



**International Council of Nurses**  
*The global voice of nursing*

# RECOVER TO REBUILD



## INVESTING IN THE NURSING WORKFORCE FOR HEALTH SYSTEM EFFECTIVENESS

March 2023

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# EXECUTIVE SUMMARY

## PURPOSE OF THE REPORT

The report focuses on the nursing workforce at a time when the world is trying to recover to rebuild health systems which have been severely damaged by the COVID-19 pandemic. The nursing workforce has been central to the pandemic response, performing a critical, risky and often dangerous role as the main workforce response. The same nurse workforce—and often the same individual nurses—are now being called on to re-double this effort, as the core health profession necessary to rebuild health system capacity.

This report was commissioned by the International Council of Nurses (ICN). The aim is to inform the policy debate on how health systems, countries and international organisations should respond to the vital issue of protecting and restoring a sustainable nursing workforce against a backdrop of a global pandemic, and the need for global health system recovery and rebuild.

The report sets out the urgent action agenda for 2023 and beyond. It highlights the increasing evidence of the stress, burnout, absence and strikes affecting the nursing workforce. Underlying concerns about poor working conditions and unsafe staffing have become even more obvious, and must be addressed. The core emphasis in this report is that **without sufficient investment in well-supported nurses there can be no effective healthcare system recovery and rebuild.**

In our 2022 report in *Sustain and Retain in 2022 and Beyond* (Buchan, Catton & Shaffer, 2022), we reported on emerging evidence of the impact of the COVID pandemic on the nursing workforce resulting in increased rates of nurses leaving the profession. The report included some scenarios of the scale of shortage suggesting that there could be a need to replace up to 13 million nurses globally in the coming few years. The further evidence collected in the last 12 months highlights that those trends are both continuing and increasing. This is not only putting severe pressure on the ability of many health systems to deliver current services to their populations but risks seriously undermining efforts to rebuild health services and deliver on universal health coverage (UHC) and the Sustainable development Goals (SDGs). The evidence indicates that the current state of the nursing workforce should be considered as a global health emergency.

## COVID-19, HEALTH SYSTEM REBUILD AND ITS IMPACT ON THE NURSE WORKFORCE

Analysis at global level points to a nurse shortage in the millions, possibly as high as 30.6 million in 2019. This is compounded by many regions, countries and sectors also experiencing nursing workforce distribution inequalities. The pandemic, beginning in early 2020, then acted as a multiplier to the demands being made of the global nursing workforce.

Three years into the pandemic, there are several key policy responses that are required to support the nurse workforce and therefore enable health system rebuild. This includes investment in redeploying resources to other parts of the health system to enable the backlog of non-COVID-19 care to be dealt with. The underlying issue, which is central to any effective policy response and targeted investment, is to recognise that for many working nurses this is not a short term, one-off ‘acute’ episode, or some obscure or distant phenomenon—it is pervasive and personal. It has been a relentless, intense and a continuing drain on nurses’ energy, morale, and physical and mental health.

## **NURSE BURNOUT RISKS UNDERMINING RECOVERY AND REBUILD**

During recovery and rebuild, every working nurse deserves consideration. To avoid many individual nurses reaching breaking point, there is a need to give proper attention to the impact of their rebuild decisions on individual nurses and the nurse workforce. If policy makers focus only at the system level, and ignore the impact on nurses, then nurse retention and longer-term supply will worsen.

It is now three years since the pandemic first became apparent, but there is already a substantial and growing evidence base on the nurse workforce impact. The review summarises the rapidly expanding evidence base provided by surveys of nurses, which highlights the risks of high workload, stress and burnout to the sustainability of the nursing workforce.

## **NURSE BURNOUT: INDIVIDUAL NURSE ‘RESILIENCE’ IS NOT THE SOLUTION**

The key point that emerges from these surveys and reviews is that the scale of actual and potential trauma and burnout in the nursing workforce is huge. Burnt-out nurses are absent, reducing their hours or leaving employment. Some who have ‘held on’ for the first years of the pandemic are now exhausted and will have to step down to less demanding roles, have respite, or step away to work in other sectors or retire.

Those who remain at work report increasing levels of stress, and an increasing propensity to consider leaving their job or profession. There is a major concern that despite high levels of nurse burnout being reported in many of these studies, there is often an absence of a systematic organisation and employer response, with further burden being placed on individual nurses to be ‘resilient’ as they entered a fourth year of pandemic and rebuild.

One clear signal of the level of impact and concern is that the last 12 months have seen an unprecedented growth in protests and strike action by nurses in many countries as a last resort in reaction to inadequate responses by government and employers to concerns about workplace safety, working conditions and an absence of safe staffing levels.

## **NURSE SHORTAGES: THE RESULT OF INADEQUATE POLICY RESPONSES**

In many countries the early phase of the pandemic led to increased short-term supply of domestic nurses, as ‘surge’ policies were enacted by systems and governments to rapidly scale up the nursing workforce.

This often included requiring existing nurses to work longer hours, encouraging returners to come back into employment, co-opting student nurses into work, and fast-tracking international recruits. These emergency measures cannot be sustained in the long term, and may actually mask a reduced supply of longer-term/permanent nurses as the shift into rebuild impacts further on nurse workload and burnout.

There are clear signs of policy concern that the shortage gap is already increasing. It is evident that many countries have not invested sufficiently in training adequate numbers of nurses to meet their own demands. In some countries, nurse unemployment co-exists with significant nurse shortages, reflecting funding concerns, and ineffective policy and planning.

Demand for nurses is increasing because of the pandemic impact and rebuild, and because of worsening chronic disease rates and an ageing population in many countries; nurse supply is falling behind, because of pandemic-driven burnout related outflows, and because of underlying demographic change as the workforce in some countries ages and more nurses reach retirement.

One obvious feature of policy response in some high-income countries is renewed and expanded efforts on international recruitment of nurses as the ‘quick fix’ option, with some countries now ‘fast tracking’ active international recruitment. There is an urgent need to monitor and track the aggregate numbers of international flows of nurses in order to highlight source countries that may be at risk.

ICN is advocating for a systematic approach to tracking flows and assessing impact on the nurse workforce, if we are to both understand the root causes of current problems, and best direct policy responses at country level and globally. This requires consistency in the use of data, and clarity in interpretation of standard indicators, ideally using a ‘dashboard’ that is standardised and regularly updated.

## **AN ACTION AGENDA FOR 2023 AND BEYOND: PROTECTING AND SUPPORTING THE NURSE WORKFORCE FOR HEALTH SYSTEM REBUILD**

The nursing workforce has been at the forefront of COVID-19 response effectiveness in all countries. It will also be critical to the success of health systems recovery and rebuild around the globe.

This report highlights that the effects of COVID-19 and health systems’ recovery and rebuild are increasing the demand for nurses, but are also having damaging direct and indirect effects on individual nurses, on overall nurse supply, and on an already understaffed and overstretched global nursing workforce.

The growing risk is that pandemic and rebuild requirements that have expanded the global nurse workforce shortage gap will also exacerbate the unequal distribution of nurses, and will push up international flows of nurses from low-/middle-income countries to high-income countries. This will undermine country-level recovery and rebuild efforts, could lead to worsening population health, could prevent the attainment of UHC in some countries, and undermine countries’ ability to respond to the next public health emergency.

This focus links closely with this year’s International Nurses Day theme of ‘Our Nurses. Our Future’ which will highlight what must be learnt from the pandemic and lay out the clear actions required to ensure nurses are protected, respected and valued, and health care systems are sustainable, safe, affordable, accessible and responsive.



To protect and support the global nursing workforce and to invest in longer-term nurse workforce sustainability, there is an urgent need for effective and co-ordinated policy responses both at national level, and internationally/globally. This response must include both immediate **action** to meet the urgent challenges set out in this report, and the development of a shared longer term vision and **plan** for the global nursing workforce, to ensure that the world is better placed to meet future major health shocks. There are two main levels where policy action and planning must occur:

## Country level

At country level, protecting and investing to support the nurse workforce to achieve longer-term sustainability should be the overarching goal, comprehensively set out in a national strategy or strategic plan. This can be achieved with a primary focus on two inter-related policy priorities: to improve retention of nurses in the workforce and to ensure adequate domestic training capacity. This requires:

- **ACT: Nurse workforce impact assessments**, conducted regularly, in order to develop a better understanding of the impact on individual nurses and the overall nursing workforce, inform effective support and investment, and enable health system rebuild.
- **ACT: Commitment to invest and support for safe staffing levels.** Dangerous levels of nurse understaffing have been a major problem in many health systems during the pandemic and rebuild—it magnifies the burnout risk for those nurses who remain working in the system, compromises patient care, and will be a driver for increased outflow of staff. It will also undermine the rebuild efforts.
- **ACT: Commitment to support for early access to full vaccinations programmes for all nurses.** Without this protection of the nursing workforce, future pandemic responses will be jeopardized, and all other interventions to improve sustainability risk being undermined. Some countries have yet to achieve adequate coverage.
- **PLAN: Reviewing/expanding the capacity of the domestic nurse education system** to meet rebuild demand, and to sustain long term nurse supply. This should be based on data generated from impact assessments and from a regular and systematic national nurse labour market analysis, which includes assessment of the projected size, skill profile and deployment of the future nursing workforce, and agreed approaches to filling any identified gaps, through adjustments in investment in supply and in curriculum.
- **PLAN: Investing in the retention of nurses and the attractiveness of nursing as a career**, by providing fair pay and conditions of employment, structured career opportunities, and access to continuing education, and support for well-being, to ensure that the damaging effects of nurse burnout are combatted, that nurse unemployment is addressed, and that the drivers of nurse strikes are tackled.
- **PLAN: Implementing policies for improved career structures, and optimizing the workforce by advanced practice roles, and appropriate technological support.** This can enable the nursing workforce contribution to the rebuild to be optimised through supporting nurses working at full scope, increasing the use of advanced practice and specialist roles (i.e. nurse practitioners), effective skill mix and working patterns, teamwork, and provision of appropriate administrative support, technology and equipment, and training in its use. This will contribute to retention and attractiveness of nursing, will accelerate rebuild, and should include a focus on having an enabling regulatory and legislative framework.
- **PLAN: Monitoring and tracking nurse self-sufficiency.** Using a self-sufficiency indicator gives national policy makers an insight into the extent of their dependence on (and potential vulnerability to) international nurse supply.

## International level

At international level, the policy response must be driven by recognition that the nursing workforce in lower-income countries, already vulnerable and often understaffed, has been further damaged by the impact of the pandemic.

This risks health systems' recovery and rebuild and any prospects of improving population health, including meeting the SDGs and achieving UHC. These countries will continue to be highly vulnerable to international outflow of nurses, even if they succeed in implementing domestic policies to improve nurse supply and support recovery and rebuild.

These at-risk countries need to be backed up by the international community. Key international stakeholders, such as the World Health Organization (WHO), the Organization for Economic Co-operation and Development (OECD), the World Bank and ICN must act now, but they must also develop and agree on a vision and long-term, ten-year plan for sustaining the global nursing workforce.

The global nurse workforce challenge is too big, too critical and too 'different' from that which existed only three years ago to be ignored. **There must be a co-ordinated effort by international stakeholders and countries to develop a long-term, ten-year plan to aim for a sustainable global nursing workforce.** We cannot risk more damage to an already impaired workforce, and we cannot revert to the pre-pandemic situation of 'living with' extensive nursing shortages. The necessary actions, both immediate, and in support of developing this ten-year plan, which must be considered and co-ordinated between countries and international stakeholders include:

- **ACT: Supporting an immediate update of the State of the World's Nursing (SOWN) analysis.** SOWN 1 was published in early 2020 and describes the pre-pandemic profile of the global nursing workforce. It is a useful benchmark, but the world is forever changed because of the pandemic. As we enter the fourth year of the pandemic, there is an urgent need for SOWN 2: an updated global profile of the nursing workforce during the pandemic, and oriented towards rebuild, to assess the damage done, and the scope for targeted investment and action on sustainability and renewal.
- **PLAN: Commitment to support for early access to full vaccinations programmes for all nurses, in all countries.** International co-operation is required to protect the nursing workforce in all countries.
- **PLAN: Commitment to implementing and evaluating effective and ethical approaches to managed international supply of nurses,** through a collective approach framed within a fuller and more effective and consistent implementation of the WHO Global Code of Practice on the International Recruitment of Health Personnel and its safeguard list. This must focus on improved monitoring of international flows of nurses, independent monitoring of the use of country-to-country bilateral agreements and recruitment agencies to ensure compliance, an agreed definition of what is meant by 'active' recruitment, and with fair and transparent recruitment and employment practices. The evidence base and monitoring of the implementation of these policies is currently inadequate to inform effective policy and identify any ethical malpractice, and urgently requires improvement. In the meantime, given the current high levels of active international recruitment, ICN is calling for consideration of a time-limited moratorium of active recruitment of nurses from countries on the safeguard list.
- **PLAN: Commitment to supporting regular and systematic nurse workforce impact assessments, particularly in resource constrained countries,** by the provision of technical advice, data improvement, independent analysis, and multi-stakeholder policy dialogues to agree priority policy actions on domestic nurse supply and retention.

- **PLAN: Commitment to investing in nurse workforce sustainability in small states, lower income states and fragile states, most vulnerable to nurse outflow, and impacted by the pandemic**, by building on the lessons of the UN High Level Commission on Health Employment and Economic Growth, and of the WHO Strategic Directions on Nursing and Midwifery which demonstrate the long-term economic, social and population health benefits of investing in the nursing workforce.

Recover to rebuild. There is need for both urgent action and a shared long-term vision and plan for the global nursing workforce. The COVID-19 pandemic has already caused unprecedented damage to the global nursing workforce, and health system recovery and rebuild is now adding to the burden. Without sufficient, well-motivated and supported nurses, the global health system cannot be rebuilt. A co-ordinated policy response at country level and internationally is urgently needed to meet the 2023 Action Agenda and to develop a longer-term plan: to protect and support the nurse workforce, and enable health system rebuild.

# 01 CHAPTER ONE

## 1. INTRODUCTION

### 1.1 INTRODUCTION

The report focuses on the nursing workforce at a time when the world is trying to recover and rebuild health systems which have been severely damaged by the COVID-19 pandemic. The pandemic first hit in early 2020. It is not over, and its impact on population health has challenged, and in some places overwhelmed, health system capacity and undermined economies. In particular, many health systems are only now beginning to face up to huge backlogs of work displaced or cancelled during peak pandemic, as well as having to address the growing chronic disease challenge created by the pandemic itself. In January 2023, the World Health Organization (WHO) announced that COVID-19 “continues to constitute a public health emergency of international concern (PHEIC)” and that it “is probably at a transition point” with a need to mitigate the continuing potential negative consequences (WHO, 2023a).

The pandemic has killed millions, infected many millions more, undermined the global economy and make a huge demand on health systems. There have been more than 677 million cases, and an estimated 6.7 million deaths as result of the pandemic (Worldometer, 2023). The toll the COVID-19 pandemic has exacted on the global economy has been significant, with the International Monetary Fund (IMF) reporting that median global gross domestic product

dropped by 3.9% from 2019 to 2020, making it the worst economic downturn since the Great Depression. Recovery has been uneven and disparities in vaccine access and coverage could threaten improvement in much of the world (Oum, Kates & Wexler, 2022). The World Bank Development Outlook in 2022 emphasised that the pandemic crisis led to a dramatic increase in inequality within and across countries, and that the recovery from the crisis will be “as uneven as its initial economic impacts, with emerging economies and economically disadvantaged groups needing much more time to recover” (World Bank, 2022).

The nursing workforce has been central to the pandemic response, performing a critical, risky and often dangerous role as the main workforce response. Many worked excess hours for months, in dangerous conditions, and with limited support. Some faced workplace stigma, bullying and violence. The same nurse workforce—and often the same individual nurses—are now being called on to re-double this effort, as the core health profession necessary to rebuild health system capacity. **The nurse workforce, was already under pressure before the pandemic. It has now faced existential threats during the pandemic peaks, with many dying, and now must respond to greater demands on its globally stretched resources.**



### 1.3 NURSE SHORTAGES UNDERMINE HEALTH SYSTEM REBUILD AND ECONOMIC GROWTH

Against this backdrop of growing nurse workforce shortages, the recognised need for urgent and effective policies to protect and support the nursing workforce is now ‘mainstream’. This reflects the growing recognition that economic growth and health system recovery and rebuild depend on having an effective health workforce. The dependency of economic growth on effective health systems and a sustainable workforce were well articulated by the UN High Level Commission on Economic Growth (WHO, 2016a). The vital linkage between health workforce sustainability, effective health systems, population health and economic growth has been reinforced by the pandemic impact and need to recover and rebuild. This must include a central focus on investing in a well-supported nursing workforce, and be whole of government in terms of policy solutions.

The *Financial Times* warned that, “the departure of skilled nurses, and high levels of sick leave among frontline staff, are putting huge strains on overstretched services and reversing any progress made in recent years to boost nursing workforces... Meanwhile, ageing populations in the US and Europe are intensifying demand for healthcare while insufficient training opportunities in some western nations and global health budget constraints make it harder to recruit” (Smyth & Neville, 2022). OECD has stressed that in Asia-Pacific, “The most commonly reported factor on the supply side was the cancellation of elective services and the redeployment of staff to provide COVID-19 relief...” (OECD/WHO, 2022).

OECD has explored in detail the need for health system recovery and rebuild as a foundation for economic growth. In late 2022, in a report on priority investments in health systems, it identified that one of three ‘pillars’ of investment must be to “Bolster health professionals working on the frontline” and emphasised that a “reinforced workforce strengthens service delivery”. It pinpointed two major necessary areas of investment: (1) having an adequate number of health and long-term care professionals; and (2) improving the competitiveness of salaries of key cadres of health and

long-term care workers. For (1) it estimated that across (high-income) OECD countries, the increase in the number of nurses to reach the Global Burden of Disease Study/Institute for Health Metrics and Evaluation (IHME) health worker density of 11.45 nurses/midwives per 1,000 population for UHC effective coverage **would require a further investment of around 0.33% of GDP on average** (OECD, 2022). For (2), raising the competitiveness of salaries for nurses and care workers, it estimated that the necessary cost of increasing the wages of nursing and care workers, using as a base the average OECD countries nurse salary level **corresponded to an additional average increase of 0.14% of GDP in OECD countries** (OECD, 2022).

Overall, in OECD countries in Europe, OECD reported that, “at least half of the new investments required to support health system recovery and make them more resilient should be on the health workforce to increase recruitment and retention rates by improving working conditions” (OECD/European Union, 2022, p. 76). This echoed a WHO Europe report on the healthcare workforce which concluded that, “European countries must prioritize their HCWs by investing more and investing smarter. They must protect their HCWF by developing and implementing policies that place the interests and well-being of HCWs at the forefront” (WHO Europe, 2022, p. 68).

