



The future of work in the health sector

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Preface

In January 2019 the ILO launched its centenary celebrations with the release of the report of the Global Commission on the Future of Work, *Work for a brighter future*. The report calls for a human-centred approach to the future of work, with a focus on investing in people's capacity to transition into new areas of employability. The care economy, including the health sector, is clearly an area which will provide opportunities for employment and economic growth. The sector will also be shaped by new technologies, migration, and increasing demand for a wide variety of health services.

This paper, which is part of a series of studies on the sectoral dimensions of the future of work, explores how changing technology, demographics and other drivers will change work in the health care sector. Such changes will provide opportunities and pose challenges to governments, employers and workers in the field, and it is our hope that this study contributes to an informed discussion on how the future of the health sector can contribute to growth, employment and sustainable social development.

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1. Introduction

1.1. Background

The health sector is fundamental to both society and the economy. It provides a significant percentage of jobs worldwide, contributing to social and economic development. It is essential to social well-being and to the health of working people. With advances in medical science, new technologies, and enhanced social protection, the health sector has made significant achievements over the past few decades, with a positive impact on the promotion, protection and restoration of people's health.¹ However, it is currently undergoing major changes worldwide.

Complex drivers and trends are creating both challenges and opportunities for health service delivery: healthcare costs are increasing; populations and the health workforce are ageing; and technology promises to radically reshape the health sector in ways yet to be imagined. Despite many achievements, however, persistent health inequities remain a major concern.

In this context, the demand for universal health coverage (UHC) will require concerted efforts and collaboration at the global, regional, national, and local levels. The 2012 UN General Assembly resolution on global health and foreign policy² calls on Member States to support UHC, including through transparent, equitable and inclusive decision-making processes that incorporate inputs from all stakeholders. The resolution acknowledges current challenges in ensuring sustainable financing mechanisms for UHC, and recognizes the importance of a skilled, well-trained and motivated health workforce for ensuring the resilient and responsive health systems needed to achieve UHC.

The ILO Social Protection Floors Recommendation, 2012 (No. 202) provides a rights-based framework for achieving universal access to essential healthcare while ensuring basic income security by building comprehensive social security systems. The Recommendation calls on Member States to “ensure, at a minimum that, over the life cycle, all in need have access to essential healthcare and to basic income security” and that social security guarantees “be established by law”.³

Moreover, the 2030 Agenda for Sustainable Development acknowledges the pivotal role of UHC and access to quality care in the promotion of physical and mental health and well-being, as well as the extension of life expectancy for all.⁴ It also recognizes the

¹ In this paper, the health sector is defined broadly, including the full range of work related to healthcare, from clinical work to those functions, including in other sectors (e.g. through outsourcing), which support the delivery of health services and outcomes. It refers to the full continuum of health and social work sectors as defined in ISIC, Revision 4, Section Q, including personal care work. The term health sector encompasses the entirety of health systems functioning, including health services delivering direct healthcare.

² UN General Assembly: [Global health and foreign policy](#), Resolution adopted by the General Assembly on 12 December 2012, A/RES/67/81.

³ ILO: [Social Protection Floors Recommendation, 2012 \(No. 202\)](#).

⁴ UN General Assembly: [Transforming our world: The 2030 Agenda for Sustainable Development](#), Resolution adopted by the General Assembly on 25 September 2015, A/RES/70/1.

importance of a healthy and well-educated workforce that is able to engage in fulfilling work and participate fully in society.

In an effort to accelerate progress towards UHC and the UN Sustainable Development Goals (SDGs), the World Health Organization's Global Strategy on Human Resources for Health: Workforce 2030 seeks to ensure equitable access to health services and health workers within strengthened health systems.⁵ The strategy builds on the principles of people-centred health services, community empowerment and engagement, health workers' rights to safe and decent working environments, international collaboration and solidarity, and ethical recruitment practices.

The health sector is defined by both the beneficiaries of its wide range of services and those who deliver these services. At a fundamental level, without health workers there can be no healthcare.⁶ The UN High-level Commission on Health Employment and Economic Growth (HEEG Commission) made a strong case for investments in the health workforce to generate progress towards the SDGs, including UHC, and to ensure timely, accessible and equitable high-quality health services for all.⁷

1.2. Future of Work Initiative

In January 2019 the ILO's Global Commission on the Future of Work released its *Work for a Brighter Future* report⁸, which proposes a new human-centred social contract with an emphasis on increasing investment in peoples' capabilities, institutions of work, and decent and sustainable work. The report identified the care economy, including the health sector, as an area of employment growth which was critical to social and economic development. In the area of health services, a report issued in 2017⁹ had already set the basis for discussion, linking the future of work centenary initiative to the work and recommendations of the HEEG Commission.

1.3. Aim and structure of the paper

This paper provides a sectoral perspective on the future of work regarding both the challenges and opportunities facing the health services sector. In doing so, the paper examines the implications of demographic changes, globalization, technological advances and environmental and geopolitical developments on the future of health services. It explores the impact of these megatrends on decent work, focusing specifically on employment and working conditions, education and training, and social dialogue. The paper then presents suggestions for the future of work that we want in the health sector, in line with the 2030 Agenda.

⁵ WHO: [Global strategy on human resources for health: Workforce 2030](#), 2016.

⁶ J. Campbell et al.: [A universal truth: No health without a workforce](#), Report for the Third Global Forum on Human Resources for Health, Recife, Brazil, 2013 (Geneva, Global Health Workforce Alliance and WHO, 2013).

⁷ HEEG Commission: [Working for health and growth: Investing in the health workforce](#), Report of the High-Level Commission on Health Employment and Economic Growth (Geneva, WHO, 2016).

⁸ Global Commission on the Future of Work: [Work for a brighter future](#) (Geneva: ILO, 2019).

⁹ ILO: [Improving employment and working conditions in health services](#), Report for discussion at the Tripartite Meeting on Improving Employment and Working Conditions in Health Services, ILO Sectoral Policies Department (Geneva, 2017).

2. Megatrends and drivers

2.1. Demographics

Demographics, including ageing societies and population growth, have a major influence on the health sector. The world population is expected to reach 9.8 billion by 2050.¹⁰ Africa will account for the largest portion of this growth, with its population expected to increase by 1.3 billion between 2017 and 2050, followed by Asia. Nine countries – Democratic Republic of Congo, Ethiopia, Pakistan, India, Indonesia, Nigeria, Uganda, the United Republic of Tanzania, and the United States – are projected to contribute to half of the world’s population growth within that time-frame. Yet other countries, including some in Eastern Europe, are expected to see a decline of more than 15 per cent in their total population.¹¹

Notably, the global population aged 60 years and over is expected to double by 2050, reaching 2.1 billion.¹² By the same year, the population aged 80 years or over, growing at a faster rate, will reach 425 million. The global distribution of the ageing population, however, is unequal. While population ageing is still rising in developed countries, the growth rate is faster in developing countries, where it is estimated that those aged 60 years or over will total 1.7 billion by 2050 (80 per cent of the total 2.1 billion). Africa again is expected to experience the fastest rate of increase.¹³ Fertility is a major factor in population growth: globally, total fertility is expected to decline from 2.5 births per woman in 2010-2015 to 2.0 births by 2095-2100. The global proportion of youth in the population is expected to decline to 15.2 per cent by 2030, and to be outnumbered by the older population by 2050, which could increase competition between young people for job opportunities.¹⁴

An ageing population presents many challenges for health systems, including a shift towards care-based and end-of-life services. As family structures have reduced in size in tandem with changing demographics and women’s increased labour force participation, the availability of unpaid care work traditionally provided by female relatives has been eroded.¹⁵ More than 50 per cent of older people worldwide do not have access to long-term care.¹⁶ Globally, this is exacerbated by a shortage of qualified, long-term care workers and a lack of infrastructure for such services.¹⁷ Insufficient attention to care work will worsen existing

¹⁰ United Nations, Department of Economic and Social Affairs, Population Division: [World population prospects: The 2017 revision, Key findings and advance tables](#), 2017 (ESA/P/WP/248).

¹¹ *ibid.*

¹² United Nations, Department of Economic and Social Affairs, Population Division: [World population ageing 2017](#), 2017 (ST/ESA/SER.A/408).

¹³ *ibid.*

¹⁴ ILO. [Addressing the situation and aspirations of youth](#). Issue Brief 2. 2017.

¹⁵ ILO: [Care work and care jobs for the future of decent work](#), 2018.

