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POLICY BRIEF

Professionalize European Public Health Workforce: The need for a Minimum Dataset and Skills Passport

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KEY MESSAGES

- Public Health Workforce is difficult to define. The use of a Minimum Dataset and a Skills Passport should be considered to help strengthen professionalization.
- More workforce data is important for policy-making decisions, forecasting capacity management, and workforce development for a rapidly changing health environment.
- Information provided by the Minimum Dataset and Skills Passport will allow public health education institutions to adapt their curricula to the workforce's needs.

Introduction

This policy brief aims is to inform deliberations amongst stakeholders such as the European Commission, Directorate General for Health and Food Safety, public health educational institutions, public health policymakers, public health civil society organisations, and health or education ministries of European Member States to provide context for advancing the professionalism of the Public Health Workforce (PHW), by introducing the concept of a minimum dataset and Skills Passport.

In 2021, the European Union Health Policy Platform emphasized the need to have PHW ready for unprecedented health and social challenges (1). The COVID-19 pandemic has shown that delivery and coordination of public health is essential to national and global health and highlighted the problems of long-standing underfunding and underdevelopment of the PHW (2). Developing a competent PHW with skills to adapt to rapidly-changing health challenges is not possible without knowing the workforce compositions.

Historically, the PHW has been difficult to accurately define due to its multidisciplinary, various occupational categories, unclear boundaries in the field of public health, and the absence of credential requirements for many of the disciplines involved. In most of the countries within Europe, there is no single system that enumerates PHW or registers the composition of key skill sets (3).

No clear definition of PHW

Despite a long history of public health training, the PHW has not been clearly defined at the international level due to its complexity and diversity. In 2003, Beaglehole defined PHW as "a diverse workforce whose prime responsibility is the provision of core public health activities, irrespective of their organizational base"(4). However, the complex nature of public health involves a wide range of professionals, leading to the definition of wider PHW as all people engaged in work that creates the conditions within which people can be healthy (5,6).

In addition, the challenges of defining the PHW are complicated by the different understandings and terminologies across Europe concerning the role and meaning of "public health". In 2008, for example, the Medical Specialties in Public Health were recognized in 21 European Member States under different titles, such as "preventive medicine" in Italy, "social medicine" in Sweden, and "community medicine" in Denmark. (7,8).

No data on PHW

Efforts to enumerate the PHW have faced major challenges, due to the lack of a clear professional licensing system and central registries in most countries, except United Kingdom and Poland, where registration of public health professionals is optional (9–11). Until now, most efforts to enumerate the PHW are based on existing data sources with various limitations (3). Different job titles for the same type of public health employment are a hindrance, and not all job titles are appropriately classed as 'public health' in different data sources. Registers use different definitions of public health employees. Some specific disciplines (nursing, medical professions) have their registers and not all are represented in the databases.

Taxonomy is a useful tool to describe and classify a workforce (12). Some efforts to develop taxonomies for the PHW narrowly focus on those contributing to the essential public health operations or working in governmental agencies (12,13). Furthermore, current taxonomies do not clearly distinguish between positions that require formal public health education and those that do not, nor do they establish connections between those occupations and required public health competencies. The need to match public health professions and required competencies is calling for the development of a tool to gather deeper insights into PHW, as well as specify the needed skills and qualifications for each profession within the PHW.

The objective of this policy brief is to propose the development of a Minimum Dataset and Skills Passport to support the professionalism of the PHW within the European Union. More specifically, this policy brief will present Minimum Dataset and Skills Passport, suggest their visualisation, discuss their potential benefits and barriers to their implementation, and will propose recommendations that can contribute to creating a sustainable impact on the development of the PHW.

Policy Option 1. Minimum Dataset

To ensure the population's health, the determination of employment availability is central (14). As stated by the World Health Organization, "No Health Workers, No care."(15), professional training, recruitment and retention of workers, and training investment are priorities for the public health sector to tackle present and future difficulties. Therefore, there is an urgent need for PHW data to describe the supply and distribution. Due to the contextual nature of the public health sector, a gold standard is not available, as planning tools should be individually adapted to national and local needs and country characteristics. Therefore, countries should consider a Minimum Dataset as advised by the Joint Action on Health Workforce Planning (16).

Definition

A Minimum Dataset, in epidemiology, is defined by a list of names, definitions, and data sources to support a specific purpose (17). As there is no unified data on the health workforce on a European level and the available data is context-sensitive due to different planning methods and tools (18), there is no appropriate concept of a minimum dataset on a European Union level.

