Skills for the future health workforce: Preparing health professionals for people-centred care

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SKILLS FOR THE FUTURE HEALTH WORKFORCE: PREPARING HEALTH PROFESSIONALS FOR PEOPLE-CENTRED CARE

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Acknowledgements

Abstract

The landscape of health services delivery is undergoing significant transformation from fragmented and disease-centred toward integrated and people-centred care. Health workers find themselves at the centre of this transformation that demands from them commensurate changes in the skill-set employed in day-to-day practice, among other challenges. The paper identifies transversal (core) skills that are becoming increasingly crucial for all front-line health workers to reap the potential benefits of people-centred care, such as better patient and population outcomes, higher productivity, and higher retention/job satisfaction combined among the workers themselves. These transversal skills include interpersonal skills, such as person-centred communication, interprofessional teamwork, self-awareness and socio-cultural sensitivity, as well as analytical skills, such as adaptive problem solving to devise customised care for individual persons, system thinking, openness to continuous learning, and the ability to use digital technologies effectively. Recognising the need to prepare health professionals for meeting the dual challenges of technically and emotionally complex healthcare workplace is a prerequisite to building and maintaining resilient and resourceful health workforce. This paper provides also a brief overview of skills assessment methods and tools that could be used to evaluate the effectiveness of health workforce policies and suggests a skills assessment strategy to evaluate the impact of reforms on the skills and performance of health workforce.

Résumé

Le champ de la prestation des services de santé effectue une transformation importante, passant de soins fragmentés et centrés sur la maladie à des soins intégrés et centrés sur la personne. Le personnel de santé se trouve au centre de cette transformation qui exige de leur part des changements quant aux compétences employées au quotidien, entre autres défis. Ce document identifie les compétences transversales (essentielles) qui deviennent de plus en plus cruciales pour que tout le personnel de santé de première ligne récolte les avantages potentiels des soins centrés sur la personne, tels que de meilleurs résultats pour les patients et la population, une productivité plus élevée et une meilleure rétention / satisfaction au travail pour le personnel de santé. Ces compétences transversales comprennent des compétences interpersonnelles, telles que la communication centrée sur la personne, le travail d'équipe interprofessionnel, la conscience de soi et la sensibilité socioculturelle, ainsi que des compétences analytiques, telles que la résolution adaptative de problèmes pour concevoir des soins personnalisés pour les individus, la pensée systémique, l'ouverture à l'apprentissage continu et la capacité d'utiliser efficacement les technologies numériques. Reconnaître la nécessité de préparer les professionnels de la santé à relever le double défi d'un lieu de travail de santé techniquement et émotionnellement complexe est une condition préalable à la création et au maintien d'un personnel de santé résilient et ingénieux. Ce document donne également un bref aperçu des méthodes et des outils d'évaluation des compétences qui pourraient être utilisés pour évaluer l'efficacité des politiques relatives aux personnels de santé et suggère une stratégie d'évaluation des compétences pour évaluer l'impact des réformes sur les compétences et les performances des personnels de santé.

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The landscape of health services delivery needs to undergo a significant transformation, from specialist- and disease-centred care delivery systems toward value-based and people-centred models of care. Many OECD countries are planning or implementing reforms that aim at such transformation in response to the challenges presented by ageing populations with multiple chronic conditions and complex care needs as well as the changing expectations of patients, their carers, and communities. Over the past few decades, the adoption of evidence-based medicine, involving guidance by expert panels with an emphasis on specialisation and technical knowledge, has helped to improve the quality of healthcare, but it has also contributed to segmentation of care, by specialties and by professions. The growing attention to people-centred models of care refocuses the value of care back to patients and requires counteracting this segmentation of care and involving patients through shared patient-provider decision-making about care.

Health workers find themselves at the centre of this transformation that demands from them commensurate changes in the skill-set employed in their day-to-day practice, among other challenges. People-centred care demands, for example, greater attention to broader aspects of patient care that extend well beyond bio-medical conditions and require attention to psycho-social conditions and other aspects of patient's lives. Expanding the scope of care into psycho-social spheres requires specific interpersonal skills, such as patient-centred communication and inter-professional collaboration. It also gives rise to new ethically challenging issues. If unaddressed, these emerging demands may be contributing to greater tensions in a workplace as well as higher rates of worker attrition.

This adds to the strain on health workers, which is becoming evident in the increasing rate of burn-out across all categories of health professionals. Burn-outs negatively affect the worker's ability to provide safe and effective care for patients and may exacerbate attrition rates and workforce shortages. From the patient perspective, these sub-optimal working conditions are experienced as care that does not fully meet their health needs, and these shortcomings especially affect individuals with multiple long-term conditions and complex care needs.

Moreover, such significant changes in the care delivery models and workplace conditions would be expected to be accompanied by commensurate changes in the training of health workers. Yet, growing evidence suggests that the education and training of health professionals are not keeping pace with these changes. The analysis of data collected through the OECD Survey of Adult Skills (PIAAC) reveals significantly higher rates of skills mismatch among doctors and nurses in comparison to other professional workers. These trends point to a real risk of skills gap that could widen as the pace of care delivery reforms picks up.

Taken together, these findings have raised concerns among global health policy makers and reinforced the urgent need to introduce appropriate policies to ease the strain on the health workers and help them make the transition to new models of care. These concerns were discussed at the 2017 meeting of the OECD Health Ministers who called for "a transformative agenda for the health workforce, assessing health professional skills, remuneration and co-ordination, and how these skills and models of care need to adapt in light of digitalisation, wider technological changes, and the evolution of patients' needs."

This paper provides insights on how to design better skills policies and develop a systematic approach to evaluating health workforce skills that will enable them to function effectively in integrated and people-centred models of care. Key findings are:

- Recognising the need to prepare health professionals for meeting the dual challenges of technically and emotionally complex healthcare workplace is a prerequisite for building and maintaining a resilient and resourceful health workforce.
    - o The paper identifies transversal (core) skills that are becoming increasingly crucial for all front-line health workers to reap the potential benefits of people-centred care, such as better patient and population outcomes, higher productivity, and higher retention/job satisfaction among the workers themselves. These transversal skills include interpersonal skills, such as person-centred communication, inter-professional teamwork, self-awareness and socio-cultural sensitivity, as well as analytical skills, such as adaptive problem solving to devise customised care for individual persons, system thinking, openness to continuous learning, and the ability to use digital technologies effectively.
    - o It is important to define a common competency framework across multiple categories of health professionals who work in very diverse healthcare settings. Internationally, there is find a remarkable convergence in recognising transversal skills as fundamental across major categories of health professionals, such as physicians, nurses, and pharmacists. Building on this emerging convergence of transversal skills requirements, a common competency framework is proposed in this paper, which could be used to foster collaboration across professional groups and encourage the development of multi-disciplinary care teams.
- Comprehensive skills assessment strategies are needed to generate evidence for ensuring that health workforce is fit for purpose.
    - o While there is a growing consensus that the transversal skills discussed in this paper are crucial for successful transition to people-centred care, there has been relatively little emphasis to date on formulation of commensurate skills assessment strategies. In particular, skills assessment instruments - allowing the assessment of transversal skills as well as whether health professionals can actually put them to full use in their workplace reality – are necessary to generate evidence needed for ensuring that health workforce is fit for purpose.
    - o There is a need to take a systems-approach to skills assessment. The existing skills assessment instruments do not readily differentiate between the skills mismatch caused by inadequacies in education and training systems from the inadequacies in health systems and organisation of the workplace – such as misalignment in payment incentives, restrictions due to regulations, or shortcomings in the organisation and management of the work process. Such distinctions are, however, necessary for policy makers to determine the appropriate course of action, that is, for example, whether to focus resources on reforming the education and training of health professionals or to focus on addressing system constraints that prevent the workers from applying their skills. It is not sufficient for workers to possess the skills needed for the people-centred care delivery models: they must also be enabled to use these skills effectively to reap the benefits in terms of system performance.
    - o Moreover, finding meaningful linkages between transversal skills and actual service performance indicators will be an important goal for informing policies designed to raise the performance of the entire health workforce. Therefore, skills assessment strategies should strive to provide policy relevant and system-level evidence on how health workforce skills affect the overall quality of care and patient experience.

1. Introduction

1.1. Background

1.	The landscape of health services delivery needs to undergo a significant transformation, from specialist- and disease-centred care delivery systems toward value-based and people-centred models of care. Many OECD countries are planning or implementing reforms that aim at such transformation in response to the challenges presented by ageing populations with multiple chronic conditions and complex care needs as well as the changing expectations of patients, their carers, and communities. Over the past few decades, the adoption of evidence-based medicine, involving guidance by expert panels with emphasis on specialisation and technical knowledge, has helped to improve the quality of healthcare, but it has also contributed to segmentation of care by specialties and professions. The attention to people-centred models of care refocuses the value of care back to patients and calls for counteracting this segmentation of care and involving patients through shared patient-provider decision-making about care.

2.	Health workers find themselves at the centre of this transformation that demands from them commensurate changes in the skill-set[1] employed in day-to-day practice, among other challenges. People-centred care demands, for example, greater attention to broader aspects of patient care that extend well beyond bio-medical conditions and require attention to psycho-social conditions and other aspects of patient lives. Expanding the scope of care into psycho-social spheres requires specific interpersonal skills, such as patient-centred communication or interprofessional collaboration. It also gives rise to new ethically challenging issues. If unaddressed, these emerging demands may be contributing to greater tensions in a workplace as well as higher rates of worker attrition (Levi et al., 2004[1]; Ulrich et al., 2010[2]).

3.	This adds to the strain that is becoming evident in the increasing rate of burn-out (Dyrbye et al., 2017[3]) across all categories of health professionals. Burn-outs negatively affect the worker's ability to provide safe and effective care for patients and may exacerbate attrition rates and workforce shortages. From patient perspective, these sub-optimal working conditions are experienced as fragmented care that does not meet their needs, and these shortcomings especially affect individuals with multiple long-term conditions and complex care needs (Ryan et al., 2016[4]).