¹⁶ X. Scheil-Adlung: [Health workforce: A global supply chain approach – New data on the employment effects of health economies in 185 countries](#) (Geneva, ILO, ESS Working Paper No. 55, 2016).

¹⁷ *ibid.*

inequalities for the elderly, potentially leading to impoverishment and exclusion.¹⁸ This increases pressure on countries' welfare systems, and heightens demand for public and private health and care services. The health workforce is also ageing, with one-third of all physicians in OECD countries aged 55 years or over in 2014.¹⁹

Epidemiological developments pose an additional strain for the health sector. Worldwide, non-communicable diseases are on the rise and are becoming the leading cause of death.²⁰ While populations are living longer, many people live longer while suffering with health impairments and disabilities, with rates being higher for women than men.²¹ According to a 2016 study, the number of years lived with a disability has been constant or increasing due to causes such as diabetes.²² As the population ages, the number of people living with dementia is expected to triple to over 130 million by 2050.²³ The management of non-communicable diseases requires health systems to adapt to changing health needs and respond to rising demand for health services.²⁴ Moreover, differences in the patterns of disease, such as the disproportionate burden of infection-related cancers occurring in low- and middle-income countries, calls for well-adjusted interventions.²⁵

Demographic and epidemiological challenges are compounded by global inequality in access to quality health services. This inequality is characterized by critical health workforce shortages, uneven health worker distribution, and skill mismatches. Low-income countries are disproportionately affected, with 84 per cent of the population experiencing gaps in access to healthcare due to health workforce shortages, compared to 23 per cent in upper-middle income countries.²⁶ The 2008-09 financial and economic crisis had a detrimental impact on public health services and on the health workforce in high-income countries, as austerity measures reduced access to public health services, for example, in Greece, Portugal and Spain.²⁷

Further inequalities are evident when comparing rural and urban areas, with 56 per cent of the rural population experiencing legal health coverage gaps in 2015 compared to 22 per cent in urban areas.²⁸ This is aggravated by difficulties in attracting and retaining high skilled health workers in rural and remote areas, frequently due to concerns relating to decent

¹⁸ X. Scheil-Adlung: [Long-term care protection for older persons: A review of coverage deficits in 46 countries](#) (Geneva, ILO, ESS Working Paper No. 50, 2015).

¹⁹ ILO: [Improving employment and working conditions in health services](#), op. cit.

²⁰ Institute for Health Metrics and Evaluation (IHME): [The global burden of disease: Generating evidence, guiding policy](#) (Seattle, IHME, 2013).

²¹ WHO. [Life expectancy and Healthy Life Expectancy Data by WHO Region](#).

²² T. Vos et al.: "Global, regional, and national incidence, prevalence, and years lived with disability for 328 diseases and injuries for 195 countries, 1990–2016: A systematic analysis for the Global Burden of Disease Study 2016", in *The Lancet* (2017, Vol. 390), pp. 1211-1259.

²³ The Lancet: [A global assessment of dementia, now and in the future](#). *The Lancet Editorial*. Vol. 386. September 25, 2015.

²⁴ T. Vos et al. "Global, regional and national incidence." op. cit.

²⁵ L.A. Torre et al.: "Global cancer incidence and mortality rates and trends—An update", in *Cancer Epidemiology, Biomarkers & Prevention* (2016, Vol. 25, Issue 1), pp. 16-27.

²⁶ *ibid.*

²⁷ ILO: [Improving employment and working conditions in health services](#), op. cit.

²⁸ *ibid.*

work deficits and gaps in social protection.²⁹ As a result, more than half the world's rural population (52 per cent) lacks access to healthcare due to the shortage of health workers, compared to 24 per cent in urban areas. The situation is most severe in Africa, where 77 per cent of the rural population is without access to healthcare due to health worker gaps.³⁰ Urban health risks disproportionately impact the most vulnerable populations, including those in slum areas, where up to 40 per cent of population growth is occurring.³¹ As the world becomes increasingly urbanized, with 70 per cent of the population projected to live in urban areas by 2050, it is important to balance sustainable urban growth with rural development.

2.2. Globalization

Health is no exception to the globalization of services, as indicated by the increasing presence of multi-national companies in the healthcare sector, as well as the growing, international mobility of health workers.

Health worker migration

Health worker migration, an important feature of global health labour markets, is increasing and becoming more complex. Whereas general push and pull factors such as labour market dynamics are recognized as drivers of migration, perceived better working conditions and higher incomes are among the most common factors driving individual health worker migration.^{32, 33, 34, 35} Irrespective of health workers' motivations, the phenomenon of health workforce migration brings challenges to all national health systems, affecting the origin and destination countries in terms of both equity and efficiency.³⁶ The effects of health workforce migration on origin and destination countries vary. In destination countries, concerns include the unsustainability of health systems relying on foreign-trained highly-skilled health workers and the high costs for health services associated with international recruitment, including language training and induction, as well as failing to utilize migrant health workers' skills and knowledge to their full potential as a result of the lack of

²⁹ ILO. [Conclusions on improving employment and working conditions in health services](#), 2017.

³⁰ ILO. *World Social Protection Report 2017–19: Universal social protection to achieve the Sustainable Development Goals*. Geneva: ILO, 2017.

³¹ WHO. [About health risks in cities](#).

³² M. Kingma: "Nursing migration: Global treasure hunt or disaster-in-the-making?", in *Nursing Inquiry* (2001, Vol. 8, Issue 4), pp. 205-212.

³³ P.F. Clark, J.B. Stewart and D.A. Clark: "The globalization of the labour market for health-care professionals", in *International Labour Review* (2006, Vol. 145, No. 1-2), pp. 37-64.

³⁴ R. Labonté, C. Packer and N. Klassen: "Managing health professional migration from sub-Saharan Africa to Canada: A stakeholder inquiry into policy options", in *Human Resources for Health* (2006, Vol. 4).

³⁵ B.M. Kuehn: "Global shortage of health workers, brain drain stress developing countries", in *JAMA* (2007, Vol. 298, No. 16), pp. 1853-1855.

³⁶ I.A. Glinos et al.: [How can countries address the efficiency and equity implications of health professional mobility in Europe?: Adapting policies in the context of the WHO Code of Practice and EU freedom of movement](#), Policy Brief 18 (Copenhagen, WHO Regional Office for Europe, 2015).

recognition of qualifications. In countries of origin, health workforce migration might exacerbate already existing shortages and disparities in health workforce distribution, and can lead to increased workloads for the remaining health professionals in understaffed regions and institutions. Some migrant health workers return home, but their reasons for doing so are mixed: this might be, for example, for family reasons, or with the aim of starting a business (Philippines) or to retire (Ghana), so they are not necessarily returning to provide health services.³⁷

The unmet demand for health workers in high-income countries will continue to increase the migration of such workers from low- and middle-income countries that cannot afford the incentives needed to retain them.³⁸ Significant numbers of migrant care workers, mostly women, are following this geographic trend to fill demand in affluent countries. Typically, they leave behind their own children with relatives or domestic workers, resulting in a phenomenon becoming known as the “global care chain”.³⁹

Globalization of healthcare provision

Globally, the provision of healthcare by the private sector is on the rise. In China, for example, private hospitals now outnumber public ones,⁴⁰ and multinational healthcare and pharmaceutical companies are increasingly investing in the country, which has become a top revenue generating market.⁴¹ New examples of public-private partnerships in healthcare are emerging, with well documented cases in Australia, India, and the United Kingdom.⁴² Fiscal austerity measures arising from the 2008 financial crisis have accelerated the development of private healthcare. In Europe, reforms to public healthcare systems have encouraged the involvement of global, for-profit healthcare providers from Australia, Singapore, and South Africa.⁴³

In addition to a mobile workforce, consumers themselves are increasingly travelling abroad to obtain healthcare. The medical tourism market is growing, particularly for cosmetic, dental, fertility, and elective surgery treatments, with such services mainly offered by private healthcare providers.⁴⁴ The geographic flows of medical tourism are mixed. Certain patients travel to high-income countries when specific treatments are not available in their home countries;⁴⁵ others travel from high-income to middle-income countries to

³⁷ International Organization for Migration (IOM) “[Mobility of Health Professionals to, from and within the European Union](#).” *IOM Migration Research Series*. No. 48. (Geneva, 2014).

³⁸ R.M. Scheffler et al.: “Forecasting imbalances in the global health labor market and devising policy responses”, in *Human Resources for Health* (2018, Vol. 16).