How a Minimum Dataset could look like?

Data collection on the PHW differs in the Member States with various indicators and data resources. Some countries have central statistics, others use information from

Health insurance companies, registration offices, and employers collected by surveys. The use of a category system is needed to harmonize available data with its original collection method and definitions of the public health employee (19). To close the gap of missing data, information can be obtained according to a predetermined standard, for example, through questionnaires.

A Minimum Dataset should guide critical variables in health workforce surveys, including demographic, educational, and practice characteristics (20). Existing taxonomy can be adapted to collect specific information. Country-specific trends and comparisons between countries can be seen. Additionally, it can be possible to calculate country-specific workforce demand. This could be used to assess the gaps currently within the workforce and strengthen workforce knowledge for future capacity planning and allow valid comparisons across countries. The minimum dataset can be used by national and European employers and policymakers and an example is provided in Figure 1.

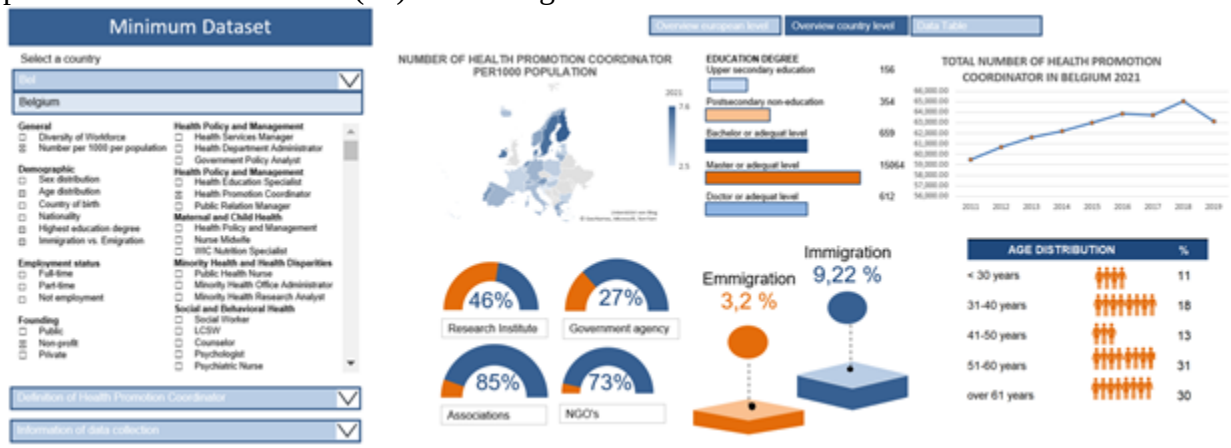

Fig. 1. Example of a Minimum Dataset

What are the benefits of a Minimum Dataset?

By analysing, monitoring, and reporting the PHW, the gaps and requirements can be examined (21). On a European level, it could help identify the public health workers' migration from low/middle-income to higher-income countries. Strategies and policies on a local and European level can be developed to minimise the resulting lack of professionals in low-income countries. Additionally, inefficient organisational structure can be identified and processes can be improved (22).

The dataset can help evaluate trends of age distribution, emigration, and immigration of the workforce. As a result, countries will have an indicator of where to allocate resources and focus on training PHW to fulfil capacity demand. This benefit is illustrated by the local example of a Minimum Dataset as used in Queensland (23) (see Box 1).

The European Commission carried out a feasibility study on EU-level cooperation on health workforce needs. This is a step towards a minimum dataset within the European Union, highlighting the five critical elements of the health workforce planning process. These key elements include goals, forecasting model, data, link to policies, and organisation (16). Since

data is linked to every element, the harmonisation and availability of data is a step towards the professionalization of the healthcare workforce (20).

What are the barriers to implementing a Minimum Dataset?

At the European level, the coordination between the Member States for data collection could be challenged by the heterogeneity of Member States. In addition, demand forecasting is influenced by demographic change, and advances in medicine and policy, such as the retirement age of health professionals. Thus, European-level data collection would require the involvement of a centralized statistical agency (i.e EuroStat) (24) to coordinate between stakeholders, facilitate resources, and monitor the collection process.

Data harmonization is another barrier to implementing a Minimum Dataset. The integration and analysis of multi-resource data could be time-consuming and requires developing new frameworks and tools to assist data compilation, as well as network infrastructure to enable data sharing between stakeholders. Furthermore, the use of data needs to be in line with the General Data Protection Regulation (25) (GDPR) to minimize ethical concerns related to privacy, data protection, and surveillance.