Further impetus to the urgent need for investment in the nursing workforce is given by the findings of a recent econometric study which investigated the strength and significance of the association of the health workforce with multiple health outcomes and COVID-19 excess deaths across countries. It found that, “a higher density of the health workforce, especially the aggregate density of skilled health workers and density of nursing and midwifery personnel, was significantly associated with better levels of several health outcomes, including maternal mortality ratio, under-five mortality rate, infant mortality rate, and neonatal mortality rate, and was significantly correlated with a lower level of COVID-19 excess deaths per

100,000 people, though not robust to weighting by population”. It concluded that, “investment in health workforce should be an integral part of strategies to achieve health-related SDGs, and achieving non-health SDGs related to poverty alleviation and expansion of female education are complementary to achieving both sets of goals, especially for those low- and middle-income countries. In light of the strains on the health workforce during the current COVID-19 pandemic, more attention should be paid to health workforce to strengthen health system resilience and long-term improvement in health outcomes” (Liu & Eggleston, 2022).

Finally, in January this year, background analysis for the Davos World Economic Forum (WEF) highlighted that “Urgent and extreme action is needed now to improve recruitment and retention of the global healthcare workforce” (Rivin & Lumley, 2023): another telling example of how the issue of health sector staff shortages has ‘mainstreamed’ since the pandemic first hit, and is now recognised as a drag anchor on rebuild and economic re-generation.

#### 1.4 THE AIM AND STRUCTURE OF THE POLICY REPORT

This report was commissioned by the International Council of Nurses (ICN). The aim is to inform the policy debate on how health systems, countries and international organisations should respond to the vital issue of protecting and restoring a sustainable nursing workforce against a backdrop of a global pandemic, and the need for global health system recovery and rebuild. The report sets out the urgent action agenda for 2023 and beyond.

The aim of the report is to give a global snapshot which highlights the necessary main policy actions required to support the nursing workforce in the context of the ongoing challenge of COVID-19 and the growing challenge of health systems recovery and rebuild. It does so by using data analysis, rapid reviews of studies and documents, media scans, and background information from National Nursing Associations (NNAs) and other sources. The development work for the report was conducted in December 2022/ January 2023.

This report takes a whole of nursing workforce perspective. Nurses work across the whole of the health and social care system—in hospitals, mental health, primary care, nursing homes, long term care, occupational health and other locations. They are everywhere where there is a need for care. Furthermore, COVID-19 has penetrated everywhere in health care. For example, ICN recently published a global review of nurses working in mental health, noting that as a result of the pandemic, 93% of countries reported their mental health services were either halted or interrupted, and that WHO had reported a 25% increase in depression and anxiety alone during the pandemic (ICN, 2022b).

The remainder of the report is in four further chapters:

- Section 2 sets the scene, reporting on the need for health system rebuild and the critical impacts on the nursing workforce in 2023;
- Section 3 looks in greater detail at nurse workforce supply and burnout at a time of rebuild;
- Section 4 provides policy recommendations for action and investment for 2023 and beyond which are required to protect and support nurses, and enable health system recovery and rebuild.

# 02

## CHAPTER TWO

## 2. COVID-19, HEALTH SYSTEM REBUILD AND ITS IMPACT ON THE NURSE WORKFORCE

### 2.1 THE PROFILE OF THE GLOBAL NURSING WORKFORCE

The report builds on last year's report, *Sustain and Retain in 2022 and Beyond* (Buchan, Catton & Shaffer, 2022), and on other recent assessments of the profile and pressures on the global nursing workforce. It is framed by global initiatives, including the report on the State of the World's Nursing (SOWN) (WHO, 2020a), the global Nursing Now initiative (Nursing Now/Burdett Trust for Nursing, 2021), and the WHO Global Strategic Directions for Nursing and Midwifery (SDNM) (WHO, 2021a).

The key message that has emerged from these initiatives is **that without effective co-ordinated action to protect, support and rebuild the nursing workforce**, the current global shortages of nurses will constrain many countries from achieving UHC, and continue to undermine the effectiveness of responses to the COVID-19 pandemic.

The SOWN report was published in 2020 and as such it describes the pre-pandemic global nurse workforce. It does provide a benchmark for assessment of how the pandemic has impacted on the nurse workforce, and where policy effort to rebuild must be focused. **To fully support this effort, there is an urgent**

**need to update the key analysis reported by SOWN.** SOWN reported that the pre-pandemic world was already short of almost six million nurses, with huge shortages in some countries and regions, had a growing replacement challenge driven by poor retention and by ageing/retirement of the nursing workforce, and was witnessing a growth in international mobility of nurses. In some countries, there was the added problem of nurse unemployment existing alongside nursing shortages—with countries and health systems reporting nurse shortages but not being able to employ existing nurses because of limited resources or relatively poor pay and career prospects in nurse employment. (Key points are shown in Table 1).

Underpinning all analysis and identification of policy 'solutions' is **the key metric that nine out of every 10 nurses worldwide are female.** Policies that do not take full account of a gender analysis (Bourgeault *et al.*, (2021) will not be effective against nurse workforce challenges. There are glaring issues of discrimination, such as the gender pay gap in the health workforce (WHO, 2022c) that remain to be effectively addressed.



**Table 1: Findings from SOWN**





Source: WHO, 2020a

The COVID-19 pandemic erupted in early 2020, at the same time as SOWN was published. In last year's *Sustain and Retain* policy report, we highlighted that **the pandemic has had a multiplier effect, exacerbating the shortage factors that had already created a global nurse-supply gap before the pandemic**, whilst adding huge new pressures at the level of the individual nurse and the health system. Almost three years on, there is now an urgent need for an update report on SOWN to provide a clearer and more accurate picture of the damage inflicted by the pandemic damage, and of the scale of the need for tailored and effective policy interventions at country level and globally.

In the meantime, more recent sources of analysis of the overall scale of the nursing shortage have come from two reports. Firstly, WHO staff have updated their projections on the global supply of health professionals to 2030. The updated WHO global supply projections for 'nursing personnel' are now based on a

revised base estimate of a **7.07 million short-fall of nursing personnel in 2020**. This in turn means that WHO has revised and reduced its estimated nursing personnel shortage in 2030 to **4.5 million staff** (Boniol, *et al.*, 2022a).

However, there is now an alternate analysis on global health workforce supply, which estimates a much higher current nurse shortage (see Table 2). This was conducted for the Global Burden of Disease (GBD) study (Haakenstad *et al.*, 2022) and was based on a revised expanded determination of UHC threshold attainment. Based on estimates to reach 80 out of 100 on the UHC effective coverage index (a higher threshold than used by WHO), the GBD study estimated a current stock of 29.8 million nurses and midwives (95% uncertainty interval 23.3 to 37.7) and that the **global shortage of nurses and midwives was 30.6 million in 2019**—four times higher than the estimate of 7.5 million produced by WHO, but based on different definitions (Boniol *et al.*, 2022b).

**Table 2: Differing estimates of nurse shortages: WHO and Global Burden of Disease (GBD)**

	CURRENT STOCK	ESTIMATED 'CURRENT' SHORTAGE	2030 STOCK/SHORTAGE (PROJECTION)
<b>WHO</b>	29.10 million (nursing personnel) (2020)	7.07 million (2020)	36.27 million stock; 4.5 million shortage (nursing personnel)
<b>GBD</b>	29.8 million (nurses and midwives) (2019)	30.6 million (2019) aggregate shortage	N/A

NOTE: Differences in definitions and analytical approaches. Sources: WHO: Boniol *et al.*, 2022a; GBD: Haakenstad *et al.*, 2022)

The scale of the global nurse shortfall determined by either WHO or GBD measures in the millions (see Table 1 above). GBD is a more ambitious metric, but arguably one that more comprehensively defines what could and should be delivered under expectations for UHC. ICN has highlighted that this GBD-related analysis ‘raises the bar’ by using a threshold for access to a more comprehensive range of health services, including more care and treatment for non-communicable diseases, infection prevention and control, and higher levels of primary healthcare, all of which are essentially nursing work (ICN, 2022c). And will be central to restoring and rebuilding health systems.

Whilst the overall global analysis sets out the scale of the nurse shortage challenge, there is also the need to better understand variation in distribution of nurses in different sectors, regions and specialities. New analysis published in the last year provides some pointers.

Additional WHO analysis has focused on differences in in-country nurse-to-population density in 58 countries, and the relationship between these in-country differences and other indicators of health equity (Boniol *et al.*, 2022c). It used a standard measure of inequalities in distribution: the Gini coefficient. The report highlighted that there was an overall regional clustering of countries in three groups: (1) high levels of within-country inequalities in nurse-to-population densities mainly in African countries; (2) moderate levels of within-country inequalities in nurse-to-population densities mainly in South-East Asian, Central and South American countries; (3) low levels of within-country

inequalities in nurse-to-population densities mainly in Western countries, Japan, and Korea. The WHO report concluded that, “inequality in distribution of nurses was correlated with other indices of health and inequality such as the Human Development Index, maternal mortality, and life expectancy”. This finding reinforces the need for policy to focus on achieving effective workforce distribution as well as an overall improved supply of nurses.

The review of nurses working in mental health published by ICN in 2022 estimated that there were approximately 300,000 mental health nurses across the world but reflected the critical problem of mal-distribution that was reported in SOWN. ICN highlighted that the distribution of nurses working in mental health varied markedly vastly across regions, ranging from 0.9 per 100,000 population in Africa to 25.2 per 100,000 population in Europe. The report offers a stark reflection on the disparity of available nursing personnel by income level, with low-income countries having 0.4 per 100,000 population and high-income countries having 29 per 100,000 population (ICN, 2022b).

The available analysis at global level points to a nurse shortage in the millions, possibly as high as 30.6 million in 2019. This is compounded by many regions, countries and sectors also experiencing nursing workforce distribution inequalities. It is important to understand that the pre-COVID world already had huge nurse shortage and distribution challenges. The pandemic acted as a multiplier to the demands being made of the global nursing workforce.

## 2.2 SURGE, SUSTAIN AND INVEST/REBUILD

Three years in, the timing and impact of the pandemic on the nursing workforce continues to be variable in different countries, but a core group of challenges have emerged at a global level, and in nearly all countries.

The main nurse workforce issues are summarised in relation to three phases of pandemic impact and policy responses: surge, sustain and invest/rebuild (see Table 3). This is presented as a linear process, but the reality is that there have been different successive pandemic waves impacting at different times in different countries.

It is important to understand and appreciate that nursing workforce policy responses are interconnected. The underlying issue, which is central to any effective policy response and targeted investment, is to recognise that for many working nurses this is not a short term, one-off ‘acute’ episode, or some obscure or distant phenomenon—it is pervasive and personal. It has been a relentless, intense and continuing drain on nurses’ energy, morale, and physical and mental health.

**Table 3: Surge, Sustain and Invest/Rebuild: Implications for the nurse workforce**

	MAIN HEALTH SYSTEM CHALLENGES	SYSTEM RESPONSES ON NURSE SUPPLY
<b>SURGE</b>	<p>Developing surge capacity</p> <p>Focus on acute intensive care/critical care</p> <p>Maintaining provision in primary care/ nursing and care homes</p>	<p>Extra hours worked (often unpaid overtime)/ different work patterns</p> <p>Re-deployment of current staff</p> <p>Integration of returners/ non-working nurses</p> <p>Student nurses in workforce</p> <p>Fast track of international nurse applicants</p> <p>Integration of refugees with nursing qualifications</p> <p>[Prevention of international outflow of nurses]</p>
<b>SUSTAIN</b>	<p>System preparedness for additional waves</p> <p>High/increasing pandemic related nurse absence</p> <p>Deployment of vaccination programme(s)</p> <p>Managing 'two track' services: COVID-19/ non COVID-19</p> <p>Cancelling surgeries, primary care visits</p> <p>Move to virtual care services</p>	<p>Nurses deployed to deliver vaccine programmes</p> <p>Increase flexible deployment of nurses</p> <p>Provide cover and relief for burnout/ nurses with ill health</p> <p>Retraining/additional training of some nurses</p> <p>Increased use of digital/technology support</p>
<b>INVEST AND REBUILD</b>	<p>Re-orientate services to address 'non-pandemic' backlog</p> <p>Prepare and implement services to address 'long COVID' related chronic care-notably a need for improvements in primary care/ public health</p> <p>Maintain workforce readiness to meet additional pandemic surges</p> <p>Maintain workforce readiness for further test/trace and vaccination programmes</p>	<p>Reduce/end use of short term/volunteer returner nurses, or integrate into permanent workforce, and support return of "front line" student nurses to their education</p> <p>System and employer led support for nurses at work: safe staffing, fair pay and conditions, flexible working, health and well-being</p> <p>Invest in development and expansion of advanced roles for nurses (e.g. nurse practitioners); increase effectiveness of workforce contribution to population health, and improve career opportunities and retention</p> <p>Invest in training to increase supply of new nursing staff, focusing on those with intensive care, public health and primary care skills, and clinical specialist nurses/ advanced practice, often in teams or new models of care</p> <p>Invest in technology to support more virtual care by nurses</p>

**Sources:** key information provided by NNAs.

**Additional sources:** Maier, Scarpetti & Williams, 2020; Batalova & Fix, 2020; McLaughlin, 2020; San Juan *et al.*, 2021; Tangcharoensathien, Wisawatpanimit & Chanprasobpol 2021; Llop-Gironés *et al.*, 2021; Lee, Cho & Shin, 2021; WHO, 2021b; Ball & Ejebu, 2021; Pressley & Garside, 2023.

### 2.2.1 Surge: Implications for the nurse workforce

At the beginning of the pandemic, countries and systems had to try to rapidly develop 'surge capacity' to meet fast and unpredictable increases in demand in health services driven by the rapid spread of COVID-19. This focus on rapid scaling up of critical care/intensive care (CCU/ICU) capacity and hospital bed availability was often accompanied by a reduction or suspension of other elements of acute care provision to 'free up' capacity to meet pandemic responses. It often also included re-orientation of primary health care support including moving staff to urgent care. Unfortunately, it often lacked consideration of the impact of COVID-19 on nursing and care homes, which were often less well supported than hospitals.

In this surge phase, nurse workforce surge supply responses focused primarily on rapidly increasing ('scaling up') overall nurse workforce capacity, and shifting more of that capacity to ICU/CCU and the other high-pressure points of the pandemic. Specific responses included:

- requiring nurses to work longer hours and/ or different shift patterns
- redeploying nursing staff from other clinical areas, often without additional training

- bringing non-practising nurses back into the workforce as temporary/voluntary 'returners'
- deploying student nurses to 'front line' work (or removing them from clinical placements)
- using temporary/agency staff
- 'fast track' integration of international nurses (often already in application process) and integration of refugees with nursing qualifications (Maier, Scarpetti & Williams, 2020; Gupta *et al.*, 2021; WHO, 2021b, p. 22).

### 2.2.2 Sustain: Implications for the nurse workforce

One key aspect of policy response to the pandemic has been the delivery of vaccination programmes. The inadequate and inequitable supply of vaccines to many countries has been stressed by ICN (ICN, 2021b), who have also advocated with other groups that nurses and other health professionals must have prioritised access to the vaccine in order to enable them to continue to lead health system responses. In September 2021, ICN highlighted that only one in ten health workers in Africa had been fully vaccinated (ICN, 2021c).

ICN has stressed that immunisation programme effectiveness is often linked to having nurses in advanced roles, with prescriptive authority (ICN, 2020a). Nurses have been at the front line of the vaccination efforts in many countries (Burden, Henshall & Oshikanlu, 2021; Evans, 2021; Goldberg & Lavon, 2021; WHO, 2021b, p. 22).

Where countries have the resources, the pandemic has driven an increase in the use of tele-health and other types of digital support to remote care, enable access and increase efficiencies. This is increasing training needs and the demand for nurses with digital skills ('digital literacy') (Lee, Cho & Shin, 2021).

In low income countries in Sub-Saharan Africa, the impact on nurses has been particularly pronounced. A World Bank report stressed that due to the impact of the pandemic, the region's 7% female nursing workforce largely under 45 years of age "may struggle to meet stressful and dangerous job demands while caring for families and children no longer in school. This may lead to higher rates of attrition in the nursing workforce" (World Bank Group, 2021, p. 52). It also noted that "Long working hours, dangerous working conditions, lack of access PPE and psychological first aid will likely drive increases in attrition and absenteeism" (World Bank Group, 2021, p. 52).

The 'sustain' phase has also been characterized by increased staff absenteeism in most health systems, as a direct result of infection of workers or their families, and by increased workload and burnout. This has been a major challenge, with short term absence and longer term illness-related absenteeism, and death affecting nurse supply. As we noted in last year's report, the risk is that if the negative health and well-being drivers of absence are not dealt with by employers, temporary absence becomes permanent exit.

### 2.2.3 Invest and rebuild: Implications for the nurse workforce

Health systems must now recover and rebuild their 'non-COVID' care capacity to meet the backlog of cancelled surgeries and worsening chronic diseases such as mental health. At the same time they must maintain the capacity to meet additional and future pandemic waves, and also to cope with increases in

demand caused by infected patients who have now developed longer term chronic conditions-sometimes termed 'long COVID' (Sudre, *et al.*, 2021). This requires targeted investment in support of the current nurse workforce, and longer term investment in future workforce supply and sustainability.

This complex rebuild **includes investment in redeploying resources to other parts of the health system to enable the backlog of non-COVID-19 care to be dealt with.** In terms of nurse supply, the first aspect of the renew and rebuild challenge includes:

- deploying some nurses from COVID related temporary posts back to their 'normal' clinical areas (in some cases this will include maintaining flexibility to shift them back if there are successive pandemic waves)
- reducing or ending the deployment of volunteer 'returner' nurses (also in some cases integrating them into the workforce)
- retaining them on a reserve 'pool' that can be rapidly redeployed if there are other waves)
- transitioning student nurses back to their learning role so that they can finish their disrupted studies
- and planning and providing staff cover to allow time off work or in less stressful work areas for front line staff that have burned out or are in ill health as a result of their intensive workload in the initial phase of COVID-19.

The second critical area for policy investment to support rebuild is to **improve supply and retention of nurses, which as noted above, has been badly damaged by the individual impact of COVID-19 induced burnout.** This

requires system and employer led support to retain nurses at work through safe staffing levels which prevent over-work; fair pay and conditions of employment ('decent work'), flexible working opportunities, and support for the health and well-being of nurses and other staff.

The third area **is investment in training to increase supply of new nursing staff, focusing in many countries on increasing numbers as well as focusing on priority skills,** such as increasing the numbers of nurses that work in intensive care, mental health, public health and primary care.

The fourth main aspect of **investment in the rebuild of the nurse workforce for longer term sustainability is the development and expansion of advanced roles for nurses, often with prescribing authority** (e.g. nurse practitioners, clinical nurse specialists). The pandemic has exposed the need and created the opportunity for more rapid deployment of nurses in advanced practice roles (Stucky, Brown & Stucky, 2021). This will increase overall cost-effectiveness of the workforce contribution to population health, and will also provide improved career opportunities which can have a positive effect on retention. There is a clear and obvious role for advanced practice nurses to be deployed to meet the growing chronic disease challenge.

