Joint Action Health Workforce Planning and Forecasting

D054

Two Pilot Projects and two Feasibility Studies.

The overall report.

Written by

Paolo Michelutti, Annalisa Malgieri

Funded by the Health Programme of the European Union

WP5

Two Pilot Projects and two Feasibility Studies. The overall report.

Joint Action Health Workforce Planning and Forecasting

Version	Last updated	Owner
Version 01	29/05/2016	Written by Paolo Michelutti. Reviewed by Reijo Ailasmaa, Pilar Carbajo, Gilles Dussault, Eszter Kovacs, Isabella Notarangelo, Milena Santric, Victor Slenter.
Version 02	08/06/2016	Written by Paolo Michelutti and Annalisa Malgieri. Edited by Gilles Dussault, Milena Santric, Victor Slenter.

Please cite this work as:
Michelutti P., Malgieri A., Two Pilot Projects and two Feasibility Studies. The overall report., Joint Action Health Workforce Planning and Forecasting, Funded by the Health Programme of the European Union, www.healthworkforce.eu.

Funded by the Health Programme of the European Union

Table of contents

Funded by
the Health Programme
of the European Union

The Joint Action Health Workforce Planning and Forecasting

The Joint Action on Health Workforce Planning and Forecasting is a three-year programme running from April 2013 to June 2016, bringing together partners representing countries, regions and interest groups from across Europe and beyond, but also no EU countries and international organisations. It is supported by the European Commission in the framework of the European Action Plan for the Health Workforce, which highlights the risk of critical shortages of health professionals in the near future.

The main objective of the Joint Action Health Workforce Planning and Forecasting (JA EUHWF) is to provide a platform for collaboration and exchange between partners, to better prepare Europe's future health workforce. The Joint Action aims at improving the capacity for health workforce planning and forecasting, by supporting the collaboration and exchange between Member States and by providing state of the art knowledge on quantitative and qualitative planning. By participating in the Joint Action, competent national authorities and partners are expected to increase their knowledge, improve their tools and succeed in achieving a higher effectiveness in workforce planning processes. The outcomes of the Joint Action, among other things, should contribute to the development of sufficient health professionals, contribute to minimise the gaps between the needs and the supply of health professionals equipped by the right skills, through the forecast of the impact of healthcare engineering policies and of the re-design of an education capacity for the future.

This document contributes to achieving this aim by resume lessons learnt and recommendations based on the four experiences of implementation of the Handbook on Health Workforce Planning and Forecasting (Italian and Portuguese Pilot Projects, German Feasibility Study and Joint Feasibility Study between Romania and Moldova) led by WP5 Italian Team,

This document has been approved by the Executive Board of the Joint Action on Health Workforce Planning and Forecasting on 2016, June 14th.

Funded by
the Health Programme
of the European Union

Contributors and Acknowledgements

The preparation of this deliverable was led by Annalisa Malgieri (Ministry of Health – Italy) and Paolo Michelutti (AGENAS – Italy).

In addition, we would like to highlight the contributions that have been invaluable in preparing the materials reflected in this document. Within this particular work we are grateful for being able to count on the knowledge and expertise of associated and collaborating partners participating on this specific document.

Our sincere gratitude goes to the following authors who directly contributed to the preparation of this deliverable:

- Ana Paula Gouveia - ACSS Administracao Central do Sistema de Suade, IP – Portugal;
- Filomena Parra - ACSS Administracao Central do Sistema de Suade, IP – Portugal;
- Mara P. Timofe - Babeş-Bolyai University, Cluj-Napoca, Romania- BBU Cluj-Napoca – Romania;
- Marius I. Ungureanu - Babeş-Bolyai University, Cluj-Napoca, Romania- BBU Cluj-Napoca – Romania;
- Melanie Boeckmann - University of Bremen, SOCIUM Research Center on Inequality and Social Policy in Bremen, Germany;
- Miriam Düsterhöft University of Bremen, SOCIUM Research Center on Inequality and Social Policy in Bremen, Germany;
- Heinz Rothgang - University of Bremen, SOCIUM Research Center on Inequality and Social Policy in Bremen, Germany;
- Rebecca Runte - University of Bremen, SOCIUM Research Center on Inequality and Social Policy in Bremen, Germany.

We are grateful to:

- Victor Slenter – Capaciteits Orgaan – The Netherlands
- Isabella Notarangelo - HOPE - Belgium
- Reijo Ailasmaa – National Institute for Health and Welfare – THL – Finland
- Eszter Kovacs - Semmelweis University – Hungary
- Gilles Dussault - Universidade Nova de Lisboa - Portugal
- Milena Santric Milicevic – University of Belgrade - Serbia

for their dedication and diligence in reviewing and editing this document.

We would like to extend our thanks to all partners engaged in the Joint Action and we would like to highlight Michel van Hoegaerden, Tina Jacob, Damien Rebella and Maria D'Eugenio (Belgian Federal Public Service of Health, Food Chain Safety and Environment; coordinator of the Joint Action) for their leadership and support.

Finally, the financial support from the European Commission is gratefully acknowledged and appreciated. In particular, we would like to thank Caroline Hager, Isabelle Deve from the European Commission DG Health and Consumers, and Jurgita Kaminskaite from the Consumers, Health and Food Executive Agency (CHAFEA).

Glossary

Term	Definition
Affordability	Keeping the costs of healthcare services within the threshold of what is considered sustainable by the population, national government and/or EU definition.
Age groups	A division of the population according to age, in a pre-determined range, used to distinguish differences among populations. Examples: 0-4; 5-9; 10-14; …. 60-64; 65+.
Anticipation	Thinking ahead of an occurrence in order to determine how to handle it, or how to stop it from happening.
Big picture challenge	A fundamental challenge that policy makers are facing across the (healthcare) system. Meeting a big picture challenge requires focused action at the highest level across the health, social care, education and employement sector.
Circular mobility	A form of migration that is managed in a way allowing some degree of legal mobility back and forth between two countries
Cluster	A set of system factors and driving forces, similar to each other and linked through cause and effect relationships, which describe a key focal issue of concern.
Demand (of HWF)	Number of health professionals required to fill in open vacancies. It should ideally be expressed both headcount and in full-time equivalent (FTE), depending on the forecasting purpose.
Driver / Driving force	A factor that causes or might cause changes, measurable movements or trends in the HWF of a health care system.
Events	Occurences that can impact the healthcare system.
Emigration (outflow)	The act of leaving one's current country, in this context with the intention to practice a profession abroad.
Factors	A circumstance, fact or influence that contributes to a result. Factors are linked to each other through cause and effect relationships. A change to a factor often will influence one or more other factors in the system.
Full-time equivalent (FTE)	Unit used to measure employed persons to make them comparable, as they work a different number of hours per week, in different sectors. The unit is obtained by comparing an employee's average number of hours worked to the average number of hours of a full-time worker of same kind. A full-time worker is therefore counted as one FTE, while a part-time worker gets a score in proportion to the hours he or she works or studies. For example, a part-time worker employed for 24 hours a week where full-time work consists of 48 hours, is counted as 0.5 FTE.
Healthcare production	The output of healthcare services that can be produced from the given combination of human and non-human resources.
Health professional	Individuals working in the provision of health services, whether as individual practitioner or as an employee of a health institution or programme. Health professionals are often defined by law through their set of activities reserved under provision of an agreement based on education pre-requisites or equivalent.

Health workforce	The overarching term for the body of health professionals (trained and care workers directly involved in the delivery of care) working in a healthcare system.
Horizon scanning	A systematic examination of information to identify potential threats, risks, emerging issues and opportunities allowing for better preparedness.
Imbalances (major)	The uneven spread of the active health workforce across countries, regions or professions, resulting in *underserved/overserved areas*.
Indicators (key planning)	A quantitative or qualitative measure of a system that can be used to determine the degree of adherence to a certain standard or benchmark
Job retention	The various practices and policies which enable healthcare professionals to chose to stay in their countries to practise for a longer period of time, or to stay in their practice, or even to keep working full time.
Labour force	The total number of people employed or seeking employment in a country or region.
Megatrend	A large, social, economic, political, environmental or technological change that is slow to form and difficult to stop. Once in place, megatrends influence a wide range of activities, processes and perceptions, both in government and in society, possibly for decades. For example, the ageing population megatrend is composed of trends in birth rate, death rate, quality of healthcare, lifestyle, etc.
Migration (inflow)	The act of (either temporarily or permanently) moving into a country, in this context in order to practice a profession.
Minimum data set (MDS) for Health Workforce Planning	A widely agreed upon set of terms and definitions constituting a core of data acquired for reporting and assessing key aspects of health system delivery
Planning process	A process of defining health workforce planning perspectives, based on needs assessment, identification of resources, establishing the priority of realistic and feasible goals, as well as on administrative measures planning to achieve these goals
Planning system	Strategies that address the adequacy of the supply and distribution of the healthcare workforce in relation to policy objectives and the consequential demand for health labour force
Population	A group of individuals that share one or more characteristics from which data can be gathered and analysed.
Population healthcare needs	The requirements necessary to achieve physical, cognitive, emotional, and social wellbeing, at the individual, family, community and population level of care and services.
Professions (withing JA scope only)	The professional qualifications of physicians, nurses, midwives, pharmacists, and dentists, included in the Directive 2005/36/EC of the European Parliament and of the Council.
Qualitative information	Information collected using qualitative methodologies to identify and describe key factors in the health workforce system which are likely to affect the supply and demand of workforces.
Qualitative methodologies	Methods used to gather qualitative information on key factors which are likely to affect the supply and demand of health workforces through techniques such as interviews, document analysis, or focus groups. Includes methods to quantify uncertain parameters for forecasting models.
Reliance on foreign health workforce	The share of foreign (trained & born) health professionals within a country's health workforce in a given year, expressed as a percentage of the stock of the workforce

