect and how it correlates or how it relates to the rest. In health service aspects the logical thing to do is to pay attention to the structure and how it works. Evidently, if you value health in a more generic way, it includes many things, and obviously it conditions unemployment, or the level of water, or food, but of course they are annexes, which surround the whole but these are not direct care. I think that director, structure, manager, or administrator, as we want to call it, would always be associated more with the economic aspect and it appears that manager is a little more global. What they have to do basically is control their own structure and at the same time have reference to what is happening around, in a political environment, in an administrative environment, at a high level, because logically, what we are calling health network manager should also be responsible for network management at another level, for example, at an educational level, at a working environment level, at the level of anything in other aspects. Undoubtedly all this also influences health, but I think what we cannot ask a health manager is to control other things, ideally, what he can have most is to consider what the general situation is to establish, or evaluate the general situation to see if its economic capacity, as well as its level of economic management allows it to do certain things or implement certain technology, which in the end is what counts. I3: It seems to me that, in addition to all the above, it would be good if aspects such as being able to integrate into the model of health maintenance and conservation aspects of conditioning, such as food or the educational environment or working conditions, or social conditions, these issues along with probably housing, would seem to me to be fundamental in such a way that they form part of the competencies or scenarios that a network manager should integrate.

I4: I think that factors related to lifestyles are important. All studies indicate that most of the benefits of the population' s health level on the lifestyles of that population, but it would have to take into account aspects such as socioeconomic conditions, environmental solutions and so on in the municipalities. Above all, in order to reach populations at risk or especially vulnerable in some very specific situations, such as complex problems, complicated social problems, without welfare and social networks that can support the improvement of the population. In other words, it should be a more global vision of what is being done, or can be done right now with what we have and with the resources.

I5: I believe that it is fundamental what the environment is, where the person lives, the conditions of housing, health, plus investing what is employment, and education. Perhaps if public authorities or managers do not invest in ensuring that the population has access to education, we will end up in very poor health, in other words, I think that everything has an influence, especially the conditions in which the person lives, and I believe that education, or having rights is fundamental for the individual. I think that education and the environment, the neighborhood, sanitation, having good hygiene conditions, are more important than having good hospitals, or a health center every 2km. It is more important to invest in people's living conditions, to favor employment. As a result, a good education gives you the possibility of having a better job, more economic possibilities to take care of yourself, to live in a neighborhood where the air is clean, where you have green spaces. All this conditions better health, because many times it is that, it is not the health workers who make such decisions, to make our environment more favorable to enjoy good health.

I6: There are two very important parts, one related to health promotion and the other is related to the efficiency of health resources.

What topics should regional health managers prioritize/analyze in _ SPAIN _? [If the respondent has difficulty answering the question, give examples: target group type, environments, behaviors...]

I1: Where one should focus is on the health managers, who I think are strongly focused on production. Understanding that production, in order to make therapeutic diagnoses, helps your organization. And going back to what we were saying before, there is a preventive work, which makes it possible for the disease not to reach the patient. However, when it does reach the patient, an early or rapid diagnosis is applied, and it would act quickly. There is also work aimed at prevention, reduction, and early or rapid diagnosis, for rapid action. In principle,

I

believe that this is what can work best for a patient. But perhaps, above and beyond that, what we should have is the ability to see how this influences the health of citizens. In other words, it is not clear, I think it is not clear, what indicators measure the connection between the things we do in the health networks, and the health of the citizens.

I2: .....

I3: It seems to me that the fundamental thing should be a regional health manager, to call it as mentioned in the question, one should do two great things. First, to analyze the situation of the different competences, which might have under his responsibility. And once this has been done, one must establish priorities in terms of which these situations are distorted and, depending on the importance we give to them, one must correct this distortion that we have detected after the analysis.

I4: First of all, I think they should know the integration structure of the network, that is to say, you cannot start working if you do not really know what you are counting on. And to analyze the common objectives, that we must know that they may be questioned, what lines of communication exist between them. It is important to know what components this network has or can have, what coherence, and what common objectives this network can have, otherwise it is impossible to carry it out.

I5: They should take a picture of the environment, the population, what health problems they have, why they are derived, what is said about an analysis of the situation of the population, neighborhood conditions, hygiene, open spaces, unemployment, marginal groups, educational performance, immigrant population groups, etc. I believe that what is the structural part and an analysis of how the population lives and the most important health problems they have and look a little bit further than the concept of health/disease, biology, but to see a little bit further, is what will allow you to make decisions and really if they want to establish or make some changes.

I6: Firstly, an analysis of the population's health must be carried out. Secondly, a health plan must be drawn up. And thirdly, we must demand that the health services provided are efficient, but not only the health services, but we also have to take a very important step forward in terms of health promotion.

GENERAL PERCEPTION

What do you think about the current health system at the regional level in _SPAIN_? [Provision of health offers, overcoming barriers of access, offers for target groups that are difficult to reach, transparency of structures in the health system, etc.] Also rate on a scale of 1 to 10 (10' excellent, 0' very bad).

I1: Well, I think there's a reasonable level of care. There is a reasonable level of provision. What the system shows is that, the greater recourse, the greater the demand. I believe that in general the valuation is positive. A 7, 7.5.

I2: I think we have a good model and a good system, with the big problem that is the inequity of geographical location in many cases and perhaps as well to some extent when in the political sphere it interferes significantly. I think that the model on paper is difficult to improve, the application always has weaknesses, much progress has been made in recent years, much work remains to be done, but I believe that in general our model works because it is based precisely on networks, it is based precisely on the integration of care models and coordination with socio-health levels.

Regarding the role of the model, I give it an 8-9, and regarding the reality, a 6.5, because the big problem we have is the inequity and the great distortion that it produces sectorization by communities. The non-functioning of the General Health Council at the state structure level. I think that this creates important inequities, very important differences in terms of financing and this is often evident, logically, in management capacity and in the possibility of establishing solutions.

I3: Well, it seems to me that in Spain and at present, health services are very well positioned, very well considered, and improved management should be an absolute priority.

I think it would be at a level between 7 and 8.

I4: I think it's pretty improvable, it's okay, but it's pretty improvable. As I told you before, in situations like the ones we are living now that appreciates that everything was going well, that everything was perfect, now you can see that there were many situations in which we can improve quite a bit. Things are not bad, but there are many spotlights, in which we would have to stop a lot, and it is quite easy to identify in crisis situations the improvements that can be made and where we would have to work.

Between a 6-7.

I5: I think here we are investing a lot in what is not going to add value to us in the long run. I believe that at a time when a part of the budget has been taken away from what is the part of

public health, prevention and health promotion, there we are failing, there we are doing it wrong. Then there is another part also of what is palliative care that is not being done well either. This means that a policy has been made, a health that it is not consistent with what we have and what comes to us, then the social part of the care of the elderly, of the prevention of care of chronic, etc. Right now we are investing a lot of money in high-tech, in very expensive medicines, which in the end is not bringing as much health to our population. It is contributing to some particular groups, also sometimes very debatable, but not to increase the health of the citizens. Currently, there are very important problems, such as tobacco or obesity, and for that no money is being invested in. However, we have expensive medicines, hypercube technological treatments, or drugs for oncology, so that a person can survive of very little time, that aimed at prevention programs or for children, adolescents, certain groups that have less access to health, etc. It would be much more profitable and much more efficient than where it is being invested, in the latest surgical technique or in the latest device that makes you a wonderful scanner. I think that's what we're failing at, that is, the part that's really going to contribute in the long run we don't invest.

A 6.

I6: I think we are in an excellent time, but what happens is that there is a lack of strategic planning on the health systems in Spain. And coordination between the health systems of the 17 autonomous communities. A 10.

FINANCING IN THE AUTONOMOUS COMMUNITY

What do you think of the resources for health care at the regional level in _ SPAIN _? [material resources, acquired project funds, knowledge and information, social resources]

I1: It seems to me that they are limited, but what happens is that, if we look back, there are more resources than before and it seems that the level of response and satisfaction does not vary over time. As I was telling you before, the more resources there are, the more demand there is.

I2: Resources are always insufficient, in principle, many more would always be needed. I think they are sufficient. Although in crisis situations like the ones we have right now, any situation like this is insufficient. I think we have very good care and very good resources for urgent critical patient care, and we don't have that good resources for chronic patient care. I think that's where it suffers a little, where we're missing resources. The resources are sufficient to

obtain good indicators compared to other countries, insufficient in chronic patient care which is the one that actually generates perhaps the most difficulty of care over time, in that continuity. I think we have a very good organization at the critical patient level.

I3: In general, they seem insufficient to me, but not because of a cliché. They seem insufficient to me simply because of one fact, which nowadays explains it to us very clearly. Since the economic crisis about 10 years ago, the funding for health services has not only stagnated, but has decreased. We, the non-professionals, realized this at a time when we needed health services and we needed them in an extraordinarily vital way. We realized that not being well financed was causing many problems, that we objectified them when the necessary resources, the financial resources, have not only been necessary, but they have been indispensable to save more transcendental things, than even health itself.

I4: I think there are a lot of resources available but they are poorly sized and with watery spaces. For example, there is no budgetary flexibility, if at any given time material resources are necessary and there is no budget left for those materials, it could be used for that. What worries me is that we are so stagnant regarding what health care resources are, that in managing those resources administratively they have no possibility of making the use of those resources more flexible. That is to say, to move resources back and forth costs a lot of work and then depending on the needs of the population, but depending on the administrative capacity you have to mobilize those resources, social or trade union actions, that even the worker or workers want or do not want to do that work. For example, mobilizing now with the issue of the crisis, if it had had to be done as it has been done in Madrid, mobilizing resources from one health center to another, because that at other moments other than in times of crisis would not be possible, even if the needs existed. We can have unused or underutilized resources on one side and elsewhere, resources are needed, and that means there are some pretty important pockets of inefficiency.

I5: I think it's excellent. I think that the budget that should go to this part is destined to what is the healthiest part, more technology, not research, and that this part cannot be taken away more than what has been taken away, but the technological part, medicines, from there we don't do it very well, we are not really efficient and this is not having any effect on us having better health indicators. I believe that this part is what is failing and that each Autonomous Community has its own budget, its own independence, but it is true that there are differences between the type of care given in one community and another. There is a common portfolio

but then each Autonomous Community manages and provides another service that is different, and also has different circumstances.

I6: We should do two things. On one hand, we should increase the percentage of gross domestic product devoted to health, but not to continue spending the same, but to meet the needs of citizens who are currently not covered. Not to spend more, or to do new things, but we must also try to be more efficient, we know that some of the health care being provided does not bring health, and we should not do so. However, there is also a process of technological fascination among citizens, and this is obviously expensive and does not bring any benefits.

TRAINING IN MANAGEMENT AND NETWORKING

What requirements are required to complete training as a regional health network manager? / Do I need to have a health degree to complete regional training as a health manager?

I1: Not right now. I believe that one must have the knowledge that allows us to coexist or be in a better condition when decision-making, like, you must know the elements of organization, of legislation, but also of resource management, certain criteria of economic, technological type, in short, you must be able to move with ease through complex knowledge organizations and therefore have knowledge that allows you..., if you do not have knowledge it is difficult that you can put it on the table to make decisions. And then you have to have certain skills, which we said before, hey I can be very prepared, but if I'm all day analyzing things and I don't make any decisions... well, bad business.

I2: Health training specifically not. In fact, there are managers right now who are not health care workers: economists, lawyers, health workers as such, not necessarily.

I3: In coordination with what I said at the beginning of the questions seems absolutely necessary to me, that is, that a complex world like the one we are talking about and even if it integrates more aspects and levels of the current ones, needs high professional training, given by specific studies that are granted by bachelor's degree, or a sufficient level that will guarantee it, that that world is known , that the handling of all these variables is known.

I4: Related to what we talked about a moment ago, I think it would be important, that is, it would be important for whoever holds that position as health manager, to be formed before that position as health manager and to be formed in all aspects of that job. Not only in one area or another but in all aspects, including what we talked about at the beginning of the

interview, the issue of synergistic relationship with other institutions, with town halls, with associations of neighbors, that is, the one who occupies that position as health manager, must integrate with all the actors working in that network or in that management area and that is not always carried out. Health education does not guarantee training, but it would be important for that person to have a health degree, it is not necessary but important. I believe that we have many examples where health qualifications to fill these roles have not guaranteed that they take these positions effectively. But it would be important if that degree had it, and if I didn't have that degree, it would have knowledge of that attention.

I5: No, in fact, those who do not have that health degree may have other goals in their sights and not just look at health care, but look at more aspects that influence health, which we must take into account. It is often better that they can be equal or better managers without that health degree. It's not necessary. To be a manager of an area, from my point of view, you don't need to be a health care provider, you can have different backgrounds, and other skills that maybe we health care workers don't have because we're too focused on the disease, health and we don't see any further, in hospitals, health centers, and we don't see the rest of the influencing factors.

I6: What you have to have are the skills, nowadays having a degree says nothing, just having the skills and the valuation system must be done by competences and not by the degree.

Are there educational opportunities for health network managers (or equivalents) in _ SPAIN _?

I1: Well I think there are postgraduate courses, through master's degree that teaches students this type of knowledge. All the necessary ones? Well, probably not, but a lot of them.

I2: If it is in a formal way, organized by the ministry, at either national level or Autonomous Communities, maybe, but as far as I know not right now. Informally with units and institutions that allow training in health management in a more or less external way and which can be used at a given time, then yes. There are very important educational institutions that have their master's degrees, their courses and 1000 more stories, to achieve training degrees in health administration. Formally, since the disappearance of the vocational school for managers, which existed 25 years ago, and depended on the ministry of health, have no longer been generated. The fact that there are autonomous communities, this may have dispersed this training and the school, which at the time existed, have no longer formally existed.

I3: Of course they exist, what happens is that today, what doesn't exist is the path to access it. The path that exists is only the political decision of the politician who is making the decisions

at the time. It is not a professional decision, it is not a decision in relation to the professional skills that are given by a degree, but by the political decision of a person who can prove that there is a suitable person to be manager, but according to his own knowledge or his personal or political objectives.

I4: Well, I don't know, I don't think so, with that definition and that work perspective, I don't think so.

I5: And I think so, there's a lot of training, for sure. There is training, there are societies to share..., there are possibilities to train and manage.

I6: Yes, there are training models, the UCAM has a master's degree in training.

INTEGRATED INFORMATION SYSTEM

What software/information systems are used in the regional healthcare service?

I1: .....

I2: .....

I3: .....

I4: I can tell you about Primary Care. We use the patient's medical history via the IMO-AP support. Already from Primary Care, we have access to Selene (hospital computer program) and then very specific things, we have access to non-face-to-face consultations with some hospital specialists and then for example on the subject of Sintrom, for oral anticoagulants, we do have computer applications that allow us from Primary Care to determine a patient's INR, we can send the result and a treatment so that it doesn't have to be moving back and forth. And then there is as a platform that communicates the IMO-AP medical history application with Selene's application, which is Agora, a platform that is a connection platform, which integrates the two medical records, not completely but in many aspects, and it enables you to consult both Primary Care and hospital related-things, clinic choices of the two through that platform.

I5: There are many, we have both medical records and then there is the Drop for Sintrom control, and many more. I don't know them all.

I6: I don't remember the names.

Does this computer support require you to enter health data for the Region? If yes, what kind of data?

I1: .....

I2: .....

I3: .....

I4: To access the support, no, it is an individual medical history support.

I5: No. Patient data, but not from the region.

I6: Of course, any computer system has to be fundamentally based on something prior, which is the community health plan.

What is the most important and valuable information you get from this software?

I1: .....

I2: .....

I3: .....

I4: Above all, getting to know the situation of a patient's health status. Let me explain: I can know what the patient has within his medical history, I can know how the situation has evolved over time and I can have a global vision of the future forecast, that is, I know the appointments that the patient will have, hospital appointments, when the patient has been asked for a test, when the result will be ready, access the results telematically. It allows me not to need the physical patient, to know their health situation and their evolution.

I5: Medical history, indicators, a battery, especially the control panel of Primary Care and hospital, management indicators. If we didn't have that data, from both supports, we wouldn't have practically any objective information. We could do audits, or measure other things. But there is also a very important program that is for pharmacy management, dispensing treatments, yes there are many programs that in the end converge in our medical history, a program for transfusions as well. But they're all integrated into medical history.

I6: I believe everything that programs do is a picture of the population’s health, which allows you to create not only supportive programs but also health promotion programs and do something with the whole issue of predictive assistance.

Does this software require the introduction of data from other external databases for proper operation?

I1: .....

I2: .....

I3: .....

I4: No.

I5: No, for certain controls such as glucose, the system can be for glucose control of type Flash or I do not know if there will be any more of that style, of specialty, I do not know if maybe in the subject of implants, anyway, they use other external software, usually centralized around the Murcian service. And those of us who have external software, the patient also gives its consent for the data to be dumped so that we can visualize it.