## 2.3 NURSE BURNOUT RISKS UNDERMINING RECOVERY AND REBUILD

As noted above, there have been rapid changes in policies to temporarily increase nurse supply at the system level in all countries. Some of these measures have added to the demands made of the nursing workforce, some were initially 'temporary' but may become permanent, and some have had unintended negative consequences on individual nurse health and well-being.

The **pandemic and health system rebuild is not a short term 'one-off' challenge for nurses and the nurse workforce. It is long term, relentless and cyclical, with a real and future risk of exerting further damaging impact on**

**nurses and therefore on health systems.** It risks creating disillusion amongst nurses if there is no sign of respite and positive change, pushing many to breaking point (Gee *et al.*, 2022). During recovery and rebuild, every working nurse deserves consideration. To avoid many individual nurses reaching breaking point, there is a need to take full account of the need for sustainability and 'decent work'. If policy makers give proper attention to the impact of their rebuild decisions on individual nurses and the nurse workforce, then retention and future supply will improve; if policy makers focus only at the system level, ignore the impact on nurses, then nurse retention and longer-term supply will worsen.

It is now three years since the pandemic first became apparent, but there is already a substantial and growing evidence base on the nurse workforce impact. Using the search words “COVID nurse retention” on Google Scholar gives more than 34,000 hits just for 2020-2022. This evidence focuses both on the personal level—stress, workload, infection risks, ‘missed care’ (Chaboyer *et al.*, 2021), demands made of nurses to “cope” and be ‘resilient’, and concern about ‘moral injury’ when nurses are required to make or witness ethically challenging decisions about patient care delivery (Rowlands, 2021) —and on the implications of the system responses described in the previous section (re-deployment, maintenance of safe staffing, new responsibilities, access to adequate PPE, vaccinations, etc.).

Most of the published evidence focuses on nurses working in urban hospitals but, as we stress in this report, the impact of COVID-19 has been system-wide. We include studies reported below which examine nursing homes and primary care work locations. In addition, the impact on student nurses is important to consider—a separate group, but in many countries, students have been called onto ‘front line’ work, and/ or have had their studies disrupted. They too have experienced stress, low

staffing, high workload and potential burnout. (See e.g. Dempsey *et al.*, 2022; Michel *et al.*, 2021; Gómez-Ibáñez *et al.*, 2020).

A major part of this rapidly expanding evidence base is provided by national or local surveys of nurses, often led by, or supported by NNAs. These surveys both expose the damage to individual nurses, with many more reaching breaking point, and highlight the risks to the sustainability of the nursing workforce. Policy makers must take account and act on these findings.

In our 2022 *Sustain and Retain* report, we highlighted a range of studies from Australia, Belgium, Brazil, Canada, China, Egypt, Germany, India, Iran, Ireland, the Economic Community of West African States, Japan, Lebanon, the Netherlands, Oman, the Philippines, Qatar, the Republic of Korea, South Africa, Spain, Taiwan, Uganda, the UK, and the USA. This year, we add to the evidence base by highlighting new studies that were published since the last report, again from abroad range of countries. This highlights the global nature of the pandemic impact and health system rebuild. Table 4 below presents country specific studies on nurse workforce impact issues published in 2022-3.

**Table 4: Key findings from nurse workforce surveys of nurses, 2022-23**

<p><b>Australia</b> (Halcomb <i>et al.</i>, 2022; Peters &amp; Marnie, 2022; Sharplin <i>et al.</i>, 2023)</p>	<p>Survey of 359 Primary Health Care (PHC) nurses: Most participants (80.5%) reported that COVID-19 had impacted negatively on the detection and management of non-COVID related health conditions. Many PHC nurses perceived that there had been an overall reduction in the quality of care delivered due to COVID-19 and felt that there was a lack of adequate supervision and workplace support.</p> <p>National survey of ANMF members, 761 responses: 13% of participants reported that they planned to leave their profession; intention to leave a current role in the next 1-5 years ranged from 32% in the 40-49 and 50-59 year age groups to 53% in the 60+ age group. “...the main challenge identified by participants was primarily an overwhelming need for more staff... Respondents also felt unsupported and anxious when redeploying into other areas of their facility to cover patient load” (Peters &amp; Marnie, 2022, p. iii).</p> <p>A survey commissioned by the NSW Nurses and Midwives’ Association (NSWNMA) with more than 2,300 respondents reported that 15 in every 100 nurses and midwives were suffering symptoms of post-traumatic stress at clinical levels. Overwork, exhaustion and burnout were identified as key contributors. Overall, 22% respondents indicated they want to leave the health professions entirely. The report found better pay, better workplace support and reduced workloads were the top three retention measures to stay.</p>
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<p><b>Belgium</b> (Khan, Bruyneel &amp; Smith, 2022; Van den Heede, <i>et al.</i>, 2022)</p>	<p>Survey of 4,552 nurses in Belgium: 70% of nurses were at high risk of burnout during the first wave of the COVID-19; the main risk factors of burnout were a lack of PPE for COVID-19 and changes in perceived workload. In terms of working conditions during the pandemic, the following burnout risk factors were identified: working above full-time schedule over the past weeks, having more than 75% of patients with COVID-19 in the ward, being exposed to the death of COVID-19 patients, and having more than half of the colleagues on sick leave.</p> <p>Survey of all intensive care units in Belgium: Many ICU nurses are physically, but most of all, mentally exhausted, after two years of COVID-19 pandemic. As the duration of the pandemic seemed to be 'never-ending', these feelings of exhaustion seemed to increase.</p> <p>After two years, the impact of the COVID-19 crisis on the wellbeing of ICU nurses and perceived quality of nursing care is high. The average of 43.9% of nurses reporting an intention to leave is high (26.5% to a non-nursing job, 5.8% to a nursing job outside the hospital setting and 11.7% to another nursing job in the hospital), important number of care activities is left undone on the last shift with 1.6 out of 5 planning and communication activities and 1.8 out of 9 clinical activities reported as left undone. The COVID-19 pandemic magnified existing problems and created new ones. Hospitals with a better nurse working environment have better nurse outcomes and higher perceived quality of care. The Belgian ICU nurse staffing workforce is highly skilled, but a scarce resource that is difficult to substitute.</p>
<p><b>Canada</b> (Crowe, Howard &amp; Vanderspank, 2022; Lavoie-Tremblay <i>et al.</i>, 2022; Ben Hamed &amp; Bourgeault, 2022)</p>	<p>Survey of 425 critical care nurses: The large majority reported symptoms of post-traumatic stress disorder (74%), depression (70%), anxiety (57%), and stress (61%). All (100%) reported moderate to high burnout, 87% were suffering from signs of secondary traumatic stress, and 22% intended to quit their current employment.</p> <p>Survey of 1,705 frontline nurses in Canada: High chronic fatigue, poor quality of care, lower work satisfaction and higher intention to leave their organisation were reported for nurses caring for COVID-19 patients. Poorly prepared and overwhelmed nurses showed higher turnover intention than those well prepared and in control.</p> <p>National survey with 4,467 practicing nurses: 94% were suffering from symptoms of burnout and 45% of nurses were experiencing severe burnout, (up from 29% pre-pandemic). Feeling frustrated, overwhelmed and lacking little work-life balance or control over the way they practice their profession, many nurses have left and many more are contemplating leaving full-time positions. More than half of nurses are considering leaving their current job within the next year and 19% of nurses are considering leaving the profession altogether.</p>
<p><b>Czechia</b> (Gurková, Mikšová &amp; Šátková, 2022)</p>	<p>Sample of 371 nurses from four acute care hospitals working during the pandemic: Nurses reporting unfavourable environments consistently describe a higher frequency of episodes of missed care. Prevalence estimates of missed care in Czech acute care hospitals during the COVID-19 pandemic were predicted from the overtime work, the nurses' perception of the "Nursing foundations for the quality of care" and their satisfaction with their current position. Missed nursing care could be mitigated by improving the nurses' work environment.</p>
<p><b>Germany</b> (Schug <i>et al.</i>, 2022)</p>	<p>Online survey of 757 nurses in German hospitals: The intention to quit was reported by 18.9%. One third (32.5%) reported sick leave of <math>\geq 10</math>-12.3% more than 25 days in 12 months. Lower reward levels, having changed work departments during the pandemic, working part-time and higher depression levels significantly predicted turnover intention. Enhancing protection from COVID-19 and reducing workload might also prevent sick leave. Depression prevention, improved change management and support of part-time workers could contribute to reducing turnover intention among nurses.</p>

<b>Ghana</b> (Boateng <i>et al.</i> , 2022)	Survey of 226 randomly selected nurses and midwives working at a tertiary healthcare centre in Ghana: The prevalence of turnover intention was 87.2%. About two-thirds (61.5%) of the participants were exposed to a high level of workplace hazards. Management support, salary, inadequate number of staff on duty per shift were significantly associated with turnover intention.
<b>India</b> (Kavitha, Sikander & Joseph, 2022)	Survey of 367 student nurses from 6 colleges: 113 (30.79%) had high symptoms of PTSD, and 44 (11.98%) students had a moderate level of PTSD.
<b>Iran</b> (Lofti, <i>et al.</i> 2022)	Survey of 190 operating room nurses working at public hospitals in Iran: Significant inverse relationship found between unfavourable safety climate perceived by the nurses in the COVID-19 pandemic, and turnover intention.
<b>Ireland</b> (Brady <i>et al.</i> , 2022)	Cross-sectional study of 390 nursing home staff during the third wave of the COVID-19 pandemic: Staff report high levels of post-traumatic stress, mood disturbance and moral injury during the pandemic. Differences in degree of moral injury, well-being and coping styles were found between staff groups, which need to be incorporated into planning supports for this neglected workforce.
<b>Jordan</b> (Fawaris <i>et al.</i> , 2022; Khrais <i>et al.</i> , 2022)	<p>Survey of 312 healthcare workers in Jordan; almost 38% and 36% presented with moderate to severe anxiety and depression. Nurses reported more severe symptoms than other healthcare workers.</p> <p>Survey of 536 Registered Nurses participated in the study from eight hospitals in Jordan to examine the effect of perceived organisational support, accountability and nurses' characteristics on missed nursing care under the impact of COVID-19: Communication problems had the highest impact on missed nursing care, compared with labour resources and material resources reasons. Higher patient: nurse ratio aggravated by COVID-19 pandemic, years of experience, satisfaction with the income, perception of accountability and organizational support were among the factors associated with the levels of missed nursing care.</p>
<b>Malaysia</b> (Jarrar <i>et al.</i> , 2023)	Survey of a sample of 400 nurses at a general hospital, during COVID: Working hours duration was significantly associated with nurses' anxiety, depression, fatigue, sleepiness, quality of nursing care and intention to leave their job. Working more than 14 hours was negatively associated with their perceived quality of nursing care and positively associated with their perceived ill-being and intention to leave.
<b>Mexico</b> (Cortés-Álvarez & Vuelas-Olmos, 2022)	Survey of 462 nurses: 46.72% of nurses reported moderate-severe traumatic distress response, 42.40% of nurses evidenced a high level of emotional exhaustion, and 41.78% showed moderate-severe psychological distress. An increase in working hours per week due to COVID-19 and contact with a suspected and confirmed case of COVID-19 in their workplace are factors associated with higher traumatic distress response to the outbreak.
<b>The Netherlands</b> (Heesakkers <i>et al.</i> , 2023)	Survey of 589 nurses working in intensive care in 2021 after second surge (164 had also completed the questionnaire in 2020): 38.2 % experienced one or more mental health symptoms and 49.9 % experienced work-related fatigue. Compared to the first measurement, the occurrence of mental health symptoms remained high and work-related fatigue was significantly higher. Granted holidays as requested, being more confident about the future and a better perceived work-life balance were significantly associated with less symptoms. The study concluded that, "The second surge of the COVID-19 pandemic further drained the mental reserves of intensive care unit nurses, resulting in more work-related fatigue".
<b>Norway</b> (Djupedal, <i>et al.</i> , 2022)	Survey of 694 nurses: change in work schedule related to the pandemic was associated with worse sleep quality, reduced sleep duration, and higher turnover intention.
<b>The Philippines</b> (Labrague, de los Santos & Fronda, 2022)	Online survey of 295 frontline nurses: Hospital facility size, nurse staffing levels, and patient safety culture predicted missed nursing care. PPE adequacy, nurse staffing levels, and patient safety culture were identified as predictors of quality of care.



<p><b>Poland</b> (Piotrowski <i>et al.</i>, 2022; Dziedzic <i>et al.</i>, 2022)</p>	<p>Survey of 390 Polish nurses and midwives: almost 25% of the sample reported high turnover intention, and a similar proportion reported low job satisfaction. Resilience was related to nurses' job satisfaction.</p> <p>Survey of 333 professionally active nurses participated in the study during fourth COVID wave: Severe and very severe symptoms of depression were found in 23.1% of nurses, whereas moderate symptoms were detected in 30.3%. High to very high levels of anxiety were observed in 46.5% of respondents, while 25.8% of nurses showed a moderate level of anxiety. Moderate and high levels of stress were found in 35.4% and 14.1% of the respondents, respectively. "High scores for depressive symptoms, anxiety, and stress among Polish nurses during the fourth wave of the COVID-19 pandemic are indicative of a direct threat to the mental health of nurses. Targeted support strategies need to be developed and implemented to prevent the deterioration of mental health in this group".</p>
<p><b>Spain</b> (Molina-Mula <i>et al.</i>, 2022)</p>	<p>Study of 892 nurses in the Balearic Islands: About 75.6% of the nurses had experience in COVID-19 units, and 49.1% had worked for more than 10 months in a COVID-19 unit. Nurses in COVID-19 units were more likely to report emotional fatigue (OR 1.9, <math>p &lt; 0.001</math>) and anxiety (OR 1.5, <math>p = 0.021</math>). In general, moderate post-traumatic stress was evident in general nurses (<math>p = 0.027</math>), and severe post-traumatic stress was evident in ICU nurses (<math>p = 0.027</math>). A reduction in COVID-19 patient care predicted reduced levels of emotional fatigue, depersonalisation and post-traumatic stress.</p>
<p><b>Sweden</b> (Nymark <i>et al.</i>, 2022)</p>	<p>Study to evaluate missed nursing care and patient safety: 43 registered nurses and nurse assistants in the COVID-19 sample and 59 in the reference sample. The COVID-19 sample reported significantly more overtime hours and more absence from work due to illness in comparison with the reference sample. The patient safety and quality of care were perceived significantly worse, and the COVID-19 sample reported more missed nursing care in wound care and in basic nursing.</p>
<p><b>United Arab Emirates</b> (Sam <i>et al.</i>, 2023)</p>	<p>Survey of 525 nurses working in Dubai Health Authority (DHA) hospitals: 67.6% of participants reported moderate levels of burnout with 54.7% "seeming to be having secondary traumatic stress".</p>
<p><b>United Kingdom</b> (Ball <i>et al.</i>, 2022)</p>	<p>National survey with 2,205 respondents during first pandemic wave, on question asking for the top three things that the government or their employer could do to improve their working lives: PPE/staff safety (60.0%), support to workforce (28.6%) and better communication (21.9%) were the most cited themes. Authors stressed that urgent improvements in provision and quality of PPE were needed for the safety of both workforce and patients, and that, "Failure to meet nurses needs to be safe at work appears to have damaged morale in this vital workforce".</p>
<p><b>USA</b> (Guttormson <i>et al.</i>, 2022; Kim, Rankin &amp; Ferguson, 2022; Sheppard <i>et al.</i>, 2022; NSI Nursing Solutions Inc., 2022; Berlin, Lapointe &amp; Murphy, 2021; Squires <i>et al.</i>, 2022; Aiken <i>et al.</i>, 2022)</p>	<p>Survey of 488 nurses working in ICUs: Over two thirds of respondents experienced a shortage of PPE. Nurse respondents reported moderate/high levels of moral distress and burnout. Symptoms of moderate to severe depression and anxiety were reported by 44.6% and 31.1% of respondents, respectively. 47% of respondents were at risk for having post-traumatic stress disorder (PTSD). Lack of perceived support from administration and shortage of PPE were associated with higher levels of burnout, moral distress, and PTSD symptoms.</p> <p>Three cross-sectional surveys of US nurses: Early-pandemic (<math>n = 320</math>), pre-vaccination (<math>n = 228</math>), and early-vaccination cohorts (<math>n = 292</math>). There were significant decreases in moderate/severe anxiety and moderate/severe depression for the early-vaccination cohort compared to the other cohorts. Coping mechanisms and organisational support appear to be important predictors of nurses' poor mental health and burnout.</p> <p>Survey of 129 RNs in a US hospital system: Moral distress related to work environment or patient quality and safety were significant factors in registered nurses'(RN) intent to leave their position. RNs who perceived their work environment as morally distressing had 9 times the odds of considering intent to leave their position compared with their co-respondents. RNs who perceived the hospital's quality and safety practices as morally distressing had almost three times the odds of intent to leave.</p>

<p><b>USA</b> (Guttormson <i>et al.</i>, 2022; Kim, Rankin &amp; Ferguson, 2022; Sheppard <i>et al.</i>, 2022; NSI Nursing Solutions Inc., 2022; Berlin, Lapointe &amp; Murphy, 2021; Squires <i>et al.</i>, 2022; Aiken <i>et al.</i>, 2022)</p>	<p>A survey of 272 hospitals from 32 US states, covering 166,087 RNs, in 2021 reported that “RNs exited the bedside at an alarming rate”. The turnover rate for staff RNs increased by 8.4% to 27.1%. RNs working in step down, telemetry and emergency services experienced the highest rates.</p> <p>“Thirty-two percent of registered nurses (RNs) surveyed in the United States in November 2021 said they may leave their current direct-patient-care role, according to McKinsey’s latest research”.....an increase of 10 percentage points in under 10 months. 32% of RNs indicated a likelihood of leaving their current position providing direct patient care in November 2021, up from 22% in February 2021. “The strongest drivers of intent to leave included insufficient staffing levels, seeking higher pay, not feeling listened to or supported at work, and the emotional toll of the job”. In contrast, “the most influential factors of whether to stay in role included safety, flexibility (such as work–life balance, work schedule), and environment (for example, a trusting/caring team, feeling valued by organization, doing meaningful work).”</p> <p>Survey of 242 US nurses, with a focus on examining the impact of the pandemic on nurses’ roles, professional relationships, and the organizational cultures of their employers: “Organizational culture and its influence on pandemic response implementation was a critical feature of their experiences...Findings suggest that organizational performance during the pandemic may be reflected in nursing workforce retention as the risk for workforce attrition appears high”.</p> <p>Repeated survey before and during the pandemic of 151,335 registered nurses in New York and Illinois, and a subset of 40,674 staff nurses employed in 357 hospitals. Key findings included that hospital nurse burnout was high before the COVID-19 pandemic as well as during it; better staffed hospitals before pandemic had better outcomes during it; policies to prevent chronic hospital nurse understaffing are needed.</p>
<p><b>Republic of Korea</b> (Joo, Yeon &amp; Hwa, 2022)</p>	<p>Survey of 176 nurses working at three long-term care hospitals: Turnover intention was positively correlated with COVID-19 stress, and a positive nursing work environment could help nurses reduce their COVID-19 stress and turnover intention.</p>
<p><b>Romania</b> (Gherman <i>et al.</i>, 2022)</p>	<p>Survey of 463 Romanian nurses, focused on reporting of Potentially Morally Injurious Events (PMIEs): PMIEs’ memories were uniquely associated with burnout and turnover intentions. “Our findings emphasize the need for organizational moral repair practices, which should include enhancing nurses’ feelings of autonomy, relatedness and competence.”</p>
<p><b>South Africa</b> (Moyo <i>et al.</i>, 2022)</p>	<p>Survey of nurse managers in one district hospital: They experienced human resource related challenges during COVID-19, “worsened by the fact that vacant posts were frozen”. There was a shortage of material resources that affected patient care. Nurse managers who had previously contracted COVID-19 experienced stigma and discrimination.</p>
<p><b>Thailand</b> (Gaesawahong <i>et al.</i>, 2022)</p>	<p>Survey of 1,073 RNs who provided services to patients with COVID-19: The four impacts of the COVID-19 pandemic were: 1) work-life imbalance due to increased workload; 2) fear of infection and transmission; 3) inadequate organisation support including supply of PPE and quality vaccines, information support, and unfair compensation in some hospitals; and 4) ecological changes in both positive and negative directions. “Nurse leaders could provide adequate support for necessary equipment and information to the RNs so that they reduce danger-related stress. Compensation should be considered as appropriate for them.”</p>

Table 4 above gives snapshots at points in time, using different methods, different measures and definitions, and in just a selection of countries. Even so, they give insights into the profound and global scale of the damage that has been done to the nursing workforce. **These are ‘one-off’ studies, but this is not a one-off situation. The overall impact across the world is persistent and deep rooted.** Both COVID-19 itself, and a lack of effective pandemic policy responses in many countries have contributed to this global burnout of nurses.