³⁹ ILO: [Care work and care jobs](#), op. cit.

⁴⁰ Deloitte: [Global health care outlook – The evolution of smart health care](#), 2018.

⁴¹ F. Le Deu et al.: “[Healthcare in China: Entering ‘unchartered waters’](#)”, in *McKinsey & Company*, Nov. 2012.

⁴² World Bank Group: [PPP in health](#), Public-Private-Partnership Legal Resource Center, 2018.

⁴³ J. Lethbridge: [Health care reforms and the rise of global multinational health care companies](#) (London, Public Services International Research Unit, 2015).

⁴⁴ N. Lunt et al.: “Medical tourism: A snapshot of evidence on treatment abroad” *Maturitas*. (2016, Vol. 88), pp 37-44.

⁴⁵ Orbis Research: [Medical tourism market by treatment type and by region-global industry analysis, size, share, growth, trends, and forecasts \(2016-2021\)](#) (Market Data Forecast, 2017).

take advantage of lower cost procedures.⁴⁶ A growing trend is regional exchanges, for example, between south-east Asian countries, for reasons still to be analysed.⁴⁷ According to recent estimates, the global medical tourism market is expected to increase in value from USD 19.7 billion in 2016 to USD 46.6 billion by 2021.⁴⁸ Transnational patient outsourcing is also a rising phenomenon, whereby governments are funding patients to receive treatment abroad, often considered a sign of health system weakness.⁴⁹

Research suggests that medical tourism in developing countries can have both positive and negative effects on the health workforce.⁵⁰ It can create employment and contribute to health workforce retention in destination countries. Its expansion, however, can lead to health workers moving from the public to the private health sector, compromising access to services for those that are unable to afford care in the private sector. Findings from India show that increased medical tourism can impact the public health system by further deepening inequities and increasing health workforce shortages, leading to unregulated growth of the private sector and increasing the cost of medical treatment.⁵¹

2.3. Technological advances

The debate surrounding the impact of technology on future work covers a wide spectrum, with some arguing technology will outdate the need for labourers, and others asserting it will create jobs. Research indicates that technological change is non-linear, and will destroy, create and transform jobs in different phases depending on the ability of societies and institutions to support social dialogue and learning.⁵²

Technological advances are likely to have a significant impact on health services and ways of working. Technological innovations, such as online and mobile health applications (apps), 3D- and bio-printing, artificial intelligence (AI), block chain, electronic health (e-health) and mobile health (m-health, involving mobile phones), genomics and proteomics, are already affecting health professionals' day-to-day work.⁵³ On a broader level, technological innovations may radically reshape the health sector, as evidenced by the creation of a fully virtual care facility, where healthcare personnel exclusively provide

⁴⁶ N. Lunt et al.: op. cit.

⁴⁷ *ibid.*

⁴⁸ Orbis Research: [Medical tourism market by treatment type and by region-global industry analysis, size, share, growth, trends, and forecasts \(2016-2021\)](#) (Market Data Forecast, 2017).

⁴⁹ N. Lunt et al.; op. cit.

⁵⁰ H. Beladi et al.: "Medical tourism and health worker migration in developing countries", in *Economic Modelling* (2015, Vol. 46), pp. 391-396.

⁵¹ I. Hazarika: "Medical tourism: Its potential impact on the health workforce and health systems in India", in *Health Policy and Planning* (2010, Vol. 25, Issue 3) pp. 248-251.

⁵² I. Nübler: [New technologies: A jobless future or golden age of job creation?](#) (Geneva, ILO, Working Paper No. 13, 2016).

⁵³ OECD: [New Health Technologies: Managing Access, Value and Sustainability](#). (Paris, OECD, 2017).

“telehealth” services to patients, whereby medical advice and provision is given remotely through telecommunication technologies.⁵⁴

Technology is increasingly being seen as a means to address today’s health service challenges, including rising healthcare costs and population growth and ageing.⁵⁵ Robot technology is already being used in nursing care, with Japan leading its implementation. In its “Investments for the Future Strategy 2017”, the Government of Japan outlined its plans to use robots as lifting aids and mobility aids, for bathing and toilet assistance, and in direct nursing-care services.⁵⁶ Technologies can also help facilitate care delivery in non-traditional settings, including in the home, and have the potential to improve access to healthcare in rural and remote areas.

Additional impacts include improving the delivery of health and disaster management services to poor and remote locations, increasing the transparency and efficiency of governance, integrating related ICT usage into continuing education, and allowing health workers to be trained and kept up to date with the most recent information.⁵⁷ Technology has achieved positive impacts in personnel training through simulation techniques, by facilitating access to information via handheld devices, and in online training.⁵⁸ New technologies have the potential to improve the prevention of diseases and to encourage patients to be actively involved in monitoring their own health, conditions and treatment.⁵⁹

In the digital age, patient data will be easier to collect and monitor, including remotely, making it possible to improve healthcare delivery in new ways. In some ways this is patient-driven and due in large part to the high level of smartphone ownership globally. By 2015, there were 165,000 mobile health apps in circulation, and m-health is increasingly being used for prevention, diagnosis, treatment, and monitoring.⁶⁰ As some developments with potential implications for diagnostics and care include cognitive computing, cloud-based interoperable electronic health records, and the “internet of things” (IoT),⁶¹ employers must invest in their employees’ ability to navigate challenges related to data management, data protection compliance, and cyber risks.

⁵⁴ Mercy Virtual: [About](#). (n.d.)

⁵⁵ ILO: [Care work and care jobs](#), op. cit.

⁵⁵ PricewaterhouseCoopers (PwC): [Healthcare: A digital divide? Insights from PwC’s 2015 Global Digital IQ® Survey](#), 2016.

⁵⁶ Japanese Ministry of Economy, Trade and Industry (METI): [Revision of the priority areas to which robot technology is to be introduced in nursing care](#) (Tokyo, METI, 2017).

⁵⁷ C.P. Chandrasekhar and J. Ghosh: “Information and communication technologies and health in low income countries: The potential and the constraints”, in *Bulletin of the World Health Organization* (2001, Vol. 79), pp. 850–855.

⁵⁸ Evidence Centre for Skills for Health: [How do new technologies impact on workforce organisation?: Rapid review of international evidence](#) (Bristol, Skills for Health, n.d.).

⁵⁹ K. Dybczak and B. Przywara: [The role of technology in health care expenditure in the EU](#) (Brussels, European Commission, Economic Papers 400, 2010).

⁶⁰ OECD: [New Health Technologies](#), op. cit.

⁶¹ Deloitte: [Global health care outlook](#), op. cit.

Alongside this potential, it has been argued that the health sector should do more to utilize technology and prepare for its future use.⁶² Healthcare organizations will need to account for a wide range of implications related to technological advances, including the virtual delivery of services and the integration of robotics and AI. However, the health sector must evaluate the added benefits of technology for patients and workers, and enhance its usefulness through improved policy and practice. While health technology can contribute to cost containment, it has added to healthcare expenditure growth in recent years in OECD countries.⁶³ Evidence of the effectiveness and utility of new technologies is not always clear, and policy-makers must balance innovation with value.⁶⁴

2.4. Environmental and geopolitical developments

Environmental factors, including climate change and air pollution, affect the demand for health services in many ways.⁶⁵ Numerous studies have linked climate change to extreme weather events such as heat waves and cold waves, heavy precipitation and flooding, as well as drought. Older people are in many cases the most vulnerable to such weather events.⁶⁶ Climate change has been indirectly linked to heightened risks of vector-borne diseases and cholera, and to decreased food safety with associated health effects.⁶⁷

Tackling climate change, frequently identified as the greatest threat to global health,⁶⁸ will require bold action worldwide. In order to manage the health and other risks associated with extreme weather events, governments need to invest in climate change research, monitoring and surveillance, ensure funding for climate resilient health systems, phase out coal from the global energy mix, expand access to renewable energy, and implement international agreements that support the transition to low-carbon economies.⁶⁹ Addressing climate change provides opportunities for progressive developments, including reducing the burden of ill health and addressing poverty and inequities.⁷⁰

Infectious diseases do not respect borders, but the increased migration associated with globalization and cheaper international air and other forms of transport have increased such risks. Ensuring international health security requires appropriate investments in health. The 2014 Ebola outbreak demonstrated that many countries' health systems were not sufficiently

⁶² PricewaterhouseCoopers (PwC): [Healthcare: A digital divide?](#), op. cit.