4.	Such significant changes in the care delivery models and workplace conditions would be expected to be accompanied by commensurate changes in the training of health workers. Yet, growing evidence suggests that the education and training of health professionals are not keeping pace with these changes. The OECD study on health workforce skills (Schoenstein M, 2016[5]) found significantly higher rates of

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[1] In most of the literature as well as in policy-relevant work, the terms "skills", "knowledge", "competencies", "abilities", and, to a lesser extent, even "education" are often used interchangeably. In this report, the term "skill" is used to indicate all types and facets of competencies needed by workers to perform their jobs. Distinctions between different dimensions are made only where relevant. This is done partly for the sake of simplicity but also because of a general lack of agreement on what each of these terms refers to. Indeed, although there are some conceptual differences between them, all terms refer to the interactions between workers and their jobs and relate to the same problematic of shortages and surpluses in the labour market, with similar methods applied to estimate their imbalances. Skills are generally a combination of ability, capacity and knowledge acquired through deliberate, systematic, and sustained efforts to carry out complex tasks or job functions. These can be grouped into cognitive skills (concepts, ideas), technical skills, and interpersonal skills. Skills can also be classified as job-specific or generic.

skills mismatch[2] among doctors and nurses in comparison to other professional workers. These trends point to a real risk of skills gap that could widen as the pace of care delivery reforms picks up.

Figure 1.1. Likelihood of reporting being over-skilled or under-skilled by occupation groups, PIAAC 2011-12
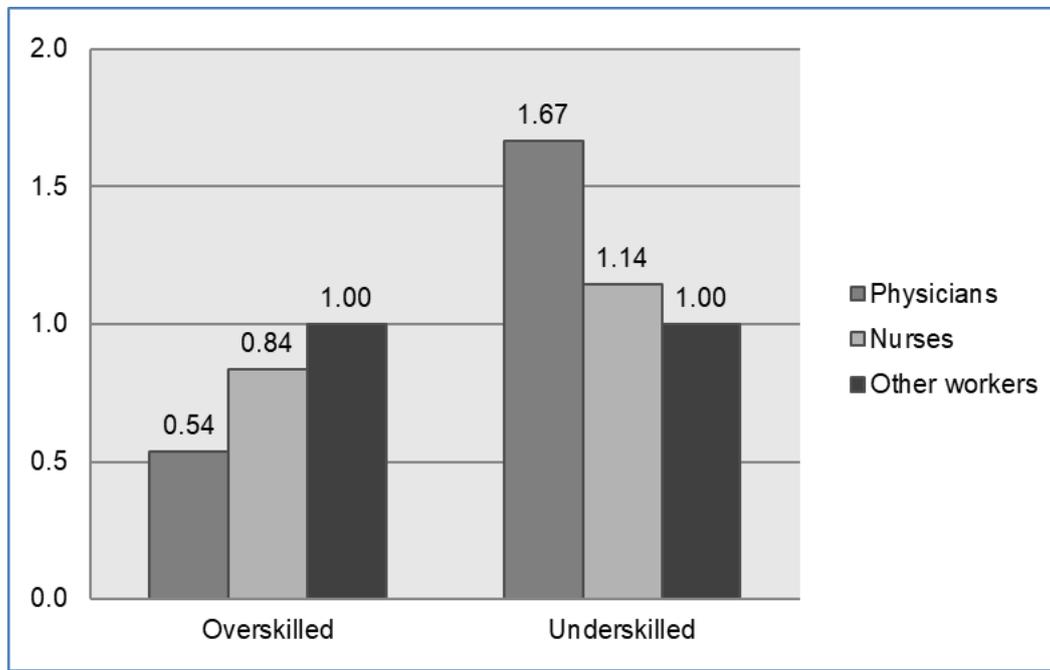
Source: Figure 6.6 in OECD 2016 Health Workforce Study (Schoenstein, Ono and LaFortune, 2016[6]). https://doi.org/10.1787/9789264239517-en.

5.   PIAAC results showed that some 76 percent of doctors and 79 percent of nurses reported over-skilling in their current job, while 51 percent of doctors and 46 percent of nurses reported under-skilling. In comparison to other professionals, doctors and nurses reported somewhat less over-skilling compared with other professionals, but doctors were 67 percent more likely, and nurses 14 percent more likely to report being under-skilled for their duties compared to other professionals (Figure 1.1). When stratified by education levels, it becomes evident that advanced nurses (master's level or above) face a very high level of over-skilling – nearly twice the level of other professionals (Figure 1.2).

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[2] Mismatch refers either to the inadequacy of a worker's skills relative to the requirements of the job he/she is currently in or to the opposite phenomenon whereby a worker's skills exceed those required by the job. Mismatch can be measured relative to qualification level, field of study, or skills.

Figure 1.2. Likelihood of reporting being over-skilled or under-skilled by nurses by levels of education, PIAAC 2011/2012
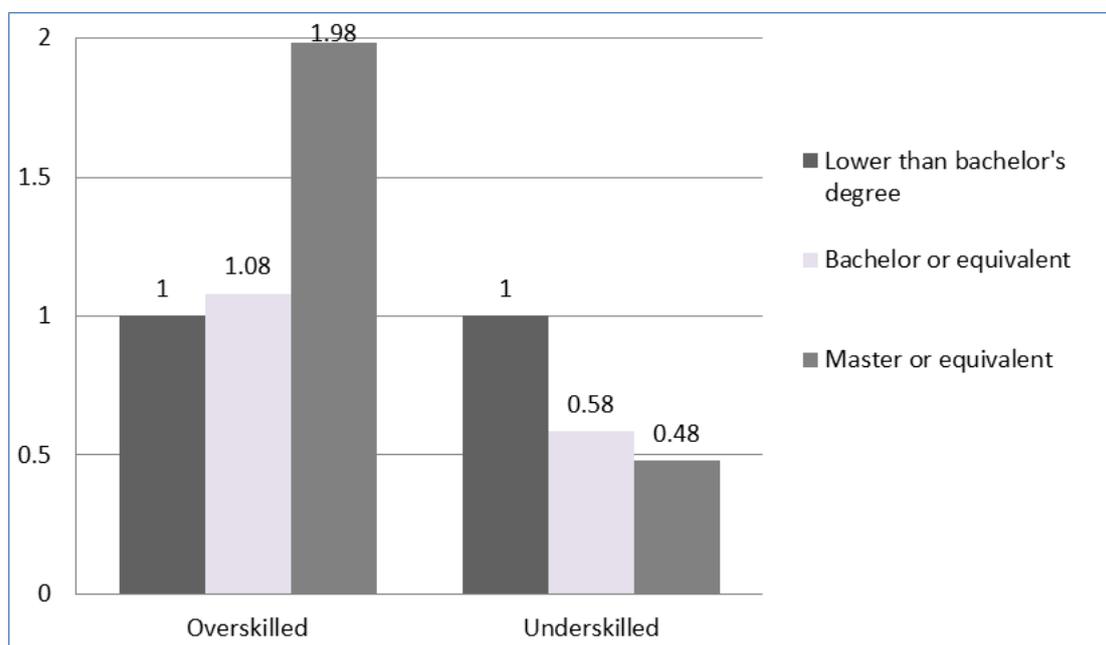
Source: Figure 6.9 in OECD 2016 Health Workforce Study (Schoenstein M, 2016[5]) http://dx.doi.org/10.1787/9789264239517-graph62-en.

6.   Taken together, these findings have raised deep concerns among global health policy makers and reinforced the urgent need to introduce appropriate policies to ease the strain on the health workers and help them make the transition to new models of care. These concerns were articulated at the 2017 meeting of the OECD Health Ministers[3], who called for "a transformative agenda for the health workforce, assessing health professional skills, remuneration and co-ordination, and how these skills and models of care need to adapt in light of digitalisation, wider technological changes, and the evolution of patients' needs."

1.2. Objective

7.   In the coming years, countries will need resilient and resourceful health workers who are not only equipped with biomedical knowledge and skills but will also possess self-awareness and inter-personal skills that will help them work safely in a changing, complex, and stressful workplace. This paper discusses transversal (core) skills that are required by health professionals working in a people-centred health system. Transversal skills (also referred to as "soft" or "core" skills) are the cornerstone for the personal development of a worker, and are the building blocks for the development of the job-specific specialised skills. This paper is aimed at policy makers concerned with designing better skills policies and developing a systematic approach to evaluating health workforce skills that will enable them to function effectively in integrated and people-centred models of care.

8.   The paper presents a systematic approach to identifying transversal (core) skills that are required by health professionals working in a people-centred care system. The first section discusses the unique challenge of defining a common competency framework across multiple categories of health professionals who work in very diverse healthcare settings. Building on the emerging convergence of competency requirements observed across major categories of health professionals, we propose a common

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[3] The OECD Health Ministerial Meeting held in Paris in January 2017.

competency framework, which could be used to foster collaboration across professional groups and encourage the development of multi-disciplinary care teams.

9.　　　In the following section, we describe a set of crosscutting or "transversal" skills that underpin the competency framework.　These transversal skills represent a set of commonly shared skills across all categories of health professionals and are distinct from job-specific specialised skills, which will remain an essential component of all health professional training.　Transversal skills will prepare the health professionals to be resilient and adaptive in an ever-changing and uncertain workplace.

10.　　　Finally, we provide a brief overview of skills assessment tools and methods that could be used to evaluate the effectiveness of health workforce policies. The section summarises the current state of skills assessment in the health sector and presents different options for measuring health workforce skills at individual and institutional levels. For a more detailed discussion on the skills assessment tools and methods, readers are referred to the companion technical paper, "Feasibility Study on Health Workforce Skills Assessment: Supporting Health Workers Achieve Person-Centred Care" (OECD, 2018a[7]).

