Assessing the Global Sustainability of the Nursing Workforce

A Survey of National Nurses' Association Presidents within the International Council of Nurses

March 2025

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Rosemary Bryant AO Research Centre

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ICN International Council of Nurses

The global voice of nursing

Assessing the global sustainability of the nursing workforce: A survey of national nurses' association presidents within the International Council of Nurses

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Acknowledgement of country
We acknowledge the Traditional Custodians of the lands on which we work and live, and recognise their continuing connection to land, water, and community. We pay our respects to Elders past, present, and emerging. We acknowledge the stories, traditions, and living cultures of Aboriginal and Torres Strait Islander peoples on this land and commit to building a brighter future together.

About the Rosemary Bryant AO Research Centre

The Rosemary Bryant AO Research Centre (the Centre) is a partnership between the University of South Australia, the Australian Nursing and Midwifery Federation (SA Branch), and the Rosemary Bryant Foundation. The Centre aims to empower the role of the nursing and midwifery professions across the health system through the development of a research-driven, evidence-based platform of health care. To achieve this, the Centre has developed a comprehensive research programme focused on advancing the discipline of nursing and midwifery and patient care in the domains of population and public health, workforce reform, safety and quality, clinical practice, patient outcomes, and integration into education.

About the International Council of Nurses

The International Council of Nurses (ICN) is a federation of over 130 National Nurses' Associations (NNAs), representing over 28 million nurses worldwide. Founded in 1899, ICN is the world's first and widest reaching international organization for health professionals. ICN works to ensure quality nursing care, sound health policies globally, the advancement of nursing knowledge, and the presence worldwide of a respected nursing profession and a competent and satisfied nursing workforce. As the global voice of nursing, ICN leads the nursing profession to improve health for all.

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FOREWORD

Since the COVID pandemic, nurses around the world have faced unprecedented challenges. As a federation of over 130 national nursing associations (NNAs) and as the global voice of nursing, the International Council of Nurses (ICN) keeps in close and regular contact with our members who are diverse in size, availability of resources, and in the challenges they face. Many NNAs have told us their nurses are overworked, underpaid, undervalued, lacking resources, dealing with conflict, violence, natural disasters, and many other barriers to providing quality care for their patients and the community.

ICN's 2025 International Nurses Day report, *Our Nurses. Our Future. Caring for nurses strengthens economies,* focuses on the importance of improving the health and well-being of nurses in order to strengthen health systems, and achieve the Sustainable Development Goals and Universal Health Coverage. It underscores the critical role a healthy nursing workforce plays in strengthening economies, improving health systems, and ensuring better outcomes for communities worldwide.

In order to better understand the needs, concerns and pressures of our NNAs and nurses worldwide, ICN commissioned the Rosemary Bryant AO Research Centre to carry out an independent survey of ICN's members. The results of this survey, which are presented here, give us a unique insight into broad trends from 2021 to the present day.

On behalf of ICN, I would like to thank the authors, Greg Sharplin, Jarrod Clarke and Marion Eckert; the Rosemary Bryant AO Research Centre, and the Presidents of ICN's member associations who have taken the time to contribute to this important survey. Their dedicated leadership of their associations gives a voice to every nurse in their country. Together, they tell us we must act urgently! As the global voice of the over 29 million nurses worldwide, ICN pledges to listen to their voices, to bring their concerns to the highest levels of decision-making, and to ensure that nurses are valued, protected and empowered.

Dr Pamela F Cipriano
President
International Council of Nurses

ACKNOWLEDGEMENTS

The Rosemary Bryant AO Research Centre and the International Council of Nurses would like to thank all the national nurses' associations that took the time to prepare responses and participate in the survey.

We would also like to thank Marie Carrillo of ICN, who supported the project's implementation and coordinated the translation process for the French and Spanish versions of the survey.

The Rosemary Bryant AO Research Centre would like to thank the following individuals for their expert advice and guidance on the project:

- Howard Catton, Chief Executive Officer, International Council of Nurses
- Lisa Little, 1st Vice President, International Council of Nurses
- Adj Professor Jim Buchan, University of Technology Sydney

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ABBREVIATIONS

Abbreviation	Full name
COVID-19	Coronavirus disease 2019
GBD	Global Burden of Disease
LI/LMI	Low-income and lower-middle income
ICN	International Council of Nurses
IOM	International Organization for Migration
NNA(s)	National nurses' association(s)
OECD	Organisation for Economic Co-operation and Development
RBRC	Rosemary Bryant AO Research Centre
SOWN	State of the World's Nursing
WHO	World Health Organization

SECTION 1

EXECUTIVE SUMMARY

BACKGROUND

Since the release of the first State of the World's Nursing (SOWN) report in 2020, there have been dramatic changes to the stability of the nursing workforce within countries. In addition, the world's capacity to effectively create and support the predicted number and appropriate distribution of new nurses required, and nurture nurses in the current workforce has been diminished.

The International Council of Nurses (ICN), recognizing this opportunity to contribute the national nurses' association (NNA) voice to this global challenge, commissioned the Rosemary Bryant AO Research Centre (RBRC) to conduct an international survey through their member NNAs. ICN is a federation of more than 130 NNAs, representing over 28 million nurses worldwide. The purpose of the survey was to gather a global perspective on the long-term sustainability of the nursing workforce, as well as the country's national capacity to effectively create and support the predicted number of new nurses required.

The research questions were:

1. What ability do countries have to maintain a sufficient number of nurses, and an appropriately distributed workforce to meet the care needs of communities?
2. What internal capacity do countries have to meet their supply needs through recruitment and retention methods?
3. What level of awareness do countries have in relation to prioritisation and response to provide safe and healthy working conditions for nurses?
4. How has the international mobility, emigration and immigration of nurses affected a country's long-term sustainability of the nursing workforce?

METHOD

An online cross-sectional survey ran over a 13-week period from 25 July 2024 to 17 October 2024. The survey was developed by the RBRC and ICN provided input into its design and content to ensure applicability to the international context. The survey was available in English, French and Spanish. Participants for this survey were purposively sampled from the list of ICN member NNAs. Participants were directly emailed the participant information sheet and the link to complete the survey distributed by ICN member communication channels. Participants could either be the president of the NNA or their representatives.

The survey was developed and formatted into four parts, each focusing on a risk to long-term sustainability of the nursing workforce:

1. **International mobility and migration** – international mobility, emigration and immigration of nurses between countries.
2. **Recruitment, retention and flexible employment support** – the country's internal capacity to meet its own supply needs through recruitment and retention methods that motivates a sufficient number of nurses to enter or remain in the workforce.
3. **Accessible and safe care** – the country's ability to have a sufficient number of nurses, and appropriately distributed workforce to meet the care needs of communities, and to do so within reasonable bounds of safe care provision.
4. **Safety of the workforce** – the country's awareness, prioritisation and response to provide safe and healthy working conditions for nurses.

RESULTS

The results section is divided into four: (i) demographics, (ii) workforce planning and management, (iii) safety and well-being, and (iv) international mobility and migration.

Demographics

A total of 68 NNAs responded to the survey, representing a response rate of just under 50% of the 130-plus ICN member NNAs worldwide.

- Approximately three-quarters of NNAs were from the regions of Europe (33.8%), Africa (26.5%) and the Americas (14.7%).
- The largest proportion of NNAs were from high-income countries (45.6%) followed by upper-middle income countries (25.0%).

Workforce planning and management

- More than one-third (38.3%) of NNAs rated their country's capacity to meet the current health care needs of their nation as poor or very poor. A larger proportion of NNAs from high-income countries (48.4%) rated this as poor or very poor compared to NNAs from other income groups.
- Nearly two-thirds (61.7%) of NNAs reported that the demands on the nursing workforce had moderately or greatly increased since 2021.
- NNAs from LI/LMI countries reported the highest proportion of increases in undergraduate nursing applications (73.7%), while high-income countries reported the lowest proportion (16.2%).
- Approximately half (48.4%) of NNAs observed a moderate or great increase in the number of nurses leaving the sector.
- The majority of NNAs (72.1%) reported that nursing salaries had little or no increase since 2021, and considering factors such as inflation, more than one-third (36.4%) reported that this constituted a real terms decrease in salary since 2021.
- Over half (51.5%) of NNAs reported that their country had a national level nursing workforce plan or strategy in place.

Safety and well-being

- Over two-thirds (68.3%) of NNAs reported that their country had policies to prevent workplace violence against staff.
- Just over half (51.5%) of NNAs reported having policies to support new graduates or inexperienced staff.

- Just under half (47.6%) of NNAs reported having polices to ensure that nurses had access to workplace psychological or mental health support
- Approximately two-thirds (64.1% and 69.7%) of NNAs reported not having polices to ensure appropriate skill mix and adequate staffing levels, respectively.
- The vast majority (86.2%) of NNAs reported that nurses in their country have experienced instances of violence or hostility perpetrated by patients or the general public.
- More than two-thirds (71.0%) of NNAs reported that nurses had experienced instances of violence or hostility perpetrated by other employees.
- Around two-thirds (64.2%) reported that their country's health care system is experiencing a shortage of nursing staff that is making it difficult to achieve a safe environment for patient/client care.
- Just over half (53.9%) of NNAs reported that, considering their current health care systems and the way the nursing profession currently operates, this system will be able to more than moderately meet health needs of their nation over the next 20 years.

International mobility and migration

- Nursing emigration was adversely related to a country's income group, with 66.7% of NNAs from LI/LMI countries reporting a moderate to great increase, compared to 21.4% of NNAs from high-income countries.
- Compared to the other income groups, NNAs from LI/LMI countries were also more likely to strongly disagree that their government is managing nursing emigration effectively, and more likely to agree that this was making it hard to maintain a workforce capable of meeting current and future workforce demands.
- NNAs reported the top five factors contributing to emigration as: poor salary, poor working conditions, lack of opportunity for career advancement, nurse contribution undervalued by government and policy makers, and lack of employment opportunities.
- Immigration of the nursing workforce was related to country income groups, with 42.8% of NNAs from high-income counties reporting a moderate or great increase compared to 20.0% of those from LI/LMI countries.
- NNAs reported the top five factors contributing to immigration as: abundance of employment opportunities, internationally competitive salary, good health care infrastructure, low level of crime, and supportive national policy.

CONCLUSION

Addressing the global nursing workforce crisis requires coordinated efforts on multiple levels. Governments and health care organizations must invest in policies that support sustainable workforce growth, improve retention strategies, and ensure the well-being of nurses. Without decisive action, the current trajectory threatens the stability of health care systems worldwide, impacting both workforce sustainability and the quality of patient care.

SECTION 2.0

BACKGROUND

Since release of the first State of the World's Nursing (SOWN) report in 2020, there have been dramatic changes to the stability of nursing workforces within countries, predominantly triggered by the COVID-19 pandemic. This has put the World Health Organization (WHO) Sustainable Development Goals at risk, as well as the world's capacity to effectively create and support the predicted number and appropriate distribution of new nurses required, and nurture those nurses currently in the workforce.[1] In addition, the growing trend of an ageing population, the greater burden of chronic disease and the increasingly complex health conditions presenting at health services, has accelerated indices of burnout, psychological distress, and the number of nurses leaving the sector worldwide.[2-4] To resolve these workforce challenges, many countries have ramped up recruitment methods, such as international nursing migration,[5] which has led to further disparities in the global distribution of nurses.[6] To address the emerging issue of national and international nursing workforce instability, policy interventions must focus on ensuring adequate staffing levels, attractive working conditions, and support for respite. At the international level, the policy response must protect the nursing workforce in lower income countries that are highly vulnerable to the international outflow of nurses.[7]

WORKFORCE PLANNING AND MANAGEMENT

The SOWN report, published by WHO in partnership with ICN, estimated that the global nursing workforce totalled 27.9 million in 2020.[8] While the report also revealed a shortfall of 5.9 million nurses worldwide to achieve the WHO sustainable development goals, a significantly higher nurse shortage has been determined by the Institute for Health Metrics and Evaluation Global Burden of Disease (GBD) study.[9] Based on minimum threshold estimates for reaching Universal Health Coverage effective coverage of 80 out of 100 (a higher threshold than that adopted by WHO), the GBD study estimated that the global shortage of nurses and midwives was 30.6 million in 2019; a 2.5-fold increase over estimates produced by WHO at the time.[10]

The GBD study was recently cited by the Organisation for Economic Co-operation and Development (OECD) and the European Commission in their *Health at a Glance: Europe* report, when forecasting needs across OECD countries.[11] Given that the stability of the nursing workforce has been significantly impacted in recent years, particularly following the COVID-19 pandemic, recent estimates suggest that between approximately 10 and 13 million "new" nurses will need to be trained to meet global health care needs.[12,13] Nurses comprise nearly 50% of the global health care workforce, so this predicted shortage will have significant consequences for health care systems globally.

Workforce shortages affect patient-nurse ratios, which in turn impact patient safety and quality of care.[7] Insufficient staffing levels also contribute to negative workforce outcomes, including job dissatisfaction, occupational stress, burnout, and high turnover rates.[14] These challenges are exacerbated by ongoing public health issues, including the increasing burden of chronic diseases, ageing populations, and the long-term

disruptions caused by COVID-19.[7,15] Many health care institutions are already struggling with staffing shortages, and additional demands on the workforce place further strain on health care professionals, increasing attrition rates. To address these issues, there is a need to develop long-term strategies that not only address the recruitment of new nurses, but also support the retention and well-being of existing staff, in line with the WHO Global Strategic Directions for Nursing and Midwifery 2021-2025.[16]

SAFETY AND WELL-BEING OF THE WORKFORCE AND PATIENTS

Physical and psychosocial harm resulting from exposure to risk in the occupational environment are a pervasive hazard and a long-standing issue for all health care workers, including nurses. Nurses are frequently exposed to hazardous working conditions, which can lead to both physical injuries and psychological distress: nurses' health and well-being are critical, not only for their own safety, but also for patient outcomes. The physical, mental and emotional well-being of nursing staff directly influences their ability to provide safe, effective, and compassionate care.[17,18] Previously, ICN has stated that "a global phenomenon of mass trauma is occurring to nurses since the start of the pandemic".[19] The psychological strain and heavy workloads experienced by nurses during and since the COVID-19 pandemic, has highlighted the urgent need for governments to invest in protective measures to ensure the safety and well-being of the nursing workforce.

INTERNATIONAL MOBILITY AND MIGRATION

International mobility and migration of the nursing workforce has grown significantly over the past decade.[20] This is a result of increasing globalisation, with advancements in transport and communication technologies creating greater opportunities for global migration.[21] According to the International Organization for Migration's (IOM) 2024 World Migration Report, 281 million people, or 3.6% of the global population, lived in a country other than their country of birth in 2020.[22] WHO estimates that, in 2018, one in eight (13%) nurses were born or trained internationally. While migration declined during the early years following the COVID-19 pandemic because of border closures, permanent migration trends of foreign nationals into OECD countries have since continued to increase.[22] Migration provides opportunities for professionals to seek opportunities and better conditions outside of their home country. However, there are implications for the global distribution of the nursing workforce,[23] with trends pointing towards low and lower-middle-income countries being unevenly impacted.

PURPOSE OF THE STUDY

In the context of these global challenges, NNAs are well-positioned to reflect and comment on the strengths and challenges experienced within their country, as well as how nurses and the nursing workforce as a professional body are affected by in-country, regional, economic, political, technological, social and environmental factors. To this end, NNAs offer a unique perspective and can contribute to the global dialogue about what must be overcome to improve the world of work for nurses and, in turn, improve health outcomes for individuals, communities and societies.

Recognising this opportunity to contribute the NNA voice, ICN commissioned the Rosemary Bryant AO Research Centre (RBRC) to undertake a survey of Presidents of ICN member NNAs.

This study aimed to gather a global perspective on the long-term sustainability of the nursing workforce, as well as NNA member country's perspective of their nation's capacity to effectively create and support the predicted number of new nurses required to meet health care demand.

The study has four overarching questions:

- What ability do countries have to maintain a sufficient number of nurses, and an appropriately distributed workforce to meet the care needs of communities?
- What internal capacity do countries have to meet their supply needs through recruitment and retention methods?
- What level of awareness do countries have in relation to prioritisation and response to provide safe and healthy working conditions for nurses?
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SECTION 3

METHODOLOGY IN BRIEF

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4. **Safety of the workforce** – the country's awareness, prioritisation and response to provide safe and healthy working conditions for nurses.

The survey was distributed to the president, or their nominated representative, of the NNA members of ICN.

A detailed description of the Methodology is provided in Appendix 1.

A copy of the survey is provided in Appendix 2.

Data were analysed and reported descriptively and, for ease of interpretation, some response categories have been collapsed. These are noted in the results where appropriate. A detailed breakdown of all results is provided in Appendix 3.

SECTION 4

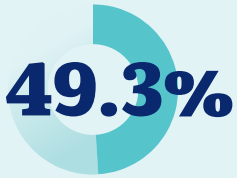
RESULTS

The results section is divided into four sections: (1) demographics, (2) workforce planning and management, (3) safety and well-being, and (4) international mobility and migration.

1. DEMOGRAPHICS

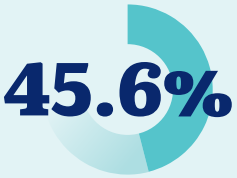
The following section describes, at an aggregate level, the NNAs that responded to the survey.

Summary of findings



68 of the 130-plus (49.3%) NNAs who are members of ICN responded to this survey.

Approximately three-quarters of NNAs were from the regions of Europe (33.8%), Africa (26.5%) and the Americas (14.7%).



The largest proportion of NNAs were from high-income countries (45.6%).

A total of 68 NNAs responded to the survey, representing a response rate of just under half (49.3%) of ICN member NNAs worldwide. To understand more about the NNAs who responded to the survey, the respondents were retrospectively mapped to (i) geographic regions of the world, and (ii) income group of the country.

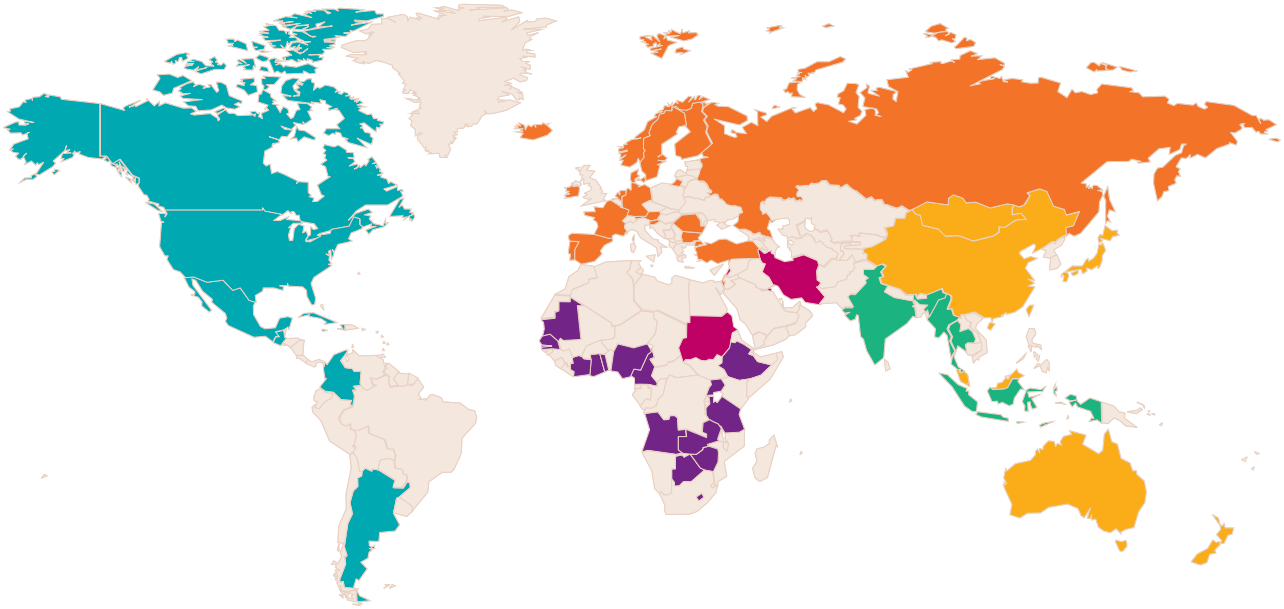
i. To explore the geographic distributions of responses, respondent NNAs were categorised based on WHO regions of the world (Table 1). The respondent NNAs were located across different regions of the world, with most located in the regions of Europe (n=23, 33.8%), Africa (n=18, 26.5%), and the Americas (n=10, 14.7%). Few responses were received from the Eastern Mediterranean (n=5, 7.4%) and South-East Asian (4, 5.9%) regions. A visual representation of the distribution of responses by WHO regions is provided in Figure 1.

Table 1. Distribution of respondent NNAs by WHO regions.

	n	%
Europe	23	33.8
Africa	18	26.5
Americas	10	14.7
Western Pacific	8	11.8
Eastern Mediterranean	5	7.4
South-East Asia	4	5.9
Total	**68**	**100**

Note. World region has been categorised according to WHO. These regions include economies at all income levels and may differ from world regions defined by other organizations.

Figure 1. Distribution of respondent NNA by WHO regions.



Legend

Africa · Eastern Mediterranean · South-East Asia
Western Pacific · Europe · Americas · No response

ii. Countries were also categorised based on World Bank income groups (Table 2). The largest proportion of respondent NNAs were from high-income countries (45.6%, n=31), followed by upper-middle-income countries (25.0%, n=17), and lower-middle-income countries (22.1%, n=15). Notably, only five NNAs from low-income countries participated (7.4%). Due to the lower number and proportion of responses from LI/LMI countries, these categories were consolidated into a single "low/lower-middle (LM) income" group (n=20, 29.4%) for subsequent analysis and reporting purposes. A visual representation of the distribution of responses by World Bank income groups is provided in Figure 2.