⁶³ OECD: [New Health Technologies](#), op. cit.

⁶⁴ *ibid.*

⁶⁵ Millennium Ecosystem Assessment: [Ecosystems and human well-being: Synthesis](#) (Washington, D.C., Island Press, 2005).

⁶⁶ E. W. A. Leyva et. Al., "Health Impact of Climate Change in Older People: An Integrative Review and Implications for Nursing", in *Journal of Nursing Scholarship*. (2017, Vol. 49, Issue 6), pp. 670-678.

⁶⁷ A. Costello et al.: "Managing the health effects of climate change: Lancet and University College London Institute for Global Health Commission", in *The Lancet* (2009, Vol. 373, Issue 9676), pp. 1693-1733.

⁶⁸ *ibid.*

⁶⁹ *ibid.*

⁷⁰ N. Watts et al.: "Health and climate change: Policy responses to protect public health", in *The Lancet* (2015, Vol. 386), pp. 1861-1914.

prepared to respond to health crises. The successful containment of the 2018 Ebola outbreak in the Democratic Republic of Congo showed the value of learning from failures, and offered lessons to better manage subsequent outbreaks.⁷¹

Armed conflicts around the world pose a threat to security and health, as well to health workers' lives. Attacks on healthcare facilities in Syria, for example, have led to hundreds of health workers being killed and numerous others being injured.^{72, 73} Worldwide, during the last quarter of 2017, 104 attacks were reported, with 64 health worker deaths and 59 injuries in 16 countries and territories.⁷⁴ These conditions are contributing to health workforce attrition in conflict areas.⁷⁵

⁷¹ WHO: "[Ebola outbreak in DRC ends: WHO calls for international efforts to stop other deadly outbreaks in the country](#)", News Release, 24 Jul. 2018.

⁷² F.M. Fouad et al.: "Health workers and the weaponisation of health care in Syria: A preliminary inquiry for *The Lancet*-American University of Beirut Commission on Syria", in *The Lancet* (2017, Vol. 390, Issue 10111), pp. 2516-2526.

⁷³ ReliefWeb: [Monitoring violence against health care – February 2018 summary report](#) (Geneva, WHO, Health Cluster, 2018).

⁷⁴ WHO: [Attacks on Health Care Dashboard](#) (Geneva, WHO, 2017).

⁷⁵ F.M. Fouad et al.: "Health workers and the weaponisation of health care in Syria", op. cit.

3. Impact on decent work

Demographic change, globalization, technological advances and environmental and geo-political developments are already transforming work in the health services sector. These megatrends and drivers will have a major bearing on the future of work in health services, but, much also depends on the design of health services, workforce implications, and service delivery. Due to this complexity, however, the longer-term impact cannot be accurately predicted with the currently available information. The effects of some drivers, such as population ageing and growth, are easier to predict than others since they have been documented for some years.

This section will examine the impact of such megatrends and drivers on health sector jobs, employment and working conditions, education and training, and social dialogue.

3.1. Impact on jobs

Healthcare systems are continuously challenged to adapt to an ever-changing environment, which requires constant adjustments in the delivery of health services. This has consequences for both how work is carried out and the demands made on the health workforce. Based on WHO health workforce data (1990-2013), increasing demand for health services is expected to generate around 40 million new jobs for health workers by 2030, mainly in high- and middle-income countries. Other estimates suggest additional job creation potential due to multiplier effects in related industries, including important opportunities for the establishment and sustainability of small and medium-sized enterprises.^{76, 77}

Despite progress in addressing health workforce shortages, an estimated shortfall of 18 million health professionals by 2030 has been projected, especially in low- and lower-middle-income countries and rural areas,⁷⁸ supplemented by an estimated global shortage of 31.8 million workers in non-health occupations supporting health service delivery.^{79, 80} To achieve UHC, these gaps need to be addressed, which would create jobs on a significant scale. According to ILO estimates, achieving UHC will require significantly more jobs by 2030 in the health sector and beyond; specifically, 27 million new jobs for workers in health occupations, 45.5 million new jobs for workers in non-health occupations, and creating new jobs for the estimated 57 million unpaid non-health workers.⁸¹

Technology and automation will impact jobs in the health sector on multiple levels. They are expected to lead to the elimination of a range of low-skilled jobs, such as the transport of materials in hospitals, and of highly technology-based specialized jobs,

⁷⁶ J.X. Liu et al.: “Global health workforce labor market projections for 2030”, in *Human Resources for Health* (2017, Vol. 15).

⁷⁷ HEEG Commission: [Working for health and growth: Investing in the health workforce](#), op. cit.

⁷⁸ *ibid.*

⁷⁹ Health occupations include professions such as physicians, nurses, physiotherapists; non-health occupations include workers in administration, cleaning, manufacturing; unpaid workers include those providing care for family members due to lack of carers.

⁸⁰ X. Scheil-Adlung: [Health Workforce: A global supply chain approach](#), op. cit.

⁸¹ *ibid.*

including medical radiology.⁸² The use of technology to achieve more efficient health services also provides new opportunities for governments, employers and workers in the form of new types of work and related occupational profiles. For example, in Singapore, where over 4,500 health support jobs are threatened due to digitalization, a Healthcare Academy has been established by unions to retrain workers for new roles in the expanding health sector.⁸³

3.2. Impact on employment and working conditions

Decent work is fundamental to ensuring effective and resilient health systems and to achieving equal access to quality healthcare. For example, improving working conditions through safe staffing approaches, such as appropriate health worker to patient ratios, also improves patient outcomes.⁸⁴

Non-standard forms of employment (NSFE)

In response to cost and efficiency concerns, health sector reforms have resulted in greater diversification of the types of jobs available, including the use of non-standard forms of employment (NSFE), which include fixed-term work, temporary and agency work, dependent self-employment, and part-time work.⁸⁵ Well-designed and regulated NSFE provide the means to address changing demands, short-term absences of workers and challenges related to work-life balance.⁸⁶

However, workers in these forms of employment tend to be more exposed to decent work deficits, including job insecurity, lower pay, social protection gaps, and increased health and safety risks. They often have more limited organizing capacities and collective bargaining power, impacting fundamental principles and rights at work and restricting opportunities for meaningful social dialogue in the sector.^{87, 88}

There are high numbers of informal wage workers in the health and social care sector in certain countries, including Argentina, Brunei Darussalam, Cambodia, Latvia, Mali, Poland, Senegal, South Africa, and Turkey.⁸⁹ Health sector informality also tends to be larger than comparable sectors, like education, when there is an over-reliance on community

⁸² C. Benedikt Frey and M.A. Osborne: [*The future of employment: How susceptible are jobs to computerisation?*](#) (Oxford, Oxford Martin School, University of Oxford, 2013).

⁸³ Y. Yahya: [*“New Health care Academy to train health workers at risk of losing jobs to technology”*](#), in The Straits Times (published 27 August 2018).

⁸⁴ ILO: [*Improving employment and working conditions in health services*](#), op. cit.

⁸⁵ ILO: [*Non-standard forms of employment*](#), Report for discussion at the Meeting of Experts on Non-Standard Forms of Employment, ILO Conditions of Work and Equality Department (Geneva, 2015).

⁸⁶ ILO: [*Improving employment and working conditions in health services*](#), op. cit.

⁸⁷ ILO: [*Conclusions of the Meeting of Experts on Non-Standard Forms of Employment*](#), GB.323/POL/3 (Geneva, 2015).

⁸⁸ M. Quinlan: [*The effects of non-standard forms of employment on worker health and safety*](#) (Geneva, ILO, Conditions of Work and Employment Series No. 67, 2015).

⁸⁹ ILO: [*Care work and care jobs*](#), op. cit.

health workers, such as in India, Myanmar and Malawi.⁹⁰ Calls have been made for the ILO, governments and social partners to invest in more research on the changes generated by NSFE, such as the monitoring of outsourcing, the nature of flexible working arrangements, and the increasing use of NSFE in the public sector.⁹¹

NSFE are likely to grow in the health services sector due to the increasing shortage of health professionals and expectations of work-life balance. Zero hours contracts, an arrangement whereby workers do not have guaranteed working hours, are on the rise.⁹² In 2013, some 27 per cent of healthcare employers in the United Kingdom were using zero-hours contracts. Initially used in low-skilled jobs, zero-hours contracts are increasingly being used in cardiac services, physiotherapy, psychiatric therapy, and hearing services.⁹³ Many workers with these types of contracts experience financial insecurity; their employers, on the other hand, may experience challenges in retaining quality staff and in maintaining service quality and continuity.

