

REPORT

# Migration in South Asia: A Review

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The Review has been funded by UKaid from the UK Government; however the views expressed do not necessarily reflect the UK Government's official policies.

Published in June 2015

Suggested Citation: Vartika Sharma, Lopamudra Ray Saraswati, Susmita Das and Avina Sarna. 2015. Migration in South Asia: A Review, Report. New Delhi: Population Council.

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## **ACKNOWLEDGEMENTS**

We are grateful to UKaid for supporting this regional research on health and migration in South Asia.

We would like to thank Dr Nupur Barua, Deputy Head, South Asia Research Hub at DFID, India, for her support. Our thanks to Dr Niranjana Saggurti, Program Officer, Bill & Melinda Gates Foundation (ex-Population Council) for conceptualizing this study.

We would also like to thank Ms Deepika Ganju, Population Council, Delhi and Mr Michael Vosika, Population Council, New York, for their editorial support.

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## INTRODUCTION

Migration is a process encompassing any kind of population movement regardless of length, composition, or cause, either across an international border or within a state. It includes the migration of refugees, displaced persons, uprooted people, and economic migrants (IOM 2003). Migration is considered an important global issue, as roughly one out of every 55 individuals in the world is a migrant today (IOM 2003). With access to modern transportation and telecommunications, more people are motivated and able to move.

Estimates for migration vary. According to the United Nations report “Trends in Total Migrant Stock, 2005 Revision”, between 1960 and 2005 the number of international migrants in the world more than doubled, from an estimated 75 million to almost 191 million. According to the International Organization for Migration (IOM), some 192 million people are living outside their place of birth, representing about 3 per cent of the world’s population. The United Nations Development Program (UNDP) estimates a higher figure, approximately 740 million internal migrants and 214 million international migrants (UNDP 2009). Undocumented migration is harder to track, but the International Labour Organization (ILO) estimates that there are 15–30 million irregular immigrants internationally.

The Human Development Report 2009 (UNDP) is essentially pro-migration and applies a human development approach to the study of migration. When migrants integrate and diffuse broadly within their adopted homeland, the adopted homeland becomes more diverse and migrants have a better chance of being valued as enriching society and introducing complementary cultural traits. Ground realities in India, however, indicate that this has not happened and the influx of migrants from Bangladesh and Nepal has raised concerns. For the Indian state, the security implications of large-scale migration from both Bangladesh and Nepal are varied but inter-related, given the complex nature of migration and the multiple identities that migrants profess. They cover demographic changes, growth of radicalism, particularly Islamic fundamentalism, regionalism, and, more importantly, involvement and even encroachment of foreign powers on the country’s “sovereign space”. (Behra 2011). Hugo (2005) documents recent major trends in the various types of international migration in Asia and argues that there are elements in the existing system and in the region that will lead to the perpetuation and enhancement of international migration to some extent, regardless of political and economic development and government interventions.

Contrary to popular perception that migration is mostly a South-North phenomenon, South-South migration is large. Available data from national censuses suggest that nearly half the migrants from developing countries reside in other developing countries. Almost 80 per cent of South-South migration takes place between countries that have contiguous borders (Ratha and Shaw 2007).

Cross-border migration poses a big challenge for many countries, both in terms of the magnitude and variety of migration patterns and processes. If appropriately managed, migration can greatly benefit the individual as well as his/her source and destination communities. In contrast, poorly managed migration can result in various social, cultural, and economic difficulties, including public health problems such as HIV/AIDs, TB, and malaria.

Nevertheless, migration is a natural process during the socioeconomic transformation of a country and cannot be stopped without coercive measures, which is not feasible in a democracy (Behra 2011). In addition, there is evidence that a city’s migrant population makes a significant contribution to its economy, catering to labour demands at lower cost (Srivastava and Sasikumar 2003). Migrants make a huge contribution to the economy and culture of their source/destination countries by filling labour-market needs in high-skill and low-skill segments of the market, rejuvenating populations, improving labour-market efficiency, promoting entrepreneurship, spurring urban renewal, and injecting dynamism and diversity into destination countries and societies (ILO 2010). Although migrants are exposed to new risks, migration in the first instance reduces vulnerability and contributes to a secure livelihood and to reduced risks of seasonality, harvest failure, and food shortage (Thieme 2006).

This desk review was undertaken to synthesize available evidence on programmes, policies, and research related to migrants in the South Asia region, specifically India, Bangladesh, and Nepal.

The objectives of this review are: (1) to synthesize existing evidence around migrants in order to characterize their specific vulnerabilities, (2) to collate information around existing policies and programmes for migrants and to identify gaps and challenges, and (3) to provide recommendations for future areas of research and evidence-gathering.

## **METHODOLOGY**

For this desk review, we accessed published articles and reports on cross-border migrants in South Asia. The review was limited to materials published from 2004–14, except for some very important material that was necessary to include. On issues regarding migrant policies and country-specific schemes, documentation was included without a time limit. The literature review was conducted for specific issues related to migration within and from the Asian countries, specifically in the South Asian region. For this, standard systematic review procedures were used. Bibliographic databases such as JSTOR, POPLINE, and PubMed, and standard search engines such as Google Scholar were searched using free-text terms to produce a sensitive search, adjusting terms depending on the search tools available (e.g., truncation for timeline). The search included a combination of the following terms in addition to the domains to be documented under literature review: “Cross border migration”, “Migrants’ health”, “South Asia”, “HIV”, “Places of origin”, “Bangladeshi migrants”, “Nepali migrants”, “Trafficking”, “Migration related policies”, etc. In addition to the literature search, experts in the field were consulted to provide a complementary search and refereed documents that are not in the peer-reviewed literature. Search items were limited to the following focus areas:

1. Migration and Health
  - Communicable Diseases
  - Non-Communicable Diseases
  - HIV/AIDS
  - Reproductive and Sexual Health
  - Maternal Health
  - Nutrition
  - Child Health
  - Health-Seeking Behaviours
2. Migrant Policy/Schemes
  - Migrant-Related Interventions
  - Socio, Economic, Lifestyle, and Cultural Vulnerabilities
  - Mobility Patterns and Structural Mobility

Through this process, qualitative and quantitative research, articles, and intervention evaluation reports were identified. Articles that had a robust research methodology and analysis were included. Broadly, the following categories of documents were included in this bibliography:

- Scientific papers published in national and international peer-reviewed journals using search engines through selected keywords
- Current policy and strategy documents pertaining to migrants
- Intervention programs as detailed in selected reports

## **CROSS-BORDER MIGRATION: INDIA, BANGLADESH, AND NEPAL**

According to a UN Department of Economic and Social Affairs report (2009), India was projected to rank ninth in terms of number of international migrants in 2010 and to account for 2.5 per cent of all international migrants. As per India’s National Sample Survey Organization (2010), there were 326 million internal migrants in 2007–08 (28.5 per cent of the population). India shares a common border with Bangladesh, Bhutan, China, Myanmar, Nepal, and Pakistan and thus is one of the most sought-after destinations by immigrants, evident from the huge influx of people from neighbouring countries such as Bangladesh, Nepal, and Tibet.

According to Behra (2011), the nature of migration from Bangladesh and Nepal to India has been dissimilar because of their different historical backgrounds, geographical variants, ethno-religious affinities, political systems, and bilateral arrangements with India. Behra illustrates that geographical contiguity, sociocultural



affinity, the kinship factor, and historical reasons have left the Indo-Bangladesh and Indo-Nepal borders vulnerable to migration.

India has a 4,097-km border with Bangladesh along the states of Assam, Meghalaya, Tripura, and West Bengal. Of this, only around 1,500 km is fenced, leaving a major portion of the border porous and easy for illegal migration. Bangladeshi migrants are therefore mostly concentrated in Assam and West Bengal. A study by Siddiqui and Abrar (2002) highlighted that most Bangladeshi migrants, irrespective of their country of destination, migrated between the ages of 25 and 35 years and spent about half their lives in the host country before returning to their native country.

Similarly, India and Nepal share an open and porous 1,900-km border that runs along the states of Bihar, Sikkim, Uttar Pradesh, and West Bengal. Migration between Nepal and India has been easy because of the open, porous border and strong familial links. As a result of a bilateral friendship treaty signed between India and Nepal in 1950, citizens of both countries can travel and work freely across the border. Their concentration is in the northeastern states, Uttar Pradesh and West Bengal, with scattered presences over the remainder of the country (Behra 2011). According to recent estimates, there are approximately one million Nepalese working in India (GoN 2004), and they mostly work as unskilled permanent or seasonal labourers. The 2001 census shows that more than 762,000 individuals—or 3.3 per cent of Nepal's total population of just over 23 million—were out of the country, with more than 77 per cent of those in India. Most Nepalese respondents migrated for the first time between the ages of 16 and 20 years (Samuels et al. 2012). Several studies have shown that the choice of destination for most Nepali migrants was Mumbai (Samuels et al. 2012; Bam et al. 2013; Poudel et al. 2003; Poudel et al. 2004).