I6: Without a doubt, all population data and let's not forget that healthcare is related to the income and education.

What kind of additional information (not yet compiled and processed) would be useful in the regional health service?

I1: .....

I2: .....

I3: .....

I4: With regard to the patient's medical history, I think it is quite well structured, but it is true that the IMO-AP and Selene have very different functional structures and that the way to work with the two supports is different. To work with the two supports you must be very clear of what you are getting, how to obtain the information or how to automize the information, is different , but I think that's enough, you don't have to that.

I5: I think it would be important if, as implemented in other countries, citizens themselves would enter into our medical history, share their health data. For example, if a patient takes its blood pressure on a daily basis, they could insert that data and we would see it in our medical history. Either you do glucose checks, or you weigh yourself, or you put on a pulse oximeter, especially the most complex patients or the exercise they perform... that certain

very basic parameters could be monitored, and what is being measured in your home will come to us, and we would obtain all this information about our patients, in particular and in general. So, if there was a way to communicate with other health data or that this data could be shared outside of our health system, I do not know, if for example the patient collects or not a medication from the pharmacy, and many more things, the subject of fitness bracelets..., even if they are very basic data, it would give us more capacity and we would know how the patient is and we could make many more decisions about how our population is doing and what needs it has. If the patient is not in our system then they could also share their data with us.

I6: There is a lot of information about patients and there is little information about the citizens, so when we talk in 2020 about the health services models, those models cannot be focused only on patients, but they also must be focused on the healthy population, because they represent the market where we can promote.

REAL NETWORKS

What are the key challenges and problems for regional health network administrators when developing a health region in _ SPAIN_?

I1: Well, probably coexist between the available resources you have and the needs or demands of the system or network actors.

I2: The challenges are basically in the economic aspect, to what extent technology is the important factor, I think it is that the important challenge, On one hand, on the professional aspect, in order to solve the problem, in the socio-cultural aspect and that the work is not properly understood, that the activity is not sold properly, that the population does not understand it... and perhaps biggest of all, when the political sphere does not support the professional aspect, when the interests stand in the way of health indicators. Perhaps for me, the biggest challenge is that, that sometimes making a decision as a manager does not match the wishes of the politician. Maybe for me it is the challenge and what most prevents things from working in a rational way. I think that is the biggest challenge that a health manager is currently facing in our system, and then there are countless minor issues, which are also daily challenges: achieve greater efficiency, higher effectiveness, the system, the work model, all the people who used to work on those aircraft carriers, which are the hospitals, that the health administrations understand what they do , why they do it, what they do it for, what the

objective is, what are the goals of the system, that this idea spreads to each member of the system, counting on the workers of the system, so that they row in the same direction towards the other great challenge, the other big problem. In that sense, we have the basic theme of the functionalization of the staff, the need for mechanisms to support good work and I do not mean sanctions because that is not it, but somehow I do not support more than the sanction aspect, to the one who does not fulfill the responsibility of doing it well. I believe that the staff needs to be explained what is right within their activity, to what extent they have to do, what indicators they have to do and explain to them like any other service company or any company of any kind, the worker has a function and that function has to be properly explained, stimulated, rewarded or not when the models that have to be done are not made. So I think this is the other big problem and the enormous difficulty that management has on that subject.

I3: It seems to me that the most important priority is a high capacity for analysis with the use of computer technologies, a good level of prioritization of the problems analyzed and a good level of management to implement the prioritized solutions.

I4: First to acquire the necessary training, I believe that the challenge is that there is prior information and that it is set to develop that network, and second to have the capacity, those necessary tools to bring together different actors from said networks. That those people who manage that area, do not have that private plot on one side or another, but that all those healthcare and social health networks that are around the patient end up integrated since they are able to integrate them, that it is not something. I think it's very important to acquire that previous training, a lot.

I5: We have to agree on all the actors involved in health, everyone has their interests and in certain environments they can weigh on each other more than others, or the population can also have that vision, that need that it needs one more than the other. That's our handicap, our main problem.

I6: Fundamentally organizational.

PREVENTION-CURATION

What do you think about health promotion and prevention issues at the regional level in _SPAIN_? [Provision of health offers, overcoming barriers to access, offers for target groups that are difficult to reach, etc.] Also rate on a scale of 1 to 10 (10' excellent, 0' very bad).

I1: I sense that there is an empowerment, which is not enough. But I sense that there is a current concern about the current health structure. I would say that, if I have to measure the level, then I would say a 4. If you told me about the progression then perhaps it would be a higher number. But if I have to rate it would be below 5.

I2: Well prevention is being done more and more, health promotion is perhaps the aspect that is still far from being done. I believe that right now public television, radio and private networks should be informing the population much more about the health aspects. This is an indicator of the general number of deaths, of healthy births. The population should be much more educated in the aspect of what is happening with healthcare in its field and in their country. That would help promote measures and that promotion of measures is what I think is always too late and not enough.

In terms of prevention, the measures are more or less established at ministerial level, based on general criteria that come even from the World Health Organization, or supranational structures many times, and which are simply adapted by the ministry at the country level and then by the concierge in each autonomous community.

Prevention, measures are done, general measures have improved greatly, attention to drug dependence ... there are many programs, there are always many more to be done and there are always new needs, but I believe that in the sense of prevention there is a more or less concrete policy. In the promotion aspect I don't think so.

My rating is 7-8 of both, one for the other.

I3: Well, it seems to me that in some cases it is clearly implemented and has very important organizational programs, from breast cancer or screening of cervical cancer or vaccination programs, but I think it is improvable in many respects.

Well, I think currently an 8.

I4: I believe that very little consideration is given to these issues and that they are very necessary, they are essential, I believe that the promotion and prevention of health from Primary Care are very important, they are basically that work tool that can improve the level of health of the population. What is being taken into account? Well, regulate.

A 5.

I5: Well I think that we have the pending subject, there I believe that the budget that goes towards what is promotion and prevention is very low, very few resources are devoted, and I think it is in fact one of our main problems, that in the end we have a lack of good preventive,

community-based programs, that encourage the population to make the best decisions, to have information, and that is preventive programs, screening programs, I think that is where we would lack that investment that would bring us a lot of quality of life and health, at least the future ones.

Well, a 3-4, we don't have any more, the budget is totally changed, you can't invest so little in what public health is and in the programs, preventive measures. In fact, a preventive part of us has to go in that direction, like, we have to treat the disease and treat health, that is, prevent the disease.

I6: Health promotion is part of the health goals, that is the big change, so far we have been thinking that we only saw the sick, and now we have to think that we see citizens, some healthy and others sick. A 5.

Please keep in mind that it is also necessary to fill out the separate document regarding the competences in a more detailed way!

5. Discussion & Conclusion

Within this chapter please describes the following points:

- *Discuss strengths and limitations of your research*

Limitations:

Possible limitations of this study include:

- The availability of health network managers, as Covid-19 has complicated and delayed the conduct of interviews.
- The limited time to conduct the study.
- Sample reduced to 6 people only, as determined by the guidelines of the European project Erasmus + ComHe.Net, Project-ID: 2019-1-DE01-KA203-005025 but not by the saturation criterion.

Training proposals and profile of the RAS manager

To mitigate the lack of professionalization and politicization of health managers in Spain and the impact they have on the system, it is necessary to develop a standard training and establish the obligation to possess the knowledge and skills necessary to manage and improve the health

system. This requires defining a competency profile for healthcare network managers. This profile should include a University Degree, from different health branches but it is not necessary, with knowledge in network management and experience in healthcare networks. The identified training needs outline the training proposal that would be necessary to implement in our environment, which consists of:

-Knowledge on health networks, their role, how to establish them, resource management, the integration of the objectives and goals of the system and information on the whole and general aspects of the health system, social systems, education systems, issues related to education, training in media management and, in addition, the integrity of the system, create synergies with other institutions , Town halls, associations of neighbors and with the socio-health structure;

-Knowledge of information technologies and systems: management of computer media, social networks, technology.

-Knowledge of health economics: theoretical knowledge and practical experiences of economic assessment systems and evaluation techniques, rational use of resources, cost management, assessment of product efficiency and effectiveness, costs and benefits they produce, and the organization of services based on economic possibilities;

-Knowledge in health management and policies: health planning, analysis of health outcomes, and organizational skills;

- Humanistic and social knowledge: knowledge of general situations of mental health patients, palliatives, family, humanistic issues, social network or communication with citizens;

- Health care training: Know the health care of the population at all stages of life and from all levels of care. Healthcare professionals such as doctors and nurses include health management subjects in their training, but for the profiles of professionals who do not come from health branches, it is necessary to have basic knowledge, the research capabilities, development and innovation activities developed by healthcare professionals. In addition, training should include internships in public and/or private health institutions with professional experts in the field. There are currently master degrees and courses that already include these trainings, but are not mandatory.

- *Discuss the findings (compare findings from desk top re*search and from the *interviews)*

Networks

The Spanish health system is structured to ensure the rational use of the health services of the population and to avoid the overlapping of networks and services. This requires the division into regions and sectorization of resources, coordinated through the creation of planning mechanisms and instruments that guarantee the order and rationality of the health organization (Repullo, 2012).

In Spain, the structure is public and on the basis of this horizontal and vertical structure the indicators for each system, services and components are established. The regional managers perform this function. According to interviewees, services are provided mainly through the public system (NHS), consisting of regional health services,

*"more than 90% of cases are made up of a public system, which makes healthcare fundamental and some preventive activities through regional health services are publicly owned." I*3

The autonomous communities create health plans that include coordination with the social environment. There are currently significant synergies for the formation of socio-health coordination structures. The structures are based on socio-health coordination, allowing the connection and collaboration between social services and health systems. Although it is not carried out in an effective way. (Botija, Botija and Navarro, 2018). Moreover, the municipal area is a fundamental part of promoting public policies on health in an egalitarian way, in which citizens participate and there is intersectorality. To this end, it is necessary to create networks and jobs with other administrations to further advance and adapt local administrations to social needs, through horizontal and flexible organizational models that achieve autonomy at local level and that municipalities contain more resources. (Ruiz, et al., 2018) Regional health network managers must cooperate and work with a multitude of organizations such as patient and neighborhood associations, volunteers, NGOs, industries, providers, training structures, research, universities, educational centers, Councils, public and private institutions, municipalities, local entities and state security forces. Also with organizations that are dedicated to the management of social, psychological and family creditors, which do not currently exist. This broad vision is necessary to improve integration and achieve elements of financing and improvement of the use of resources and material. The parties involved within the network are all participating parties such as the hospital level, primary care level, mental health center, specialty centers, local pharmacy communities and private clinics.

The allocation of health competences to the Autonomous Communities minimize the distance between the political vision and the needs of the population. The transformation of the vertical or hierarchical model to a horizontal and participatory model must be carried out through the establishment of mechanisms that accredit the management skills of professionals who aspire to the position (Alvarez and Rodriguez, 2016).

Due to this decentralization situation, the RASs model is applied in the healthcare environment, but not in all contexts. In our system, NHS is made up of a comprehensive health network fundamentally between Specialized and Primary Care levels. In addition, social services, the IMAS (in the Region of Murcia) are part of the network. Since the General Law on Health, integration has evolved, despite the situation from which it came, in which there was a lot of dispersion and division of the sectors.

In fact, Primary Care is proposed as the strategic axis of the NHS due to its ability to comprehensively address health-disease processes, to reduce inequalities, to confront social determinants, to overcome health inequalities with citizens' collaboration and coordination between sectors (Co, et al., 2018).

Currently, the objective is to integrate the different networks, health and social services that are not yet integrated, in addition to the town halls, units and state security forces and associations. However, the situation is very different in each area, with respect to some figures, for example, in some health centers there is a social worker and in others it is the city council that is in charge.

Therefore, the role of health network managers is fundamental to healthcare at the regional level in Spain. Managers channel the actions to achieve the objectives of the organization itself. For a network to be operational and properly integrated, the objectives have to be common at all levels of care and coordination between them is essential. The criteria for analyzing the situation and addressing the difficulties, the establishment of priorities and control and quality of activities are dictated by health managers. For the system to work in general, it must work from the top. Achieving the right leadership of healthcare environments requires the use of creativity and innovation to seek alternative solutions to problems; effective and efficient communication to speak in public and express their ideas in a clear way, the ability to motivate the team, be part of it, and teach its professionals and know their needs, to manage their skills, making them more effective, in addition to knowing the essential activities that are carried out in the health organization are important requirements (Ayuso and Herrera , 2017).

Likewise, the current perspective of network management comprises the manager as a mediator among the different components of the networks, facilitating the processes. Network management provides different descriptions, strengthening through information and segmented authority (Saz-Carranza, 2010). There are organizations suitable for employing a health network health manager: any organization from a health center, a health area, or centralized at the regional level (as it is currently located) is convenient. Therefore, in any organization the figure of a manager makes sense, although there has to be a scale of organizations from simpler to more complex. The organization from which a health manager should be included in the health network are municipal entities such as Primary Care units and city councils, if included in the network, since both structures are the closest to the population and know their social and health needs:

"I *believe that at the CCAA level or in small regions more or less standardized, that they connect sufficient amounts of population, around one million or one and a half million people, that somehow it* allows it to be profitable to do that kind of thing." [I2]

In addition, the priority issues of regional health managers are to provide resources for diagnostics and therapeutics. First strengthen preventive work to prevent disease in the patient, early diagnosis and actions when the disease occurs. And then, observe and analyze the capacity of health activities to influence citizens through indicators that measure the relationship,

"Analyzing the situation that the different competencies that you may have under your responsibility *and once analyzed, establish priorities in the case of which of these situations are distorted, and depending on the importance we give you, correct that distortion that we have detected after the analysis."* [I3]

Due to the current situation it is necessary to define the main tasks and activities that health managers of health networks in Spain must fulfill, which are based on coordinating the different services, developing the objectives of organizations to improve patient care and, consequently, population health. The integration of socio-health services causes flow-generating activities between levels, and produces the management of circumstances to achieve the objectives of the networks for the maintenance of citizen health:

"The *goal of the system can only be to improve health indicators, improve quality of life indicators, have clear criteria based on that, set targets, which are already set, by the WHO, which are set by political structures, and from there, based on those objectives, operate... trying to integrate them*

into those networks, in order to make them more effective and more efficient, that is, that they are closer to the proposed objective and at a reasonable cost is what a network manager has to try to do." [I2]

On the other hand, the skills and qualifications of health managers needed to be able to perform the tasks mentioned above are: management, leadership, research, healthcare technologies and communication. In addition, you should have the ability to make decisions, work as a team, lead an organization, to approach problems and focus the situation, and to work on the objectives. The training is very diverse as different degrees coexist.

"The *health sector must have an overview of the situation, it has to know the system, it has to know how to sell the sanitary product, and it has to understand the quality with which it provides that service, it has to be at a cost, and evaluate and assess. That requires highly trained and experienced people*." [E2]

This is necessary because a large amount of resources are mobilized, and the operation and management of the structure must be known and prioritized. Therefore, it is important that the health manager is the most complete professional in the entire network and, for this, it is necessary to professionalize the position, so that they are more prepared and more beneficial work dynamics originate. The spontaneous appearance of this figure is therefore complicated.

Likewise, the health dimensions to which the work of health managers relates at the regional level are all aspects related to the population. The physical, mental and social dimensions are the most taken into account in the field, although also the spiritual, emotional and sexual dimensions are treated in medical consultations in the event that there is any pathology in any of them, but generally they are not treated with such intensity. Instead, dimensions such as safety or food health are set aside. In addition to meeting the demand for care, prevention and health education are essential for the development of healthcare in all its dimensions. It is essential that the manager focuses on population health, because individual health is handled by clinicians in their consultations.

The important determinants of health in terms of work for a health manager in the regional network are education, food, health services, and the work environment of its staff. Working conditions, unemployment, water quality and street sanitation, and housing quality are key aspects that influence and condition health but do not have the capacity to influence them.

Therefore, the manager must control his own structure and know what is going on around in the political, administrative, economic fields, etc., to know the current situation and act accordingly. Health authorities at both the state and regional levels are therefore engaged and coordinated in the development of health determinants. The best known theoretical model in relation to the needs indicated is that of Lalonde, in which health is related to the environment, lifestyles, human biology and the healthcare system (Girón, 2010).

It could be positive to integrate food, education, employment and working conditions, social conditions, the environment and housing, socio-economic conditions and hygiene, into the determinants of health, with health services as part of the competences of a network administrator. Aspects such as education provide better socio-economic and employment conditions, and greater knowledge of healthy habits.

Thus, the manager must know the network integration structure, its components, and the common objectives for analyzing and raising the network's communication lines according to the objectives. The manager should conduct a population health analysis to carry out a health plan, demand efficiency from health services, and promote health.