Health sector transformation

Outsourcing in the public sector, and specifically the health sector, is viewed critically by many workers' organizations and others, since it may contribute to the transfer of public services to the private sector, with uncertain consequences for public workers.⁹⁴ Evidence from Brazil shows that institutions can lead the way to dialogue and negotiation between employers and workers' representatives in the health sector to mitigate the instability associated with outsourcing.⁹⁵ Nevertheless, the shift in the provision of health services from public to private is affecting working conditions for health workers, with marketization contributing to increasing workloads. Research suggests that the growth of a private health services sector is changing the relationship between patients and healthcare workers, producing a more customer-provider type of relationship.⁹⁶

The health sector is evolving at a rapid pace, with transformations increasingly being led by actors outside the health sector, including tech giants such as Amazon, Apple, Google and Uber. A recent venture between Amazon, Berkshire Hathaway and JPMorgan Chase & Co. is using big-data analysis to improve care and cut wasteful costs.⁹⁷ At this stage, it is difficult to assess the impact of such actors on the health sector in terms of implications for patients and workers, or their relationships.

⁹⁰ *ibid.*

⁹¹ M. Sargeant and H. Sutschet: [Non-standard working in the public service in Germany and the United Kingdom](#) (Geneva, ILO, Working Paper No. 304, 2015).

⁹² UNISON – The Public Service Union: [Zero hours contracts](#), 2015.

⁹³ *ibid.*

⁹⁴ Confederación Latinoamericana y del Caribe de Trabajadores Estatales (CLATE).

[The Future of Work in the Public Sector](#). (2018)

⁹⁵ A. Verma and A. Gomes: [Non-standard employment in government: An overview from Canada and Brazil](#) (Geneva, ILO, Working Paper No. 303, 2015).

⁹⁶ J. Lethbridge: [Health care reforms and the rise of global multinational health care companies](#), op. cit.

⁹⁷ T. Hunnicutt and C. Humer: “[Amazon, Berkshire, JPMorgan name Atul Gawande CEO of healthcare venture](#)”, in *Reuters*, 20 Jun. 2018.

As a result of technological developments, jobs in the health services sector are likely to be redefined, with increased coordination and supervisory roles, and new employment paths will emerge in areas such as telehealth and mobile clinics. The automation of repetitive and administrative tasks can relieve heavy workloads, help reduce medical error, and enable staff to focus more on patient care. Automation also means that health workers are likely to be dealing with tasks of greater complexity, creating risks of cognitive and emotional overload.

Due to the people-centred nature of care, the relational aspects of work are likely to remain strong in the future, particularly regarding dialogue between patients and healthcare workers. It is also expected that patients will take more responsibility and control over their health and health data in the foreseeable future, which will affect how health workers provide services. The settings in which care is provided will change as greater numbers of people access health services from home. However, accessing health services via telemedicine raises concerns about quality assurance, data propriety, and cybersecurity.⁹⁸ In these contexts, health systems need to prepare health workers to navigate changing expectations from both patients and employers, and changing work environments.

Gender dynamics

Despite the fact that women's contribution to the health labour force is significant, policies are not adequate to ensure they play their full role or achieve their full potential.⁹⁹ Historical trends, where women in the health sector tend to be clustered in lower skilled jobs, are still a reality.^{100, 101, 102} Globally, the gender pay gap is estimated to be an average of 20 per cent or greater in the overall economy. The pay gap is even more pronounced in the health and social work sectors.¹⁰³ Studies have demonstrated that female physician

⁹⁸ Deloitte: [Global health care outlook](#), op. cit.

⁹⁹ A. Langer et al.: "Women and health: The key for sustainable development", in *The Lancet* (2015, Vol. 386, Issue 9999), pp. 1165-1210.

¹⁰⁰ T.L. Adams: "Gender and feminization in health care professions", in *Sociology Compass* (2010, Vol. 4, Issue 7), pp. 454-465.

¹⁰¹ R. Gill: "Gender stereotypes: A history of nursing in India", in *Social Action* (2018, Vol. 68), pp. 43-55.

¹⁰² S. Donley and C.L. Baird: "The overtaking of undertaking?: Gender beliefs in a feminizing occupation", in *Sex Roles* (2017, Vol. 77, Issue 1-2), pp. 97-112.

¹⁰³ ILO: [Improving employment and working conditions in health services](#), op. cit.

researchers, physician assistants, pharmacists and nurse practitioners are earning less than their male counterparts.^{104, 105, 106, 107, 108}

Women working in the health sector face considerable pressure in balancing work and family responsibilities. Insufficient recognition is given to informal and unpaid activities carried out by women, or to gendered differences in the provision of patient care. On average, female family doctors spend more time with their patients, an activity that will likely grow in demand in future.¹⁰⁹

Women are also disproportionately represented in the care economy. The percentage of women in the formal long-term care workforce is 80.3 per cent in Spain, 89.7 per cent in the United States, 92 per cent in Canada, and 95.2 per cent in South Korea. With respect to unpaid care work, such work is most frequently carried out by the female partners, daughters or daughters-in-law of those being cared for, and they perform this work without appropriate social protection.¹¹⁰ Care work is frequently and systemically undervalued due to gender dynamics, as evidenced in a 2012 equal pay case in New Zealand: the case resulted in the Care and Support Workers (Pay Equity) Settlement Act 2017, which raised the rate of pay and recognised the gender-based, systemic undervaluation of care work.¹¹¹

3.3. Impact on education and training

The future of work will generally require mechanisms that ensure lifelong learning, flexible education, and training systems that can anticipate the skills demanded by the labour market.¹¹² The transformations in work driven by new technologies mean that education and training will have to better prepare health workers for their new tasks and roles. Investment in continuous skills development will be critical to ensure that technologies and AI are

¹⁰⁴ R. Jaggi et al.: “Gender differences in the salaries of physician researchers”, in *JAMA* (2012, Vol. 307, No. 22): pp. 2410-2417.

¹⁰⁵ B. Coplan et al.: “Salary discrepancies between practicing male and female physician assistants”, in *Women’s Health Issues* (2012, Vol. 22, Issue 1), pp. e83-e89.

¹⁰⁶ M.J. Carvajal, G.M. Armayor and L. Deziel: “The gender earnings gap among pharmacists”, in *Research in Social and Administrative Pharmacy* (2012, Vol. 8, Issue 4), pp. 285-297.

¹⁰⁷ M.W. Edmunds: “Another task for NPs: Gender salary disparity”, in *The Journal for Nurse Practitioners* (2015, Vol. 11, Issue 10), pp. A21-A22.

¹⁰⁸ S.A. Seabury, A. Chandra and A.B. Jena: “Trends in the earnings of male and female health care professionals in the United States, 1987 to 2010”, in *JAMA Internal Medicine* (2013, Vol. 173), pp. 1748-1750.

¹⁰⁹ Canadian Health Human Resources Network (CHHRN): *Feminization of the physician workforce: Implications for health human resource planning* (Ottawa, CHHRN, 2013).

¹¹⁰ X. Scheil-Adlung: *Long-term care protection for older persons. op. cit.*

¹¹¹ S.A. Seabury, A. Chandra, A.B. Jena: “Trends in the earnings of male and female health care professionals in the United States, 1987 to 2010”, in *JAMA internal medicine* (2013, vol. 173), pp. 1748-50.

¹¹² ILO. [Skills policies and systems for a future workforce](#). Issue Brief, No. 8. 2018.

properly supervised and managed, and do not add to the workload of health workers.¹¹³ It will be essential to analyse those tasks that may be automated in the future, and to identify those that will continue to require hands-on human expertise.

Education and training in the health professions will most likely be influenced by the larger factors shaping the future of work, characterized by a continuous decrease in the need for physical and manual labour and basic cognitive skills. Due to these factors and the growing importance of AI, it is expected that the relative weight of certain skills will grow in value. This includes interpersonal and soft skills like communication, social and emotional skills, higher cognitive and technological skills,¹¹⁴ as well as teamwork and team-building abilities.¹¹⁵ The changing relationship between patients and health workers due to technological advances will require tailored training related to social media, and education through simulation training.^{116,117}

Strengthening health systems in an interdependent world requires curriculum development and student evaluations that are competency-based in order to prepare health workers for services remodelled around peoples' needs.¹¹⁸ Traditional boundaries between professions are likely to become blurred as new job profiles and work patterns emerge. Therefore, education and training will need to include inter-professional training to adequately prepare health professionals for changing realities.