Table 2. **Income grouping of respondent countries by World Bank categories.**

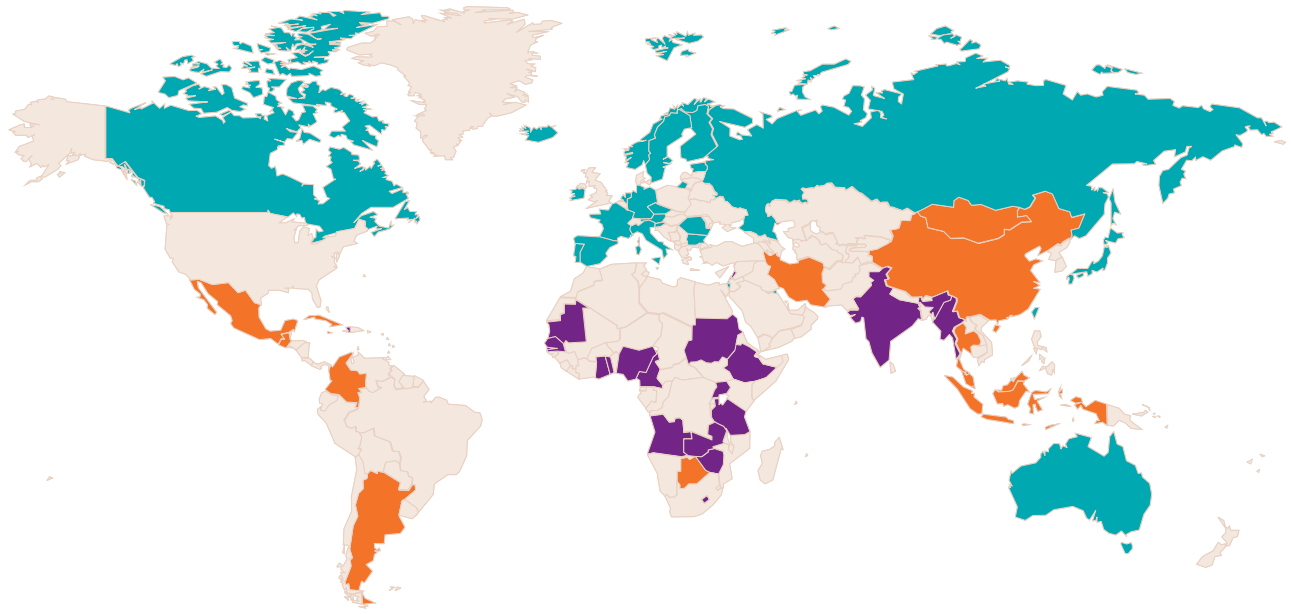
	n	%
High-income	31	45.6
Upper-middle-income	17	25.0
Low/lower-middle (LM)-income*	20	29.4
Total	**68**	**100**

Notes. The World Bank classifies economies into four income groups based on 2023 gross national income (GNI) per capita in US Dollars; Low: GNI per capita of $1,145 or less; Lower-middle: GNI per capita between $1,146 and $4,515; Upper-middle: GNI per capita between $4,516 and $14,005; High: GNI per capita of more than $14,000.

Note: Economic data for Palestine was not available through the World Bank's 2023 data release, therefore historical data from 2021 was used that classifies Palestine as an 'Upper middle income' country. Media releases from the World Bank suggest that due to the Israeli Palestinian conflict, Palestine's GNI is currently estimated at a 'Lower middle income' level.

* Low income (n=5, 7.4%) and Lower middle income (n=15, 22.1%) were combined to create Low/lower-middle (LM) income due to the low number of participants from low-income countries.

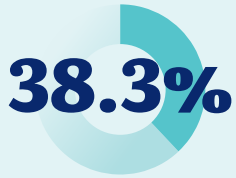
Figure 2. **Distribution of respondent NNAs by World Bank income groups.**



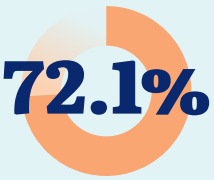
2. WORKFORCE PLANNING AND MANAGEMENT

The following section focuses on the domestic supply and demand for the nursing workforce in the respondent countries. It explores changes observed in the numbers of nurses entering and leaving the sector, factors that have contributed to recruitment and retention, and strategies in place to address nursing workforce sustainability.

Summary of findings



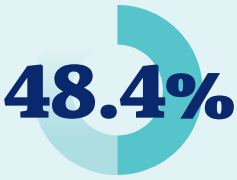
More than one-third (38.3%) of NNAs rated their country's capacity to meet the current health care needs of their nation as poor or very poor. A larger proportion of NNAs from high-income countries (48.4%) rated this as poor or very poor compared to NNAs from other income groups.

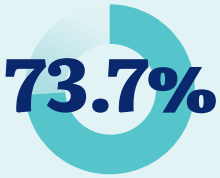


The majority of NNAs (72.1%) reported that nursing salaries had increased only a little or not at all since 2021, and considering factors such as inflation, more than one-third (36.4%) reported that this constituted a real-terms decrease in salary since 2021.

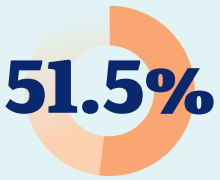
Nearly two-thirds (61.7%) of NNAs reported that the demands on the nursing workforce had moderately or greatly increased since 2021.

Approximately half (48.4%) of NNAs observed a moderate or great increase in the number of nurses leaving the sector.





NNAs from LI/LMI countries reported the highest proportion (73.7%) of increases in undergraduate nursing applications, while high-income countries reported the lowest proportion (16.2%).



Over half (51.5%) of NNAs reported that their country had a national level nursing workforce plan or strategy in place.

2.1 Supply and demand

Respondents were asked to rate the current capacity of their nation's nursing workforce to meet the health care demands of their country (Table 3). For the purposes of reporting, category responses of 'poor' and 'very poor', and 'very good' and 'excellent', were collapsed. Across all NNAs (n=68), the largest proportion rated their nation's capacity as poor or very poor (n=26, 38.2%). When analysed by income group those NNAs from high-income countries appear to have a less favourable outlook regarding their workforce's capacity. The largest proportion of NNA's who rated their nation's capacity as poor or very poor were from high-income countries (n=15, 48.4%), followed by LI/LMI (n=7, 35.0%) then upper-middle-income countries (n=4, 23.5%). Conversely, few NNAs from high income countries (n=2, 6.4%) rated their nation's capacity as good, very good or excellent, compared to approximately half of upper-middle-income (n=10, 58.8%) and LI/LMI (n=10, 50.0%) countries, respectively.

Table 3. **Nursing workforce capacity to meet the current health care needs of their nation.**

	Low/LM Income (n=20)	Upper Middle Income (n=17)	High Income (n=31)	Overall (n=68)
Poor / Very poor	**35.0%**	23.5%	**48.4%**	**38.2%**
Fair	15.0%	17.6%	45.2%	29.4%
Good	**35.0%**	17.6%	3.2%	16.2%
Very good / excellent	15.0%	**41.2%**	3.2%	16.2%

Note. Most frequent response highlighted in bold.

Respondents (n=68) were then asked about their country's capacity to provide a sufficient number of jobs for new nurses (Table 4). Approximately 30% of NNA's (n=21) reported their nation's capacity as poor or very poor. Notably NNAs from low-income countries reported less capacity, with 60.0% (n=12) rating the capacity as poor or very poor and few respondents (n=2, 10.0%) rating it as very good or excellent. A comparatively higher proportion of high-income and upper-middle income countries rated it as very good or excellent.

Table 4. **In-country capacity to provide a sufficient number of jobs for new nurses.**

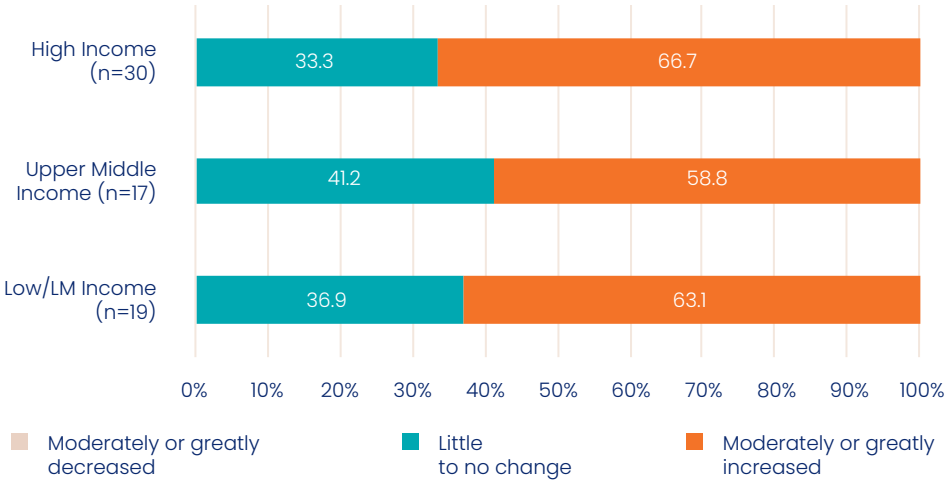
	Low/LM Income (n=20)	Upper Middle Income (n=17)	High Income (n=31)	Overall (n=68)
Poor / very poor	**60.0%**	**35.3%**	9.7%	**30.9%**
Fair	20.0%	11.8%	16.1%	16.2%
Good	10.0%	17.6%	35.5%	23.5%
Very good / excellent	10.0%	**35.3%**	**38.7%**	29.4%

Note. Most frequent response highlighted in bold.

Throughout the survey, respondents were asked a range of questions about the observed changes since 2021. This period of comparison was used to provide a reflection on the change in the world since the release of the WHO SOWN report in 2020. Respondents were asked to rate observed changes on a seven-point Likert scale from 'greatly decreased' to 'greatly increased'. Here, and throughout the report, these response options have been collapsed to three levels for ease of reporting; 'moderately or greatly decreased' (i.e., 'moderately decreased' and 'greatly decreased' categories combined), 'little to no change' (i.e., 'slightly decreased', 'stayed the same', and 'slightly increased' categories combined), and 'moderately or greatly increased' (i.e., 'moderately increased' and 'greatly increased' categories combined). To see the data where response categories have not been collapsed, please see Appendix 3.

Respondents (n=66) were asked about the observed changes in the demands placed on nurses in their country since 2021 (Figure 3). Overall, nearly two-thirds of respondents (n=42, 61.7%) reported that the demands on the nursing workforce had moderately or greatly increased and approximately one-third (35.3%) reported little to no change. No NNA reported that the demands on the nursing workforce had moderately of greatly decreased since 2021. Responses across income groups were relatively similar suggesting that this experience has been similar across the world, irrespective of income group.

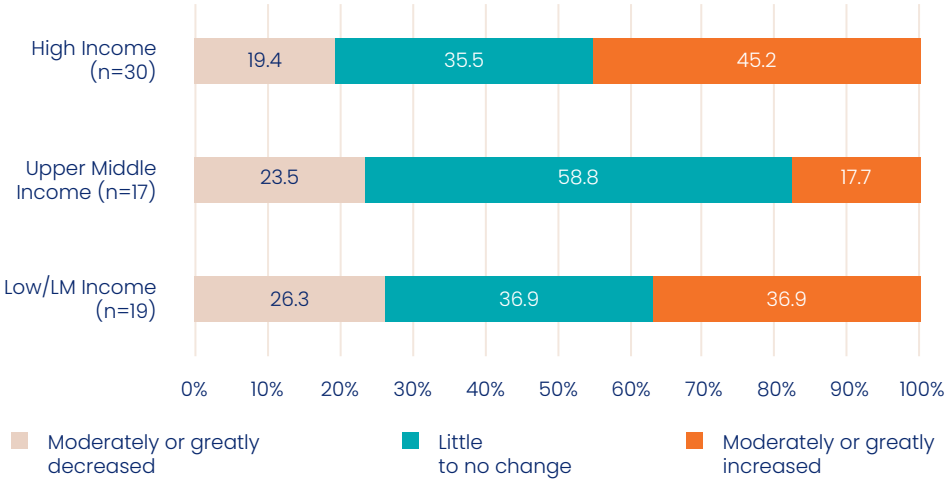
Figure 3. **Change in the demands placed on the nursing workforce since 2021.**



Respondents were also asked a number of questions regarding factors that may have contributed to changes in the available supply of nurses since 2021 including: (i) nursing vacancies, (ii) undergraduate nursing applications, (iii) unemployment rate, and (iv) nurses leaving the sector.

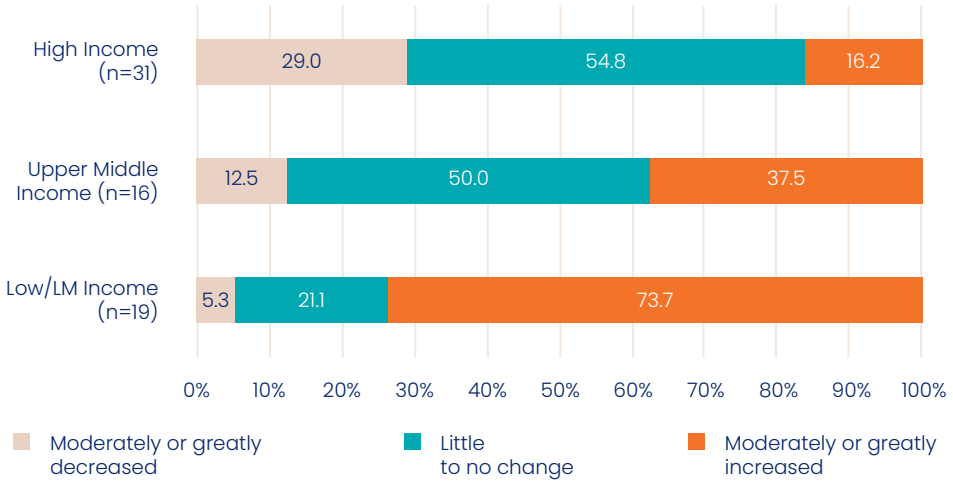
i. **Nursing vacancies**: When respondents (n=67) were asked about the observed change in nursing vacancies in their country since 2021 (Figure 4), approximately four in 10 respondents (n=28, 41.8%) reported observing little to no change and approximately one-third (n=28, 35.8%) reported an increase. Comparing between income groups, a larger proportion (n=14, 45.2%) of NNAs from high-income countries reported observing an increase, compared to respondents from upper-middle-income (n=3, 17.7%) and LI/LMI (n=7, 36.9%) countries.

Figure 4. **Change in nursing vacancies since 2021.**



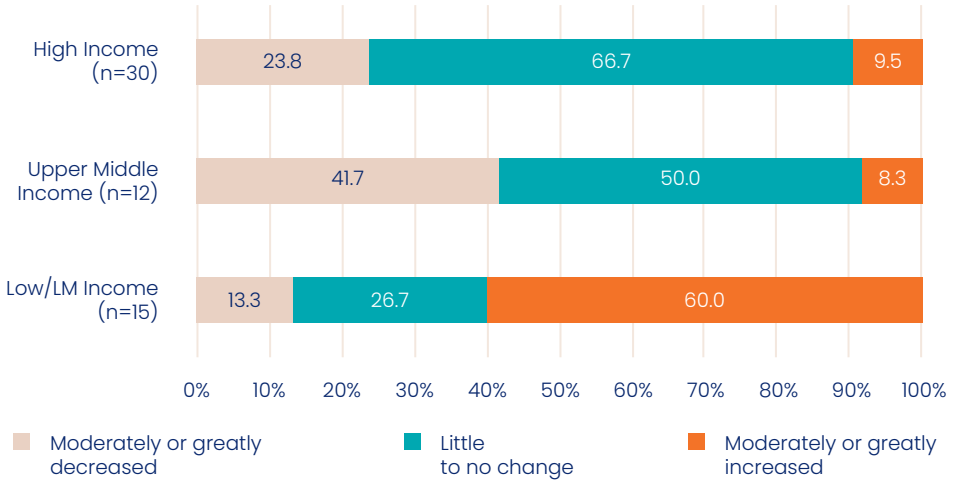
ii. **Undergraduate nursing applications**: When respondents (n=66) were asked about the observed changes in the number of undergraduate nursing applications since 2021, a clear trend was observed based on income group (Figure 5). This trend showed an inverse relationship between income and undergraduate nursing applications. Approximately three-quarters (n=14, 73.7%) of NNAs from LI/LMI countries reported increases in nursing applications and only one (5.3%) reported a decrease. Conversely, there was a small proportion of high-income countries (n=5, 16.2%) reporting an increase in undergraduate nursing applications and nearly one-third (n=9, 29.0%) reporting a decrease. It is also worth noting that half of upper-middle-income countries and high-income countries reported little to no change.

Figure 5. **Change in the number of undergraduate nursing applications since 2021.**



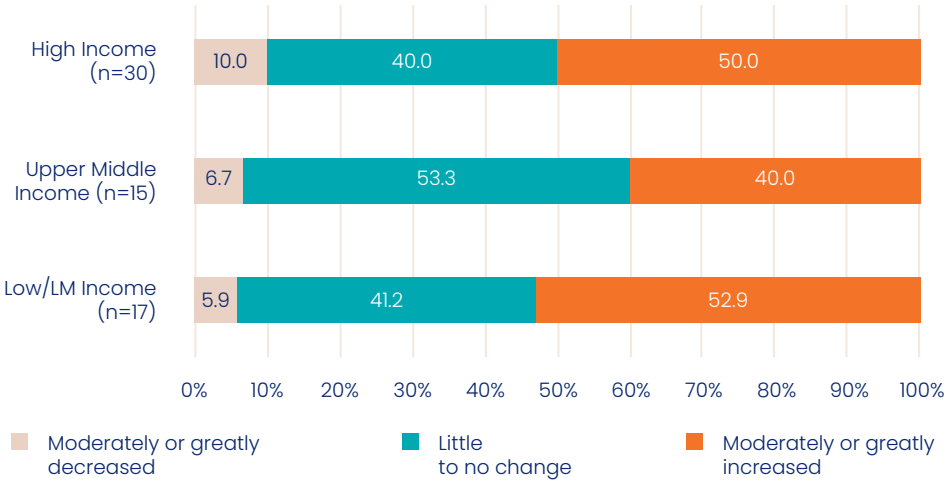
iii. **Nursing unemployment rates**: Respondents (n=48) were asked to assess the changes in nursing unemployment rates since 2021 (Figure 6). While overall, it appeared that there had been little change with half (n=24, 50.0%) of respondents reported little to no change in nursing unemployment rates since 2021, there was variability between economic groups, in particular LI/LMI countries compared with other income groups. Here, a larger proportion of respondents in LI/LMI countries (n=9, 60.0%) reported that nursing unemployment rates had moderately or greatly increased. In contrast, only 8.3% (n=1) of respondents in upper-middle-income countries and 9.6% (n=2) in high-income countries reported increases.

Figure 6. **Change in the nursing unemployment rate since 2021.**



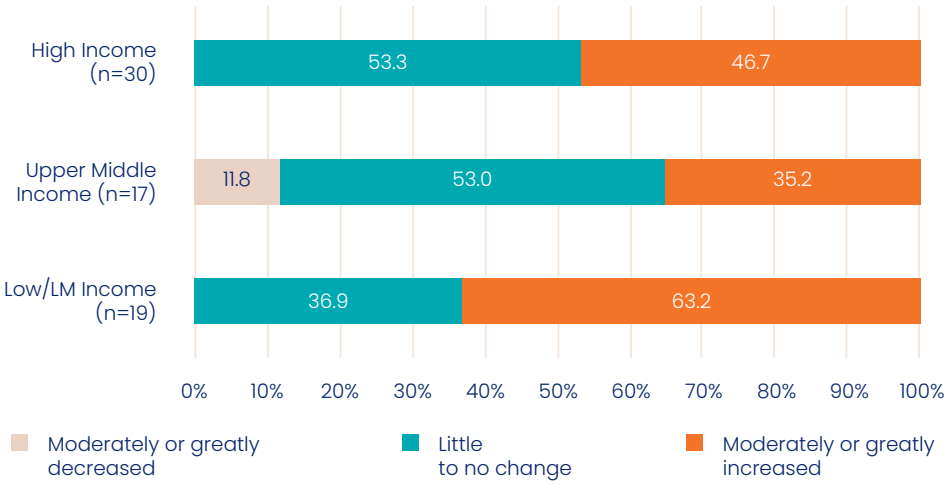
iv. **Nurses leaving the sector**: Respondents (n=62) were also asked to evaluate the observed change in the number of nurses leaving the sector (i.e., retiring or leaving to work elsewhere) since 2021 (Figure 7). Nearly half (n=30, 48.4%) of respondents observed a moderate or great increase in the number of nurses leaving the sector with a similar proportion observing little to no change (n=27, 43.6%). Few countries observed a moderate or great decrease (n=5, 8.0%). Across income groups, responses were relatively similar suggesting that economic position of the country is unrelated to changes in the proportion of nurses leaving the sector since 2021.

Figure 7. **Change in the number of nurses leaving the sector since 2021.**



v. Finally, respondents (n=66) were asked to rate the change in the gap between supply and demand of the nursing workforce since 2021 (Figure 8). There was an equal split between NNAs reporting little to no change (n=32, 48.5%) and those who reported a moderate to great increase (n=32, 48.5%). Very few (n=2, 3.0%) reported observing a decrease. Among high income countries there was an approximately equal split between little to no change and observing an increase in the gap between supply and demand. Among low/LM income countries, approximately two-thirds (63.2%) reported that the gap had moderately or greatly increased.