Unlike the migration from Nepal, movement from Bangladesh to India needs approval from the relevant authorities and most migrants to India are unauthorized (Samuels and Wagle 2011). Although exact figures are unknown, the 2001 India census documented that there were approximately 3 million Bangladeshi migrants in India, representing 60 per cent of total migrants in India. People from India and Bangladesh regularly cross the porous borders through many unofficial transit points (Samuels et al. 2012).

Singh (2009) highlight that illegal migration is extremely difficult to measure, and in the Indian context, it is far more complex in view of the ethnic ties the migrants share with the native population. Efforts to control illegal cross-border immigration remain highly inadequate in India. Unabated cross-border immigration for the last several decades is particularly worrisome in North-East India. Bangladeshi immigrants in the region are actually “settlers” and thereby competitors for space: land, water, services, and jobs. Hence, their presence is perceived as a potential threat, capable of creating tensions and conflict between the immigrants and the natives, and capable of altering the demographic and political profile of the region (Singh 2009).

Dutta (2009) estimated the fresh migration rate as being (-0.0076) for Bangladeshi migrants to West Bengal from 1991–2001 and demonstrated it to be negative and very negligible both for rural and urban migrants by sex. Dutta concludes that though the migration rate of documented Bangladeshi migrants to West Bengal may reflect a declining trend, undocumented migration might reveal a different picture.

In Nepal, more men migrated with their peers. In contrast, most women migrating to India have come with their spouse and children. While most Nepalese migrants moved on their own or with peers, migration among Bangladeshis is arranged largely by brokers (Samuels et al. 2012).

## **REASONS FOR MIGRATION**

Migration is an important livelihood strategy, mainly for the poor in many of the world's poorest countries (WHO 2008). Employment opportunities and higher wages were the driving forces for migration from Bangladesh and Nepal to India. The main pull factors for migration were economic opportunities in India (Samuels et al. 2012; Bam et al. 2013; Dutta 2009; Siddiqui and Abrar 2003). In a study by Samuels et al. (2012), more than 80 per cent of respondents in India and 90 per cent of migrant households in Nepal perceived migration to India as beneficial for the family, resulting in remittance flows for families at source destinations. Other common benefits of migration cited in different studies were better educational opportunities for children, better household/food availability, and ability to afford health services (Samuels et al. 2011; Thieme 2006). The social influence of friends and neighbours who are also migrating to India is a pull factor (Bam et al. 2013).

Lack of employment and business opportunities at home were reported as main push factors (Thieme 2006; Samuels et al. 2011). Bangladeshi migrants chose India because it was cheaper and easier to migrate to than going to another country to earn better wages/income (Asia Foundation 2013). Stigma and caste discrimination are other prominent reasons for migration in Nepal. Among all Nepalese social groups, Dalits have the highest proportion of men migrating from Nepal to India (ILO 2005). Poor socioeconomic status, caste-related discrimination, and lack of employment opportunities push large groups of young Dalits to migrate to India for employment (Bam et al. 2013). Vishwanathan et al. (2004) also reported migration within the country to escape caste-based discrimination.

A study in the Tangail and Chittagong areas of Bangladesh reported high migration propensity in the study areas, with almost every second household having at least one member working overseas. (Siddiqui and Abrar 2003). Migration has been practiced for generations, and being a migrant or a family member left behind is for many people not an exception but rather a routine and integral part of their lives (Thieme 2006). Migration has also been spoken of as a rite of passage—it is almost expected that someone will migrate. In some households in Nepal, every male member of the family had done so (Samuels et al. 2011).

Unlike other studies on migration, Behra (2011) focused on the ethnic identities of migrant populations, which excludes a sense of “belonging” to India. Unlike migration to other countries, the ethnic commonalities of Indians with Bangladeshi and Nepali migrants imbues migration to India with both “push” and “pull” factors that have an ethnic dimension. Not surprisingly, the same ethnic dimension impinges on the migrant’s choice of whether to co-opt an Indian identity or retain that of their country of origin. For India, the security implications of large-scale migration from both Bangladesh and Nepal are varied but interrelated, given the complex nature of migration and the multiple identities that migrants profess. Behra concludes inter alia that India’s borders with Bangladesh and Nepal must be regulated and that resident migrants need to be strategically dealt with, keeping in mind age-old relationships with these countries and, more importantly, the nature and construct of our geography.

## **SOCIAL NETWORKS**

Migration is a socially embedded process (Thieme 2006) that depends on and creates social networks (Vertovec 2002). For migrants, social networks are crucial for finding jobs and accommodations, circulating goods and services, and psychological support and continuous social and economic information in the destination areas. Social networks often guide migrants into or through specific places and occupations (Thieme 2006; Vertovec 2002).

Some of the most compelling results to emerge from recent research on migration have come in explaining “chain migration”—the tendency for past migration to be strongly associated with further migration (Kuhn 2005). Chain migration unfolds as the costs and risks of migration decline or the returns to migration increase for members of a contextual unit, such as a community (Kuhn 2005; Vertovec 2002). It is evident by the fact that people from a single nation, region, and even community come to dominate certain industries in migrant destination areas. Further, migration can be conceived of as a social-diffusion process whereby low-status households that do not migrate initially will eventually gain access to migration and its benefits (Durand et al. 2001; Kuhn 2005). Early movers tend to come from the highest strata of a community, as household wealth may buffer prospective migrants against the costs and risks associated with moving (Sanders et al. 2002). Winters et al. (2001) speculated that over time social networks would reduce the costs and risks of migration for an increasing share of the population, and to an increasingly representative cross-section of the community (Winters et al. 2001; Zhao 2003). Few studies have addressed the importance of weak and strong ties in chain migration, but most have focused on differences between family and community networks that are specified contextually (Winters et al. 2001; Collyer 2005). One critical factor in the transmission of migration opportunities between communities may be the strength of connection to social peers living outside the community of origin (Kuhn 2005).

Thieme (2006) highlighted the importance of social relations of power within family and kinship structures and rights in Nepal as well as in the destination in India. The outline of the existence of transnational migration networks and transnational social spaces shows that the lives of migrants and their families back home are deeply interwoven. They recommended that interventions on migration should address both the source and destination areas. The migration linkages between the places of origin in Delhi and Nepal are intergenerational and reproduce social structures. At the same time, traditional structures are transformed and merged with

modern patterns. Migrants also construct new social relations and institutions in the process of migration (Thieme 2006). Migration researchers have recognized that migrants maintain contact with people in their places of origin through correspondence and sending remittances (Vertovec 2002; Thieme 2006; Siddiqui and Abrar 2002). Newer, less expensive, and more efficient modes of communication and transportation allow migrants to maintain contact with their families in their native home and with their original culture (Vertovec 2002).

Few studies have also looked into the role of social networks in addressing health problems. A study in Nepal (Kirwan et al. 2009) reported the significance of strong social networks for TB patients. In the study, many respondents reported a weak social network, which was sometimes attributed to their migrant status. Further, living with family or relatives abroad was identified as a protective factor for the transmission of HIV to women (Thapa et al. 2014). Family support for patients plays an important role in improving treatment adherence (Kirwan et al. 2009; Kulkarni et al. 2013).

Vertovec (2002) argues that there is much to be gained—both in theoretical and policy terms—by recognizing the centrality and extent of transnational networks surrounding skilled labour migration. The study suggests that networks utilized by skilled migrants often tend to be of a different nature and may have different migratory outcomes than those characterizing low or unskilled migrants. Dimensions of social position and power, such as the class profile of the network, have been shown to have considerable conditioning impact on migration processes. Social ties in pre-migration networks are related to factors affecting which people migrate, the means of migration, the destination (including locality, accommodation, and often specific job), and future prospects for physical and occupational mobility.

Interaction across political borders that are geographically porous and linguistically familiar stimulates access, as well as receptivity, to new ways of thinking and new forms of behaviour (Basu and Stephenson 2002). Basu and Stephenson in their analysis found evidence of considerable spatial variation in the prevalence of contraceptive use in Bangladesh, with a more obviously geographic pattern to the spatial dispersion of low- and high-contraceptive districts. Controlling for variations in individual and household-level correlates showed an important role for cross-border influences only in those districts that share a common language across the border. The districts that are positive outliers in contraception lie close to the Bangladesh–West Bengal border, and the positive outliers form a contiguous band in a manner suggestive of a role for contagion.