2. Shared Competency Framework for Health Professionals

2.1. Convergence of Competency Frameworks

11.   Competency frameworks are generally used to structure and guide the education and learning objectives of the student and to ensure that the graduates are fit to practise in their respective fields. In most OECD countries, health professionals operate in a system where their roles and functions are largely defined by their professional categories. For this reason, competency frameworks are usually produced and endorsed by the professional bodies and are used to enforce professional and regulatory standards. Competency frameworks are also being used to promote a new approach to education, which emphasises skills for *life-long learning* and is structured to assess progression through a career beyond the initial qualification.

12.   In the health sector, jobs are deeply segmented by professions with high barriers for moving from one professional group to another, and career progression is generally expected to occur within the same professional category. However, with the proliferation of new models of care delivery and the emergence of new roles and functions, there is a need for a more flexible and inclusive competency framework that will help health professionals gauge their skills in the context of a broader healthcare team setting. This approach would also allow health professionals map their career progression beyond the roles and functions defined by their current professional category.

13.   In addition, some efforts are being made to establish an international competency framework among various health professionals, including medicine, nursing and pharmaceutical professionals. A number of factors present significant barriers to these efforts, including the wide country variations in the scope of practice assigned to each professional group, which makes it difficult to compare competencies by professional groups across national borders. For example, nurses can prescribe medicines in some of the countries but not in others. Second, there is often more than one regulatory body for the profession in a given country, creating a multiplicity of frameworks even within the same country, imposing another level of consultation in reaching consensus on competency norms and standards. On the other hand, the increasing mobility of health workforce and globalisation of healthcare, e.g., through digitalisation of care and use of telemedicine, are giving new impetus to developing a common framework across national borders.

14.   Initial efforts at the international level have focused on finding ways to develop common frameworks for education institutions. While global competency frameworks for physicians do not exist yet, efforts are underway to harmonize competency frameworks for physicians across several countries. Mobility of physicians across national borders is creating greater interest in developing a harmonized framework. The World Federation of Medical Education (WFME) is one of the leaders in this respect by establishing a global competency framework for medicine. These examples point to an increasing coordination and cooperation among countries and professional groups at an international level. Box 2.1, below summarises the findings from a literature review of competency frameworks developed by different categories of health professionals (OECD, 2018a[7]). The study found a significant convergence of competency framework approaches across these very diverse groups of professionals.

Box 2.1. A review of existing health professional competency frameworks

One of the most influential and often referenced competency framework for physicians has been the Royal College of Physicians and Surgeons of Canada (CanMEDS) framework. This may be a result of its clear structure and accessible, well-organised literature. Germany directly modelled its framework on the CanMEDS model, and CanMEDS has additionally influenced the Australian frameworks. UK's "Good Medical Practice" and "Tomorrow's Doctors" approaches have also had significant influence.

The International Pharmaceutical Federation (FIP) has launched an education initiative to develop a global competency framework and education strategy for pharmacists (International Pharmaceutical Federation, 2012). The FIP global competency framework takes a more expansive view of occupational domains, possibly reflecting the greater variability and range of tasks undertaken by pharmacists.

The International Council of Nurses (ICN) offers a set of guides on clinical interventions and International Classification of Nurses, but currently there is no global framework for nurse competences or nurse skills. Regional frameworks are available at the European level (European Federation of Nurses Associations, 2015; European Federation of Nurses Associations, 2017), as the European Union has regulations regarding basic training and competences for nurses to facilitate nurse mobility and qualification recognition among EU countries (Directive 2013/55/EU).

In the United States, the National Council for State Boards of Nursing is working toward greater harmonization of nursing regulations not only among the USA states, but across some provinces in Canada and states of Mexico. In addition to labour mobility, the introduction of telemedicine is spurring greater harmonization of nursing regulation across jurisdictions.

For the dental profession, the Association of Canadian Faculties of Dentistry (ACFD, 2016) and the UK Committee of Postgraduate Dental Deans and Directors (COPDEND, 2015) are developing new frameworks for defining competencies and guiding training curriculum in dental programs. These competency frameworks for dental professionals share many of the elements found in other health professional groups and underscore the criticality of dental health as part of physical and psycho-social well-being of the population.

Source: (OECD, 2018a[7]).

15.   The movement toward integrated and people-centred care is motivating different groups of health professionals to come together to develop more coordinated and collaborative models of care. The starting point is to recognise that in today's multi-disciplinary workplace, all members of the care team would share the common goals and values of people-centred care. The challenge is whether it would be possible to develop a generalizable competency framework - encompassing all major health professional groups - that is flexible enough to allow new categories of health workers to be included and robust enough to cover the core skills in a diverse group of professionals. To encourage this process, we propose below a competency framework for health professionals that could be used to start the dialogue. The framework is not intended to be a final solution, but an initial proposal designed to stimulate discussions among professionals and to involve other key stakeholders, including national policy makers and patient groups, to participate in the discussion.

## 2.2. Defining Competency Domains for Health Professionals

16.   Competency frameworks help to define areas of focus based on the set of tasks and responsibilities included in the professional scope of practise, implying the skills needed.   These competency frameworks generally identify five to ten core domains for their professional group, accompanied by a list of indicator skills as examples of performance in each domain.   A common competency framework encompassing all the major categories of health professionals is proposed below. This framework envisages major domains or areas of focus that are necessary for people-centred care and is particularly targeted for use by multi-disciplinary teams managing complex "whole person" care (Figure 2.1).

17.   The domain "Patient Focus" refers to the more traditional focus of healthcare, which involves competencies for providing safe and effective clinical services, including patient assessment, care planning and treatment. The domain of "Practice Focus" refers to competencies in handling ethically difficult issues and understanding the professional standards of conduct as well as knowledge of legal and regulatory context in which these standards are to be interpreted and upheld.   This is an area requiring more attention to developing professional competencies as technological advances and emphasis on people-centred and personalised care raise new challenges and push the boundaries of ethical and moral standards.

18.   "Management and Organisation Focus" recognises that healthcare is no longer a solo operation and demands professionals with considerable skills and knowledge to develop and implement complex work processes and collaborate with diverse and multi-disciplinary teams. The domain for "Social and Population Focus" is an area that is expected to grow with the expansion of people-centred care, which demands much greater knowledge and skills in handling difficult social issues and better understanding of the community, environment and other aspects affecting the health and well-being of the patients and their families.

19.   Reference is made to competency domains for Education and Research. These domains are not part of direct patient care but are critical competency areas for ensuring quality and safety in all aspects of healthcare, which requires continuous discovery, evaluation and improvement. These skills are needed in the larger teams who support the work of health professionals engaged directly with patient care. Health professionals would be expected to have some level of competencies in all these domains. Over the course of a career, some may choose to specialise and achieve higher levels of competency in one or more of these domains.

Figure 2.1. Competency framework: domains of competencies for health professionals
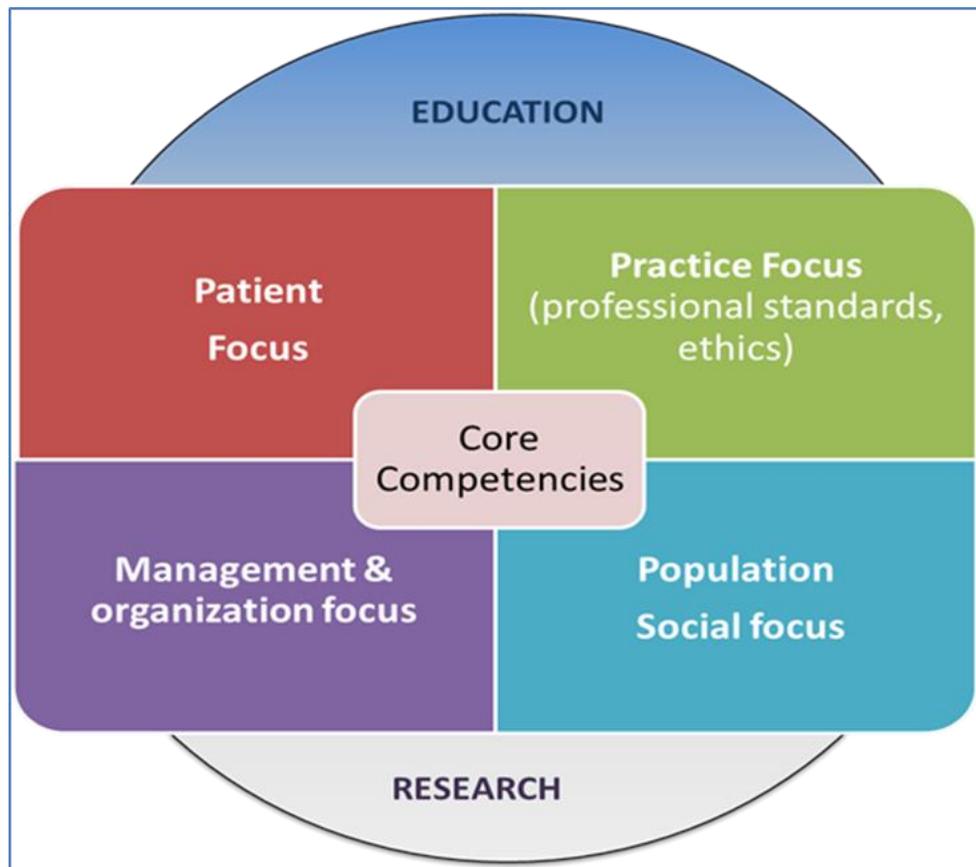
Source: Based on the framework proposed by the International Pharmaceutical Federation (FIP, 2012[8]).

3. Transversal Skills for People-Centred Care

3.1. Identifying transversal skills for people-centred care

20.   Health professionals are trained and equipped with specialised knowledge and skills for handling well-specified clinical functions and these remain the primary focus of professional education institutions and regulatory bodies. At the same time, there is a growing recognition of the importance of common functions and skills, such as teamwork and communication, that are shared across all categories of health professionals (Braithwaite et al., 2012[9]; Braithwaite and Lamprell, 2013[10]). An integrated and people-centred model of care may involve a multi-disciplinary team composed of members such as community pharmacists, physician assistants, social workers, housing specialists, and physiotherapists. Through the greater sharing of functions and collaboration across professional boundaries, there is a convergence of crosscutting "transversal" skills that underpin the effective operation of these multi-disciplinary teams.