The country surveys paint a disturbing picture; these are backed up by a growing number of

multi-country reviews examining the nursing workforce and COVID-19. These studies give a deeper and more detailed perspective on the impact on nurse burnout, intention to leave, and turnover. In our *Sustain and Retain* report, we identified several reviews that had already emerged (Williams *et al.*, 2020; Joo & Liu, 2021; Jo *et al.*, 2021; Llop-Gironés *et al.*, 2021; ECSACON, 2021). One year on, we report on many more (see Table 5 below). These systematic reviews and meta-analysis take longer to develop, but add significant weight to the growing evidence base on the impact of the pandemic on the nurse workforce.

**Table 5: Reviews and meta-analyses focused on nurse and health care worker impacts 2022-23**

FOCUS	METHOD(S)	FINDINGS
Prevalence of depression and anxiety in nurses during the first 11 months of the COVID-19 pandemic (Ślusarska <i>et al.</i> , 2022)	Systematic review and meta-analysis	23 studies ( $n = 44,165$ ) from nine countries (China, the Philippines, the United States, Turkey, Saudi Arabia, Iran, UK, Brazil, and Canada. Authors reported that the combined incidence of depression among nurses was 22%, and anxiety symptoms 29%. “This meta-analysis shows that over one-fifth of nurses in professional practice during the COVID-19 epidemic suffer from depression disorders, and almost one-third experience anxiety symptoms”. Authors argue that this underscores the importance of providing comprehensive psychological support strategies for nurses working in pandemic conditions.
Factors mediating the psychological well-being of healthcare workers responding to global pandemics (Schneider <i>et al.</i> , 2022)	Systematic review	Thirty-nine studies were included in this review: 21 investigated the SARS pandemic, 12 investigated the COVID-19 outbreak, four investigated MERS and one investigated influenza. The studies looked at China, Canada, Taiwan, South Korea, Singapore, India, Israel, Italy, Japan and Saudi Arabia. Most studies demonstrated that well-being was at greater risk in nurses than in other healthcare workers (HCWs). “Indeed, a large body of evidence suggested that social, organisational, and governmental support plays a crucial role in how global pandemic outbreaks are experienced by HCWs, and there was evidence that proper support has the potential to significantly impact their general well-being. The results of this review suggest that support was actually the most frequently reported factor for protecting HCWs’ well-being”.
De-escalation strategies for redeployed staff and repurposed facilities in COVID-19 intensive care units (ICUs) during the pandemic (Clark, Chisnall & Vindrola-Padros, 2022)	Systematic review	Fifteen papers from six countries: UK, USA, Singapore, China, Iran, and Australia, covering wellbeing and training themes. The key operational approach in relation to maintaining flexibility for future surges was to use a traffic light or phased return system for both the workforce and the facilities, as it would allow for a quick return to redeployment, if needed. The key supportive strategies have focused on the wellbeing and the training needs of the returning redeployed workforce, which included ensuring that staff received time off to rest and recuperate. These strategies also entailed monitoring and supporting the long-term mental health of staff received recognition and gratitude for their service; identifying training needs in the trainee healthcare workforce and catching up on any missed training. The most relevant training strategy in relation to preparation for future surges of COVID-19 was to continue with ICU and disaster preparedness training and practices.



## 2.4 NURSE BURNOUT: INDIVIDUAL NURSE ‘RESILIENCE’ IS NOT THE SOLUTION

The key point that emerges from these surveys and reviews is that the scale of actual and potential trauma and burnout in the nursing workforce is huge. This is extremely concerning, because nurse burnout is both an issue of personal health and well-being, and a risk to service quality and health system recovery and rebuild. In addition, policy makers must recognise that nurses are individuals with non-work commitments and that, during the pandemic, their concerns extended beyond their own personal experiences, to include responsibilities for their families (Chandler-Jeanville *et al.*, 2021; Brolan *et al.*, 2022).

Burnt-out nurses are absent, reducing their hours or leaving employment. Some who have ‘held on’ for the first years of the pandemic are now exhausted and will have to step down to less demanding roles, have respite, or step away to work in other sectors or retire. Those who remain at work report increasing levels of stress, and an increasing propensity to consider leaving their job or profession. There is a huge concern that despite high levels of nurse burnout being reported in many of these studies, **there is often an absence of a systematic organisation and employer response, with further burden being placed on individual nurses to be ‘resilient’ as they entered a fourth year of pandemic and rebuild.**

One key review of burnout in nursing, which identified and examined 91 (pre-pandemic) research studies, concluded that “The patterns identified by these studies consistently show that adverse job characteristics—high workload, low staffing levels, long shifts, and low control—are associated with burnout in nursing. The potential consequences for staff and patients are severe” (Dall’Ora *et al.*, 2020). The same authors noted that nurse burnout “was linked to reduced patient safety and adverse events, including medication errors, infections and falls. When staff experienced burnout, patient dissatisfaction and family complaints increased” (Dall’Ora & Saville, 2021). They concluded that **“the evidence clearly does not support interventions to reduce burnout**

**that are targeted at individual behaviours such as mindfulness or resilience training—but, rather, at those that aim to fix mismatches in the work environment.”** (Dall’Ora & Saville, 2021)

These points were reinforced in a systematic review of burnout in nursing, covering the period up to the early phase of the pandemic (October 2020) (Jun *et al.*, 2021) which stressed the need to look at nurse burnout as a symptom that requires organisational responses: “Nurse burnout is associated with worsening safety and quality of care, decreased patient satisfaction, and nurses’ organizational commitment and productivity. Traditionally, burnout is viewed as an individual issue. **However, reframing burnout as an organizational and collective phenomenon affords the broader perspective necessary to address nurse burnout**”. Another recent report from the European Commission expert panel on the mental health of the health workforce during the pandemic emphasised the need to “immediately support the mental health and alleviate the consequences of stress, fear, and moral injury”, and stressed that **“The organisation, as opposed to the individual worker, is to be held publicly accountable for worker well-being”** (European Commission, Directorate-General for Health and Food Safety, 2021).

Another review has highlighted that, “COVID-19 also demonstrates the limitations of self-care, one of the most touted frameworks to reduce shared stress and burnout... Although self-care can be useful in specific roles, **the primary onus for reduction of both burnout and shared trauma should be shifted from the individual worker to the organization**” (Cohen-Serrins, 2021, pp. 259-268).

A commentary on ‘the Great Resignation’ in US nursing noted that organisational responses that focused mainly on building nursing resilience and excluded workplace-related causes “are particularly short-sighted”, concluding that, “The end result risks **creating a false mindset that the nurse and not the system must be fixed**” (Laskowski-Jones & Castner, 2022).

And yet another review, published in 2023, examines the role of three key workplace conditions that are prerequisites for improving quality and safety in healthcare: staffing for quality; psychological safety, teamwork and speaking up; and staff health and well-being at work. The authors note that, “All three of the conditions for healthcare improvement that we identify... depend on leadership, management support, and role modelling”. The review noted that the research supports the plausibility of a causal link between registered nurse staffing, care quality and patient outcomes; that, “Staffing is about more than numbers; practice

environments are also critically important”; and that in relation to nurse staff well-being at work “**Interventions targeting individual staff neglect the wider structural and organisational constraints/contexts**” (Maben, Ball & Edmondson, 2023).

The key message here is that a policy emphasis only or mainly on individual nurse ‘resilience’ cannot be the answer. **Safe staffing levels, fair working conditions, flexible hours, scope for respite and stepdown must be part of the targeted investment and package of policy solutions.**

## 2.5 MISSING NURSES, MISSED CARE: THE COSTS OF POLICY INACTION ON NURSE BURNOUT

The primary reason why organisations and employers must lead on supporting nurses’ health and well-being is because it is their responsibility, it is the employer duty of care. It is all too clear what a neglect of duty of care can lead to: damage to nurses and damage to quality of care. In addition, they should respond because it is in their own interests.

**Nurse absenteeism and turnover costs are a significant drain on organisations** (Alves *et al.*, 2022; Arir *et al.*, 2022). Studies have examined the various impacts when nurses are absent, temporarily or permanently if they leave the organisation. These include temporary replacement costs, cost of hiring a permanent replacement, and lost productivity, with attribution of a financial value to each element. Various studies use different methods and metrics, but do give an insight into the scale of the potential costs—and an added justification for organisations to “do something about it”. A linked concern is that in some situations nurses feel they must be at work even when they are unwell. The pandemic is likely to have increased this pressure. This so called ‘presenteeism’ in nursing can put patient care at risk by reducing the capacity of nurses to provide high quality care. Rates of presenteeism are reportedly particularly high in the nursing workforce (Freeling, Rainbow & Chamberlain, 2020).

At the level of the individual nurse, turnover cost has been estimated to be equivalent to 1.3 times the salary of a departing nurse

(Jones & Gates, 2007). One recent assessment of nurse turnover in the US reported that the average cost of turnover for a bedside RN was \$46,100 “resulting in the average hospital losing between \$5.2 m-\$9 m”, and that “each percent change in RN turnover will cost/save the average hospital an additional \$262,300/yr” (NSI Nursing Solutions Inc., 2022). Another recent US study estimated that a hospital spends an expected \$16,736 per nurse per year employed on nurse burnout-attributed turnover costs (Muir *et al.*, 2021). A report on the NHS in England, estimated that the total financial impact of 10% nurse turnover on a large hospital employing over 3,000 nurses, would equate “to a minimum spend of £3.6 m every year” (NHS Shared Business Solution, n.d.).

Another study used modelling to assess nurse burnout-attributed turnover costs under two scenarios: (1) a hospital with ‘status quo’ nurse burnout prevalence and (2) a hospital with a “burnout reduction program” and decreased nurse burnout prevalence. The ‘status quo’ hospital spends an expected \$16,736 per nurse per year employed on nurse burnout-attributed turnover costs, whilst in a hospital with a burnout reduction programme, costs reduce to \$11,592 per nurse per year employed. Nurses spent less time employed at the ‘status quo’ hospital (2.9 versus 3.5 years of employment). The study concluded that “hospitals should strongly consider proactively supporting programs that reduce nurse burnout prevalence and associated costs” (Muir *et al.*, 2021).

**At an aggregate level, absence and turnover costs to a health care organisation can be significant** (Duffield *et al.*, 2014; Kiel, 2020; Zhao *et al.*, 2019). Another recent report estimated that each percent change in nurse turnover will cost (or save) the average hospital an additional \$328,400 (Shaffer & Curtin, 2020). In England, the system-wide estimate of the cost of staff absence to the NHS was £1.1 billion per annum in 2019 (immediately pre-pandemic) (Health Education England, 2019).

A cost analysis of the first wave of the COVID-19 pandemic on staffing in a Portuguese hospital in the three month period, 1 March to 31 May 2020 analysed the costs of absenteeism, hiring new staff and overtime work by health professionals (nurses, physicians, operational assistants, and diagnostic and therapeutic technicians) and compared it with the same three-month period in the pre-pandemic year (2019) to determine differences in costs. It estimated that the costs of scale up, and filling vacancies in a workforce of 7,000 was an additional €8,817,199.84 in the three months (absenteeism: €6,842,284.64; hiring new staff: €363,540.03; overtime work: €1,611,375.17) (Santos *et al.*, 2021).

Another potential source of additional cost is when organisations try to fill nurse vacancies by **using short term/ temporary contract nurses (e.g. agency nurses or traveller nurses)**. The pre-pandemic evidence on the use of short-term agency nurses suggests that the claimed benefits of their deployment are sometimes countered by a negative impact on care quality and overall productivity (Birmingham *et al.*, 2019).

Nevertheless, during the pandemic response there have been reports of very large increases in use of agency or traveller nurses in some countries to cover for vacancies and help rapidly

increase deployment (See e.g. Yang & Mason, 2022; Odom-Forren, 2022). Reports in the **United States** suggest the demand for travel nurses has “increased exponentially”: by 35% in 2020 and an expected 40% more in 2021 (Adegbesan, 2022). Research commissioned by the Royal College of Nursing in **England** in 2022 in support of arguments for fair pay and safe staffing highlighted that agency nursing costs NHS organisations around £21,300 per year more than the current cost of a permanent nurse (London Economics/RCN, 2022).

Another indicator of nurse shortages which carries a significant cost is **missed care** which occurs when nursing care is omitted or delayed, often as a result of understaffing and heavy workload. It has also been described using other terms such as ‘task incompleteness’, ‘unmet needs’ or ‘implicit rationing’ (Griffiths, 2018). It is regarded as an **early warning for adverse patient health outcomes and an early signal for deteriorating quality of care** (Imam *et al.*, 2021). Whilst the concern about missed care predates the pandemic, it is increasingly being reported and described in a range of countries (See Shubert *et al.*, 2021; Nilasai & Hariyet, 2021; Hamma, Guirgas & Mosallam, 2021; Labrague, de los Santos & Fronda, 2022; Taskiran-Eskici & Baykal, 2022; Zárate-Grajales, *et al.*, 2022). The organisational implications of missed care on service delivery and patient safety are all too obvious. As an added pressure on individual nurses, missed care also contributes to **nurse moral injury, dissatisfaction and potential burnout**. Nurses know they are not delivering care to the quality that is needed, because they have insufficient staffing levels and resources. Organisations that do not respond effectively to indicators of missed care are further damaging care outcome and contributing to nurse burnout.

## 2.6 NURSE PROTESTS AND STRIKES: THE LAST RESORT

Where nurses are unsupported at work and working in intolerable conditions, their last resort is to protest and strike to achieve improvements, where the employing organisation has been unwilling to respond. The last 12 months have seen an unprecedented growth in **protests and strike action by nurses as a last resort in reaction to inadequate responses** by government and employers to concerns about **workplace safety, working conditions and an absence of safe staffing levels**.

ICN is monitoring nurse protests and strikes, and highlights activity across a range of countries. It has noted an “Alarming increase in industrial action by nurses is a symptom of global crisis in healthcare systems” (ICN, 2022d). The ICN database, and another analysis of health sector protests (Essex & Weldon, 2021) report on strikes in many countries, e.g. **Angola, Australia, Argentina, Bosnia, Denmark, Finland, France, Germany, Italy, Kenya, Mexico, Morocco, New Zealand, Peru, Spain, Uganda, USA, UK, and Zimbabwe**.

A recent analysis of trends in health worker strike action and other protests from 85 countries showed **a 62% increase in health worker protest activity between 2019 and 2021 (from 2,416 protests to 3,913 protests)**. “All but a very few” of these countries experienced a large increase in total number of protests, “with some countries—such as Mexico,

Argentina, Peru, Algeria and Kazakhstan”—experiencing a particularly steep increase... Of the 6,589 recorded protests between 2020-2021, **about half (3,213) were identified as explicitly related to health worker concerns about inadequate support for the COVID-19 response** (Brophy *et al.*, 2022).

In some countries, such as the UK (Crerar & Stacey, 2023) and Zimbabwe (Ndlovu, 2023), this has led to **government attempts to impose new restrictive, ‘anti-strike’ laws** based on limiting the ability of NNAs and other trade unions to call for action or to penalise such action.

Strike action is a very visible manifestation of discontent and unmet nurse workforce demands. **The rapid growth in strikes in the period since the pandemic first hit is another red flag that many health systems are still in crises, and scope for rebuild is not yet based on sound foundations**. Legitimate concerns about safety, staffing and working conditions are not always being acknowledged fully by governments and employers. Low pay is not the only driver. There is a central role for governments in ‘fixing’ the underlying causes of strikes. A previous evidence review of health worker strikes by WHO has highlighted that, “Positive resolution was achieved more often when collective bargaining institutions and higher levels of government were involved in the negotiations” (Russo *et al.*, 2019).

## 2.7 SUPPORTING NURSES: THE URGENT NEED FOR NURSE WORKFORCE IMPACT ASSESSMENTS

The surveys and reviews reported in the previous section of this report provide insights and present a worrying picture of **burnt-out individuals and health systems in crises, with critical constraints on recovery and rebuild capacity**. There is a vicious cycle of higher demand/lower nurse staffing, causing higher absence and lower retention, leading to lower staffing, which in turn is making more nurses leave work, or intend to leave.

There is an absence of standardised, accurate and comparable data on COVID-19 related

nurse burnout, absence, turnover and early retirement. There are major data gaps, as highlighted in a recent systematic review on the pandemic and health workforce: “Notable evidence gaps included occupational and psychosocial factors affecting healthcare workers’ absenteeism and risk of burnout, gendered considerations of human resources for health (HRH) capacity, evaluations in low- and lower-middle income countries, and policy-actionable assessments to inform post-pandemic recovery and sustainability of services for noncommunicable disease management” (Gupta *et al.*, 2021).



No country will be immune from the possibility of increased numbers of nurses leaving their system; for example, many high income OECD countries already have a relatively high proportion of nurses in pre-retirement age groups, who will be particularly vulnerable to increased outflow. **There is an urgent need to move to a situation where countries and systems can rapidly and accurately assess the current and potential future losses of nurses**, so that action can be taken to protect and support the nursing workforce, plan for future rebuild requirements, and act to tackle the nurse shortages.