Figure 8. **Change in the gap between supply and demand of the nursing workforce since 2021.**



Respondents were asked to describe the main challenges their country faces in maintaining or building a domestic nursing workforce to meet health care demands. Most responses highlighted poor working conditions, such as unsafe environments, excessive workloads, and notably, low salaries. Many respondents pointed out that nurses are often not compensated in a way that reflects their responsibilities, leading to nurses seeking employment in other sectors where they can earn the same or higher pay under better conditions:

> *"There are many other more attractive jobs where they get paid more, work less, and work in a cleaner environment."*
>
> *"...Salaries and compensation do not adequately reflect their [nurses'] level of competency and responsibility..."*
>
> *"The public health sector can hardly compete for graduates with private entities and the labour market, where nurses can earn much more by working in other areas...."*

Respondents also emphasised that excessive workloads often lead to high burnout rates and further exacerbate the burden on nurses who remain in the profession:

> *"...These issues are compounded by heavy workloads and stressful working conditions, leading to lower retention rates. The declining number of nursing students entering the workforce has impacted the profession's sustainability, with many nurses leaving due to burnout and inadequate workplace support."*

Additionally, there was concern about a decline in the number of undergraduate nursing applications, attributed to poor student recruitment strategies. For those who graduate, many respondents noted a lack of graduate support and the negative reputation of the nursing profession, which often leads to low retention of new nurses:

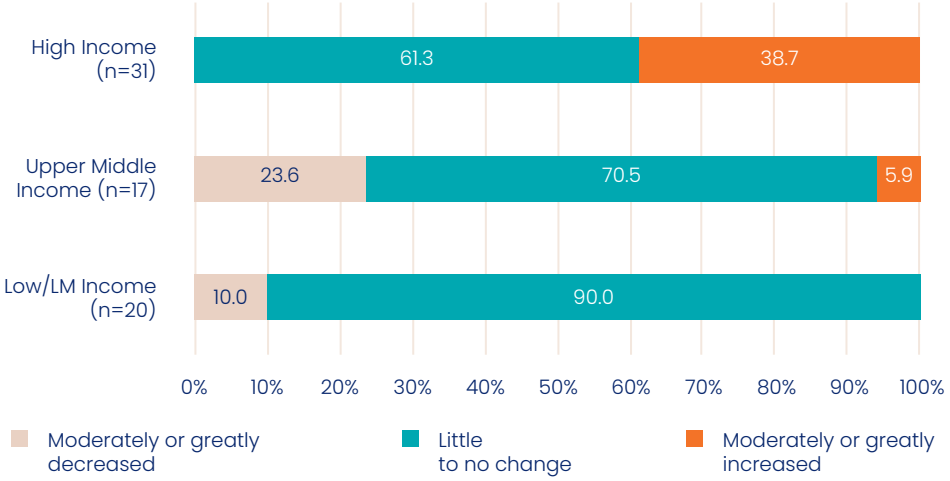
> *"Many newly graduated nurses are not accustomed to shift work, and rosters are often inflexible. Bullying and poor leadership have been identified in surveys as factors that discourage people from joining the nursing profession, while also pushing existing nurses out."*

Many respondents called for increased government investment, support, and the development of national nursing workforce strategies as necessary steps to address these challenges.

2.2 Nursing salary

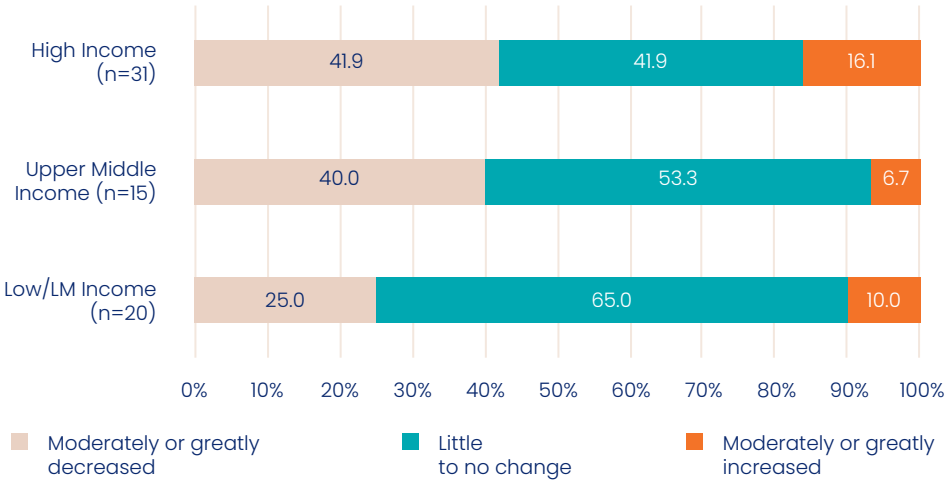
Respondents were asked what change in the base nursing salary in their country has been observed since 2021 (Figure 9). The majority of respondents (n=68) indicated that the base nursing salary had changed only a little or not at all (n=49, 72.1%). Across income groups, no NNA from LI/LMI countries reported a moderate to great increase, one NNA (5.9%) from upper-middle-income countries reported such an increase, and so did 12 (38.7%) from high-income countries. Although differences were observed between income groups, changes in salary are likely closely aligned with national income levels and capacity for those nations to increase salaries for their health care workforce, including nurses, since 2021.

Figure 9. **Change in base nursing salary since 2021.**



Taking into account factors such as the cost of living, inflation, and other financial elements, respondents (n=66) were asked to assess the *real* change in nursing salary - defined as income relative to the purchasing power for goods and services - since 2021 (Figure 10). Compared to the pattern observed in Figure 9 above, there was an apparent shift with an increasing proportion of NNAs reporting a real decrease in base nursing salary overall and across all income groups. More than one-third (n=24, 36.4%) noted a real decrease, while only 12.1% (n=8) reported a real increase. While this trend was largely consistent across income groups, a higher proportion of NNAs from high-income (n=13, 41.9%) and upper-middle-income countries (n=6, 40.0%) reported a real decrease compared to LI/LMI countries (n=5, 25.0%). Note, a large proportion of respondents reported no real change, with 51.5% (n=34) reporting that nursing salaries have remained at the same level relative to the purchasing power for goods and services.

Figure 10. **Real change in base nursing salary since 2021.**



When respondents (n=68) were asked to evaluate how adequately the nursing workforce is remunerated in their country, more than half of respondents rated this as poor or very poor (n=38, 56.7%), approximately one-third (n=22, 32.4%) considered the remuneration 'fair', while only seven respondents (10.3%) rated it as good or very good (Table 5). No respondents deemed the remuneration to be excellent. A greater proportion of respondents from NNAs in LI/LMI countries rated remuneration as poor or very poor (n=16, 80.0%) compared to those from upper-middle-income (n=9, 56.3%) and high-income countries (n=13, 41.9%).

***Table 5.* NNA assessment of their country's remuneration of the nursing workforce.**

	Low/LM Income (n=20)	Upper Middle Income (n=16)	High Income (n=31)	Overall (n=68)
Poor / very poor	**80.0%**	**56.3%**	**41.9%**	**56.7%**
Fair	20.0%	37.5%	38.7%	32.8%
Good	0.0%	6.3%	16.1%	9.0%
Very good*	0.0%	0.0%	3.2%	1.5%

* Note, 'Excellent' was not collapsed and reported with 'Very good' because no respondents indicated 'Excellent' when completing the survey.
Most frequent response highlighted in bold.

2.3 Workforce strategy

Respondents were asked whether their country has nursing workforce plans or strategies at the national, regional, and/or organizational level (Table 6). Multiple responses were permitted; values are based on the number of people who selected each option and the percentage is calculated based on the overall number of NNAs (n=68) and total number from each income group, as per Table 2.

Overall, national-level strategies were the most common across all income groups, with approximately half (n=35, 51.5%) of respondents indicating such plans were in place. Of NNAs reporting that their country had a national nursing plan in place, the highest number of responses were from NNAs in high-income countries (n=15, 48.4%). Regional and organizational strategies were less frequently indicated (14.7% and 25.0%, respectively). Of note, nearly one-third (n=22, 32.4%) of all respondents either had no strategy or were unsure or unaware of a strategy.

***Table 6.* Types of nursing workforce plans or strategies in place.**

	Low/LM Income (n = 20)		Upper Middle Income (n = 17)		High Income (n = 31)		Overall (n=68)	
	n	%	n	%	n	%	n	%
National	10	50.0	10	58.8	15	48.4	35	51.5
Regional	0	0.0	1	5.9	9	29.0	10	14.7
Organizational	4	20.0	3	17.6	10	32.3	17	25.0
No or don't know	7	35.0	6	35.3	9	29.0	22	32.4

Notes. Multiple responses permitted; the total number of responses is greater than the total number of respondents.
Percentage (%) calculated based on number of responses / total number of NNAs per income group, as per Table 2.

Regarding the national level plan, questions were asked regarding the main mechanisms present in the plan. Respondents were asked to rate, on a five-point Likert scale from 'Not at all' to 'A great deal', how much of the plan relied on training of new staff to meet workforce demands (Training new staff), the immigration of nurses to bridge workforce gaps (Immigration of nurses), and the introduction of mechanism to improve retention, e.g. flexible working environments (Retention mechanisms) (Table 7). The number of respondents varied slightly per statement.

- **Training new staff**: more than 70% of NNAs reported that the national plan either 'Moderately', 'A lot' or a 'A great deal' relied on the training of new nurses to meet future demands (n=27, 77.2%).
- **Immigration**: Just under half (n=17, 48.6%) reported that their national plan did 'Not at all' rely on the immigration of nurses to meet workforce demands. There were also few respondents who indicated that their national plan relied 'A lot' or 'A great deal' on immigration to bridge workforce gaps.
- **Retention mechanisms**: results showed clustering around NNAs selecting that the national plan relied 'A little', 'A moderate amount' or 'A lot' on the introduction of mechanisms to retain staff (n=25, 75.8%).

Table 7. **Recruitment and retention mechanisms present in the national plan.**

	Training new staff (n = 35)		Immigration (n = 35)		Retention mechanisms (n = 33)	
	n	%	n	%	n	%
Not at all	0	0.0	17	48.6	6	18.2
A little	8	22.9	5	14.3	9	27.3
A moderate amount	12	34.3	8	22.9	9	27.3
A lot	5	14.3	3	8.6	7	21.2
A great deal	10	28.6	2	5.7	2	6.1

Across income groups some differences were observed regarding the mechanisms included in the national plan with a trend towards high income countries being more reliant (Table 8). For example, when asked about the degree to which the national plan relies on immigration to bridge workforce gaps, more than half of high-income countries (n=9, 56.3%) indicated either 'a moderate amount', 'a lot' or 'a great deal'. This pattern was similar for both training of new staff (n=15, 93.8%) and retention mechanisms (n=10, 62.5%) which both had higher proportions, but the gap between high income countries and other income groups was not as marked as it was for immigration. It is important to note here that numbers are small when broken down by these categories.

Table 8. **Recruitment and retention mechanisms present in the national plan by income group.**

	Low/LM Income		Upper Middle Income		High Income	
	n	%	n	%	n	%
Training new staff (n=35)						
Not at all	0	0.0	0	0.0	0	0.0
A little	**3**	**33.3**	**4**	**40.0**	1	6.3
A moderate amount	**3**	**33.3**	2	20.0	**7**	**43.8**
A lot	1	11.1	2	20.0	2	12.5
A great deal	2	22.2	2	20.0	6	37.5
Immigration (n=35)						
Not at all	**6**	**66.7**	**6**	**60.0**	5	31.3
A little	2	22.2	1	10.0	2	12.5
A moderate amount	0	0.0	1	10.0	**7**	**43.8**
A lot	1	11.1	1	10.0	1	6.3
A great deal	0	0.0	1	10.0	1	6.3
Retention mechanisms (n=33)						
Not at all	2	25.0	**3**	**33.3**	1	6.3
A little	2	25.0	2	22.2	**5**	**31.3**
A moderate amount	2	25.0	2	22.2	**5**	**31.3**
A lot	2	25.0	1	11.1	4	25.0
A great deal	0	0.0	1	11.1	1	6.3

Respondents were asked to describe what considerations they believed were missing from their country's national plan/strategy. Responses described the need to address many of the same challenges previously mentioned in relation to building a domestic nursing workforce. Respondents mentioned investment in education to increase the number of graduates, adjustments to working visa requirements to attract international nurse migration, and the need for a greater focus on retention of the current workforce, through mechanisms such as safe staffing levels and better pay.

> *"There is a lack of targeted incentives to retain nurses within the country. Competitive salaries, benefits, and career advancement opportunities should be prioritized to discourage migration and enhance job satisfaction."*

Respondents were asked to what degree their national plan references or is aligned to the WHO Global Strategic Direction for Nursing and Midwifery (Table 9). Of those who responded (n=33), approximately two-thirds reported either a 'moderate', 'a lot', or 'a great deal' of alignment with the WHO guidelines (n=23, 69.7%), and one-third (n=10, 30.3%) reported minimal ('a little' or 'not at all') alignment.

Table 9. **NNA rating of alignment of in-country national plan to the WHO Global Strategic Direction.**

	Low/LM Income		Upper Middle Income		High Income	
	n	%	n	%	n	%
Not at all	0	0.0	1	12.5	0	0.0
A little	3	30.0	**3**	**37.5**	3	20.0
A moderate amount	2	20.0	1	12.5	**8**	**53.3**
A lot	**4**	**40.0**	1	12.5	4	26.7
A great deal	1	10.0	2	25.0	0	0.0

Respondents were also asked if they believed that any considerations were missing from the WHO Global Strategic Direction for Nursing and Midwifery. Respondents were largely supportive of the WHO Global Strategic Direction for Nursing and Midwifery, with some respondents mentioning the need for emphasis on data modelling and global responsibility to address nursing workforce sustainability, such as guidelines for ethical nurse migration.

> *"The strategy is excellent but is missing a strategic opportunity to centre the plan around future state models of care based on projected population health demands using data modelling (based on scenario generation with evidence-based pathways and use of advanced technologies). New models of care and different configurations of health providers are required to address the shifting health care needs of [the] global population."*

2.4 Workforce sustainability

NNA's were asked a series of open-ended questions related to factors affecting the sustainability of the workforce in their country. Respondents were asked to describe what actions their country had taken to address nursing workforce sustainability and to comment on how effective these actions have been. Some respondents mentioned that addressing nursing workforce sustainability was currently in their early stages, and that therefore they could not speak to their effectiveness. Others expressed concern about the lack of comprehensive actions taken by government, and some mentioned that actions were being carried out piecemeal, such that their effectiveness was unclear.

> *"Very little has been done, and in fact any work is being done discretely rather than comprehensively and is piecemeal ...we need a national, non-partisan policy that is backed by legislation to prevent the budget, rather than the people, being the priority."*

The respondents who mentioned actions had been taken reported that increases in training capacity and undergraduate nursing positions were among the first, along with reviews of nursing pay. The perceived effectiveness of these actions by the respondents varied but most said that further action is required to achieve a substantiable nursing workforce in their country.

> *"Various measures have been introduced in an effort to address nursing workforce sustainability. For example, there has been an increase in the number of education places and supports for nursing students at both undergraduate and postgraduate levels. Expanding education is crucial for long-term sustainability, as it ensures a steady flow of registered nurses who are prepared to address the growing needs of the health care system... This initiative represents a positive step toward stabilising the nursing workforce by addressing staffing challenges and supporting nurses in high-pressure environments. Despite these advancements... The absence of a fully funded workforce plan has slowed the broader implementation..."*

When asked to describe the additional actions that NNAs thought needed to be taken to address the long-term sustainability of the nursing workforce in their country, respondents spoke largely of reforms to improve the working conditions for nurses. These included mandating staffing levels to ensure nurses aren't overworked, addressing burnout, improving nursing pay in line with international standards and domestic comparability to other professions, and investing in mental health supports for nurses.

> *"...Quality of life at work must be improved to reduce psychosocial risks. Plans must be implemented to attract and retain nurses so that they do not leave the profession during their career..."*

> *"Provision of better working conditions and better pay... more opportunities for career development and specialization in nursing ...a national nursing and midwifery policy to guide nursing and midwifery education and practice in the country."*

> *"...The overhaul of the decree governing nurses' skills will give nurses greater autonomy and ensure that their skills are upgraded so that their work is in line with nursing practice. Quality of life at work must be improved to reduce psychosocial risks. Plans must be implemented to attract and retain nurses so that they do not leave the profession during their career, particularly in hospital departments. An overhaul of training must also be envisaged in order to integrate nursing training into the university curriculum and by developing research as part of doctoral courses."*

The introduction of innovations into health care, such as the integration of new technology into nursing practice, including digital health and virtual care services, were identified as a positive direction. However, their scalability and government willingness to fund them was the main concern expressed.

> *"There are countless innovations/policies/good ideas being implemented across the country and led by [jurisdictional] nursing bodies and through collaboration - however, the ability to scale up what is working well and fundamentally understand the TRUE impact and VALUE of the nursing profession on patient safety, quality of care, patient experience and all other outcomes (team, organizational, system) needs to be further demonstrated...."*

2.5 Retention

Respondents(n=68) were asked to rate a range of factors related to nursing workforce retention in their country, including: (i) how well nurses were supported to work to full scope of practice, (ii) how well nurses were provided with opportunities for career progression, (iii) how well nurses were valued by the community, and (iv) how easily new graduates were able to transition to practice once they completed their educational qualification (Table 10).

i. **Working to full scope of practice**: few respondents rated this as very good or excellent (n=6, 8.8%) and approximately four in ten (n=28, 41.1%) rated this as poor or very poor. NNAs from LI/LMI and upper-middle-income countries were more likely to rate this as poor or very poor (n=9, 45.0% and n=8, 47.0% respectively).

ii. **Provided with opportunities for career progression**: more than 70% rated it as either poor or very poor (n=24, 35.3%) or fair (n=25, 36.8%). Again, few respondents rated this as very good or excellent (n=5, 7.4%), mainly those from NNAs in high-income countries (n=4). The overall pattern of results tended to suggest improvements in opportunity occurred as level of income of the country increased, i.e., NNA's from higher income countries reported better opportunities than those from lower income countries.

iii. **Valued by the community:** on average responses were relatively evenly distributed. However, again, when analysed by country level of income, results indicated more favourable ratings of community support from those in higher income countries. While the largest proportion of responses from high-income countries (n=18, 48.4%) rated this as very good or excellent, the largest proportion from upper-middle-income countries (n=6, 35.3%) rated this as fair, and 40.0% (n=8) or those from LI/LMI countries rated this as poor or very poor. This may be linked to more significant challenges in health care systems, underfunding, and a lack of community investment in nursing roles.

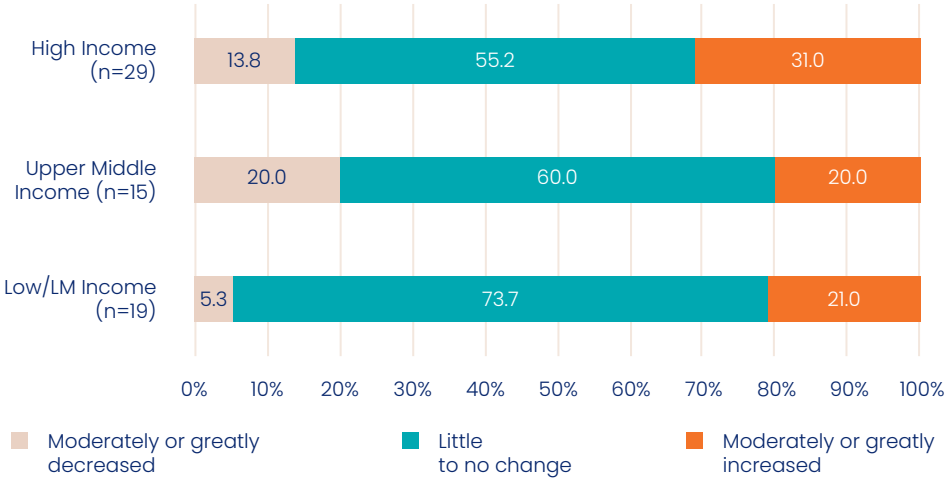
iv. **Ease of new graduates' transitioning to practice:** respondents tended to rate this more positively with two-thirds (66.2%) rating transition to practice as good, very good or excellent. Again, results suggested nurses in higher incomes countries are more easily able to transition to practice, with 48.4% of NNAs in high-income countries rating this as very good or excellent compared with 35.3% of middle-income countries and 25.0% of LI/LMI countries.

Table 10. **NNA rating of factors affecting nursing workforce retention.**

	Low/LM Income (n=20)	Upper Middle Income (n=17)	High Income (n=31)	Overall (n=68)
How well are nurses supported to work to full scope of practice				
Poor or very poor	**45.0%**	**47.0%**	**35.5%**	**41.1%**
Fair	20.0%	23.5%	19.4%	20.6%
Good	30.0%	17.6%	**35.5%**	29.4%
Very good or excellent	5.0%	11.8%	9.7%	8.8%
How well are nurses provided with opportunities for career progression				
Poor or very poor	**50.0%**	29.4%	29.0%	35.3%
Fair	40.0%	**52.9%**	25.8%	**36.8%**
Good	10.0%	11.8%	**32.3%**	20.6%
Very good or excellent	0.0%	5.9%	12.9%	7.4%
How well are nurses valued by the community				
Poor or very poor	**40.0%**	23.6%	9.7%	22.1%
Fair	35.0%	**35.3%**	12.9%	25.0%
Good	20.0%	29.4%	29.0%	**26.5%**
Very good or excellent	5.0%	11.8%	**48.4%**	26.4%
How well new nurses are able to transition to practice				
Poor or very poor	20.0%	23.5%	3.2%	13.2%
Fair	20.0%	17.6%	22.6%	20.6%
Good	**35.0%**	23.5%	25.8%	27.9%
Very good or excellent	25.0%	**35.3%**	**48.4%**	**38.3%**

Related to retention, respondents (n=63) were also asked about the change in the frequency of nursing workforce strikes or disputes since 2021 (Figure 11). Overall, the majority (n=39, 61.9%) reported observing little to no change. NNAs from high income countries represented the highest proportion of respondents reporting they observed a moderate or great increase in the number of strikes or disputes (n=9, 31.0%) suggesting that there has been greater formal, coordinated industrial activity in these countries.

Figure 11. **Change in prevalence of nursing worker strikes/disputes.**



Respondents (n=58) were asked if their country has appropriate strategies, legislation or policies to ensure an appropriately distributed workforce to meet the care needs of regional, rural and/or remote communities (Table 11). Overall, the majority reported that they did not (n=35, 60.3%). Respondents from high-income countries most frequently reported that these forms of strategies, legislation or policies were in place (n=14, 48.3%), but this was fewer than half of all high-income countries who responded to this question.

Table 11. **Strategies, policies or legislation to meet the care needs of regional, rural and/or remote communities.**

	Low/LM Income (n=15)	Upper Middle Income (n=14)	High Income (n=29)	Overall (n=58)
Yes	33.3%	28.6%	48.3%	39.7%
No	66.7%	71.4%	51.7%	60.3%

Respondents (n=56) were also asked if their country has strategies, legislation or policies to ensure an adequately distributed workforce to meet the care needs of disadvantaged, underserved, or vulnerable populations, such as ethnic or racial minorities, older people, children, indigenous populations, low income or homeless populations. Just over half (n=30, 53.6%) of respondents indicated that they had such strategies, legislation or policies in place (Table 12). Here, NNAs from LI/LMI countries had the highest proportion who reported they had such methods in place (n=9, 60.0%) and NNAs from upper-middle-income countries had the lowest proportion (n=6, 46.2%).