Figure 3.1. Transversal skills required for integrated and people-centred care
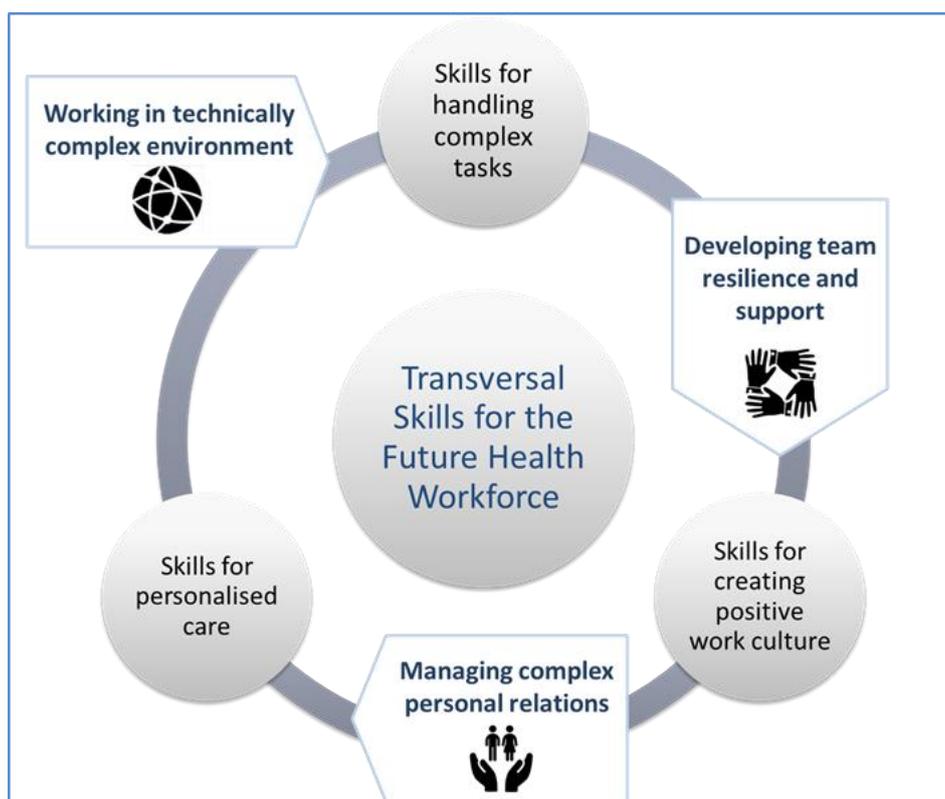
21.   A recent OECD study on health workforce skills reviewed examples from various healthcare contexts and compiled a list of important transversal skills required to implement integrated and people-centred models of care.   Based on these reviews, the study organised transversal skills into three broad

categories: (i) skills for managing people-centred care; (ii) skills for managing complex tasks; and (ii) skills for creating positive work culture (OECD, 2018a[7]). Figure 3.1 illustrates schematically the inter-relationship among these skills. These sets of skills are not mutually exclusive, and they overlap in many cases. As health systems evolve, the skills profile of the health workforce will also continue to evolve over time.

3.2. Skills for people-centred communication and collaboration

22.   People-centred care will involve close collaboration between the patient and health professionals in all aspects of treatment planning and implementation that take into account patient preferences in terms of health outcomes, social values, and personal goals (Kon et al., 2016[11]). Training in inter-personal skills is gaining attention but these topics tend to be presented in the abstract and not necessarily as an integral part of clinical protocol or practice. Outside the health sector, innovative firms are adopting the concept of "Human Centred Design", using evidence from behavioural sciences and rigorous testing, in which psychological responses are incorporated explicitly into the technical design of products. Kaiser Permanente (USA) has been one of the early adapters in the health sector and has been developing training programmes in quality improvement that embeds predicted emotional responses of both patients and health workers into critical points in the clinical pathways (Kachirskaia, Mate, & Neuwirth, 2018). Initial results show promise of significantly improving service outcomes as well as patient and health worker experience. To support the transition of healthcare toward these goals, a health professional will require a multiplicity of closely inter-related inter-personal skills. They include more sophisticated *communication* skills that incorporate new findings from behavioural sciences as well as the discipline and skills to engage patients and other members of the care team in *shared decision making*. The broadening of the scope of practice from disease-specific to whole-person care calls for skills in *interprofessional collaboration.* Finally, in an increasingly diverse and multi-cultural context, *socio-cultural competencies* are becoming essential for effective communication between people belonging to different social, cultural, and age groups.

3.2.1. Person-centred communication

23.   In a typical healthcare setting, communication with patients takes a form of a *provider-centred* interview with a patient focused on the chief medical complaint. In people-centred models of care, it is necessary to include the ability to engage the patient (and family/carers) through person-centred communication. The latter expands the attention to the patient's personal and social context to inform the choice of the most suitable intervention. Effective person-centred communication allows for identifying a solution that both preserves the patients' health and recognises their other life goals (Institute for Healthcare Improvement, 2017[12]).

24.   Delivering effective interventions might require eliciting information on sensitive aspects such as a patient's unmet social needs. Indeed, patients are often reluctant to assert all their concerns as a result of long-standing cultural norms and authority imbalance between the patient and health professionals (Box 3.1). Through person-centred communication, these socially sanctioned roles of patients and clinicians can be re-envisioned and both parties can feel safe in communicating with each other in a context of mutual trust (Berry et al., 2017[13]).

> **Box 3.1. Communication about patient's personal and social context**
>
> Shortage of health professionals skilled in person-centred communication may contribute to misdiagnosis and diminished well-being, which can result in delivery of low-value care, waste of resources, and frustration among health professionals. A case that illustrates this problem involves a 67 years old patient with a long list of symptoms such as severe back pain, lack of sleep, and fragile mental state. The main cause of these problems could be traced back to the fact that the patient had been sleeping in a bathtub after two of her married children moved back in with her due to financial constraints. The patient ended up with a considerable number of return visits to primary care providers, which resulted in prescription of antidepressant medication, sleeping pills, and ultimately enrolment in a programme for people with complex medical problems. Only after a community liaison mental health nurse visited the patient's home was the extent of the difficult social circumstances revealed. Subsequently, a referral was made to a housing department and arrangements made for a financial grant to buy a single bed. The patient's condition improved significantly after this intervention.
>
> Source: Authors' personal communications with Frances Hughes, CEO of International Council of Nurses, August 2017.

25.   Building trust in interaction between the provider and the patients has other potential benefits to the health system. There is some evidence to show that positive doctor-patient relationships characterised by empathy and good communication can lead to increased patient and doctor satisfaction and decreased litigation and claims against the provider (Mikesell, 2013[14]). This would benefit not only the doctors who will face fewer financial and emotional stress related to the litigation, but it will be of interest to the payer organisations who must also bear the consequences of higher cost of care. From this perspective, it is noteworthy to find that this topic is under active research by a medical insurance agency.[4]

3.2.2. Shared decision-making

26.   Essential to people-centred care is the collaborative process between the patient (and their family/carer) and healthcare providers in making treatment decisions together, taking into account the best scientific evidence available, as well as the person's social context, values, goals, and preferences (Kon et al., 2016[11]) (Tulsky et al., 2017[15]). In certain clinical contexts, when a straightforward choice can be made, such as a decision about elective surgery, it could be argued that all that is needed is adequate information and consent of a patient. Yet, in most cases, care that a person seeks does not consist of a series of easily defined "take-it-or-leave-it" choices but is a process of understanding between the person and providers developed and deepened through dialogue and interaction (Lehman, 2017[16]).

27.   Shared decision-making starts with a patient (or family/carer) and a health professional (or a team) reaching a common understanding of the reasons help is being sought and the outcomes that are most important to the patient. This is followed by an exchange of knowledge made relevant and understandable to the patient (Lehman, 2017[16]). Box 3.2 provides an example of a situation that calls for shared decision-making.

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[4] This topic has been under investigation by Avant Mutual (Australia) under the Project Title: Understanding risk characteristics associated with medico-legal claims outcomes (Yee et al., 2017[37]).

Box 3.2. The importance of shared decision making for people-centred care

Shared decision-making helps to ensure that patients receive care consistent with their goals. For example, a woman in her 80s had experienced a heart attack. In addition, she has chronic kidney disease and type-2 diabetes, but she is still able to care for herself. She qualifies for coronary artery bypass grafting, with an estimated 20% perioperative risk of death (death in relation to the surgery, most frequently defined as death within 24 hours or alternatively within up to 30 days of a surgical procedure). The surgery would also make her dependent on long-term care or nursing home care, at least for a while. The patient is a widow and lives alone in a farmhouse where she was born and spent almost all her life. She does not fear death but leaving the farm and losing her independence are anathema to her. Together, the patient and her physician decide that she would forego the surgery and return home.

Source: (Cenci, 2016[17]).

3.2.3. Interprofessional collaboration

28.   Breaking down the professional silos has been one of the most challenging aspect of building multi-disciplinary teams for people-centred care. Most health workers receive their pre-service education among professional peers and do not have many opportunities for inter-professional learning even within healthcare, let alone across different disciplines such as social and long-term care. To be effective as a multi-disciplinary team, individual members will need to have a common understanding about the team's goals, acknowledge and accept the contributions of other team members, and be able to adapt their own professional identity to complement those of the other team members.

29.   Each health professional group has their unique professional cultures that include attitudes and beliefs about the roles of other health personnel. Effectiveness of interprofessional collaboration depends on whether professionals belonging to the different groups are aware of these differences and can make an objective assessment of their own perspectives and biases in the interactions with others. The case of a patient with polypharmacy (Box 3.3) illustrates importance of interprofessional collaboration between pharmacists and clinicians to ensure that optimal care is achieved.