ADVANTAGES, DISADVANTAGES AND INTEGRATION OF HEALTH SERVICES

The integration refers to the identification of the health needs of patients and the response of the system to them (Rosas, Narciso, Cuba, 2013). The development of certain countries such as Spain, due to the evolution of medicine, technology and social protection cause complex health systems with many specialized health providers, who work in sectors (Auro, Sauto and Toro, 2012).

The integration of Primary Care and Specialized Care health services is necessary:

"*A single management team, which shares objectives,* shares *processes, for in the end the patient circulates between the different levels and the division at these levels is more administrative than real*"[I1]

The Unified Area Integration Model needs to reach the focus scales:

"If *the patient when seen by the family doctor, does not have the opportunity to interact with the specialists and make processes, which are somehow cross-the-levels, we will have done nothing."* [I1]

Integration is also carried out with networks and social support, as with residences. This integration makes it possible to use resources in a more rational way, such as avoiding duplicates of complementary tests. On the other hand, social services and town halls are not properly integrated into the system due to the existence of different administrations: local, regional and general:

"In *many health centers, for example, there are social workers, and in others the town hall covers the* situation." [I2]

The current model does not give the same importance to the two levels of care, which causes situations in which hospital care has more weight, making the integration of services difficult and hindering the continuity of care. This continuity consists of the continuity of information that providers use and have available from previous episodes for current care, continuity of relationship with suppliers over time and continuity of management based on the complementation and provision of different types of health care, avoiding duplication (Sanchez, Married, 2014). This continuity is threatened by technological advances, organizational changes in services and the increase of patients with complex chronic diseases. This causes an increase in the number of providers serving the patient. Information exchanged between professionals from one level of care to another is limited, and waiting times are high (Aller, et al., 2013).

Likewise, currently, in Spain, there is a lack of collaboration between the two levels of care to achieve adequate continuity of care, taking into account the processes at each level of care in a non-integrated way. The lack of transmission of information and the lack of cooperation in developing common protocols with referral criteria has an impact on accessibility, consultation and applicability between the two services. Consequently, the patient lacks adequate follow-up with inadequate referrals and deadlines, and repetitions of diagnostic tests (Montes, Canosa, Castilla y Montero, s.f.).

The integration of care between different levels of health care is one of the main advantages of RAS, which leads to improved quality and continuity of care. However, today's differences in importance between different levels of care make it difficult to integrate properly.

PUBLIC AND PRIVATE INTEGRATION

The structure of health services in Spain is mostly public, based on managers at the regional level who have the following function:

"The *general idea in Spain is that the structure is public, the basis. And on the basis of this public structure, all the indicators* that each of these systems, these services, these components, have to carry out their work are established" [I2]

So, the private structure is not integrated to complement the system:

"The *indicators generated in healthcare by this private structure are often not known, at a general level, to what* extent the public health of the whole or health situation of the population as a whole improves" [I2]

Ownership and control is public but the inclusion of private management systems promotes the efficiency of the healthcare system (Bayle, 2014). Therefore, the NHS contains forms of outsourcing or indirect management of public health care through private providers, through the administrative granting of health care in a health area (Martín y González, 2011).

So, the structure of the health system in Spain is public; this structure controls the whole, but there is also a medical device of private structures, which sometimes depend on the Municipalities:

"*In Spain, services are mainly provided through the public system, which is the* NHS*, composed of regional health services*"[I3]

To this end, Law 16/2003 exists, of 28 May on cohesion and quality of the NHS, lays down standards for the entire Spanish health system, including private health, related to information, public health, training and research and safety and quality activities. The role of Private Health is complementary to Public Health (Girela, 2014).

To achieve integration between the public and private systems, managers need to have skills such as leadership, teamwork, integrated care process development and patient-centered care (Cequier and Ortiga, 2015).

Finally, the private structure integrated within the public structure of the NHS serves to complement health services. There are currently laws that promote coordination between the two structures, but managers need to have competences that promote integration between the two.

HORIZONTAL AND VERTICAL COORDINATION

Healthcare coordination aims to provide healthcare services in a synchronized manner without having any adverse effects on patients (Fernández y Ollero, 2010).

In Spain, such coordination is a priority due to the increase in chronic patients. It is proposed as a strategy to improve continuous care, reduce costs and improve the quality of health care (Allapuz, Gallardo, Perona and Grup de Coordinació entre nivells del Garraf, 2012).

There are two types of integration. Horizontal integration occurs when two or more organizations or services operate at the same level (Herrera, Asensio, Kaknani and Mayor, 2016). The Horizontal Coordination Policy exists within each level of healthcare at the management level, but not at the healthcare level. It is divided and more developed in the field of Specialized Care:

"It *is sufficient to consider management level positions in the hospital, in the healthcare area, 80% of the management positions in healthcare are in hospitals and less than 20%* are Primary Care centers*. It can cause a major offset when considering decisions made at the horizontal level. Horizontal coordination exists in Primary Care, but it might need to be improved upon"*[I2]

For proper horizontal coordination to occur, it is necessary to define the human, material resources and the decision making power of the different organizations involved.

Vertical integration occurs when two or more organizations that operate collectively at different levels (Herrera, Asensio, Kaknani and Mayor, 2016). Vertical coordination between the two levels of care exists, but is insufficient.

On the other hand, the centralized use of high-tech resources is sometimes confused with vertical management. High-tech services must be centralized for profitability:

"What *has been done is to try to ensure that Primary Care can relieve hospitals from an overcrowding of patients at any given time by having access to the high-tech resources with the possibility of accommodating to patients' needs. "*[I4]

The unified management of the healthcare system causes an offset between hospitals and Primary Care centers, making Primary Care centers dependent on the hospital system, due to their higher acquisition power, management and consumption of resources:

"Without a good balance between these two fundamental levels, from the provision of care point of view, it seems to me that it would be skewed in favor of the level who consumes and has more need for resources that being at the hospital level" [I3]

Process management is based on a reliable model based on scientific evidence, in which variability in clinical care is due to individual patient's needs (Delgado, 2015). It exists within the health care network, but with difficulties in integrating some levels:

"It *is very sectorized by units, by services, by specific specialties, and perhaps more integration is lacking, and it is one thing that needs to be improved upon*"[E2]

At other times, process management is not carried out or its management is unknown.

Horizontal and vertical coordination in Spain exists, but it is not fully developed due to the differential resource needs between the different levels of care and the division of the healthcare units. This situation makes it difficult to develop care process management, unfeasible without an adequate coordination and integration.

INTERSECTORAL COORDINATION

Coordination arises from high-level government agreements, increasing interministerial synergies through practical and coordination agreements. The cabinets of the different ministries enable cross-sectoral coordination and are key to improving coordination between social structures such as health and education(McQueen, Wismar, Lin, Jones and Davies, 2015).

There is no widespread coordination with other sectors in the national health system, and we can see this in some statements given by informants:

"That *hospital has an agreement with that technology company, with that manufacturer, with that leading university and that stands out*"[I1]

There are certain sectors such as research, education, and social area in which communication exists. Also, in other services such as blood donation. However, there is no adequate coordination between them:

"There is a vertical coordination but only at the higher levels"[I2]

This may be due to a low demand, because they are very specific services that collaborate only in very specific situations. The scarcity of socio-health sectors in Spain makes it difficult to coordinate with the social sector.

To avoid this situation, the health plans of the different autonomous communities propose a coordination with the social sector. Strong socio-health coordination structures are established

with important developmental synergies between the two sectors, through the socio-health plans (Botija, Botija and Navarro, 2018).

The incorporation of sectors such as the pharmaceutical sector, town halls, neighborhood associations and state security forces would be important. There are Primary Care centers that occasionally collaborate with these sectors. Coordination with other sectors:

"It *also depends a lot on the teams, on who is working in the team, on what is the personal relation of the staff with those organizations, so there is not always coordination with other sectors in an institutional way, sometimes it is a more personal collaboration rather than from the* system itself"[I4]

Cross-sectoral coordination is necessary for the local implementation of priority Health Promotion and Prevention Strategies (Mireles, Rodríguez, Prado, Esteban, Serón and Calvo, 2018).

MANAGEMENT OF SOCIO-HEALTHCARE PROCESSES

The coordination of social and health services is based on a universal model to promote the well-being of each person. Social and health coordination is based on the prevention and care of health situations that deteriorate the social status, situations of dependence and fragility, as well as enhancing the well-being and daily life of people (Pinzón, Alonso, Torró, Raposo and Morilla, 2016).

Coordination of social and health services in Spain does not exist or is scarce and occurs at specific times. This is due to the unavailability of social resources.

"The *network is basically in the health aspect, hospitals, primary care centers, social network and social supports in the case of Murcia, by different institutes like IMAS*." [I2]

The coordination of social services with the health sector is also related to rehabilitation, mental illness and addiction care (Perez, 2015).

There is also integration with socio-health services, in any of its areas, such as behavioral aspects of women's care or gender-based violence:

"It *takes place, but perhaps more centrally than locally, it is as highly sectorized; there is no regional coordination, there are some plans but then they are passed down to health centers, mental health centers, in short, to much smaller systems, but from what is the managing part, there is no such*

coordination, we try that too, or steps are taken in certain aspects or problems such as gender-based violence, but in others, no, there really is no such coordination and communication." [I5]

The integration of health and social services to provide comprehensive care to the elderly and chronic patients is carried out at the average level of health management (Herrera, Asencio, Kaknani and Mayor, 2016). The relationship occurs by:

"*Protocols of referrals and support, with meetings and approaches of different health professionals with other social health professionals and thus sometimes maintaining easy and agile access routes: by phone or on the* internet." [I2]

Socio-health integration has advantages such as simplifying the decision-making process and increasing patient satisfaction, despite organizational and financial barriers. Autonomous communities such as Castilla-La Mancha and Extremadura have a unified integration system, the Concierge of Health and Social Services (Jiménez and Prieto, 2012).

GENERAL PERCEPTION OF THE CIRCUMSTANCES

The current health system at the regional level in Spain is good, based on a good model with regards to the level of care and service delivery. Despite the inequalities due to geographical location that sometimes occurs, the intrusion of the political sphere and the sectorization by Autonomous Communities:

"The *model on paper I think is hardly improvable; the application always has weaknesses, much progress has been made in recent years, yet there is also a lot of work still to be done, but I think in general our model works because it is based precisely on networks; it is based precisely on the integration of care models and coordination with s*ocio-health *levels"*[I2]

The decentralization of the health system in Autonomous Communities can lead to non-compliance with the conditions of universality and equality of health protection, such as the access to the services or material resources that are offered in different ways by each of the Autonomous Communities (Castillo, 2015).

Therefore, the coordination of the system exists, but it can be improved upon.

"Here, *we are investing a lot in what will not in the long run bring us any value; I believe that the moment a part of the budget was removed, that belongs to the part of Public Health, Prevention*

and Health Promotion, and there we are failing, there we are doing it wrong; then there is the part that belongs to Palliative Care that is also not properly done." [I5]

Spending on health technologies is important for health decision-making, in addition to contemplating efficiency, it is necessary to contemplate equity and distributive justice (Parada, Taborda and Chicaíza, 2013).

A lot is currently being invested in new technological treatments, very expensive medicines, and very little for health prevention and health promotion programs:

"I *think that's what we're failing at, that what's the part that's really going to contribute in the long run in which we don't invest."* [I5]

Experts in Public Health and Primary Care on health promotion and prevention issues recommend improving the rationality and independence of decision-making on preventive population programs, encouraging health promotion, such as in community activities and collaborating with municipalities, among other sectors (Marquez, Villegas, Soler and Martínez , 2014).

Currently, investment in promotion and prevention of health is insufficient and considerably lower than that for new surgical techniques, drugs, technological treatments, etc.... The coordination with town halls and other sectors is also scarce and insufficient.

The average rating of health circumstances in Spain of the interviewees is between 7-8 out of 10, is quite high since it is carried out and is fruitful, but is insufficient for current demands.

The situation is Spain is good; the model is suitable. Although there are differences in inequality of some health benefits due to geographical differences or excessive technological investment and the limited advocation for health promotion and prevention are some of the barriers that the NHS must face.

INEQUALITIES IN THE CATALOGUE OF BENEFITS AND SERVICES

Spanish healthcare is considered one of the best in the world, due to its catalogue of benefits, its coverage and accessibility and technical quality. The catalogue of features is very extensive (Cotanda, 2011).

The catalogue of benefits of the National Health System is regulated by the Law 16/2003, on Cohesion and Quality of the National Health System, which establishes the basic and common

conditions for continuous, comprehensive and timely care, including appropriate public health benefits (Villalbí, Carreras, Martín and Hernández, 2010).

The catalogues of health services are different within the Autonomous Communities. They are not clearly defined and there are inequalities due to the difference in availability of resources; we can observe it in statements such as:

"It *is not the same to talk about a tertiary hospital as a regional hospital, each one will have different solution capabilities and a different catalogue. As far as I know, right now there is not a general catalogue. A catalogue that clearly defines which things are within the system, except in very specific cases: dental care, plastic surgery, but in general right now, our system has an almost infinite* catalogue," [I2]

"One *of the problems that we have is that these catalogues of services are not coherent, they are not equal, therefore, we can find that a person living in Spain as a citizen may not have the same health offer, for a purely geographical matter, of living in one province belonging to one region or another."* [I3]

On the other hand, some interviewees state that the differences between catalogues and between Autonomous Communities are not significant, although for specialized assistance do differ greatly at the regional level:

"The *problem is the difference that some regions have over others in resources, in the use of those resources, and the results of those resources..."* [I1]

These inequalities occur due to autonomy and funding differences between the 17 autonomous communities:

"There *are more disadvantaged regions, with less budget, with fewer professionals, where a citizen does not receive the same type of assistance as in* others." [I5]

Thus, there is an uneven development of the benefits of the catalogue in the national territory. Despite this, the objective is the uniformity of the Spanish health system (Jerez, 2018).

Therefore, the content of the NHS service portfolio ensures the effective performance of services, and this content is the minimum for the Autonomous Communities. Each Autonomous Community can have its own catalogue while including the minimum required by the NHS. The Autonomous Communities are the ones that define the guarantee of assistance times to its portfolio of services,

which consists in the setting of maximum times to make access effective, excluding surgical transplant interventions (Fernández, 2011).

COPAYMENTS

Co-payments are payments among all citizens, through taxes and the end user of the service that is consumed (Gallo, 2012). The co-payment in Spain distinguishes between pensioners and the working population, establishing a monthly contribution limit for pensioners, and payment percentages that vary according to 3 income groups of active citizens. There are also grants for chronic treatment medication, personal exemptions to certain vulnerable groups such as people with disabilities, recipients of social integration income and non-contributory pensions, non-employment people who do not charge unemployment benefit, and treatments arising from work accidents and occupational diseases (González, Rodríguez and Puig, 2016).

Co-payments are a controversial issue; there are two aspects in Spain: on the one hand, health managers who believe that co-payments are necessary and essential to improve the financing of the system and the social awareness of the cost of services and, on the other hand, those that are against it because the fairness and solidarity of the system are lost.

The co-payment would be necessary because the situation in Spain is unsustainable, a great deal of resources are consumed, there is a lack of citizen engagement, excessive demand and excessive medicalization. The co-payment is envisaged as an improvement in social awareness and the proper use of health resources:

"*Whoever makes the most use, should pay a little more*"[I1]

Experts propose the inclusion of a moderating ticket for the demand for Primary Care and emergencies, the purpose of which would not be collect a payment, but to ensure the sustainability of the system (González, 2017).

Among the drawbacks, we can identify some, such as:

"It *is a situation that politically does not have a good "reputation", it is not well accepted by our population because there is no co-payment culture; the population of our society is accustomed to free healthcare, except for the personal choice of patient*"[I2]

The co-payment is viewed as the solution to the NHS funding problem. In Spain, there is the co-payment for the outpatient pharmacy:

"The best co-payment job that has been done, has been to work on the health demand in the case of the use of drugs, and the fact *that everyone pays, according to their own situation. It has generated a much more rational use of the medication, avoiding general* misuse." [I2]

Users must pay according to the Royal Decree-Law 16/2012 60% of the price of sale to the public of the product if their income is equal to or greater than 100,000 euros, and 50% if their income is between 18,000 and 100,000 euros. People who are active and their income is less than 18,000 euros contribute 40%. Social Security pensioners must pay 10%, when their income is equal to or less than 100,000 euros. Pensioners have a maximum spending limit for the provision of the health co-payment, to facilitate access to medicines. Spending on medicines, materials and pharmaceuticals in Spain in 2014 accounts for 1.36% of Gross Domestic Product (GDP) (Martínez-López and Martínez- Gayo, 2019).