Table 12. **Strategies, policies or legislation to meet the care needs of disadvantaged, underserved, or vulnerable populations.**

	Low/LM Income (n=15)	Upper Middle Income (n=13)	High Income (n=28)	Overall (n=56)
Yes	60.0%	46.2%	53.6%	53.6%
No	40.0%	53.8%	46.4%	46.4%

2.6 Discussion

Under this section, the study aimed to answer two research questions:

1. What ability do countries have to maintain a sufficient number of nurses, and an appropriately distributed workforce to meet the care needs of communities?
2. What internal capacity do countries have to meet their supply needs through recruitment and retention methods?

Countries' ability to maintain a sufficient and appropriately distributed workforce

Increasing demand and workforce challenges

Global nursing workforce shortages have been widely documented, with data from WHO's National Health Workforce Accounts revealing a shortage of 5.9 million nurses globally in 2020.[23] Other organizations, including ICN, have predicted that, in the wake of the COVID-19 pandemic, between 10 and 13 million "new" nurses will be needed to address the shortfall.[12,13] This shortage is a global health challenge, with potentially serious implications for the delivery of safe and effective health care.[7] However, despite this challenge, there is still a potentially insufficient focus on training, recruitment and retention policies to close this gap by 2030. Based on anticipated nursing workforce growth rates and population increases, WHO projects that by 2030, the shortage of nurses will decrease by approximately one-quarter (24%), to 4.5 million nurses globally.[15]

While WHO projections indicate potential improvements in global nursing workforce capacity over the next few years, the findings of this survey reveal that many countries continue to face significant nursing workforce challenges. Almost two-thirds (61.7%) of the NNAs surveyed perceived that demands placed on the nursing workforce have moderately or greatly increased since 2021. This increasing demand is likely attributable to ongoing public health challenges, such as a rising chronic disease burden and ageing populations.[7] Notably, WHO's projections do not account for the impact that the COVID-19 pandemic has, and continues to have, on health workers globally.[15]

The COVID-19 pandemic severely impacted the mental health of many health care workers, leading to high rates of burnout among nurses and an exodus of nurses leaving the sector to retire or work elsewhere.[24] This was observed by the NNAs, with almost half (48.4%) reporting a moderate to great increase in the number of nurses leaving the sector since 2021. Beyond reducing the overall workforce, this loss places additional strain on remaining staff, further exacerbating burnout and increasing the risk of further attrition. If left unaddressed, this cycle of workforce depletion and escalating demands could perpetuate ongoing shortages and undermine recruitment strategies.[25]

Nearly half of NNAs (47.1%) perceived that the gap between the supply of nurses and the demand for health care services has been either moderately or greatly increasing since 2021 and none reported that it had diminished. This perception suggests that, despite efforts to bolster the nursing workforce, workforce shortages are either growing or the effects of the undersupply are becoming increasingly apparent, potentially in response to the increasing complexity of health care. Furthermore, these findings were consistent across income groups, suggesting that the decrease in supply and the increase in demand are not solely linked to a country's income level, and that this is a global phenomenon.

When the NNAs were asked to rate their country's current capacity to meet the health care needs of their nation, more than one-third (38.3%) indicated that this capacity was either poor or very poor. The proportion of respondents who indicated this was highest among NNAs from high-income countries (48.4%). These findings suggest that many nations, including those with greater resources, are struggling to ensure the delivery of high-quality, safe care for their populations. This highlights ongoing challenges in health care system capacity, workforce availability, and resource distribution.

Internal capacity to address workforce supply through recruitment and retention

Domestic nursing supply and education

While demand for nurses remained consistent across income levels, survey results indicated that high-income countries faced greater challenges in sustaining a domestic nursing workforce. Among NNAs from high-income countries, 29.1% reported a moderate to great decrease in undergraduate nursing applications, while 54.9% observed no change, despite rising demand. In contrast, 73.7% of NNAs from low- and LM-income countries reported an increase in nursing applications, compared to just 16.2% from high-income nations. The SOWN report estimated that, if all countries maintained their (then) current level of production of graduate nurses, the nurse headcount would be projected to increase from nearly 28 million in 2018 to approximately 36 million in 2030.[8] This continued growth is an assumption of the estimated nursing shortage decline projected by WHO.[15] However, the results of this survey indicate that applications for nursing courses may not have continued along projected trends. Similarly, a 2024 OECD policy briefing of young people's intention to become nurses identified that, across OECD countries, the share of 15-year-olds expecting to become nurses fell 8%, from 2.3% in 2018 to 2.1% in 2022.[26] The briefing attributed some of this decrease in interest to the COVID-19 pandemic, which shed light on poor working conditions, excessive workloads, physical and mental demands, and the relatively low financial reward of nursing work. Findings suggest that, rather than solely focusing on recruitment drives, investments should prioritise creating safer and more supportive working environments for the existing workforce. Improving working conditions may not only enhance retention but also increase the profession's attractiveness, in turn leading to a rise in undergraduate nursing applications.

Although a higher proportion of NNAs from LI/LMI countries reported an increase in undergraduate nursing applications, this does not necessarily translate into increasing workforce numbers. While the majority of NNAs from LI/LMI countries reported an increase in nursing applications, 36.9% observed a moderate to significant rise in the number nursing vacancies, and 60% reported a moderate to great increase in nursing unemployment rates since 2021. These findings suggest that a number of nurses trained in these countries may not be transitioning into the workforce or are seeking employment elsewhere. A long-standing trend of nurses training in LI/LMI countries and subsequently migrating to high-income countries has been observed.[27] It is estimated that approximately two-thirds of nursing students from LM-income countries (64.2%) intend to leave their countries to work elsewhere.[28] Globally, in 2018, approximately 3.7 million nurses worldwide were born or trained in a different country to where they are practising, representing 13% of the global nursing workforce. This proportion rises to 15.2% in high-income countries but remains below 2% in other income group countries.[8] These patterns indicate that nurses trained in LI/LMI countries are often moving abroad, particularly to high-income nations, contributing to workforce shortages in their home countries.

Remuneration as a key retention factor

One of the primary drivers reported by the NNAs of increasing workforce shortages is poor working conditions, specifically inadequate remuneration of the nursing workforce. About 70% (72.1%) of NNAs reported that nursing salaries have not changed since 2021, with more than one-third (36.4%) suggesting that factors such as inflation and the rising cost of living mean there has been a real decrease in the base salary. Nursing has been historically undervalued relative to other health professions, with some suggesting that this is based on gender biases.[29] As a result nursing salaries are often low relative to the demands of the job and compared to professions requiring similar level of training. NNAs in this survey reported that because of this, nurses in their country had been observed leaving the health care sector to seek employment in other industries with better pay and working conditions. These findings are supported by other research on pay satisfaction. A 2021 systematic review of factors influencing retention among hospital nurses found that, among other factors, remuneration was a significant influence on staff turnover.[30]

National Workforce Strategies

While many NNAs mentioned the need for increased government investment, support, and the development of national nursing workforce strategies as necessary steps to address workforce challenges, only half (51.5%) reported that their country had national level nursing workforce plans or strategies in place. The WHO Global Strategic Directions for Nursing and Midwifery outlines a framework for developing workforce strategies, emphasising the need to not only recruit new nurses but also to ensure that existing staff are supported and retained through improved working conditions, adequate remuneration, and professional development opportunities.[16] However, findings suggest that even in countries that do have a national strategy, alignment with WHO recommendations is often weak, with 43.8% of NNAs reporting little to no alignment, and the same proportion suggesting only a moderate level of alignment.

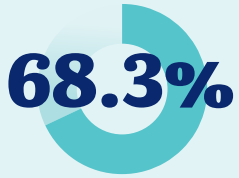
Conclusion

An effective global approach to achieving nurse workforce sustainability requires a comprehensive and coordinated response at local, national, and international levels. Results from this survey highlight the need to develop long-term strategies that not only address the recruitment of new nurses, but also support well-being of existing staff and other important retention factors, such as pay. With respect to addressing workforce sustainability, NNAs spoke largely of reforms to improve the working conditions for nurses, including mandating staffing levels to ensure nurses aren't overworked, reducing exposure to psychosocial risks, including burnout, improving nursing pay in line with international standards and domestic comparability (to other professions), and investments in mental health supports for nurses. While such strategies have previously been identified as effective in improving retention, leadership buy-in at all levels within a health system is needed.[31] Governments and health care organizations must work collaboratively to ensure the appropriate legislation, regulations and policies are in place as an optimal foundation on which to drive change across the sector and reverse this apparent trend.

3. SAFETY AND WELL-BEING

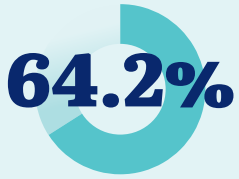
The following chapter focuses on the safety and well-being of nurses and patients globally, including the policies in place to ensure safe staffing levels and how nurses are protected from encountering violence and aggression in the workplace.

Summary of findings



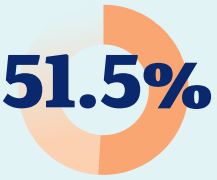
Over two-thirds (68.3%) of NNAs reported that their country had policies to prevent workplace violence against staff.

Approximately two-thirds (64.1%) and (69.7%) of NNAs reported not having polices to ensure appropriate skill mix and adequate staffing levels, respectively.

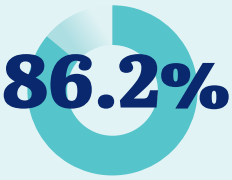


Around two-thirds (64.2%) reported that their country's health care system is experiencing a shortage of nursing staff that is making it difficult to achieve a safe environment for patient/client care.

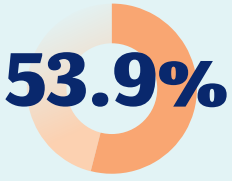
Just over half (51.5%) of NNAs reported having policies to support new graduates or inexperienced staff.

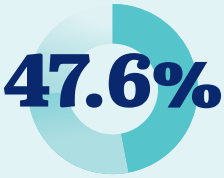


The vast majority (86.2%) of NNAs reported that nurses in their country have experienced instances of violence or hostility perpetrated by patients or the general public.



Just over half (53.9%) of NNAs reported that, considering their current health care systems and the way the nursing profession currently operates, their country will be able to, at minimum, moderately meet health needs of their nation over the next 20 years.





Just under half (47.6%) of NNAs reported having polices to ensure that nurses had access to workplace psychological or mental health support.

More than two-thirds (71.0%) or NNAs reported that nurses had experienced instances of violence or hostility perpetrated by other employees.

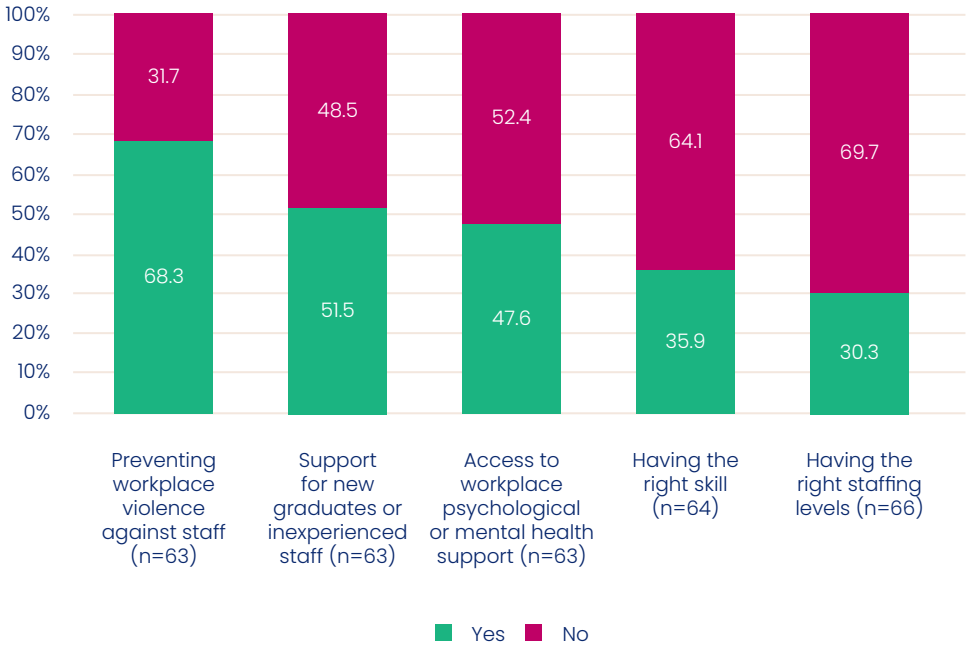
3.1 Workforce policies to support nurse safety

Respondents were asked about whether there were workforce policies in place to ensure the safety and well-being of nurses in their country, including: (i) preventing workplace violence against staff, (ii) support for new graduates or inexperienced staff, (iii) access to workplace psychological or mental health support, (iv) having the right skill mix and (v) having the right staff levels (Figure 12). Note, the ordering of policies reported here is based on the most frequently indicated to the least, and is not the ordering of policies in the survey.

The majority of NNAs reported that their country had policies to prevent workplace violence against staff (n= 43, 68.3%) and just over half (n=34, 51.5%) reported having policies to support new graduates or inexperienced staff. Just under half (n=30, 47.6%) reported having polices to ensure that nurses had access to workplace psychological or mental health support.

Conversely, approximately two-thirds reported not having polices to ensure appropriate skill mix (n=41, 64.1%) or adequate staffing levels (n=46, 69.7%), respectively, indicating that these aspects of ensuring safety and well-being of nurses in their country are receiving the least focus.

Figure 12. **Presence of workforce policies in place to ensure safety and well-being of nurses.**



Respondents who had these policies in place were asked to rate the quality of these from very poor to excellent (Table 13). Patterns were similar across all policy categories, with the exception of right staffing levels. While across all policy categories 'fair' was the most common rating, notably polices regarding staffing levels had only one respondent (n=8.3%) who rated this policy as very good and one-third (n=4, 33.3%) who rated it as poor or very poor. It is worth noting that there were a lower number of respondents for skill mix and staffing levels.

Table 13. **Quality assessment of workforce policies in place to ensure safety and well-being of nurses.**

	Support for graduates (n=23)	Mental health support (n=23)	Preventing violence (n=30)	Skill mix (n=15)	Staffing levels (n=12)
Poor or Very poor	17.4%	21.7%	23.3%	20.0%	**33.3%**
Fair	**47.8%**	**39.1%**	**40.0%**	**33.3%**	**33.3%**
Good	13.0%	21.7%	13.3%	**33.3%**	25.0%
Very good or Excellent	21.7%	17.4%	23.4%	13.3%*	8.3%*

Note. * n=0 respondents indicated 'Excellent' for Skill mix or Staffing levels.

3.2 Violence and hostility directed towards nurses

National nurses' associations were asked a series of questions related to violence directed towards nurses in their country (Table 14). When asked if nurses in their country have experienced instances of violence from patients or the general public, the vast majority reported that they had (n=56, 86.2%). Further, when asked if nurses had experienced instances of violence from other employees, more than two-thirds reported that they had (n=44, 71.0%). When analysed by income group, there was a trend for increasing exposure to violence from patients or the general public as income increased. However, the reverse trend was observed for exposure to violence from other employees where they work, with those from LI/LMI countries more frequently reporting this source of violence.

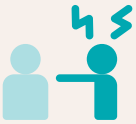
Table 14. **Reported exposure to violence from patients/general public and other employees.**

	Patients or the general public		Other employees where they work	
	n	%	n	%
Low/LM income	16	80.0	14	77.8
Upper middle income	13	86.7	10	66.7
High income	27	90.0	20	69.0
Overall	56	86.2	44	71.0

Respondents were asked to describe what has been observed in their country in relation to violence or hostility towards nurses by patients or the general public. To provide structure to the analysis process, responses have been deductively mapped against the framework of workplace violence proposed by Schulz-Quach et al (2025).[32] The framework identifies five sources of risk: organizational, societal, clinical, environmental and economic. Organizational factors include inadequate leadership, training, and policies. Societal factors highlight issues such as vulnerable patient populations and negative societal attitudes toward health care workers. Clinical risk factors focus on patient-related concerns, including intoxication, psychiatric conditions, and long wait times. Environmental factors include insufficient security measures, poor facility design, and exposure to noise. Economic factors include budget limitations and staffing shortages. These risk factors collectively contribute to an increased likelihood of exposure to workplace violence for nurses. Analysis of comments and examples are provided in Table 15, below.

Table 15. **Qualitative assessment of risk factors contributing to violence and hostility towards nurses.**

RISK FACTOR CATEGORY	ANALYSIS AND COMMENTS
 **Organizational risk factors**	Organizational risk factors include lack of leadership, poor organizational culture, lack of policies and excessive work. Many NNAs mentioned the poor reporting culture concerning violence that was observed among nurses. This lack of reporting was often attributed to perceptions that occupational violence and aggression was a normal and acceptable part of the job, fear of retaliation, or a general lack of belief that reports contribute to prevention. "...a substantial percentage of nurses have experienced some form of violence at work, with many incidents going unreported due to fear of retaliation or the perception that violence is "part of the job." Respondents also mentioned the lack of workplace policies and training of nurses on how to respond to or de-escalate situations of violence or hostility.
 **Societal risk factors**	Societal risk factors include gender and race-based discrimination, hostility, and violence. This was articulated through NNAs describing a sense of low societal respect for and recognition of nursing as a profession, or placing undue blame on nurses for the quality of care delivered to them. "Poor concepts of nursing care by society. Physical, verbal and psychological aggression in the face of poor quality care and the complaints or demands felt by patients or the general public. Undervaluation due to ignorance of professional responsibilities."

RISK FACTOR CATEGORY	ANALYSIS AND COMMENTS
 **Clinical risk factors**	Clinical risk factors include patients, workflows and work pressure. Respondents often mentioned clinical risk factors in the form of frustration and aggression displayed by patients towards nurses due to long wait times. "In [country name removed], 82.2% of nurses reported experiencing some form of violence, often linked to patient frustrations, such as long wait times for services." Other factors, such as trying to manage intoxicated patients or patients with psychiatric disorders, were also mentioned as placing nurses at a higher risk of facing workplace violence. "The causes of the violence were as follows: Criticism of the care provided, cognitive problems on the part of the perpetrators, waiting times deemed too long, drunkenness or drug use."
 **Environmental risk factors**	Environmental risk factors include lack of personal security, inadequate barriers/protections in place, poor temperature controls, and inadequate escape options. Here, respondents reported lack of security and lack of escape options from violent situations as barriers to addressing incidents of violence and aggression as they occurred. "...Factors contributing to this violence include the high-stress environment of health care settings and inadequate security measures, leading to an unsafe working atmosphere for nurses."
 **Economic risk factors**	Economical risk factors include lack of budget for prevention programmes and inadequate funds to invest in protection. Respondents mentioned outsourcing of security to local law enforcement, which placed nurses at risk of harm over an extended period of time when security or police were not present. "The police will only stay an hour after bringing a violent patient in putting health care workers, frontline reception, patients waiting for care, at risk. The police do not have enough resource..." Further, the lack of national level laws and government investment dedicated to effective workplace violence and aggression management was also mentioned.

Regarding what has been observed in relation to violence and hostility towards nurses by other employees, respondents mentioned bullying, which was often perpetrated due to discrimination based on race: this was particularly prevalent among international migrant nurses. Respondents also mentioned power imbalances and hostility displayed by other clinicians towards nurses. The cause of hostility, whether it be nurse-to-nurse or other clinician to nurse, was often attributed to high-stress workplace environments.

> *"Nurses sometimes face aggression and bullying from colleagues in the workplace, which can create a toxic work environment. This hostility may stem from high-stress conditions, inadequate staffing levels, and the pressures associated with the demanding nature of health care work. The impact of such aggression can be profound, affecting nurses' mental health, job satisfaction, and overall workplace morale. It can lead to increased absenteeism and turnover rates, further exacerbating staffing shortages."*

3.3 Nurse well-being

Respondents were asked to describe the main contributing factors to the mental and physical health and well-being of the nursing workforce in their country. To support interpretation of how the risk factors related to the organizational and broader health system environment, responses were deductively themed against the psychosocial risk factors proposed by Deady et al (Table 16).[33] Here, psychosocial risk factors are organised into three domains: job factors, operational and team factors, and systems and policy factors. Job factors include elements such as job insecurity, role conflict, high workloads, and low job control, all of which contribute to stress and burnout. Operational and team factors focus on workplace dynamics, including conflicts, bullying, lack of support from colleagues or supervisors, and hazardous working environments. Systems and policy include organizational culture, procedural justice, and organizational changes.

Table 16. **Qualitative assessment of contributing factors to the health and well-being of nurses.**

CONTRIBUTING FACTOR CATEGORY	ANALYSIS AND COMMENTS
Job factors	A range of job factors were described, including role overload (i.e., high workloads and job demands), poor working conditions, high-risk work (i.e., shift work, psychically demanding work, late night work without proper security measures, exposure to substances, managing traumatic experiences), effort/reward imbalances (i.e., low wages), and low job control, with most tasks delegated by other health care staff. "Large workloads and time pressure and high emotional demands are the most widespread problems related to nurses' mental and physical health and well-being... Nurses are in general more exposed to these factors compared to other professions..."

CONTRIBUTING FACTOR CATEGORY	ANALYSIS AND COMMENTS
 **Operational & team factors**	Operational and team factors that were mentioned include a lack of support by managers, a culture of bullying and harassment, exposure to hazardous physical working conditions, and poor organization of the workforce, leading to understaffing and high patient-to-nurse ratios. "'Nurses may be confronted with various risk factors due to their exposure to environmental factors in the workplace... This exposure may be responsible for the development of certain pathologies (cancer, etc.). Nurses face a variety of risk factors: - Chemical risk - Biological risk - Physical risk (exposure to ionising radiation, carrying heavy loads)..."
 **System & policy factors**	Respondents mentioned the lack of policies to protect the mental well-being of nurses, such as few mental health support services and a lack of professional supervision and mentorship. At a higher level, respondents mentioned a lack of government support towards addressing mental health risk factors outside of work and improving overall quality of life. "...Inadequate resources, insufficient breaks, and lack of managerial support further exacerbate stress and job dissatisfaction, severely impacting nurses' mental health..." "...Inadequate compensation relative to workload and responsibilities, causing financial stress and potentially forcing nurses to work multiple jobs. Difficulty balancing personal life with irregular shift patterns, impacting sleep quality, personal relationships, and overall quality of life..."

3.4 Safe staffing

Respondents (n=67) were asked to rate their agreement with the statement 'Your country's health care system is experiencing a shortage of nursing staff that is making it difficult to achieve a safe environment for patient/client care' (Table 17). The majority of respondents (n=43 ,64.2%) either agreed or strongly agreed with the statement. The highest levels of agreement were from NNAs in high-income countries; 76.7% (n=23) of whom agreed or strongly agreed that the shortage was affecting safe care. This was followed by respondents from low-income countries (n= 12, 60%).