As the global mobility of health workers becomes increasingly common, many origin and destination countries are recognising the importance of structured training and education for migrant workers: Ireland, for example, relies heavily on migrant health workers, particularly from Pakistan and Sudan. To balance this necessity with their commitment to the WHO Global Code of Practice, the Government of Ireland initiated a two-year postgraduate training scheme – the International Medical Graduate Training Initiative (IMGTI) – for doctors from Pakistan. The overall aim is that in the short term such graduates gain clinical training experience that is otherwise unavailable to them, so as to enhance the health services in their home country in the long term.¹¹⁹

3.4. Impact on social dialogue

The changes introduced by demographic factors, globalization, environmental and geopolitical developments, and technological advances will have implications for social

¹¹³ S. Benhamou and L. Janin: [Intelligence Artificielle et Travail](#) (Paris, France Stratégie, 2018).

¹¹⁴ PricewaterhouseCoopers (PwC): [Workforce of the future: The competing forces shaping 2030](#), 2018.

¹¹⁵ ILO. [Skills policies and systems for a future workforce](#). Op. cit.

¹¹⁶ E. Smailhodzic: “Social media use in healthcare: A systematic review of effects on patients and on their relationship with healthcare professionals”, in *BMC Health Services Research* (2016, Vol. 16).

¹¹⁷ T. Levett-Jones and S. Lapkin: “A systematic review of the effectiveness of simulation debriefing in health professional education”, in *Nurse Education Today* (2014, Vol. 34, Issue 6), pp. e58-e63.

¹¹⁸ J. Frenk et al.: “Health professionals for a new century: Transforming education to strengthen health systems in an interdependent world”, in *The Lancet* (2010, Vol. 376, Issue 9756), pp. 1923-1958.

¹¹⁹ RCSI. [Brain Drain to Brain Gain: Ireland's two-way flow of Doctors](#). 2017.

dialogue. Developments in the health services sector as a result of these megatrends and drivers will likely influence consensus building and democratic participation among stakeholders. Policies for the future of work in the care sector must similarly be founded on social dialogue.¹²⁰

The growth of NSFE in the health services sector poses challenges for the workers affected in terms of having access to the same benefits and rights as those employed full-time, and for employers in relation to the predictability and sustainability of the workforce.¹²¹ Initiating and maintaining social dialogue in such a climate will prove difficult.

Nevertheless, social dialogue presents opportunities to better prepare health workers for changing working conditions. Some countries, such as Australia, have engaged in negotiations for flexible working arrangements for nurses, such as shift swapping, annualized hours contracts, career breaks, phased retirement and purchased leave. Certain countries have also introduced arrangements specific to the ageing nursing workforce, such as Canada, which piloted a flexible working model for older nurses that divides their schedule between direct care and the mentoring and support of new nurses.¹²²

¹²⁰ ILO: [Care work and care jobs](#), op. cit.

¹²¹ *ibid.*

¹²² M. MacPhee and S. Borra: [Flexible work practices in nursing](#) (Geneva, International Council of Nurses, 2012).

4. The future of work we want in the health sector

Building sustainable and adequately staffed health services for the future to achieve UHC and equitable access to quality healthcare requires developing a well-trained, motivated and supported health workforce. To make progress towards this goal, the health sector must be recognized as a contributor to inclusive economic growth, a generator of jobs, and a site for advancing gender equality, providing decent youth employment opportunities and generating gains across multiple SDGs.

With the overall vision of securing a skilled workforce with the capacity to respond effectively to population health needs, the HEEG Commission produced ten recommendations to foster job creation in the health sector and to address the predicted workforce shortages.¹²³ Six of the recommendations aim to transform the health workforce in ways that contribute to achieving the SDGs:

- stimulate investments in creating decent health sector jobs
- maximize women's participation and foster their empowerment
- scale up transformative, high-quality education and lifelong learning
- reform health service delivery and organization
- harness the power of technology
- ensure core capacities for response in emergencies and the protection of health workers.

The four other recommendations address needs that must be met to achieve the envisaged change:

- raise adequate funding
- build partnerships and collaboration
- manage international migration to maximize generalized benefits and protect migrant rights
- manage data and information in order to strengthen accountability.

Political will and inter-sectoral, multi-stakeholder involvement are indispensable to achieving the Commission's recommendations.

4.1. The health sector as a source of inclusive economic growth

To make progress towards the SDGs, a paradigm shift in thinking about the health sector and its economic significance is critical. As advocated by the HEEG Commission, investments in the health sector should be regarded as a driving force for economic growth rather than a resource drain on national economies.

¹²³ HEEG Commission: [Working for health and growth](#), op. cit.

Health service provision globally involves a wide range of occupational groups, including people working in health and non-health occupations. In addition to paid work, many people, particularly women, engage in unpaid care work, including by taking care of the elderly and those with disabilities. The health sector will reach its potential for inclusive economic growth by creating jobs that contribute to health protection, including by recognizing and compensating unpaid care work.

There is significant potential for employment creation in the health sector and, through multiplier effects, in other sectors. The creation and delivery of healthcare goods and services involve not only the health sector, but also a broad range of other sectors: administration, information technology, cleaning, agriculture, food, transportation, retail, wholesale, and research. ILO estimates suggest that each health worker position created will generate 2.3 jobs in non-health occupations, with variation between regions.¹²⁴

To achieve UHC by 2030, millions of new jobs need to be created: the employment creation potential by 2030 has been estimated at between 129 million¹²⁵ and 173 million jobs in the health, social and related sectors.¹²⁶ Investing in health by creating the necessary jobs will boost economic growth within and outside the health sector. To secure such investment, the sector will need to be recognized by governments as an engine of growth.

International recruitment of migrant health workers is often utilized when job vacancies cannot be filled by domestic health workers, but such recruitment often fails to address issues related to the rights of migrant workers or the labour market needs of their countries of origin. A recent series of ILO case studies highlighted several best practices in the international recruitment of nurses.¹²⁷ In the United Kingdom, for example, one recruitment agency pays close attention to the internal health labour market of the Philippines to ensure that the recruitment process does not deepen existing staff shortages.¹²⁸

Other promising practices present in India and the Philippines include using ICT to ensure efficient and transparent recruitment, maintaining long-term client relationships, monitoring migrants' skills and motivation, and creating international partnerships to ensure accountability.¹²⁹ Further, a newly created web platform, the Migrant Recruitment Advisor (MRA) aims to protect migrant workers from abusive employment practices through user reviews of recruitment agencies. It allows migrant workers to comment on their experiences, rate the recruitment agencies and learn about their rights.¹³⁰

¹²⁴ X. Scheil-Adlung: [Health workforce: A global supply chain approach](#), op. cit.

¹²⁵ *ibid.*

¹²⁶ ILO: [Care work and care jobs](#), op. cit.

¹²⁷ D. Calenda (ed): [Case studies in the international recruitment of nurses: Promising practices in recruitment among agencies in the United Kingdom, India, and the Philippines](#) (Bangkok, ILO, 2016).

¹²⁸ *ibid.*

¹²⁹ *ibid.*

¹³⁰ ILO: [New online ratings help migrant workers avoid unscrupulous recruiters](#), Press release (11 April 2018).

4.2. The health sector as a contributor to gains across the SDGs

Investing in health systems and in the health workforce will advance progress towards the achievement of the SDGs. Doing so will bring benefits for various SDGs, particularly SDG 3 on good health for all, SDG 1 on ending poverty, SDG 4 on quality education, SDG 5 on gender equality, and SDG 8 on inclusive economic growth and decent work for all.

As many of the SDGs are interlinked, the impact of health and wellbeing on sustainable development is complex and wide-ranging, with impact across all SDGs.¹³¹ Recent frameworks for integrating health and well-being across the SDGs might provide a basis for future progress on measuring the contribution of health to sustainable development.¹³² Specifically, this has been proposed in order to cover inter-sectoral actions and capture associated potential new indicators. In the field of respiratory diseases, for example, proposed objectives might include improved access to social protection and health systems or reduced outdoor and indoor pollution. New indicators could include the proportion of the population that has access to social protection and health services, and the proportion of households with access to sustainable and clean energy sources and water.¹³³

4.3. The health sector as a promoter of gender equality and decent employment opportunities for youth

Globally, gender inequality concerns four areas: economic participation and opportunity, educational attainment, health and survival, and political empowerment. Addressing these gaps carries the promise of additional resources for GDP, ranging from US \$250 billion in the United Kingdom to US \$2.5 trillion in China.¹³⁴

Among physicians, the proportion of women is still lagging behind that of men in some, mainly surgical, specialties. Research shows that female medical students tend to gravitate towards specialties such as obstetrics-gynaecology, paediatrics, paediatric surgery, dermatology, and oncology.¹³⁵ However, an increasing proportion of women are specializing in domains such as neurosurgery, urology, and orthopaedics.