In Spain, the money raised in 2013 through the pharmaceutical co-payment system amounted to 1,182,381 million euros, with each member of the working population contributing with an average of 19.1 euros (2.72 euros per prescription) and each pensioner with an average of 52.9 euros (0.82 euros per prescription) (Minana, 2015).

On the other hand, there is the aspect that is against the co-payment, because the solidarity of the public service is lost and may lead to not taking the prescribed treatment, with the complications which that entails:

"The *co-payment in general, I do not like; I think the co-payment what it does is identify inefficiencies of the system, that is, the people who have to make a co-payment are not always the people who spend the most resources, and they are not always the people with the most resources. If you don't have the resources to be able to make that co-payment to the pharmacy, then the patient stops taking the medication and that causes health complications and leads to the collapse of the system due to the lack of co-payments, because that patient doesn't do what he has to* do"[I4]

Therefore, co-payments affect the fairness of the system, represent an obstacle and discrimination of access to health services. The payment reduces the use of both effective and non-effective health resources, in the number of medical visits, pharmaceutical prescriptions, hospital stays and preventive services (Benach, Tarafa and Muntaner, 2012).

There is also another point of view that is in favor of co-payments only on very specific occasions and as a penalty for the misuse of the health network, but not as co-financing of the system:

"Co-payments should only be used in very specific cases and almost as a means of penalizing the misuse of the health network, that is, not as a means of co-financing the system, as that is the purpose of taxes, but rather as a way of identifying the co-responsibility of the user and health systems with regard to the financing and spending of those resources." [I4]

Co-payments are a tool used in Spain to control health expenditure and improve the use of pharmacological resources. In general, interviewees are in favor of the development of the co-payment system.

Universality

Universality is an essential feature of human rights, in which all rights are attributed to all people (Almiñana, 2015). Universality is a fundamental concept in Public Health (Fernández, Pérez y Cortés, 2016).

Health care in Spain is universal in nature, and this is how it is assumed by informants:

"The *attention given is free, and I think it is very suitable to the needs. And the rare cases in which that universal care is not given because they are those who earn more than 100,000 euros a year, very specific situations, or people who directly do not opt for health care and somehow choose other alternatives, but the care is universal, in principle, and it is given to everyone and everyone is included. To some extent, except in the case of higher rents, they would have co-payments*" [I2]

A healthcare card is not necessary in order to be seen by a doctor in Spain:

"In our health system all people are cared for, whether they have insurance or not, we take care of everyone equally. The resources that we have are accessible whether they have a card or not. Here, *in our region, there is no such problem,* that we do not provide assistance to all citizens, here everyone is provided with what is there, but without any prejudices."[I5]

But there are some aspects of the patients such as social, family, emotional aspects that are not completely looked after.

In Spain, all Spaniards or residents with permission are insured by the Social Security, have Health Cards, depending on the employment or family status. Access is different depending on whether

you have administrative residency, are paying contributions or have paid them in the past, have a right obtained through an insured person or for lack of means. Foreigners residing in Spain are asked for insurance as a guarantee of resources, so that they do not carry a burden on the public system. Spaniards who are unemployed and remain outside Spain for more than 90 days lose their right to healthcare (García, Biedma, Serrano del Rosal, and Ranchal, 2017).

Healthcare in Spain is universal in nature, all citizens have the right to healthcare. Access to the Health Card depends on the employment and family status.

LOCAL FINANCING

Germany has the Bismark model based on compulsory contributions to social security funds or sickness funds for the professional branches, by the working sector (Houses, 2010). This model is characterized by the principle of insurance, the empowerment of health in relation to work and financing by social contributions. Health funding is usually run by health insurance funds, whose management is regionalized. The healthcare offer is generally mixed, i.e. public and private sector providers. Despite this, the model sometimes shows persistent deficit problems in health insurance funds (Coll, 2015).

In Germany, there is additional funding through taxes of national, regional and local origin, whereas in Spain, local financing does not exist (Keys, 2018).

Local funding for health services, as in Germany, is not considered an optimal funding model for Spain, as pointed out by our informants:

"If *we start from the model we have here, local funding would be a very big change, organizationally, in every way. Because it would give town halls and corporations a sphere of influence that they don't have right now. In the German model, the structure is different based on mutual insurance companies and there its starting point is different. I think that they have more problems integrating these structures, as they are much more diverse* "[I2]

But the Spanish model can be improved upon if the town halls are integrated into the health areas to create synergies between both institutions. Therefore, the public administration must take over the financing of health expenses. Local funding could bring with it drawbacks such as:

"The *problem is that, if we finance organizations with particular money, we lose the concept of* solidarity." [I3]

Despite this, the German model could be used to control healthcare spending and meet the established budget, to provide health care more efficiently according to the interviewees.

The German health system is one of the countries with the highest health expenses, 11.3% of the GDP, even though the results achieved are similar to other countries with lower health expenses. This would decrease the efficiency of the system. However, the German model has advantages such as the reduction of waiting lists due to free access of care at the outpatient level (Comino, 2016).

FINANCING IN THE AUTONOMOUS COMMUNITY

The Spanish Constitution has derived much of the responsibility for the spending to meet the public needs that guarantee social welfare. This has led to the economic and financial decentralization of public spending with services such as health, education and social services (Martínez, 2017).

The current funding model does not incorporate mechanisms that ensure the balance between spending needs and financing over time (Cantarero, Alvarez, Blázquez and Sáez, 2015). Resources for health care at the regional level in Spain are limited, although there are more resources available now, the level of satisfaction is the same. Demand for resources is in proportion to the available resources.

Resources are insufficient, gross domestic product devoted to health should be increased:

"Since *the economic crisis about 10 years ago, health services funding has not only stagnated, but declined. People are realizing at times like now, that we need health services and need them in an extraordinarily vital way; we realize that not being well funded is causing many problems"*[I3]

Above all, in certain areas of care such as chronic patient:

"We *have very good healthcare and very good resources for urgent critical patient care, and we don't have as good resources for chronic patient care. The resources are enough to obtain good indicators compared to other countries. However, they are insufficient in chronic patient care which is the one that actually generates perhaps the most difficulty of care over time."* [I2]

There are also resources that are not well directed and distributed which causes the existence of pockets of inefficiency:

"There *is no budget flexibility, if at any given time material resources are necessary and there is no budget left for such materials, it could be used for that. What worries me is that we are so stuck about what health care resources are, that in managing these resources administratively have no possibility of making the use of those resources more* flexible." [I4]

The decentralized state requires a distribution of spending powers and tax sources among the different levels of government, prior to the formulation of annual spending and income policies. The prior allocation of revenue sources between levels of government and distribution of spending competition is a problem. This is because it is impossible to guarantee that the tax revenue earned for all governments are equal to that of funding needs (Recio y Montero, 2016).

On the other hand, resources are sufficient, but the budget should be divided and social resources should be invested more, since, due to some technological fascination and pharmacology, there is no real correlation between the money spent and the obtained results. There are budgetary differences between Autonomous Communities.

Economic decentralization to the Autonomous Communities and the lack of balance between funding and health expenditure leads to deficiencies in the distribution of resources for chronic patients and lack of redistributive capacity of budgets.

NATIONAL FINANCING

The current funding model is sufficient but does not allow for the proper financing of health services due to the distribution of resources. At national level there are inequalities, inadequate distributions because it does not consider the population size and conditions of each Autonomous Community:

"When *a public system determines that an amount of money goes to a public service, cost control is simply financial, i.e. it is not needed; what the politician must do is determine what the needs are because the money comes from his decision, not from a study of necessities, but from the political d*ecision." [I3]

In this way, the problem of current funding is the evolution of health expenditure itself. There is a health deficit between the volume of available resources and the provision of health services and expenses (Hita, 2010).

One solution would be to work in clinical management and divesting inappropriate services and create frameworks of governance and organizational innovation to support structural reforms (Cortés y López, 2014). Therefore, a readjustment based on real needs and flexibility in the system would allow the current funding of health services to be sufficient:

"Public *authorities will have to consider how to address the budget that the health system needs or how to distribute what is there. It's best to leave the budget as it is or split it differently, in order to invest in other aspects that are not now being invested right now, but someone has to make that decision. If we really think about it, this will bring that, more value and more health: more programs, especially programs that improve the health of the population, not so much make more hospitals, more health centers, more professionals, maybe we have to form them in another way, we have to assess what we have and how we can distribute it much better. Making more efficient* use." [I5]

This is because the Primary Care in Spain has insufficient budgetary funding; funding is considered to address in a lesser proportion the universality of the system compared to the public hospital. Primary Care will achieve better quality health levels when used by all social spheres, including those with more influence (Simó and Gérvas, 2012).

The NHS in Spain does not incorporate cost-effectiveness analysis in the decision-making process of the technologies and services that make up the portfolio of services, nor has it developed evaluation institutions that are capable of carrying out this function. This may be due to the scarcity of willpower of politicians at state and regional level to introduce cost-effectiveness analysis and the lack of transparency and independence of evaluation processes. Also the rigidity between the decentralized health system and evaluation with its important economies of scale, the technical difficulties in evaluation and its ability to influence decision making. Finally, the social and professional rejection of the exclusion of benefits perceived as indiscriminate (Artells, Peiró and Meneu, 2014).

UNIFIED MANAGEMENT AREAS

The unified area management model favors the management of health networks, the approach of a network model without a unified area would be wrong.

Primary Care must articulate health and social services, focusing on the needs of the patient and promoting coordination between different care areas (Merino, Zabala, Amengual, Marquez and

Manuel, 2015). The model reflects the concepts of horizontal and vertical integration contemplated in the networks.

The management of the unified area requires certain precautions so that the hospital does not absorb most of the resources and Primary Care is impaired:

"That *from the management and from the structure the different levels of assistance are weighed in a similar way, that each, in some way, has a specific weight and an organization according to*

a lot, and the controls we have right now towards professionals are of all fields, from activity, quality, shapes, times, indicators too, well specified and every year they are better"[I2]

The Spanish health system is characterized by the fragmentation between different levels of care, which makes it difficult to use socio-health services, which are essential due to chronicity and increased aging. The central element would be to achieve vertical integration between the different levels to achieve system efficiency (Panisello, 2017). On the other hand, horizontal competition between different units that constitute a system or its relationships play a key role in understanding the efficiency of systems and competitive and cooperative mechanisms (Camera, 2011). In continuous care, the doctor accompanies the patient between the different levels of care (Waibel, Martínez and Vázquéz, 2010).

True health management is carried out in the area of integrated health, although it can be improved, which basically depends on the structures that run the area. To the extent that process management is implemented, although there is still some way to go to develop equality between the two levels of care and to give more importance to the social, preventive and educational sphere.

"Health management in the health center is not always carried out in an effective way because there is still *a residue of hospital-centrism and health automation that makes resources more focused on one part of the health system than on another.* " [I4]

This is because the integration of the social environment into the healthcare environment is essential to efficiently address the dependence that certain patients suffer, such as chronic patients and also support for the caregiver as a health care collaborator (Sanchez and Married, 2014).

This health management requires the establishment of common objectives, which go in that direction, and the training of people who can carry it out. Relations with town halls, industries and associations must also be maintained. However, it also depends on individual factors, such as the manager who manages the area:

"*Aspects such as in-depth knowledge of their trade by the management teams, leadership level in transmitting the ultimate agents of provision of health and prevention services. So it's a very variable situation and depends on factors unfortunately too individual.*" [I3]

The individual aspects of the health manager, such as those mentioned above, interfere with the health manager's ability to achieve a correct and beneficial development of his work. This involves achieving the proposed objectives and the development of the system.

Unified area management is critical to guarantee adequate healthcare. Horizontal and vertical coordination of the different levels of care that make up the NHS is essential to achieve the fundamental objective that is health.

MANAGER TRAINING

Health center management positions are responsible for planning, organizing, directing, controlling and coordinating the medical and health services in hospitals, clinics, public bodies and similar organizations. The purpose is to achieve maximum efficiency in the management of the health institutions they lead. To this end, they establish their organization's strategies, management objectives and plans, and submit them to the pre-established control bodies. In this way, they are ultimately responsible for their institution and for the results of management within the scope of competence. In executing the functions mentioned above, they must attend to the people of the organization, their interest groups and representative bodies, approve the budget and prioritize investments, promote the quality of service and training, protect the organization’s assets and manage the commissions that arise from the management of their area (Alamillos and Collazos , 2015).

Therefore, it is critical that health managers possess a range of inherent specific knowledge or tools for developing complex organizations such as networks. The manager must have high level of professional qualification guaranteed by a minimum level of training. Nevertheless, there are no specific requirements to complete the training as regional health network manager. However, it is important to possess the knowledge to make decisions, to know the elements of the

organization, legislation and resource management. It is not important to hold a specific title but to possess the necessary competences.

To complete such regional training as a health manager, it is not necessary to have a certain university degree nor is it mandatory to be a healthcare professional; there are managers who are economists and lawyers who provide other training and different skills, but it is advisable, at least, to have knowledge about healthcare.

"Health education *does not guarantee training, but it would be important for that person to have a health qualification, it is not necessary but important. I believe that we have many examples where health qualifications for these positions have not ensured that they effectively fill these positions."* [I4]

Educational opportunities for health network administrators consist of postgraduate studies, such as master's degrees or courses. These master degrees are not organized by the Ministry of Health at national level or by Autonomous Communities and are sometimes not known. Despite the educational opportunities to access a management position, political decisions are necessary, and sometimes this is not due to the professional skills granted through a degree. Thus, a health manager must have multiple expertise in management and network work, healthcare, information technologies and systems, health economics, humanistic and social, in health management and policies, environmental training, etc...

"*They must be provided with this knowledge: organization, clinical management tools, information system tools, quality tools, economic management tools, supply management tools, technology management tools, innovation tools, all of* this must be contained and I understand that they must have that type of student or professional." [I1]

In addition, you must have knowledge about promotion and health prevention:

"For it must have, in addition to specific health training, a different vision of the concept of health, in which not only diseases are talked about, but also health promotion, using all the schemes that were launched a few years *ago by the American foundation "patient permanent" and not only dedicate themselves to the patients but also* to the population, so the motto of the networks must be to talk about population health and not talk about individual health." [I6]

It is vitally important that managers should focus on emphasizing that educational programs include community-related, public health, cultural, advocacy and community health development competencies, problem solving, creativity, motivation and self-reflection (Morán, 2013).

The role of the health manager is fundamental to the development of the organization. Therefore, the correct training of the manager aimed at achieving the maximum efficiency of the system is a priority. The manager must have a minimum professional qualification in order to carry out the position, although a specific degree is not necessary but rather the knowledge and training necessary for the performance of his duties. Currently, in Spain there are courses and master degrees that provide the necessary knowledge, but are neither official nor required. This training provides knowledge about network management and work, healthcare (promotion and prevention), information technologies and systems, health economics, humanistic and social, in health management and policies, environmental training, among others.

Knowledge of Health Care Networks is included in the training of managers and management staff.

"At *the management level of small units, health centers, service headquarters, hospital service units, I also* know that they work in that sense, but so well that it is not excessively formalized." [I2]

Such training is usually subsequent to taking up the position, although it is essential to be trained before accessing it. Training of health managers is included in areas, although training sometimes does not occur until the position is accessed. In addition, certain undergraduate studies such as medicine or nursing at some universities, already include health planning subjects and this organizational model.

Specific training should include providing a different view of the system or network that a manager should have, health networks and what they are for, how to establish them, resource management, the integration of the objectives of the system's goal and information on the whole and general aspects of the health system, social systems, educational systems, education-related issues, training in media management and, in addition, the integrality of the system, create synergies with other institutions, municipalities, neighborhood associations and with the socio-health structure.

The specific competencies that a health network manager must have for the advancement of integrated care include a global view of the system, patient-centered care, participation, communication, leadership, talent management, rational management, innovation management, change management, resource management and digitization (Hernández, García, López, Castell y Martí, 2019).

Training in network management and work in Spain normally occurs after obtaining the position, despite the fact that there is training on the subject in certain health levels. Training must include knowledge about health networks, their role, their components, etc. In addition, it must possess competences such as communication, resource management, among others.

HEALTH CARE TRAINING

Health care training is not part of the knowledge needed to develop the profession as a health manager. The healthcare manager does not have care functions. On the one hand, there are profiles of healthcare managers in Spain who are not health care trainees nor do they have training in health care, such as graduates in economics, law, among others:

"I *am not a healthcare person, so I do not have a health care* training." [I1]

On the other hand, the profiles of medical professionals and specialists include educational management and leadership programs, so that they can develop their professional career as healthcare managers as well. The professional profiles must respond to the needs of the health system and therefore one of the advantages is the health knowledge in health managers that provides more knowledge about the system (Morán, 2013). The current healthcare manager must know the training, research, development and innovation activities developed by healthcare professionals which promotes the development and quality of the system (Ayuso and Herrera, 2017).