Retirement	Period or life stage of a health care worker following termination of, and withdrawal from the healthcare system. It is expressed in the number of healthcare professionals retiring from the labour market.
Scenario	A description of a sequence of events, based on certain assumptions. Scenarios are used for estimating the likely effects of one or more factors, and are an integral part of situation analysis and long-term planning.
Shortage	The negative gap between supply and demand.
Stakeholder	Groups or individuals that have an interest in the organisation and delivery of healthcare, and who either deliver, sponsor, or benefit from health care.
Stock (of HWF)	Number of available practising and non- practicing health professionals in a country, recorded in a registry or database. It should ideally be expressed in headcount and in full-time equivalent (FTE)
Supply (of HWF)	Number of newly graduated health professionals available to fill in open vacancies. It can be expressed in headcount or in full-time equivalent (FTE)
System	A network of interdependent components that work together to try to accomplish the aim of rendering medical and other health services to individuals.
Threat/opportunity	A future event or system state which may occur due to changes in the system. The impact to the system may be viewed as detrimental (a threat) or beneficial (an opportunity); or a combination of both.
Training	The process by which a person acquires the necessary skills and competencies for delivering healthcare, possibly through post-graduate training programmes (in the framework of Continuous Professional Development) in addition to graduate training programmes
Trend	An emerging pattern of change, likely to impact a system.
Universal coverage	A healthcare system that provides effective, high quality and free of expense preventive, curative, rehabilitative and palliative health services to all citizens, regardless of socio-economic status, and without discrimination
Underserved areas	A region or area that has a relative or absolute deficiency of medical personnel or healthcare resources. This deficiency could present itself in shortages of professionals/specialities/skills required to deliver health services
Variables	A characteristic, number or quantity that can increase or decrease over time, or take various values in different situations.
Weak signal	Barely observable trends or events that indicate that an idea, threat or opportunity is going to arise. Sometimes referred to as *early signals*.
"Wild card"	A situation or event with a low probability of occurrence, but with a very high impact in a system. Sometimes they can be announced by a weak signal.
Healthcare Workforce planning	Strategies that address the adequacy of the supply and distribution of the health workforce, according to policy objectives and the consequential demand for health labour (National Public Health Partnership, 2002).
Workforce forecasting	Estimating the required health workforce to meet future health service requirements and the development of strategies to meet those requirements (Roberfroid et al, 2009; Stordeur and Leonard, 2010).

Funded by
the Health Programme
of the European Union

Executive Summary

This report summarizes the results of **two pilot projects**, conducted in Italy and in Portugal, and **two feasibility studies**, made in Germany and jointly in Romania and Moldova, in 2015 and 2016 as part of the EU Joint Action on Health Workforce Planning and Forecasting. The four initiatives all concerned the implementation of a health workforce planning system using part of the knowledge produced by the Joint Action. In particular, the "Handbook on Health Workforce Planning Methodologies across EU countries" and the "Minimum Planning Data Requirements" (http://healthworkforce.eu/work-package-5/).

Each of the four initiatives was accounted for in a specific report. The four specific reports are therefore an integral part of this "overall report". Although the four initiatives are very different from each other, there is a common baseline that links them together: the knowledge and the change.

The evidences and the **lessons learned** from the initiatives show the overall usefulness of the **knowledge** and the tools used and in particular their feasibility for overall implementation. Nevertheless, some improvements are needed and specific insights and additions are strongly suggested.

This overall report outlines also **recommendations** on how to improve management (or conditions) for a successful **change**, starting from the assumption that change is needed in the health workforce planning systems across the EU.

Indeed, the four initiatives had a **significant impact** in their context: raising awareness, initiating discussion on health workforce planning, underlining the importance of planning, fostering dialogue between stakeholders from policy and technical level. The high involvement of stakeholders resulted in knowledge exchange, increasing commitment, sharing of common goals (indicating engagement for lobby that can lead to higher political commitment) and clarifying detailed of methodological steps in health workforce planning.

In the light of those valuable outcomes, lessons learned and recommendations all rely on the concept of **sustainability** of further actions in order to save the human capital, the knowledge capital and relationships capital that the four initiatives have contributed to in shaping and increasing.

This overall report is thus addressed to:

- planners and stakeholders interested in a synthesis of the four experiences in order to come closer to those of their interest before reading the detailed reports;
- researchers and policy makers in order to enhance their future efforts in the areas considered most necessary.

Funded by
the Health Programme
of the European Union

1 Introduction

This report summarizes the results of two pilot projects and two feasibility studies conducted in 2015 and 2016 as part of the EU Joint Action on Health Workforce Planning and Forecasting (www.healthworkforce.eu) concerning the implementation of a health workforce planning system. Workpackage 5 (WP5, one of seven workpackages that make up this Joint Action), led by the Italian Ministry of Health, had the task of promoting such initiatives as part of action 3.3. of the Joint Action "Defining and experimenting guidelines on HWF planning": "*two countries will be chosen to experiment with the handbook while in other two countries we will study and in-depth explore the opportunities to implement new planning methodologies (feasibility study)*"[1]. After publishing the "guidelines", e.g. the Handbook on Health Workforce Planning Methodologies across EU countries[2] (here after the "Handbook"), the WP5 launched in 2015:

- A pilot project in Italy, led by the Italian Ministry of Health and supported by Age.Na.S. (Italian Agency for Regional Health services);
- And a pilot project in Portugal, headed by ACSS (Administração Central do Sistema de Saúde).

Both pilot projects focussed on improving the (national) planning system of health workforce.

To complete action 3.3. WP5 also engaged in two feasibility studies to " *in-depth explore the opportunities to implement new planning methodologies*" for health workforce requirements in different contexts and levels. Two studies were performed:

- A local feasibility study of the applicability of the Handbook in two German area states (Länders);
- An international feasibility study of a collaboration for health workforce planning between two states of Eastern Europe, namely Romania and Moldova.

The selected countries are partners in the Joint Action that proposed themselves to conduct either a pilot project or a feasibility study. Their choice was validated by the Executive Board of the Joint Action. They represent a variety of experiences. The four initiatives are indeed unlike each other in terms of the context in which they were developed and of their specific objectives that were pursued. Therefore, the results achieved by the two projects and the two studies cannot easily be compared. This diversity was required to test the effectiveness of the Handbook on the matter of providing knowledge and tips to implement a new planning system "for different contexts".

The specific objectives of the four initiatives were proposed by the partners who managed and conducted the field work. They were agreed with the WP5 team leading (Italian Ministry of Health and Age.Na.S.) and discussed by the Executive Board of the Joint Action. The WP5 team also monitored the progress of work, through meetings and site visits. The International Steering Committee, originally planned in the Grant

[1] Grant Agreement of the EU Joint Action on Health Workforce Planning and Forecasting, Annex 1, pages 75-76.
[2] "Handbook on Health Workforce Planning Methodologies across EU countries", A. Malgieri, P. Michelutti, M. Van Hoegaerden, Slovakia, Joint Action Health Workforce Programming & Forecasting, Funded by the Health Programme of the European Union (http://healthworkforce.eu), 2015. Also available at: http://hwf-handbook.eu/.

Agreement[3] composed of international partners of the Joint Action to evenly guide the two pilot projects has not been activated. As the projects had impacts on national institutional processes, the Executive Board delegated to national partners the decision on the governance methodology.

The results of the four initiatives are presented in separate reports describing the starting context, the objectives, the limitations, the methodology, the results achieved and possible next steps. The four specific reports are an integral part of this "overall report". This report, on the basis of a synthesis of the different experiences, aims to highlight the lessons learned in testing the Handbook and make recommendations for future applications. In this sense, the general report is addressed to:

- planners and stakeholders interested in a synthesis of the four experiences in order to come closer to those of their interest before reading the detailed reports;
- researchers and policy makers in order to enhance their future efforts in the areas considered most necessary.

2 The common baseline

The two pilot projects and the two feasibility studies had a common baseline: the knowledge and tools produced by the Joint Action.

The main deliverable explicitly tested was the “Handbook on Health Workforce Planning Methodologies across EU countries” (hereinafter Handbook). It is a collective book presenting good practices from seven EU countries, input from grey literature, insights from in-country and international experts, suggestions and recommendations derived from the analysis of the state of the art in the EU countries. The content of the Handbook is organised into five components corresponding to the five key elements of a planning system: goals of the system, data needed, forecasting tools (to estimate future supply and demand), organisation (of the processes and of the stakeholders’ involvement) and links to policy actions (in terms of adopted policy levers and management systems put in place to assess to efficacy of the planning actions). Those five components are then connected by an “implementation path”: a stepwise approach suggested for planners who aim to implement a new planning system. The suggested steps are:

- Knowing about the current health workforce inventory;
- Assessing the current health workforce situation;
- Organising the stakeholder involvement;
- Making future health workforce forecast;
- Setting the goals;
- Linking plans with policy actions;
- Planning capacity evaluation.

[3] Grant Agreement, *op.cit.*, p. 74.

The four initiatives considered partly or entirely those seven steps and, based on their focus, they also took into account other Joint Action's deliverables.

The **pilot project in Italy** covered the seven steps, with a specific focus on the first four steps and on the last one, while goals and policy actions were considered "not changeable" in the pilot project time frame (but several discussions, in particular involving the health professionals' representatives, led them to state some proposals on those two elements). In addition to the Handbook, the project team also used the following deliverables:

- the Minimum Data Set (MDS) included in the "Minimum Planning Data Requirements" (http://healthworkforce.eu/work-package-5/) used for a data gap analysis on the data needed for making future forecasts;
- the "Report on terminology mapping" (http://healthworkforce.eu/work-package-4/), used to lead the discussion on the "status of activity" of the health professionals and on the Full Time Equivalent count;
- the "Report on Health Workforce Planning Data" (http://healthworkforce.eu/work-package-4/), used to evaluate the planning capacity of the Italian system before and after the pilot project (see in particular the evaluation tool included in the report and available in the web format at http://hwftoolkit.semmelweis.hu);
- the "User guidelines on qualitative methods in health workforce planning and forecasting" (http://healthworkforce.eu/work-package-6/), used for the stakeholders' analysis and to support the management of the Experts' panel done as part of the health workforce forecasts' exercise of the demand side;
- the "Report on Future Skills and Competences of Health Workforce in Europe" (http://healthworkforce.eu/work-package-6/) distributed as pre-reading material on the aforementioned panel of Experts;
- the "Network of Experts" (http://healthworkforce.eu/work-package-7/)

The **pilot project in Portugal** focused its action on "knowing about the current health workforce inventory", "assessing the current health workforce situation" and "making future health forecasts" while the other steps where considered as stages of a future implementation (in particular the organisation of the stakeholders' involvement, foreseen in a National Law just approved on August 2015, and the assessment of the current demand). As in Italy, the content of the Handbook guided the Portuguese project team in the implementation of the targeted activities. Moreover, the "Report on mobility data – Health workforce mobility data serving policy objectives" (http://healthworkforce.eu/work-package-4/) was of great help, due to the health workforce mobility challenges that Portugal is facing, with particular regards to doctors and nurses leaving the country.