The process of reintegration and rehabilitation of returnee migrants is perhaps the least explored in migrant literature. In Bangladesh, there is negligible information on the number of returnee migrants and their return pattern. Furthermore, there is absence of a policy framework to facilitate the reintegration of the returnee migrant workers, and Siddiqui and Abrar (2002) reported that the process of reintegration of the returnee migrant into mainstream society and economy is quite difficult considering the host of problems they face such as lack of information on current business trends, advisory services and job opportunities. They also had to deal with social problems where friends and relatives considered the returnee migrants as the fortunate ones and made constant demands on them. 50 per cent of the respondents of the study by Siddiqui and Abrar (2002) said they were approached for financial support.

## **MIGRATION: BENEFITS AND REMITTANCES**

Remittances sent home by migrants make significant contributions to their national economies as well as their families' incomes. In 2005, estimates of South-South remittances ranged from 9 to 30 per cent of developing countries' remittance receipts. Although the impact of South-South migration on the income of migrants and natives is smaller than for South-North migration, small increases in income can have substantial implications for the poor (Ratha and Shaw 2007). In rural communities that have little cash income, even small transfers of cash can be highly valuable to, for example, secure nutrition for the whole year (Thieme 2006).

In Bangladesh and Nepal, remittances are larger than the national foreign-exchange reserves. For Bangladesh's economy, remittances constitute almost one-third of foreign exchange earnings. However, due to the increase in the flow of unskilled and semiskilled labour, remittances are increasing at a much lower rate than the labour flow (Siddiqui and Abrar 2003; Maimbo 2005). Remittances are also vital to the economy of Nepal and it is estimated that nearly 20 per cent of the country's Gross Domestic Product (GDP) in 2010–11 came from remittances sent by Nepalese migrant workers from abroad (Amnesty International 2011).

For many households, remittances are a major source of earning to maintain subsistence because they provide a lifeline to meet daily needs or provide for their future, e.g. by paying for their children's education, purchasing land for farming, building a home, or investing in a small business (Siddiqui and Abrar 2003; Samuels et al., 2011; Amnesty International 2011). The family expects the migrants to improve their well-being and wealth (Thieme 2006). While remittances from migrants are critical for the survival of families in source communities, those who move abroad and those who stay may face numerous vulnerabilities (Samuels et al. 2011). A longitudinal study in Indonesia (Lu 2010) shows that despite earning a high income, migrants tend to under-consume and remit a large amount of earnings to families at the place of origin, which hinders migrants' own potential health gains. Kirwan et al. (2009) showed in their study in Nepal that the economic burden of TB treatment in migrants was far greater than their financial reserve. Consequently, remittances sent to families are reduced and migrants remained in debt long after treatment completion, tied to the treatment location and paying off high interest loans.

According to a report by Siddiqui and Abrar (2003) exploring the origin and scope of remittances in Bangladesh, more than half of the individuals sending remittances were married, yet parents constituted the highest number of recipients of remittances. A large segment of the receivers were more than 50 years of age and more than half were illiterate. These are important factors in determining the use of remittances. The remittance-sending members of these families on average are staying overseas for more than five years and a typical migrant remitted 55.7 per cent of his income. This report highlighted that a substantial portion of remittances is used to finance migration of other family members, and families saw this as a major investment for further enhancing their household income. It is crucial to note that many of the benefits of these remittances are lost in intermediation, and that migrants are paying "super taxes" for remittance charges that further undermine their capabilities (Watkins and Quattri 2014).

## **MIGRANTS: VULNERABILITIES, EXPLOITATION, AND DISCRIMINATION**

There are several ways in which migrants are at a disadvantage compared with non-migrants. Migrant workers have faced discrimination in wages, work quality, and working conditions because of their migration status. Differential access to government-supported food security and health programmes for administrative reasons, such as delays in issuing beneficiary cards, have also been reported (Srivastava and Sasikumar 2003). Migrants who move to socio-culturally different destination areas may face language barriers; engage in risky work conditions; experience poor housing conditions, violence, and harassment; and be unable or unwilling to access health and social services because of government restrictions and discriminatory attitudes and behaviours of staff. They may also face loneliness and depression. These vulnerabilities increase manifold if a migrant is illegal or unauthorized (Samuels et al. 2011).

In addition to India, Nepalese also migrate in large numbers to Gulf Cooperation Council (GCC) countries in search of a better future. Despite the huge outflow, there is a lack of proper understanding and knowledge in Nepal of the laws and regulations that govern migration to these countries. The state of domestic workers is particularly precarious since they are not protected by the labour laws of the GCC countries and come directly under the purview of the Kafala system, a sponsorship system that gives the sponsors complete control over migrants' mobility as well as their visa status. All the characteristics of the Kafala system correspond to a form of forced labor. Consequently, these workers are unable to exercise their rights and freedoms and hence form the "invisible working class" in the GCC countries. This "invisibility" makes it all the more difficult to scrutinize and regulate their working conditions (Bajracharya and Sijapati 2012). In research conducted by the Asia Foundation (2013), severe forms of exploitation such as being battered or scolded by the owner or manager (19.2 per cent), sexual harassment by the owner or agent in the destination country (3.8 per cent), owner threatening to kill them (3.8 per cent) were reported by Nepali female migrants. Several national and international reports have documented how Nepalese migrant workers have been subjected to serious exploitation and human rights abuse during the migration process and highlighted how this is linked to the role of recruitment agencies and brokers. In 2010–11, Amnesty International documented cases of Nepali migration to the Gulf states and Malaysia where migrants were forced to work long hours daily without a rest day, accept lower than promised wages, were locked in, had their passport confiscated, and were physically beaten or denied food when they did not comply with their employer's demands. Nearly all migrants who participated in this research stated that they had been deceived by recruitment agencies and brokers on at least one substantive aspect of their employment terms and conditions—salary, type of job offered, work hours, overtime pay, or rest days.

In Southeast Asia trafficking and other forms of exploitation occur within well-worn migratory pathways. Trafficking occurs as part of the migration continuum; many trafficked individuals consent to the initial movement through a facilitator or move of their own accord, and it only becomes evident at their destination that they have been deceived and are being exploited (Larsen 2010). Amnesty International's (2011) research also indicated that some recruitment agencies and brokers are involved in the trafficking of Nepalese migrants for exploitation and forced labour.

Exploitation of migrants is usually seen as a failure of destination countries to recognize their rights. While this is important, it is also partly a function of the migrant workers not being aware of their own rights. Moreover, many do not have strategies and mechanisms available to them to protect themselves at the destination (Hugo 2005). Based on his study, Hugo (2005) recommended that migrants adapt and integrate best in situations where they have strong social-support networks to assist and support them and that it is crucial for migrant workers to be linked to such social networks where they are not linked already.

## **MIGRANTS' HEALTH**

The effect of internal or international migration on migrants' health is complex and much variation exists between the migrant groups. The disease patterns of immigrants are influenced by the environments of the origin and destination countries and by the process of migration itself (McKay et al. 2003). Therefore, the effect of migration on a particular health outcome(s) varies according to who is migrating, when they migrate, where they migrate from, where they migrate to, and what health outcome is measured (McKay et al. 2003). Thus, migration as an "exposure" is complex, involving a wide range of socioeconomic, behavioural, and environmental changes (Ebrahim et al. 2010).

Climate change, global conflict and economic necessity are driving the highest levels of migration in history. The sheer scale of human displacement has turned migrant health into a priority global-public-health issue, an issue rendered more complex by the diversity of the populations involved—from people in search of work or education to more vulnerable groups like asylum seekers and refugees. Apart from the increased potential for the spread of infectious disease that a more mobile global population brings, there is also a rising concern that migrants' health needs are not always adequately met (WHO 2008). To prioritize migrants' health, the World Health Organization (WHO) has called upon its member states to promote migrant-sensitive health policies, equitable access to health promotion, and disease prevention and health care programmes for them (WHO 2008).

From an economic perspective that understood migration as a spillover of development, migration is now also the subject of socioeconomic investigation—incorporating the problems of assimilation, relative deprivation, and isolation. The corollary is an increased emphasis on economic and social understanding of migration and its consequences. This entails studying migration or migrants in terms of factors beyond income, with health outcome being the most important but one of the most under-studied factors (Choudhary and Parthasarathy 2009).

