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Strengthening evidence on migrant workers' health in Nepal

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Abstract

Thousands of Nepalese labour migrants have died abroad in past decades, and morbidity is also high. The high volume of data collected through pre-departure health screening, unfortunately, remains largely unused. Making better use of health data, including by trusted public health researchers, could help develop health interventions for migrant workers.

1 The context

Labour migration remains a cornerstone of Nepal's economy. Between 2008 and 2024, more than 5.7 million labour permits were issued for foreign employment. In the fiscal year 2022/23 and 2023/24 alone, the number of permits reached 954,319 [1]; more than 80% of these permits were issued to migrants going to six Gulf Cooperation Council (GCC) countries and Malaysia, where many are employed in so-called 3D jobs i.e. "difficult, dirty, and dangerous" [2].

Labour migration generates substantial economic benefits for Nepal. For example, remittances reached NPR 1.72 trillion (US\$12.5 billion) in fiscal year 2024/25, equivalent to 28.6% of the country's GDP and more than five times the global average remittance-to-GDP ratio of 5.13% [3]. Despite these economic gains, the human costs associated with labour migration remain substantial. The Ministry of Labour, Employment and Social Security (MoLESS) reported that 13,224 Nepali migrant workers died abroad between 2008/09 and 2023/24 (Fig. 1), with more than 1,100 deaths recorded annually since 2020/21 [1]. However, this figure likely underestimates the true burden, as official statistics are largely derived from compensation claims submitted by families. Furthermore, undocumented migrant workers remain largely absent from national records, further obscuring the scale of mortality and health-related harms associated with labour migration.

Data on the health and wellbeing of returnee migrants are also limited, with existing evidence primarily focused on those returning from Gulf Cooperation Council (GCC) countries and Malaysia. Many returnees report a range of health problems, including



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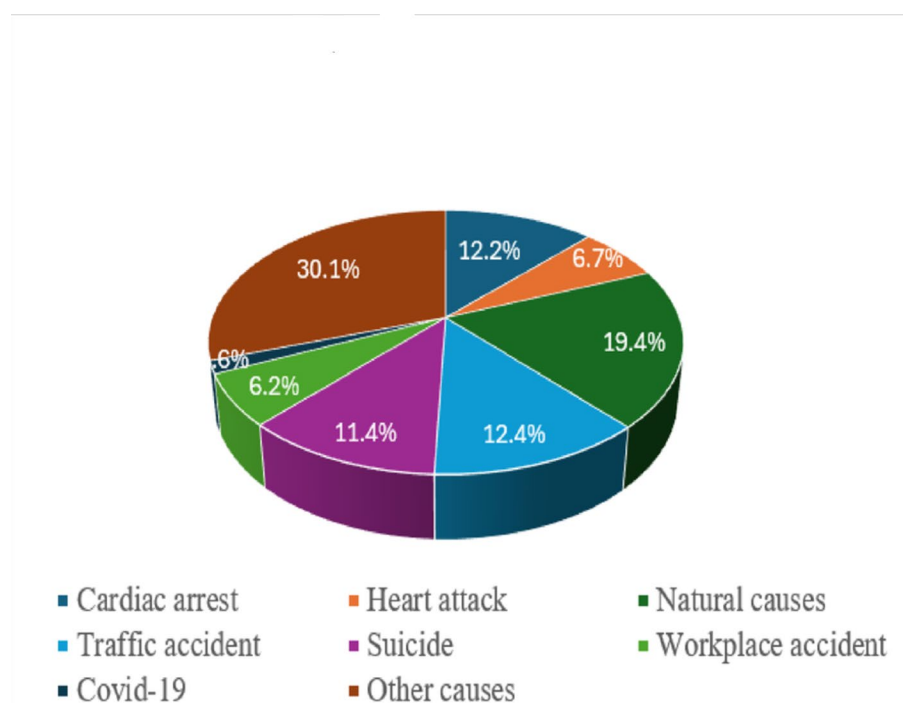


Fig. 1 Cause of deaths among Nepali migrants (2008/09-2023/24) (N= 13,224)

work-related injuries, kidney disease, uncontrolled diabetes or hypertension, mental health conditions, and other chronic illnesses. Under the medical fitness requirements of destination countries, such conditions may result in migrants being classified as ‘medically unfit’ to continue overseas employment.