Lastly, the constantly growing and changing PHW (14) would require a simulated update of job titles and required competencies, as well as societal demands to promote professionalism and the value of the workforce.

Box 1. Example of Minimum Dataset implementation

An annual survey of General Practices and General Practitioners is used to keep an up-to-date database of the general practitioner workforce in remote, rural, and regional Queensland. The data gathering is based on the Remoteness Areas (RA) system of the Australian Standard Geographical Classification and census by a mix of strategies. The Minimum Dataset aims to optimize the health care resources and create a sustainable framework which also feeds the need of rural areas to guarantee an adequate access to the healthcare system. In the published healthcare report, they provide information about the number of medical practitioners, gender, number of average working hours per week by gender, working status (solo or collocate practice with at least one other GP), working location (inner regional/ outer regional/ remote/ very remote). Employment through monitoring, proactive planning is possible so that a shortage of specialists, especially in rural areas, can be minimized (23).

Policy Option 2. Skills Passport

Definition

Currently the European Union defines a Skills Passport as: “a tool or document allowing people to record their skills, competencies, and knowledge. These can result from formal, informal or non-formal learning” (26). One example is the “Europass” provided by the European Union. This passport shows academic credentials and certificates and is valid among all member states. Unfortunately, for the PHW it has limitations as it is not linked to a competency framework.

Former Public Health England (replaced by UK Health Security Agency and Office for Health Improvement and Disparities) described the Skills Passport as an

interactive digital platform, which can "enable users to keep a record of their public health credentials – all in one place that can be accessed by individuals irrespective of their employer, or employment status." (27). It identifies the qualifications of the PHW and provides the possibility of transferability among employers and registration bodies. For better categorization and recognition of qualifications, the Skills Passport is aligned to a Public Health Skills and Competency Framework (PHSKF) (28).

How could a Skills Passport look like?

Our concept inspired by the idea of a Skills Passport by Public Health England (28), is an interactive digital platform that includes all career data and diplomas certificates, and continued professional development courses for the public health employees.

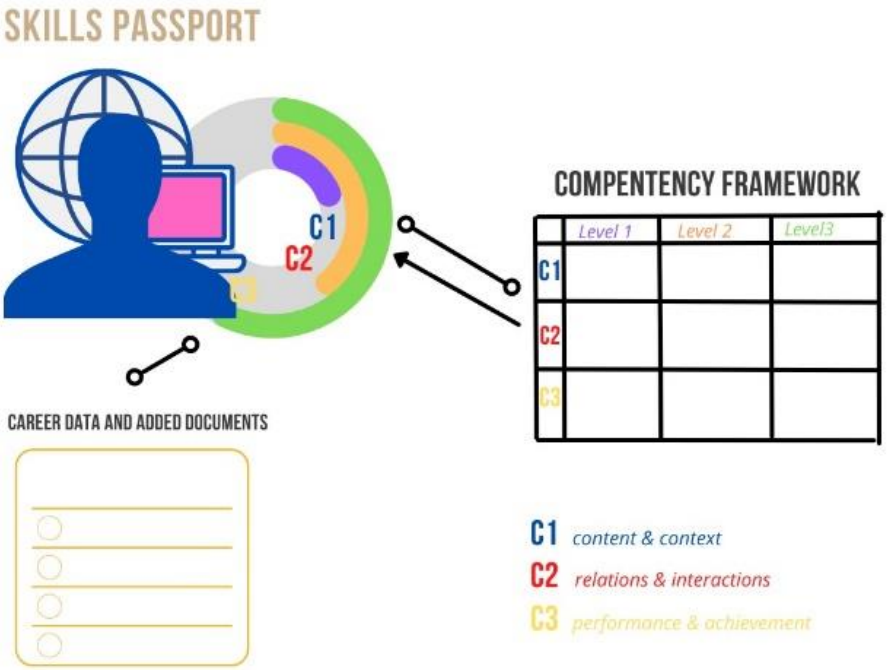

Figure 2. Model of a Skills Passport

Once the data is uploaded, an artificial intelligence algorithm can analyse the data and subsequently match the competencies within a competency framework. These are visible in the passport so that administrative bodies, employers and employees have a clearer understanding of the qualifications and competencies of the workforce (Figure 2). In this policy brief, we propose to link the Skills Passport to the WHO-ASPHER Competency Framework which has three main categories ("content & context", "relations & interactions", and "performance & achievements"), which are linked to competency subcategories. The single competencies are assessed on three levels: level 1- expert, level 2, proficient, level 3-competent (29). In addition, this Skills Passport can be linked to the existing "Europass" of the European Union.