In Australia, the key competencies that stand out in a healthcare manager are knowledge of the health environment, establishing health training as a requirement (Liang, Howard, Koh and Leggat, 2013). In addition, studies related to health care management competencies, conducted in this environment, show that competencies are higher in managers with clinical roles (Lockhart and Backman, 2009).

In Ibero-America, health professionals often have contact with management when they enter the administrative position, and despite having health knowledge, they lack training in other aspects

that are fundamental for developing health management. Despite this, healthcare professionals can be very good health managers if they are previously trained as managers. This is a benefit due to the current change in the type of management that is based on anticipating and taking risks and changes quickly from new technologies, etc. (Vargas, Portillo and León, 2013).

The experiences in Chile are very positive in this sense, being clear evidence of benefit in the training of the RAS manager; specifically at the School of Public Health of the Faculty of Medicine of the University of Chile, they work with management teams to develop the essential competencies to manage a health care network of health services, hospitals and primary care centers (Vergara, Bisama and Moncada, 2012).

In the Region of Murcia, the General Technical Secretariat is in charge of the Administrative Unit of Coordination, with responsibilities for general and common services such as economic and financial services, information systems and technologies, databases in the scientific and health fields, legal and regulatory advice, among others. The Management Directorate of the SMS depends on this secretariat (Ferrándiz, 2017). Therefore, health care training is important, fundamental, as it promotes knowledge about the system, but it is not essential today to develop the role of healthcare manager in Spain.

- TRAINING IN INFORMATION TECHNOLOGIES AND SYSTEMS

Today, technologies are an essential part of the healthcare sector, facilitating the transfer of information between patients, between professionals, and between patients and professionals. Moreover, by implementing Internet in health institutions has meant great advances in the sector, at a technological level (Oliver and Iñiguez, 2017). Therefore, it is essential that the health manager has knowledge about information technologies and systems to continue the development in the field.

Training in information technologies and systems is part of training as a manager and is currently included. However, on other occasions the development of such training has been through practice and in a non-regulated way.

Training in technologies must include training in computer media management, social media, technology and should be incorporated formal training:

"*With the theme of technologies and information systems, it is a very important tool when it comes to coordinating all health actors... we will have to learn how to do group education using*

those health networks, using that new technology and we're going to have to pull our socks up quickly. And it is very important that we learn those things." [I4]

Training in information technologies and systems in the healthcare sector is increasingly needed due to the technological development of recent years. Although such training is usually obtained in a non-regulated way and after obtaining the position, it is currently included in the previous training on computer media, social networks, etc.

- HEALTH ECONOMICS TRAINING

Training in health economics is part of training as a manager in some cases, other times the manager develops it from his practice by his own will.

"The *basic dashboard, if it depends on the manager, that is his work scope and in that sense he must have financial training. But above all what he must have is good advice from the management and support direction that would inform him at every moment of the* situation." [I2]

Currently, economic training is included in the training of health managers, through informal courses and information from support institutions at national level. Although there are no formal activities in this context, there exits collaboration with universities, with the department of health economics, in which activities, projects, training and conferences are developed. Such training should include theoretical knowledge and practical experiences of economic evaluation systems and evaluation techniques, rational use of resources, cost management, assessment of efficiency and effectiveness of the product, the costs and benefits they produce, and the organization of services according to the economic possibilities.

In Spain there are health professionals with an interest in health economics and, on the other hand, there are also health economists. Most of them work for the public administrations. Spanish professionals have a wide interest in economics and health management (Trapero y Oliva, 2016).

Training in health economics is included in previous training as manager, although in Spain it has sometimes been obtained after obtaining the position. Economics training is one of the most developed nationally and includes the rational use of resources, cost management, cost-benefit assessment, etc.

- HUMANIST AND SOCIAL TRAINING

Humanistic and social training is included in the manager's own training. This training is important but not essential for the development of the manager's training curriculum. Therefore, it does not include a free training on this subject, beyond sociological or marketing aspects. Such training should be inherent in general training from the time the individual begins his or her schooling. The humanistic and social formation provides empathy on social problems and problems in the most human aspect. It should include knowledge of general situations of mental health patients, palliative care, family, humanistic issues, social network or communication with citizens.

"*Anthropology, situations of risk of social exclusion, types of relationship, types of social and family structures, relationships with social accessibility groups, accessibility to social systems based on that family and social status they have, knowing or making a structure of what is the basic health area or the area they are working, what resources it has, what structure* it has at the economic level, what accessibility it has to the health system, all those kinds of things are what would have to be analyzed and we would have to learn how to do it"[I4]

Health managers cannot know everything in depth, but they must be permeable to the needs of the population, look for tools and be advised on the issues affecting the population.

Communication is a fundamental social skill that the health network manager must develop for the proper functioning of its functions. Communication is a determining factor in the coordination of different levels of care: it increases the effectiveness of leadership, promotes consensus and decision-making, improves internal communication and facilitates the performance of the functions of nursing managers, ineffective communication is a weakness in Primary Care management (Lopez, 2011).

Humanistic training is not part of the training as a manager, but is part of the professional's own decision. It should be a discipline that would be taught at all stages of vocational training. Instead, social and social skills training is more common and sometimes it is learned before occupying the position. Both are essential for the development of competencies as a healthcare manager.

- MANAGEMENT TRAINING AND HEALTH POLICIES

The evaluation of health plans, policies and programs are key elements of management (Villalbí, and Tresserras, 2011).

Currently, there are master's degrees in management and provision of health services. In the manager's training, training in management and health policies is the one that has the most priority, regarding training in the topics mentioned above. Such training should clearly include:

"training in health planning, in analysis of health outcomes, and also having organizational skills." [I6]

In addition, the interviewees highlight:

"*Knowledge of what Primary Care is, what social networks are, the relationships that are established between the different levels of care, ... many managers become area* managers without knowledge of a part of the area they are managing. Well, I believe that training in health management would have to be an established, basic training on health policy, on health policy administration, on management, both in one health structure and another, at the primary level, at the secondary level, relationships between those levels of care, that would have to be learned before starting to manage such a health structure." [I4]

At present, health managers and politicians in both the public and private sectors must increase their preparedness; it is necessary to promote the professional career for health managers to develop new profiles and skills according to current needs. Managers should focus on health micromanagement and incorporate new management models in health facilities (Fernández y Vaquera, 2012).

NON-FACE-TO-FACE CONSULTATIONS, TELEPHONE TRACKING

New technologies promote the application of health networks

"*Health technologies are the best thing that could have happened to us.... They contribute so much, they do so in real time that the benefits really are at all* levels." [I2]

These technologies are presented as the future development of the health organization, both in Primary Care and Specialized Care. They are presented as new avenues of communication and patient monitoring, safe, effective and with the same guarantees as face-to-face care.

Non-face-to-face queries provide a very useful resource to improve accessibility and producing more face-to-face query time. In addition, one can solve various types of problems, in different age groups (De la Fuente, et al., 2018). One of the benefits is that they avoid a large number of unnecessary visits to the health center, in such a way that they benefit the doctor and the patient

(Monsalve, Peñalba and Lastra, 2013). However, it is necessary to know and agree on the approachable processes for this type of consultation, the time necessary for it, and to ensure the confidentiality and satisfaction of patients and to train professionals in this type of competence (Freire, Dosantos and Gómez, 2016).

Non-face-to-face consultation or follow-up experiences through technological solutions are very beneficial, effective and efficient for the system:

"It *has benefits anywhere, time, patient displacement, expenses arising from that displacement, expenses arising from loss of work, hours of work, simplicity, the specialist's knowledge of the patient's* situation, which gives him/her an edge before arriving and having to assist him/her, if you have to attend the patient but above all it simplifies the waiting lists in a spectacular manner." [I2]

The benefits of using Primary Health Care's telephone referral to hospital care significantly reduce waiting days for appointments, this type of referral does not mean time or excessive spending for Primary Care physicians (Azogil, Pérez, Avila, Medrano and Coronado, 2018). On the other hand, telephone monitoring by nurses in Primary Care to patients for the first 24-48 hours after hospital discharge is a tool to ensure the continuity of care and quality of health services (Calvo, Rodríguez, Villarubia, López and Maldonado, 2015).

In addition, they serve to establish other types of more fruitful relationships with chronic patients, to detach the patient from the face-to-face consultation, which in many cases are unnecessary due to the patient's condition and cause the mobilization of a large amount of resources around them, such as family, time...

"Our patients, whom we had a chronic pathology for years, to whom we did not give more information because they have had all the information for *years about their health care, but we continued to keep him tied and linked to a face-to-face consultation, which made that patient every three months come to see us only* to do a technique that they also did at home once a week." [I4]

Not only can you use telephone or telematics queries but also video conferencing, depending on the resources available. This changes the therapeutic relationship with patients, which also allows us to spend more time and emphasize patients who do need that face-to-face consultation and

need more time. Citizens' satisfaction in non-face-to-face consultations is equal to face-to-face consultations. This is an important but necessary cultural change.

The telephone consultation provides very high levels of patient satisfaction and correctly solves most problems (García de Ribera, et al., 2010).

There are also other utilities, such as phone calls such as pediatric telephone triage are glimpsed as an agile and useful resource to facilitate administrative matters, drug doubts... it is a convenient and inexpensive method and significantly reduces pediatric visits (Mendiola, et al., 2014).

Non-face-to-face consultations and telephone tracking are new technological tools to facilitate communication and streamline healthcare. They are presented as safe, effective alternatives with the same guarantees as face-to-face care. Benefits include improved accessibility, avoid unnecessary patient visits and transfers, and facilitate patient follow-up and doctor-patient communication. Patient satisfaction is high with respect to such tools.

INTEGRATED INFORMATION SYSTEM

Clinical History is defined in Law 41/2002 as the set of documents that include data, assessments and information of any nature on the situation and clinical evolution of a patient throughout the care process (Rodríguez, de la Torre y Pascual, 2011).

The limitations of using different software for the recording of medical history in Primary Care and Specialized Care are to have two different software for the same patient in the Region of Murcia, which generates obvious drawbacks:

"There *is no access to the information from the other side, having to waste time looking for the other part of the patient's medical record, if there is access, to know what has really happened.... That is, basically what it demands in the case that we have in our region right now, we can access the hospital records, or the hospital can access our records (health center) or many of the records, but it takes time. So basically, what leads to delays*"[I2]

This can cause inconveniences such as repetition of unnecessary tests, medication interaction with each other, and gaps in patient care, not taking care of the patient comprehensively. Despite this, currently access to the patient's different medical records exists and allows us to know a lot of information, reports, results, hospital documentation, hospital admission time... previously all this information was known through the patient. Although to access the information it is necessary to know software very well.

The different software for a patient's medical history is because the incorporation in Spain of information and communication technologies in the gradual health sector has been gradual, which has caused a lot of isolated systems, coming from different providers, with duplicate information and sometimes inaccessible from all over the hospital, or the area, the Autonomous Community or the country (Aleixandre, Ferrer and Peset, 2010).

Therefore, the goal is to continue to make progress in this direction and create a unique medical history for the patient with access to all the health agents involved. This improved option consists of a single integrated information system for the entire network.

"The *use of medical history together,* access to data and information, both at the Primary *healthcare* level and *at the secondary level are essential to improve the quality of care, to reduce and avoid biases and errors in treatment and follow-up.* " [I2]

The medical history must meet the criteria of unity and integration, in each care institution, in order to facilitate physicians the timely knowledge of the data of a given patient in each care process (Medrano and Pacheco, 2015). In the Region of Murcia the computer program "OMI-AP" is used, in Primary Care and "SELENE", in hospitalized care as supports of the patient's medical history. Both media systems are related by a computer portal called "AGORA". Computer programs such as "Drop" are also used to control anticoagulated patients, to send the test and treatment result from the health center to the specialist, and vice versa. In addition, there is another program for pharmacy management and the dispensing of treatments.

Despite this, computerized medical history has important benefits such as accessibility and availability, multiple data visualizations, communication with other professionals, communication with patients (it may generate a channel of communication between the app and the healthcare team), add data, access to knowledge bases, integration with decision support, economic benefit at the organizational level and improve in the quality of care (De Quirós y Luna, 2012).

Computer support does not require the introduction of health data from the Region, as it is an individual medical history support. It only requires patient data. To access other external software, the patient's consent is required to be able to dump and view their data. Despite this, the computer system is fundamentally based on each community's health plan.

The most important and valuable information obtained through this software is to know the clinical situation of the patient's health status, its evolution over time and to have an overview of

upcoming appointments, tests, results in a telematic manner. To know the patient's health situation and its evolution it is not necessary to have the patient physically present. It also serves to know the population's health.

A momentary solution to alleviate the different it structures of different healthcare services is the implementation of universal viewers based on the standards that integrate today's electronic systems. In the Community of Madrid there is the HORUS visualizer (Ramos, Alfaro and Santiago, 2011)

The software does not need to enter data from other external databases for proper operation. Although it does need population data. The software information is properly structured, no further information is required.

In Spain, a software integrated into the SELENE software has been developed to automate the detection of drug-related events in all hospital patients (seville, Gómez, Ebeda and Téllez, 2012).

The patient's access to enter data into their medical history and share it with healthcare professionals would be useful in monitoring certain basic parameters that the patient is measuring in their home, if the device collects their pharmacy medication, which would provide more information in real time of the patient, and gives the possibility to make decisions. On the other hand, there is little information about citizens, in the healthy population, because it is where health promotion takes place.

To perform their work, health managers have a system of indicators, that is, a dashboard. Although, currently, it is little used:

"Right *now, the management knows each of the activities that I do throughout the day, everything. The quality with which I perform it and the situation of my patients. Is it improvable? Yes, there are many aspects to improve, getting all that data requires a very important effort of complementation, which involves time and* effort." [I2]

"The Business Intelligence Portal", which is a Primary Care dashboard, accesses information on activities performed, patient data, such as the number of patients being vaccinated or care plans for patients..., but only the results of those activities. This dashboard allows you to observe the data and fully monitor the system's inefficiencies. Without a system of indicators, decisions cannot be made rigorously.

In Spain, due to the gradual incorporation of information technologies has caused the implementation of different software by the Autonomous Community and between the levels of care, which causes different medical records and difficulties in their access. The integrated information system with a unique medical history per patient for all levels of care is the objective to avoid inconveniences including duplication of unnecessary tests and pharmacological interaction. Currently to alleviate these disadvantages there are communication portals between the different levels of care. In addition, the health manager has a system of indicators that allows him/her to know the activities carried out, patient data...

REAL NETWORKS

The key challenges and problems for health managers of regional health networks when developing a health region are above all economic, finding the balance between available resources and network's needs and demands. In this way, that greater efficiency and effectiveness of the system is achieved.

"*The professional aspect, in order to solve the problem, in the socio-cultural aspect and that the work is not well understood, that the activity is not sold properly, that the population does not understand it... when the political sphere does not support the professional aspect, when interests stand in the way of what are health indicators are.*" [I2]

This is an important challenge that sometimes impedes the rational functioning of the sector. It is also important that professionals in the system know the objectives of the system, the tasks, the goals, that they understand how it works, its tasks and functions. And employees who do not fulfill their professional responsibility should not be rewarded but reward those who do. In such a way that the realization of its functions is encouraged, explained and stimulated specifically. In addition, the organizational skills must be acquired and the health manager should have the necessary training to develop the network, and have the capacity and tools to develop it:

"The *most important priority is a high capacity for analysis with the use of technologies, a good level of prioritization of the problems analyzed and a good level of management to implement the prioritized* solutions." [I3]

One of the main challenges is to increase the efficiency of the healthcare system. This requires improving the internal productivity of the system, which has an impact on the economy. The involvement of professionals is necessary to achieve higher quality of care with the minimum

consumption of resources and with the help of the appropriate technology. (Miranda, 2014) To improve the results of health organizations is essential to create innovative models that facilitate the involvement of professions (Hernández, Polanco, Solinis, Hernández and Zaldua, 2014).

Networks are a solution to manage policies and projects with limited resources and complex problems involving different actors and encounter an increase in demand and citizen participation (Mendes, 2013). Networks can be a solution to NHS challenges. These are a necessary condition to address the problems of the organization, as they provide an overview and ongoing work. Networks can be complemented to contribute health through a collaborative environment, the goal is not to improve the organization but to improve the results of the organization. Training and leadership and cohesion capacity are therefore essential:

"*The solution to the challenges is to analyze, prioritize, and execute the prioritized. That is, a systematic solution to important problems, that seems to me to be the fundamental objective of a health* system." [I3]

Likewise, an effective solution would be to prioritize problem solving due to the analysis of situations and not derived or influenced by political interest. Politics sometimes has more influence on decision-making than the results of the analysis of the situation itself. This sometimes causes ineffective results.