Even if migrants to a new region achieve a higher standard of living in their new place of residence, their improved living conditions may not be associated with better health. Part of the difficulty of understanding the health consequences of migration is the complications in trying to control for variables that may affect health, such as gender, age, and urban or rural environment of migrants and non-migrants (Madrigal et al., 2011). For migrants, the move away from their place of origin may result in stress associated with the loss of the homeland and social support and the adoption of a new way of life. A new lifestyle may be particularly deleterious if it is associated with decreased physical activity and increased consumption of commercial foods, changes frequently experienced by rural-to-urban migrants (Kusuma et al. 2009). However, it is also possible for some rural-to-urban migrants to experience improved health outcomes if the migration takes place in a region where medical facilities and services are located in the urban areas (Godfrey and Julien 2005). Thus, an investigation of whether migration results in better or worse health outcomes should differentiate the stress associated with migration from possible (though not necessary) unhealthy changes in lifestyle (Madrigal et al. 2011). Many factors affect the process of migration and thus affect migrant mortality and morbidity rates. Variations in rates over time are generally a product of environment, historically determined style of life (for example, diet, smoking, alcohol, family size, fertility, social interactions) and genetics. Some of these factors act early in life and their effects endure, while others may act in adult life. Cancers may have "initiators" that act early in life and "promoters" that act later (McKay et al. 2003).



“Selective migration” is an important factor that may influence mortality or morbidity rates. It entails the movement of a “select group” of healthy or unhealthy migrants. The group possesses special characteristics and may differ sharply from their non-migrant counterparts back home. The movement of healthier individuals is known as the “healthy migrant” phenomenon. On the other hand, sick individuals may be involved in “return migration”, for example to be nearer to family or care-giving institutions (McKay et al. 2003). Short-distance migrants tended to show higher mortality than long-distant migrants. McKay et al. (2003) suggested that this resulted from short-distance migrants being a select group that moves because of illness, so they can be nearer to family or an institution.

## **HIV/AIDS**

Several studies have documented that a more mobile global population brings increased potential for the spread of diseases such as HIV. Migration and migrants specifically have had a significant role in the history of the global HIV pandemic. In 2008, the Joint United Nations Program on HIV/AIDS identified migrants as one of the groups most vulnerable to HIV infection and its consequences (UNAIDS 2008). International and internal migrants are among the 12 groups it identified as most-at-risk of HIV transmission and facing barriers to treatment. The report outlines some of the social, economic and political factors in origin and destination countries which influence the risk of HIV infection of international labour migrants and contribute to their heightened vulnerability. These include separation from spouses, families and familiar social and cultural norms, language barriers, substandard living conditions, and exploitative working conditions, including sexual violence. The resulting isolation and stress may lead migrant workers to engage in behaviours, e.g. unsafe casual or commercial sex, which increase HIV risk. This risk is exacerbated by inadequate access to HIV services and fear of being stigmatized for seeking HIV-related information or support. Female migrant workers may be particularly vulnerable to HIV as many are employed in relatively unskilled jobs within the manufacturing, domestic service or entertainment sectors, often without legal status and little access to health services. They are often susceptible to exploitation and/or physical and sexual violence, in some cases by their employer, and have few alternative employment opportunities.

High prevalence of sexual-risk behaviour has been found among work migrants in many countries, and the major role this plays in HIV transmission is well established (Anarfi, UNFPA Expert Group Meeting, 2005). Not only does migration facilitate the rapid spread of a virus along so-called “corridors of migration”, but also causes behaviours and situations that facilitate transmission (Brokerhoff and Biddlecom 1998). Migration is a dynamic process, and the role of migration in HIV transmission is a nonlinear function of individual, dyadic, and network features regardless of context (Cassels et al. 2013). Migrant labourers account for almost 40 per cent of all new HIV infections (UNGASS 2010). Seasonal migrant laborers have been identified as a “bridge population” that transmits HIV in the general population. A study among Nepalese migrant labourers traveling to Indian cities (a common destination) found 32.8 per cent of men (up from 27 per cent in 2006 and 22 per cent in 2008) engaged in unprotected sex in India, often with sex workers (IBBS 2010). In examining the role of population mobility in spreading HIV across the Indo-Nepal border, several studies have highlighted that migrants not only exhibit a higher risk for acquisition of HIV and other sexually transmitted infections (STIs) than non-migrants, but disproportionately transmit those infections to others (IBBS 2010; FHI 2002; Population Council 2011; Smith-Estelle and Gruskin 2003; Mercer et al. 2007; Poudel et al. 2003; Thapa et al. 2014; Bam et al. 2013).

National data in Nepal identifies the highest burden of people living with HIV (PLHIV) among estimated seasonal migrant labourers (41 per cent) (Puri and Cleland 2006). The HIV prevalence among migrants is reported to be 1.4 per cent (Mid West) and 0.8 per cent (Far West), but the prevalence in migrants’ wives is 3.3 per cent (IBBS 2010), i.e., roughly two to four times higher than in the overall population. This increased prevalence is consistent with evidence that as many as one in every ten male migrants returning from Mumbai is HIV-positive (UNAIDS 2009). Labourers’ vulnerability to contracting STIs and HIV affects spouses and children in turn (NCASC 2007; Ministry of Health and Population, Nepal 2007). Low-risk women (rural and urban) account for 26 per cent of total new infections (UNGASS 2010). Moreover, adequate knowledge of HIV/AIDS among migrants appears to be the lowest in Nepal (UNGASS 2010). A study among Dalit migrants in Nepal also found lack of awareness concerning HIV/AIDS as common among study participants (Bam et al. 2013). This increases risk to spouses for infection through decreased opportunities for self-protection, particularly because condom use between migrant labourers and their spouses at home is inconsistent (IBBS 2010). High-risk sexual behaviour in India (Population Council 2011; Smith-Estelle and Gruskin 2003) coupled with inconsistent use of condoms inside and outside marital relationships (FHI 2002; Mercer et al. 2007) increases husbands’ and then wives’ vulnerability to HIV.

Smith-Estelle and Gruskin (2003) reported that migration, health status, gender-based discrimination, and access to education have an impact on HIV vulnerability among rural women from migrant communities in Nepal. Studies by the Population Council (2011) and the United Nations Development Program (2011) showed a significant association between spousal migration and women's HIV status.

Despite low HIV prevalence in Bangladesh (1 per cent), the population is vulnerable to an HIV epidemic. Cases of HIV and active syphilis have been found in successive rounds of sero-surveillance among vulnerable populations, including female sex workers, injecting drug users, and men who have sex with men. (Government of Bangladesh 2003). Annual behavioural surveillance has found that risk behaviour among vulnerable populations is at least as prevalent as in Asian countries having a concentrated epidemic.

One of the ways that HIV can be introduced into a low-prevalence country is through people returning from high-prevalence countries where they have engaged in risky behaviours. In the Doti district of Nepal, which has high rates of migration to India, it was found that a significantly higher proportion of men who had lived away from home reported having sex with a sex worker. HIV prevalence was significantly higher among men who had lived abroad (3.7 per cent) or elsewhere in Nepal (3.0 per cent) compared with men from the same area who had not lived away (0.7 per cent) (FHI 2002; Poudel et al. 2003). Similarly, in a study in Bangladesh by Mercer et al. 2007, the proportion of men who reported unprotected sex with sex workers and with other men while living away from their wives, abroad or within country is a cause for concern. Further, some men had sex with a sex worker while abroad and then had sex with a sex worker after returning to Bangladesh, indicating potential for introducing HIV into a population that reported low condom use with new clients (3–12 per cent) as per national surveillance data. HIV-infected men returning to Nepal from India were found to have infected their wives because they did not use condoms during marital sex (FHI 2002). It was also reported that migrants' wives do not consider themselves at risk of HIV because they do not believe that their husbands have other sex partners (Bondurant et al. 2001).

Thapa et al. (2014), in a matched case-control study in Achham district of Nepal, identified the social and behavioural factors for HIV infection among the wives of labour migrants in the far western communities of Nepal. Literacy status was the only one woman-related social factor associated with HIV infection. Literacy status, age at first out-country migration, and country of migration were the husband-related social factors; alcohol consumption, living alone abroad, and having an unpaid partner abroad were the wife-related behavioural factors associated with HIV infection. Given that the husband-related social and behavioural factors are mostly determining the risk of HIV infection in the wives, prevention efforts must incorporate behaviour-change approaches targeting labour migrants and their wives.

A cross-sectional study by Mercer et al. (2007) aimed to quantify reported sexual-risk behaviour among married men and women in two rural areas of Bangladesh, comparing prevalence among those who had, and had not, lived apart from their spouse as a result of the husbands' work-related migration. The main differential found in the study was the relatively high prevalence (60–70 per cent) of extramarital sex reported by men from both study areas who had lived away from their wives. Though there are no comparable data, the prevalence of extramarital sex while away versus before living away was two to three times higher in this study. Women were also more likely to report extramarital sex if their husbands lived away from home. The risk for extramarital sex increased with longer periods of separation. This “dose–response” relationship, together with the significantly higher proportion of men reporting extramarital sex while living away than before living away (with sex workers and with men), provides evidence of association between temporary separation from their spouse and extramarital sex. Although the two study areas were not intended to be representative of rural Bangladesh, the similarity in reported sexual-risk behaviour of men from widely separated areas in the east and west of the country suggests that these behaviours may not be localized.