For example, Malaysia, which hosts about half a million Nepali migrant workers, requires all foreign workers to undergo mandatory health screening within 30 days of arrival to obtain their Visit Pass (Temporary Employment) (VPTE). The medical examination is required yearly, for every VPTE application and renewal [4]. These examinations are conducted through the Foreign Workers Medical Examination and Monitoring Agency (FOMEMA). Similarly, migrants travelling to Gulf Cooperation Council (GCC) countries are required to undergo pre-departure medical examinations through the Gulf Approved Medical Centers Association (GAMCA), now replaced by Wafid, as mandated by the relevant ministries of health in destination countries [5]. Although routine annual medical examinations are not generally required, migrants may undergo additional assessments during residence or work visa renewal processes.

If a migrant worker is deemed unfit during these screenings, employers are legally required to repatriate them to their country of origin. A media report in Nepal found that annually 2,900–5,260 Nepalese migrants are declared unfit for work in Malaysia for health reasons [6]. The MoLESS regularly publishes its Labour Migration Report, which provides an overview of Nepalese workers abroad. The report offers valuable information and discussion on labour migration governance, recruitment practices, migration trends, skills profiles, migrant health and safety, access to justice, reintegration of returnee migrants, and social security for migrant workers. These analyses are based primarily on two data sources: (i) the Foreign Employment Information Management System (FEIMS) and (ii) the Foreign Employment Welfare Information Management

System (FEWIMS). However, there remain opportunities for more comprehensive analyses of the health data collected by key stakeholders across the migration cycle. For instance, 223 (as of August 2025) government-authorised medical screening centres conduct pre-departure health assessments for aspiring migrant workers [1]. Nepal's pre-departure medical screening includes a general examination, blood tests (e.g., for diabetes, kidney function), infectious disease screening (e.g., HIV), urine tests, and X-rays. However, individual-level data are still collected through paper-based reporting systems. Data from these tests are neither streamlined, analysed, nor shared. Given the volume of migration from Nepal (e.g., over 2,000 migrants leave daily), these data could provide a comprehensive health profile of young people in Nepal, as envisioned by the recently published National Labour Migration Policy [7].

In this paper, we highlight the importance of systematically collecting health data across the migration cycle and, more importantly, of establishing an integrated electronic database with appropriate mechanisms for data sharing and research access to inform evidence-based policies and interventions that improve the health and wellbeing of labour migrant workers.

1.1 Gaps in data utilisation in the migration trajectory

Nepal's Foreign Employment Information Management System (FEIMS) is designed to track the four stages of migration: pre-recruitment, pre-departure, employment, and return [1]. However, there remains a significant gap between data collection and optimal use. Analysis of these data could reveal patterns of health issues, including cases deemed medically unfit, and variations in the data by age, sex, geographic region, or ethnic group and serve as a baseline for returnees' health information. Also, the data could help identify the intersecting vulnerabilities associated with migration and inform future programme and policies to address these challenges. Currently, while destination countries such as Malaysia and GCC states require post-arrival medical screenings and annual check-ups, these results are not shared with Nepal. Some of these countries do publish basic information, but it is hugely inadequate to fully understand the problems of a sub-group of workers from Nepal, or stratified by, for example, age or occupation. For instance, during the period 2014–2018, 2.43% of 5,819,426 foreign workers in Malaysia failed (mainly due to communicable diseases) their FOMEMA screening [8]. The prevalence of conditions that make Nepalese returnees 'medically unfit' are unknown. A significant number of Nepalese are reported to die from cardiovascular-related problems; cardiometabolic risk factors such as hypertension, diabetes, and obesity are also markedly higher in Nepalese migrants compared to non-migrants [9]. Comparing pre-departure and post-return health status can help identify migration- or occupation-related health issues. We argue that systematic analysis of FEIMS medical data not only maps these health patterns (or profiles and related risk factors) of migrant workers but can also play a crucial role in regularly updating pre-departure training contents on emerging health issues, informing intervention, strategies and safer workplace practices while abroad.