Finally, during the two pilot projects, the WP5 team with the support of the WP1 Coordination team organised an experts workshop with the aim, for the Italian and Portuguese planners attending, to receive specific suggestions on the two Pilot Projects potential difficulties. This was considered as a first example of

the functionality of the network of experts, which is one of the main deliverables regarding the sustainability of the Joint Action (see "Network of Experts", http://healthworkforce.eu/work-package-7/).

The **Feasibility Study in Germany**, with a specific attention on two German Länders, is made up of two parts. The first part is focused on the overall issue of proposing to the Länder's stakeholders the Handbook as guideline to implement a health workforce planning methodology at local level. In that way, the discussions with the stakeholders were related both on the applicability of the overall Handbook and on the feasibility of implementing proposed "good practices" for "setting the goals" (English practice[4]), "linking plans with policy actions" (Dutch practice[5]) and "organising the stakeholders' involvement" (Spanish practice[6]) in the two Länders. The second part of the study reports the results of the measurements of the six health workforce planning indicators for five health professions, those which were proposed in the "Minimum Planning Data Requirements" (http://healthworkforce.eu/work-package-5/).

The **Romania-Moldova Joint Feasibility Study on Health Workforce Planning**, starting from the problems of "brain drain" affecting both countries, reports the analysis of the current methods for data collection and health workforce planning from the stakeholders' point of view. The study reports proposals to improve the current health workforce inventory and to make future health workforce forecasts. It includes broad discussion on the five key elements of a planning system proposed by the Handbook, starting from the idea to improve the cooperation between the two countries. Like the pilot project in Portugal, the Joint Feasibility Study took advantage of the already mentioned report on Mobility data and two more deliverables:

- the "Report on the applicability of the WHO Global Code of Practice on the International Recruitment of Health Professionals in a European Union Context" (http://healthworkforce.eu/work-package-4/);
- the "Report on Circular Migration of the Health Workforce" (http://healthworkforce.eu/work-package-7/).

The lessons learned from the two pilot projects and the two feasibility studies are reported and discussed in chapter 4 using the seven-step path as reference framework.

The Joint Action is intrinsically an action of promoting changes that urge the Member States to adopt policies, measures, processes and tools to improve the management of the health workforce, through the exchange of experiences and cooperation between Member States.

If the knowledge and tools produced during the Joint Action formed the common base of the four initiatives, "change" was indeed the leitmotiv. Keeping in mind the premises and challenges of the Joint Action[7], change is not only assumed to be positive but also essential.

[4] Malgieri A., *op. cit.*, p. 51.
[5] Malgieri A., *op. cit.*, p. 135.
[6] Malgieri A., *op. cit.*, p. 154.
[7] http://healthworkforce.eu/introductory-information-to-the-joint-action/

The issue of change was discussed in several workshops during the Joint Action, although it was not the subject of specific deliverables. Walter Sermeus professor at KU Leuven University[8] also proposed a model of change management (Knoster model) which was then used as a reference frame[9] on other occasions[10].

In this respect, the two pilot projects are to be considered as endeavours to change (improve, develop, deploy). The two feasibility studies are firstly two analyses of the conditions and opportunities of change. In Chapter 4 we outline some recommendations on how to better manage (or promote conditions) of change, on the basis of Knoster model and in the light of the findings and considerations emerging from the four initiatives.

Knowledge and change are therefore the two key words that form in short the common baseline of the work done "in the field" by the partners of WP 5. The specificities of the four initiatives are summarized in the next chapter.

3 Synthesis of the four initiatives

This chapter describes a synthesis of the four initiatives in terms of the background, objectives, limits, methods used, results achieved and probable next steps.

The Pilot Project in Italy [PP_IT]

Background

Every year the Ministry of Health, the Ministry of Education, the Professional Bodies and the Regions are in charge to determine the number of enrolments to the University degree courses (*numerus clausus*) for all health professionals. The related decision making process is split in two parts. In the first part, the Ministry of Health coordinates the Regions and the Professional Bodies in determining the health workforce requirements at national and regional level. The results of these efforts are published in a Legal Agreement between the Government and the Regions. In the second part of the process, the Ministry of Education together with the Ministry of Health takes the decision on the numbers of students' intakes at each medical University, considering the Legal Agreement and the universities training capacities.

In this comparison, the intake numbers expressed in the Legal Agreement are the weakest term because the mechanisms for determining health workforce needs are insufficiently transparent and explained. Then, the numbers pertaining the Universities training capacity appear to be more robust with the result that the latter has led the decision making process in the past.

[8] http://www.kuleuven.be/wieiswie/en/person/00010801

[9] A description of the Knoster model elements and its use (the example cited there refers to the education sector) is available at this link: http://www.d11.org/LRS/PersonalizedLearning/Documents/KnosterMANAGINGCOMPLEXCHANGE.pdf.

[10] See the WP7 deliverable "Concept of the technical recommendations & recommendations towards policy making" (D073/D074) available at http://healthworkforce.eu/work-package-7/.

Objectives

- To develop and implement a common and shared methodology to measure the health workforce requirements among Regions and National stakeholders involved in the planning process in order to overcome the various and obscure methods in use by the Italian Regions
- To include in the forecasting model both public and private sectors and to make long term projections (at least 20 years).
- Finally, to use this methodology to determine the needs for five professions (dentists, doctors, midwives, nurses, pharmacists) and to set the related number of students' intakes to university degree courses for the academic year 2016/2017.

Limitations

The decision making process as described above is regulated by a legal framework in which the pilot project had no ambition to act on it or modifying it. Accordingly, the regulation policy on entry barriers to Universities was considered by the pilot project as the only applicable and usable policy lever. The pilot project targeted all five health professions focus of the Joint Action.

The Italian Ministry of Health proposed the pilot project to various national and regional stakeholders, including the five Professionals Bodies and the 21 Regions (namely 19 Regions and 2 Autonomous Provinces). The participation to the project as well as the use of the tools delivered during the project was not mandatory and all the stakeholders were involved on a voluntary basis.

The pilot project started in January 2015 and finished 16 months later, in April 2016.

Methodology

The Pilot Project in Italy was managed by a Project team led by the Italian Ministry of Health, in collaboration with Age.Na.S., who were in charge of the planning and realization of the objective of the Project during the 16 months' timeframe.

The Project team was supported by a Steering Committee composed of at least one representative of all 21 Italian Regions and Autonomous Provinces and of representatives of the five health professions in focus, the Ministry of Education, the Ministry of Economics and Finances, the National Institute of Statistics, Co.Ge.A.P.S. (Consortium for the Management of the Registry of Health Professions) and ENPAM (National Body of Social Security and Assistance for Doctors and Dentists).

The activity was carried out in working groups made up of representatives of stakeholders, which met regularly at least once a week, mostly by web meeting. The working groups were organised around three main topics:

- The data necessary for the planning of the health workforce;
- The forecasting model of supply and demand for health professionals;
- The organised involvement of the stakeholders.

The activities involved about 150 people from 50 different organizations, both nationally and regionally. In 16 months of work about 100 meetings and conferences were held.

Results

The pilot project produced several results and outputs.

An inventory of the stock of dentists, doctors, midwives, nurses and pharmacists was completed. It includes both private and public sector workforce and it allows to identify active and not active workforce.

A forecasting mathematical tool was developed for all the five professions. The tool allows to project the current active stock, as identified by the inventory, out of 2040 in comparison with the estimated demand in each future year. The health workforce stock is forecasted estimating, for each year, the main inflow (from education) and outflows (per mortality and per retirement). While the future demand is estimated basically on the future demographic changes (quantitative forecasting) and on foreseen changes on health services organisation and technology development (qualitative forecasting).

The tool is available in a Microsoft Excel file. In November 2015, the Project team sent the tool to all the regional and national stakeholders involved in the project. 110 files were filled with data needed to forecast demand and supply for the five professions, both at regional and national level.

19 regions out of 21 used the new forecasting tool. Also the five Professionals Bodies used the same tool to forecast their professional capacity at a national level.

The 2016 Agreement between the Government and the Regions, with regard to the Pilot Project and the Joint Action, made explicit the health workforce planning principles agreed with the stakeholders. It also contains in annex the forecasting methodology applied for the five professions in focus.

This result and the great interest showed by the involved stakeholders demonstrates that the Health Workforce Planning have become part of the Italian political action. Those improvements are attested by the findings of a planning capacity assessment done during the pilot project.

Next steps

The Ministry of Health and all stakeholders involved considered the pilot project as the first step of an improvement process of health workforce planning. Indeed, the pilot project was the opportunity to evaluate the planning capacity of the Italian system and to propose further progress:

- To include other health professionals in the new planning system;
- To extend the forecasting exercise to the medical specialities;
- To explore other potentialities of the existing databases;
- To analyse and propose alternative and/or complementary policy actions;
- To set a “2017-2037 strategy of human resources in health” in which to include all these proposals.

The Pilot Project in Portugal [PP_PT]

Background

ACSS (Administração Central do Sistema de Saúde - Central Administration of the Health System) is the Ministry of Health's central body responsible for HWF planning and forecasting. A number of instruments are already in place, some in the process of improvement, others have been planned during the pilot project. Existing instruments include: the National Health Service (NHS) Social Balance and the Health Sector Human Resources (HR) Inventory, and the national monthly report on NHS human resources and the requirements for healthcare professionals available from the coordination with the 5 Regional Health Administrations and the NHS Monitoring Portal, including benchmarking data on HR, finances, performance and productivity. During the pilot study, a parliament law approved the National Inventory of Health Professionals (NIHP) envisaging to include public, private and social sectors data. As for prospective tools, efforts were devoted to upgrade the centralization of NHS databases, business intelligence, quality and accuracy of data, the set-up of a Health Professionals Portal and the planning of a Geographic Integrated System for Health Planning (SIGPS).