What is required from each health system and country is that they develop a better informed understanding of the root causes of nurse workforce problems by conducting periodic **impact assessments of the nursing workforce**. Assessing and evaluating workforce impact was promoted by WHO, in the global HRH strategy in 2016 (WHO, 2016b, para 71), and options and models were then reviewed (Nove, Cometto & Campbell 2017). There is an urgent requirement to develop and apply a specific standardised impact assessment approach to the nursing workforce as it responds to the pandemic rebuild (Chan *et al.*, 2021), for two critical reasons.

**Firstly, there is a need to provide rapid alerts to damage being done to individual nurse health and well-being.** As highlighted above, it is becoming increasingly apparent that many nurses are or will suffer from burnout and other physical and mental illness, including PTSD, as a result of their experiences in working long hours in high intensity environments, often with inadequate support and PPE. This means

there is an urgent necessity for the provision of more effective support on staffing levels and work environment, as well as adequate and long term counselling and support for stressed staff (Williams *et al.*, 2020).

As highlighted in the previous section, an essential part of the recovery and rebuild response must be to shift the policy, professional and management focus from individual nurses having to 'cope' and 'be resilient' with unbearable burdens to one where employers and organisations take responsibility for creating and maintaining supportive working conditions and adequate staffing. This is the only way to enable the health system to recover and rebuild.

**Secondly, there is need to have more accurate, complete and comparable data on the overall impact of the pandemic on nurse infection, long COVID and mortality rates; on nurse staffing and absence rates (and reasons for absence); and on nurse turnover and retirement patterns.** This data must also be made available rapidly, as near as possible to 'real time' in order to support informed rapid policy response (Buchan, Williams & Zapata, 2021), and to provide more accurate estimates for use in nurse workforce planning.

This data is an essential building block for any informed policy response to protecting and supporting the nurse workforce during the recovery rebuild of health systems. It can help identify the underlying reasons for shortages, can pinpoint where current nurse shortages are most pronounced, and can be used to develop needs-based and rebuild scenarios which take full account of the need to address identified and emerging nurse shortage gap problems.

# 03

## CHAPTER THREE

### 3. THE WIDENING GAP: NURSING SHORTAGES IN 2022

#### 3.1 NURSE SHORTAGES: THE RESULT OF INADEQUATE POLICY RESPONSES

COVID-19 has placed huge demands on nurses in all countries. As highlighted in the previous chapter, policy responses must take account of and respond to the personal impacts experienced by nurses working during the pandemic, but there must also be an urgent policy focus on responding to the growing nurse workforce shortage gap worsened by the impact of COVID-19. This gap is likely to grow further without funded and targeted policy action.

To understand the dynamics of demand for nurses, it is necessary to assess domestic supply factors, factoring in the impact of the pandemic. Nursing shortages are created when demand outstrips supply, and as noted earlier, many countries have seen the demand-supply gap widen due to the pandemic, and then be further exposed as rebuilding of health systems comes on the agenda. Countries must try to replace nurses who have left (or will leave because of burnout and ageing of the workforce), retain those who have stayed, and must also try to recruit additional nurses to meet increased and changing demand.

As discussed earlier, in many countries the early phase of the pandemic led to increased short-term supply of domestic nurses, as 'surge' policies were enacted by systems and governments to rapidly scale up the nursing workforce. This often included requiring existing nurses to work longer hours, encouraging returners to come back into employment, co-opting student nurses into work, and fast-tracking international recruits. **These emergency measures cannot be sustained in the long term, and may actually mask a reduced supply of longer term/permanent nurses** as the shift into rebuild impacts further on nurse workload and burnout.

**There are clear signs of policy concern that the shortage gap is already increasing.** In its 2022 report on health systems in Europe, OECD has highlighted the nurse shortage constraints and policy challenges: "The demand for nurses is expected to continue to rise in the coming years due to population ageing while many nurses are approaching retirement age. Increasing the retention rate of nurses in the profession is a growing concern

to avoid exacerbating current and future shortages. Concerns about growing shortages have prompted many countries to increase the number of students in nursing education programmes, although it will take a few years before the impact is felt. Some countries continue to rely on international recruitment to address nurse shortages, although this may exacerbate shortages in those countries where these nurses are recruited". (OECD/European Union, 2022).

A 2022 analysis of nursing and other healthcare workforce across the 53 countries of the WHO European Region also expressed concerns about ageing of some elements of the health care workforce (HCWF): "The ageing of the HCWF is a concern throughout the Region and poses a threat to the sustainability of the workforce due to the challenge of replacing workers when they retire". The WHO report also highlighted that more research on gender gaps and occupational segregation was required to ensure that all the competencies and contributions of women in the workforce are recognised. It concluded that countries across the Region "must now sustain and develop the HCWF and protect its health and well-being", setting out 10 action points to strengthen their HCWF (WHO Europe, 2022).

The 2022 OECD report on health systems in Asia-Pacific (OECD/WHO, 2022) highlighted the large variation in the number of nurses across countries and territories, from more than 10 nurses per 1,000 population in the highest in high-income countries such as **Australia, Japan and New Zealand**, to much lower supply in several low-income countries and territories, including **Papua New Guinea, Pakistan and Bangladesh**, where there is 1 nurse or less per 2,000 population. On average, less than two nurses per 1,000 population work in lower-middle and low-income Asia-Pacific countries.

As summarised by these recent reports by OECD, WHO and other main stakeholders, **many countries are now realising that they must invest in supporting increased supply of nurses**, both to meet growing and changing demand created by the pandemic and rebuild, and because of burnout-induced reduced levels of retention of the current nursing workforce.

**Inadequate levels of nurse staffing matter, because this impacts negatively on care quality and outcomes, as well as being a major constraint on any rebuild efforts.** A recent systematic review has collated the evidence on nurse staffing and outcomes from low- and middle-income countries (Assaye *et al.*, 2021). Based on an assessment of 27 studies in low- and middle-income countries, the review concluded that, "Lower nurse-to-patient ratios and higher nurse workload are linked to in-hospital mortality, hospital-acquired infections, and medication errors among patients, and high levels of burnout, needlestick and sharps injuries, absenteeism, and intention to leave their job among nurses in low- and middle-income countries." Similar findings were reported in a more recent systematic review which focused on nurse staffing levels and patient outcomes in acute care settings, assessing longitudinal studies. It included 27 papers and concluded that there was "little room for doubt" that "having more registered nurses on hospital wards is causally linked to reduced mortality" (Dall'Ora *et al.*, 2022).

The shortage gap varies in different countries and areas of care, but emerging priorities include the need for nurses with intensive care, public health, mental health and primary care/chronic disease management skills; and developing or increasing the supply of clinical specialist nurses and those working in advanced practice roles and as nurse practitioners to provide more effective staff mix. As OECD has noted in its 2022 report, "Evaluations of nurse practitioners in primary care in Finland, Ireland and the United Kingdom show that advanced practice nurses can improve access to services and reduce waiting times, while delivering the same quality of care as doctors for a range of patients, including those with minor illnesses and those needing routine follow-ups" (OECD/European Union, 2022).

The main source of new supply of nurses should be to invest in training more nurses domestically, including a focus on developing and expanding advanced practice; a secondary source, open to countries that have the available resources, is to resort to active international recruitment. This chapter reports on these trends and drivers, and concludes with a clear message to policy makers about the need to focus on **nurse workforce self-sufficiency**.

### 3.2 DOMESTIC SUPPLY OF NURSES VARIES, BUT IS OFTEN INADEQUATE

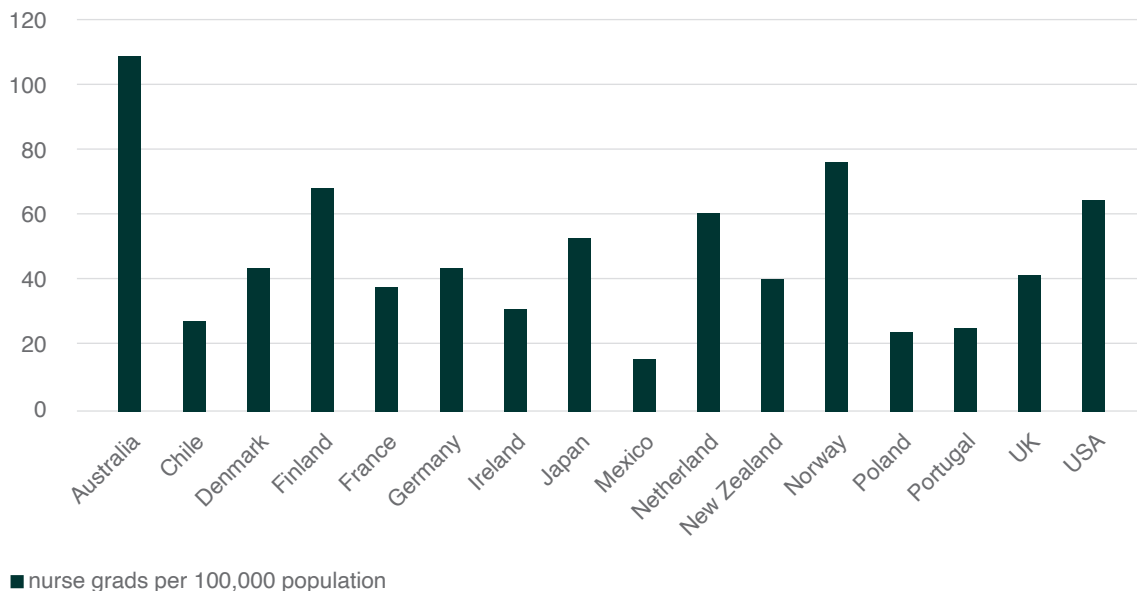
The planning target for any country that has the resources should be to aim for a graduation rate (sometimes termed net increment rate) of new nurses entering the workforce from domestic training that can meet longer term sustainability—an inflow that can both replace those who leave the system, plus bring in more nurses with the requisite skills, where rebuild has increased demand.

However, many countries have not invested sufficiently in training adequate numbers of nurses to meet their own demands. This was highlighted in the SOWN report in 2020, which recommended increased investment in expanding the nursing workforce as one of the main policy interventions. The same policy message has come from OECD, as noted above and from WHO in the Global Strategic Directions for Nursing and Midwifery.

The SOWN report showed that, on average, high income countries had more than three times the graduation rate, of 38.7 nurses per 100,000 population, than did low-income countries (10.4) (WHO, 2020a, p. 47). However there was huge variation in the graduation rate across these high income countries, reflecting very different decisions being made about levels of investment in the domestic nursing workforce, and which in turn can be a major factor in driving increases in active international recruitment of nurses. In a separate analysis in 2022, WHO Europe estimated that the numbers of nurse graduates as a percentage of the workforce size ranged from under 1% to nearly 25% across the 53 countries of the Region (WHO Europe, 2022).

This variation is highlighted in Figure 1, which shows the number of nurses graduating per 100,000 population in selected countries affiliated to the OECD.

**Fig 1: Selected OECD affiliate countries, nurse graduations per 100,000 population, 2021 or most recent year**



Source: OECD, n.d.

In the selected mid-large size OECD countries shown in Figure 1, the nurse graduation rate was more than four times higher in **Australia** (at more than 100 per 100,000) than in **Poland**; other countries reported to have relatively low graduation rates included **Portugal** (26), **Chile** (28) and **Ireland** (31). Other countries with reported high graduation rates were **Norway** (76) and **Finland** (68). The Figure highlights a huge variation in the size of new supply of nurses from domestic training, across the affiliate countries of the OECD. These countries with very different levels of domestic supply of 'new' nurses from training have all been hit by a common challenge—a pandemic which suddenly increased demand for nurses.

Nurse supply and shortages are more difficult to assess systematically in many low- and middle-income countries because of existing data limitations, but SOWN had highlighted that countries experiencing low densities of nurses are mostly located in the WHO African, South-East Asian and Eastern Mediterranean regions, and in parts of Latin America. It reported that in 2018, “Global inequalities in availability of nursing personnel are largely income driven, with a density of 9.1 nurses per 10,000 population in low-income countries compared to 107.7 per 10,000 population in high-income economies” (WHO, 2020a, p. 43): a tenfold variation in nurse availability.

SOWN also stressed that income level of countries is also strongly associated with shortages in the nursing workforce. Eighty-nine percent of the nurse supply gaps identified in 2018 was concentrated in low- and lower middle-income countries. SOWN estimated that addressing the shortage of nursing personnel in low-density countries would require an average increase in the number of yearly graduates of 8.8% from 2018 to 2030 (range: 0.2-13.4%),

and improved absorption capacity. The countries accounting for the largest shortages (in numerical terms) included **Bangladesh, India, Indonesia, Nigeria and Pakistan**. Population growth in many low-income countries will push up demand for nurses, irrespective of the current workforce profile. For example, in **Nigeria**, population growth based projections from 2016-2030 suggest that there would be an ‘availability gap’ (shortage) of up to 140,000 nurses and midwives in 2030, compared to 2016, a 29% shortfall (Adebayo *et al.*, 2016).

A 2021 World Bank report examining nurse labour markets in the 14 countries of the ECSA (Eastern, Central and Southern African) Region (**Botswana, Eswatini, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, South Africa, South Sudan, Tanzania, Uganda, Zambia, Zimbabwe**) (World Bank Group *et al.*, 2021) reported that demand for nurses was growing, but high vacancy rates (ranging from 30-55%) in the public sector remained a problem, noting that nurses do not fill posts due to “poor wage, remote location, lack of amenities, and poor working conditions” (World Bank Group *et al.*, 2021, p. 26).

A recent assessment of the impact of the pandemic and rebuild challenges on the health workforce in five Latin American countries, published by WHO, covering **Bolivia (Plurinational State of), Chile, Colombia, Ecuador and Peru** reinforced the point about sustainability: “The biggest challenge ahead is to develop mechanisms to absorb the newly recruited HRH to reduce pre-pandemic gaps and maintain improvements in their terms and conditions of employment, such as pay increases, which in turn largely depend on identifying adequate sources of funding” (WHO, 2021b, p. viii).

### 3.3 NURSE UNEMPLOYMENT AND SHORTAGES: A PARADOX AND A POLICY FAILURE

As noted in the introduction to this report, one feature of some nurse labour markets is the apparently contradictory co-existence of nurse shortages and nurse unemployment (or under-employment, such as highlighted in **Mexico**) (Aristizabal, Nigenda & Serván-Mori, 2019).

WHO in **Africa** have called this the “paradox of health worker unemployment in countries with critical shortage “ (WHO Regional Office for Africa, 2021). This can happen because of one or more of three main reasons: The output of new nurses from domestic education, and/or

overall availability of nurses outstrips demand; the inadequate pay and working conditions being offered are insufficient to attract those with nursing qualifications into nurse employment; or the funding available to employ nurses (in the public sector, the so-called ‘fiscal envelope’) is insufficient to meet identified demand.

The major concern now is about structural causes which are leading some countries to constrain government expenditure, limit budgets and therefore undermine effective policy response to nurse shortages. Examples include **Ghana** where an unregulated expansion of training capacity resulted in substantial increases in the production levels of nurses above the demand projections of the Ministry of Health, and led to, “a decade of uncorrected implementation lapses resulting in a lingering need-based shortage of nurses and midwives at service delivery points whilst thousands of trained nurses and midwives remained unemployed for up to 4 years and constantly protesting for jobs” (Asamani *et al.*, 2020).

Similar problems have been reported in other countries. In **Lesotho**, where, despite unmet demand for nurses, nearly one out of three professional nurses and midwives (28.43%, n=1349) were unemployed—about four percentage points higher than the country’s unemployment rate of 24%—because of a lack of funding (Asamani *et al.*, 2022).

In **Chhattisgarh State, India**, labour market analysis identified a substantial production of nurses, particularly from private schools, but “a lack of trusted accreditation mechanisms”, and nurse vacancies in public sector persisting alongside unemployment among nurses. At the time of the analysis, in 2018, it was estimated that there were around 25,000 qualified nurses residing in Chhattisgarh and around 8,000 of them were unemployed. Yet, there were vacancies in government facilities, in part because of very time-consuming job appointment procedures (Garg *et al.*, 2022).

Nurse unemployment in a country that also has significant nurse shortages is a red flag for funding concerns, and ineffective policy and planning. It is a sign of potential self-inflicted damage. This can become even more problematic if nurses then migrate because they cannot find employment in nursing in the country at a wage that is attractive. Efforts to rebalance, reduce unemployment and increase employment should focus on effective planning mechanisms and recruitment procedures, and on increasing the fiscal envelope so available nurses can be employed to meet demand. In some low income countries, this may include donor provision of technical support and funding.

### 3.4 THE HEALTH SYSTEM ‘REBUILD’ NEEDS MORE NURSES

There is as yet only limited standardised country-level analysis available which takes account the impact of the pandemic on projected increased demand and nursing numbers. However, this emerging evidence base paints a worrying picture. The examples below, from a range of countries, point to very significant shortage gaps, with analysis from some countries exposing a growing gap.

In **Canada**, it was reported that job vacancies in healthcare and social assistance increased 9.5% (+13,000) to an all-time high of 150,100 in the third quarter of 2022. On a quarter-over-quarter basis, job vacancies rose in the third quarter for registered nurses

and registered psychiatric nurses (+17.0% to 27,600); nurse aides, orderlies and patient service associates (+37.5% to 26,200); and licensed practical nurses (+20.7% to 13,100) (Statistics Canada, 2022).

The National Health Service (NHS) in **England** reported a registered nurse vacancy rate of 11.9% as of 30 September 2022 (47,496 posts were vacant). This was an increase from the same period the previous year when the vacancy rate was 10.5% (NHS Digital, 2022); recent projections suggested that there will be a need for 69,000 more nurses by 2024/5 to meet growing rebuild related demand (The Health Foundation, 2021).

In **Germany**, it has been reported that, “The pandemic is accelerating a broad trend that has been building for some time,” with the Federal Labour Agency in Germany (Bundesagentur für Arbeit) reporting that the average number of vacant positions for registered nurses in long-term care in 2019 was 15,000 and in acute care 12,400; furthermore they highlighted that it took 205 days to fill a position for a nurse in long-term care and 174 days for a nurse in a hospital (Bundesagentur für Arbeit, 2021, pp. 14-16). A more recent report from Germany notes that, “At present, vacancies outnumber the amount of qualified job seekers on the job market. According to expert estimations, the nursing sector will need 150,000 new nurses by 2025. Demographic changes in the country will exacerbate this situation in the medium and long term” (GIZ, 2021).

In **India**, a recent analysis looking at health workforce shortages to 2047 (Sethi, 2022; KPMG, 2022) reported that with 24.5 nurses and midwives available per 10,000 population, there was a shortfall of 1.37 million nurses and midwives, when compared with the WHO threshold recommendation of 34.5. One key conclusion was that, “India will have to significantly ramp up the efforts in augmenting education infrastructure, skilling of existing workforce, attracting the younger generation to join the workforce, and providing other social safeguard benefits to promote healthcare as the preferred profession in the coming decades”.