The need to improve pre-departure training has been recognised by many stakeholders [10]. Without leveraging these data, policy decisions risk being based on assumptions, potentially resulting in inefficient or inequitable interventions. Having relevant data may enable us to link health status with types of occupation, which in turn can lead

to focused health promotion for people in specific working conditions. For example, it is widely recognised that construction workers in the Middle East face extreme heat, which may exacerbate several health issues [11–13]. This should result in better-targeted health promotion on these occupational issues in pre-departure education and in destination countries (perhaps via mobile phone/apps/texts or online reminders or health camps in host countries). A second example would be security guards who are required to work long shifts without many opportunities to leave the post for toilet breaks, and hence may reduce their fluid intake, which may exacerbate kidney disease. Apart from targeted health promotion, there is also a key role for government in enforcing safe working conditions for security guards. Evidence is sparse and non-definitive in linking types of occupation and concomitant occupational health risks among migrant workers in the GCC and Malaysia.

1.2 Health screening on returnee migrants: a missed opportunity

In 2023/24, 538,605 migrant workers returned via Kathmandu's Tribhuvan International Airport only [1]. Despite these numbers, reintegration support remains geographically and functionally limited. For example, the ReMi (Reintegration of Returnee Migrant Workers Project; <https://remi.org.np/>) operates in only 20 of Nepal's 753 local government areas. While migration policies and strategies have focused re-integration of returnee migrants, health and well-being of returnee workers are not a priority. Studies with Nepalese returnee migrants have warned of a rising prevalence of non-communicable disease risk factors, such as hypertension, diabetes [9], and mental illnesses [14, 15], highlighting a missed opportunity for early intervention and screening upon arrival.

A critical yet often overlooked aspect of supporting returnee migrant workers is their enrolment in health insurance schemes upon return. Many returnees come back with chronic illnesses, injuries, or mental health conditions, yet reintegration services remain limited and do not prioritise long-term healthcare access. Without financial protection, these individuals face significant barriers to accessing necessary treatment, particularly for conditions such as kidney disease, diabetes, or hypertension that require ongoing care. Integrating health insurance enrolment into post-arrival screening and referral systems, potentially linked with existing health data platforms, could ensure continuity of care and reduce out-of-pocket expenditures.

Studies from haemodialysis centres in Nepal also report many kidney failure patients within migrant communities, for example, a study from two major haemodialysis centres in Kathmandu reported that of the total 339 patients, 28% receiving dialysis were returnee labour migrants, predominantly from GCC countries and Malaysia [16], whereas those returned due to physical injuries are completely unaccounted for. This suggests returnee migrants should be offered health screening on their arrival that includes medical examinations, mental health assessments, and screening for common occupational health issues. Integrating these services into the existing government health system would allow returnee migrants to receive referrals for further care, rehabilitation, or psychosocial support where necessary. Indeed, these data could be linked to the pre-departure medical test by creating a unique identifier for each migrant worker.

We recognise that implementing medical screening for returning migrants requires additional financing and human resources for health as well as strong coordination between the MoHP and MoLESS. However, as a starting point, a sample of returnees

could be included, randomly selected on different days and arrival times. For example, Filipino returnee migrants, particularly those from disaster affected areas or those who suffered workplace injuries, undergo medical assessments on arrival and are then integrated into the national health system via the Universal Health Care (UHC) Act [17]. In the Philippines, the Overseas Workers Welfare Administration (OWWA) and the Department of Social Welfare and Development (DSWD) provide a continuum of care that bridges physical health, trauma-informed counselling, and livelihood training [18–19]. This has ensured that migrants do not just return but are socially and economically re-integrated into their communities [20]. Perhaps, Nepal can apply some of the best practices and learn from the Philippines.