Moreover, the human health resources planning process in Portugal is a systematized process for doctors, and it covers the management process for determination of internship places in the health system.

Objectives

The Planning of the Pilot Project was set up based upon a step by step approach through three ambitions:

1. Know the exact current health workforce situation;
2. Identify current and future imbalances;
3. Build a policy and a plan.

The operational objectives identified by these three ambitions were:

- To measure the health workforce stocks (doctors, nurses, dentists and pharmacists).
- To assess health workforce imbalances (doctors and nurses);
- To make health workforce stock projections for a specific time frame (doctors and nurses);
- To estimate and forecast health care demand/needs;
- In case of imbalances detected, to prepare and propose measures to the political level (hiring foreign professionals, intervention in retirement age, hiring retired professionals, extra-time, and so on);
- To provide the Ministry of education with information about *numerus clausus* needed for the training of health professionals.

Limitations

Main limitations were:

- Very scarce information on the private and social sectors, which also include doctors and nurses working in the NHS, all of the dentists and almost all of the pharmacists;
- Difficulty in accessing data on real emigration of health professionals (like in almost every country);
- Delay in the National Inventory of Health Professionals implementation;

- Necessity of Team work ata top level due to the increasing of the accuracy of the Demand Model (through the incorporation of the private sector requirements and the development of other dimensions, such as Service's Organization or Service's Use Patterns)
- Inexistence of a "platform" bringing together all the relevant stakeholders with the specific purpose of health workforce planning.

Methodology

The management of the Pilot Project was done in the framework of the Joint Action and the active participation of ACSS on WP4 and WP5 (workshops, meetings and testing templates) attentive to:

- the Grant agreement (ACSS obligations and expectations);
- workshops/meetings (working process at EU level);
- development and conclusion of Handbook;
- testing the Handbook with a pilot project (theoretical vs practical approach);
- chronogram for pilot project (follow up);
- information flow between the Joint Action Coordination team (WP1), WP5 and ACSS team;
- WP5 follow up & supervision.

Results

The pilot study produced several scenarios and forecasts for doctors and nurses, which vary significantly.

The variation of professionals' numbers is related with various factors such as the estimated decline of the population, the specificities of healthcare professionals' admissions in hospital and non-hospital clinical areas, the international best practices and the EU and OECD doctors and nurses' ratios.

These results, due to the aforementioned limitations and considering the pilot project timeframe, were limited to the public sector.

Next steps

ACSS saw its participation in this pilot project as an opportunity to strengthen its knowledge and share experiences on health workforce planning, to improve the National planning system reinforcing its sustainability and evaluation, trigger the involvement of national stakeholders in the planning system and pave the way for a more consistent planning and forecasting model, namely through the full implementation of the National Inventory of Health Professionals and the activation of the Advisory Board dedicated to the health workforce management.

The Feasibility Study in Germany [FS_DE]

Background

Germany's healthcare system is characterized by self-governance of corporatist actors. Politically, knowledge about shared decision-making between the federal government, the area states (Länder) and civil society organizations is essential in understanding the German context. Instead of one central, federal planning

model, a variety of regulation mechanisms for different professions apply differently to hospital and to outpatient care in the states.

Planning processes in Germany apply to distribution of posts for physicians practicing under statutory health insurance, medical school admission at universities (under control of the ministry for education, not the ministry of health), and specialist training. While *numerus clausus* rules regulate access to medical education for physicians, dentists, and pharmacists, there is no direct cooperation between the education and health sectors is used to realize workforce planning.

Key features of the German health workforce planning system are: self-governance, strong stakeholders and a normative understanding of limited planning as sufficient[11].

Objectives

The feasibility assessment was conducted by a research team of the University of Bremen in two states (Länder) in Germany: in Hamburg and in Bremen. The study was conducted to specifically test the applicability of two Joint Action deliverables, the "Minimum Planning Data Requirements" and the "Handbook on Health Workforce Planning Methodologies across EU Countries", to a health system based on self-governance of strong corporatist actors and a social health insurance system. The key objective of this project was to report on state-level stakeholders' needs and expectations for such a handbook, to test German states' data availability to fulfil the minimum planning data requirements, and to critically assess possible implementation challenges for a handbook in German states. Stakeholders invited included physicians, pharmacists, nurses, midwives, health insurance companies, and state-level departments of health.

Limitations

This feasibility study tested the Handbook and minimum planning data set (MDS) in an exploratory design with a consciously limited scope. Results were intended to indicate stakeholders' perceptions in two German states rather than be generalized for the entire country. Future research might extrapolate and repeat the study with a larger sample.

Methodology

The University of Bremen team conducted a mixed methods study consisting of three complementary approaches.

- Focus groups and key informant interviews (qualitative assessment)
- Document and policy analysis
- Mathematical projections based on indicators of the minimum data set (quantitative assessment)

[11] For a brief overview over the German health care system and its health workforce planning approaches, see the specific report on the German Feasibility Study, "One handbook for diverse needs? A feasibility study at state-level within Germany's self-governed healthcare system", Boeckmann M., Runte R., Düsterhöft M., Rothgang H., Joint Action Health Workforce Programming & Forecasting, Funded by the Health Programme of the European Union (http://healthworkforce.eu), 2016.

Results

Study results suggest that the MDS can be completed using data available in Germany. Data on migration of health professionals is the main challenge when applying the MDS as comprehensive data are lacking. A simple projection of future supply of the five professions is possible using the model outlined in "Minimum Planning Data Requirements" report.

Regarding Handbook applicability, interviewed stakeholders expressed concerns regarding the transferability of national health service / country experiences such as those included in the Handbook. Stakeholders representing professions felt that their needs and experiences were not captured in a handbook which is instead focused on government-led planning. Information on creative solutions to common workforce planning problems was seen as more useful than outlining status quo strategies. Overall, stakeholders expressed interest in learning more about policy interventions for the cross-borders exchange

Next steps

The interviewed stakeholders expressed the interest for learning cross-border policies and called for creative solutions for workforce planning problems that are different from the government-led planning approaches described in the Handbook.

The Romania-Moldova Joint Feasibility Study [FS_RO-MD]

Background

The Executive Board of the European Joint Action on Health Workforce Planning and Forecasting decided to carry out this Feasibility Study in Romania and the Republic of Moldova based on the fact that both countries face negative effects due to health workforce mobility. In addition, as a report issued by the Republic of Moldova WHO country office suggests, part of the health personnel from the Republic of Moldova covers health personnel deficits in Romania. What is more, both Romania and the Republic of Moldova are Joint Action partners and share the same language, which greatly facilitates bilateral communication.

- Strengths of the health workforce management system in Romania: Centralized data sources; Databases organized by professional associations; High number of professionals trained.
- Weaknesses of the health workforce management system in Romania: Poor reliability of data; Insufficient use of data for planning purposes; Lack of a human resources for health strategy.
- Strengths of the health workforce management system in Moldova: Effective data collection tools and mechanisms; Data highly reliable; Existence of a human resources for health strategy.
- Weaknesses of the health workforce management system in Moldova: Rudimentary planning system; Poor use of data for planning purposes.

Objectives

In order to contribute to improving health workforce planning in Romania and the Republic of Moldova, the Feasibility Study aimed to assess the actions being carried out to take the following steps:

1. assessing the current stock of human resources for health;

2. assessing the current situations of human resources for health;
3. assessing the involvement of stakeholders;
4. developing a forecast of the health workforce requirements.

The feasibility study aimed also to consult stakeholders in Romania and the Republic of Moldova on the possibility for collaboration between the two countries for health workforce planning.

Limitations

The study did not put great emphasis on local and regional stakeholders' perspectives regarding their participation in the workforce planning process.

The discussion most often centered on the physicians and the nurses. This is most probably due to the fact that physicians and nurses are amongst the categories the most (visibly) mobile.

Methodology

Babeş-Bolyai University was commissioned to coordinate the Joint Romania-Moldova Feasibility Study. The method for data collection included the review of existing documents that are relevant to the issue, as well as interviews that were carried out with stakeholders involved in the management of human resources for health both in Romania and the Republic of Moldova.

Results

The data collected through the interviews were analysed and yielded the following findings.

- Both Romania and Moldova hold significant amount of data. Especially in Romania, a quality check of this data is needed. Communication of data would greatly improve policy efforts of retention in Romania and Moldova.
- Moldova can be considered a success story for its data collection process. However, replicating the same model in Romania (unique structure to collect data) can be challenging, due to the complex structure of data generating and actors involved.
- A minimum data set approach is embraced by stakeholders in Romania and Moldova. Currently, significant amounts of data are collected and further work needs to be done in order to ensure proper data flow between the two countries.
- Despite the rudimentary health workforce planning at national level, a joint process between Romania and Moldova can catalyse national efforts. New strategies, tools and processes can be developed as a result.
- Romania and Moldova are not currently doing any forecasting of their health workforce needs. However, forecasting would have an added value specially to inform decision making. The time range is an aspect that needs to be carefully considered when embarking in a forecasting effort.

Next steps

The feasibility study yielded a set of recommendations on increasing experience sharing, exchanging good practices, using available data for planning and encouraging circular migration. They will contribute to

improving human resource for health planning in the two countries, as well as to strengthening the cooperation between the two countries in this area.

4 Evidences and lessons learned.

The lessons learned from the two pilot projects and the two feasibility studies are presented with the evidence from the four initiatives on the seven-steps' implementation path.

Knowing about the current health workforce inventory

Knowing about the current health workforce situation is the first step for a robust forecasting exercise. It starts with the question: which data should be collected and which method should be used to collect them? The main references were: the Handbook (in terms of good practices on how to collect) and the report on "Minimum Planning Data Requirements" (a Minimum Data Set on Supply and Demand side advising which data to collect). Here it is the Supply Side minimum data set (marked with a "X").