Finding the economic balance between available resources and population needs is one of the biggest challenges of a health manager. Moreover, sometimes the population does not understand the manager's decisions and the lack of political support lead to a decrease in the efficiency and effectiveness of the system. Increasing the efficiency of the healthcare system requires the professionals who are part of it to understand its functions and promote/foster their performance. Also, networks are a good option to deal with these situations and improve system quality.

COORDINATION OF SOCIAL POWER (NON-GUBERNAMENTAL ORGANIZATIONS AND GROUPS)

The associations are groups of people who are suffering a common pathology and are constituted to carry out a collective activity in a stable way; they are organized democratically and they are also non-profit and independent of the State, political parties and companies. These organizations are an important point of intersection between public health, health systems, health administrations, health workers and society. The members of the association seek to find mutual

support, a greater knowledge of the disease and its treatments, with the aim of improving in its pathology (Paniello, 2015).

There are channels of communication between the regional health service and non-governmental associations in the network model. But they are not fully developed, they are insufficient and sometimes even unknown:

"*But in a slightly informal and rather speculative way at times, taken advantage of an opportunity and often without a follow-up. It depends a lot on the political sphere and that they do not tend to last*." [I2]

Non-governmental organizations are responsible for meeting the social needs of the population (Forcado, 2018). The fundamental role is to ensure adequate assistance and to channel the social concerns of specific groups, social needs, demands, requirements, claims and complaints from groups that they represent that health or political structures do not contemplate, and from a constructive and positive level.

"*Identify opportunities for improvement and above all to report the wells of inefficiency that occur in the socio-health system, that is, they are sentinels that identify when something is not being done right or could be improved. I believe that the healthcare system uses them as a warning of something that is not being done well, not as the basis for the solution, if the healthcare* system establishes criteria outside of it." [I4]

These structures are the future, and are considered to be the third sector between the private and the public. They are therefore used as an advisory body, enhanced and subsidized. However, the relationship is collaborative, and health services must have the ultimate responsibility.

In addition, associations have an intermediary role and play a key role in helping citizens interact with different health organizations. Patient participation through partnerships provides an opportunity for public leaders to have proposals and initiatives beneficial to the development of healthcare (Sanchez, 2019). They also collaborate with the health system educating patients and health care and sensitizing the population of different pathologies. These associations have a fundamental social function and are often opposed to injustices of the health system (Aguerrebere, 2012).

Non-governmental associations have the role of meeting the social needs of the population, helping to ensure adequate assistance, and channeling the social concerns of specific groups. Although a large number of associations are currently barely developed, their role is critical. These are the intermediaries between the population and health services.

NEED FOR OPERATIONAL COORDINATION

Health care is becoming increasingly complex, due to the high specialization and intervention of numerous services, the increase of chronic and multipathological patients makes real care coordination essential. There are initiatives to combat fragmentation in the provision of health care such as integrated health organizations. These organizations establish supplier coordination strategies and can contribute to improving continuity of care, while creating an environment that promotes collaboration between professionals of the different levels of care (Vazquez, Vargas, Nuño and Toro, 2012).

Currently, in the Region of Murcia, there is coordination in the Regional Health Service in theory, according to the model of health networks, but it is not operational. The criteria are not common between Primary and Specialized Care, the relationship between the two is not maintained.

The organizational aspects need to be improved:

"If *there is no electronic medical history, a unique medical history per patient, if there is no therapeutic adherence through a digital system, if there is no health portal that the citizen can access, then all those things make them impossible. We'll have some nets, but deep down we'll only have one* name." [I6]

In addition, a key aspect would be to improve the level of coordination between care levels. One of the current challenges in this area is to achieve optimal coordination of the levels of care, without leaving aside other groups of services to the citizen, such as police authorities, social services, geriatric residences. All this in order to achieve better attention to the citizen. This is necessary to assess aspects such as mobility, individual variability, level of demand, the use of the services available to determine the final result (García, Quintana, and Prats, 2012).

"We *must have much more common and fulfillable criteria and objectives. we should have a greater understanding of the results to modify/vary deviations from that* situation." [I3]

To achieve operational coordination, it is necessary to improve the organizational aspects due to the complexity of the system. The current system contains numerous services, there is a high specialization, patients are becoming more complex..., this makes it necessary to create strategies that favor coordination in the system and, therefore, the integration of different levels and care services.

CUTS, DISVESTMENT AND REASSIGNMENT

In Spain, there is an excessive dependence on the health system as the main determinant of health to achieve the welfare society, which causes excessive consumption of resources. Increased life expectancy with increased comorbidity causes increased health consumption. Pharmaceutical consumption is an important expense at the NHS (Iglesias, 2012).

Divestment involves severing partially or completely funding medicines, devices, appliances or procedures with low clinical value, i.e. without sufficient clinical effectiveness and efficiency when it comes to others available and use them to finance others with greater clinical value. The existence of divestment policies that are not dominated by political decisions are essential (Campillo and Bernal, 2013). Currently in Spain, health services are being implemented as a mechanism for health control, reassignment, that is, reordering the system according to the needs that occur, as opposed to the divestment in which resources are no longer financed:

"I *believe that reallocation and efficiency in the use of resources, yes. Not cuts, because our budget is growing and we don't cut anything, quite the opposite, reallocation, ... I think it is to try to make the most of our available budget and try to invest where it is most necessary, where we see that there are more needs, and certainly try to* bet *on the P*rimary care." [I5]

On the other hand, other services are implementing a cut as a mechanism for controlling health expenditure and to a lesser extent, divestment and reallocation:

"There is v*ery little attempt to reallocate resources based on the needs that occur. Very rarely in the work meetings we have, or in the information we have, this budget that was allocated for this will not be used and we will use it for this other thing. If the budget that is identified/destined for one thing is not used, it goes into a bag, which no one knows where it will fall, that it is not money that is not used, but without real ability to identify where that money would need to be used to improve that health care. Basically cuts are being applied.*" [I4]

Following the economic crisis in Spain, the Autonomous Communities opted for a selective cut in social spending, distinguishing itself between measures of a general or horizontal nature, both by the Government and the Autonomous Communities themselves, which directly sought to reduce spending in the social areas (Del Pino and Fernández, 2019). The cuts lead to the increase in waiting lists in Spain (Sánchez y Palomo, 2018). However, the divestment mechanism has been widely used during times of crisis, in Spain, as a control of health spending reaching 5.6% over GDP in 2016, and subsequently increasing (Fayos, 2017). In 2018, GDP in health in Spain reached 6%. (Eurostat Statistics Explained, 2020)

The most commonly used mechanisms in Spain to control health expenditure and improve the distribution of resources are reallocation first, to reorder resources according to the needs. In other particular services, cuts are mostly applied and to a lesser extent divestment. Therefore, in Spain there is a disparity between the control mechanisms used to direct health expenditure. Although divestment has been widely used in times of crisis, there is now an increase in GDP in health.

EFFICIENCY OF SUBSTITUTION PROCESSES AND COMMUNITY FOCUS

The Primary Care level generally has sufficient resources to meet most of the population's health needs, although there are technological resources that need to be widespread:

"*Yes, I think so, you can improve it too, I believe that* the Primary Care *has* that resolute capacity, it is true that it has the great problem of the demand of the population, but we do have a lot of resources. Yes, it is true that it must be equipped with more resources, both human and material, and that it has more capacity, greater means of communication with *other specialties, training, better health centers to promote research, sessions, staff training..., we* have to improve but our *Primary Care works very* well." [I5]

The reform of Primary Care drove the development of all its capabilities, but there are obvious needs for improvement. Proposals for improvement should be accompanied by sufficient funding, optimize the impact on health and be adapted to the organization and clinical competencies and to increased demand, bureaucracy, and medicalization. The support provided by information systems has reduced bureaucracy and promotes continuity of care (Palomo, Gené and Rodríguez, 2012).

But on the other hand, the level of demand and level of attention is not balanced.

"Those *aspects that are not purely care aid are virtually gone, therefore we would lack the resources to reach that component of health, which is not the purely care aid one works with in Primary.*" [I3]

The need for the restructuring and reorganization of health services to perform the necessary tasks, which are not carried out due to lack of time, is evident.

To this end, it would be important to incorporate quality of care as an important indicator for raising criteria for streamlining services in primary health care (Romano and Choi, 2016). To ensure the quality of care it is necessary to analyze the components and the evaluation of it. The adequacy and relevance of the procedures performed, the quality of the procedure and patient satisfaction. To do this, it is necessary to develop measures and indicators that allow to know the state of quality of care (Ochoa, 2012). Since, in Primary Care, there are difficulties in defining roles and allocating resources between care levels, which must be re-translated to be based on evaluation without political profitability or rationing. A new model with area vision, integrality and self-management is needed, which adapts the portfolio of services in Primary Care to today's society, to the new needs and demands of the citizens, as well as to the legitimate progress of professionals. A model with a new allocation of resources, which improves the resolution capacity in Primary Care and, consequently, efficiency in the area (Clavería, Ripoll, López, Rodríguez y García, 2012).

Despite this, the number of resources is increasing, as a solution to hospital overload:

"Sometimes this investment in primary care resources has been made, not as a result of the need to improve the health of patients *who are cared for in Primary Care, but to download a little flow to Primary Care to discharge the hospital. That kind of thing has made Primary Care more* resource-efficient." [I4]

Finally, Primary Care resolution capability requires more effective integration with Specialized Care to be optimized to the fullest. Primary Care in Spain has a large amount of resources, although they are not sufficient for current demands. Increased funding to adapt the service to the needs of the population would be a solution to develop the level of care and improve the continuity of the system. This is necessary because there is a current imbalance between health care and demand.

INCREASED COSTS

The economic evaluation of health interventions has been well developed today and is increasingly important as a tool to assist in making decisions on public financing for health benefits and for pricing in Europe (Oliva, Brosa, Espín, Figueras and Trapero, 2015).

Information on the cost of the processes applied in the health network exists, especially in the hospital area, although it is not usually used:

"I *don't think it exists right now; the information probably exists, what happens is that it is not used. Information is not used to make decisions that would involve a health* network." [I3]

There are data on the cost of some drugs, but the information is not used. According to the interviewees, the factors that influence the increase in costs are the impact of new treatments, the duplication of unnecessary acts or consultations, the impact of demands, the impact of life expectancy, the technological level, which significantly influences costs, clinical variability and the ability not to properly manage the entry and exit of new techniques, causing the survival of various techniques. Also, the economic situation of the area, the conditions of the population such as aging, chronicity or geographical dispersion, levels of population information or the training of professionals.

"*The professional manages with his/her daily activity... the use of resources that go through your consultation and your activity on a daily basis. Good training, adequately optimized work of the professional is what he will greatly affect spending, and spending will affect the effectiveness of the process*" [I2]

The new health technologies financed by the NHS must present adequate evidence of their therapeutic and social value compared to cost (Lopez, et al., 2010). Spain is lagging with the economic assessment of health interventions, which provides a necessary conceptual scenario to compare the therapeutic and social benefits and health and social costs of alternative treatments and programs. The information it produces is necessary at the time of making a decision (Oliva, 2013).

A multitude of process indicators are available for measuring results, especially in production activities. However, there are hardly any efficiency measurement processes available, both are not very useful at present, and in need of having it computerized:

"You *have above all process measurement results, but mainly in a descriptive mode. Let me explain myself: we have instruments to measure what is being done, but not the health outcomes of what*

is being done... I have no chance of measuring whether a patient comes 6 times, instead of coming 4, if that worsens or improves their health. So, I have no chance right now to measure efficiency beyond the activity I'm doing, nor the results."[I4]

To this end, qualitative indicators are used, for the evaluation of the technical efficiency of Primary Care teams it is recommended to incorporate quality of care as an important aspect to rationalize primary care services (Romano and Choi, 2016). And for the evaluation of efficiency in the treatment of pathologies or specific health problems, the methods of economic evaluation are used, through cost-effectiveness and cost-utility analysis (Perez, 2018).

Clinical management is an essential tool to improve microeconomic efficiency. Resource management is carried out by the professional and this will significantly influence effectiveness. In Primary Care and certain specialties, intermediate positions on clinical management are trained to work more efficiently.

Microeconomic efficiency consists of developing a portfolio of services to maximize health improvements and produce it at the lowest possible cost (technical and management efficiency) (Suarez, 2019).

Despite this, horizontal and vertical integration is not applied enough to achieve the economy of scale, although it is essential for resource allocation, which sometimes results in inequality. However, in other situations integration is not applied due to the great difficulty in such a large organization, sectorized by health areas, despite the optimization of resource management and pharmacy, but in general the economy of scale is not carried out.

"I *don't think so, if we don't have well planned what the objectives, the resources, the instruments, the tools we have to work with, the workflows, the coordination between levels, if that's not clear, it's quite difficult... A lot of times we do things out of inertia... but many times users don't feel what the common workflows or goals we have are, but we're* a little bit of a guideline, sometimes the vertical structure and sometimes a horizontal structure." [E4]

To avoid this situation, the measures are aimed at maintaining the cohesion and quality of the health system and promoting cost retention measures based on rational use policies aimed at professionals and users, and the concentration of resources at scale to improve the economy of scale (García, 2011).

PREVENTION AND HEALING

The promotion and prevention of health at the regional level in Spain is being enhanced and there is a concern about it. Both are a working tool that can improve the level of population health.

"Prevention is being done and increasingly, health promotion; perhaps this is the aspect that has a long way to go. I believe that right now public television, radio, and private networks should be informing the population much more about the health aspects... That would help promote measures and that promotion of measures is what I think is always too late and does not support it." [I2]

Social networks offer a possibility of communication and infinite information, in which you can find numerous resources. It is the means by which you can disseminate the information to a large number of people. Social media can be used to carry out health prevention and promotion (Matarín, 2015).

For the prevention of health there are general measures provided by the Ministry of Health, which the concierges of each Autonomous Community adapt. There are many programs such as drug care, preventive breast cancer programs, cervical cancer screening, vaccination programs, etc... On the other hand, health promotion is not as enhanced and there are hardly any measures to carry it out. Both are improved and insufficient for current demands:

"I believe that here we are investing a lot in what will not, in the long run, bring us value, I believe that at the time when a part *of the budget was taken away from what is the part of public health, prevention and health promotion, there we are failing, there we are doing it wrong... health care which is inconsistent with what we have and what comes to us... right now we are investing a lot of money in high technology, in very expensive drugs, which in the end is not bringing as much health to our* population." [I5]

This situation is due to insufficient budget and resources for health promotion and prevention. Although not all informants feel the same, in fact, one of the current objectives is health promotion:

"Health *promotion is part of health goals, that is the big change, so far we have been thinking that we only saw the sick, and now we have to think that we see citizens, some healthy and others sick.* " [I6]

Health promotion brings health knowledge to citizens, empowers them with knowledge by enabling their participation in collective initiatives and fostering equity. Therefore, it is essential

to stimulate the quality of care of Primary Care, through the integration of health promotion and prevention activities (Guillem, 2018). Thus, the asset model is a proposal to revitalize actions, evidence and evaluations in relation to health promotion. This model shows a health perspective that encourages communities to guide their goals to context and focus on aspects that improve health and well-being, enhance equity and improve decisions (Cofino et al., 2015).

The average rating of health promotion and prevention in Spain is 5.5 (on a scale of 10); it is low because of the great importance attached to the level of Primary Care compared to other countries, and therefore to the promotion and prevention of health at the Spanish level. An appropriate level would be from a medium-high score, i.e. a 7-8, which would denote an effective importance and empowerment of the system for achieving the objectives.

Therefore, the prevention and promotion of health in Spain are fundamental due to the structure of the system, there is an increase in empowerment and new tools to develop them such as social networks. Despite this, it is not yet really effective in Spain and funding is not adequate, which leads to results which can be improved.

FAMILIST APPROACH

The Spanish health model is based on a familyist approach, especially on the part of the level of care. Primary Care is the level of care that most recognizes this approach,

"At *the Primary level it is true that the family structure and support network that you have around the patient, the user, is much more taken into account, especially because it is an essential element of care, many times much of the care could not be carried out if we did not have that collaboration with the family structure. I think hospital networks don't take it that much into* account." [I4]

The family is a resource in the care process, and it is important to incorporate practices that guide the reinforcement of families and incorporate it into the participation of the care of the sick family member. Currently hospital policy also reinforces the option of the hospitalized patient remaining accompanied by his/her family member (Fernández, et al., 2015).

In addition, the familyist approach to health care on the sustainability of the Spanish health model is very important, as there is a longevity and complex chronicity.

"It supports in every way: at the level of *care, at the level of mental health, at the level of socio-economic support, I think it is a very important section and that is reflected in all those health*

conditions... about the level of health of the population, I think it helps a lot, especially in elderly stages, where social support is paramount." [I2]

Professionals in specific units such as palliative care consider the family to be the best patient care support and it is essential that they participate in care (Fernández, 2017).