A study in Doti district in far western Nepal, where international migration—particularly labour migration to India—is common, revealed risk behaviours such as sex with sex workers and/or multiple sexual partners, and deciding about condom use based on the appearance of sex partners. These risk behaviours were significantly more common among the migrant-returnees both in India and in Nepal (Poudel et al. 2003). The study revealed a high HIV and syphilis prevalence (8 per cent for HIV, and 22 per cent for syphilis) among the male migrant-returnees and non-migrants in five communities of Doti district, where migration to Mumbai is common. In a study by Bam et al. (2013) among Dalit migrant labourers in Nepal, participants described unmarried status, peer influence, alcohol use, low-priced sex with female sex workers, and unwillingness to use condoms as

common factors of their migration experience. The study did not include information on wives' perceptions or behaviour but confirmed high-risk male behaviour that can endanger their female partners.

Migrating to India as opposed to migrating to other countries was found to be an independent risk factor for HIV infection (Thapa et al. 2014). The IBBS 2010 shows that one-third of the total Nepalese labourers in India work in the state of Maharashtra. In 2011, the National AIDS Control Organization in India reported that 18 per cent of female sex workers in Maharashtra are infected with HIV. Another study highlighted that one-third of Nepalese migrant labourers engaged in unprotected sex in India, often with female sex workers, and that 85 per cent of them were unskilled labourers from the far-western region of Nepal (Thapa et al. 2014). The prevalence of HIV was higher among male labour migrants and female sex workers who returned from India, especially from Mumbai, than in similar non-migrant groups. In the early 2000s, about 6–10 per cent of Mumbai returnee men, compared with up to 4 per cent of India returnee men and up to 3 per cent of non-migrant men in far-west Nepal were identified as being infected with HIV (Nepal 2007). Though Mumbai was identified as the high-risk destination, this data is based on small samples and thus these findings need to be interpreted with caution.

Mathematical models developed based on disease characteristics in a region lead to better understanding of disease dynamics and can guide policymakers in resource allocations for prevention and control of an infectious-disease epidemic. Vaidya and Wu (2011) developed a mathematical model to evaluate the effects of seasonal labour migration to India on exacerbating the HIV burden in the far-western region of Nepal. Their results show that HIV cannot be eradicated from this region unless the recruitment of HIV infections from India is stopped. They argue that compared with the total number of HIV infections recruited from India via seasonally returned migrants, the total number of new infections generated as a result of sexual activities back home was found to be significantly low. The model suggests that seasonal labour migration to India and sexual activities in the workplace are the key factors that contribute to the dynamics of the HIV epidemic in far-western Nepal. Using the calibrated model, Vaidya and Wu assessed two prevention strategies—one focused on returnee migrants and another on migrants in their workplace in India— and suggested that prevention programs to promote safe-sex activities in the migrants' workplace will be more effective in suppressing the HIV epidemic in far-western Nepal than prevention programs that educate villagers to promote safe-sex practices such as condom use (Vaidya and Wu 2011).

Cassels et al. (2013) proposed a network-dyadic conceptual for future research designs on migration-related work. The model theorizes that a disease-transmission process occurs within a series of potentially overlapping, concurrent sexual dyads drawn from a network of potential partners, and entrance and exit from that network through migration. The model proposed that HIV transmission is driven by risk behaviours of migrants that emerge and is enabled by mobility, the bridging of sub-epidemics across space and time, and the displacement effects on the primary residential sending community for migrants. To investigate these causal pathways, empirical study designs must measure the relative timing of migratory events, sexual-risk behaviours, and incident HIV infections.

## **MALARIA**

Malaria linked with the migration of population is a complex phenomenon. There is evidence to suggest that malaria is no longer a forest-dependent disease and may largely be affected by population movements. Although migration in itself is not a definitive risk for malaria, several factors can put migrants and local communities alike, in vulnerable situations. In particular, infrastructure and rural development, deforestation for logging and economic farming, political movements, and natural disasters are some of the major factors that push and pull people in and out of malaria-endemic areas. Therefore, understanding the changing socio-environmental situation as well as population movements and their associated risks for malaria infection, is critical for malaria control, containment, and elimination. Population movements that either place people at risk for malaria or cause them to pose a risk to others cannot be stopped. Where movements are unavoidable, people should be made aware of the risks and have adequate access to treatment (Martens and Hall 2000).

Migration may lead to permanent change of residence or there may be temporary change of residence after which the individuals return to their location of origin (termed "circulation"). All these patterns can influence local malaria epidemiology, including transmission and its seasonality (Kumar et al. 2012). South Asia is potentially one of the most dynamic regions in terms of population movement that promotes malaria transmission. There are three identified risk factors related to population movements that exacerbate malaria in South and South East Asia: (1) those that increase malaria transmission, (2) those that predispose communities to severe and



complicated malaria, and (3) those that promote transmission of drug-resistant parasite strains (Kumar et al. 2012).

In South Asia, India offers vast variations in geography and regional ties to surrounding communities and countries. This makes for many possible ways in which malaria parasite populations can mix to affect drug responses, disease severity, and transmission. With more than 70 per cent of India's population living in rural areas, the interplay between city-based and forest-based concentrations of human reservoirs for parasites and easy movement of workers from one part of India to another, mixed with varying degrees of innate and acquired protection in different human communities, raises many opportunities for dissecting important traits that contribute to malaria protection or vulnerability (Kumar et al. 2012). The World Health Organization estimates that India accounts for 75 per cent of all malaria cases in South East Asia. Today, of the 1.2 billion people in India, 95 per cent live in malaria risk areas. There are an estimated 1.5–2 million reported malaria cases every year in India. Studies place malaria-related economic losses at about US\$ 0.5–1.0 billion annually.

The unprecedented increase in mobility in the last few decades has led to greater concern about the relationship between mobility and malaria. Population movement contributed to drug resistance in India, with people of different immune statuses moving from endemic to non-endemic disease areas, accelerating transmission of resistant strains (Martens and Hall 2000). Uneven malaria severity in India is often attributed to large discrepancies in health care accessibility as well as human migrations within the country and across neighboring borders (Kumar et al. 2012). Poor access to health care goes hand in hand with poor reporting from some of the same areas, combining to possibly distort disease prevalence and death from malaria in some parts of India (Kumar et al. 2012).

Specifically, the booming economies of certain cities in South Asia attract migrant workers from poorer states (Kumar et al. 2012). Employment-driven migration is mainly from the “relatively less developed” states to large metropolises and other large cities, wherein the migrants get absorbed in low-paid jobs in the unorganized sectors. The workers' living conditions are poor, with denial of basic amenities to maintain the standard of living, making them prone to health problems (Mukherji 2010). Migrant labour in the construction sector is more susceptible to various health and occupational hazards, because the construction sites create breeding grounds for various vectors and unprotected labourers act as potential bait. In addition, immigrants from disease-endemic areas settle in urban slums having highly vector-receptive and unprotected housing, introducing new and drug-resistant strains. A cross-sectional study (Adsul et al. 2011) was conducted in one of the construction sites in Mumbai city to study the socio-demographic profile and morbidity pattern of construction workers. Nearly one-fifth of the workers had febrile illness, of which over 20 per cent had suspected malaria.

Lastly, malaria is a hugely complex disease with many interconnections. Both mega- and micro-development projects that impact the forest or create new conditions suitable for vectors often attract a substantial workforce from various horizons across borders and cultural boundaries. While one of the first concerns is to ensure that these vulnerable mobile individuals access basic services, including health care, another key concern is to restrict or mitigate the widespread dispersal of parasites by these elusive population groups.

## **TUBERCULOSIS**

Among the 22 high-burden countries that account for more than 80 per cent of the worldwide incident cases of TB, 19 territories are in tropical areas (Zammarchi et al. 2014). South East Asia carries about 40 per cent of the global TB burden, and India is the highest TB burden country in the world and accounts for more than 25 per cent of the world's incident cases (WHO 2012).