Table 1. Minimum data set for health workforce supply-side

Areas	Supply				
Category / Characterisation	Labour force	Training	Retire-ment	Migration (outflow)	Migration (inflow)
Profession	X	X	X	X	X
Age	X	X	X	X	X
Head count	X	X	X	X	X
FTE	X				
Geographical area	X	X	X	X	X
Specialisation (where relevant)	X	X	X	X	X
Country of first qualification	X	X	X	X	X
Gender	X				

Which data were useful (and used)?

PP_IT used partially the data set suggested in the Minimum Data Set (MDS) on the Supply Side with some differences. For the current health workforce characterisation, data collected and used were:

- Type of profession (as starting point, to differentiate the five professions in focus);
- Year of birth (useful to calculate the age at the current moment as well as to project the stock in the future);
- Head count (useful to count the stock at the current and in the future);
- Geographical area, in terms of place of work (useful to count the current stock of the Italian Regions);
- Place of birth instead of Country of first qualification (because the latter was not available for all the stock of all the five professions).

FTE data was not collected (not available); specialisation was not collected because not relevant (medical doctors were planned as a single professional category); gender was collected but not used.

An important parameter was added: the status of activity, in order to distinguish the "professionally active" stock from the "licensed to practice" stock and thus to project the former in the future years and estimating future flows between the two categories.

The other data sets used to estimate the supply-side were:

- Training: only headcount of the current students in training (to estimate future inflows from education); age and gender were collected but not used in the forecasting exercise;
- Retirement: no data collected on past retirement stock; outflow to retirement was estimated considering the age of the current stock;
- Migration (outflow): no data available on past migration outflows.
- Migration (inflow): data available on past migration inflows only on "place of birth".

PP_PT worked only with data of the public sector, because data on private sector were not available. Taking this as a limitation, current stock parameters used were: type of profession, including specialisation (where relevant), age, headcount, gender, geographical area, place of birth. Also PP_PT added "status of activity" targeting the professionally active stock and the field of activity for the NHS stock (Hospital or primary care). PP_PT also used data on training specialisation of medical doctors in order to calculate the replacement rate, that is the weight of doctors in training in total doctors, by medical speciality. Finally, as for PP_IT, also PP_PT didn't analyze data, because not available, on migration outflow.

FS_DE targeted the feasibility of collecting the data of Minimum Data Set (MDS) in Germany. All the MDS data are available for all the five professions but since these are not collected with the aim of systematic forecasting and health workforce planning, format and availability are not necessarily in line with the MDS requirements. The only data missing is on health workforce immigration and emigration, available only for doctors.

FS_RO-MD did not target the MDS gap analysis. Instead, they analysed the overall status of data collection and data availability on the current health workforce stock, stating that both Romania and Moldova hold significant amount of data, even though in Romania a quality check of this data is needed. Mobility flows between the two countries and abroad are known in aggregated form.

Lesson learned on data useful (used).
Data useful for knowing the current health workforce stock are, at least, the type of profession (and specialisation if relevant), the "status of activity" and the year of birth. FTE count remains a challenge, in particular for the private sector. The migration outflows are mostly unknown even though they are needed to measure the current stock. Migration inflows are measured or estimated taking into account the place of birth rather than the country of first certification. They are useful to measure the reliance on foreign health professionals. But, mobility data due to often fluctuant trends in the past might not provide clear picture of the future mobility trends, and to overcome limitations of their future projections we need to forecast different mobility scenarios.

How data were collected (estimated)?

PP_IT used only existing databases, although they were not created for workforce "planning purposes". No further data were collected. Different sources were used and linked for the five professions, including data of a yearly national survey on the labour force and a database on the continuing medical education - CME. In the absence of labour activity information, data on health professionals attending the CME training courses were used in order to split the stock of "licensed to practice" into "professionally active", "unemployed" and "out of the labour market", for both public and private sector.

PP_PT had a full dataset at their disposal on the health workforce in the public sector because of single database dedicated to collecting data on this sector. A Law approved on August 2015 established a National Inventory of Health Professionals, including the private sector, but its implementation had a delay. Other sources where considered incomplete or unreliable. Surveys were out of scope considering the project time frame.

FS_DE used data already collected from different sources (mainly from the Federal Statistical Office).

FS_RO-MD put in evidence that the top priority in Romania at the moment is, in stakeholders' view, the creation of a unified registry on health workforce as already done in Moldova, so that a cooperation between the two countries could be initiated afterwards.

Lesson learned on data collection (estimated)

The best option to obtain a complete picture on the current situation is to have workforce data collected at a personal level in a single dedicated database, as already suggested by the good practices described in the Handbook. But, implementation of a professional register requires time and resources.

The detailed description of the public sector employees allows to forecasting some future flows (e.g. the replacement rate).

If some necessary data are not available and if it is not feasible to collect them during the planning timeframe, it's possible and consumes fewer resources to estimate the missing information by means of detailed assumptions based on already existing data.

Assessing the current health workforce situation

The Handbook suggests that the choice of specific indicators can help planners and policy makers to foster a dialogue with the stakeholders on assessing the present-day situation. The analysis of the current health workforce supply compared to the demand is important to avoid the future of imbalances and to recognize weaknesses that potentially could create future disequilibrium. The Handbook, as well as the report on Minimum Planning Data Requirements propose some indicators to support the analysis. When there is no single indicator capable of providing an instant snapshot, the use of several proxies and relative weights might assist in estimation of the current gap.

PP_IT tried an assessment of the current situation, bringing the stakeholders to discuss on the most suitable indicators to use. Since there was no agreement on which indicator to use (and this was a failure for the PP_IT), it was not possible to measure gaps between current demand and supply. The indicator "n° of professionals per thousands of inhabitants" suggested in the Minimum Planning Data Requirements was

calculated and compared with other EU countries. The international benchmarking exercise have not provided reliable estimates because of the poor quality of international data and because of the great differences among the EU Countries in the health care sector organisation. Therefore, the same indicator "workforce to population ratio" was applied to estimate the current regional gaps by a method of comparing the stock in the different Italian Regions with the National value used as the benchmark (even if the national average with huge regional imbalances is very likely poor benchmark for estimating health workforce requirements). However, the five professions' representatives declared the absence of equilibrium in the current situation.

PP_PT, as for the PP_IT, used the basic indicator "n° of professionals per thousands of inhabitants" to compare its health workforce density, in particular Dentists and Pharmacists (the ones mostly out of the NHS), with other EU countries. PP_PT used the same indicator also to set the demand on some future scenarios in their forecasting model.

Lesson learned on current gap assessment

The assessment on the current gap between demand and supply was done by a method of international and regional benchmarking of health workforce density. The assumption that there is an equilibrium in forecasting models was very likely the consequence of a failure to achieve consensus on the value of workforce supply and demand among stakeholders.

Organising the stakeholder involvement

The Handbook points out that the stakeholders' involvement is one of the fundamental and most critical parts of the whole planning system. The importance of their involvement is due both to the necessity of acquiring information and points of view and to find consensus on some solutions. In any case, this involvement is often critical, both for the number of interested stakeholders and for the strong discrepancy among the represented power positions.

PP_IT started with a stakeholders' analysis using a grid to organise the stakeholders in a matrix according to their interest and power. Then a Steering Committee representing more than 30 stakeholders was established and different working groups were created, involving the stakeholders in the various stages of the project, including the choice and the approval of the forecasting model and the discussion and the validation of results of the forecasting exercise. Broader stakeholders' participation raised the political awareness of the efficacy of the health workforce planning.

PP_PT considers the systematic participation of stakeholders in the health workforce planning system the next challenge, looking at involvement of the stakeholders in the Belgian planning system as the best practice. The pilot project contributed to create the conditions for a more active participation of the stakeholders which will take place through the Advisory Board foreseen in the Law which approved the National Inventory of Health Professionals.

FS_DE looked at the stakeholders' involvement in terms of gathering the stakeholders' perspective and their expectations (mainly the health professions' perspective) on the efficacy of the Handbook in giving

suggestions and advices from a "not-governmental" point of view. FS_DE pointed out the necessity to better balance the power among the stakeholders involved in the planning system in Germany giving more power to nurses, midwives and pharmacists. At the same time, it stressed the importance to better represent the healthcare services providers and patients point of view. At current, inter-sectoral planning and fine tuning between education and health sectors remains challenging.

FS_RO-MD highlights the stakeholders' proposal for coordination in health workforce planning based on an agreement that would involve the Ministries of Health, educational institutions and economic actors in healthcare. This proposal by the stakeholders is a success for the Joint Feasibility Study. Indeed, a bilateral dialogue between the two countries would be extremely useful in advancing cooperation between various institutions for health workforce planning.

Lesson learned on organising the stakeholders' involvement

The evidences confirmed the Handbook findings: one of the key elements of a health workforce planning system is the communication of goals and results of the planning process to the stakeholders. The other key element is achieving their engagement both in the process of building the model that will be used by the health workforce planners, as well in the elaboration of scenarios. Their participation is essential despite it will potentially create criticalities, which will in turn take a lot of time to solve or diminish them. Moreover, the stakeholders' involvement could be turned into "assuming point of view" of the weakest involved party, as sometimes are direct healthcare service providers or patients.

Making future health workforce forecasts

The forecasting model and its results (projections and scenarios) stimulate the political debate with the stakeholders and represent an essential instrument to support decisions and actions of the policy makers.

Although there are several methods and tools developed in EU countries and described in the Handbook, a basic common approach consists in estimating the quantitative evolution of the current health workforce, forecasting main future outflows and inflows, and analysing the links between those numbers and the estimated future trends of demography and of demand for healthcare services. The "Minimum Data Planning Requirements" proposes some indicators to measure the future demand, all base on the calculation of the weighed population per "age groups" and their related "health consumption".

PP_IT implemented right that basic approach developing a stock and flows model: flows from education and immigration; per retirement, per death and emigration. The model is set to formulate any hypotheses on the size of new professionals' inflows needed to meet the estimated demand, taking account of the existing stock and of the estimated numbers of unemployed professionals in each year. About the estimated demand, first exercise was the calculation of the indicators based on weighed population per "age groups" and their related "health consumption". But the results were considered not reliable because of its dependency on the current demand and the overestimation of the link between future demand and future healthcare services consumption. a basic indicator was adopted, centred on quantitative future changes in population corrected by means of qualitative information provided by a panel of experts. The forecasting exercise was done at local (Regions) and national level.