Table 17. **NNA assessment of if nursing workforce shortages are affecting the delivery of safe care.**

	Low/LM Income (n=20)	Upper Middle Income (n=17)	High Income (n=30)	Overall (n=67)
Strongly disagree	20.0%	29.4%	10.0%	17.9%
Disagree	5.0%	17.6%	10.0%	10.4%
Neither agree nor disagree	15.0%	5.9%	3.3%	7.5%
Agree	**30.0%**	**35.3%**	**46.7%**	**38.8%**
Strongly agree	**30.0%**	11.8%	30.0%	25.4%

Respondents (n=65) were asked to consider their current health care systems and the way the nursing profession currently operates, and how they think this system will be able to meet health needs of their nation over the next 20 years (Table 18). While responses varied, the majority indicated that their health care systems would be able to meet a little to a moderate amount of the needs (n=52, 80%). Some participants indicated that they did not think their current health system would be able to meet those needs at all (n=6, 9.2%). Of note, NNAs from high-income countries were less optimistic than those from other income groups, with not one indicating that their health system could meet a lot or a great deal of their country's health care needs the way the current system is operating.

Table 18. **NNA assessment of how well their country's current health care systems will be able to meet health needs over the next 20 years.**

	Low/LM Income (n=19)	Upper Middle Income (n=16)	High Income (n=30)	Overall (n=65)
Not at all	10.5%	12.5%	6.7%	9.2%
A little	**47.4%**	**31.3%**	33.3%	36.9%
A moderate amount	31.6%	25.0%	**60.0%**	**43.1%**
A lot	5.3%	25.0%	0.0%	7.7%
A great deal	5.3%	6.3%	0.0%	3.1%

3.5 Discussion

The safety and well-being of the workforce across all sectors is paramount to enhancing productivity and improving outcomes.[34] This is particularly significant in health care, where the workforce directly interacts with patients, meaning their well-being is essential to the quality of care delivered. The physical, mental, and emotional well-being of nursing staff directly influences their ability to provide safe, effective, and compassionate care.[17,18] It is therefore critical that health care organizations, policymakers, and governments recognise and invest in comprehensive strategies to safeguard and enhance the well-being of nurses.

This section was designed to answer the research question:

1. What level of awareness do countries have in relation to prioritisation and response to provide safe and healthy working conditions for nurses?

Support for new graduates

To assess this awareness, the survey asked NNAs whether their country had national policies in place aimed at ensuring the safety and well-being of nurses. Almost half (48.5%) of the NNAs reported a lack of policies/strategies in place to support the integration of new graduates into the workforce. This has implications in terms of recruitment and retention, and safety of care. The phenomenon of 'transition shock', describing the initial shock of new nurses transitioning from the protected environment of academia to the unfamiliar and stressful context of professional practice,[35] has been described as driving increasing new graduate attrition rates.[36] Protective factors against transition shock and successful adoption of newly graduate nurses, have been identified as policies and strategies that prepare and support new nurses.[37] Turnover rates highlight the critical importance of support during this period to ensure that new nurses effectively integrate into and remain in the nursing workforce.

Mental health and psychological support

In this survey, more than half (52.4%) of the NNAs indicated that nurses in their country lacked appropriate access to workplace psychological or mental health support. Nurses are, in the line of their work, constantly exposed to emotionally draining stressors, which increases their risk of occupational burnout and other forms of psychosocial harm.[38] As frontline care staff who interact directly with patients, nurses are more suspectable to burnout than other health care staff,[39] with a 2020 meta-analysis estimating the global prevalence of high burnout symptoms among nurses at approximately 11.2%.[40] High rates of burnout among health care staff has been associated with higher staff turnover.[41]

Beyond burnout, high rates of depression, anxiety, and psychological distress have been observed among nursing populations, particularly during the COVID-19 pandemic.[42-44] The high rate of mental ill health and burnout among nurses have been attributed to high work demands, low control, and low support at work.[38] Given the findings of these studies, the reported lack of psychological/mental health support for nurses across respondent countries is a concern, indicating that many nurses may be facing continued struggles with mental health, with low to no levels of occupational support.

Workplace violence

Among questions regarding polices aimed at ensuring the safety and well-being of nurses, the highest proportion of NNA's indicated that their country had policies in place to prevent workplace violence against staff (68.3%). However, the survey also indicated that these policies were sub-par, with 63.3% of NNAs indicating that the implemented policies were of fair to very poor quality. In addition, the vast majority of NNAs reported that nurses had experiences some form of violence or hostility from patients or the general public (86.2%) or from other employees (71.0%). Global rates of violence exposure among nurses have been estimated at 39.7% for bullying, 66.9 % for non-physical violence, 36.4 % for physical assault, and 25% for sexual harassment.[45] Experiences of violence and/or aggression by nurses, beyond the direct distress and physical harm caused by the incidence, can lead to a wide range of negative outcomes, including increased risk of mental disorders, such as post-traumatic stress disorder and depression,[46,47] higher rates of occupational burnout and absenteeism,[48,49] sleep disturbances,[50] and impaired jobs performance, such as reduced quality of clinical care.[49,51,52] While many interventions geared towards the prevention and management of violence against nurses have been implemented – including zero tolerance policies, risk management programmes, aggression management teams, and reporting systems – the increasing prevalence of violence and aggression directed towards nurses suggest that more work is required.

Safe staffing and skill mix

Policies regarding skill mixes and safe staffing levels were the least frequently reported by NNAs, with 64.1% and 69.7% reporting that these were not in place in their country respectively. These polices aim to ensure that health care facilities have the appropriate number of staff with the necessary skills and experience to deliver quality and safe patient care. These polices also ensure that nurses are appropriately supported by other staff and have enough staff to ensure they do not face undue pressures in the workplace. Research has demonstrated a relationship between nurse-to-patient ratios and patient outcomes such as mortality.[53,54] The implementation of nurse-to-patient ratios has also been associated with a number of nurse outcomes, including better job satisfaction and occupational injury and illness rates.[55] Findings indicate the importance of staffing level to protect patients and nurses alike.

When respondents were asked about nursing staff availability in their country and its impact on achieving a safe environment for patient care, over two-thirds (64.2%) of NNAs either 'agreed' or 'strongly agreed' that this was a concern. A systematic review of factors affecting the shortage of nursing workforce identified that shortages are driven by poor recruitment, including inadequate workforce planning, decreasing nurse enrolment and lack of training for new nurses, importing nurses from other countries rather than training local nurses, and a lack of retention strategies, including policies to support the workforce.[56] Furthermore, nurse overwork, low salary, and poor working conditions were determinates of attrition.[56]

When the NNAs were asked to consider their current health care systems and the way the nursing profession currently operates, and how they think this system will be able to meet health needs of their nation over the next 20 years, a combined 46.1%, indicated that the current system would only meets need 'a little' or 'not at all'. Such findings point towards the need to establish more strategic nursing workforce planning, with a focus on safe staffing and appropriate skill mix to ensure that health needs at a national level can be met.

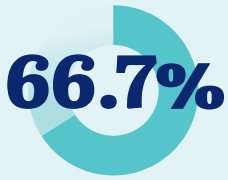
Conclusion

Findings from this survey highlight a gap in policies and strategies aimed at ensuring the safety and well-being of the nursing workforce. Although awareness of workplace challenges likely already exists and cannot be determined by these results alone, the results of this survey suggest that many countries lack comprehensive policies to support new nurses, provide mental health resources, prevent workplace violence, and enforce safe staffing levels. Strengthening these policies is essential to ensuring that nurses are able to continue to deliver high-quality care while maintaining their own well-being.

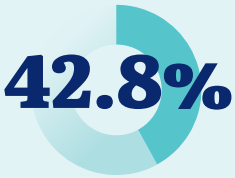
4. INTERNATIONAL MOBILITY AND MIGRATION

The following chapter covers issues associated with international mobility and migration of nurses. This includes observed changes in relation to emigration and immigration, the effects of migration on the nursing workforce, and the factors contributing to international mobility.

Summary of findings



Nursing emigration was inversely related to income groups, with 66.7% of NNAs from LI/LMI countries reporting a moderate to great increase compared to 21.4% of NNAs from high-income countries.



Immigration of the nursing workforce was related to income groups, with 42.8% of NNAs from high-income counties reporting a moderate or great increase compared to 20.0% of those from LI/LMI countries.

NNAs from LI/LMI income countries also more frequently strongly disagreed that their government is managing nursing emigration effectively. They also more frequently agreed that this was making it hard to maintain a workforce capable of meeting current and future workforce demands compared to countries in the other income groups.

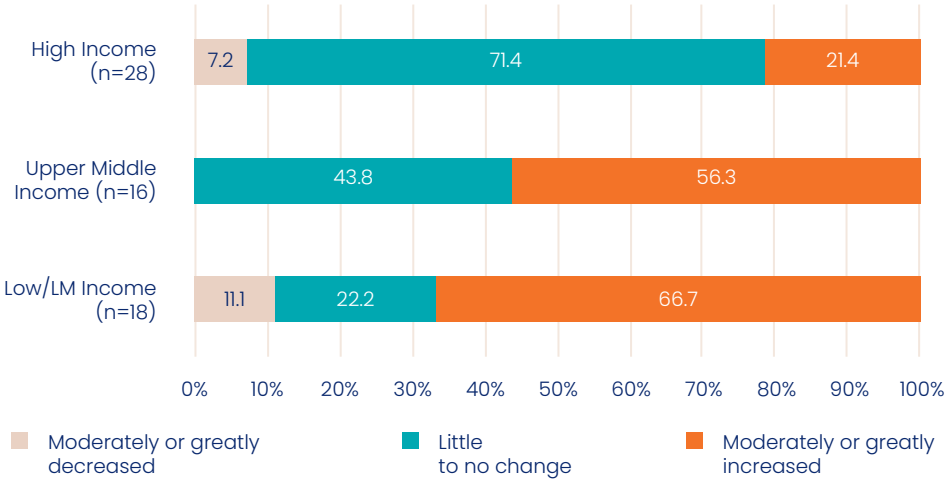
NNAs reported the top five factors contributing to emigration as: poor salary, poor working conditions, lack of opportunity for career advancement, nurse contribution undervalued by government and policy makers and lack of employment opportunities.

NNAs reported the top five factors contributing to immigration as: good living conditions, abundance of employment opportunities, internationally competitive salary, good health care infrastructure and low level of crime.

4.1 Emigration

Respondents were asked a series of questions related to emigration. First, respondents (n=62) were asked about the observed change in the number of nurses emigrating (leaving the country to settle permanently in another) *from* their country since 2021 (Figure 13). Overall, half (n=31, 50.0%) of respondents observed little to no change. However, when analysed by economic group there was a clear pattern of increasing proportion of NNAs reporting that emigration rates had moderately or greatly increased as income level decreased. That is, two-thirds of NNAs from LI/LMI countries (n=12, 66.7%) and over half of the upper-middle-income countries (n=9, 56.3%) observed a moderate to great increase, while only one in five (n=6, 21.4%) high-income countries reported an increase. Further, a large majority (n=20, 71.4%) of high-income countries reported no change and some reported a decline (n=2, 7.2%).

Figure 13. **NNA assessment of changes in the number of nurses emigrating since 2021.**



Respondents (n=63) were asked to rate their agreement with a series of statements related to the effect of emigration on their country (Table 19), including: (i) 'Our Government is responding appropriately to manage nursing emigration effectively', (ii) 'Emigration of nurses from our country makes it very difficult to maintain a sustainable workforce that is able to meet *current* health care demands', and (iii) 'Emigration of nurses from our country makes it very difficult to maintain a sustainable workforce that is able to meet *future* health care demands'.

i. **'Our Government is responding appropriately to manage nursing emigration effectively'**: While responses varied, there was a higher proportion, almost half, of NNAs that either disagreed or strongly disagreed with this statement (n=31, 49.2%). The greatest proportion of these respondents were from countries in LI/LMI countries (n=11, 57.9%) and upper-middle income countries (n=9, 60.0%), compared with those from high income countries (n=11, 37.9%). There was a lower proportion overall who expressed agreement or strong agreement with the statement (n=17, 27.0%) suggesting that, collectively, NNAs' perception tended to be that Governments are not yet responding to nursing emigration, and the increased rate of emigration, effectively.

ii. **'Emigration of nurses from our country makes it very difficult to maintain a sustainable workforce that is able to meet current health care demands':** Overall responses varied but there was a trend towards increasing agreement with the statement as country income group declined. That is, NNAs from LI/LMI countries had a higher proportion who agreed or strongly agreed with this statement (n=13, 65.0%) compared to those from upper-middle-income (n=7, 46.6%) and high-income (n=9, 31.0%) countries.

iii. **'Emigration of nurses from our country makes it very difficult to maintain a sustainable workforce that is able to meet future health care demands':** A similar trend was observed when asked to rate agreement with regards to meeting *future* demands, with a higher proportion of NNAs from LI/LMI countries agreeing or strongly agreeing that this would be a challenge (n=12, 60.0%), compared to 46.2% (n=7) of upper-middle income countries and 43.3% (n=9) from high-income countries.

Table 19. **NNA's level of agreement with statements related to emigration in their country.**

	Low/LM Income	Upper Middle Income	High Income	Overall
Our Government is responding appropriately to manage nursing emigration effectively				
	(n=19)	(n=15)	(n=29)	(n=63)
Strongly disagree	**31.6%**	26.7%	10.3%	20.6%
Disagree	26.3%	**33.3%**	27.6%	**28.6%**
Neither agree nor disagree	15.8%	0.0%	**41.4%**	23.8%
Agree	26.3%	**33.3%**	20.7%	25.4%
Strongly agree	0.0%	6.7%	0.0%	1.6%
Nurse emigration makes it difficult to maintain a sustainable workforce to meet *current* needs				
	(n=20)	(n=15)	(n=29)	(n=64)
Strongly disagree	10.0%	20.0%	17.2%	15.6%
Disagree	15.0%	20.0%	**27.6%**	**21.9%**
Neither agree nor disagree	10.0%	13.3%	24.1%	17.2%
Agree	30.0%	13.3%	17.2%	20.3%
Strongly agree	**35.0%**	**33.3%**	13.8%	25.0%
Nurse emigration makes it difficult to maintain a sustainable workforce to meet *future* needs				
	(n=20)	(n=13)	(n=30)	(n=63)
Strongly disagree	15.0%	15.4%	23.3%	19.0%
Disagree	15.0%	15.4%	16.7%	15.9%
Neither agree nor disagree	10.0%	**23.1%**	16.7%	15.9%
Agree	**30.0%**	**23.1%**	**30.0%**	**28.6%**
Strongly agree	**30.0%**	**23.1%**	13.3%	20.6%

Respondents were then asked to rate the top five most influential factors that they believe contributed to nursing emigration out their country (Table 20). The top five most influential factors were rated as poor salary (72.1%), poor working conditions (69.1%), lack of opportunity for career advancement (61.8%), nurse contributions being undervalued by government and policy makers (54.4%) and lack of employment opportunities (36.8%). Factors external to the immediate working environment or the nursing profession were less frequently reported, in particular, broader living challenges in the country or region, such as conflict or other crises (8.8%), racial/ideological tension (1.5%) or high levels of crime (0.0%).

Table 20. **Factors that contributed to nursing emigration in rank order.**

	n	%
Poor salary	**49**	**72.1%**
Poor working conditions	**47**	**69.1%**
Lack of opportunity for career advancement	**42**	**61.8%**
Nurse contribution undervalued by government and policy makers	**37**	**54.4%**
Lack of employment opportunities	**25**	**36.8%**
High cost of living	20	29.4%
Low societal respect and recognition for nurses	15	22.1%
Poor health care infrastructure	9	13.2%
Lack of educational opportunities	9	13.2%
Conflict or other crises	6	8.8%
Formal agreements or bilateral/MOUs with other countries	5	7.4%
Poor living conditions	4	5.9%
Racial/ideological tension	1	1.5%
High level of crime	0	0.0%
Other	10	14.7%

Note. Multiple selections permitted per respondent. Hence, response numbers and percentages will sum to greater than the total number of respondents and 100%, respectively.

Respondents were asked to describe the main emigration issue faced by their country. Notably a few respondents reported the emigration of the nursing workforce was not an issue in their country (n=11, 16.2%), with most of these being NNAs in high-income countries. Of those who reported experiencing emigration-related challenges, many were respondents from NNAs in LI/LMI countries. These NNAs described an 'exodus' of nurses moving to other, typically higher-income, countries to look for more competitive wages, and better living and working conditions. A consequence of those nurses leaving the country was additional strain on the workforce that remained.

> *"...in summary - low wages, heavy workloads and limited career prospects have led to significant emigration of [country name removed] nurses in search of better opportunities abroad."*
>
> *"Foreign countries offer better salaries, recognition and employment opportunities."*
>
> *"... because of nurses migrating to other countries the health institution in [country name removed] are actually facing an acute shortage of nurses which is causing a heavy workload on the remaining nurses..."*

Some NNAs reported that barriers, such as language and government policies, have limited nurses' freedoms to seek opportunities abroad. This resulted in nurses feeling burnt-out, worsening workforce performance.

> *"The government's recent decision to stop issuing letters of good standing has restricted nurses' ability to seek opportunities abroad, limiting their freedom to choose whether to stay or leave. This has contributed to widespread burnout among nursing professionals, who face increasing workloads and emotional strain in an under-resourced system."*

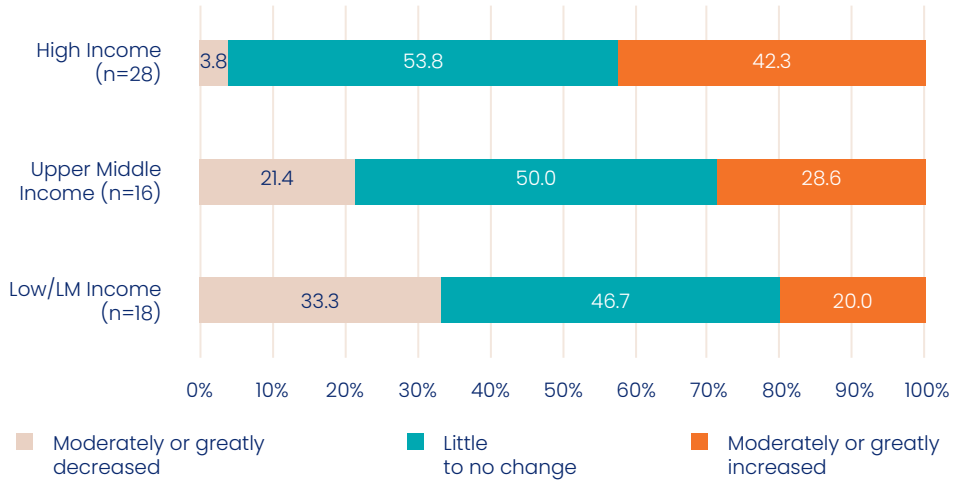
For nurses who choose to emigrate, some NNAs noted the need for better international standards to protect these professionals.

> *"...Lack of legislation with a fair and egalitarian approach to professional migrants. Lack of regulation of salaries of health professionals who migrate to countries with a higher economic status than their country of origin."*

4.2 Immigration

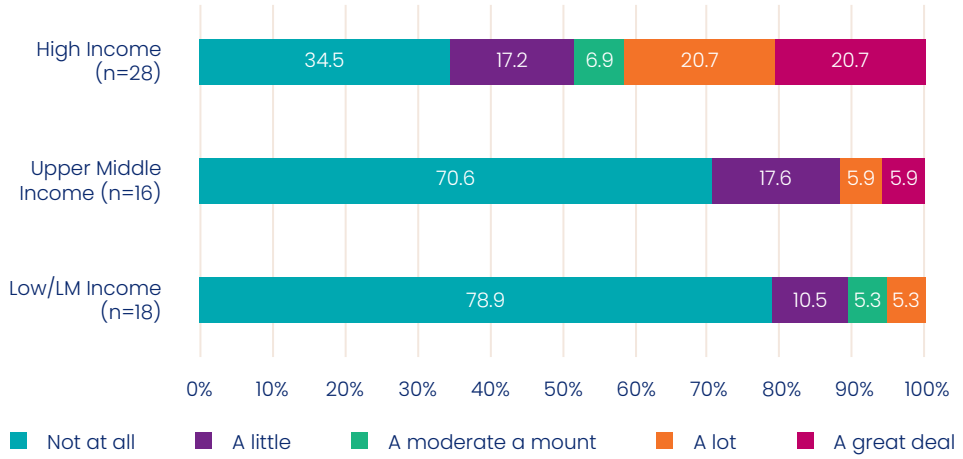
Respondents were asked a series of questions related to immigration. In the context of this study, immigration was defined as nurses coming to a country to settle permanently. First, respondents (n=55) were asked about the observed change in the number of nurses immigrating *into* their country since 2021 (Figure 14). While approximately half of respondents (n=28, 51.0%) observed little to no change, differences were observed between the income groups and demonstrated the opposite trend to emigration of nurses. NNAs from high-income countries more frequently reported an increase (n=11, 42.3%) in nurses migrating to their country compared with NNAs from upper-middle-income countries (n=4, 28.6%), with few from LI/LMI countries reporting an increase (n=3, 20.0%). Conversely, NNAs from LI/LMI countries more frequently reported a decrease in immigration rates (n=6, 33.3%), followed by upper-middle income countries (n=3, 21.4%) with very few high-income countries reporting a decrease in immigration rates (n=1, 3.8%).

Figure 14. **NNA assessment of changes in the number of nurses immigrating since 2021.**



Respondents (n=65) were asked to what degree their country currently relies on the immigration of nurses to meet its workforce demands (Figure 15). Overall, just over half reported that they were not at all or only a little reliant on migrant nurses (n=37, 56.9%). However, when analysed by income group, there was a trend observed towards lower income countries being less reliant on immigration compared with higher income countries. Approximately nine out of ten NNAs in LI/LMI (n=17, 89.5%) and upper-middle-income (n=15, 88.2%) countries reported that they were 'not at all' or 'a little reliant', compared with approximately half of high-income countries (n=15, 51.7%). There was a difference in response distribution among NNAs from high-income countries, with four in ten indicating that they were a lot or a great deal reliant on immigration (n=12, 41.4%) and approximately two-thirds being at least a little reliant on nurse immigration for their workforce needs (n=19, 65.5%).