Migrants currently play an important role in determining the current epidemiology of TB in countries where they are settled. The incidence in the countries of origin is the strongest predictor of TB incidence in migrants according to some authors (Watkins and Plant 2002). Migrants have a high risk of acquiring TB before migration as they are exposed in their country of origin to several risk factors for TB infection and progression. TB may occur in migrants as a consequence of a reactivation of a Latent TB Infection (LTBI) acquired in the country of origin, but may also occur because of a new infection acquired in the host country after resettlement or during travel in the country of origin (Zammarchi et al. 2014). Moreover, after migration, migrants are exposed to additional risk factors for acquiring or reactivating TB infection, such as poverty, stressful living conditions, social inequalities, overcrowded housing, malnutrition, substance abuse, and limited access to health care. An increased risk of TB is

still present in second-generation migrants in whom a link to endemic countries persists after migration through social networks or travel in the country of origin (Health Protection Agency, UK, 2010).

Tuberculosis treatment in migrant populations can be challenging because of lower adherence to treatment, which adversely affects the treatment success rate and increases disease morbidity and mortality. It also contributes significantly to the development of drug resistance. Kulkarni et al.'s (2013) study in Mumbai, in India, prospectively followed up a cohort of New Sputum Positive TB patients to study risk factors for non-adherence to Anti-Tuberculosis Treatment. The findings showed that patients, in the age group of 15–49 years, males, migrants, and patients who were employed were more likely to be non-adherent. More than 70 per cent of non-adherent patients were migrants, with the majority being males. More than 30 per cent of patients went to their native place and became non-adherent. Patients not living with their own family were observed as being more non-adherent to the treatment as compared with patients living with family. Migration affects stability of residence, which in turn adversely affects adherence. The importance of family support in improving treatment adherence has also been suggested by other studies (Kirwan et al. 2009). The study by Kulkarni et al. (2013) emphasized that special groups, such as males, those in the reproductive age group (15–49 years), patients without adequate family support such as migrants, and female sex workers need special attention from treatment providers to ensure adherence to Anti-Tuberculosis Treatment. A considerable portion (23–53 per cent) of TB cases in migrants is diagnosed in the first years (2–4) after resettlement in the host country. However, the reasons for this phenomenon are not completely clear (CDC 2012).

Access to the health system, including TB diagnostic and treatment services, is lower in migrant populations compared with native subjects (Zammarchi et al. 2014). Migrants have a longer patient diagnostic delay for TB (defined as the time elapsed from the onset of symptoms and the first medical consultation), while natives have a longer health care diagnostic delay (defined as the time elapsed between the first medical consultation and the initiation of treatment) (Mor et al. 2013; Gagliotti et al. 2006). The increased patient delay is possibly due to a combination of reasons such as language barriers, possible lack of medical insurance, fear of deportation (for illegal migrants), or discontinuation of their employment and competing socioeconomic priorities may prevail over health issues (Mor et al. 2013; Gagliotti et al. 2006; Zammarchi et al. 2014).

Given the epidemiological importance of migrant subjects in determining the epidemiology of TB in industrialized countries, many of these countries implement different control measures for TB, including mass screening programs (Zammarchi et al. 2014). The rationale of these programs is the early detection and treatment of active and then contagious TB cases, in order to prevent tuberculosis transmission within the host country (Alvarez 2011). Screening for active TB may decrease the period of infectiousness by as much as 33 per cent (Verver 2001), and secondary benefits of immigration screening are reduced transmission of TB in the country of origin and during travel (Alvarez 2011). TB mass screening programmes for migrants have been implemented in low-endemic countries but present several limitations. High-income industrialized countries have widely different approaches to the screening of migrants. The majority of countries screen for active TB and most commonly the screening is compulsory (Pareek 2012). The most commonly used tool for screening for active TB in adult migrants is a chest radiograph, which is used by the majority of industrialized countries alone or in combination with a clinical examination and less commonly with a tuberculin skin test. However, screening protocols based on a chest x-ray only are unable to detect cases of extra-pulmonary TB, which represent a not negligible portion of TB cases in migrant patients (Peto 2009).

## **HEPATITIS**

Hepatitis E is another disease that may be carried to the host country by migrant workers who may have been exposed to unsanitary conditions in the country of origin. Prompted by cases of acute hepatitis in expatriate workers presenting at a hospital in Qatar, a limited prospective observational study was conducted (Ibrahim et al. 2009) to determine the epidemiological and clinical features of patients (predominantly Nepalese) presenting with acute hepatitis. It was likely that transit in Kathmandu in reportedly unsanitary conditions was the focus of infection. On the available evidence, Hepatitis E was imported by expatriate workers and it was clear that medical screening of these workers pre- and post-arrival must be improved to prevent further outbreaks. The study findings suggest that it is essential that health care workers in Qatar and elsewhere are made aware of the problem of imported Hepatitis E and understand the variable presentation of the condition.

## **OBESITY AND CARDIOVASCULAR HEALTH PROBLEMS**

Migrants generally tend to exhibit disadvantaged risk-factor profiles and are more frequently subject to hypertension, chronic conditions, and obesity. (Ebrahim et al. 2010; McKay et al. 2003). The scale of obesity and diabetes among factory workers, their spouses, and rural siblings is very large, arguing for much wider adoption of population-prevention activities as proposed by the WHO. The effects of better access to health care (provided for factory workers and their co-resident families) may also influence the propensity for diagnoses of diabetes and hypertension (Ebrahim et al. 2010).

Hypertension has emerged as a major threat to health in developing countries, and even in India the number of hypertensive individuals is expected to rise to 214 million by 2025. With the increasing prevalence of hypertension even in the lower socioeconomic strata, it is important to understand the awareness of the problem and treatment-seeking behaviour in specific communities such as migrants. A cross-sectional prevalence study (Kusuma et al. 2013B) highlights the lack of awareness and inadequate treatment-seeking (in terms of medication) among migrants living in Delhi, in the background of considerable prevalence of hypertension in the socioeconomically disadvantaged study migrants (18.3 per cent). Also, their knowledge is mainly limited to “have heard of hypertension”, thus comprehensive knowledge was lacking in these communities. This study is important in that it highlights community perceptions. Similar findings about lack of knowledge have been shown in other studies (Kusuma et al. 2009).

Another qualitative study (Kusuma et al. 2009) that examined the Explanatory Models of hypertension held by neo and settled migrants showed that city life was perceived as a major predisposing factor for developing hypertension. City life was associated with pollution and adulteration of food, high-fat diets, stress, and certain attitudes such as physical inactivity and quarrelsomeness (“lack of tolerance” and “tendency to quarrel over small issues”). The concept of hypertension was interconnected and linked to migrants’ day-to-day city living. The Explanatory Models of hypertension among neo- and settled migrants and men and women were broadly similar with slight variations by gender and migration status in the perceived pathways to hypertension. But another study (Kusuma et al. 2013B) showed few differences in the perceptions of neo- and settled migrants as well as men and women. While the Explanatory Models of the settled migrants mainly centered on changed dietary habits, physical inactivity, and stress, the explanations of the neo-migrants highlighted stress followed by dietary factors and physical activity as precursors of hypertension. Understanding of lay beliefs and perceptions is important because prevention and control of chronic conditions, such as hypertension, requires life-long adoption of healthy lifestyles. Understanding the blood pressure distribution within populations is fundamental to understanding the etiology of cardiovascular diseases and to developing effective preventive strategies.

A study (Kusuma et al., 2009) focusing on whether the BP levels and hypertension prevalence differ between neo-migrants and settled migrants in the city of Delhi found that higher blood pressure levels and hypertension were more prevalent in older settled migrants and younger neo-migrants. Thus, urban residence and migration to urban areas can be a leading cause of increased prevalence of hypertension. Recent migration was found to be a significant contributor to hypertension prevalence. Age contributed significantly to blood pressure variation in both groups in both groups of settled migrants and neo-migrants, except in neo-migrant men. Neo-migrants were likely to be subjected to more lifestyle issues in terms of insecurity regarding work, compromised housing and eating patterns, staying away from family, and so on, and the stress generated during the adjustment process may be contributing to rise of blood pressure even at younger ages and may lead to further increase as they grew older.

Migration, chiefly from rural to urban areas, has been linked to precursor conditions of cardiovascular diseases. The association between overweight/obesity and different patterns of internal migration was studied by Varadharajan et al. (2013) using National Family Health Survey 3 data, a cross-sectional survey that covered 29 states of India in 2005–6. The analysis supported the hypothesis that exposure to urban environments is associated with overweight/obesity. Ebrahim et al. (2010) showed similar findings of rural-urban migrants having higher prevalence of obesity and diabetes than rural non-migrants. Migration was associated with both an increased fat intake and reduced physical activity in both men and women, as compared with rural dwellers, and this likely contributed to the higher levels of obesity and diabetes observed in migrants.