PP_PT used also a stock and flows model which estimates the quantitative evolution of the current health workforce in the public sector, forecasting main future outflows (mortality rates, retirements and stock renewal rate) and inflows (from education), and compare these numbers with the estimated future trends of demography. On the demand side, PP_PT used the basic indicators "n° of professionals per thousands of inhabitants", keeping it fixed or changing it depending on the scenario. Qualitative methods like Delphi or surveys were kept into consideration for further improvements.

FS_DE calculated the indicators suggested in the Minimum Planning Data Requirements. Trying to forecast the health workforce in different geographic areas or by specializations with those indicators is challenging, as German data sources for all professions except physicians are better suited for national estimates. There are no data available on demographic indicators divided by geographical area or specialization for dentists, pharmacists, midwives, and nurses. As medical schools are unequally distributed across federal states and therefore also serve other states, supply side projections have to address mobility across the German area states.

FS_RO-MD highlights that Romania and Moldova are not currently doing any forecasting of their health workforce needs. However, forecasting would have an added value specially to inform decision making. The time range is an aspect that needs to be carefully considered when embarking in a forecasting effort. In particular, mobility flows forecasts should be done with two time frames in mind: the current state of affairs and after a possible accession of the Republic of Moldova to the EU.

Lesson learned on making future forecasts

The evidence shows that forecasting is feasible at different levels of complexity, using basic indicators or more sophisticated mathematical tools. The use of information gathered through qualitative methods enhances the efficacy of the model, even if it remains a challenge to "insert" the qualitative information in the mathematical tool. Furthermore, some dimensions are better forecasted at local level (e.g. the population needs), while other at national (inflows from education) or international level (mobility flows). Health workforce forecasts and the forecasting mathematical tools are useful for decision support systems for health workforce planning. Taking into account the public policy nature of the health workforce it's important to have both a reliable and an intelligible forecasting model.

Setting the goals

The practices established in the EU countries and described in the Handbook show that, basically, just the will to preserve certain principles, even in the face of complex challenges such as the economic crisis, makes the health workforce planning meaningful. Subsequently, on the basis of the strategic framework, specific objectives can be defined.

PP_IT instead of the goals subject targeted different proposals for improvement of the legal framework (including a National Health Workforce Strategy – 2017-2037). Furthermore, the pilot project has helped in the development of a political engagement and the increasing of the awareness on the importance of the theme, both at a national and at a regional level.

PP_PT, as for the PP_IT, didn't work to improve or change the goals of the planning system which remain the terms of reference leading the forecasting exercise. Strategic goals are: to provide the system with the necessary HWF to satisfy the healthcare demand/needs; to ensure greater efficiency of public resources, and contribute to the system sustainability. Specific objectives are: to anticipate imbalances (Supply vs Demand) in the medium and long term; to improve the professionals' mobility within the system, in order to achieve a better resources allocation; to build tools that allow to manage and adjust training capacity (pre and post graduate).

FS_DE analysed the feasibility to implement a goals system based on the English practice described in the Handbook[12]. Implementing goal setting as a practice is possible in Germany and is indeed already being done, albeit at different levels and for few professions. Specificity of goals at higher level and national scale is limited. It is conceivable that concrete goals set by hospital administrations and the education system could also count as useful practices in the realm of health workforce planning. In line with the self-governed and regionally fragmented German system, the English top-down practice cannot be implemented directly, but aspects of goal-setting might be transferred. Specific goal-setting and monitoring practices within and across sectors, for different professions and different organizations vary and cannot be subsumed under a national approach.

FS_RO-MD put in evidence, from one side, the lack of goals or strategy in Romania (even though the current 2014-2020 public health strategy is mentioning the need to develop such a strategy, little progress has been realised so far) and, on the other side, the specific "Strategy for the Development of Health Human Resources 2016-2025" approved by the Moldavian Government in April 2016. The general objectives of the new strategies are to improve health workforce management, to produce adequate (quantitatively and qualitatively) supplies of health professionals according to the health system's necessities, to focus on recruitment, retention, evaluation and continuous development of health professionals, to ensure sustainable financing for health human resources and to develop and implement effective mechanisms for health workforce retention in the context of health professionals' mobility.

Lesson learned on setting the goals

Setting the goals at national level is not an easy task, in particular on public policies, because it forces a consensus on the long term targets and it poses the constrains to the stakeholders involved. Establishing a strategy on overall principles appears, as already suggested by the Handbook, to be a good mean to come to a definition of operational objectives, in a second stage.

From a local perspective (Länder or Regions) or from a Professional Body perspective, for setting goals on the long term it is mandatory to know about the goals and the strategies of the other stakeholders in order to create synergy and having better chance to reach the proper goals.

[12] Malgieri A., *op. cit.*, p. 51.

Linking plans with policy actions

Translating the project into actions is a key feature of any planning system. For the policy makers it is important to choose the right solutions and the most effective policies while for planners, it is important to manage the action planning process with the right approach using the most effective tools.

PP_IT worked on the sole policy lever formally structured in Italy the regulation of access to the degree courses (*numerus clausus*). As a consequence of the forecasting results, other policy levers were proposed by the five health professional's bodies in order to affect the future dynamics of the health labour market:

- Pharmacists, to face the massive forecasted future unemployment, proposed to introduce a national regulation on access to degree courses (existing up to now only at local level);
- Midwives proposed a future vertical substitution with the gynaecologists, considering, on the supply side, the forecasted increasing number of young midwives and the decreasing number of gynaecologists, together with the forecasted decrease of the demand for midwives (because of the decreasing female population in the fertility ages);
- Dentists proposed a European regulation of the labour market for Dentists, considering the high mobility of dentists and the growing mobility of patients;
- Nurses proposed incentives to foster generational change to face the current young unemployment and promoted the role of the Community nurse to enlarge the future nurses' demand;
- Medical Doctors proposed to improve the forecasting demand and link it, on one hand, to the CME programs and, on the other hand, to improve the medical specialities placement.

PP_PT put in evidence that current situation in Portugal where some imbalances in certain specialties (for example, in Family Doctors) occur. The proposal of additional measures to *numerus clausus* also depends on the results of the National Inventory of Health Professionals (to understand the amount of needs in the private sector). In the case of nurses, the education system has been adjusted naturally (less demand of students, less graduate's production).

FS_DE pointed out necessary changes to the profession's education and training of physicians, midwives, nurses and pharmacists as: *numerus clausus* rules regulate access to medical education for physicians, dentists and pharmacists, but no direct cooperation between the education and health sectors is used to inform workforce planning. The interviewed stakeholders favoured solutions from within the current system. Points raised included monitoring and evaluation, structural determinants of the work, financial changes, and considering societal developments in a planning approach.

FS_RO-MD proposed that a Moldovan-Romanian dialogue can lead to several policy measures. In particular retention strategies, given the fact that both Romania and Moldova are experiencing massive outflows of health professionals. However, given the fact that at least a part of the Moldovan health professionals is emigrating to Romania, it should be further discussed and agreed how a retention policy in Moldova would impact the outflow of health professionals to Romania. Based on the existing evidence, the study proposes for circular migration to be taken into account by the two countries, given the shared benefits for the two countries as well as for the individuals.

Lesson learned on linking plans with policy action

Numerus clausus rules are the main and powerful levers to regulate the health labour market but the link between education and health workforce planning is often weak. The evidences show that reinforcing the system for health workforce planning might strengthen that link. Additional policy actions are desired and requested, in particular from the health professions representatives, in order to solve current or foreseen challenges of the labour market (retention, retirement, flexibility, financial mechanisms, etc.). In turn, developing different strategies guarantees major chances to reach and maintain a sustainable workforce in the future.

Planning capacity evaluation

Health workforce planning takes place in a context of high uncertainty as changes can rapidly occur. The evaluation of a planning strategy and system is not only possible, but it is desirable, in order to measure its effectiveness and its compliance with the changing situation.

PP_IT The efficacy of the pilot project in terms of how it affected the capacity of the planning system was evaluated in two ways. First, a stakeholder survey was conducted to assess the “satisfaction” of the involved stakeholders. Secondly, using an evaluation tool[13] developed during the European Joint Action, the project team has done an evaluation of the Italian system before and after the pilot project. The evaluation kit foresees a score from 0 (minimal planning capacity) to 26 (maximum planning capacity): the project has permitted to pass from 7 to 15 scores, doubling planning capacity. The evaluation disclosed that the pilot project led to double the planning capacity of the Italian system.

PP_PT is working on an evaluation model. The establishment of the evaluation model to monitor the implementation and adjust the results of the planning system is under discussion at this moment within ACSS.

FS_DE analysed the feasibility to implement a planning system evaluation based on the Dutch practice described in the Handbook[14] which relies on evaluation of its effectiveness, assessed using the following four questions: Has the planning model contributed to the decision-making process? Is the model mathematically sound? Is the planning approach appreciated and accepted by the health field? Does the model cover all the relevant parameters? The questions outlined in the policy link evaluation practice can only be partially applied to the German context. Self-governance implies that the main stakeholders are continually involved in the planning process, which should lead to an automatic acceptance of and engagement with the decisions made among actors in decision-making. Evaluation of the process is therefore possible, whereas in the current approach an evaluation of a model is obsolete.

Lesson learned on evaluating the planning capacity

The evidence shows that the assessment of the capacity of the planning system is desirable and feasible, using different tools, also custom made. The Joint Action proposed an easy-to-use tool which allows a comparison between a "before" and a "after". Such comparison therefore allows to highlight the pilot project

[13] Visit the web portal of the evaluation tool kit at http://hwftoolkit.semmelweis.hu.
[14] Malgieri A., *op. cit.*, p. 135.

impact on the planning system. The use of a not-customized tool has the advantage that it forces the "evaluator" to express opinion on any aspect deemed as "irrelevant" to its system. Taking that into account, such tools could stimulate further developments. On the other hand, a customized tool has the advantage to probe specific aspects of the planning system. The experience of PP_IT suggests that using both is an effective and feasible solution.

5 Evidences and recommendations

The two pilot projects were definitely two attempts to change the planning system in Italy and Portugal. They were indeed seen as the first steps of a change that will have further developments in the coming years.