Bold change is needed to properly compensate women's contribution to the care economy, including by recognizing the unpaid care work carried out in family and community settings, transitioning unpaid care work to formal jobs, and accounting for women's unpaid work when the health workforce composition is analysed.¹³⁶ The Women

¹³¹ A.R. Nunes, K. Lee and T. O'Riordan: "The importance of an integrating framework for achieving the Sustainable Development Goals: The example of health and well-being", in *BMJ Global Health* (2016, Vol. 1), pp. 1-12.

¹³² *ibid.*

¹³³ *ibid.*

¹³⁴ World Economic Forum: [The global gender gap report 2017](#), 2017.

¹³⁵ L.F. Ng-Sueng et al.: "Gender associated with the intention to choose a medical specialty in medical students: A cross-sectional study in 11 countries in Latin America", in *PLOS ONE* (2016, Vol. 11).

¹³⁶ A. Langer et al.: "Women and health: The key for sustainable development", *op. cit.*

and Health Commission produced recommendations to achieve these needed changes, including the development and enforcement of gender-responsive policies, equal pay for work of equal value, and collecting and analysing sex-disaggregated health workforce data.¹³⁷ The Women in Global Health Movement¹³⁸ shares similar objectives and advocates for gender equality by developing tools and partnering with key stakeholders in the areas of leadership, capacity building, enabling environments, mentorship and networking, and research and data.¹³⁹

The future of work in the health sector must implement gender-responsive policies to ensure equity and fairness in the health workforce. Gender imbalances take many forms in the health sector, from medical specializations to unpaid care work. To ensure that women are able to fully participate in the health workforce, the health sector must ensure parental leave for both men and women, value and recognize the contribution of both paid and unpaid care work, and ensure gender-responsive social protection floors.

The health sector could also prove a source of decent employment for youth, who are the most affected by unemployment. In 2018, the global youth unemployment rate stood at 13.1 per cent, with higher rates in the Arab States (29.7), Northern Africa (28.6), and Latin America and the Caribbean (19.5).¹⁴⁰ Additionally, as of 2017 more than 20 per cent of youth, the majority being women, were not in employment, education or training (NEET).¹⁴¹ However, bureaucracy, insufficient opportunities and under-funding, which are often characteristic of the public sector, may make it less attractive to young people seeking employment. Nevertheless, encouraging trends are evident in some countries: between 2005 and 2015, youth employment in the health services sector doubled in the Philippines and Tanzania, tripled in Bangladesh, and increased by approximately 90 per cent in Colombia.¹⁴² This trend also opened opportunities for young women in particular, such as in Brazil, where over two-thirds of young workers in the health sector are female.¹⁴³

Work on core skills is a useful starting point to promote skills attainment among youth.¹⁴⁴ Focusing on the four broad skill categories – learning to learn, communication, teamwork, and problem-solving – can empower young workers to successfully navigate the future work environment.¹⁴⁵ A 2014 study in the United States revealed that healthcare is not a preferred field among under-represented minority students due to negative experiences and their lack of knowledge about careers in the field. It also showed that students lacked

¹³⁷ *ibid.*

¹³⁸ Women in Global Health: [About](#).

¹³⁹ R. Dhatt et al.: “The time is now – A call to action for gender equality in global health leadership”, in *Global Health, Epidemiology and Genomics* (2017, Vol. 2), pp. 1-4.

¹⁴⁰ ILO: “[Youth employment trends: Where is youth unemployment the highest?](#)”, About the ILO.

¹⁴¹ ILO. [Addressing the situation and aspirations of youth](#). op. cit. [ILO: Global Employment Trends for Youth 2017: Paths to a better working future](#)

¹⁴² ILO: [Global employment trends for youth 2017: Paths to a better working future](#), 2017.

¹⁴³ *ibid.*

¹⁴⁴ ILO: [Enhancing youth employability: The importance of core work skills](#), Skills for Employment Policy Brief, 2013.

¹⁴⁵ L. Brewer: [Enhancing youth employability: What? Why? And How? Guide to core work skills](#) (Geneva, ILO, 2013).

the prerequisites or skills necessary to enter the field.¹⁴⁶ In addition to long-term tracking of students, the study identified summer school programmes in biological sciences, boot camps to prepare premedical students for medical school, and interactive online webinars providing guidance on financial and admission matters as preliminary steps for making healthcare careers more accessible.

With the right policies in place, the health sector can offer decent employment opportunities for youth and promote gender equality by offering stable career paths for a highly feminized workforce, across all occupational levels and health specialities.

4.4. The means to achieve the future of work we want in the health sector

Achieving the desired future of work in the health services sector requires a number of efforts in response to the drivers involved. Effective social dialogue between governments, workers and employers and consultation with other relevant stakeholders, such as patients' forums, is imperative, particularly during times of structural change, as noted in the 2002 Joint Meeting on Social Dialogue in the Health Services. Health sector stakeholders must act early and engage in forward-looking decision making to shape the future development of the health sector, before such issues become urgent.^{147, 148}

Promoting inter-sectoral collaboration at national, regional and international levels is key to ensuring policy coherence and to advancing decent work in the sector. Labour market policies that address systemic issues leading to health labour market failures will be necessary to create sustainable and decent jobs. Many hospitals and academic institutions now host crowdsourcing events, including hackathons, boot camps, and accelerators, which bring together professionals from diverse backgrounds to encourage creative planning to solve challenging health system problems.^{149, 150}

In order to achieve the SDGs, health service delivery models need to be responsive to the broader megatrends and drivers. Empowering workers, including women and youth, by giving them a voice in the planning and shaping of health services, and facilitating participatory approaches to improve their workplaces, would foster health services in which individuals can put their knowledge and skills to practical use.

Labour market policies must also take account of current trends and drivers. Given the continued migration of health workers, efforts need to be made at national, regional and global levels to ensure that migration benefits individuals, as well as origin and destination countries. To this end, efforts are needed to ensure the implementation of the recommendations contained in the WHO Global Code of Practice on the International

¹⁴⁶ L. Holden et al.: "Promoting careers in health care for urban youth: What students, parents and educators can teach us", in *Information Services & Use* (2014, Vol. 34, No. 3-4), pp. 355-366.

¹⁴⁷ ILO: [Improving employment and working conditions in health services](#), op. cit.

¹⁴⁸ ILO. [Social dialogue in the health services: A tool for practical guidance](#). 2005.

¹⁴⁹ C. Barnaby: "[MIT-HMS healthcare innovation bootcamp](#)", Center for Primary Care, Harvard Medical School, n.d.

¹⁵⁰ 2018 Yale Healthcare Hackathon: [Artificial intelligence enabling medicine](#).

Recruitment of Health Personnel (Global Code)¹⁵¹ and of ILO standards concerning migrant workers, public employment services, and private employment agencies.

A key principle of the Global Code is the responsibility of Member States for the sustainability of their domestic workforce. The Code refers to international standards on labour migration and the protection of migrant workers' rights. Similarly, the International Platform on Health Worker Mobility,¹⁵² a joint venture between the ILO, OECD, and WHO, aims to maximize the benefits and minimize the adverse effects of health worker migration through policy dialogue, knowledge sharing, and cooperation. The ILO General Principles and Operational Guidelines for Fair Recruitment, which cover all economic sectors and worker categories, identify the potential dangers that can be associated with international recruitment, such as a diminishing workforce, the lowering of labour standards, wages or working conditions, and the general undermining of decent work.¹⁵³

Decent working time arrangements are of great importance for the health sector, where long working hours and shift work are common to ensure 24/7 services. Recent developments include flexitime schemes, differential hours over the year, compressed hours, staggered hours, and job sharing.¹⁵⁴ Such arrangements usually allow extended operating hours for employers, and better personal and family arrangements for workers.¹⁵⁵ However, flexible schedules may lead to record-keeping or administrative difficulties for employers and potential inconveniences for some workers, or lead to fatigue and stress if compressed work weeks become frequent.¹⁵⁶ Working time policies must balance staff needs and well-being with health service provision.¹⁵⁷

Safe staffing principles are imperative for the future of work in the health sector. Inadequate staffing can result in an excessive individual workload, which may increase the likelihood of work-related stress, error, and health risks for both patients and staff.¹⁵⁸ Appropriate worker to patient ratios is crucial: efforts to ensure this have resulted in positive staff working conditions and patient health outcomes, for example in Australia, where nurse to patient ratios were introduced in 1998 and are being reviewed every three years through collective bargaining.¹⁵⁹ Similarly, social protection measures and standards for occupational health and safety, including provisions for adequate financial compensation in the event of work-related fatalities, injuries and diseases, are particularly necessary for workers in the health sector.