Gupta et al. (2012) conducted one of the few studies to determine the influence of migration among married women, who move along with their husbands, on cardiovascular risk factors. The study shows that in Asian Indian rural-to-urban migrant women, the prevalence of lifestyle and metabolic cardiovascular risk factors (hypertension,

hypercholesterolemia, and diabetes) is high, is similar to that of urban women, and is significantly greater than that of rural women. The important associations of risk-factor differences in rural-to-urban migrant women, as compared with the rural, are high dietary-fat intake, physical inactivity, overweight/obesity and central obesity.

Results of a meta-analysis (Madrigal et al. 2011) of body mass index (BMI) and blood pressure comparing non-migrants who inhabit the Asian subcontinent with migrants who moved to various places around the globe indicates that BMI almost always increases to a significant level upon migration and that an increase in BMI is most pronounced in female migrants. Results also show that blood pressure does not always increase in migrant communities and that it is actually lower in some migrant samples than in comparable non-migrant groups. Thus blood pressure and BMI do not behave in the same manner following a migration event. Whereas BMI almost always increases upon migration, blood pressure increases, decreases, or remains unchanged upon migration. The authors suggest that BMI reflects changes in diet and physical activity, whereas blood pressure reflects lifestyle incongruence, lack of social support, and stress. The difference in obesity and overweight between migrants and non-migrants was particularly startling for the 18+ age samples, which shows that migration results in increased BMI even in young subjects.

## **OTHER HEALTH PROBLEMS**

Although there have been some significant studies on health issues linked to migration status, the issue of malnutrition in this context continues to be understudied. A study by Choudhary and Parthasarthy (2009) reiterates the need to understand urban health issues including nutrition insecurity. The study used NFHS data to identify the determinants of malnutrition in Mumbai city and reported migration status to be a significant determinant of under-nutrition among children and their mothers. The findings that incidence of stunting and women's under-nutrition is significantly higher for migrants reflects the need for an inclusive strategy that accounts for the perspective of migrants and target migrants in the provision of health services.

Quite like malnutrition, there are limited studies to showcase the relationship between migration and mortality. An understanding of the mortality risks associated with rural-urban migration has the potential to influence health policy and provision of health services through an appreciation of the differential health needs of rural-urban migrants relative to non-migrants. Given the presence of a clear urban-rural differential in infant and child survival in India, Stephenson et al. (2003) examined the impact of rural-urban migration on under-two mortality in India, and the pathways through which migration may influence mortality. Migration status was not found as a significant determinant of mortality in any of the three age groups: neonatal, early post-neonatal and late post-neonatal and toddler. But a relationship between migration status and mortality existed when socioeconomic and health-utilization variables were omitted from the models. The relationship between migration and mortality is thus explained by differences in socioeconomic status and use of health services between rural-urban migrant and non-migrant groups. Problems faced by migrants in assimilating into urban societies create mortality differentials between rural-urban migrants and urban non-migrants. These results highlight the need to target migrants in the provision of health services, and demonstrate that rural areas continue to have the highest levels of infant-child mortality.

In perhaps the first study to examine the effect of urbanization on renal function in India. Bailey et al. (2013) studied the differences in estimated Glomerular Filtration Rate (eGFR) between rural non-migrants, urban non-migrants, and rural-to-urban migrants (urban migrants) to understand the reasons behind any differences observed. The study showed that urbanization would have a negative effect on eGFR and that those living in an urban area would have worse renal function, represented by a lower eGFR, than rural non-migrants. Vascular risk factors such as diabetes and obesity were in part responsible for this difference; differences in muscle mass also partly accounted for their observations. The study concluded that further work is required to confirm this association with measured renal function.

The EMPHASIS project (Enhancing Mobile Populations' Access to HIV and AIDS Services, Information, and Support) is one of the few intervention studies of cross-border migrants. The project adopted a comprehensive model to reach migrants across the mobility continuum (at source, during transit, and at destination) to reduce the vulnerability of mobile populations, particularly women, to HIV infection across selected cross-border zones in India, Bangladesh, and Nepal. The five-year project provided a diverse range of services to 340,000 individuals across the three countries, including migrants, their families, and key stakeholders in the age group of 15-49 years. It suggested that reaching cross-border migrants with information in their home countries and at their

destinations can lead to safer mobility and positive health outcomes. Another key finding was that support for men's and women's solidarity groups across the mobility continuum can result in additional outcomes, including women's political and economic empowerment, and a reduction in gender-based violence. It also highlighted that creating an environment that safeguards the rights of migrants and ensures access to services, requires the enlistment of diverse stakeholders to create and maintain a chain of partnership across migration corridors. Further, it was recommended that the health programming across borders and migration corridors—in South Asia and elsewhere—required a robust and flexible monitoring system closely coordinated by all stakeholders and partners. Programs for cross-border migrants need to be open to grassroots feedback so that they can be adapted to changing circumstances and local needs.

## **REVERSING THE EFFECTS OF MIGRATION: URBAN TO RURAL MIGRATION**

Urban-to-rural migration has been much less studied than rural-to-urban migration. The uniqueness of a study by Gupta et al. (2012) was that it had a sizeable cohort who back-migrated from urban to rural areas and demonstrated that changes of urbanization are reversed by regaining rural milieu. The study shows that both processes are closely interlinked and that lifestyle changes with migration leads to an increase in a number of cardiovascular risk factors and more importantly also shows that the effects of migration are reversed with the return to rural milieu. It showed that women who migrate from urban-to-rural locations have risk-factor prevalence that is lower than rural-to-urban migrants and urban women. Lending further credence to the obesogenic nature of urban environments was the finding of decreased odds of overweight/obesity for women migrating from urban to rural areas in India by Varadharajan et al. (2013). Apart from confirming rural-to-urban migration as a risk factor for being overweight, this study found that other patterns of migration are also associated with overweight/obesity. Since this study covered a large, representative sample (56,498 women aged 15–49 years, and 42,190 men aged 15–54 years), the findings can be generalized at the country level. Not much evidence is available for urban-to-rural migration, but this could possibly be associated with increased physical activity or less energy-dense diets or both, especially in women (Varadharajan et al. 2013; Gupta et al. 2012). Return to the rural milieu leads to a sense of togetherness and reversal of many sociocultural dimensions of migration (Gupta et al. 2012).

## **DURATION OF STAY AS A MIGRANT AND HEALTH OUTCOMES**

Migrants' ill-health and unfavorable risk profiles may worsen with increasing duration of stay. In a review of evidence on migration and cardiovascular risk factors and obesity, McKay et al. (2003) reported that migrants tend to suffer from poorer health and display disadvantaged risk-factor profiles. In comparison with the host population, they are more frequently subject to hypertension, chronic conditions, low birth-weight, and obesity. Moreover, their ill health and unfavorable risk profiles may worsen with increasing duration of stay. Duration of migration in rural–urban women migrants correlates significantly with obesity parameters and systolic blood pressure (Gupta et al. 2012). A study in Mumbai (Choudhary and Parthasarathy 2009) found that as the duration of stay increases, migrants learn to assimilate to the new environment and their relative disadvantage compared with non-migrants declines. However, irrespective of the length of stay in Mumbai, rural migrant mothers and their children continue to fare worse in terms of nutrition outcome as compared with non-migrants and urban migrants. In another study (Ebrahim et al. 2010), the hypothesis that longer duration of stay of migration is associated with increased risk of obesity and diabetes was not supported. Community-based studies in Nepal provided some information on HIV prevalence by duration of migration. Results of studies from districts such as Achham and Doti in Nepal imply that migrants who spent more than four or five years in India seem to have a substantially higher chance of contracting HIV than those who stayed for a shorter duration (Thapa et al. 2014; Poudel et al. 2003; Nepal 2007).

## **MIGRANT STATUS AND HEALTH CARE ACCESS AND UTILIZATION**

Health care utilization is influenced by multifaceted factors, which are often interlinked and range from the individual level to broader system-level factors. Thus, the accessing of health care is influenced by multiple dimensions, with migration as a distinct determinant. It is necessary to understand the existing scenario of migrants' health care access in order to develop migrant-sensitive strategies for improving their health.

Evidence from other countries such as China (Shaokang et al. 2002) and Guatemala (Lindstrom and Muñoz-Franco 2006) point to a “package” of obstacles in utilizing health care services among migrants, ranging from

low social status, low income and education, low levels of awareness and poor access to fair credits. Additionally, poor migrant households were primarily engaged in the informal sector, and travel costs as well as waiting and opportunity costs for utilizing health care services were possibly high (Pande and Yazbeck 2003). In India, studies have argued that public opinion on poor and unskilled migrants tends to be very hostile; these individuals were often blamed for the overburdening of civic amenities and facilities and for a deteriorating urban environment and sanitation (Bhagat 2010), which could adversely affect poor migrants' access to health care facilities. According to a study by Samuels et al. (2014), Bangladeshis in India preferred private doctors/clinics for general health care. Returnee respondents said that they never went to government hospitals when they were in India, as this could lead to the disclosure of their illegal migrant status. Some returnee female migrants reported that they often returned to Bangladesh for treatment because their employers did not provide any treatment facilities.