The two feasibility studies investigated the possibilities and opportunities for a change in their respective contexts trying to assess the conditions, especially in light of the tools and the knowledge produced by the Joint Action.

Change has then been the common thread of these four initiatives. In this chapter we provide recommendations, in the light of the four initiatives, for those who aim to change their health workforce planning system, at local or national level.

As mentioned in chapter 2, a reference framework for the change management model was proposed by Tim Knoster in 1991. In a presentation to The Association for Severely Handicap (TASH) Conference, Knoster introduced a Managing Complex Change Model that has several components: **vision, consensus, skills, incentives, resources and action plan**. Knoster suggested that when the components are collectively inherent in the system, then change will likely take place. However, if any one of the components was missing, then the change process may be frustrated, sabotaged, inhibited, or may not take root[15].

What recommendations we can get from the results achieved in the 4 initiatives as well as from the limitations encountered?

Vision and consensus.

In the PP_IT the vision had been agreed and defined from the beginning with the involved stakeholders and originated from a common problem: the unclear process of determining access to degree courses. The proposal to participate in a project to build a common methodology was then understood by everyone. There were among others in the past some attempts to do so that had failed. There was also a discussion on the reasons of the past failures that was helpful in clarifying that "this time" would have been different, just because of the vision the pilot project had. Indeed, for the first time, the proposal came from the Ministry of Health, and not from one of the Regions, thus ensuring an overview and a coordination capacity that individual regions did not have. The European context of the project also provided a strong commitment and an international perspective to the topic of workforce planning that everyone appreciated. The vision was

[15] http://www.d11.org/LRS/PersonalizedLearning/Documents/KnosterMANAGINGCOMPLEXCHANGE.pdf

then corrected and improved during the project and, once the first results had been reached, by introducing and then defining the prospect of further activities and projects at the end of the Joint Action.

For PP_PT the collaboration at international level is a necessary tool to reach their vision of having a complete knowledge of the current situation and of the main dimensions of the labour market. Vision will be better if the collaboration is with countries facing similar problems and with similar features.

The European vision of the project, that convinced the stakeholders in Italy, was instead intended as "prescriptive" by the German stakeholders (see FS_DE[16]), who would prefer to maintain a local vision in favour of the status quo. The international approach can be limited to bilateral agreement between different countries to exchange information.

A bilateral agreement is also the vision proposed by FS_RO-MD. Romania and the Republic of Moldova should take into consideration collaborating on planning human resource requirements. Such a collaboration should be initiated through an inter-ministerial dialogue and pursued with the involvement of institutions with responsibilities in the area of health workforce management in the two countries. With aim of sharing experiences and encourage circular migration.

Recommendation on building a vision and achieve consensus in order to avoid confusion and sabotage.

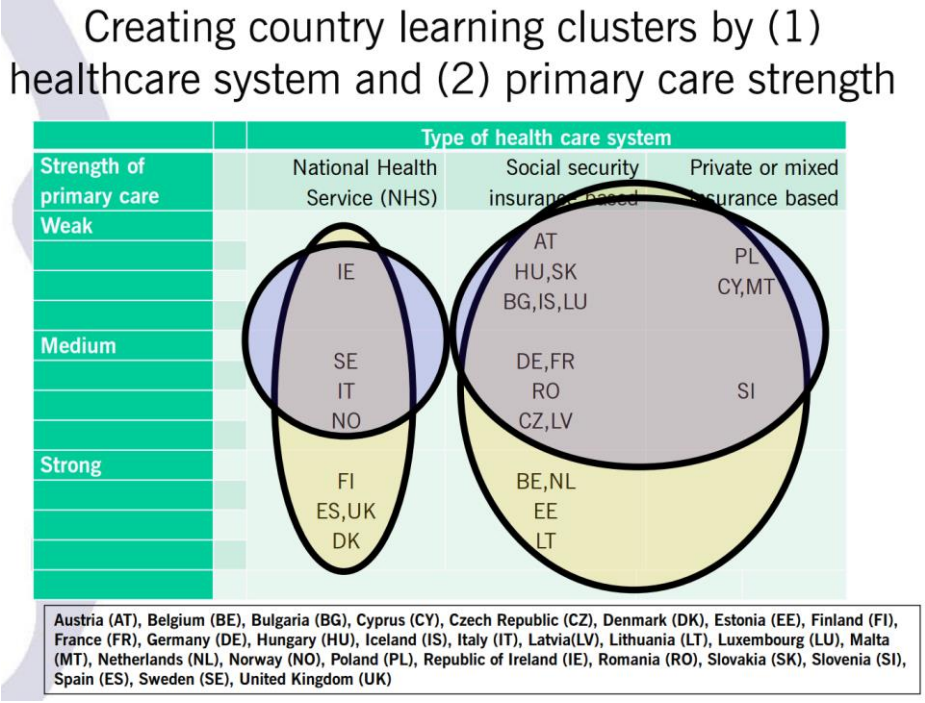
- Build a vision prospecting solutions to practical problems shared by stakeholders.
- Ensure that the problems include a local vision and that the solutions include an international vision.
- Try to achieve results in the near future by adopting a basic approach and then scale-up with a more ambitious vision, thus ensuring the collaboration of stakeholders.

An example of international collaboration was suggested by Ronald Batenburg[17] and presented in 2016 during the third Joint Action Conference on “Planning & Educating Health Workforce without Borders” in Varna (Bulgaria). The proposal by Batenburg is to create “learning clusters” and to make country learning clusters to create a first efficient exchange in smaller and more homogeneous groups and then create exchange between different clusters to learn by crossing boundaries. Here are the proposed learning clusters[18].

[16] “*The term “handbook” seems to indicate a prescriptive guidebook that stakeholders would have to adhere to and that they oppose. The possibility of European influence on self-governance was predominantly perceived as unnecessary and threatening to the status quo.*” FS_DE, page 27.

[17] “Health workforce planning in Europe: Creating learning country clusters”, Ronald Batenburg, Health Policy, December 2015, Volume 119, Issue 12, Pages 1537–1544.

[18] See the Batenburg’s presentation at http://healthworkforce.eu/wp-content/uploads/2016/02/JA-Varna-2016-presentation-Ronald-Batenburg-v-1.1.pdf



Ronald Batenburg, Joint Action Conference on "Planning & Educating Health Workforce without Borders", Varna (Bulgaria), 2016.

Skills and resources.

PP_IT involved, during the 16 months of the project, more than 150 people coordinated by a project team of 3 people: 1 full-time project manager, 1 assistant full time, 1 part-time statistician. The activities were organized into working groups that reflected the key elements of the Implementation path of the Handbook. More than 50 people, representing different stakeholders, participated in the working groups divided according to their skills and interests. Each working group was therefore able to take up the proposal of the Handbook and use it to build specific and tailor-made solutions. The good practices described in the Handbook were analysed. None of them were applied "tout court", but all were considered as stimulus and inspiration. PP_IT also used other tools and other knowledge produced within the framework of the Joint Action by other work packages (see Chapter 2).

PP_PT was limited in terms of resources allocated to the project.

- First of all, lack of dedicated people. Indeed, the project team was engaged also in other tasks than the project. Because of this, it recognised the necessity of team-work at macro or top level to deepen the accuracy of the Demand Model (through the incorporation of the private sector needs and the development of other dimensions, such as Service's Organization or Service's Use Patterns). So the project team proposed to create a specific and dedicate team for HWFPF to link the strong but scattered expertise existing in ACSS through various areas (regulation, careers, hiring, training, professional registries, data, models) and with the incorporation of new skills.

- Secondly, lack of time, because all international experiences and models have to be adapted to, and are limited by, the conditions of the country building the planning system and the projection model. The national specific conditions to develop a whole planning system demand time. However, PP_PT took great advantage from the knowledge produced by the Joint Action, in particular on the mobility issue (Work package 4) that is one of the challenges Portugal is facing.

FS_DE pointed out that stakeholders perceive opportunities to change the current system, indicating a degree of dissatisfaction with the status quo. Not all stakeholders, however, have the same opportunities and resources to lobby for changes. The Handbook can therefore provide inspiration on principles of planning approaches, yet implementation of specific lessons will depend on structural determinants of respective systems, as well as on perceived need for changes and resources available. FS_DE also provided suggestions and advices on how to design a future version of the Handbook able to improve further skills and knowledge:

- The future Handbook should be a flexible tool to guide not only governmental agencies but also to link to other stakeholder interests.
- The scope of practices should be broadened to systems with less planning, with regional instead of national focus, and with different status profiles of professions.
- The next version of the Handbook should present more of innovative approaches rather than (only) status quo of practices.

FS_RO-MD suggested that, in order to deepen the collaboration between Romania and Moldova, several preparatory activities need to be undertaken. The first one could be to assess more systematically the current health workforce planning efforts in the two countries. Another one could be to assess the feasibility of up-scaling local or regional level successful initiatives in health workforce data collection and their use for planning purposes. But FS_RO-MD pointed out that currently, there are no prospects that these activities could be supported by a joint partnership between Romania and Moldova solely. As such, resources and expertise would be necessary for pilot projects, from external bodies, such as the European Commission or the World Health Organization, institutions which have provided previous support in the area of health workforce in Romania and Moldova. Whereas our results support a top-down approach as being feasible in Moldova, a more feasible option for Romania would be a bottom-up approach (identifying champions, building on success stories and investing efforts in scaling them up).

Recommendation on improving skills and increasing resources in order to avoid anxiety and frustration.

- Establish a project team with a minimum staff (at least 3 people) working full time.
- Identify other people with varied skills to be involved on demand on specific issues.
- Assign a limited timeframe in which to achieve concrete results (stepwise approach).
- The results to be achieved must be consistent with the actual available time. If there is lack of time, try to achieve the same results by giving up the quality; you can improve later.
- Foster the discussion among experts and learn from best practices so that for every problem there may be more solutions already applied by other parties or applicable.
- Foster research for innovative applications.

An example of fostering the discussion and the exchange of knowledge among experts was the Experts' meeting on which Italian and Portuguese teams had the opportunity to discuss on their challenges and compare solutions with some international experts. This was considered as a first example of Network of experts, which is one of the main deliverable regarding the sustainability of the Joint Action (see "Network of Experts", http://healthworkforce.eu/work-package-7/). It is therefore recommended to activate the use of this network.