Figure 15. **NNA assessment of country reliance on nurse immigration to meet current needs.**



Respondents were asked to rate their agreement with a series of statements associated with nurse immigration (Table 21). These statements were: (i) 'Immigration of nurses is an issue in our country', (ii) 'Our government is responding appropriately to manage nursing immigration effectively', and (iii) 'International nurses being recruited to/immigrating to our country are integrating well into our nursing workforce'. The statements and analysis of findings are described below:

i. **'Immigration of nurses is an issue in our country'**: Of those who responded (n=65), there was an even divide between countries who agreed or strongly agreed it was an issue (n=29, 44.6%) and those who disagreed or strongly disagreed it was an issue (n=29, 44.6%). There was a higher proportion (n=15, 53.6%) of NNAs from high-income countries who agreed or strongly agreed that it was an issue in their country.

ii. **'Our government is responding appropriately to manage nursing immigration effectively'**: Of those who responded (n=59), there was a trend towards a higher proportion of disagreement (n=28, 47.4%) compared with agreement (n=14, 23.7%). Of note, not one (n=0) NNA from a high-income country strongly agreed with this statement.

iii. **'International nurses being recruited to/ immigrating to our country are integrating well into our nursing workforce'**: Of those who responded (n=57), there was a tendency to agree with the statement by NNAs (n=24, 42.1% who agreed or strongly agreed vs n=16, 28.1% who disagreed or strongly disagreed). There was no discernible pattern or trend observed between different income groups.

Table 21. NNAs' level of agreement with statements related to immigration in their country.

	Low/LM Income	Upper Middle Income	High Income	Overall
Immigration of nurses is an issue in our country				
	(n=20)	**(n=17)**	**(n=28)**	**(n=65)**
Strongly disagree	40.0%	29.4%	10.7%	24.6%
Disagree	10.0%	23.5%	25.0%	20.0%
Neither agree nor disagree	5.0%	17.6%	10.7%	10.8%
Agree	20.0%	11.8%	28.6%	21.5%
Strongly agree	25.0%	17.6%	25.0%	23.1%
Our government is responding appropriately to manage nursing immigration effectively				
	(n=18)	**(n=14)**	**(n=27)**	**(n=59)**
Strongly disagree	38.9%	7.1%	11.1%	18.6%
Disagree	22.2%	14.3%	40.7%	28.8%
Neither agree nor disagree	11.1%	50.0%	29.6%	28.8%
Agree	22.2%	14.3%	18.5%	18.6%
Strongly agree	5.6%	14.3%	0.0%	5.1%
International nurses being recruited to/ immigrating to our country are integrating well into our nursing workforce				
	(n=16)	**(n=13)**	**(n=28)**	**(n=57)**
Strongly disagree	18.8%	23.1%	3.6%	12.3%
Disagree	6.3%	7.7%	25.0%	15.8%
Neither agree nor disagree	25.0%	38.5%	28.6%	29.8%
Agree	31.3%	23.1%	42.9%	35.1%
Strongly agree	18.8%	7.7%	0.0%	7.0%

Respondents were asked to rate the top five most influential factors that they believe contributed to nursing immigration to their country (Table 22). The top five most influential factors were rated as good living conditions (35.3%), an abundance of employment opportunities (29.4%), internationally competitive salary (29.4%), good health care infrastructure (19.1%), and low level of crimes (19.1%). The top five factors were not as frequently selected compared with factors contributing to nurse emigration (see Table 20) and overall, there was a more even distribution of responses.

Further, when comparing between ranking of factors of emigration and immigration, the top five did not necessarily directly equate. For example, while salary was mentioned on both lists (first 72.1% on factors contributing to emigration vs equal second, 29.4% on factors contributing to immigration), working conditions was ranked second (69.1%) on factors contributing to emigration but equal tenth (14.7%) on factors contributing to immigration. Also, some factors that were perceived to affect immigration to a country (e.g. low level of crime in the destination country; ranked fifth, 19.1%) were not necessarily a factor identified as driving nurse emigration (e.g. high level of crime in the source country; ranked fourteenth, 0.0%).

Table 22. **Factors that contributed to nursing immigration in rank order.**

	n	%
Good living conditions	**24**	**35.3%**
Abundance of employment opportunities	**20**	**29.4%**
Internationally competitive salary	**20**	**29.4%**
Good health care infrastructure	**13**	**19.1%**
Low level of crime	**13**	**19.1%**
Supportive national policy	12	17.6%
High societal respect and recognition for nurses	12	17.6%
Formal agreements or MOUs with other countries	12	17.6%
Modern health care technologies	11	16.2%
Good working conditions	10	14.7%
Strong national economy	10	14.7%
Attractive nursing migration recruitment policies	9	13.2%
Low cost of living	6	8.8%
Abundance of opportunities for career advancement	3	4.4%
Abundance of educational opportunities	2	2.9%
Other	11	16.2%

Note. Multiple selections permitted per respondent. Hence, response numbers and percentages will sum to greater than the total number of respondents and 100%, respectively.

Respondents were asked to describe the main immigration-related issues faced by their country. The primary concern for many of the NNAs was the risk of exploitation, which can result in migrant nurses being required to take positions with worse working conditions, such as in rural and remote areas, or in settings where poor working conditions create difficulties in maintaining domestic staff.

> *"There is significant risk of exploitation, nurses sent to rural and remote areas are not coping, with reports in aged care of nurses not understanding the sector. Some have poor language skills, are overworked, and have large patient/staff loads with minimal management training."*

NNAs also mentioned concerns regarding migrant nurses facing language barriers and discrimination from patients and other staff. Many NNAs also mentioned issues with qualifications not being internationally recognized or transferable, meaning that many migrant nurses end up working in other sectors.

> *"In our country, without a legal process of homologation and recognition of the degree, it is not permitted to work as nurses. Isolated cases have been reported of nurses who have entered [country name removed] from other countries and, faced with the difficulty of homologation, work in other areas, such as home care."*
>
> *"These nurses are not able to work in nursing roles but are instead placed in low-paid positions as care assistants or practical nurses."*

Respondents were asked to describe the greatest risks to nursing workforce sustainability that international mobility and migration pose in their country. Most NNAs reported that their countries' workforce was, at least to some degree, reliant on international mobility and the migration of nurses to meet workforce demands, making them vulnerable to changes in migration patterns.

> *"The greatest risk to nursing workforce sustainability in [country name removed] due to international mobility and migration is the country's growing reliance on overseas nurses, which creates vulnerabilities in our health care system. As [removed] increasingly depends on internationally educated nurses to fill staffing gaps, it becomes susceptible to global nursing shortages and changes in migration patterns."*

On the other hand, some countries view international mobility as a significant risk to depleting their domestic supply of nurses.

> *"We are losing nursing workforce to other countries..."*

Several NNAs indicated that, in addition to addressing international risks, improving domestic conditions would contribute to the overall sustainability of the workforce.

> *"If we do not incorporate policies to retain nursing staff, we will be doomed to a progressive increase in emigration. Above all, working conditions and the possibility of professional progression and recognition of the high level of training of our nurses must be improved."*
>
> *"We need the government to focus on investment in nursing instead of "quick fixes" with international recruitment..."*

Some NNAs also highlighted the risk posed by "bad actors" in the global nursing workforce mobility landscape, often referring to higher-income countries that "poach" nurses from other nations. This practice was seen as a threat to the balance of nurse distribution worldwide.

> *"It is important to provide opportunities for international nurses, but being seen to 'poach' from poorer countries continues the global nurse resource drain."*

4.3 Discussion

This section aims to address the research question:

1. How has the international mobility, emigration and immigration of nurses affected a country's long-term sustainability of the nursing workforce?

International mobility and migration trends

The results of this survey are consistent with previously reported trends regarding international mobility. Around two thirds (66.7%) of NNAs from LI/LMI countries reported increases in the number of nurses emigrating from their country since 2021, compared to 21.4% of NNAs from high-income countries. Conversely, 42.3% of NNAs from high-income countries reported increases in the number of nurses immigrating to their countries since 2021, compared to 20.0% of NNAs from LI/LMI countries. Further, one third (33.3%) of NNAs from LI/LMI countries reported a moderate to great decrease in immigration, compared to only 3.8% of NNAs from high-income countries. These trends, as reported by the respondent NNAs, supports other research describing the disparities between the international mobility and migration of the nursing workforce. WHO estimates that 15.2% of nurses in high-income countries were born or trained in a different country to the one they are practising in, compared to less than 2% in other income group countries.[8] This suggests that greater numbers of nurses are moving from low income countries to high income countries.[7]

Nursing workforce migration from developing countries to more developed countries is driven by factors such as poor salary, outdated health care technologies, lack of employment opportunities, and poor health care infrastructure.[27] The movement of nurses from lower-income to higher-income countries creates disparities in health care across nations and leads to an insufficient supply of nursing staff in their home countries, increasing the burden on their already over-burdened health care sector. The migration of skilled professionals is colloquially referred to as 'brain drain,' describing how countries lose not only the individual nurse but also the investment made in their education and training.[57]

Over half (57.9%) of NNAs from LI/LMI countries disagreed that their government was appropriately managing nursing outflow, with over two-thirds (65.0%) indicating that this was making it difficult to meet the nation's current health needs. Just under two-thirds (60.0%) indicated that nursing emigration will make it difficult to meet the future health needs of their nation. Disparities resulting from this are exacerbated by some high-income countries, which employ aggressive recruitment strategies, such as creating a streamlined immigration process, when seeking internationally trained nurses to supplement workforce shortages in their country.[58]

Survey findings indicate that high-income countries are more reliant on nurse immigration to sustain their health care systems compared to lower-income nations. A higher proportion of NNAs from high-income countries (41.4%) reported reliance compared to NNAs from upper-middle-income (11.8%) and LI/LMI countries (10.6%). These findings suggest a growing dependence of developed nations on foreign-trained nurses to sustain their health care systems. As migration patterns continue to favour movement toward high-income countries, these nations may increasingly integrate internationally educated nurses into their workforce and rely on this when developing policies around recruitment. However, the over-reliance of international migration may pose a risk to workforce stability.

To address these challenges, WHO established the Global Code of Practice on the International Recruitment of Health Personnel in 2010, encouraging ethical recruitment practices and international cooperation.[59] However, the persistence of workforce imbalances in the 15 years since the Code was endorsed by all WHO member states, suggests that further policy interventions and stronger global collaboration are needed to ensure a more sustainable and equitable distribution of the nursing workforce.

Migration factors

Regarding the main reasons for emigration and immigration, most of these are related to the direct working environment, including nursing salary, working conditions, opportunities for career advancement, and government support. These findings are largely in line with other research.[27,60] While the NNA-reported reasons for emigration and immigration largely aligned, with 36.8% indicating that nurses emigrated due to a lack of employment opportunities and 29.4% stating that nurses immigrated due to an abundance of job opportunities, other factors did not. For instance, while 29.1% (n=13) reported that a low crime rate was a factor attracting nurses to immigrate, no NNAs indicated that high crime levels were a factor driving emigration. These differences suggest a potential disconnect in the perception of the drivers of migration between home and destination countries, with higher-income nations possibly misinterpreting the challenges and priorities influencing migration decisions.

Conclusion

Findings from this survey highlight ongoing disparities in the international mobility and migration of the nursing workforce, with low-income countries experiencing higher rates of nurse emigration, and high-income countries becoming increasingly reliant on foreign-trained nurses to meet workforce demands. While migration presents opportunities for professional growth and, in some circumstances, improving personal situations, it also contributes to workforce shortages in source countries, further straining already overburdened health care systems. Despite efforts, including the WHO Global Code of Practice, challenges remain in ensuring ethical recruitment and sustainable workforce planning, and balancing country needs and individual freedoms is a challenge. Strengthening policies that support retention, equitable workforce distribution, and international collaboration is essential to promoting a more balanced and resilient global nursing workforce.

SECTION 5

DISCUSSION

This study aimed to gather a global perspective on the long-term sustainability of the nursing workforce, as well as NNA member country's perspective of their nation's capacity to effectively create and support the predicted number of new nurses required to meet health care demand. To the best of the authors' knowledge, this is the largest survey to be conducted across global NNAs to gain their perspective on these issues. The study was guided by four overarching research questions:

1. What ability do countries have to maintain a sufficient number of nurses, and an appropriately distributed workforce to meet the care needs of communities?
2. What internal capacity do countries have to meet their supply needs through recruitment and retention methods?
3. What level of awareness do countries have in relation to prioritisation and response to provide safe and healthy working conditions for nurses?
4. How has the international mobility, emigration and immigration of nurses affected a country's long-term sustainability of the nursing workforce?

The research questions have been addressed in the previous discussion sections at the end of each topic in the report results. This section provides an overview and narrative summary of the report's key findings.

SUPPLY AND DEMAND

The findings from this survey highlight the persistent and evolving challenges facing the global nursing workforce. While WHO projections indicate a potential reduction in the global nursing shortage by 2030,[15] our survey suggests that many countries continue to experience increasing demand, workforce attrition, and difficulties in recruitment and retention. The aftermath of the COVID-19 pandemic, coupled with a rising chronic disease burden, increasingly complex presentations to health care facilities and ageing populations, has exacerbated these pressures.[7]

A notable concern is the declining interest in nursing careers, particularly in high-income countries,[26] where undergraduate nursing applications have stagnated or decreased, despite increasing demand for nurses. Contributing factors include inadequate remuneration, challenging working conditions, and the physical and emotional toll of the profession. In this survey, NNAs reported that undergraduate applications had decreased in high-income countries while applications had increased in low-income countries. However, a greater proportion of NNAs from LI/LMI countries indicated a growing number of nursing vacancies, suggesting either poor integration of the new nursing workforce or high levels of international migration.

INTERNATIONAL MOBILITY AND MIGRATION

International migration continues to play a significant role in the nursing workforce. WHO estimates that, in 2018, one in eight (13%) nurses were born or trained internationally, with this proportion increasing to 15.2% in high-income countries compared to less than 2% in other income group countries.[8] This survey found disparities between the immigration of nurses from low-income countries to high-income countries, with increase in the number of nurses emigrating from LI/LMI countries and immigrating to high-income countries.

One of the most common factors contributing to international mobility by the NNAs was related to poor nursing salaries. Nearly three-quarters of NNAs reported that nursing salaries had not increased since 2021, with a substantial proportion indicating that, in real terms, wages have declined due to inflation and the rising cost of living. Other indicators associated with the undervaluing of nursing are reported in this study, including poor protection against exposure to occupational violence, limited health and well-being support and poor staffing levels and skill mix. This undervaluing of the profession has contributed to rates of workforce attrition, with nurses seeking better opportunities in other sectors, or in the case of lower-income countries, seeking international employment opportunities.

WORKFORCE PLANNING

The survey also underscores the need for comprehensive workforce strategies at the national level. Despite global recommendations, only about half of the surveyed NNAs reported the existence of national nursing workforce plans, and among those, alignment with WHO's strategic directions was often moderate at best. Further results suggest that these national plans are not being effectively utilised in all countries. While around one-third of surveyed NNAs in high-income countries indicated that their national plan did 'not at all' rely on the immigration of nurses to bridge workforce gaps, in another question 41.4% indicated that their country currently relied 'a lot' or 'a great deal' on the immigration of nurses to meet current workforce demands. Findings suggest that many countries are not following the strategies outlined in their national workforce strategies and are instead opting for immediate short-term fixes.

SAFETY AND WELL-BEING

Effective workforce planning must prioritize retention through improved working conditions and protecting the safety and well-being of the nursing workforce. This includes policies to prevent workplace violence against staff, of particular import considering the high rates of violence experienced by nurses globally.[45] Of the NNAs surveyed, 86.2% and 71.0% respectively indicated that nurses in their country had experienced violence from patients or the general public and from other employees. However, only over two-thirds (68.3%) indicated that their country had policies to prevent workplace violence against staff, and under half (47.6%) reported having polices to ensure that nurses had access to workplace psychological or mental health support. The lack of supportive, national level policies to protect nurses, indicated the need for national level reforms to support global nursing workforce planning.

STRENGTHS AND LIMITATIONS

The strengths and limitations of this study should be carefully considered when interpreting the findings. A strength of this research was the survey design, in that it included quantitative and qualitative (open-ended) questions, which provided the NNAs an opportunity to provide further context to their responses. This survey design assists in understanding and interpretation of patterns in both the quantitative and qualitative data. Surveys are also an effective, efficient means of identifying patterns and associations, prior to further, more expensive methods of research or evaluation to inform policy or practice change.

While just under half of ICN's NNA members responded, which provided reasonable representation both geographically and economically, the survey employed a cross-sectional design, which may not fully represent the global perspective, nor allow for monitoring of changes over time at the individual NNA level, unless repeated. Additionally, the survey was distributed exclusively to NNAs partnered with ICN through ICN channels. Expansion to NNAs outside of ICN would increase the representativeness of the global perspective and mitigate risk of selection bias.

A potential limitation of the data collection method was the use of online surveys distributed via survey software, along with the emailing of a digital 'paper' version to the NNAs. The digital 'paper' version of the survey may have led to issues with the translation of survey skip logic, which determines which question or page a respondent sees next based on how they answered the current question, embedded in the online tool. As a result, some respondents may have answered questions they should not have, while others may have inadvertently skipped questions they were meant to answer. While this limitation was mitigated through quality control when results were transcoded from the digital 'paper' version of the survey into the data analysis software, some errors still may have occurred.

Furthermore, the reliance on self-reported data may result in self-presentation bias and recall errors. Efforts were made to reduce the risk of self-presentation bias by explaining the intent of the research and encouraging honest reporting and providing 'not applicable and 'don't know' options where appropriate. Finally, the analyses in this report were limited to descriptive statistics. While this was a necessary decision based on the few responses in some categories of interest (e.g. low-income countries), it does preclude statistical significance testing of group differences.

SECTION 6.

CONCLUSION

Findings from this study suggest that addressing the global nursing workforce crisis requires coordinated efforts at multiple levels. Governments, health care organizations and those representing the nursing workforce must invest in policies that support sustainable nursing workforce growth, improve retention strategies, and ensure the well-being of nurses. Without action, the current trajectory threatens the stability of health care systems worldwide, impacting both workforce sustainability, and patient care quality and safety.

The results indicate that global migration continues to disproportionally have a negative impact lower-income counties. To address this, international dialogue and agreements are required to guide the management of the international flow of nurses in a fair and ethical manner which ensures that lower-income countries are able to maintain a sustainably sized nursing workforce to meet their domestic needs.

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APPENDIX 1: STUDY METHODOLOGY

PARTICIPANTS

Participants for this survey were purposively sampled from the member list of ICN NNAs. Participants were directly emailed the participant information sheet and the link to complete the survey distributed by ICN member communication channels. Participants could either be the president of the NNA or their representatives.

MATERIALS

The survey was developed by the RBRC. ICN provided input into its design and content to ensure applicability to the international context. To this end, questions were reviewed to minimise risk of individuals or groups of respondents not thinking questions were relevant to themselves or their associations' responsibilities. The survey was made available online via the Qualtrics platform, and a digital 'paper version' of the survey was also made available. Responses provided via the 'paper version' of the survey were then entered into the survey tool for data collation.

The survey was developed and formatted into four parts, each focusing on a risk to long-term sustainability of the nursing workforce:

1. **International mobility and migration** – international mobility, emigration and immigration of nurses between countries.
2. **Recruitment, retention and flexible employment support** – the country's internal capacity to meet its own supply needs through recruitment and retention methods that motivates a sufficient number of nurses to enter or remain in the workforce.
3. **Accessible and safe care** – the country's ability to have a sufficient number of nurses and an appropriately distributed workforce to meet the care needs of communities, and to do so within reasonable bounds of safe care provision.
4. **Safety of the workforce** – the country's awareness, prioritisation and response to provide safe and healthy working conditions for nurses.

The survey was tested several times during the development, with feedback guiding refinement. Because of the nature of the survey and the participants, pilot testing with NNA presidents was not feasible: instead, it was pilot tested by ICN staff. For a full list of survey questions please see Appendix 2.

The survey was available in English, Spanish and French. To aid speed of translation, the survey was initially translated using artificial intelligence (AI) software, DeepL (DeepL SE, Germany), and subsequently reviewed and refined by native speakers for accuracy and clarity.

Demographics

Respondents were asked a range of questions regarding their, and their association's details, including the name of their organization (in English), their organization's main responsibilities (professional nursing association, nursing union, and/or nursing regulatory body), the country their organization is located in, and the respondent's position in this organization (president or representative).

International mobility and migration

Emigration

This part focused on the emigration of the nursing workforce from the respondent's country. Emigration was defined as the process of leaving a country permanently and going to live in another one. In the context of this survey, we were interested in nursing staff moving from the respondent's country to live and work elsewhere in the world. Respondents were asked to rate the change observed in the number of nurses emigrating from their country since 2021 on a scale of 1 *(Greatly decreased)* to 7 *(Greatly increased)*. Respondents were also asked to rate the following statements on scale of 1 *(Strongly disagree)* to 5 *(Strongly agree)*: Our Government is responding appropriately to manage nursing emigration effectively; Emigration of nurses in our country makes it very difficult to maintain a sustainable workforce that is able to meet current health care demands; Emigration of nurses is a challenge in building a sustainable workforce that would be able to meet our country's future demands. Respondents were asked to briefly outline the main emigration-related issues that their country is facing; a 750-character limit was imposed on responses. Respondents were also asked to select from a set list - i.e., poor working conditions, lack of employment opportunities, poor salary etc. - the top five items they believed were contributing to nursing emigration out of their country.

Immigration

Respondents were asked to rate the change observed in the number of nurses immigrating to their country since 2021 on a scale of 1 *(Greatly decreased)* to 7 *(Greatly increased)*. Respondents were also asked to rate the following statements on scale of 1 *(Strongly disagree)* to 5 *(Strongly agree)*: Immigration of the nursing workforce is an issue in your country; Our Government is responding appropriately to manage nursing immigration effectively; International nurses being recruited to/immigrating to our country are integrating well into our nursing workforce. Respondents were asked to briefly outline the main immigration-related issues that their country is facing; a 750-character limit was imposed on responses. Respondents were also asked to select from a set list - i.e., good working conditions, good living conditions, abundance of employment opportunities etc. - the top five items they believed were contributing to nursing immigration to their country. Respondents were also asked to describe, in no more than 2,000 characters, the greatest risks to nursing workforce sustainability that international mobility and migration pose for their country.