Box 3.3. Importance of interprofessional collaboration between pharmacist and prescribing clinician

Patient seen in a community pharmacy is an eighty-two year old female currently being appropriately treated by her family physician for congestive heart failure, glaucoma, hypertension, and osteoarthritis. She has just had an appointment with a new orthopaedic physician where she complained of persistent arthritic pain in her knee. The physician prescribed an NSAID (non-steroid anti-inflammatory drug) for pain and inflammation. From the orthopaedic standpoint, prescription of NSAID is a good practice. However, from a cardiac standpoint, this is a risky approach due to the potential side effects of NSAIDs, which can be dangerous for an individual of this age. Pharmacists possess knowledge needed to issue a recommendation to the prescribing physician such that the patient's outcome is optimised. Yet, whether and how well the pharmacists and the prescribing clinician manage to resolve the problem depends on

their attitudes towards, and skills in, collaborative interprofessional patient care, as well as the system context that would support such a collaboration.

Source: Authors' personal communications with Alex Berland, School of Population and Public Health, The University of British Columbia, Canada.

3.2.4. Socio-cultural competency

30.   Socio-cultural competency is the ability to learn about, understand and accept the importance of variations in cultural norms, and to apply this knowledge to overcome cultural barriers in providing people-centred care (Saha, Beach and Cooper, 2008[18]). The need for socio-cultural competency is rising as societies embrace greater cultural diversity and global labour mobility brings together people from many different cultures. To provide people-centred care to people from diverse cultural backgrounds, health professionals will need to recognise the cultural perspective of the person as well as their own cultural perception and values that they bring to the encounter.   For example, in Canada complaints about discrimination towards Aboriginal patients have led to compulsory training in "cultural safety" (O'Sullivan, 2013). Such training programmes help prepare health workers to anticipate how patients and the health workers themselves may react psychologically to the treatment experience. Only then will both parties be able to negotiate, build trust and come to an understanding on a mutually agreed treatment plan (Box 3.4).

Box 3.4. The challenges of variations in cultural norms to health care delivery

Patient seen in hospital oncology ward is a 65-year-old female admitted two days ago with pancreatic cancer. She had emigrated from China with her husband 45 years ago, speaks English poorly and prefers to communicate in Chinese. Her two children take turns staying at the bedside and appear overwhelmed by her hospitalization. Although the room is warm, the patient is wearing several layers of clothing. From her grimaces and groans, she is obviously experiencing pain but when asked by the hospital staff, she states that she is "OK." Her son asks the attending doctor or nurse why his mother is not receiving analgesia because she is clearly uncomfortable. There are several bottles on the patient's bedside table, which the son explains are traditional Chinese medicine, which the patient wishes to use alongside the Western treatment. This is a complex situation involving many players with different cultural norms and expectations, and it calls for a team with considerable communication skills and socio-cultural sensitivity.

Source: Authors' personal communications with Alex Berland, School of Population and Public Health, The University of British Columbia, Canada.

3.3. Skills for managing complex tasks

31.   Health professionals deal with increasingly complex tasks in an environment fraught with uncertainty and constant change due to advances in technology as well as changes in the rules and standards of healthcare. Consequently, skills in *adaptive problem-solving* as well as general *health system awareness* are crucial for sustaining a career in healthcare. Furthermore, in this complex environment *skills for effective use of digital tools* are required to support communication with patients and other healthcare providers, and increasingly to facilitate and document teamwork and other forms of distance interprofessional collaboration. Health sector has started to make use of digital technology also to analyse the data generated in the sector to, for example, better adapt services to the people's health needs and preferences. Moreover, emerging digital tools based on Big Data and developments in artificial intelligence (AI) – notably, deep learning – offer a promise of customised decision support for clinicians and creating "learning health systems", in which knowledge contained in the diagnoses and decisions made by nearly

all clinicians and the respective patient outcomes inform the care of each individual patient. This strategic orientation to harness health data requires building the health workforce capacity to put the digital tools to work effectively and safely.

3.3.1. Adaptive problem-solving skills

32.   The transition to people-centred models of care puts an emphasis on the importance of skills in adaptive problem solving[5]. For example, the development of a person-centred treatment and care plan requires the ability to flexibly adapt available options and arrangements to each person's context, values, and preferences. It means that the development of a treatment and care plan becomes much more case or context dependent and might include problems for which no guideline-based solutions exist. Taking the example of a prevalent problem such as poor adherence to medicines helps to illustrate the importance of skills in adaptive problem solving. A recent OECD study estimates that as much as 75% of patients do not take their medicines as recommended by the prescribing clinician (OECD, 2018b[19]). The complexity of uncovering the underlying cause of poor medication adherence and the challenges of finding person-centred solutions are illustrated in Box 3.5.

Box 3.5. Importance of skills in adaptive problem solving for people-centred care

Three chronic patients do not take their medication on a regular basis and as a result, they are not controlling their illness. The reasons behind the problem vary significantly from patient to patient. The first patient frequently misses doses of her medicine, because she has multiple work duties and she finds it hard to incorporate taking her osteoporosis medication into her daily routine. In her case, a simplified once-a-month dosage regimen is available and, if prescribed, could solve the problem. The second patient is a retiree – also suffering from osteoporosis - and has been prescribed the once-a-month dosage regimen, which he, nevertheless, completely forgets due to its infrequency. Indeed, the patient would prefer daily regimen because that would help him establish a routine. The third patient takes his hypertension medicine irregularly, because he is overwhelmed with the care of his seriously ill wife, with no assistance from anyone else. In this case, a solution lies outside of the scope of healthcare and will require broader perspective on the patient's social needs and conditions to improve medication adherence, such as finding a support group of informal caregivers or by deploying community resources. These examples illustrate the complexity of the problems faced daily by the health professionals, and the resourcefulness required to find solutions.

Source: (OECD, 2018b[19]).

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33.   A particularly important dimension of problem solving in the context of people-centred care is the capacity for *collaborative problem solving* in multi-disciplinary settings. Although inter-professional education is frequently thought as essential for preparing health professionals to function in multi-disciplinary team settings, education and training of most health professionals follow the long tradition of segmenting students and trainees by professional groups and specialties. In the general education sector, however, a major reform is underway that could augur similar changes in the health sector. In the latest

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[5] Adaptive problem solving refers to an individuals' capacity to flexibly and dynamically adapt their problem solving strategies to the environment in which they operate, identify and select among a range of available resources, highlighting the centrality of a reflexive, flexible, and adaptive mind. Adaptive problem solving takes place at the interface between the internal, mental world of the problem solver and the external world that makes information available in the physical, social, and digital environment that can be used as problem solving resources.

round of Programme on International Student Assessment (PISA 2015), the OECD evaluated the ability of 15-year-old students from 52 countries and economies to engage in collaborative problem solving (OECD, 2017). The implementation of the survey reflects growing international recognition of the value of collaborative problem-solving skills for the future workforce. Countries such as Finland[6] are leading the way in introducing general education reforms that promote cross-curricular or "transversal" skills that involves collaborative problem-solving across the boundaries of individual subjects. A new generation of graduates from these systems will likely be better prepared to work in inter-professional teams and they may help to accelerate the pace of education reforms for the health professionals.

3.3.2. Health system awareness and systems thinking

34.   For successful transition to people-centred and interprofessional team-based models of care, health professionals would benefit from having a broad health system awareness beyond the boundaries set by their immediate workplace. The systems thinking will be needed in guiding patients in their journey through the health system (the right treatment, at the right time, and from the right provider). As noted in the section on competency framework (Section 2.), systems thinking will also help the health professionals in their own professional development process and guide them in mapping out a long-term career development strategy.

3.3.3. eHealth skills

35.   Health professionals will need to be proficient in using various forms of information technology in their daily practice to benefit from technological advances. In the context of people-centred care, ICT skills become even more crucial as a means for sharing and communicating information across multi-disciplinary teams. The application of patient-reported outcomes in mobile apps or other digital platforms enable patients to become more engaged in their own care. The relevant skills include not only technical proficiency with the use of ICT programmes and devices, but communication skills that are peculiar to exchanges conducted on different forms of digital media. The process of shared decision making with the patient and other health professionals may differ between digital and face-to-face communication. The health professional will also need to have a firm understanding of the ethical dimension of digital communication, such as how to manage privacy and confidentiality of information in a team setting.

36.   Furthermore, as automation and digital technologies employing Big Data integrate into health services, the mix of digitals skills will need to include also foundational level of understanding how the data employed by digital tools is collected, analysed, and how the algorithms powering the digital tools use the data to produce information. These skills should not be tied to any specific technology but allow health workers to exploit digital tools and data to improve care and fully partner with patients. These skills should also help them understand and tackle problems such as automation bias (favouring suggestions made by automated systems and ignoring other sources of information) as well as the inherent limitations of data (OECD, 2019[20]).

3.4. Skills for supporting positive work culture

37.   The ongoing system changes are placing enormous strains on the health workforce, and reducing "burnout" rates is a priority concern among all categories of health professionals (Dyrbye et al., 2017[3]). In addition, moving away from managing discrete diseases towards what matters most to each patient can give rise to new kinds of professional and ethical dilemmas. Hence, skills in *effective stress and fatigue management* as well as skills related to maintaining *professional standards and ethics*, such as identifying

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[6] Under its new National Curriculum Framework 2016 (NCF), Finland emphasizes the importance of a multi-disciplinary approach to education and introduces the concept of "phenomenon-based" teaching, which will result in classes on broader topics such as climate change and community to complement subject-based classes.

and resolving ethical dilemmas, are vital for sustaining positive work culture. Similarly, mind-sets for *continuous learning and practice quality improvement* are essential for facing challenges posed by the ongoing evolution of population health needs and the corresponding changes in health care delivery system. *Mentoring and teaching* skills are important for shaping positive work culture since they influence how well young health professionals are prepared for their practice.