Incentives.

PP_IT involved both public employees and consultants, at national, regional and local level. The contribution of the latter in terms of time spent was larger than the first. In general, the regions not supported by consultants had more difficulties to participate in different activities, amongst others because for civil servants, the project was in addition to their many duties. In any case, the investment was large but uneven among stakeholders. The most active stakeholders were those who took advantage of the pilot project to carry out activities within their specific interest, usually related to the more general theme of human resource management. Some regions, for example, through the pilot project, have implemented a database of regional health staff or have completed their existing database. The representatives of the five professions had the advantage of "using" the stakeholder network created by the project to disseminate and raise awareness about their promotion of the profession policies, as well as obtaining information in support of their policies. Finally, the majority of stakeholders has drawn motivation from participation in a European project with broad national impact that gave them the availability to broaden their knowledge horizons, gain new experiences and to increase their visibility, in particular through the dissemination activities (conferences, scientific publications and dissemination, etc.).

PP_PT has also involved public employees and a team of consultants. Even for the ACSS team participation of public employees was lower than planned, because they were committed to other activities besides health workforce planning. In any case, their participation was active. They especially enjoyed the opportunity to exchange experiences and gain new knowledge at European level.

FS_DE highlighted conflicting objectives between the stakeholders with respect to the motivation and the urge of change. The advantages (and disadvantages) of developing a health workforce planning system are not that obvious and require further study.

FS_RO-MD has clearly illustrated the advantages of a bilateral cooperation between Moldova and Romania, in terms of mutual growth and development and proposed the solution of "circular migration" just as possible "win-win strategy". In any case, the difficulty to involve the key stakeholders in their study shows that more work needs to highlight the benefits of such cooperation in the human resources management in health.

Recommendation on creating incentives to avoid resistance

- Highlight the opportunities and implications of the development of a health workforce planning system in the more general context of human resource management.
- Clarify the benefits of participation in the change project.
- Define specific goals and the related timing.

- Provide visibility of the provided contributions by giving visibility to those who actually contribute.
- If civil servants involved have remuneration systems with economic incentives, link these bonuses to the achievement of the project objectives.
- Develop in the public institution specific professionalism related to human resource planning that can also become career paths.

There are several examples and proposals for future actions and projects and related funding mechanisms (http://healthworkforce.eu/work-package-7/). Member States can easily transform these examples and proposals into advantages and opportunities for their stakeholders.

Action plan.

PP_IT achieved all the objectives in the scheduled timing, in some cases even reaching more goals than foreseen. A key factor was the action plan. The project was led by a Steering Committee made up of about 30 stakeholders. At the first meeting of the Steering Committee, the action plan and the related milestones were presented. In the next 16 months, there were 5 meetings of the Steering Committee, about one every three months. Each meeting included the presentation of the results achieved in the previous three months by the working groups, the approval of the Steering Committee and the definition of the activities for the next three months in light of the results achieved until then. Such managing and monitoring mechanisms stressed participants to produce on time and promoted the research for feasible solutions. An important element was the introduction of the "trial and error" working method which created a trustful working environment where error was accepted as well as the research for innovative solutions.

PP_PT has had delays in the adoption of the law on the National Inventory of Health Professionals and its implementation. In light of those delays, the action plan had “on-going” amendments. In the end the project team decided to focus only on the public sector where the necessary data where fully available. This review allowed to achieve good results in the future projections of the public sector stock, fostering more advanced search in the future.

In the two feasibility studies there was no particular evidence related to the action plan.

Recommendation on setting an action plan to avoid treadmill

- Establish an action plan using a "step-by-step" approach.
- Establish a steering committee in which to present the action plan for its validation.
- Regularly reports the results to the committee and trim subsequent actions based on the results achieved.
- Try to involve the members of the Committee in finding solutions that will be presented to them.
- Keep daily targets and ambitious goals
- Notify constantly actions taken.

The WP7 deliverable "Concept of the technical recommendations & recommendations towards policy making" (D073/D074)[19] contains further recommendations on the "action plan" to develop and implement health workforce dimensions in all policies impacting health.

Recommendations: table of synthesis.

Building a vision and achieve consensus to avoid confusion and sabotage.	• Prospect solutions to practical problems shared by stakeholders. • Ensure a local vision of the problems and an international vision to the solutions. • Adopt a basic approach to achieve results in the near future and then scale-up with a more ambitious vision.
Improving skills and increasing resources to avoid anxiety and frustration.	• Establish a project team with a minimum staff (at least 3 people) working full time and identify other people with varied skills to be involved on demand. • Foster the discussion among experts and learn from best practices. • Foster research for innovative applications.
Creating incentives to avoid resistance.	• Highlight the opportunities and implications of the development of a health workforce planning system in the more general context of human resource management. • Provide visibility of the provided contributions by giving visibility to those who actually contribute. • Develop specific professionalism related to human resource planning that can also become career paths.
Setting an action plan to avoid treadmill.	• Establish a steering committee in which to present the action plan for its validation. • Regularly reports the results to the committee and trim subsequent actions based on the results achieved. • Keep daily targets and ambitious goals.

6 Conclusions

The two pilot projects and the two feasibility studies presented and analysed in this report have to be considered as great opportunities.

Knowledge improvement

From the Joint Action point of view, all four different initiatives performed field tests with aim to assess the validity of some "products", first of all the Handbook and the Minimum Planning Data Requirements delivered by the WP5. They were important to verify effectiveness and completeness of those deliverables and to collect ideas and suggestions for future improvements.

[19] See Chapter 4.5 of the deliverable available at http://healthworkforce.eu/work-package-7/.

The evidences and the lessons learned out of the experimentations show the overall usefulness of the knowledge and tools produced and in particular their overall feasible implementation. Nevertheless, some improvements are needed and specific insights and additions are strongly requested.

In particular, the **Minimum Data Set** (MDS) has to be reviewed further simplifying the underlying model, in the light of the data actually used, useful and available. The pilot projects showed the importance and the feasibility of having an inventory of the current stock and, on the base of it, starting a basic forecasting exercise. At the same time, the assessment of the gaps between supply and demand it remains a challenge for the difficulties in measuring the current demand. On this latter topic, the MDS has to be reviewed and further proposals are needed.

On the other hand, the knowledge available from the **Handbook** was very useful and the implementation path revealed its efficacy even if, the seven related steps are to be considered as a circular improvement process rather than a step-by-step formula. Indeed, the evidences showed that the starting point and the sequence of the various stage are context-dependent. However, the evidences demonstrated also the need of improvement of the content of the Handbook, taking account different perspectives (local and global), different point of views (professional bodies, citizens, etc.) and different approaches (more advanced and innovative solutions).

Specific recommendations on future developments and improvements of the Handbook comes from the four initiatives and are here outlined.

Overall content

The focus of the Handbook is on the five key elements of the planning system conceived as structural parts of a building. The Handbook thus provides examples and good practices coming from seven EU countries which has developed all the five parts. So, several examples and detail descriptions are provided on each of the five parts, as evidence of different approaches but underlying the common features. Furthermore, the Handbook offers suggestions and advices on how to link the five building block and how to manage the entire system.

The evidences from the four initiatives recommend, in further version of the Handbook, to focus more on the operational mechanisms, namely the links among the different parts, than on the parts itself, considering that the parts of a planning system have to be shape accordingly to the context. In practice, to focus more on “how to” than on “what” or “who”.

Selection of good practices

In the Handbook the practices are selected by seven planning system, operating at national level, which demonstrated to have all the five parts developed and working.

The recommendation is to select practices also from planning system developed at local level and to describe not only the state of art but also to propose innovative practices and solutions. Furthermore, it would be useful also to point out weaknesses of the practices and negative aspects of the proposed solution in order to give a broader information.

Specific content

The Handbook furnishes details and practical information in particular on the methods in use, i.e. models, procedures, actors, tools but few information are given on outputs and outcomes.

The recommendation is to give more information on the results achieved in terms of specific outputs and outcomes of the planning systems. If experts in planning methodologies could be interested more on "building the system", other stakeholders, for example, professional bodies, trade unions, or health services providers are also (or primarily) interested on outputs of the forecasting exercises for the different professions, on details of different demand scenario or on strategies set to face foreseen specific future challenges.

On the other hand, the Handbook just gives an overview on some technicalities, without going too in depth, for example, on the analysis of the mathematical tools available or which can be developed. Or, a broader analysis of the current demand assessment in different EU context (local, national and international) is missing.

The recommendation is to provide specific analysis and studies on mathematical tools and their interaction with the findings of the qualitative researches. On the demand side, the recommendation is to give more examples and solutions on the measurement of the demand for different professions. Furthermore, the results of the forecasting exercises and of the demand assessments at national level could be disseminate in a specific web platform in order to give an EU overview of potential future imbalances.

Change management

From the point of view of the partners responsible for leading the four initiatives, they had the opportunity to experience an approach and then achieve results. In some cases, the results achieved strongly influenced the current situation bringing significant and noticeable improvements. In other cases, the difficulties encountered highlighted weaknesses and areas of specific intervention.

Anyway, the four initiatives had a significant impact in their context: raising awareness, initiating discussion on health workforce planning, underlining the importance of planning, fostering dialogue between stakeholders from policy and technical level. The high involvement of stakeholders resulted in knowledge exchange, increasing commitment, sharing of common goals (indicating engagement for lobby that can lead to higher political commitment) and clarifying detailed of methodological steps in health workforce planning.

That's why all four initiatives have drawn attention to specific next steps, stressing that experimenting has meaning only if the feasibility study is thrown in an experimental stage and the pilot project is to walk through a phase of structural systematization. In the particular case of PP_IT, PP_PT and FS_RO-MD the need for further development was made explicit in the conclusion of their reports.

The sustainability of such further actions is the latest and most important recommendation that we provide at the end of this overall report.

Joint Action Health Workforce Planning and Forecasting

Funded by the Health Programme of the European Union

Joint Action Health Workforce Planning and Forecasting

Funded by the Health Programme of the European Union

Deliverable D054 - Two Pilot Projects and two Feasibility Studies. The overall report.

E.B. APPROVED (2016, June 14th)