Recruitment, retention and flexible employment support

Supply and demand

On a scale of 1 *(Very poor)* to 6 *(Excellent)* respondents were asked to rate their countries' capacity to meet current health needs and provide a sufficient number of new jobs for nurses. On a scale of 1 *(Greatly decreased)* to 7 *(Greatly increased)* respondents were asked to rate the observed changes since 2021 in nursing vacancies, unemployment rate, demands placed on the workforce, number of undergraduate nursing applications, number of nurses leaving the sector, the gap between supply and demand, and prevention of strikes. Where applicable free-text questions were included to provide details, such as vacancy rate. Respondents were also asked, on a scale from 1 *(Not at all)* to 5 *(A great deal),* the degree to which their country relied on the immigration of nurses to meet workforce demands. On a scale of 1 *(Very poor)* to 6 *(Excellent)* respondents were asked to rate how well their nursing workforce was Supported to work to their full scope of practice; Provided with opportunities for career progression; Adequately remunerated; Valued by the community and Able to transition to practice once they have completed their educational qualification. In 2,000 characters, respondents were asked to describe the main issues/challenges their country has in maintaining or building an internal/domestic supply of nurses to meet health care demands.

Nursing strategy

A range of questions were asked regarding the nursing plans/strategies in place in the respondents' countries. Respondents were asked to indicate if their country had a plan at a national, regional, or organizational level. Based on the response, the survey was designed to ensure that only relevant questions were asked. Free-text questions were included to provide details, such as the public URL (if available) for the specific plans/strategies that were in place. In regard to the national plan, respondents were asked to rate on a scale of 1 *(Not at all)* to 5 *(A great deal)* how much the plan relied on the training of new nurses, immigration of nurses, and retention strategies, to meet future workforce needs. Respondents were also asked to rate, on a scale of 1 *(Not at all)* to 5 *(A great deal)* how well the plan aligns to the WHO Global Strategic Directions for Nursing and Midwifery (2021–2025). Respondents were also provided with an opportunity to provide, in no more than 2,000 characters, comment about any considerations they believed were missing from their national plan or from the WHO global strategy.

Nursing salary

On a scale of 1 *(Greatly decreased)* to 7 *(Greatly increased)*, respondents were asked to rate the changes they had observed in the base nursing salary since 2021. They were then asked to rate if this represented a 'real' increase.

Accessible and safe care

On scale of 1 *(Strongly Disagree)* to 5 *(Strongly Agree)* respondents were asked to rate their agreement with the statement: 'Your country's health care system is experiencing a shortage of nursing staff that is making it difficult to achieve a safe environment for patient/client care'. In 750 characters they were asked to outline the main impacts that nursing shortages have had on their country's ability to provide safe care. On a scale of 1 *(Not at all)* to 5 *(A great deal)* respondents were asked how well their countries' nursing workforce was positioned to meet demands over the next 20 years. Respondents were also asked if their country has appropriate strategies, legislation or policies to ensure an appropriately distributed workforce to meet the care needs of regional, rural and/or remote communities, and the care needs of disadvantaged, underserved, or vulnerable populations, such as ethnic or racial minorities, older people, children, Indigenous populations, low income or homeless populations, etc. A free-text question, limited to 750 characters, accompanied these questions to provide examples of such strategies, legislation or policies. Respondents were asked to describe the main patient safety concerns associated with the nursing workforce shortages in their country. A 2,000-character limit was applied.

Safety and well-being of the workforce

Respondents were asked to indicate (yes, no, or don't know) if their country had the following workplace policies in place: Support for new graduates or inexperienced staff, Access to workplace psychological or mental health support, Preventing workplace violence against staff (e.g. physical or verbal harassment), Having the right skill mix (number/ratios of the right kinds of staff), and Having the right staffing levels (number of staff/ratios of staff to patients/clients). Respondents who reported 'yes' to having these policies were then asked to rate these on a scale from 1 *(Very poor)* to 6 *(Excellent)*. Respondents were also asked if nurses in their country had been affected by violence or hostility towards them from patients or the general public, and/or by other employees where they work (i.e. other nurses, team managers). These questions were accompanied by a free-text question asking respondents to describe, in 750-characters, what had been observed. Respondents were asked to describe the main risks/contributing factors to the mental and physical health and well-being of the nursing workforce in their country.

Other information

In 2,000 characters each, respondents were asked to describe any innovations/policies/good ideas implemented in their country, actions taken by their country, additional actions required, and any additional concerns related to addressing the long-term sustainability of the nursing workforce.

PROCEDURE

An online cross-sectional survey ran over a 13-week period from 25 July 2024 to 17 October 2024. There was a total of 74 questions in the survey. The survey used piping logic, so that, depending on responses to some questions, not all questions were seen by all the participants. The survey was developed by RBRC with input from ICN to ensure its relevance to informing a global understanding. Promotion of the survey was through ICN email communication channels.

DATA ANALYSIS

Data were cleaned and analysed using Statistical Package for Social Sciences (SPSS) v29.01.0. Descriptive statistics were reported using count and frequencies, where appropriate. Statistical results were accompanied by narrative analysis to support interpretation of the figures and tables presented throughout the report. Qualitative data has been narratively analysed with a focus on identifying common topics, issues or 'themes' described in the report. In two instances, qualitative data were mapped against frameworks from the literature to assist with structuring and interpreting findings. These frameworks are referenced where appropriate.

APPENDIX 2: SURVEY QUESTIONS

Question Number	Question	Response Options
Section Header: About your organization		
1	Please type the name of your organization:	<free text>
2	Please select the category that best describes your organization:	1. A professional nursing association only 2. A nursing union only 3. A nursing regulatory body only 4. Any combination of a professional nursing association, nursing union, or nursing regulatory body 5. Other [Please specify]
3	In which country is your organization located?	<free text>
4	What best describes your position within the organization:	1. President 2. Representative 3. Other [please specify]
Section Header: Nursing emigration		
5	Since 2021, what change has been observed in the number of nurses emigrating from your country? [please select only one option]	1. Greatly decreased 2. Moderately decreased 3. Slightly decreased 4. Stayed the same 5. Slightly increased 6. Moderately increased 7. Greatly increased 8. Don't know
6	Please rate your agreement with the following statements: [please select one option for each statement]	
6a	Our Government is responding appropriately to manage nursing emigration effectively.	1. Strongly agree 2. Agree 3. Neither agree nor disagree 4. Disagree 5. Strongly disagree 6. Don't know
6b	Emigration of nurses in our country makes it very difficult to maintain a sustainable workforce that is able to meet current health care demands.	1. Strongly agree 2. Agree 3. Neither agree nor disagree 4. Disagree 5. Strongly disagree 6. Don't know
6c	Emigration of nurses is a challenge in building a sustainable workforce that would be able to meet our country's future health care demands.	1. Strongly agree 2. Agree 3. Neither agree nor disagree 4. Disagree 5. Strongly disagree 6. Don't know
7	Please briefly outline the main emigration-related issues your country is facing: [750 CHARACTER LIMIT]	<free text>

8	Please select the top five most influential factors that you believe have contributed to nursing emigration out of your country: [please select up to the top 5 that apply]	1. Poor working conditions 2. Lack of employment opportunities 3. Lack of opportunity for career advancement 4. Poor health care infrastructure 5. Nurse contribution undervalued by government and policy makers 6. Lack of educational opportunities 7. Poor salary 8. Low societal respect and recognition for nurses 9. High cost of living 10. Poor living conditions 11. High level of crime 12. Racial/ ideological tension 13. Conflict or other crises 14. Formal agreements or bilateral/MOUs with other countries 15. Other [Please specify]
Section Header: Nursing immigration		
9	Since 2021, what change has been observed in the number of nurses immigrating into your country?	1. Greatly decreased 2. Moderately decreased 3. Slightly decreased 4. Stayed the same 5. Slightly increased 6. Moderately increased 7. Greatly increased 8. Don't know
10	Please rate your agreement with the following statements: [please select one option for each statement]	
10a	Immigration of the nursing workforce is an issue in your country.	1. Strongly agree 2. Agree 3. Neither agree nor disagree 4. Disagree 5. Strongly disagree 6. Don't know
10b	Our Government is responding appropriately to manage nursing immigration effectively.	1. Strongly agree 2. Agree 3. Neither agree nor disagree 4. Disagree 5. Strongly disagree 6. Don't know
10c	International nurses being recruited to/ immigrating to our country are integrating well into our nursing workforce.	1. Strongly agree 2. Agree 3. Neither agree nor disagree 4. Disagree 5. Strongly disagree 6. Don't know
11	Please briefly outline the main immigration-related issues your country is facing: [750 CHARACTER LIMIT]	<free text>

12	What are the top five most influential factors that you believe have contributed to nursing immigration into your country: [please select up to the top 5 that apply]	1. Good working conditions 2. Abundance of employment opportunities 3. Abundance of opportunities for career advancement 4. Good health care infrastructure 5. Modern health care technologies 6. Supportive national policy 7. Abundance of educational opportunities 8. Internationally competitive salary 9. High societal respect and recognition for nurses 10. Attractive nursing migration recruitment policies 11. Strong national economy 12. Low cost of living 13. Good living conditions 14. Low level of crime 15. Formal agreements or MOUs with other countries 16. Other [Please specify]
13	What are the greatest risks to nursing workforce sustainability that international mobility and migration pose for your country? [2,000 CHARACTER LIMIT]	<free text>

Section Header: Recruitment, retention, and flexible employment support		
14	Please rate your country's nursing workforce capacity to meet the current health care needs of the nation:	1. Very poor 2. Poor 3. Fair 4. Good 5. Very good 6. Excellent 7. Don't know
15	Please rate your country's capacity to provide a sufficient number of jobs for new nurses:	1. Very poor 2. Poor 3. Fair 4. Good 5. Very good 6. Excellent 7. Don't know
16	Since 2021, what change has been observed in the number of nursing vacancies in your country?	1. Greatly decreased 2. Moderately decreased 3. Slightly decreased 4. Stayed the same 5. Slightly increased 6. Moderately increased 7. Greatly increased 8. Don't know
17	If known, please provide the current national nursing vacancy rate in your country:	<free text>
18	Since 2021, what change has been observed in the unemployment rate of the nursing profession in your country?	1. Greatly decreased 2. Moderately decreased 3. Slightly decreased 4. Stayed the same 5. Slightly increased 6. Moderately increased 7. Greatly increased 8. Don't know
19	If known, please provide the current unemployment rate of the nursing profession in your country:	<free text>

20	If there is a publicly available report/website which tracks the current unemployment rate of the nursing profession in your country, please provide a link here:	<free text>
21	Since 2021, what change has been observed in regard to the demands placed on the nursing workforce in your country?	1. Greatly decreased 2. Moderately decreased 3. Slightly decreased 4. Stayed the same 5. Slightly increased 6. Moderately increased 7. Greatly increased 8. Don't know
22	Since 2021, what change has been observed in the number of students applying for undergraduate nursing education programmes in your country?	1. Greatly decreased 2. Moderately decreased 3. Slightly decreased 4. Stayed the same 5. Slightly increased 6. Moderately increased 7. Greatly increased 8. Don't know
23	Since 2021, what change has been observed in the number of nurses leaving the sector (retiring or to work elsewhere)?	1. Greatly decreased 2. Moderately decreased 3. Slightly decreased 4. Stayed the same 5. Slightly increased 6. Moderately increased 7. Greatly increased 8. Don't know
24	If known, please provide the current attrition rate of nurses from the profession in your country:	<free text>
25	Thinking about the gap between supply and demand of the nursing workforce in your country, since 2021 what change in this gap has been observed in your country?	1. Greatly decreased 2. Moderately decreased 3. Slightly decreased 4. Stayed the same 5. Slightly increased 6. Moderately increased 7. Greatly increased 8. Don't know
26	To what degree does your country currently rely on the immigration of nurses to meet its workforce demands?	1. Not at all 2. A little 3. A moderate amount 4. A lot 5. A great deal 6. Don't know
27	Does your country have a nursing plan/strategy at a national, regional or organizational level? [please select all that apply]	1. National 2. Regional 3. Organizational 4. No or don't know
27a	If a regional nursing plan/strategy is public, please provide url:	<free text>
27b	Approximately, what proportion of the workforce are covered by these policies?	<free text>
27c	If an organizational nursing plan/strategy is public, please provide url:	<free text>
27d	Approximately what proportion of the workforce are covered by these policies?	<free text>
27e	If your countries national nursing plan/strategy is public, please provide url:	<free text>
27f	To what degree does this national plan/strategy rely on the training of new nurses in your country to meet its future workforce demands?	1. Not at all 2. A little 3. A moderate amount 4. A lot 5. A great deal 6. Don't know

27g	To what degree does this national plan/strategy rely on the immigration of nurses to meet its future workforce demands?	1. Not at all 2. A little 3. A moderate amount 4. A lot 5. A great deal 6. Don't know
27h	To what degree does this national plan/strategy include measures to improve nurse retention (such as flexible employment opportunities, creating healthy working conditions, etc.)?	1. Not at all 2. A little 3. A moderate amount 4. A lot 5. A great deal 6. Don't know
27i	To what degree does this national plan/strategy reference or align to the World Health Organization Global Strategic Directions for Nursing and Midwifery?	1. Not at all 2. A little 3. A moderate amount 4. A lot 5. A great deal 6. Don't know
27j	If any, what considerations do you believe are missing from your national plan/strategy? [2,000 CHARACTER LIMIT]	<free text>
27k	If any, what considerations do you believe are missing from the global nursing workforce strategy? [2,000 CHARACTER LIMIT]	<free text>
28	Since 2021, what change in the base nursing salary in your country has been observed?	1. Greatly decreased 2. Moderately decreased 3. Slightly decreased 4. Stayed the same 5. Slightly increased 6. Moderately increased 7. Greatly increased 8. Don't know
29	Relative to the cost of living, inflation and other financial factors, does this base salary increase represent:	1. A real increase in pay 2. The pay level staying the same 3. A real decrease in pay 4. Don't know
30	Since 2021, what change has been observed in the prevalence of nursing worker strikes/disputes?	1. Greatly decreased 2. Moderately decreased 3. Slightly decreased 4. Stayed the same 5. Slightly increased 6. Moderately increased 7. Greatly increased 8. Don't know
31	Please rate how well your country's nursing workforce is: [please select one option for each statement]	
31a	Supported to work to their full scope of practice.	1. Very poor 2. Poor 3. Fair 4. Good 5. Very good 6. Excellent 7. Don't know
31b	Provided with opportunities for career progression.	1. Very poor 2. Poor 3. Fair 4. Good 5. Very good 6. Excellent 7. Don't know

31c	Adequately remunerated.	1. Very poor 2. Poor 3. Fair 4. Good 5. Very good 6. Excellent 7. Don't know
31d	Valued by the community.	1. Very poor 2. Poor 3. Fair 4. Good 5. Very good 6. Excellent 7. Don't know
31e	Able to transition to practice once they complete their educational qualification.	1. Very poor 2. Poor 3. Fair 4. Good 5. Very good 6. Excellent 7. Don't know
32	What are the main issues/challenges your country has in maintaining or building an internal/domestic supply of nurses to meet health care demands? [2,000 CHARACTER LIMIT]	<free text>
Section Header: Accessible and safe care		
33	Please rate your agreement with the statement: 'Your country's health care system is experiencing a shortage of nursing staff that is making it difficult to achieve a safe environment for patient/client care'	1. Strongly agree 2. Agree 3. Neither agree nor disagree 4. Disagree 5. Strongly disagree 6. Don't know
34	Please briefly outline the main impacts that nursing shortages have had on your country's ability to provide safe care: [750 CHARACTER LIMIT]	<free text>
35	Thinking about the current health care system and the way the nursing profession currently operates, how well do you think your country will be able to meet health needs over the next 20 years?	1. Not at all 2. A little 3. A moderate amount 4. A lot 5. A great deal 6. Don't know
36	Does your country have appropriate strategies, legislation or policies to ensure an appropriately distributed workforce to meet the care needs of regional, rural and/or remote communities?	1. Yes 2. No
36a	If available, please provide a brief example of these strategies, legislation or policies: [750 CHARACTER LIMIT]	<free text>
37	Does your country have strategies, legislation or policies to ensure an adequately distributed workforce to meet the care needs of disadvantaged, underserved, or vulnerable populations, such as ethnic or racial minorities, elderly, children, Indigenous populations, low income or homeless populations, etc.?	1. Yes 2. No
37a	Please provide a brief example of these strategies, legislation or policies: [750 CHARACTER LIMIT]	<free text>
38	If applicable, what are the greatest patient safety concerns associated with the nursing workforce shortages in your country? [2,000 CHARACTER LIMIT]	<free text>

Section Header: Safety and well-being of the workplace		
39	Does your country have the following workforce policies in place: [please select one option for each statement]	
39a	Support for new graduates or inexperienced staff	1. Yes 2. No 3. Don't know
39b	Access to workplace psychological or mental health support	1. Yes 2. No 3. Don't know
39c	Preventing workplace violence against staff (e.g. physical or verbal harassment)	1. Yes 2. No 3. Don't know
39d	Having the right skill mix (number/ratios of the right kinds of staff)	1. Yes 2. No 3. Don't know
39e	Having the right staffing levels (number of staff/ratios of staff to patients/clients)	1. Yes 2. No 3. Don't know
40	Please rate your country's nursing workforce policies and procedures with respect to the following: [please select one option for each statement]	
40a	Support for new graduates or inexperienced staff	1. Very poor 2. Poor 3. Fair 4. Good 5. Very good 6. Excellent
40b	Access to workplace psychological or mental health support	1. Very poor 2. Poor 3. Fair 4. Good 5. Very good 6. Excellent
40c	Preventing workplace violence against staff (e.g. physical or verbal harassment)	1. Very poor 2. Poor 3. Fair 4. Good 5. Very good 6. Excellent
40d	Having the right skill mix (number/ratios of the right kinds of staff)	1. Very poor 2. Poor 3. Fair 4. Good 5. Very good 6. Excellent
40e	Having the right staffing levels (number of staff/ratios of staff to patients/clients)	1. Very poor 2. Poor 3. Fair 4. Good 5. Very good 6. Excellent
41	Have nurses in your country been affected by violence or hostility towards them from patients or the general public?	1. Yes 2. No 3. Don't know
41a	Please briefly describe what has been observed in relation to violence or hostility towards nurses from patients or the general public: [750 CHARACTER LIMIT]	<free text>
41b	Have nurses in your country been affected by violence or hostility towards them by other employees where they work (i.e., other nurses, team managers)?	1. Yes 2. No 3. Don't know

41c	Please briefly describe what has been observed in relation to violence or hostility towards nurses by other employees: [750 CHARACTER LIMIT]	<free text>
42	What are the main risks/contributing factors to the mental and physical health and well-being of the nursing workforce in your country? [2,000 CHARACTER LIMIT]	<free text>
Section Header: Additional information		
43	Have you observed any innovations/policies/good ideas implemented in your country to address the long-term sustainability of the nursing workforce that you would like to share? [2,000 CHARACTER LIMIT]	<free text>
44	What actions has your country taken to address nursing workforce sustainability and how effective have these actions been? [2000 CHARACTER LIMIT]	<free text>
45	What additional actions (if any) do you believe need to be taken to address the long-term sustainability of the nursing workforce? [2,000 CHARACTER LIMIT]	<free text>
46	Are there any other issues or concerns related to the workforce and its sustainability that have not already been covered in this survey that you would like to raise? [2,000 CHARACTER LIMIT]	<free text>

APPENDIX 3: QUANTITATIVE DATA

This section provides the descriptive statistics for the quantitative questions included in the survey. Free-test questions have been removed. All percentage figures have been rounded to one decimal place and hence, may not total exactly 100% when summed.

To view the full list of questions please see Appendix 2.

About your organization

	n	%
Africa	18	26.5
Eastern Mediterranean	5	7.4
South-East Asia	4	5.9
Western Pacific	8	11.8
Europe	23	33.8
Americas	10	14.7
TOTAL	**68**	**100**

Note: World region has been categorized according to WHO. These regions include economies at all income levels and may differ from regions defined by other organizations

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	n	%
Low income	5	7.4
Lower middle income	15	22.1
Upper middle income	17	25.0
High income	31	45.6
TOTAL	**68**	**100**

Note: The World Bank classifies economies into four income groups based on 2023 gross national income (GNI) per capita; Low: GNI per capita of $1,145 or less; Lower-middle: GNI per capita between $1,146 and $4,515; Upper-middle: GNI per capita between $4,516 and $14,005; High: GNI per capita of more than $14,00.

Note: Economic data for Palestine was not available through the World Bank's 2023 data release, therefore historical data from 2021 was used that classifies Palestine as an 'Upper middle income' country. Media releases from the World Bank suggest that due to the Israeli Palestinian conflict, Palestine's GNI is currently estimated at a 'Lower middle income' level.

* Low income (n=5, 7.4%) and Lower middle income (n=15, 22.1%) were combined to create Low/Lower-Middle income due to the low number of participants from low-income countries.

5. Since 2021, what change has been observed in the number of nurses emigrating from your country? [please select only one option]

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Greatly decreased	1	5.6	0	0.0	1	3.6	2	3.2
Moderately decreased	1	5.6	0	0.0	1	3.6	2	3.2
Slightly decreased	2	11.1	1	6.3	2	7.1	5	8.1
Stayed the same	1	5.6	3	18.8	13	46.4	17	27.4
Slightly increased	1	5.6	3	18.8	5	17.9	9	14.5
Moderately increased	3	16.7	3	18.8	4	14.3	10	16.1
Greatly increased	9	50	6	37.5	2	7.1	17	27.4
Total	**18**	**100**	**16**	**100**	**28**	**100**	**62**	**100**

6. Please rate your agreement with the following statements: [please select one option for each statement]

a. Our Government is responding appropriately to manage nursing emigration effectively.

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Strongly disagree	6	31.6	4	26.7	3	10.3	13	20.6
Disagree	5	26.3	5	33.3	8	27.6	18	28.6
Neither agree nor disagree	3	15.8	0	0.0	12	41.4	15	23.8
Agree	5	26.3	5	33.3	6	20.7	16	25.4
Strongly agree	0	0.0	1	6.7	0	0.0	1	1.6
Total	**19**	**100**	**15**	**100**	**29**	**100**	**63**	**100**

b. Emigration of nurses in our country makes it very difficult to maintain a sustainable workforce that is able to meet current health care demands.