Education and training models need to equip individuals with the knowledge and skills that will allow them to be effective in their work in a changing health sector. Inter-

¹⁵¹ WHO: [Global Code of Practice on the International recruitment of Health Personnel](#), 2010.

¹⁵² [International Platform on Health Worker Mobility](#)

¹⁵³ ILO: [General principles and operational guidelines for fair recruitment](#), 2016.

¹⁵⁴ European Trade Union Confederation (ETUC): [Working time in the health sector in Europe \(Fact Sheet\)](#) (Brussels, ETUC, n.d.).

¹⁵⁵ ILO: [Staggered hours schemes](#), Information Sheet No. WT-9, 2004.

¹⁵⁶ ILO: [Compressed workweek](#), Information Sheet No. WT-13, 2004.

¹⁵⁷ ILO: Health Services: Decent Working Time for Nursing Personnel: Critical for Worker Well-Being and Quality Care. Policy Brief. (*Forthcoming*)

¹⁵⁸ ILO: [Improving employment and working conditions in health services](#), op. cit.

¹⁵⁹ *ibid.*

professional education and training, which further enhance collaboration within and between health professions and between social and care professionals, are needed to replace current silo approaches to education and training. Competency-based curricula that are responsive to rapidly changing societal needs and which exploit the power of IT for learning will better prepare individuals for the work environment of the future.

One of the means to achieve this is through sectoral skills bodies. In Australia the Community Services and Health Industry Skills Council conducted an environmental scan to identify the skills needed for the future of work in the health sector, such as those for geriatric care, which is expected to increase.¹⁶⁰ The Council also developed 160 qualifications and 1,198 competencies as part of the national vocational education and training standards.¹⁶¹ In Argentina, social dialogue established a sectoral collective agreement applying to more than 40,000 private sector workers between the Federation of Trade Unions of Health Workers (FATSA) and the Business Chamber representing the Residential and Home Care Sector. The agreement determines hours of work, overtime and overtime pay, and health and safety provisions. Of note is the inclusion of provisions on vocational training and education financed by employers' special contributions.¹⁶²

Progress towards a more meaningful future of work can only be achieved through social dialogue and collaboration, and by realising that the challenges faced are common and increasingly complex, and require joint efforts to be overcome.

¹⁶⁰ *ibid.*

¹⁶¹ Community Services and Health Industry Skills Council (CS&HISC): [*Environmental Scan 2015 – Building a healthy future: Skills, planning and enterprise*](#) (Sydney, CS&HISC, 2015).

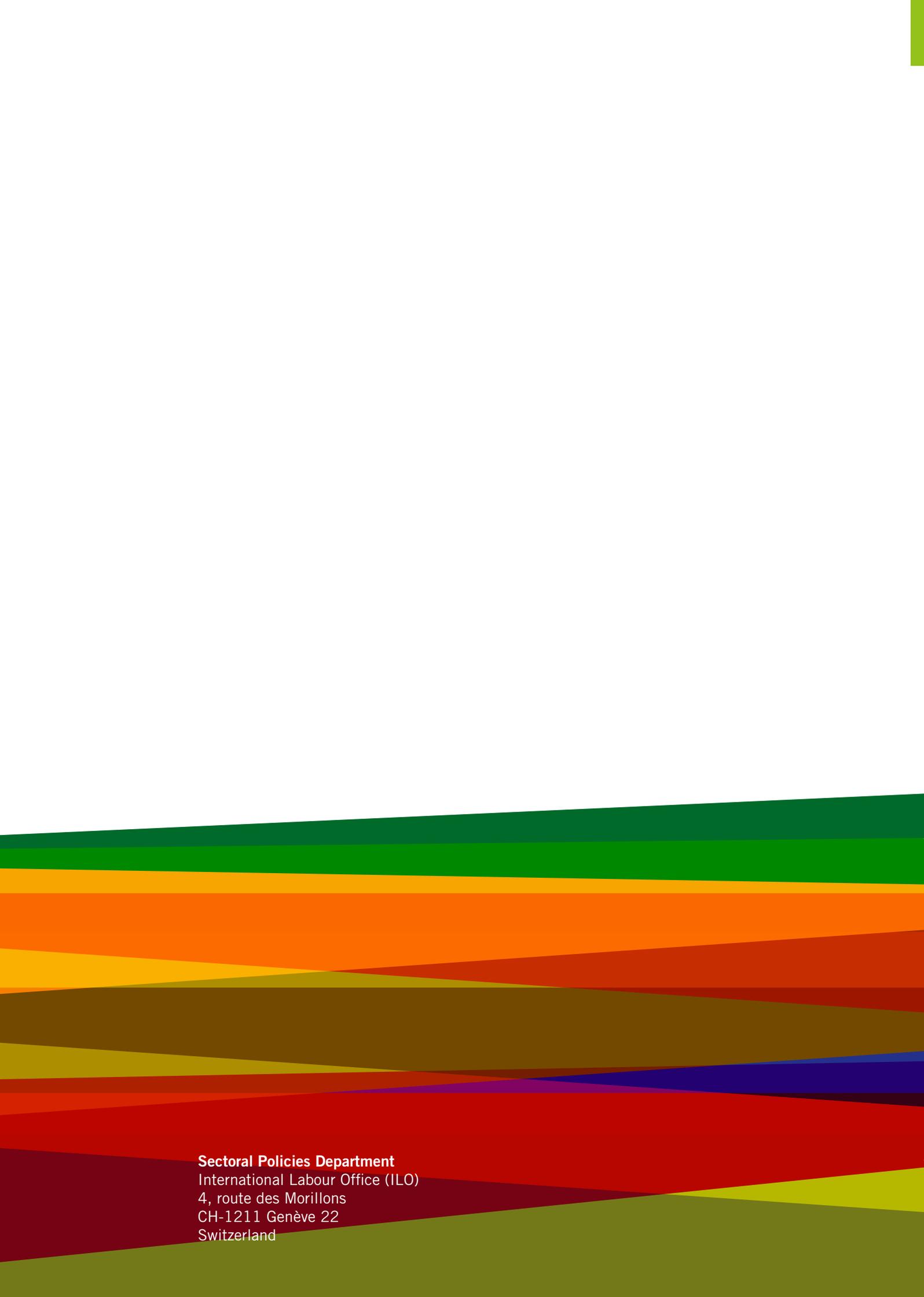
¹⁶² ILO: [*Improving employment and working conditions in health services*](#), op. cit.

5. Concluding remarks

Population dynamics, globalization, technology and environmental and geopolitical factors will radically alter the way health workers deliver health services in the future. Bold transformative change is needed to ensure sustainable health systems and health workforces. The health sector cannot afford to be a passive actor as the world of work evolves; shaping the future of work we want for the health sector requires active leadership, collaboration between sectors, participatory approaches, and strong social dialogue.

Transformative changes in the health sector require enhancing service delivery models, improving health labour market policies, updating education and training, and harnessing valuable technological developments. Yet this change must be framed by the needs of all stakeholders in the health sector, including patients, workers, employers, and governments. It must encompass meaningful collaboration between public and private actors, and be underpinned by decent working conditions. Decent work in particular is critical to ensuring the sustainability of the health sector and health workforce as future developments like changing demographics introduce new challenges. Investments in the health sector and its workforce are expected to create positive social returns and enhance inclusive economic growth. A commitment to investing in health systems is hence a commitment to investing in people and in societies.

To maximize the contribution of the health sector to the SDGs, the future of work in the sector must be shaped by all the actors involved, in a way that ensures equal access to health services and guarantees resilient health systems. The goal is to ensure access to a health worker for everyone, everywhere.



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