3.4.1. Stress and fatigue management for occupational safety and health

38.   Health professionals are at a high risk of burnout and stress-related health problems. Engaging with patients and practicing collaboratively might improve patients' outcomes, thus enhancing the meaning of work and increasing work satisfaction of health professionals, it can lead to stressful work situations. Health professionals could become exposed to personal conflicts between patients and their families or among health care team members. Skills in stress and fatigue management can help the workers mitigate some of its worst effects and reduce the likelihood of burnout and related health problems. Examples of such skills include the ability to recognise stress and control one's emotional response, initiate communication with other members of the team about stress and fatigue and analyse the problem with peers and supervisors. Indeed, teamwork is an essential element of effective stress and fatigue management and all the team members need to share skills in recognising when their colleagues are challenged and extending support.

3.4.2. Professional standards & ethics

39.   Ethically challenging situations are commonplace in health care, and skills in identifying and addressing ethical issues are central to health professionals. Moving beyond treatment of discrete diseases to managing a "whole person" care is giving rise to new kinds of professional and ethical dilemma. In complex ethical situations, two mutually exclusive options can emerge from a single ethical principle, e.g. the principle of beneficence directing the physician to perform procedures that minimise patient's discomfort can give rise to two different yet equally compelling options.

40.   The scenario described in Box 3.6 illustrates such a case with two different options: to proceed with ventilation which will provide immediate relief to the patient by easing his breathing, or abstain from ventilation to give the patient some chance at living what is left of his life, however limited, with dignity. The decision process will likely involve multiple steps and require great sensitivity in communicating with the patient and his family, listening to their preferences, weighing all the options and explaining the consequences, and arriving at an agreement through shared decision-making. Preparing the health workers to manage these types of scenarios will help reduce uncertainty and stress, and will likely improve patient experience.

Box 3.6. Complex ethical situations - end of life in hospital setting

A patient seen in a hospital Emergency Department (ED) is a 60 year-old male with chronic bronchitis, hospitalised three times in the past year and who on the last occasion was ventilated. Since then, he has been unable to walk outside his home, due to his shortness of breath. The patient accepted that situation but could not imagine living with a further deterioration of his state of health. His main fear has been that if he is ventilated again, he would never get off the ventilator. Now, he is presenting at the ED with severe respiratory difficulty that could warrant ventilation. What would the principle of minimising harm dictate in this situation?

Source: Authors' personal communications with Alex Berland, School of Population and Public Health, The University of British Columbia, Canada.

3.4.3. Mentoring and teaching

41.   Most health professionals perform dual roles as care providers as well as mentors and teachers, since so much of the craft of healthcare can only be learned through face-to-face interactions and hands-on experience. Thus, their ability to practice the people-centred and interprofessional models of care needs to be accompanied by an ability to effectively transfer their knowledge and skills to others. Recalling the above-described scenarios of various patient encounters and problems, a health professional who successfully manages to resolve them, should also be able to provide guidance/training to others on how to achieve such outcomes. For example, teachers and mentors need to be able to equip others with skills in interpreting patients' narratives for improved diagnosis and treatment planning (Cenci, 2016[17]). Mentoring and teaching skills also go hand-in-hand with continuous learning skills, discussed below.

3.4.4. Life-long learning and quality improvement

42.   Unlike their predecessors, future health professionals will need to be much more prepared for a life-long learning process that will likely take them through many changes in professional roles and functions throughout their career, as the pace of healthcare reform is expected to accelerate due to new scientific discoveries, technological innovations and changing population expectations. Maintaining flexibility and being open to new ideas will become essential characteristics to remain in active workforce. Translating knowledge into continuous quality improvement of care will be another dimension of the continuous learning process. Learning activities will need to be embedded in regular work activity and not confined to periodic training courses in order to build ability to apply the tools of quality improvement science to ameliorate the immediate work environment and contribute to longer-term systems improvement (Hockey and Marshall, 2009[21]). Successful quality improvement process also requires routine collaboration between managers and front-line workers, and depends heavily on teamwork and shared decision-making. Team leaders need to be able to inspire, encourage and empower all the team members to identify and implement improvements.

# 4. Measuring Skills for People-Centred Care

43.   The sheer complexity of work performed by health professionals makes assessment of their skills a particularly daunting task. This section describes this and other challenges in designing a skills assessment strategy that will not only generate information on the competency of individual health professionals but will also provide *policy relevant* and *system-level* evidence on how health workforce skills affect the overall quality of care and patient experience.

44.   Finding meaningful linkage between transversal skills identified in Section 3, above, with actual service performance indicators will be an important goal for informing policies that will raise the performance of the entire patient care teams. For example, there is growing evidence of the positive impact that improved communication skills of health workers have on patient reported outcomes (Costa et al., 2015[22]). Designing survey questionnaires based on realistic patient scenarios demonstrating the effects of specific skills on patient outcomes will enable evaluation of those skills against important health system performance measures.

45.   It will be important to identify other external factors that can influence the workers' ability to use their skills effectively in actual work setting. Figure 4.1 illustrates the system-level policy levers, which have an impact on the skills of the health workers as well as on the use of skills in actual care delivery settings. A well-qualified and highly skilled professional might perform poorly for a variety of reasons, e.g., a poorly designed work process, which misallocates tasks to the wrong staff, or budget cutbacks that restrict the amount of time that is allowed for care of each patient. Such systems-related shortcomings could be reported as a problem of skills mismatch, but in this case, no amount of additional training or education of the worker will solve the problem.

46.   The following section will first describe the different tools and approaches used to assess the skills of individual workers and then, discuss the advantages and disadvantages of each approach. Skills of individual workers can be assessed through either self-reporting surveys or direct assessment tools, or a combination of both. These two types of skills assessment tools have different advantages and disadvantages: self-reporting surveys carry an inherent risk of "social-desirability response" bias but are relatively easy to apply, are less intrusive for the worker, and involve lower costs for administration. Direct assessment tools include observational methods and tests using multiple-choice or open-ended response questions related to a scenario-based task. Direct assessment tools have the potential to deliver a more objective assessment of skills but are relatively more complex in design as well as expensive to administer and update. They are, however, the only instruments available that can evaluate skills involving higher-order cognitive constructs such as adaptive problem solving.

Figure 4.1. Health system context for skills assessment
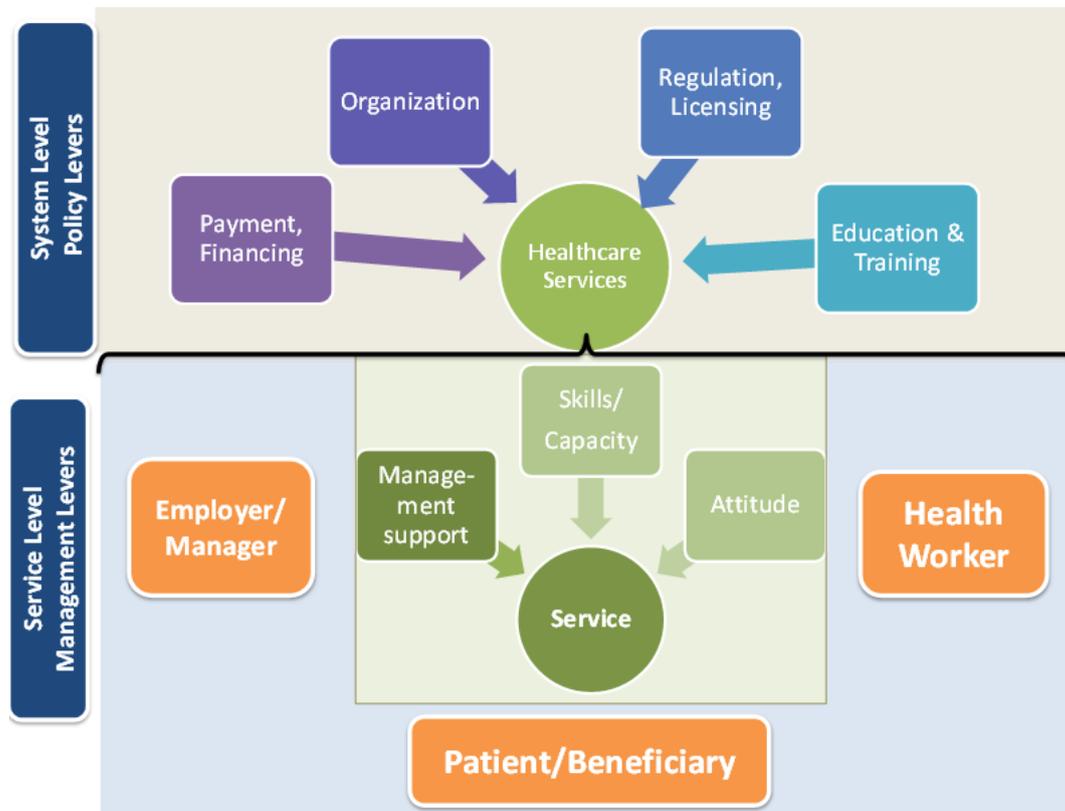
47.   The final section delineates a study design that will allow for relating individual skills with organisational and system level performance. This involves a more complex research agenda that will require collaboration across multiple stakeholders and clarity of vision on the direction of the system reform. From the study design perspective, this could be achieved through careful consideration of the sampling framework and better coordination with other ongoing health system surveys.

4.1. Self-reporting tools

48.   Many of the recent self-reporting skills assessment instruments have been developed by healthcare organisations that are pioneering efforts to move away from the disease-specific models of care and to promote people-centred and interprofessional team-based models. In making these transition efforts, these organisations frequently faced challenges in recruiting professionals with appropriate transversal skills (The Commonwealth Fund, 2016[23]). In order to address these problems, new training sessions have been developed along with suitable pre- and post-training skills assessment tools to assist monitoring of progress and provide feedback to the participating professionals. They are helping to fill the gaps in the assessment of various transversal skills, which have tended to be given a secondary place in the educational curricula relative to the assessment of clinical skills (Jepsen, Ostergaard and Dieckmann, 2015[24]).