What are the benefits of a Skills Passport?

Linking to the benefits of the competency framework (29), the Skills Passport would

bring similar impacts and help to push forward a clear definition and terminology for PHW. This can help with the planning and forecasting the PHW. Data collection can be improved through categorisation and registration of the PHW can be more workable. It is the basis for analysing the distribution of the workforce and for drawing up concrete development plans and forecasting future needs and investments. Moreover, a Skills Passport can provide orientation to develop a European standard of education for the PHW. This would raise the education and performance level of the workforce and ensure quality. In addition, a clear categorization of competencies would contribute to increasing value and respect for the profession. Needed skills and qualifications would be defined to achieve a specific rank. Advantages such as European mobility, easier professional recognition of education, as well as registration and revalidation among member states could be a result. On the other hand, it would close gaps between countries through a higher level of collaboration (29).

What are the barriers?

The main barrier will be the acceptance and usage of the passport in the PHW. The design of the framework and passport could be too complicated. As Public Health England's evaluation of their Competency Framework showed, some adaptations were necessary to improve manageability. Utilization of stakeholder consultations is a helpful tool to overcome these challenges. Promotion of the Skills Passport is vitally important and commitment from employers and employees will be necessary for its success. Otherwise, it is quite possible that many will not use it or know about its existence.

Significant efforts must be undertaken to implement it. In the United Kingdom, the Competency Framework was initiated in July 2014 and was implemented in 2016. The development of the Skills Passport still seems to be ongoing. In 2019, only the second of four stages for implementing a Skills Passport was reached. This illustrates the challenges of such an implementation (c.f. Box 2).

Box 2. Example of Skills Passport implementation

In 2016, a Skills Passport is being developed in England which is linked to a Public Health Skills and Knowledge Framework (30). The framework is shown as the basis. The Skills Passport should represent the conversion into a digital interactive platform. The design of the framework is a functional map showing public health functions and competencies (27). There, PHW is assessed in three different levels: A=Technical Functions, B=Contextual functions, C=Delivery functions, which are categorised in four levels, that refer to different key areas of public health which is aligned with existing National Occupational Standards (30). In 2019, an evaluation of the framework was conducted and determined that slightly ¼ of respondents have never used the framework and 87% of previous users rated it as useful. Barriers to using it were primarily encouragement from senior levels in the organisations. Suggestions for improvement such as the creation of an online community, better communication about its usefulness, a link to other competency frameworks, or includingmore evaluation options were made. There are several development phases for this, whereby phase two of four has been completed so far (31). The next phase (phase 3) reviews the security and performance of the previous product until it can then be fully implemented (phase 4) (30).

Recommendations

With the importance and overwhelming benefits of workforce data, it is rational to start the first steps of PHW professionalization with the Minimum Dataset to enumerate and characterise the workforce in a unified taxonomy system. There are multiple career paths within public health disciplines, which call for financial and capacity support from multiple stakeholders. In order to overcome the challenges, we urge for following action steps:

For policymakers

- Continue support for research to better characterize the PHW, as well as the development of a data framework and network infrastructure for data collection and sharing between stakeholders
- Collaborate and build consensus among public health stakeholders led by key EU-level agencies toward the development of a consistent taxonomy for describing public health occupations, functions, core competencies, and required training. Those core competencies and training need to be recognized at the European Union level.
- Involve a centralized statistical agency (for example EuroStat) to coordinate, monitor, and harmonize obtained data into an accessible database, as well as ensure compliance with GDPR regarding data privacy and protection.

For educational institutes and public health professionals

- Collaborate / consult with policymakers to come to a unified definition of PHW, conduct further research to characterize the workforce, provide evidence to advocate for the importance of professionalizing PHW, and support the policy-making process.

- Develop a common method to track the career path of PH graduates, and develop an educational framework to standardize the education for PHW, which can be recognized across the region.

For public health employers

- Take part in the survey on workforce characteristics and provide insights on career path and required competencies for particular PH professionals.
- Evaluate and consult the use of Minimum Dataset as a tool to assess actions and tasks within PH disciplines, as well as the workforce gap and capacity planning for the future.
- Promote the use of Minimum Dataset as a guideline for career development for PH professionals.
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Authors' contributions:
BK, DNH, LS, and TYCN conceptualised the paper, SL designed the illustrations of Minimum dataset, BK developed a sample model of Skill passport. All authors contributed equally to writing the paper. All authors reviewed the final version and agreed on the submission.

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