In **South Africa** (Makgatho, 2022), it is reported that the supply of qualified personnel in all nursing categories has decreased by almost 40% since 2013, with a recent study by the National Department of Health and the Hospital Association of South Africa indicating the current shortage of, “anything between 26,000 and 62,000 nurses which are predominantly registered nurses”.

In **Singapore**, it was reported that the country aims to expand by 4,000 new nurses by the end of 2023. Of these 4,000 nurses, a higher proportion will be foreign trained, with a ratio of about 60:40 local. Singapore had recorded an increase in attrition rates among local and foreign nurses in the public sector in 2021, compared with 2020. Among locally trained nurses, the attrition was 7.4% in 2021, up from 5.4%

the previous year. For foreign nurses, attrition more than doubled year-on-year to 14.8% in 2021 (Lim, 2022).

**Switzerland** held and passed a national referendum in November 2021 on nursing shortages. With leadership by the Swiss Professional Association of Nurses, it aims to improve training, quality assurance through more staff, fair employment conditions and improved recognition of the profession. It was reported that, “there will be a shortfall of 65,000 nurses across all training levels by 2030 if no action is taken. This is partly due to the fact that only about half of the number of nurses in Switzerland that will be required in the future are currently undergoing training”, with a very high reliance on international recruitment (Wenger, 2021).

In the **USA**, the Bureau of Labor Statistics’ Employment Projections 2021-2031 report that the employment of registered nurses is projected to grow 6% from 2021 to 2031, with about 203,200 openings for registered nurses being projected each year, on average, over the decade. “Many of those openings are expected to result from the need to replace workers who transfer to different occupations or exit the labor force, such as to retire” (U.S. Bureau of Labor Statistics, 2022). However new data analysis of the US nurse workforce highlighted that, in 2021, the total supply of RNs decreased by more than 100,000 in one year—“a far greater drop than ever observed over the past four decades”. Likely contributing factors were identified as “early retirements, pandemic burnout and frustration, interrupted work patterns from family needs such as child-care and elder care, COVID-19 infection and related staffing shortages, and other disruptions throughout health care delivery organizations” (Auerbach *et al.*, 2022).

These country examples highlight a growing nurse demand-supply gap. Demand for nurses is increasing because of the pandemic impact and rebuild, as well as because of worsening chronic disease rates and an ageing population in many countries; nurse supply is falling behind, because of pandemic driven burnout related outflows, and because of underlying demographic change as the workforce ages and more nurses reach retirement.

### 3.5 REBUILD IS DRIVING THE ‘QUICK FIX’ OF ACTIVE INTERNATIONAL RECRUITMENT

The pandemic has increased demand for nurses, exposing and accelerating the level of nursing shortages world-wide. It may push some countries to increase the level of domestic training but, as highlighted earlier, there is huge country level variation in the current domestic output of nurse graduates, including in high-income countries.

Even where there is scope and policy intent for increased investment to scale up domestic output, there will be a time lag of three or four years at least before any additional new domestic graduate nurses enter the workforce. The replacement need is more urgent—and one obvious feature in some high-income countries is renewed and expanded efforts on international recruitment of nurses as the ‘quick fix’ option: what the *Financial Times* has termed “shopping for nurses” (Smyth & Neville, 2022).

Even before the pandemic, the scale of the international flow of nurses was large, and growing. OECD analysis highlighted that in 2019 more than 550,000 foreign trained nurses were working across 36 OECD member countries, which was a marked increase on the 460,000 recorded in 2011 (OECD, 2019). OECD reports the number and/or share of foreign-trained nurses has increased particularly rapidly in **Belgium, France, Germany, and Switzerland**, with a steady growth also occurring in **Australia, New Zealand, Canada, and the United States** (Socha-Dietrich and Dumont, 2021).

The **United States** reports the highest number of registered international nurses, estimated at almost 197,000; second was the **United Kingdom** with over 100,000 foreign-trained nurses, then **Germany** with 71,000, and **Australia** with 53,000 (OECD, 2020a, p. 3). OECD has concluded that “The COVID-19 pandemic revealed once more that foreign-trained nurses are key assets for health systems in many OECD countries. Along with bringing into the spotlight the important role and dedication of frontline health workers, the pandemic has further highlighted the deeply embedded challenge of staff shortages as well as the

significant contribution that migrant nurses make to the health workforce” (Socha-Dietrich and Dumont, 2021).

The SOWN report also highlighted that the international mobility of the nursing workforce was increasing, noting that, “Many high-income countries in different regions appear to have an excessive reliance on international nursing mobility due to low numbers of graduate nurses or existing shortages”. One of the main recommendations of the SOWN report was that “Countries that are over-reliant on migrant nurses should aim towards greater self-sufficiency by investing more in domestic production of nurses” (WHO, 2020a, p. XIX).

**The international flows of nurses are increasing again** after some short term disruption to travel during the initial phases of the pandemic. In response to the urgent need to close the worsening nurse demand-supply gap, many high income countries are now accelerating their international recruitment efforts. This includes giving nurses preferred immigration status and fast tracking immigration procedures. A report for OECD has noted that since the pandemic, “many of the OECD countries already reliant on migrant health workers have implemented additional policy measures to ease migrant entry and the recognition of their foreign professional qualifications” (OECD, 2020b).

Some high income countries, such as **Australia, England, and Germany** have a long-term reliance on international nurses, and are now looking to increase their international recruitment activity.

In **Australia**, which retained pandemic travel restrictions longer than most countries, there were reports of an ‘airlift’ to be made up largely of nurse migrants from Britain, Ireland and other countries where nursing qualifications are recognised by regulators as being equivalent to those in Australia (LeGrand, 2021). The State Department of Health in **Western Australia** offered to cover the cost of flights, relocation fees and the mandatory 14-day



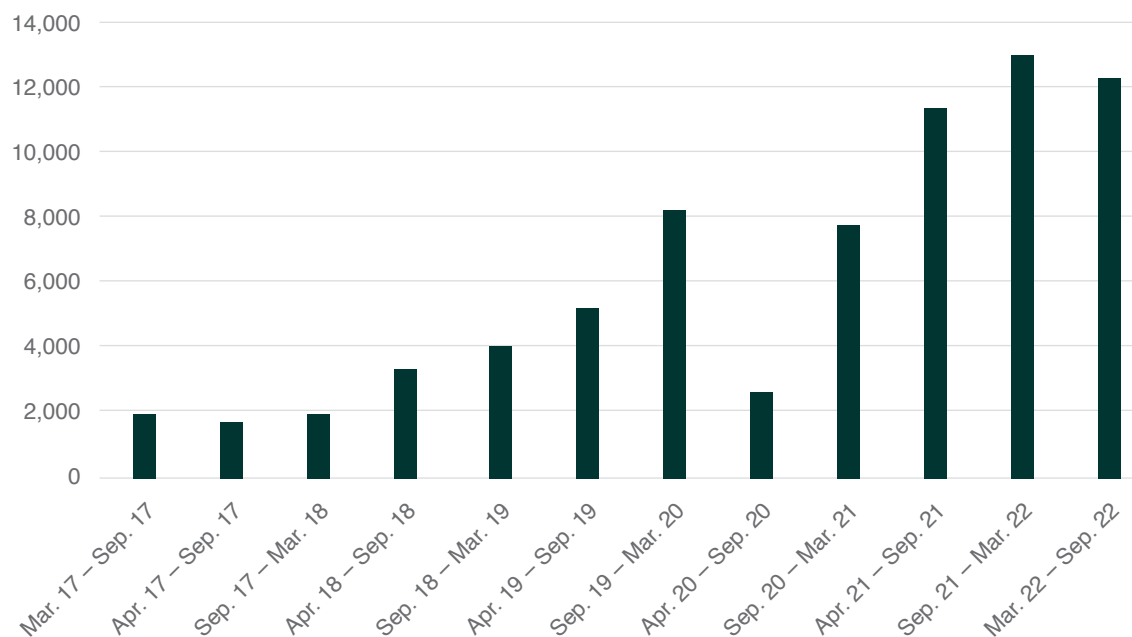
COVID-19 hotel quarantine period as it aimed to recruit 2,800 nurses by 2023 through local and international recruitment. The international offer was made both to Australian nurses working abroad, as well as to international nurses (Ely, 2021). The State of **New South Wales** has, “commenced the process for overseas recruitment” (Visontay, 2021), and the State of **Victoria** is providing relocation support to international and returning Australian health professionals, with nurses being specifically targeted, and supported to achieve immigration status (Department of Health, Victoria, 2022).

In **Canada**, it is reported that the Province of Newfoundland and Labrador has set up a nurse recruitment desk in India; Saskatchewan has held a healthcare job fair in the Philippines; and New Brunswick, Quebec and Manitoba all offer “thousands of dollars” to cover licensing for international nurses and other costs, and living expenses (McQuillan, 2022). In the Province of Ontario, the government has charged the College of Nurses with boosting nurse numbers, including allowing internationally educated nurses to practise while they work toward full registration (Jones, 2022). The Province of British Columbia is supporting internationally educated nurses (IENs) to enter the health system sooner by consolidating the assessment processes for IEN candidates; offering \$9 million in bursaries to help with assessment fees, (which is expected to benefit approximately 1,500 IENs in the first year); and creating new nurse navigator positions to help IENs navigate the assessment and licensing process (Health Department, Government of

British Columbia, 2022). It is also reported that the Province of Quebec is spending \$65 million to recruit 1,000 foreign nurses with targeting of francophone countries: **Algeria, Cameroon, Morocco, Tunisia and Mauritius** (CBC News, 2022).

In **England**, national policy effort is focused on rapidly increasing international nurse recruitment, with funding support to National Health Service (NHS) employers (NHS Employers, 2022), and an emphasis on fast tracking the processes—for example by reducing language test requirements and developing country to country bilateral agreements. In December 2021, it was reported that NHS employers had been “urged to seize the big opportunity to maximise support from overseas nurses once again” by further accelerating international recruitment (Collins, 2021).

Figure 2 below uses registration data to highlight the marked increase in inflow of international nurses to the UK in recent years. The trend since 2017 has been an upward level of international inflow, increasing sixfold across the period, reflecting domestic nursing shortages. Most recently, it shows the temporary travel disruption caused by COVID-19 in the first period of 2020, which then rebounded rapidly as a result of ‘fast tracking’ policy efforts to enable large numbers of international nurses to be recruited quickly to the UK. In the 12-month period of September 2021 to September 2022, more than 24,000 new international registrants were recorded—the highest in recorded history (Buchan, 2023).

**Fig 2: UK-“New” international nurse registrants-2017-2022, no. per six monthly period**

The WHO Global Code of Practice on the International Recruitment of Health Personnel (WHO 2021c) sets out the ethical policy framework for international recruitment of nurses and other health professionals. It will be examined in detail in the next section of this report. It should be noted that it emphasises mutuality, promotes the use of government-to-government bilateral agreements on recruitment, and has set out the so-called ‘red list’ of countries to avoid ‘active’ recruitment. In the six months to September 2022, more than 2,200 (20%) of these new international nurses to the UK came from just two ‘red list’ countries: Nigeria and Ghana.

The UK government’s use of bilateral agreements has caused some controversy, for example in relation to **Kenya** (Kay, 2022) (subsequently suspended) and **Nepal**. There is a risk that some bilaterals could be perceived as not fully meeting the spirit of mutuality, and give the appearance of a workaround to enable employers in the UK or elsewhere to ‘actively’ recruit nurses from red list countries. This will be explored later in the report.

**Germany** is developing a ‘Triple Win’ approach to international recruitment of nurses (GIZ, 2021) which reportedly includes **Bosnia and Herzegovina**, **Philippines**, and **Tunisia**. The reported policy aim is to generate

threefold benefits (‘triple win’) through a bilateral approach: “Pressure is eased on labour markets in the countries of origin, where there are unemployed nurses; migrant nurse remittances provide a developmental stimulus in their countries of origin; the shortage of nurses in Germany is alleviated”.

In December 2022, it was announced that **New Zealand** would provide fast track “immediate residency” offers to nurses, as a result of immigration policy changes (RNZ, 2022a).

In **Switzerland**, a third of nurses working in hospitals are foreign trained; during the pandemic this high dependency on foreign staff posed problems: “When countries closed their borders to limit the spread of the virus, Switzerland was forced to negotiate with its neighbours to allow health workers to continue to cross the border to work” (Romy, 2021).

In the **United States**, the Commission on Graduates of Foreign Nursing Schools (CGFNS) highlighted in its annual report that it had received over 17,000 *VisaScreen*® applications from 116 countries in fiscal year 2022, a 44% increase from 2021 and 109% increase from 2018. Health workers from the Philippines comprised 60% of all *VisaScreen*® applications with overall international recruitment on the rise (CGFNS, 2022).

Whilst some countries with long-term high reliance on international recruitment are now ramping up their efforts, demand from high income destination countries is now also extending beyond the 'usual' recruiting countries, to others which have not traditionally been so active in international recruitment. These include **Finland**, which reports a nursing shortage of 30,000 by the end of the decade and is now examining the use of international recruitment (Yle, 2021), and **Scotland**, where the government announced an allocation of £4.5 million to support active international recruitment of nurses as part of the overall plan for pandemic recovery and renewal (Scottish Government, 2021).

The obvious risk is that active international recruitment could drive up outflows of nurses from lower income source countries, and could undermine the ability of these countries to respond effectively to the rebuild challenges and future waves of the pandemic.

Analysis of pre-pandemic international supply from so-called 'source' countries has highlighted that there has been a long-term and growing trend of nurse emigration rates from some low- and middle-income countries, which challenges their ability to meet UN SDG targets and achieve UHC. As noted earlier, OECD analysis highlighted that in 2019, more than 550,000 foreign trained nurses were working across 36 high-income OECD member countries which was a marked increase on the 460,000 recorded in 2011 (OECD, 2019). OECD has also reported (OECD, 2020a, p. 9) that smaller countries in the **Caribbean** and the **Pacific**, and post conflict countries in Africa have amongst the highest emigration rates with more than half their nurses working in high-income OECD countries.

The ECSA study by the World Bank in 14 countries (**Botswana, Eswatini, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, South Africa, South Sudan, Tanzania, Uganda, Zambia, Zimbabwe**) noted that outmigration of nurses reduced the available supply of nurses in these 'sending' countries, meaning that these countries can "face needs-based shortages of nurses to achieve Sustainable Development Goals" and "poses

direct and indirect costs to sending governments, including tuition as well as foregone wages and tax revenue" (World Bank Group *et al.*, 2021).

The ECSA report also reported that, across the 14 countries, the share of foreign-trained nurses varied widely by country, and is inversely correlated with the domestic production, as measured by the net increment rate (the number of new graduates in the country, compared to the total nursing supply). (World Bank Group *et al.*, 2021, p. 24)

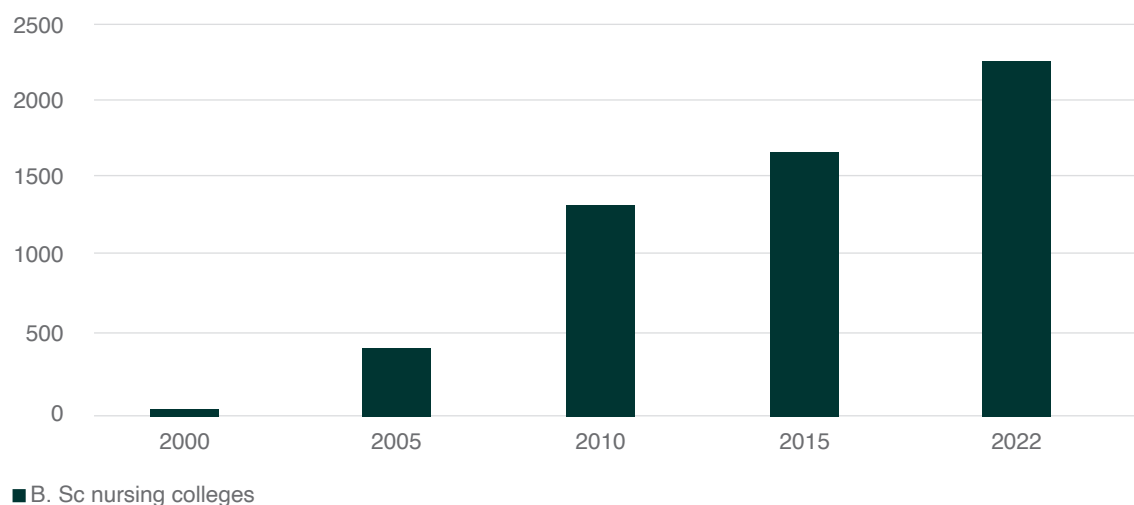
A recent policy brief by the **WHO Africa Region** which focuses on recruitment and retention of health workers during the pandemic (WHO Regional Office for Africa, 2021) has noted that, "As the pandemic overwhelmed the health systems of many high income nations, triggering a growing demand for health labour in the global North, this raised concerns of potential acceleration of health personnel outward migration from the African continent and LMICs". The brief reported that, "The issue driving brain drain from Africa is health worker demotivation (poor remuneration, lack of benefits such as health insurance, risk allowance etc.), poorly conducive environment to execute their skills as in majority of countries in Africa, the budget allocation for the public health sector is insufficient" and highlighted the need for research on health worker unemployment and under-employment in Africa "to shed light on the paradox of health worker unemployment in countries with critical shortage".

Additional reporting from **Zimbabwe** (Reuters, 2022) highlights that more than 1,700 registered nurses resigned in 2021, and more than 900 had already left in 2022. Health workers in Zimbabwe went on strike in June 2022 demanding to be paid in U.S. dollars as inflation further weakened the local currency. Many have reportedly "found work mainly in Britain, leaving the country's health sector in dire straits and local hospitals understaffed". A WHO supported multi-stakeholder healthcare labour market analysis was announced in mid-2022 to examine how to respond best to "inadequacy in the number of health workers, inappropriate skill mix, and inequitable distribution throughout the country" (Mugarisi, 2022).

Whilst there are often ‘push’ factors of low incomes, high workload, and poor career prospects which are making individual nurses consider migrating, most low- and middle-income countries do not actively encourage their nurses to be internationally mobile. However, there are a few countries, notably **India** and the **Philippines**, where what has been termed a ‘train for export’ model exists. In **India**, rapid growth in the education sector has led to a marked increase in output of nurses from domestic training. This

growth has been particularly notable for nursing colleges that train to B.Sc. level, which is the qualification most useful for international work. There were only 30 colleges offering the internationally desired B.Sc. in nursing in 2000; this had grown to 1,326 by 2010, and 2,241 by 2022 (See Figure 3). The total number of B.Sc. nursing places in 2021-2022 was more than 100,000 (116,075). Nearly all of these B.Sc. nursing colleges (2,065: 92%) are in the private sector.