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Strongly disagree	2	10.0	3	20.0	5	17.2	10	15.6
Disagree	3	15.0	3	20.0	8	27.6	14	21.9
Neither agree nor disagree	2	10.0	2	13.3	7	24.1	11	17.2
Agree	6	30.0	2	13.3	5	17.2	13	20.3
Strongly agree	7	35.0	5	33.3	4	13.8	16	25
Total	**20**	**100**	**15**	**100**	**29**	**100**	**64**	**100**

c. Emigration of nurses is a challenge in building a sustainable workforce that would be able to meet our country's future health care demands.

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Strongly disagree	3	15.0	2	15.4	7	23.3	12	19.0
Disagree	3	15.0	2	15.4	5	16.7	10	15.9
Neither agree nor disagree	2	10.0	3	23.1	5	16.7	10	15.9
Agree	6	30.0	3	23.1	9	30.0	18	28.6
Strongly agree	6	30.0	3	23.1	4	13.3	13	20.6
Total	**20**	**100**	**13**	**100**	**30**	**100**	**63**	**100**

8. Please select the top five most influential factors that you believe have contributed to nursing emigration out of your country: [please select up to the top 5 that apply]

	n	%
Poor salary	49	72.1
Poor working conditions	47	69.1
Lack of opportunity for career advancement	42	61.8
Nurse contribution undervalued by government and policy makers	37	54.4
Lack of employment opportunities	25	36.8
High cost of living	20	29.4
Low societal respect and recognition for nurses	15	22.1
Poor health care infrastructure	9	13.2
Lack of educational opportunities	9	13.2
Conflict or other crises	6	8.8
Formal agreements or bilateral/MOUs with other countries	5	7.4
Poor living conditions	4	5.9
Racial/ ideological tension	1	1.5
High level of crime	0	0.0
Other	10	14.7

9. Since 2021, what change has been observed in the number of nurses immigrating into your country?

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Greatly decreased	5	33.3	2	14.3	1	3.8	8	14.5
Moderately decreased	0	0.0	1	7.1	0	0.0	1	1.8
Slightly decreased	1	6.7	1	7.1	1	3.8	3	5.5
Stayed the same	4	26.7	5	35.7	6	23.1	15	27.3
Slightly increased	2	13.3	1	7.1	7	26.9	10	18.2
Moderately increased	0	0.0	2	14.3	6	23.1	8	14.5
Greatly increased	3	20.0	2	14.3	5	19.2	10	18.2
Total	**15**	**100**	**14**	**100**	**26**	**100**	**55**	**100**

10. Please rate your agreement with the following statements: [please select one option for each statement]

a. Immigration of the nursing workforce is an issue in your country.

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Strongly Disagree	8	40.0	5	29.4	3	10.7	16	24.6
Disagree	2	10.0	4	23.5	7	25.0	13	20.0
Neither agree nor disagree	1	5.0	3	17.6	3	10.7	7	10.8
Agree	4	20.0	2	11.8	8	28.6	14	21.5
Strongly Agree	5	25.0	3	17.6	7	25.0	15	23.1
Total	**20**	**100**	**17**	**100**	**28**	**100**	**65**	**100**

b. Our Government is responding appropriately to manage nursing immigration effectively.

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Strongly disagree	7	38.9	1	7.1	3	11.1	11	18.6
Disagree	4	22.2	2	14.3	11	40.7	17	28.8
Neither agree nor disagree	2	11.1	7	50.0	8	29.6	17	28.8
Agree	4	22.2	2	14.3	5	18.5	11	18.6
Strongly agree	1	5.6	2	14.3	0	0.0	3	5.1
Total	**18**	**100**	**14**	**100**	**27**	**100**	**59**	**100**

c. International nurses being recruited to/immigrating to our country are integrating well into our nursing workforce.

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Strongly disagree	3	18.8	3	23.1	1	3.6	7	12.3
Disagree	1	6.3	1	7.7	7	25.0	9	15.8
Neither agree nor disagree	4	25.0	5	38.5	8	28.6	17	29.8
Agree	5	31.3	3	23.1	12	42.9	20	35.1
Strongly agree	3	18.8	1	7.7	0	0.0	4	7.0
Total	**16**	**100**	**13**	**100**	**28**	**100**	**57**	**100**

12. What are the top five most influential factors that you believe have contributed to nursing immigration into your country: [please select up to the top 5 that apply]

	n	%
Good living conditions	24	35.3
Abundance of employment opportunities	20	29.4
Internationally competitive salary	20	29.4
Good health care infrastructure	13	19.1
Low level of crime	13	19.1
Supportive national policy	12	17.6
High societal respect and recognition for nurses	12	17.6
Formal agreements or MOUs with other countries	12	17.6
Modern health care technologies	11	16.2
Good working conditions	10	14.7
Strong national economy	10	14.7
Attractive nursing migration recruitment policies	9	13.2
Low cost of living	6	8.8
Abundance of opportunities for career advancement	3	4.4
Abundance of educational opportunities	2	2.9
Other	11	16.2

14. Please rate your country's nursing workforce capacity to meet the current health care needs of the nation:

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Very poor	3	15.0	1	5.9	1	3.2	5	7.4
Poor	4	20.0	3	17.6	14	45.2	21	30.9
Fair	3	15.0	3	17.6	14	45.2	20	29.4
Good	7	35.0	3	17.6	1	3.2	11	16.2
Very good	1	5.0	4	23.5	0	0.0	5	7.4
Excellent	2	10.0	3	17.6	1	3.2	6	8.8
Total	20	100	17	100	31	100	68	100

15. Please rate your country's capacity to provide a sufficient number of jobs for new nurses:

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Very poor	6	30.0	3	17.6	1	3.2	10	14.7
Poor	6	30.0	3	17.6	2	6.5	11	16.2
Fair	4	20.0	2	11.8	5	16.1	11	16.2
Good	2	10.0	3	17.6	11	35.5	16	23.5
Very good	1	5.0	3	17.6	6	19.4	10	14.7
Excellent	1	5.0	3	17.6	6	19.4	10	14.7
Total	20	100	17	100	31	100	68	100

16. Since 2021, what change has been observed in the number of nursing vacancies in your country?

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Greatly decreased	2	10.5	3	17.6	0	0	5	7.5
Moderately decreased	3	15.8	1	5.9	6	19.4	10	14.9
Slightly decreased	1	5.3	0	0	3	9.7	4	6
Stayed the same	2	10.5	5	29.4	4	12.9	11	16.4
Slightly increased	4	21.1	5	29.4	4	12.9	13	19.4
Moderately increased	4	21.1	2	11.8	8	25.8	14	20.9
Greatly increased	3	15.8	1	5.9	6	19.4	10	14.9
Total	19	100	17	100	31	100	67	100

18. Since 2021, what change has been observed in the unemployment rate of the nursing profession in your country?

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Greatly decreased	1	6.7	2	16.7	4	19	7	14.6
Moderately decreased	1	6.7	3	25	1	4.8	5	10.4
Slightly decreased	0	0.0	0	0	3	14.3	3	6.3
Stayed the same	0	0.0	4	33.3	10	47.6	14	29.2
Slightly increased	4	26.7	2	16.7	1	4.8	7	14.6
Moderately increased	3	20.0	0	0	1	4.8	4	8.3
Greatly increased	6	40.0	1	8.3	1	4.8	8	16.7
Total	**15**	**100**	**12**	**100**	**21**	**100**	**48**	**100**

21. Since 2021, what change has been observed in regard to the demands placed on the nursing workforce in your country?

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Greatly decreased	0	0.0	0	0.0	0	0.0	0	0.0
Moderately decreased	0	0.0	0	0.0	0	0.0	0	0.0
Slightly decreased	0	0.0	0	0.0	1	3.3	1	1.5
Stayed the same	3	15.8	5	29.4	4	13.3	12	18.2
Slightly increased	4	21.1	2	11.8	5	16.7	11	16.7
Moderately increased	7	36.8	3	17.6	9	30	19	28.8
Greatly increased	5	26.3	7	41.2	11	36.7	23	34.8
Total	**19**	**100**	**17**	**100**	**30**	**100**	**66**	**100**

22. Since 2021, what change has been observed in the number of students applying for undergraduate nursing education programmes in your country?

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Greatly decreased	1	5.3	1	6.3	2	6.5	4	6.1
Moderately decreased	0	0	1	6.3	7	22.6	8	12.1
Slightly decreased	1	5.3	3	18.8	10	32.3	14	21.2
Stayed the same	1	5.3	1	6.3	3	9.7	5	7.6
Slightly increased	2	10.5	4	25.0	4	12.9	10	15.2
Moderately increased	4	21.1	3	18.8	2	6.5	9	13.6
Greatly increased	10	52.6	3	18.8	3	9.7	16	24.2
Total	**19**	**100**	**16**	**100**	**31**	**100**	**66**	**100**

23. Since 2021, what change has been observed in the number of nurses leaving the sector (retiring or to work elsewhere)?

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Greatly decreased	1	5.9	1	6.7	1	3.3	3	4.8
Moderately decreased	0	0.0	0	0.0	2	6.7	2	3.2
Slightly decreased	1	5.9	0	0.0	1	3.3	2	3.2
Stayed the same	1	5.9	1	13.3	2	6.7	5	8.1
Slightly increased	5	29.4	5	40.0	9	30.0	20	32.3
Moderately increased	5	29.4	5	20.0	9	30.0	17	27.4
Greatly increased	4	23.5	4	20.0	6	20.0	13	21.0
Total	**17**	**100**	**15**	**100**	**30**	**100**	**62**	**100**

25. Thinking about the gap between supply and demand of the nursing workforce in your country, since 2021 what change in this gap has been observed in your country?

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Greatly decreased	0	0.0	1	5.9	0	0.0	1	1.5
Moderately decreased	0	0.0	1	5.9	0	0.0	1	1.5
Slightly decreased	1	5.3	2	11.8	5	16.7	8	12.1
Stayed the same	4	21.1	2	11.8	4	13.3	10	15.2
Slightly increased	2	10.5	5	29.4	7	23.3	14	21.2
Moderately increased	4	21.1	3	17.6	11	36.7	18	27.3
Greatly increased	8	42.1	3	17.6	3	10.0	14	21.2
Total	**19**	**100**	**17**	**100**	**30**	**100**	**66**	**100**

26. To what degree does your country currently rely on the immigration of nurses to meet its workforce demands?

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Not at all	15	78.9	12	70.6	10	34.5	37	56.9
A little	2	10.5	3	17.6	5	17.2	10	15.4
A moderate amount	1	5.3	0	0.0	2	6.9	3	4.6
A lot	1	5.3	1	5.9	6	20.7	8	12.3
A great deal	0	0.0	1	5.9	6	20.7	7	10.8
Total	**19**	**100**	**17**	**100**	**29**	**100**	**65**	**100**

27. Does your country have a nursing plan/strategy at a national, regional or organizational level? [please select all that apply]

	Lower Income (n = 20)		Upper Middle Income (n = 17)		High Income (n = 31)		Overall (n = 68)	
	n	%	n	%	n	%	n	%
National	10	50.0	10	58.8	15	48.4	35	51.5
Regional	0	0.0	1	5.9	9	29.0	10	14.7
Organizational	4	20.0	3	17.6	10	32.3	17	25.0
No or don't know	7	35.0	6	35.3	9	29.0	22	32.4

f. To what degree does this national plan/strategy rely on the training of new nurses in your country to meet its future workforce demands?

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Not at all	0	0.0	0	0.0	0	0.0	0	0.0
A little	3	33.3	4	40.0	1	6.3	8	22.9
A moderate amount	3	33.3	2	20.0	7	43.8	12	34.3
A lot	1	11.1	2	20.0	2	12.5	5	14.3
A great deal	2	22.2	2	20.0	6	37.5	10	28.6
Total	**9**	**100**	**10**	**100**	**16**	**100**	**35**	**100**

g. To what degree does this national plan/strategy rely on the immigration of nurses to meet its future workforce demands?

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Not at all	6	66.7	6	60.0	5	31.3	17	48.6
A little	2	22.2	1	10.0	2	12.5	5	14.3
A moderate amount	0	0.0	1	10.0	7	43.8	8	22.9
A lot	1	11.1	1	10.0	1	6.3	3	8.6
A great deal	0	0.0	1	10.0	1	6.3	2	5.7
TOTAL	**9**	**100**	**10**	**100**	**16**	**100**	**35**	**100**

h. To what degree does this national plan/strategy include measures to improve nurse retention (such as flexible employment opportunities, creating healthy working conditions, etc.)?

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Not at all	2	25.0	3	33.3	1	6.3	6	18.2
A little	2	25.0	2	22.2	5	31.3	9	27.3
A moderate amount	2	25.0	2	22.2	5	31.3	9	27.3
A lot	2	25.0	1	11.1	4	25.0	7	21.2
A great deal	0	0.0	1	11.1	1	6.3	2	6.1
TOTAL	8	100	9	100	16	100	33	100

i. To what degree does this national plan/strategy reference or align to the World Health Organization Global Strategic Direction for Nursing and Midwifery?

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Not at all	0	0.0	1	12.5	0	0.0	1	3.0
A little	3	30.0	3	37.5	3	20.0	9	27.3
A moderate amount	2	20.0	1	12.5	8	53.3	11	33.3
A lot	4	40.0	1	12.5	4	26.7	9	27.3
A great deal	1	10.0	2	25.0	0	0.0	3	9.1
TOTAL	10	100	8	100	15	100	33	100

28. Since 2021, what change in the base nursing salary in your country has been observed?

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Greatly decreased	2	10.0	2	11.8	0	0.0	4	5.9
Moderately decreased	0	0.0	2	11.8	0	0.0	2	2.9
Slightly decreased	0	0.0	0	0.0	2	6.5	2	2.9
Stayed the same	8	40.0	9	52.9	5	16.1	22	32.4
Slightly increased	10	50.0	3	17.6	12	38.7	25	36.8
Moderately increased	0	0.0	1	5.9	10	32.3	11	16.2
Greatly increased	0	0.0	0	0.0	2	6.5	2	2.9
Total	20	100	17	100	31	100	68	100

29. Relative to the cost of living, inflation, and other financial factors does this base salary increase represent:

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
A real increase	2	10.0	1	6.7	5	16.1	8	12.1
Stayed the same	13	65.0	8	53.3	13	41.9	34	51.5
A real decrease	5	25.0	6	40.0	13	41.9	24	36.4
Total	20	100	15	100	31	100	66	100

30. Since 2021, what change has been observed in the prevalence of nursing worker strikes/disputes?

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Greatly decreased	0	0.0	2	13.3	1	3.4	3	4.8
Moderately decreased	1	5.3	1	6.7	3	10.3	5	7.9
Slightly decreased	2	10.5	0	0.0	2	6.9	4	6.3
Stayed the same	6	31.6	7	46.7	8	27.6	21	33.3
Slightly increased	6	31.6	2	13.3	6	20.7	14	22.2
Moderately increased	2	10.5	3	20.0	5	17.2	10	15.9
Greatly increased	2	10.5	0	0.0	4	13.8	6	9.5
TOTAL	19	100	15	100	29	100	63	100

31. Please rate how well your country's nursing workforce is: [please select one option for each statement]

a. Supported to work to their full scope of practice.

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Very poor	5	25.0	3	17.6	1	3.2	9	13.2
Poor	4	20.0	5	29.4	10	32.3	19	27.9
Fair	4	20.0	4	23.5	6	19.4	14	20.6
Good	6	30.0	3	17.6	11	35.5	20	29.4
Very good	0	0	2	11.8	2	6.5	4	5.9
Excellent	1	5.0	0	0.0	1	3.2	2	2.9
Total	20	100	17	100	31	100	68	100

b. Provided with opportunities for career progression.

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Very poor	2	10.0	5	29.4	1	3.2	8	11.8
Poor	8	40.0	0	0	8	25.8	16	23.5
Fair	8	40.0	9	52.9	8	25.8	25	36.8
Good	2	10.0	2	11.8	10	32.3	14	20.6
Very good	0	0.0	0	0.0	4	12.9	4	5.9
Excellent	0	0.0	1	5.9	0	0.0	1	1.5
Total	**20**	**100**	**17**	**100**	**31**	**100**	**68**	**100**

c. Adequately remunerated.

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Very poor	10	50.0	5	31.3	1	3.2	16	23.9
Poor	6	30.0	4	25.0	12	38.7	22	32.8
Fair	4	20.0	6	37.5	12	38.7	22	32.8
Good	0	0.0	1	6.3	5	16.1	6	9.0
Very good	0	0.0	0	0.0	1	3.2	1	1.5
Excellent	0	0.0	0	0.0	0	0.0	0	0.0
Total	**20**	**100**	**16**	**100**	**31**	**100**	**68**	**100**

d. Valued by the community.

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Very poor	2	10.0	2	11.8	0	0.0	4	5.9
Poor	6	30.0	2	11.8	3	9.7	11	16.2
Fair	7	35.0	6	35.3	4	12.9	17	25.0
Good	4	20.0	5	29.4	9	29.0	18	26.5
Very good	1	5.0	2	11.8	9	29.0	12	17.6
Excellent	0	0.0	0	0.0	6	19.4	6	8.8
Total	**20**	**100**	**17**	**100**	**31**	**100**	**68**	**100**

e. Able to transition to practice once they have completed their educational qualification.

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Very poor	2	10.0	4	23.5	0	0.0	6	8.8
Poor	2	10.0	0	0.0	1	3.2	3	4.4
Fair	4	20.0	3	17.6	7	22.6	14	20.6
Good	7	35.0	4	23.5	8	25.8	19	27.9
Very good	3	15.0	4	23.5	11	35.5	18	26.5
Excellent	2	10.0	2	11.8	4	12.9	8	11.8
Total	**20**	**100**	**17**	**100**	**31**	**100**	**68**	**100**

33. Please rate your agreement with the statement: 'Your country's health care system is experiencing a shortage of nursing staff that is making it difficult to achieve a safe environment for patient/client care':

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Strongly disagree	4	20.0	5	29.4	3	10.0	12	17.9
Disagree	1	5.0	3	17.6	3	10.0	7	10.4
Neither agree nor disagree	3	15.0	1	5.9	1	3.3	5	7.5
Agree	6	30.0	6	35.3	14	46.7	26	38.8
Strongly agree	6	30.0	2	11.8	9	30.0	17	25.4
Total	**20**	**100**	**17**	**100**	**30**	**100**	**67**	**100**

35. Thinking about the current health care systems and the way the nursing profession currently operates, how well do you think your country will be able to meet health needs over the next 20 years?

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Not at all	2	10.5	2	12.5	2	6.7	6	9.2
A little	9	47.4	5	31.3	10	33.3	24	36.9
A moderate amount	6	31.6	4	25	18	60	28	43.1
A lot	1	5.3	4	25	0	0	5	7.7
A great deal	1	5.3	1	6.3	0	0	2	3.1
Total	**19**	**100.1**	**16**	**100.1**	**30**	**100**	**65**	**100**

36. Does your country have appropriate strategies, legislation or policies to ensure an appropriately distributed workforce to meet the care needs of regional, rural and/or remote communities?

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Yes	5	33.3	4	28.6	14	48.3	23	39.7
No	10	66.7	10	71.4	15	51.7	35	60.3
Total	15	100	14	100	29	100	58	100

37. Does your country have strategies, legislation or policies to ensure an adequately distributed workforce to meet the care needs of disadvantaged, underserved, or vulnerable populations, such as ethnic or racial minorities, older people, children, indigenous populations, low income or homeless populations, etc?

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Yes	9	60.0	6	46.2	15	53.6	30	53.6
No	6	40.0	7	53.8	13	46.4	26	46.4
Total	15	100	13	100	28	100	56	100

39. Does your country have the following workforce policies in place: [please select one option for each statement]

Support for new graduates or inexperienced staff

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Yes	11	55	7	41.2	16	55.2	34	51.5
No	9	45	10	58.8	13	44.8	32	48.5
Total	20	100	17	100	29	100	66	100

Access to workplace psychological or mental health support

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Yes	7	35	4	26.7	19	67.9	30	47.6
No	13	65	11	73.3	9	32.1	33	52.4
Total	20	100	15	100	28	100	63	100

Preventing workplace violence against staff (e.g. physical or verbal harassment)

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Yes	10	52.6	10	66.7	23	79.3	43	68.3
No	9	47.4	5	33.3	6	20.7	20	31.7
Total	**19**	**100**	**15**	**100**	**29**	**100**	**63**	**100**

Having the right skill mix (number/ratios of the right kinds of staff)

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Yes	8	42.1	6	35.3	9	32.1	23	35.9
No	11	57.9	11	64.7	19	67.9	41	64.1
Total	**19**	**100**	**17**	**100**	**28**	**100**	**64**	**100**

Having the right staffing levels (number of staff/ratios of staff to patients/clients)

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Yes	7	35	6	35.3	7	24.1	20	30.3
No	13	65	11	64.7	22	75.9	46	69.7
Total	**20**	**100**	**17**	**100**	**29**	**100**	**66**	**100**

40. Please rate your country's nursing workforce policies and procedures with respect to the following: [please select one option for each statement]

	Support for graduates		Mental health support		Preventing violence		Skill mix		Staffing levels	
	n	%	n	%	n	%	n	%	n	%
Very poor	1	4.3	0	0.0	4	13.3	1	6.7	2	16.7
Poor	3	13.0	5	21.7	3	10.0	2	13.3	2	16.7
Fair	11	47.8	9	39.1	12	40.0	5	33.3	4	33.3
Good	3	13.0	5	21.7	4	13.3	5	33.3	3	25.0
Very good	4	17.4	3	13.0	5	16.7	2	13.3	1	8.3
Excellent	1	4.3	1	4.3	2	6.7	0	0.0	0	0.0
Total	**23**	**100**	**23**	**100**	**30**	**100**	**15**	**100**	**12**	**100**

41. Have nurses in your country been affected by violence or hostility towards them from patients or the general public?

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Yes	16	80.0	13	86.7	27	90.0	56	86.2
No	4	20.0	2	13.3	3	10.0	9	13.8
Total	20	100	15	100	30	100	65	100

b. Have nurses in your country been affected by violence or hostility towards them from other employees where they work (i.e., other nurses, team managers)?

	Lower Income		Upper Middle Income		High Income		Overall	
	n	%	n	%	n	%	n	%
Yes	14	77.8	10	66.7	20	69.0	44	71.0
No	4	22.2	5	33.3	9	31.0	18	29.0
Total	18	100	15	100	29	100	62	100

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