1.3 Possible challenges

A major challenge Nepal may face in migrants' data utilisation is the limited availability of trained personnel, such as health data analysts within government institutions, to manage, analyse, and interpret the data. Karki and colleagues [21] earlier identified challenges in maintaining health records of Nepalese migrant workers, including limited government interest in developing a unified online system, shortages of competent human resources and equipment, and the absence of standardised health indicators for migrant health assessment. Many of these challenges are related to the lack of investment in data collection and analyses. These gaps constrain the ability to translate collected information daily from aspiring workers into actionable policy and interventions. One potential solution is to strengthen collaboration with researchers and academics working on migration and health. We have observed that there is a growing interest among both Nepalese and international researchers in this field, and networking and collaboration with these researchers could enhance institutional capacity for data analysis and interpretation. Similarly, technical support from international development agencies, including the World Health Organization (WHO), International Labour Organization (ILO), and International Organization for Migration (IOM), could further strengthen local institutional expertise.

Labour migration from Nepal is primarily overseen by the MoLESS (now Ministry of Youth, Labour and Employment). However, there is considerable scope for the Ministry of Health and Food Safety (MoHFS) to take a more active role in migration governance. For instance, the MoHFS could lead the implementation of health screenings for migrant workers and regularly contribute to the development or updating of 'health-contents' of pre-departure training curricula, guidelines for medical examinations, and post-return health assessments. Working closely with academics and researchers, the MoHP can also lead the analysis and interpretation of health data and regularly feed the data/findings into policy development and interventions. Such inter-ministerial coordination is essential to ensure that the health of migrant workers is systematically integrated into national migration policy.

1.4 A way forward

We suggest that Nepal should shift its migration policy from a framework of labour management to one of proactive migrant workers' protection and well-being. A key step in this transition is the creation of an integrated migrant health database and electronic health record system. However, merely creating a database is not enough; there

will need to be secure access for researchers. Therefore, official bodies should make anonymised datasets accessible upon reasonable request from researchers working on migration and health topics. We believe centralising migrant health information within FEIMS would allow the government to link pre-departure medical records with health assessments conducted on return. Such a longitudinal data system would enable health service centres to track trends over time, identify risks associated with particular migration corridors, population subgroups, or employment sectors, and better understand the long-term biological and psychological consequences of labour migration. Making good use of existing data can help improve policy decisions and resource allocation, as well as better address the needs of migrant workers and their families.

The information management system should be complemented by institutionalised on-arrival health screening. These services could support early identification of untreated occupational injuries and chronic conditions including hypertension, diabetes, kidney diseases, physical injuries, mental ill health or other lifestyle-related risks, which often remain undiagnosed or unmanaged during employment abroad.

Establishing dedicated health desks at airports to support an effective referral system for health check-ups or periodic medical camps in high out-migration districts would help trace returning workers. Moreover, Nepal's embassies can play a role in disseminating information to labour migrants and in improving the quality of data collected in-country, for example, by ensuring that death certificates are accurate and that post-mortems are requested where needed to establish the cause of death.

More generally, we argue that Nepal should expand collaboration with manpower agencies, national and international development agencies, academic and researchers engaged in the migration and health field. By re-centring migration governance around the comprehensive health profile of aspiring and returning workers, Nepal can begin to mitigate the long-term 'hidden' health costs of labour migration, and improve the effect of targeted health promotion intervention aimed at specific occupations.

2 Conclusion

There is a wealth of underutilised health data on Nepalese migrant workers collected through pre-departure health screening, resulting in a critical gap in our knowledge of the health and well-being of those workers. Moreover, there are missed opportunities to systematically collect health data from returnee migrants via easy-to-use electronic systems to assess their health status and needs. When routinely analysed and integrated with information on returnee migrants, they can provide a comprehensive understanding of migrants' health profile and risks. In turn, this information can guide improvements in pre-departure trainings and increase evidence-based policymaking to design better public health programmes and interventions. Collaboration across government ministries, local and international researchers and technical agencies could improve analysis. Such a coordinated effort will require both political will, collaboration between key players (government agencies, manpower agencies, unions, labour migrant charities) and sufficient resources, both financial and skilled data analysts.

Author contributions

PR conceived the idea. PRP, EMF, ARP, NA, PP, PS, HJP, and EvT contributed. All authors reviewed and edited the manuscript and approved the final version.

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No datasets were generated or analysed during the current study.

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Consent for publication

Not applicable.

Competing interests

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