**Fig 3: India: Growth of B.Sc. nursing colleges, India: 2000, 2005, 2010, 2015, 2022**



Source: Indian Nursing Council annual report, 2021-22 (Indian Nursing Council, 2022)

In the **Philippines**, international nurse recruitment is facilitated by a government agency, the Philippine Overseas Employment Administration (POEA). Most schools of nursing in the Philippines are in the private sector, and the nursing students will be paying for their own education—often with the expressed intention of moving abroad to practice when they graduate. This model led to rapid expansion in the number of private sector nursing schools, meeting international demand for Philippine-trained nurses, initially in the United States, but in more recent decades also to a range of other countries in the Middle East and Gulf (e.g. Saudi Arabia), Europe (e.g. the UK and Ireland) and Asia-Pacific (e.g. Singapore, New Zealand, Australia). The United States alone is reported to be the home for almost 150,000 Filipino nurses (Batalova, 2020).

coronavirus border controls ease and hiring becomes more aggressive, putting the Philippines in a tight spot in dealing with its own shortage of health care workers” (Cinco, 2022). The report linked to a government announcement of intention to increase the cap on the number of nurses allowed to go abroad annually from the current 7,500, which was implemented in 2020 to retain for pandemic response. In a separate announcement in July 2022, the lifting of the moratorium on opening new B.Sc. Nursing programmes was reported “to help augment the demand for nurses in the country” with the suggestion that the country required 201,265 more nurses nationwide to achieve the SDG requirement of 27.4 nurses per 10,000 population (Cruz, 2022).

More recent reporting suggests that, “more Filipino nurses, attracted by higher salaries abroad, are set to leave their country as

Whilst the overall trend is upwards, the actual flow patterns of nurses from low- and middle-income countries to different OECD destination countries varies markedly. Recent analysis by OECD highlighted that in countries with

the larger shares of foreign-trained nurses, English-speaking countries host relatively more nurses born in lower-middle-income countries. In **New Zealand, Australia, and Canada**, for example, between 40% to more than 50% or all foreign-trained nurses come from lower-middle-income countries, while in **Switzerland** and **Norway** the majority come from other OECD countries (Socha-Dietrich & Dumont, 2021).

### 3.6 NURSE WORKFORCE SELF-SUFFICIENCY AND MORE EFFECTIVE USE OF THE WHO CODE

The pandemic rebuild dynamic impact on global nursing workforce trends is likely to exacerbate current nurse supply shortfalls in most countries, but will also be a major risk in increasing global demand-supply inequities. The continued growth of active international recruitment of nurses could deplete some countries of scarce nursing skills. The countries reported in the previous sections of the report highlight that some active recruiting countries are now fast tracking active international recruitment as an urgent response to domestic shortfalls which have been exacerbated by rebuild demands.

There is an urgent need to monitor and track the aggregate numbers of international flows of nurses in order to highlight source countries that may be at risk, and identify which destination countries are actively increasing their international recruitment activity. ICN emphasises that all nurses should have the possibility of free movement, assuming they have no contractual commitments to a specified return-of-service, but that countries must focus on nurse workforce sustainability as an integral element in overall nurse workforce planning (Little & Buchan, 2007; ICN, 2019).

ICN is advocating for the use of a country 'self-sufficiency' indicator. When tracked over time, this indicator can flag how reliant countries are on international inflows of nurses in comparison to domestic training. ICN made a statement to the World Health Assembly in November 2020 supporting the use of a self-sufficiency indicator (ICN, 2020b).

#### Box 1: Measuring self-sufficiency

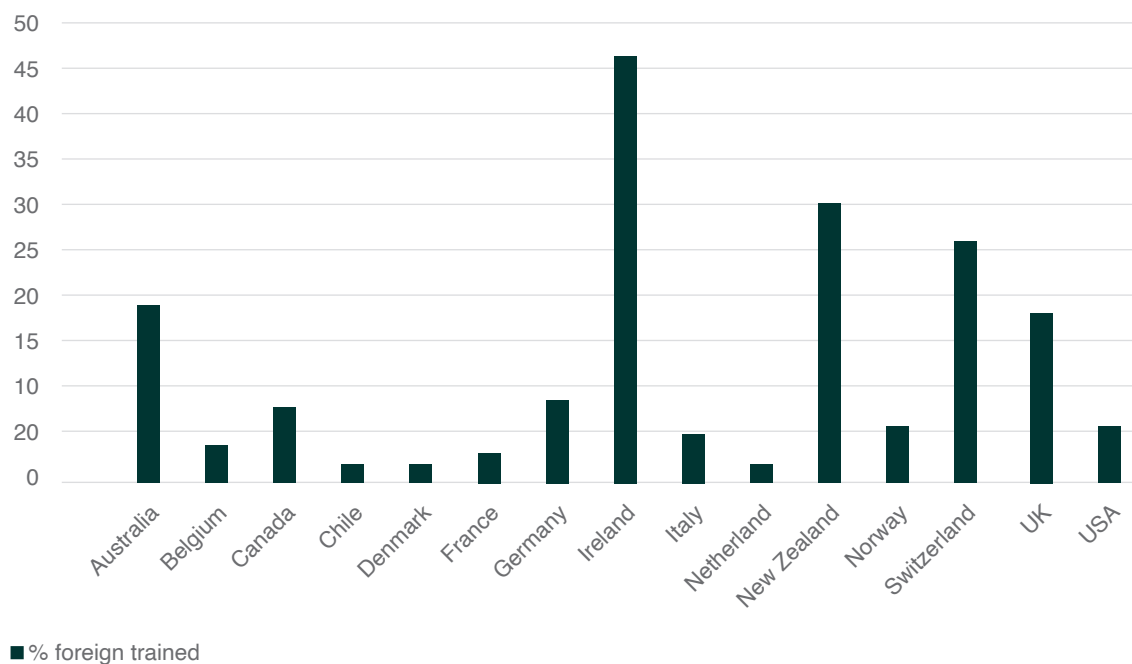
##### Self-sufficiency indicator:

the percentage of the total nursing workforce in a country that was foreign trained

**Emigration rate:** the percentage of nurses born or trained in a country, but working abroad, compared to the total who remain working in the country

The self-sufficiency indicator is determined by assessing the percentage of the total nursing workforce in a country that was foreign trained—the higher the percentage, the less the country is self-sufficient. An alternative measure, for application particularly in vulnerable source countries, is to estimate an emigration rate (Socha-Dietrich & Dumont, 2021). This can be calculated, by estimating the percentage of nurses born or trained in a country, but working abroad, compared to the total who remain working in the country. The higher the emigration rate, the more the nursing workforce of the country has been depleted by international outflows.

This self-sufficiency indicator varies markedly across OECD countries, (see Figure 4 below). Some countries, such as **Chile, Denmark and the Netherlands** report high self-sufficiency and have relatively low reliance on international nurses, but in other countries this level of reliance on internationally trained nurses is as high as 46% (**Ireland**) and 30% (**New Zealand**).

**Fig 4: Selected OECD countries, % foreign trained nurses, most recent year**

■ % foreign trained

Source: OECD, 2023

Note: See OECD for definitions and caveats

Two of the main groups of 'low' self-sufficiency countries are some OECD countries, such as **Ireland** and **New Zealand**, as illustrated above, and some of the countries of the Gulf area (for example, SOWN reports that 77% of nurses in **Saudi Arabia** are foreign, and 97% in **Qatar**) (WHO 2020b).

Long-term relatively high reliance on international inflow of nurses is a feature of countries that can attract international nurses because they have 'pull' factors such as relatively higher wages, and/or better career and educational opportunities. This entitled status as a 'destination' country has in some cases led to them limiting their own investment in education of nurses, because they off-load the costs of training to the 'source' country or to the nurses in these source countries if it is they who have paid the training costs.

A few countries are making a concerted policy-led effort to shift towards self-sufficiency. One example is **Oman**, which has explicitly followed a goal of 'Omanization' of its nursing workforce, by progressively replacing expatriate nurses with similarly qualified local nurses "to develop a sustainable workforce and achieve self-reliance" (Al-Riyami, Fischer & Lopez, 2015); another is the **United Arab Emirates** which announced in 2021 that it intends "to

develop national cadres in the nursing sector, targeting 10,000 Emiratis within 5 years" (Nasrallah *et al.*, 2021). A third is **Ireland** where the government announced in 2022 that it had developed an Irish nurse supply model, which is focused explicitly on reducing Ireland's reliance on the recruitment of foreign-educated nurses, meeting future demand for nurses and address workforce challenges, and includes recommendations to use planning scenarios to shift towards self-sufficiency (Department of Health Ireland, 2022).

**Aiming for nurse workforce self-sufficiency at national level also aligns with the WHO Global Strategy on Human Resources, and the WHO Global Strategic Directions for Nursing and Midwifery.** The Strategy was endorsed by all WHO member states in 2016, and Milestone 2.1 of the Strategy is that, "By 2030, all countries will have made progress towards halving their dependency on foreign-trained health professionals, implementing the WHO Global Code of Practice on the International Recruitment of Health Personnel" (WHO 2016b, p. 23). **To meet this commitment, countries must be able to monitor their level of self-sufficiency, or report on concerning emigration rates, and disclose active international recruitment patterns.**

The WHO Global Code of Practice on the International Recruitment of Health Personnel (WHO 2020c) was endorsed by all WHO member states in 2010. It sets out a framework for a managed and ethical approach to international recruitment, which is located in a broader context of effective domestic health workforce planning and policy, aimed at workforce sustainability, emphasising the role of bilateral agreements to ‘manage’ international recruitment activity, and which includes a commitment to improved data and monitoring of mobility patterns.

The Code was reviewed by an independent Expert Advisory Group (EAG) in 2020, who made recommendations to the World Health Assembly (WHO, 2020d), for the continued and deepened role of the Code. This included the introduction of a Health Workforce Support and Safeguard List of countries (WHO, 2021d) that should not be actively targeted for recruitment unless there is a government-to-government agreement in place to allow managed recruitment undertaken “strictly in compliance with the terms of that agreement”. This is informally referred to as the ‘red list’. In late 2022, the EAG was reconvened to assess the method used to determine which countries were on the List. After an expert group review, WHO has adapted the criteria used to identify countries for the safeguard list. This has led to a small increase, to 55, of countries on the List (WHO, 2023b).

**There is also a related need to monitor recruitment agency activity to assess compliance with the WHO Code.** There have been

reports of international recruiters employing direct advertising to try and recruit scarce health-care staff from low- and lower middle-income countries in Africa, Asia and the Caribbean, in breach of the Code (Omaswa, 2020). A recent study on Polish nurses working in Norway noted that their job insecurity (‘precarity’) stemmed from policies that left their recruitment, “in the hands of private agencies acting without an oversight of the Norwegian Health Directorate. Norway subscribes to the WHO ethical recruitment principles, but it falls short in monitoring private recruitment agencies” (Goździak & Main, 2022).

Monitoring must be an integral element in the process, to prevent damaging impacts of over-recruitment in countries with vulnerable nurse supply. ICN has called for strengthening of the implementation and monitoring of the Code (ICN, 2022e).

**The use of the Code and associated List should frame any active international recruitment of nurses.** However, as noted earlier in this report there have been concerns about full compliance with the Code by some recruiting countries. This linked to the need for a clearer definition of what is meant by ‘active’ recruitment, and to a better understanding of the use of bilateral agreements, which are being promoted by WHO, **but should be independently monitored so as to assure compliance and provide lessons for improvement in their use.**

### 3.7 NURSE WORKFORCE IMPACT: A DASHBOARD OF INDICATORS

In this report, we argue strongly for a systematic approach to assessing impact on the nurse workforce, if we are to both understand the root causes of current problems, and best direct policy responses. This requires consistency in the use of data, and clarity in interpretation of standard indicators. Various nurse/ health workforce indicators are promoted by national bodies and international agencies (see e.g. WHO, 2023c; WHO, 2022d) and there is always a risk of having only a partial or out of date

picture. There is also a need to fully update the State of the World’s Nursing report, using improved and standard data.

The primary focus and efforts should be on a core set of indicators at system or country level—a ‘dashboard’ that is standardised and regularly updated. The table below sets out several indicators which in combination can provide such a dashboard.

**Table 6: Potential core indicators in a Nurse Workforce Impact Dashboard**

<b>INDICATOR</b>	<b>EXAMPLE OF MEASUREMENT</b>
<b>Turnover</b>	The number and percentage of 'leavers' divided by the average number of staff in post in the year.
<b>Workforce stability/retention rates</b>	The percentage of staff who were in substantive posts at the beginning of Year 1 and who were still in substantive posts in that organisation a year later.
<b>Absence</b>	Time lost due to absence as a percentage of contracted working time in a defined period.
<b>Vacancies</b>	The number of funded posts that are unfilled expressed as a percentage of total posts e.g. a percentage vacancy rate.
<b>Unemployment</b>	Number of unemployed nurses seeking work, as a percentage of the total working population of nurses.
<b>Workforce self sufficiency</b>	The percentage of the total nursing workforce in a country that was domestic trained.
<b>Emigration rate</b>	The percentage of nurses born or trained in a country, but working abroad, compared to the total who remain working in the country.

Used in combination, these different indicators can give policy makers and planners a clearer picture of root causes and a better policy direction. There are different definitions in use for some of the indicators, so there is a compelling need for consistency in application. Appendix 1 gives full details.



# 04

## CHAPTER FOUR

## 4. PROTECT AND SUPPORT, TO REBUILD

### 4.1 PROTECTING AND INVESTING IN SUPPORT OF NURSES IS VITAL TO HEALTH SYSTEM RECOVERY AND REBUILD

As detailed in this report, the pandemic required many nurses to take on more work, more responsibilities and new skills, to move to other work areas, to deal with high pressure and sometimes unsafe work environments, and to be the trusted face of the 'front line' workforce. These pressures happened virtually overnight, but have now continued for years.

**Any pre-existing understaffing and resource limitations have been exposed and amplified by the pandemic, and by the rebuild focus.** This has added to the stress and workload of the nurses who cannot be expected to continue to bear the personal burden of the demands for health system rebuild.

Every time a nurse is burnt-out, or experiences any other health, well-being or work-related factors that may lead to her temporarily reducing hours or permanently leaving a health care organisation, there are negative consequences. This impacts the nurse, the health

care organisation, and the client population of the organisation. As we have highlighted in this report, there will be organisational costs and negative impacts on patient care and on the workload of nurses who remain. Fundamentally, the nurse workforce cannot continue to cover or compensate for any lack of employer-led protection and support.

**Health system recovery and rebuild, totally reliant on adequate numbers of qualified nurses, will not happen if there is not full focus given to nurse availability and impact.** Simply put, no protection and support for the nursing workforce, no effective health system rebuild.

Protecting and supporting the nurse workforce must be a key policy goal of any health system that hopes to recover from the pandemic and rebuild, and must be combined with a broader approach to supporting nurse workforce sustainability.

## 4.2 POLICY RESPONSES TO SUPPORT NURSES AT WORK

Protecting and supporting nurses must be the foundation of an effective nurse workforce strategy. Keeping scarce and vitally skilled staff for as long as possible is a more effective, and less costly organisational response than having to replace them. As noted earlier, the pandemic has heightened the prospect of this vicious cycle of an organisation having poor retention rates, causing lower staffing, leading to poorer retention.

ICN has been at the forefront in setting out the evidence-based effective policy responses to protecting and supporting nurses at work (Buchan, Shaffer & Catton, 2018 & 2022) drawing from a range of other multi-country reports and country level analyses (Chmanga *et al.*, 2020; Marugu *et al.*, 2021; Adams, Ryan & Wood, 2021; MacKay *et al.*, 2021; Dall'Ora & Saville, 2021; Cohen-Serrins, 2021) from e.g. **Indonesia** (Putra, Kusnanto & Yuwono, 2020), the **Republic of Korea** (Yun & Yu, 2021), Malaysia (Al Zamel *et al.*, 2020), **Namibia** (Washeya & Fürst, 2021). Key points from these reviews are summarised in the table below, which highlights both the 'pre-pandemic' factors impacting nurse supply, and those that have become more prominent as a result of the pandemic and need for health system rebuild.

### Box 2: Supporting the nurse workforce: 'pre-existing' and 'emerging' factors

#### Pre-existing factors

- Work environment, working relationships, and safe and supportive working conditions
- Pay, other financial and non-financial incentives
- Flexibility and 'family friendly' policies
- Career opportunities and access to education
- Manageable workload, and safe staffing levels
- Productive working relationships with other staff and teams
- Professional autonomy and participation in decision making

- Responsive management, effective leadership and supervision and focused mentoring
- Job mobility and relative job opportunities in different organisations, sectors, regions and countries

#### Emerging and pandemic related factors

- Access to full vaccines
- Access to effective PPE
- Provision of appropriate training during redeployment
- Support for respite/ time off
- Support for health/well-being
- Support for student nurses to complete their education
- Implementation/expansion of advanced practice roles
- Full participation in development and implementation of health system rebuild strategies

Box 2 provides a starting point checklist in determining what actions and interventions should be used to address the nurse retention challenge. Whilst there is always the need to understand impact and take account of context, **there are four vital and universal policy interventions** that will be at the core of overall protection and support for the nurse workforce to enable health system rebuild. These are:

- **adequate staffing levels**
- **attractive working conditions, pay and career opportunities**
- **support for respite, health and wellbeing**
- **and full participation in development and implementation of health system rebuild strategies**

The absence of an effective response to these four concerns is what is driving protests and strikes in some countries. It is also what underlies the continued existence of nurse unemployment in countries that also have nursing shortages.

These key policy interventions have generally been endorsed in the WHO Global Strategic Directions for Nursing and Midwifery, which identifies policy priorities, such as, optimizing the domestic production of nurses to meet or surpass health system demand, and conducting nursing workforce planning and forecasting through a health labour market lens (WHO, 2021a).

Policy makers and NNAs must draw from the evidence base summarised in Box 2 to identify ‘what works’ for the protection and support of the nurse workforce, by systematically identifying the options for intervention that will meet the identified problems and priorities in their own area of responsibility.

Sustained success in improving nurse supply, distribution and retention is likely to be related to planned, sequenced, multi-policy intervention—so-called ‘bundles’ of linked policies, rather than single interventions.

Identifying the most effective balance of policies to improve supply and retention of nurses is in part about taking account of the pandemic impact, experiences and motivations of the nurses. It will also require, as noted recently by OECD and ILO, “the equipping of health workers with the right skills to respond to future health crises, to prepare for increasing use of digital technologies, and to plan for demographic change”(OECD/ILO, 2022). This is why a **nurse workforce impact assessment** approach, identifying the root causes of workforce problems, using a dashboard of indicators, and informed by effective labour market analysis, as set out earlier in the report, can be an important underpinning of effective nurse workforce retention and sustainability, and future planning.