49.   As a result of these efforts, there is now a considerable repository of material and methods for the development of transversal skills assessment. They include tools for assessing skills sets related to teamwork/shared leadership and interprofessional collaboration, shared decision-making, person-centred communication, socio-cultural competencies, occupational health and safety, and continuous learning. Many of the instruments developed by different groups of health professionals converge, as discussed

above, and are being shared across different professional groups. For example, instruments used to assess the level of cultural competency among physicians have subsequently been used to assess the same skill sets among pharmacists, requiring only moderate modifications (Okoro et al., 2012[25]). This confirms the universal importance of these skills among the front-line health workforce as well as the potential to design a unique instrument for assessment of transversal skills across different categories of professionals.

50.   Self-reporting instruments assessing health system awareness and skill sets for ICT are relatively less well developed. There exist examples of overview surveys aiming to establish the state of knowledge about general health system arrangements or existing ICT tools (including eHealth and mHealth) and demand for related training among various professionals. These overview surveys are usually carried out by national professional associations. Moreover, the European Commission's EU Digital Agenda for Change has developed a survey "Benchmarking Deployment of eHealth among General Practitioners (GPs)", which details the technical skills that the GPs possess with regard to IT systems for health (European Commission, 2013[26]). These surveys offer useful background material for development of the international ICT skills assessment tool.

51.   Self-reporting tools carry an inherent risk of social-desirability response bias by respondents. A number of studies suggest that the results of self-reported surveys can be made more robust when they are combined with other aspects of skills, such as attitudes toward the skills use (Cowan et al., 2008[27]). Therefore, respondents are usually asked first to report on their attitudes towards certain behaviours or tasks by indicting their level of agreement with proposed statements (using Likert scale). For example, one of the surveys measuring attitudes towards patient involvement includes the statements shown in Table 1, below (Agency for Healthcare Research and Quality, 2017). After answering such questions regarding their own attitudes, respondents are asked to report on their self-perceived level of skills (self-efficacy) in performing given tasks, using a scale with a detailed description of each skills level.

Table 1. Questionnaire on attitudes toward patient involvement

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
It is important to ask patients and their families for feedback regarding patient care.	O	O	O	O	O
Patients are a critical component of the care team.	O	O	O	O	O
Adverse events may be reduced by maintaining an information exchange with patients and their families.	O	O	O	O	O

Source: Agency for Healthcare Research and Quality, Rockville, MD, Teamwork Attitudes Questionnaire (T-TAQ), Content last reviewed April 2017. http://www.ahrq.gov/teamstepps/instructor/reference/teamattitude.html

52.   Another approach to limiting the risk of bias in self-reporting skills assessment tools is to make the questions case-specific, i.e. rely on a detailed scenario describing the context and the patient with whom the professional is interacting. The use of scenarios/vignettes will help professionals to better define the context of behavioural performance and formulate their intentions and opinions more accurately. Consequently, the validity of the self-reporting tools to assess healthcare professionals' skills can be strengthened and the findings can be made more policy relevant through these survey design enhancements.

4.2. Direct assessment tools

53.   Direct assessment tools have the potential to deliver more objective assessment of skills than the self-reporting tools but are more complex and expensive to implement. Direct assessment methods carry their own risk of bias, so it is critical to control for biases and unfairness in scoring under these methods (Jepsen, Ostergaard and Dieckmann, 2015[24]). Tools for direct assessment of skills take the form of *examinations* or *tests* performed by respondents in the presence of trained interviewers or "raters", and *direct observations* of actual performance by trained observers.

4.2.1. Direct skills assessment based on examination

54.   Skills such as complex problem solving cannot be measured with observational tools because the respondent's internal cognitive processes are not directly observable. The most suitable tools currently available for assessing these skills are direct examinations or tests using a series of multiple-choice or open-ended response questions related to a scenario-based task. The design of the test items and the scenario-based tasks is focused less on evaluating the mastery of certain contents and more on the ability to use information provided by the examiner to find solutions in a variety of real-world situations. The test items are organised in sequence by growing complexity, and the respondent will work through the problem according to their capacity. The results are evaluated in terms of the level of complexity that the respondent was able to tackle, but there is no threshold that separates those who have the competency in question from those who do not (OECD, 2012[28]). The fact that the tests assess, among others, the ability to use certain tools to perform information-processing tasks makes these instruments particularly suitable for assessing ICT skills, i.e. the ability to use digital technology, communication tools and networks to acquire and evaluate information, communicate with or influence others, and perform tasks in work setting.

55.   There are international tools for direct assessment of cognitive skills of the general working adult population. One of the most advanced international tests is the OECD Survey of Adult Skills (PIAAC) that evaluates skills in numeracy, literacy, and problem solving (in standard or technology rich environment) through a computer-based or paper test (Annex A). An additional PIAAC module for adaptive problem-solving skills in technology-rich environments is currently under development, with the aim of being deployed in the next round of PIAAC assessment in 2022/23. PIAAC offers rich background to inform the development of direct assessment tools for the adaptive problem-solving skills of health professionals (OECD, 2012[28]).

56.   A direct examination type of assessment instrument is under development by National Council of State Boards of Nursing (United States) for rigorously evaluating clinical reasoning skills among nurses (Dickison et al., 2016[29]). The tool is currently in a testing phase and holds promise as the foundation for a future standardised assessment tool for evaluating the transversal cognitive skills of all health professionals.

4.2.2. Direct skills assessment tools based on observation of actual behaviour

57.   Tools for direct assessment of actual performance by trained observers have been developed and widely used in educational institutions preparing health professionals. Observational tools often rely on a simulated situation using "standard patients", in which an actor simulates a patient care scenario, to which an individual student/candidate or a team respond. The observer assesses the candidate's skills using a structured tool describing the candidate's responses and behaviours (Baig, Violato and Crutcher, 2009[30]).

58.   Direct observation of actual behaviour is a tool that allows the entire team dynamics and performance to be captured. This allows for a more complete assessment of an individual's teamwork skills since they are not only reflected by the individual's behaviour but also by reactions of other team members

to that behaviour. Observational tools have been used extensively to assess skills related to teamwork and have been used not only for *ex-post* evaluation of team performance but also for team *in situ* learning and self-evaluation exercises. Many such tools evolved from the aviation industry, where skills related to effective communication and teamwork are crucial for maintaining safety on an ongoing basis. Learning from their experience, many of the observational instruments for health professionals are set in care settings involving critical safety issues such as in operating theatre or emergency room settings (Jepsen, Ostergaard and Dieckmann, 2015[24]; Kapur et al., 2015[31]). These instruments offer a model for development of direct observational assessment tools for teamwork in less urgent situations, such as a team developing an interprofessional care plan for a complex patient in a nursing home.

59. It is important to recognise that observational tools are subject to bias on the respondents' part, notably the impact of the "Hawthorne effect" i.e. the alteration of behaviour by the subjects of a study due to their awareness of being observed. Appropriate approaches are proposed to mitigate the effect of participant observers on the behaviour of the workers (Oswald, Sherratt and Smith, 2014[32]). Observational instruments are also subject to value judgement on the observers' part (Cowan, Wilson-Barnett and Norman, 2007[33]). Indeed, specific skills are required of the observers, and the implementation of observational tools relies on extensive training of the observers to mitigate this potential bias (Jepsen, Ostergaard and Dieckmann, 2015[24]). The costs of the observer training add to the costs of the assessment, making the observational tools the most expensive option for skills assessment.

4.3. Conducting Surveys at Organisational and Team Levels

60. Skills assessment surveys are most commonly conducted at the individual level. However, a survey strategy could use two-stage sampling, in which first a representative sample of organisations (e.g. hospitals or clinics) or geographical units (e.g. counties or regions) is selected, followed by representative sampling of professionals within each organisation or geographical unit. Two-stage sampling would allow skills assessment surveys to include additional modules directed to managers of the organisations to gauge their perspective on skills gap and skills mismatch. This would be especially helpful in obtaining feedback from employers on current and future skills needs which can guide a comprehensive policy response to the problem of skills mismatch. Questionnaires serving this purpose in the general labour market have been developed in for example Finland, Sweden, and the United Kingdom, as well as by the International Labour Organisation. Such an additional module for the managers could increase policy-relevance by relating skills gaps from the workers perspective against those of the managers, as well as reported barriers to skills use from the employer perspective.

61. Two-stage sampling expands options for linking the results of individual skills assessment surveys with other healthcare surveys conducted around different units of observation and at higher levels of organisation. These units may be at the level of multi-disciplinary care teams, clinic or hospital level, and community or regional health system. The results could help identify correlations between team or organisational performance with health workforce skills. A similar approach has been used in the OECD Teaching and Learning International Survey (TALIS), which is the largest international survey of teachers' professional competency. TALIS evaluates classroom and school working climate, teacher satisfaction with their jobs, and their feelings about their professional abilities (OECD, 2014[34]). TALIS illustrates the advantages of two-stage sampling for generating policy-relevant data. Two-stage sampling allows accounting for influence of not only individual factors on performance at a workplace but is also designed to identify organisation-level factors, such as management styles of principals that affect teacher's ability to apply their skills (Box 4.1).

62.   A similar strategy could be adopted in the healthcare sector to correlate key service performance measures at team or organisational levels with the results of individual skills assessment surveys. For example, to evaluate team effectiveness, self-reporting tools can be used to assess the sum of skills within a team by asking the respondents to rate their team's overall performance on key items such as teamwork, shared leadership and interprofessional collaboration. Table 2 is extracted from the Team Fitness Test, which asks respondents to rate team-related statements as they apply to the team (Sun Country Health Region, 2017). These team assessment results could be compared with individual self-reported skills - on the set of transversal skills identified in Section 3 - and with service performance indicators at the team and organisational levels (clinic or hospital levels).