This is because Primary Care, as we know it today, relies on family structure, on aspects such as family caregiver self-care, collaboration with family structure,

"Family *structure in Primary Care is essential; we could not consider doing Primary Care in our country without counting with that family* support." [I4]

On the other hand, social care is not very developed or structured and the family compensates for its shortcomings. Despite this, the family system is now weakened by the incorporation of women into jobs.

Today, public policies complement the care the family brings to the patient. The state is also increasing the care it provides to patients. These public policies do not change the fact that women are the primary caregivers of dependent adults (D'Argemir, 2015).

As we have seen the familyist approach is fundamental in the Spanish health model, since much of the care of patients is provided by family members. Above all, they become even more visible in Primary Care, and specific services such as palliative care in which professionals rely on family members to improve quality of care and patient continuity. This approach helps to compensate for the lack of development of the social structure of the system. Although social changes such as the incorporation of women into jobs and the increase in longevity and multipathologies pose a challenge for the current system.

CAREGIVER SUPPORT PROGRAMS

Health management is responsible for providing resources and means to enhance the use of training tools of informal caregivers, since the training of caregivers has an impact on the health problems developed by patients (Martín and Dominguez, 2013).

Informal caregiver or family support programs exist in very specific situations such as Alzheimer's disease. From a health point of view, they are not developed, but from a social point of view there is, for example, dependency aid. At the local level, in Primary Care there are partnerships that collaborate and carry out this function:

" in many basic health areas, which do have structured and *a little more formalized support for the caregiver, but also, as we have sometimes talked about almost at the level of personal initiative, not at the institutional level. I identify that there is a need in a family, so I get to work with it, but more personally than at the institutional* level." [I4]

It is also important to train caregivers, an aspect in which there is no great development. To this end, there are companies that develop specific caregiver training programs. Informal caregivers suffer health consequences due to caring, and it is therefore important to develop programs adapted to the needs of caregivers as multidisciplinary actions, both preventive and support, to improve the emotional state of the caregiver and, consequently, the mood of the patient (Sanchez, 2014).

Caregiver and/or family support programs are a key part of social resources especially for very specific diseases such as Alzheimer's that require a lot of care. Training and supporting patient caregivers improves the quality of care and its emotional state.

SOCIOFAMILY NETWORK DEFICIT OF CAREGIVERS

Care for patients with chronic diseases is a priority, due to their associated multipathology and comorbidity, requiring very complex care and consuming a large amount of partner resources. Therefore, a holistic and comprehensive person-centered approach is required, which takes into account the social, psycho-affective situation and family context (Herrera, Asencio, Kaknani and Mayor, 2016). Home visits for this type of patient and the stability of care programs are important to ensure continuity of care (Corrales, Alonso and Rodríguez, 2012).

Specific support networks for families with patients with severe or chronic diseases do not exist at the public level, they exist through patient associations:

"renal patients, cancer patients, patients with specific diseases, some of them such as that of children with cancer pathologies, the subject of cystic fibrosis, there are some very old ones like that of renal patients. All of these organizations exist and function and are related to the topic. All those are patient associations." [I6]

Current resources formally provide home and institutional support:

"*There are units for the patient to receive support both at home and in institutions: residences or even medium-care hospitals, if any. Perhaps there is one aspect that is the medium care hospital*

that has not developed much in Spain, except for very specific communities, but it does exist formally. Then in terms of associations or groups of influence and attention to specific pathologies as well. In that sense there is a lot of help, in chronic pathologies, of all kinds, rare diseases as well." [I2]

From Primary Care, a coordinating center of health and social resources must be exercised to contemplate social problems related to dependency, in addition to clinical problems (Corrales, Alonso and Rodríguez, 2012). Although it is not currently fully developed, it is intended to be achieved. There is coordination from Primary Care to support families and caregivers, but it is not structured and developed enough to meet the needs of the population. The associations are trying to fill the resource deficit in this area.

PROACTIVITY

Implementing more tools to get ahead of the complication of a chronic process is important. Getting ahead of a chronic process is a strategic tool to develop, and it's what we understand as proactivity.

"Implementing tools that allow not to reach the critical state of *the patient's situation, I think they are always welcome, it is a form of* health prevention, *Primary or tertiary, I don't care. The point is that establishing prevention mechanisms will always help and would be* desirable." [I2]

In fact, incorporating proactive call into nursing activities, to patients after hospital discharge improves early detection of needs and care. It also provides new lines of care (Calvo, Rodríguez, Villarubia, López and Maldonado, 2015).

In addition, the existence of structures and network that allow the prevention of chronicity is an objective to work with.

"part of what we aim to work on, what is the prevention of chronicity and what is the care of these patients, of those people with chronic health problems, also of those people who have many health problems, who are patients of high complexity, who have to have a family support very well trained and who give them that support , there we have to invest more." [I5]

In fact, proactive medicine is mainly based on avoiding complication and if it appears to act quickly.

Complex chronic morbidity and high health consumption are related to proactivity. Thus, there are predictive models of high-consumption risk that identify the target population of proactive care

strategies for complex chronic patients through factors such as age, morbidity and prior use (Coderch et al., 2014).

Proactivity is the future of health systems; being able to get ahead of complications in a chronic process is the goal of health prevention. There are already tools such as the detection of the needs of the patient after hospital discharge by nursing. The increase in chronic patients represents an increase in avoidable health expenditure, so the development of these tools is important.

LACK OF ADAPTATION OF HEALTH STRUCTURES TO THE NEEDS OF THE POPULATION

The balance between the needs of the population, the structure and processes offered by the health system has some instability.

"*The needs that are appearing in recent years with the basically ageing population, the needs are increasing much, much faster than what the system is actually able to grow. And, in that sense because the assimilation we have of foreign staff, because it also creates situations with a little stress in the organization*" [I2]

Thus, the balance that exists is not real, the objectives achieved are unreasonable, especially regarding demand that is not currently met, although it is necessary to know whether the current demand is real.

The structures are adapted in greater proportion to hospital care, acute pathologies, when the patient needs to go to a hospital for an acute problem. On the contrary, it occurs with social or family problems, in which they do not adapt to the needs of the population. Despite this, the adaptation of Spain is considered one of the best in the world.

This is because complex chronic patients are hospitalized for problems that are often avoidable, leading to worse-than-expected health outcomes and increasing health costs. To do this, it is important to build an appropriate integrated care scenario, adapted to current needs (Contel, Muntané and Camp, 2012). After hospital discharge, discharge protocols are being developed to ensure continuity of care (Ortega, et al., 2014).

The hospital system adapts well to the non-healing approach when the networks are properly developed and formed. The integrated care model of the different levels of integration, situations, services, continuities adapts the non-healing approach due to this integration capacity:

"A model of integrated care for complex chronic patients was launched *relatively recently, especially with patients who were multi-admissions, patients who were admitted many times, and* what was done was to identify such patients, so that the Primary Care team and the specialized team were the same as those who cared for that patient." [I4]

By establishing a circuit between Primary Care and Specialized Care and also incorporating the social worker's social health care, more efficient process management is created. Although, this model can serve a more preventive function, it is not always developed.

Current health policies have faced a global change in the care model to provide comprehensive care tailored to the new needs of the citizens (Torres, 2015).

The complex chronic patient must be located in Primary Care, and assume that hospital care is absolutely episodic in the patient's life.

"The *patients, where they are, in their environment, at home, with their family, and the health system that serves the patient at home and their family is the Primary Care. The visit to the hospitals is circumstantial, so the integration has to be* total." [I3]

The patient depends on Primary Care as long as they are not in the hospital, so their reference site is the health center, so it must be managed from there. The patient should be at home as long as possible, with his family, whenever possible and the patient's needs are met, with the support of the specialized network. Coordination of the network between different levels of care is therefore essential. In addition, Primary Care should not lose connection to the patient when in Specialized Care, which is another problem that arises.

On the other hand, the patient is not assigned to any specific level of care because he is in a continuous process between the two levels. Thus, the care model must be formed by a network through which the patient goes through at every moment of his/her life. There is also the view that the complex chronic patient is a type of patient that should be found in Specialized Care because of the complexity of their care; the complex chronic patient is not an acute patient, therein lies the inconsistency.

Currently, the attention of episodes of decompensation of chronic pathologies in the elderly is constantly repeated (Contel, Muntané and Camp, 2012). This change of situation in Spain requires the selection of patients who are admitted two or more times a year for decompensations of their chronic pathologies. Managing cases through a team of professionals and designing a patient care

route is a priority. The route must consist of a basic team, the Primary Care team and a support team that includes psychologist, nurse case manager, internist, social worker..., among others (Sánchez, 2012).

The adaptation of health structures to the population is unstable and it is focused on the resolution of acute processes at the hospital level. Sometimes hospitalizations of complex chronic patients could be avoided if community-level care was more developed and in line with the needs of the population. The lack of protocols to ensure continuity of care worsens the situation, as the system does not adapt correctly to non-curative processes. The integration of both levels of care and the incorporation of social services is necessary to ensure that this does not happen. In such a way that, the complex chronic patient is at the level of Primary Care and in communication with the level of Specialized Care and social services.

PROFESSIONALIZATION OF HEALTH MANAGEMENT SERVICES

Professionalization occurs when an occupational group succeeds in seeking interests at the collective level and in establishing an area of action.

The requirements for this to happen are two: firstly, the institutional separation and secondly, that there is the disentanglement of a professional project of its own (Camacho, 2016).

Consequently, when a group, especially those responsible for health management, is not professionalized, it has important implications for the performance of the management of a health care network. The incompetence generated by the lack of preparedness of health managers has a serious impact on the proper development of the networks.

"The fact that you put someone who is not sufficiently prepared at the helm *of an organization, or who does not have sufficient experience, can obviously pose, the problem is that sometimes the consequences are not immediate, an impoverishment of management and, therefore, of the functioning of that health* network." [I1]

It is therefore essential that health management positions are filled by professionals with minimum necessary training and prior experience in the model.

The current policy of election of management staff in the NHS is based on the direct hiring of the person deemed suitable for the position, without public convocation and without the criteria of merit and capacity (Hernández, 2015). As the informants claim, this situation continues to occur.

Therefore, the non-professionalization of health management services has a significant impact on the development of network management, sometimes because of the lack of competence and preparation of management professionals. It is therefore substantial that a professionalization of the sector occurs. Professionalization should require minimal training and experience to take office. Currently, there is no such professionalization and the choice of manager is decided directly without call and without minimum specific requirements.

POLITICIZATION OF HEALTH MANAGEMENT

The high politicization of management positions in Spanish hospitals needs to be alleviated with greater professionalization (Franco and Fullana, 2018).

Health management is politicized, health managers are elected from the political field, by the government that is currently in power.

"*These are freely held positions where there is no clear opposition or way to arrive on clearly established merits. Now, the situation is like this, so there is a lot of disparity in the way structures operate perhaps in some autonomous communities or others.* " [I2]

The exception is that the political decision is based on objective criteria.

"Unless a politician makes decisions choosing his collaborators using objective criteria that lead him/her to put in management positions people of recognized qualifications. The system is conducive to the appointment of these people who will be in charge of the management of these health services... from the point of view of the manager's personal opinion he/she has to make the decision." [I3]

The choice of managers should be through a consultancy, through curriculum.

As mentioned above, public health management procurement sometimes occurs directly through the recruitment of the person deemed appropriate, and this can be interpreted as "free designation" by political representatives. To this end, transparency and publicity of the procedures for choosing managerial positions are necessary, and should be carried out by independent specific bodies, which implement effective mechanisms to assess the unemployment of management activity (Hernández, 2015).

The politicization of health management exists and is partly due to the lack of professionalization of the position. The choice of managers is through political decision- whether this decision is based on objective criteria or not. It is necessary that the choice of charges be made formally and by CV.

HOSPITAL DEATHS / TERMINAL PATIENT ADMISSIONS

The domicile is the appropriate place for the care of patients and families with diseases in the terminal state, being their social and affective environment. Home and community care are a priority in the Primary Care teams' portfolio of services; thus, Primary Care and home support teams respond to the needs and demands of the sick (Espinosa, Gómez, Picaza and Limón, 2010).

However, deaths in the hospital of terminally ill patients wishing to die at home could be prevented because, since the 1970s when some natural processes, such as birth or death, death have continued to happen mostly in the hospital despite the great development of Primary Health Care and home palliative action aids. In fact, progress is being made on this issue, and one goal in palliative care is that no terminally ill patients die in the hospital.

"The *end of life depends on the decision of the patient and the relatives, and all that requires proper accompaniment. If the patient finally decides or their family decides one way or another, it will all depend on how the whole is oriented. As they feel accompanied, backed up, they feel safe within that insecurity."* [I2]

To avoid this situation it is necessary to train professionals, educate citizens and establish more resources in home support teams, at the Primary Care level and establish tools to help and accompany families.

" To accompany, in times when we are, in need of affection, maximum insecurity, what we seek is that *they love us, support us, feel safe, feel that we are doing our best with that patient who is going to die. Understand every moment, know what is being done to you, what medication is being given to you, how you are avoiding that suffering, ... how he/she's being helped.* " [I2]

Professionals who work in Palliative Care teams in Spain spiritually accompany the patient, as this is part of the integral care of the same, but there are important areas of improvement in the model of care and training (Sánchez, et al., 2016).

In addition, it is important to adjust the law in such decisions to regulate them, as this informant states:

"Yes, *that is an individual right, for individuals to exercise it, without pressing anyone, without forcing anyone, but that individuals have the right to decide under what circumstances their death may occur.*" [I3]

This is not really being given at all, because at the home level there is no support for the urgencies of palliative patients or continued care. All these situations go through emergency care and if there is a deterioration, hospital admission goes through the emergency door. Often the patient is admitted to die in the hospital; and therefore, by not being able to give that support of control of symptoms or action in the face of a worsening situation at home, the patient is transferred to the hospital, and he/she is not really being allowed to choose where he/she wants to die.

PSYCHOSOCIAL AND SPIRITUAL ASPECTS

Spanish palliative care teams should pay continued attention to grief before and after death occurs. Prior to death, specific accompaniment, counselling and therapeutic intervention is provided to family members who demand attention and those with risk factors. Standardized protocols of action and increase bereavement care programs (Reverte, Garcia, Penas and Barahona, 2016) need to be established.

There are really no effective bereavement management devices, the Primary Care Doctor or the psychiatrist treat grief as a health problem, pathological bereavement:

"We *have a device that works acceptably well in palliatives, let's say pre-bereavement does, but once the patient has passed away, bereavement care* is not standardized at any time, nor does it follow a criterion beyond what specialist care is." [I2]

But it is not always considered a health problem, as bereavement is a process learned so people have to go through that process; it is only considered a disease when it does not meet normality parameters.

Pathological bereavement occurs when feelings of normal bereavement such as sadness, anger, guilt, anxiety...; physical sensations such as chest, throat, shortness of air, muscle weakness...; cognitions such as disbelief, confusion, concern... and behaviors such as eating disorders, or sleep disorders, social isolation... take more than two years, or the stages of grief lengthen over time (Gómez, 2019).

Although grief is being dealt with and there is training in palliative care teams, both in adults and children, perinatal bereavement is currently being developed.

"The bereavement in our attention is dealt with a lot *and there is a lot of case formation of the* bereavement *and the teams that work with palliative care work very* well." [I5]

WHO considers neonate palliative care as a line of intervention:

> WHO refers as one of the lines of intervention for pediatric palliative care, palliative care in the neonate. (Rabbit, 2019, p.35)

It is important that professionals working in maternity units have information and knowledge on how to treat perinatal or neonatal bereavement (Rabbit, 2019).

Mortality in older people is high because it is also a very large group; attention to grief is important because more and more young people are grieving for family loss, especially now with the pandemic.

PALLIATIVE CARE AND CONTINUED AND URGENT CARE OF TERMINAL PATIENTS

The Collegiate Medical Organization has set out the need to develop the basic competencies for palliative care in greater detail adapted to each level of care and palliative care teams. In order to establish obvious derivation criteria to specialized teams based on location, complexity and needs (Gómez, et al., 2010).

The integration of all palliative care resources exists, but it can be improved in our country.

"It *depends a lot on who integrates these teams, both Primary Care teams and home support teams... yes, there have been times when some professionals have favored this very easy integration and as always because it depends a lot on who integrates these teams. Since you don't have clearly defined who and how things should be done, doing them one way or another depends a lot on who's in that position.* " [I4]

On the other hand, the process has become overmedicalized and the family structure has been removed from the psychological and emotional level. So that many families do not endure situations and do not have the support of the administration.