In conjunction with an impact assessment, the other critical success factor is that nurses and their representative NNAs have **full participation in development and implementation of health system rebuild strategies**. The nursing workforce is the largest health profession in nearly all care environments in all countries, is at the ‘front line’, has the necessary strategic knowledge and experience, is one of the most respected professions, and will be the critical success factor in any rebuild—this/their inclusion should be obvious. However, there

continue to be worrying examples of nurses being excluded from decision making on clinical and strategic matters that are central to their work (Rasmussen *et al.*, 2022), and which can lead to a breakdown of trust which may in turn contribute to moral injury and reduced retention (Nelson *et al.*, 2022).

There are however a growing number of examples of nurse led/involved, evidence-based and multi-policy responses to supporting nurses to enable the health system to recover and rebuild. It is not possible to report on all the initiatives happening in different countries, often led by NNAs, but some examples are highlighted below.

In the **USA**, a multi-stakeholder Partners for Safe Staffing think tank (American Association of Critical-Care Nurses, American Nurses Association, American Organization for Nursing Leadership, Healthcare Financial Management Association and the Institute for Healthcare Improvement was launched in 2022 to find solutions to the nurse staffing crisis (Partners for Nurse Staffing Think Tank, 2022), stressing that, “Adequate investment in appropriate nurse staffing is also essential to a health care institution’s performance, reputation and financial viability”.

In **Canada**, a review sponsored by the Royal Society of Canada has investigated the impact of the pandemic on the nursing workforce to inform planning and implementation of sustainable nursing workforce strategies, and has set out key findings and recommendations to inform a national and sustained focus on nurse retention and recruitment (Murphy *et al.*, 2022) Another report, from the Canadian Federation of Nurses Unions and the Canadian Health Workforce Network, has focused on nurse workforce sustainability (Ben Ahmed & Bourgeault, 2022).

In **New Zealand**, the Ministry of Health New Zealand has launched a \$1 million fund targeted to help nurses who are not currently practising to return to a nursing role, “to meet increased demand, support safe staffing, and improve access to care”. This is linked to other campaigns including a domestic recruitment campaign, and a campaign focusing on nurses working abroad to come home (RNZ, 2022b).

In the **State of Victoria, Australia**, the NNA was successful in securing pre-election promises in November 2022 for government support to give graduate nurses a \$5,000 sign-on bonus if they start working in the public system, additional incentives for students to enrol in nursing, earning \$16,500 if they go on to work in the Victorian public health service for two years (Dow, 2022) and to improved and extended use of mandatory nurse staffing ratios—including to public hospital intensive care units, high dependency units, coronary care units and emergency departments (Australian Nursing and Midwifery Federation, 2022).

In **Ireland**, the development of an approach to strategic workforce planning using ‘A System Dynamics Model of Nursing Workforce Supply’ will be used to underpin the identification of policy solutions, “to meet expected increases in demand for nurses and reduce Ireland’s reliance on the recruitment of foreign educated nurses” (Department of Health Ireland, 2022).

In **Scotland** a Nursing and Midwifery Taskforce was established by government in February 2023 Minister and will include representation of the

main NNA, the Royal College of Nursing. The Taskforce will “examine building exemplary workforce cultures; addressing operational barriers; and improving working conditions, facilities and learning opportunities” (Scottish Government, 2023).

The country level and global action agenda to protect and support the nursing workforce, and enable health system recovery and rebuild is set out below. It builds on the action points that were identified in our *Sustain and Retain* policy report last year (Buchan, Catton & Shaffer, 2022), updating the focus to take account of the growing concerns about burnout and nurse supply, and with a clear set of policy messages for national policy makers (and those at state/province level in federal systems), NNAs, and international agencies. The Action Agenda can only be successful with full engagement of NNAs and other nursing leaders in identification and implementation of context specific and evidence-based policy solutions. As noted above, if the expert nursing input is excluded from health system rebuild policy, then that rebuild is much less likely to achieve progress/be successful.

### 4.3 AN ACTION AGENDA FOR 2022 AND BEYOND: PROTECTING AND SUPPORTING THE NURSE WORKFORCE FOR HEALTH SYSTEM REBUILD

The nursing workforce has been at the forefront of COVID-19 response effectiveness in all countries. It will also be critical to the success of health systems recovery and rebuild around the globe. This report has highlighted that the effects of COVID-19 and health systems recovery and rebuild are increasing the demand for nurses, but are also having damaging direct and indirect effects on individual nurses, on overall nurse supply, and on an already understaffed and overstretched global nursing workforce.

The growing risk is that pandemic and rebuild requirements that have expanded the global nurse workforce shortage gap will also exacerbate the unequal distribution of nurses, and will push up international flows of nurses from low/middle income countries to high-income countries. This will undermine country level recovery

and rebuild efforts, could lead to worsening population health, could prevent the attainment of UHC in some countries, and undermine countries’ ability to respond to the next public health emergency. This focus links closely with this year’s International Nurses Day theme of ‘Our Nurses. Our Future’ which will highlight what must be learnt from the pandemic and what must be the necessary actions that can ensure nurses are protected, respected and valued, and health care systems are sustainable, safe, affordable, accessible and responsive (ICN, 2023).

To protect and support the global nursing workforce and to invest in longer term nurse workforce sustainability, there is an urgent need for effective and co-ordinated policy responses both at national level, and internationally/globally. This response must include both

immediate **action** to meet the urgent challenges set out in this report, and the development of a shared longer term vision and **plan** for the global nursing workforce, to ensure that the world is better placed to meet future major health shocks. Policies must also take full account of the gender dimension (see e.g. Bourgeault *et al.*, 2021) in a global workforce that is reported as 90% female. The Action Agenda set out below builds on that we developed in 2022, and has been updated to take account of new and emerging challenges and issues.

**At country level**, protecting and investing to support the nurse workforce to achieve longer term sustainability should be the overarching goal, comprehensively set out in a national strategy or strategic plan. This can be achieved with a primary focus on two inter-related policy priorities: to improve retention of nurses in the workforce and to ensure adequate domestic training capacity. This requires:

- **ACT: Nurse workforce impact assessments**, conducted regularly, in order to develop a better understanding of the impact on individual nurses and the overall nursing workforce, inform effective support and investment, and enable health system rebuild. The data generated from impact assessments would improve policy and planning of the profession, optimise the retention and deployment of nurses, enhance utilisation of their skills, support monitoring of internal flows of nurses, and identify priority actions for future investment in supply, including on ‘decent work’. They could also be a national component in a country-led approach to developing an urgent and much needed update of the State of the World’s Nursing (see below).
  - **ACT: Commitment to invest and support for safe staffing levels.** Dangerous levels of nurse understaffing have been a major problem in many health systems during the pandemic and rebuild—it magnifies the burnout risk for those nurses who remain working in the system, compromises patient care, and will be a driver for increased outflow of staff. It will also undermine the rebuild efforts. There are many methodologies that can be applied to determine staffing needs; commitment to consistent application of a staffing method,
- combined with the necessary funding and investment is a key indicator of health system good governance.
- **ACT: Commitment to support for early access to full vaccinations programmes for all nurses.** Without this protection of the nursing workforce, future pandemic responses will be jeopardized, and all other interventions to improve sustainability risk being undermined. Some countries have yet to achieve adequate coverage.
  - **PLAN: Reviewing/expanding the capacity of the domestic nurse education system** to meet rebuild demand, and to sustain long term nurse supply. This should be based on data generated from impact assessments and from a regular and systematic national nurse labour market analysis, which includes assessment of the projected size, skill profile and deployment of the future nursing workforce, and agreed approaches to filling any identified gaps, through adjustments in investment in supply and in curriculum.
  - **PLAN: Investing in the retention of nurses and the attractiveness of nursing as a career**, by providing fair pay and conditions of employment, structured career opportunities, and access to continuing education, and support for well-being, to ensure that the damaging effects of nurse burnout are combatted, that nurse unemployment is addressed, and that the drivers of nurse strikes are tackled.
  - **PLAN: Implementing policies for improved career structures, and optimizing the workforce by advanced practice roles, and appropriate technological support.** This can enable the nursing workforce contribution to the rebuild to be optimised through supporting nurses working at full scope, increasing the use of advanced practice and specialist roles (i.e. nurse practitioners), effective skill mix and working patterns, teamwork, and provision of appropriate administrative support, technology and equipment, and training in its use. This will contribute to retention and attractiveness of nursing, will accelerate rebuild, and should include a focus on having an enabling regulatory and legislative framework.

- **PLAN: Monitoring and tracking nurse self-sufficiency.** The self-sufficiency indicator of level of percentage reliance on foreign-born or foreign-trained nurses gives national policy makers an insight into the extent of their dependence on (and potential vulnerability to) international nurse supply. It enables the country to track and demonstrate progress to meeting the milestone commitment of the Global strategy on human resources for health 2030 (WHO, 2016b, p. 23), and reporting on implementation of the WHO Code (WHO 2020c).

At international level, the policy response must be driven by recognition that the nursing workforce in lower income countries, already vulnerable and often understaffed, has been further damaged by the impact of the pandemic. This risks health systems recovery and rebuild and any prospects of improving population health, including meeting the SDG's and achieving UHC. These countries will continue to be highly vulnerable to international outflow of nurses, even if they succeed in implementing domestic policies to improve nurse supply and support recovery and rebuild. These at-risk countries need to be backed up by the international community. Key international stakeholders, such as WHO, OECD, the World Bank and ICN must act now, but they must also develop and agree on a vision and long term, ten-year plan for sustaining the global nursing workforce.

This long term **Plan** must focus both on rebuilding and investing in necessary growth in the global nursing workforce. It should align with the more immediate **Actions** set out in this policy report in order to set out the necessary ten-year commitments to achieving a sustainable global nursing workforce.

The pandemic has changed the world, has exposed the terrible risks of nursing shortages, but has also re-affirmed that 'health is wealth'—that countries must invest in their health systems if they aim to support vibrant economies. Health system rebuild is necessary as an underpinning for improved health and wealth.

Existing global instruments and health workforce strategies, such as the WHO Global strategy on human resources for health (WHO 2016b) and the UN High Level Commission on Health Employment and Economic Growth (WHO 2016c) reflect the pre-pandemic world. These can continue to provide a broad frame for future strategy, but clearly need to be updated to take account of pandemic impact: as does the State of the World's Nursing report.

For governments around the world, the nursing workforce challenge is too big, too critical, and too 'different' from that which existed only three years ago, to be ignored. **There must be a co-ordinated effort by international stakeholders and countries to develop a long term, ten-year plan to aim for a sustainable global nursing workforce.** We cannot risk more damage to an already impaired workforce, and we cannot revert to the pre-pandemic situation of 'living with' extensive nursing shortages. If we are to rebuild, we need a Plan. The necessary actions, both immediate, and in support of developing this ten-year Plan, which must be considered and co-ordinated between countries and international stakeholders include:

- **ACT: Supporting an immediate update of the State of the World's Nursing (SOWN) analysis.** SOWN 1 was published in early 2020 and describes the pre-pandemic profile of the global nursing workforce. It is a useful benchmark, but the world is forever changed because of the pandemic. As we enter the fourth year of the pandemic, there is an urgent need for SOWN 2: an updated global profile of the nursing workforce during the pandemic, and oriented towards rebuild, to assess the damage done, and the scope for targeted investment and action on sustainability and renewal.
- **PLAN: Commitment to support for early access to full vaccinations programmes for all nurses, in all countries.** International co-operation is required to protect the nursing workforce in all countries.

- **PLAN: Commitment to implementing and evaluating effective and ethical approaches to managed international supply of nurses**, through a collective approach framed within a fuller and more effective and consistent implementation of the WHO Global Code of Practice on the International Recruitment of Health Personnel and its safeguard list (WHO 2020c). This must focus on improved monitoring of international flows of nurses, independent monitoring of the use of country-to-country bilateral agreements and recruitment agencies to ensure compliance, an agreed definition of what is meant by ‘active’ recruitment, and with fair and transparent recruitment and employment practices. The evidence base and monitoring of the implementation of these policies is currently inadequate to inform effective policy and identify any ethical malpractice, and urgently requires improvement. In the meantime, given the current high levels of active international recruitment, ICN is calling for consideration of a time-limited moratorium of active recruitment of nurses from countries on the safeguard list.
- **PLAN: Commitment to supporting regular and systematic nurse workforce impact assessments, particularly in resource constrained countries**, by the provision of technical advice, data improvement, independent analysis, and multi-stakeholder policy dialogues to agree priority policy actions on domestic nurse supply and retention.

- **PLAN: Commitment to investing in nurse workforce sustainability in small states, lower income states and fragile states, most vulnerable to nurse outflow, and impacted by the pandemic**, by building on the lessons of the UN High Level Commission on Health Employment and Economic Growth (WHO, 2016c), and of the WHO Strategic Directions on Nursing and Midwifery which demonstrate the long-term economic, social and population health benefits of investing in the nursing workforce.

Protect, support and rebuild. There is need for both urgent action and a shared long-term vision and plan for the global nursing workforce. The COVID-19 pandemic has already caused unprecedented damage to the global nursing workforce, and health system recovery and rebuild is now adding to the burden. Without sufficient, well-motivated and supported nurses, the global health system cannot be rebuilt. A co-ordinated policy response at country level and internationally is urgently needed to meet the 2023 Action Agenda and to develop a longer term Plan: to protect and support the nurse workforce, and enable health system rebuild.

# APPENDIX 1: NURSE WORKFORCE IMPACT DASHBOARD

Several workforce indicators in combination can be used to make an assessment of nurse workforce dynamics at country or system level. This 'dashboard' can be periodically updated in order to give a policy relevant perspective, and can also support nurse workforce impact assessments. Data availability at country/system level will vary, but can be informed by standardised data collection instruments already in place, such as the NHWA, and the periodic monitoring for the WHO Code. (Other sources: DalPoz *et al.*, 2009; Chisholm, Russell & Humphreys, 2011; Lopes *et al.*, 2017; Buchan, Catton & Shaffer, 2018; WHO, 2022d). The dashboard indicators can be used in association with the findings of surveys of nurses work, health and well-being (See e.g. Table 4 above).

The table below sets out the 'core' possible indicators that can be applied on the dashboard, how these indicators are calculated, and the main strengths and limitations of each indicator as applied.



Table 7: Nurse Workforce Impact Dashboard

INDICATOR	COMMON FORM OF CALCULATION	STRENGTHS/ LIMITATIONS
Nurse turnover	<p>Turnover, and the alternate terms of 'attrition' (Chankova, Muchiri &amp; Kombe, 2009) or 'wastage' (Dovlo, 2005), is usually expressed in terms of the percentage of nurse staff of a particular workplace or system who have left the organisation (or have moved jobs) within the last 12 months. This is sometimes called the 'crude' annual turnover rate:</p> <p><b><i>The number of 'leavers' divided by the average number of staff in post in the year.</i></b></p> <p>Other measures include survival probabilities (Russell <i>et al.</i>, 2013); median survival (years), survival analysis, attrition in first years after graduation.</p>	<p>The nurse turnover rate, however measured, is the most common measure of 'retention' (or lack of it). Voluntary and involuntary turnover must be differentiated; internal and external destinations of voluntary 'leavers' should be differentiated.</p>
Nurse workforce stability/retention rates	<p>Examining nurse workforce stability focuses on the same underlying issue of retention of nurses but takes the perspective of focusing on those who stay rather than those who leave. High levels of staff stability, or retention, are the opposite of high turnover, and may be positively associated with the level and quality of healthcare available (Buchan, 2010).</p> <p><b><i>Stability index 1 – the percentage of staff who were in substantive posts at the beginning of Year 1 and who were still in substantive posts in that organisation a year later.</i></b></p>	<p>The choice to stay, when there is an option to leave, may indicate that the work environment is meeting nurse workforce needs. Stability may be a helpful indicator of positive retention but assumes that there is a 'choice' being made by the nurse to stay or leave.</p>
Nurse absence	<p>Nurse workforce absenteeism has been reported as a barrier to improvement of health outcomes in low- and middle-income countries (Chaudary <i>et al.</i>, 2006; Goldstein <i>et al.</i>, 2013). Reasons for absence from work can include remoteness and difficult access to health centres, poor infrastructure and transport, poor or unsafe working conditions. In some cases absence from the main place of work can be related to the need to generate income from other sources to achieve a living wage, participate in 'dual practice' (Fox <i>et al.</i>, 2013; Russo <i>et al.</i>, 2018).</p> <p><b><i>'Crude' absence rate: time lost due to absence as a percentage of contracted working time in a defined period.</i></b></p> <p>Other measures in use include the average duration per spell of absence, and the average duration of absence per person.</p>	<p>Absence rates can be simple to calculate; analysing absence rates by different staff groups, department or function can help to identify particular problem areas. A main limitation is that the comparison of absence rates in different units can give rise to false conclusions if basic measures such as number of absences and duration of absences, are not also provided.</p>
Nurse vacancies	<p>If funded nursing jobs/posts are left unfilled, this may reflect that the post is not attractive to workers, because of working conditions, geographic location, or if the recruiting organisation has a poor reputation. The rate of vacant posts may be an indicator of relative attractiveness and unattractiveness of different jobs, locations and organisations and, as such, the vacancy rate has scope to be used as an indicator.</p> <p><b><i>The number of funded posts that are unfilled expressed as a percentage of total posts e.g. a percentage vacancy rate.</i></b></p>	<p>Some organisations deliberately leave nurse jobs/posts vacant to save on recruitment costs which undermines the use of vacancy rates as a shortage indicator; if vacant posts cannot be filled they may be removed, 'hiding' the problem of the shortage.</p>

INDICATOR	COMMON FORM OF CALCULATION	STRENGTHS/ LIMITATIONS
Nurse unemployment	In some countries, there are individuals with nursing qualifications who are not in employment.  <b><i>Number of unemployed nurses seeking work, as a percentage of the total working population of nurses.</i></b>	It can be difficult to interpret this indicator as a labour market indicator, e.g. it may reflect unattractive pay, it may reflect inability of employers to fund job.
Nurse workforce self-sufficiency	<b><i>Self-sufficiency indicator: the percentage of the total nursing workforce in a country that was foreign trained.</i></b>  The higher the percentage, the less the country is self-sufficient.	Data may be presented as ‘foreign born’, ‘foreign trained’ nurse or ‘foreign source’ country—clarity and consistency are required in interpretation.
Nurse emigration rate	<b><i>Emigration rate: the percentage of nurses born or trained in a country, but working abroad, compared to the total who remain working in the country.</i></b>  The higher the emigration rate, the more the nursing workforce of the country has been depleted by international outflows.	Data may be presented as ‘foreign born’, ‘foreign trained’ nurse or ‘foreign source’ country—clarity and consistency are required in interpretation.

These commonly used data indicators have to be used and interpreted with caution. All require some frequency of use if they are to be used to track trends, which are much more useful than single ‘point in time’ measures. The dashboard should be a ‘live’ instrument, not a one-off analysis. Many have optional methods of calculation which can constrain comparison if different measures are used in different sites or at different times.

There are also constraints in interpreting the data as clear-cut indicators of nurse workforce behaviour. For example, low nurse turnover may just reflect an absence of alternative employment for nurses rather than high job satisfaction; maintaining a high level of nurse job vacancies may be a deliberate cost-cutting exercise.

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