Table 2. Questionnaire on team fitness

	Definitely	*Most of the time*	*Occasionally*	*Not at all*
Our roles are clearly defined and accepted as defined by all team members.	O	O	O	O
Team members feel free to give their honest opinions.	O	O	O	O
We are skilled in reaching consensus.	O	O	O	O
In team meetings we stay on track and on time.	O	O	O	O

Source: Sun Country Health Region, Geriatric Interdisciplinary Team Training Program: John A. Hartford Fdn, 2017: http://www.gittprogram.org/index.html

63.   Other examples of relevant healthcare questionnaires include management surveys, hospital performance surveys, and patient surveys. They may include routinely collected service performance indicators, or more specialised surveys such as patient reported experience measures (PREMs) and patient reported outcome measures (PROMs). PREMS and PROMs potentially measure important outcomes of the health professionals' skills and skills use, especially in the context of people-centred and integrated models of care. These indicators provide valuable correlation between health workforce skills and patient outcomes and experience. Figure 4.2 graphically illustrates the different types of instruments

that could be used independently or in combination to obtain measures of policy impact at individual, team and organisation levels.

64.   These instruments are continually developed and many of them have earned international recognition, being used in a number of countries as assessment tools for skills training interventions. The feasibility of developing an international self-reporting assessment tool is illustrated by the experience of the OECD Teaching and Learning International Survey (TALIS), which is the largest international survey of teachers' professional development, classroom and school working climate, satisfaction with their jobs, and their feelings about their professional abilities (OECD, 2014). While TALIS is not explicitly dedicated to measuring teachers' skills, the survey illustrates universality of certain aspects that affect performance of a given sector – such as education or health care – which can be successfully measured across different countries with different legal, organisational, and financial structures.

Figure 4.2. Health workforce skills assessment strategy at individual and institutional levels
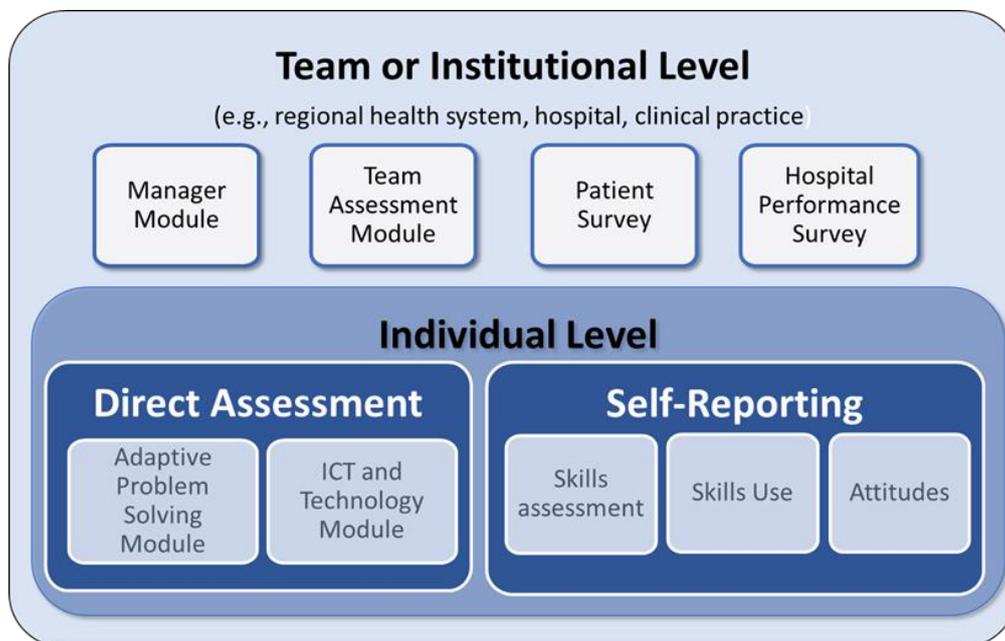
Source: (OECD, 2018a[7]).

5. Conclusions

65.   This paper discusses transversal (core) skills that are required by health professionals for a successful transition from fragmented and disease-centred care towards people-centred healthcare delivery systems. The discussion is motivated by the growing evidence of skills mismatch among health professionals. These transversal skills include interpersonal skills, such as person-centred communication, interprofessional teamwork, self-awareness and socio-cultural sensitivity, as well as analytical skills, such as adaptive problem solving to devise customised care for individual persons, system thinking, openness to continuous learning, and the ability to use digital technologies effectively.

66.   The need for these transversal skills originates in the workplace reality of health professionals managing increasingly complex tasks, such as actively engaging individuals in their own care management and health maintenance, while working in an occupational context that requires the professionals' on-going adaptation to advances in technology and changes in professional standards. Internationally, we find a remarkable convergence in recognising these types of transversal skills as fundamental across different categories of health professionals.

67.   While there is a growing consensus that transversal skills discussed in this paper are crucial for successful transition to people-centred care, there is relatively little emphasis on development of commensurate skills assessment strategies. Skills assessment instruments - allowing to assess the transversal skills as well as whether health professionals can actually put them to full use in their workplace reality – are necessary to generate evidence needed for ensuring that health workforce is fit for purpose.

68.   This paper presents also the transversal skills within a common competency framework for health professionals. The likelihood for the adoption of such a common framework has increased due to the remarkable convergence of the core set of transversal skills that are recognised as important across different categories of health professionals from different countries. The emerging convergence across professions points also to the feasibility of developing a skills assessment instrument that could be applied to all categories of health professionals and across different health systems.

69.   In summary, we offer the following recommendations for action by the policy makers and stakeholders in the healthcare system who are interested in developing an effective strategy to enhance the skills of the health workforce and support the transformation of the healthcare system toward people-centred care:

- Recognise the need to prepare health professionals for meeting the dual challenges of technically and emotionally complex healthcare workplace. Countries will need resilient and resourceful health workers armed not only with clinical and technical skills, but also with transversal skills. These skills combined will enable health workers to reap the potential benefits of people-centred care, such as better patient and population outcomes, higher productivity, and higher retention/job satisfaction among the workers themselves.

- Take a systems-approach to skills assessment and link the findings with other measures of health system performance. The existing skills assessment instruments do not readily differentiate between the skills mismatch caused by the inadequacies in the education and training system from the inadequacies in the health systems and organisation of the workplace – such as misalignment in payment incentives, restrictions due to regulations, or shortcomings in the organisation and management of the work process. Such distinctions are, however, necessary for policy makers to

determine the appropriate course of action, that is, for example, whether to focus resources on reforming the education and training of health professionals or to focus on addressing system constraints that prevent the workers from applying their skills. It is not sufficient for workers to possess the skills needed for the people-centred care delivery models: they must also be enabled to use these skills effectively to reap the benefits in terms of system performance. Moreover, finding meaningful linkage between transversal skills and actual service performance indicators will be an important goal for informing policies that will raise the performance of the entire health workforce.

- Take advantage of the convergence in recognising importance of transversal skills across different health professions and health systems. The remarkable convergence of the types of transversal skills that are recognised as important across different categories of health professionals from different countries, points to the feasibility of pooling expertise and resources internationally to co-develop skills assessment instruments that could be applied to all categories of health professionals and across different health systems.

- Involve stakeholders from the initial design stage to ensure an inclusive and comprehensive approach to skills assessment. So far, the development of skills assessment instruments has been segmented by health professional bodies. This leaves significant gaps, for example, in designing instruments that are relevant for identifying skills needs in new multi-disciplinary team settings. The policy relevance and usefulness of the survey instruments will be enhanced significantly by involving all the key stakeholders, especially representatives of patient groups, in the design of the questionnaires and the identification of policy relevant questions to be tested by the survey.

- Integrate principles and concepts of human-centred design. Since most of the existing skills assessment instruments have been developed from the perspective of the healthcare provider, they are generally not designed to reflect the perspectives of the individuals receiving care. To deliver seamless people-centred care, healthcare teams will need to be responsive to the varying needs of individuals across variable states of health, socio-cultural backgrounds, and throughout progressive stages of life. These individuals will present diverse care needs, ranging from healthy persons seeking support for healthy lifestyles to acute and chronic care patients dealing with the consequences of illness or injury, and those from disadvantaged and marginalized people requiring socio-culturally sensitive care. To be policy relevant, future skills assessment instruments will need to do a better job at incorporating the perspectives of those receiving care and be able to measure the professionals' ability to cope with the consequences of this paradigm shift.

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Annex A. Programme for International Assessment of Adult Competencies (PIAAC)

The Programme for the International Assessment of Adult Competencies (PIAAC) developed and conducts the Survey of Adult Skills. The survey measures adults' proficiency in key information-processing skills - literacy, numeracy and problem solving in technology-rich environments - and gathers information and data on how adults use their skills at home, at work and in the wider community (for more details, see website http://www.oecd.org/skills/piaac/).

This international survey is conducted in over 40 countries and measures the key cognitive and workplace skills needed for individuals to participate in society and for economies to prosper. The survey instruments administered under PIAAC consist of (a) direct and indirect assessment of skills; and (b) survey on the use of skills on the job.

The **Survey of Adult Skills** includes a direct assessment of skills obtained by:

- interviewing adults aged 16 to 65 in their homes (about 5000 individuals in each participating country);
- answering questions via computer, although the survey can also be implemented via pencil-and-paper;
- directly assessing (i) literacy skills, (ii) numeracy skills, and (iii) the ability to solve problems in technology-rich environments.

This survey also collects a broad range of *background information*, including how skills are used at work and in other contexts, such as the home and the community. The survey is designed to:

- be valid cross-culturally and cross-nationally;
- enable countries to administer the survey in their national languages and still obtain comparable results;
- provide comparative analysis of skill-formation systems and their outcomes, and international benchmarking regarding adult skills;
- be repeated over time to allow policy makers to monitor the development of key aspects of human capital in their countries.

The Survey of Adult Skills includes a module on **Skills Use** which takes an innovative "job-requirements approach" to ask adults who are employed about generic skills they use in the workplace. The survey asks adults how intensively and how frequently they use these skills at work:

- cognitive skills encompass reading, writing, mathematics and the use of information and communication technologies;
- interaction and social skills, which cover collaboration and co-operation, planning work and use of time for oneself and others, communication and negotiation, and customer contact;
- physical skills that involve the use of gross and fine motor skills;
- learning skills that cover activities such as instructing others, learning (formally or informally), and keeping up-to-date with developments in one's professional field.

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