"We *need to take one last step and make that integration much more effective with the hospital and especially with Primary Care. In our region the palliatives team works autonomously and in*

communication with Primary, with the emergency services, so in that part we are also working on it so that there is really better coordination than there is." [I5]

Integration is insufficient and the volume of resources is neither adequate for all citizens. Despite this, there are resources and there is coordination between them:

"There *is an intrahospital palliative service and an out-of-hospital palliative service, levels* of Primary Care are in coordination, the patient who is *discharged from the hospital is automatically referred to the out-of-hospital palliative service, which in* turn coordinates with the level of Primary Care." [I2]

Patients with advanced and end-of-life conditions admitted to the intensive care unit (ICU) have a high level of suffering and vulnerability. This situation is addressed through a holistic approach and it is necessary for palliative medicine to introduce its principles into treatment, through the coordination and integration of both services (Campo, Rodríguez y Cortés, 2016). A patient's transition from curative care to palliative care is very complex in the ICU and must be determined by clear and well-defined processes, since care is different and palliative care is developed in quiet, private spaces, without alarms or technologies, quite the opposite than in an ICU (Rubio, 2015).

There is currently an increase in demand for palliative care in hospital emergency services. These services are not adequately adapted due to the human resources, structure and speed of the tasks of professionals in the field. Developing screening guides to classify patients has improved care in these cases in the U.S. Thus, protocols of action before palliative patients in hospital emergency units improve the coordination of care and consolidate adequate care for patients and their families (Pepper, 2018).

Admission into Specialized Care of a terminal patient without going through the emergency door is not feasible, unless professionals, individually and by their own volition, have it previously agreed.

"*The strategy in this case, as in all cases, is facilitated by direct and personal communication between two specialists, such as the* Primary *Care* Physician and the *corresponding specialist. That is, not to move a sick person but to comment on a problem. And if necessary, let us mobilize the sick... would solve many problems without having to go through emergencies, except that going through emergencies is a purely administrative* matter." [I3]

This would require the creation of protocols and the incorporation of a mechanism:

"A terminal patient who goes to the hospital, and he/she goes there to die, what we would have *to have is a quick access mechanism, via palliative care, establishing the process, the procedure, which does not currently exist in a rule, although yes, informally it is concluded with the emergency department and admitted through emergencies and moved to palliative units."* [I2]

Families who take patients in palliative care who go to the emergency department do so out of fear or lack of control of symptoms, and due to the lack of available resources (Carrasco, 2017).

According to the interviewees, there are also experiences of palliative care teams at hospital emergency rooms, where staff are prepared for these situations in hospital emergency units. In addition, increasing resources at the home level and increasing family support hours would be critical.

Another option would be to incorporate the necessary mechanisms for home palliative assistance:

"If *it is terminal, I would make home care and transfer to the patient's home the necessary technology, which in many cases is basic and would never transfer it to the* hospital." [I6]

The incorporation of palliative care and follow-up programs by a mixed palliative care support team decreases the number of patient visits to hospital care (Pérez, Jiménez, Sánchez and Mancilla, 2013).

The continued care of terminally ill patients in palliative care exists in Spain, but is improvable and not fully developed. There are significant shortages of care adapted to terminally ill patients. We are now faced with an over-medicalized health structure with insufficient support for families in this situation. This causes avoidable hospital deaths in terminally ill patients, causing increased patient suffering. The creation of protocols for terminally ill access to hospital care without going through the emergency door or home support to patients and families in this situation would reduce uncertainty and unwanted hospital deaths. To do this, follow-up programs are incorporated for this type of patients.

ACCESSIBILITY

Inequalities in access to health benefits are avoidable, these inequalities are related to coverage of needs, the disadvantage to completing medical treatments for economic problems, inequalities in waiting times and services to equal need (Urban, 2016).

Such inequalities are found in the transit of the patient once access to the health system is inherent in public services. Geographical proximity, accessibility, waiting lists of different areas or specialties are inequalities of the Spanish health system.

"The *most common is that for reasons of geographical proximity or for cultural or personal reasons make you make use of the services, not exactly the one that needs it most, but the one that for geographical reasons or for personal reasons has more accessibility ... it depends a lot on the individual conditions and as* well on the social information available that it is necessary that, you go to a site, or demand services when they are really needed." [I3]

Patients, when accessing the healthcare system, have identical routes for all users:

"Once you have accessed the healthcare system, the circuits are basically the same for everyone; there are different circuits for the same thing, depending on the patient's situation; there are faster circuits and slower circuits. But once you enter the healthcare system, access to the rest of the system is basically the same." [I4]

Such health systems that have universal access, and those based on Primary Care, bring greater equity to health. Despite this, in Spain there are health inequalities related to the unequal distribution of social determinants of health in the different groups of the social structure (Hernández, Cesteros and Esteban, 2012). To reduce health inequalities there are interventions and policies such as improving living conditions, combating the disparate distribution of power, money, resources and measuring the problem, evaluating interventions and expanding knowledge, having qualified staff and raising public awareness (Commission to Reduce Social Inequalities in Health in Spain, 2012).

Inequalities in patient transit are post-access to the system, geographical differences affect waiting time for health services care. Although the system circuits are identical for all users. I would like to add that the development of policies aimed at alleviating these inequalities in accessibility to health resources is important.

COORDINATION FROM APS

Community care needs to take on collaborative, co-participatory, expert and competent leadership in complex decision-making. It is also necessary to adapt the equipment to the needs of people, through objective and critical analysis of the effectiveness of the actions, incorporate

new technologies and approaches in the organization that optimize the circuits and increase the resolution capacity of Primary Care (Lymón, Blay and Ledesma, 2015).

The management of complete health care cycles is not being carried out since Primary Care because hospital care has more weight of knowledge, technological expenditure, cost and pharmacological expenditure:

"Resources *in recent years have almost always been earmarked for hospitals, and that means technological advances, pharmacological advances aimed primarily at hospitals and not so much for Primary Care to have powerful work teams with the capacity to resolve and able to decide at any given time what measure to take with some type of patient... Primary Care remained only as a gateway and referral to the rest of the health* system." [I4]

Primary Care is not provided with the resolute capacity, time, or training to carry out complete health cycles, and patients are referred to Specialized Care.

"Because *it is a very abstract aspect, complete cycles in health care is a difficult area sometimes to define. A lot of times I think it's because of a problem of definition and understanding. There is no definition, no clear objective, no specific goal, in that sense, not a specific way of* working." [I2]

This is a goal, but for this it is necessary to communicate between specialties, and to train professionals in this new model. However, progress is being made in this area. Despite this, health care in the health center is incomplete and therefore the training of integrated systems between different levels of care is essential.

Primary Care has great benefits for the population: it decreases mortality, improves health outcomes, more efficient resource consumption, decreases patients admitted by preventable chronic complications, decreases consultations with Specialized Care, increases quality of life, decreases the number of emergency consultations and decreases the risk of overtreatment (González, Villena and Párraga , 2015).

Still, referrals to Specialized Care by Primary Care are made daily. To ensure coordination between both levels of care, it is important to use tools such as clinical practice guides based on evidence, processes and clinical means, which structure inter-consultations with specialized specialists when necessary (Contreras, et al., 2015).

Coordination from Primary Health Care of complete health cycles has important benefits for the population. However, this resolution capacity is not granted to Primary Care and Hospital Care assumes this role-power because it has more technological, pharmacological, and cost expenditure in general.

CASE MANAGEMENT

Case management is important to carry out continuity of care properly, efficiently and effectively using available programs and services. Case management is responsible for guiding the patient and his family in situations of complexity and adapting the supply and demand for care in situations of dependence (Rodríguez, 2014).

Case management is also a tool that facilitates coordination between care levels. To do this it is necessary to define it, good coordination and the use of technology.

"Sometimes we are calling many different forms in the same way. And then we measure and we don't quite know how to integrate that information. The network administrator has to make the terminology joint and what it tends to in the professional aspect is often to data dispersion "[I2]

Currently, it is developing in some areas of health in Primary Care or certain specialties and works very well.

"What *I know are some case management experiences almost always focused on nursing care, have not been launched in all areas of health and have not been implemented with the same effectiveness in all areas. I think it has also depended a lot on who has managed and how those case management teams have been* established." [I4]

The nurse performs the function, and facilitates patient transit through all levels of care efficiently and with quality of care. Especially for very specific cases such as transplants, in complex chronic patients according to the Kaiser pyramid, oncology, rare diseases, among others. Specifically, it is being developed in large areas that have more resources and mostly at the hospital level. In the Region of Murcia, only in one area of health (IX) is case management being developed by nursing personnel, acting as an intermediary between care levels and coordinating resources for complex patients.

Finally, the Autonomous Communities have failed to implement the figure of the case-managing nurse according to the maximum standard, the situation is uneven, due to the lack of institutionalization of the case management nurse in Spain (Vallejo y Alcaráz, 2019).

Although case management is a tool that facilitates continuity of care, coordination between care levels and the effective and efficient use of resources, it is not even developed, with the exception of some Autonomous Communities and in certain areas specifically it is only a pilot test. Sick Bay assumes the role.

Critical Reflection:

The health structure of the Spanish model guarantees Universality and reduces inequalities in health care, even though there are still differences according to geographical areas. The decentralization of the NHS from the coordination of health care to the Autonomous Communities allows a greater adaptability of the system to regional circumstances, but has some side effects such as inequity. The Health Care Network is composed of different levels of care and services that are integrated to ensure continuity and quality of care, and also includes coordination with other sectors such as education and research ones, and coordination between the public and private sectors. Also, measures such as the pharmaceutical co-payment regulated by the social situation of the citizen and income level, allowing to improve the financing of the system and above all the rational use of drugs.

Health managers have training in network management and information technologies and systems, health economics, health management and policies, and some also have training in health care and humanist-social training, even though training has subsequently been acquired from access to office and for their own motivation, in an undemented way. The politicization of the choice of health managers and the lack of transparency caused by the lack of professionalization of the sector, which impairs the development of health care networks.

The current empowerment of non-face-to-face consultations and telephone monitoring are shown as the future development of the health system to improve accessibility and communication. Likewise, access through communication portals of the Medical History between the levels of care promotes the integration of the system and improves the quality of care. Likewise, development and collaboration with non-governmental associations to channel the needs of the population is another way of integration into networks.

Funding for the development of health promotion and prevention is insufficient for current demands, but it is part of the health care in Spain and there are plans for its development. This is due to the high technological and pharmacological expenditure which consumes a lot of resources that are devoid of preventive resources.

In addition, hospital deaths of terminally ill patients would be avoidable if the necessary resources and tools were provided to palliative patients and their families.

Finally, case management is a tool in development in Spain to improve coordination between different levels of care and services of complex chronic patients. This increases the effectiveness and efficiency of the system, causing an increase in the use of resources, but with a very uneven implementation pattern in Spain.

- *What are the conclusions regarding the* two main *research questions?*
    - The NHS structure is mostly public and is divided into regional health services due to NHS decentralization. The Autonomous Communities are responsible for coordinating health care and the municipal level carries out public policies on health for the citizens. Regional health managers are responsible for partnering and maintaining relationships with patient and neighbor associations, volunteering, NGOs, industries, suppliers, training structures, research, universities, schools, counseling, public and private institutions, municipalities, local entities and state law enforcement. There is a comprehensive health network formed by the level of Primary Care and the level of Specialized Care that are integrated in both a horizontal and vertical axis, improving quality and continuity of care. There is cross-sectoral coordination with some sectors such as education and research, but it is insufficient. Management by socio-health processes requires an important coordination exercise of social and health services very complex even though there is bad network integration. The structure of the Spanish health system guarantees the rational use of population resources and prevents the overlap of different networks and services.
    - The circumstances of our health system can be positively assessed at the regional level, despite the existence of certain inequities, largely determined by the political sphere and sectorization in Autonomous Communities, offering universal health care. The movement of decentralization towards the Autonomous Communities, at the

health level, entails economic-financial decentralization and some imbalance between financing and health expenditure. Funding at the national level is sufficient, but there are inequities at the regional level and therefore an unequal distribution of resources, therefore not always considering the population size, the conditions of the Autonomous Communities and the population's needs. The minimum content of the NHS service portfolio is required at the national level, and the Autonomous Communities may extend that offer. Technological and pharmacological spending is very high, unlike spending on health promotion and prevention. The pharmaceutical co-payment regulated according to the income levels and social situation of citizens promotes the guarantee of responsible use and finally, an important descriptor of our NHS are the areas of unified management, which favor the management of health networks.

- The skills needed to manage a health care network should be those that enable you to plan, organize, direct, control and coordinate health services in hospitals, clinics, health centers, day centers, nursing homes, health areas and similar health organizations. The manager must have training in network management and in information technologies and systems, in health economics, in health management and policies, training in health care and humanist and social training is also recommended but not essential. Most of the time, the training of the manager currently takes place after accessing the position, in a non-regulated, self-taught way and through his own practice.
- Regulated, minimally demanded training needs and training resources in the area of health management of health care networks are necessary to develop the profession of manager and alleviate the political production of such positions. Although there are currently courses, subjects in some health degrees such as medicine and nursing, as well as master's degrees in sanitaria management, are studies not required to enter the position and are often not carried out as they are not a requirement.
- The challenges and areas of improvement of our national health system as an integrated service system are as follows:
    - Enhance non-face-to-face activities to improve accessibility and communication: non-face-to-face consultations and telephone monitoring, which are resources that have proved very useful during the pandemic.

- Integrated information systems such as a unified Medical History for both levels of care and between Autonomous Communities, avoiding inconveniences caused by difficulties in accessing information, duplication of unnecessary testing, pharmacological interactions...
- Regional health networks to balance available resources with the needs and demands of the population. This requires improving system productivity and efficiency.
- Develop co-development with non-governmental associations, which largely address the social needs of the population.
- Organizational aspects to achieve operational coordination, by creating strategies that favor integration between different levels and care services.
- Reallocation, cuts and divestment are mechanisms used to control health spending, although there is now an increase in GDP in health. Primary Care in Spain has a large amount of resources, although they are not sufficient for the current demands being necessary more resolution capacity at this level and a more effective integration with Specialized Care for maximum optimization.
- The increase in costs is mainly due to unnecessary consultations, impact of new treatments, duplication of acts, impact of life expectancy, technological level... although there are measures to maintain the cohesion and quality of the health system and the promotion of cost-retention measures based on policies for the rational use of resources that need to be enhanced
- Health promotion and prevention is not adequately funded, favoring the predominance of the hospital idea over the preventive idea.
- There is and is recognized the familyist approach to care especially for services such as Primary Care and palliative care. However, there are no cross-cutting care support programs, with the exception of training programs for caregivers of Alzheimer's patients.
- To enhance the coordination of partners from Primary Care to meet the needs of the population. Coordination from Primary Health Care of complete health cycles has important benefits for the population. In this line, case management is in an uneven development in Spain, although, it is a tool that

facilitates continuity of care, coordination between care levels and the use of resources effectively and efficiently.

- Implementing tools to anticipate a complex chronic process is a fundamental strategy to develop and the right environment is AP.
- The lack of specialized training in health management in the context of the Health Care Network and the politicization of health managers has a significant impact on the development of the network.
- Hospital deaths of the terminally ill patient could be greatly reduced if there were the necessary resources at the home level and sufficient awareness in the population. Continued care of terminally ill patients is not developed, and there are significant gaps in care adapted to terminally ill patients. The health structure is overly medicalized and there is a shortfall in support of families. It is important to develop procedures that allow terminally ill patients access to hospital care without going through the emergency department.
- Lack of bereavement management devices, although palliative care teams promptly address this problem until the time of death
- Developing policies to alleviate inequalities in accessibility to health resources is a key challenge.

- *Are there any recommendations or implications for* any stake *holders, policy makers, etc.?*

Recommendations for policy makers and stakeholders are to professionalize the work of health network manager in Spain, and to create specific and compulsory training containing training in network management and work, information technologies and systems, health economics, health management and policies, health care training and humanist-social training. Access to the position is through a public call.

Also, the priority issues of regional health managers are to provide resources for diagnostics and therapeutics. First strengthen preventive work to prevent disease in the patient, early diagnosis and actions when the disease occurs. And then, observe and analyze the capacity of health activities to influence citizens through indicators that measure the relationship,

In addition, it could be positive to integrate food, education, employment and working conditions, social conditions, the environment and housing, socio-economic conditions,

hygiene, into health determinants with health services as part of the competences of a network administrator. Aspects such as education provide better socioeconomic and employment conditions, and greater knowledge of healthy habits.

- *What would be an essential thing to do/some essential advice* in *terms of* the situation of *health network* management in *your country?*

  The National Health System in Spain was created as an integrated health system, but in reality, there is a significant shortfall in coordination and continuity of care, with more complex case management capacity needed to be turned into Primary Care and the redesign of the complex chronic patient's career in the hospital environment needs to be turned. Home care is increasingly a socio-health need where many agencies and institutions that can provide local resources need to be involved.

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