Against the background of ever-increasing migration and lower age at migration, reproductive health is of great importance. Maternal health indicators are poorer among migrants than natives (Shaokang et al. 2002; Heaman et al. 2013). Based on a systematic review, Heaman et al. (2013) concluded that migrant women are more likely to receive inadequate prenatal care. Shaokang et al. (2002) concluded that insufficient antenatal care (ANC) is one of the main determinants for poor maternal health outcomes and that migrants use ANC services significantly less than permanent residents.

Urban populations exhibit better maternal health indicators than rural populations, attributed to the urban advantage in terms of better health facilities. Despite high concentrations of health care services in urban areas, inequities in access exist and poor migrants are vulnerable. Kusuma et al. (2013A) demonstrated that the utilization of maternal health care services by poor migrants, particularly recent migrants in Delhi, was far below that of the general population of Delhi (IIPS and Macro International 2009) and urban India's average utilization rates (IIPS and Macro International 2007). The percentage of women who went for their first ANC checkup in the first trimester in Delhi was around 64 per cent versus 44 per cent for the study migrants. Similarly, institutional deliveries were 64 per cent in Delhi in the general population versus 54 per cent in the study migrants. This lower service utilization can be attributed to both individual and health-system-level factors. Higher mobility discourages people from continued care, and some faced problems in continuing care at another health facility. Recent migrants were not aware of the location of the health facility and a considerable proportion of recent migrant women accessing ANC from nearby private health care providers indicated that they were not familiar with the government health system in the new urban environment. The study showed that migration to the cities exacerbates their vulnerability and that recent migration itself is a risk factor for not accessing services. The study has implications aimed at tackling the inequities in health and health care access as it identifies recent migrants as a specific vulnerable group and indicates that health care access is inequitable to migrants in general and recent migrants specifically.

Using data from the National Family Health Survey, 1992–3 and 2005–6, a study by Singh et al. (2012) sought to understand the influence of household wealth and migration status on safe delivery-care utilization among women who had experienced a birth in the four years preceding the survey. The study demonstrated a sharp differential in the utilization of safe delivery care among four distinct urban population groups: poor-migrant, poor non-migrant, non-poor migrant, non-poor non-migrant. Barely 50 per cent of the poor-migrant women were utilizing safe delivery care. Results suggest a decline in safe delivery care among poor-migrant women from 1992 to 2006 in India. While poor-migrant women were most vulnerable, non-poor non-migrant women were the highest users of safe delivery care. The study recommends that the ongoing programmatic efforts should start focusing on the poorest of the poor groups, such as poor-migrant women.

Kirwan et al. (2009) identified migrants as a particularly challenging subgroup of TB patients, and migrant respondents were particularly stressed with problems of economic impact, social support networks, and interactions with TB services. Forced to attend clinics far away from their home, and isolated by the stigma associated with TB, migrants are vulnerable without social support networks. Migrants find that daily clinic visits are incompatible with their working schedules and important cultural festivals, which forces them into defaulting. This social reality of migrant workers makes compliance with daily clinic visits difficult or impossible (DOT) for many patients. The needs of migrant workers who have TB and live in Kathmandu were not adequately met and service provision needed to establish greater flexibility and support for migrant men to ensure that they could comply with the treatment.

## **SPECIFIC MIGRANT SUBGROUPS**

A number of studies underscore the need to understand migrants as more than a homogenous category and that specific categories of migrants might need special attention. Around 41 per cent of HIV cases in Nepal occur in seasonal migrant laborers, and Dalit migrant labourers represent the largest proportion of reported HIV cases in the far western region of Nepal (Puri and Cleland 2006). Dalits, who comprise 13.1 per cent of the Nepali population, may be especially vulnerable as they are marginalized because of untouchability. As a result, they are highly mobile, with 59.7 per cent migrating to India. Overall, they account for 31 per cent of the total migrants to India (ILO 2005). Bam et al. (2013) reported that Dalits are especially vulnerable among migrant labourers and may be overrepresented in new HIV infections in Nepal. The study did not include information on wives' perceptions or behaviour, but confirmed high-risk male behaviour that can endanger female partners. With limited evidence on HIV/AIDS among Dalits, there is need to understand their vulnerabilities and perceptions to create appropriate HIV/AIDS education and interventions. Comprehensive research and health-promotion programmes targeted to this population are urgently needed.

Although the urban health issue has been of longstanding interest to public health researchers, the majority of the studies have looked upon the urban poor and migrants as distinct subgroups. A study by Singh et al. (2012) highlights that poor-migrant women seemed to be greatly disadvantaged in the utilization of safe delivery care. Being poor and a migrant in India leads to a double disadvantage in the utilization of maternal health services. This study reiterates the inequality that underlies the use of maternal health care services not only by the urban poor but also by poor-migrant women, who deserve special attention.

Choudhary and Parthasarathy (2009) found that migration status is a significant determinant of under-nutrition among children and their mothers. The incidence of stunting and women's under-nutrition was significantly higher in the case of migrants. However the gap between migrants and non-migrants is mostly captured by the acute disadvantage of rural migrants, while urban migrants are almost at comparable level with non-migrants in Mumbai. These findings also confirm the identification of risk of poor maternal and child health due to rural origin.

## **GENDER AND MIGRATION**

A growing number of women in South Asia are migrating in search of better livelihood opportunities to support their families. By doing so, they are becoming economic actors (rather than dependent spouses) and financially independent (UN Women 2013). Until recently, migration studies have also tended to treat women's migration as primarily a consequence of male migration, and see women as merely accompanying or following husbands, fathers, or other related men (Boyd and Grieco 2003). In response, some feminist researchers have highlighted the existence of female labour migration, often predating the "feminization of migration" that has been suggested as a trend in global migration since the 1960s (Sharpe 2001).

Acknowledging the shortcomings of previous studies that focus too much on migrant-receiving countries and/or a single country case, Oishi (2002) examines female migration from a comparative and integrative perspective. Adopting a comparative case study approach, the study demonstrates the complex causation of international female migration in Asia. It compares "sending countries" and "non-sending countries" of migrant women at three levels of analyses: (1) the state, (2) individuals, and (3) society. The research is based on fieldwork conducted mainly in the Philippines and Sri Lanka (major sending countries) and in Bangladesh (non-sending country). At the state level, emigration policies treat men and women differently because policies for women tend to be value-driven while those for men are economically driven. At the individual level, women's autonomy and decision-making power are crucial determinants of access to health care. Women in so-called "major sending countries" (e.g., the Philippines and Sri Lanka) have higher autonomy and decision-making power in their households, compared with those in "non-sending countries". Women's emigration, if not accompanied by male family members, still carries social stigma that is strong enough to discourage the vast majority of lower-middle and middle-class women from leaving their country. Therefore, it is important to look at this meso-level factor of "social legitimacy". Oishi (2002) argues that the globalization process and the resulting export-oriented industrialization helps bring about changes in social perceptions towards women's employment and their independent departure from their own community.

Studies on South Asian women "left behind" by migrant husbands have revealed intraregional variation in the impact of such separation on women's autonomy. In the collection of examples of South Asian transnational

marriages, Charsley and Shaw (2006) expand the issue of agency, demonstrating how even non-migrant women are active participants in the migration process. The study portrays Bangladeshi male pioneer labour migrants as dependent on the “wife-work” of the women they left behind in Bangladesh, as an alternative to the conventional emphasis on such women’s dependence on their husband’s remittances.

For women, the outcomes of migration are multiple and contradictory. In a study conducted on migrants from Far West Nepal to Delhi, it is argued that it is not necessarily high financial investments and returns that count. The family, especially women, take on a bigger workload in the villages to enable their men to go to Delhi. Women take on the responsibility for the house and childcare and can even lose their decision-making power if they stay with their in-laws (Thieme 2006). If the men do not come home for harvest, women also have to take on the added agricultural work, or have to organize male support (Kaspar 2004). Migration is associated with loss of occupation (such as farming) and more women get confined to their homes as they migrate from rural-to-urban areas (Gupta et al. 2012). Although information on reasons for migration was not collected in the NFHS 3 in India, a study on internal migrants in India reported that most women migrate after marriage, whereas men migrate seeking better employment opportunities (Varadharajan et al. 2013).

A study on utilization of maternal health care in Delhi showed that migrant women can not continue receiving care because they lack an accompanying person, they are hesitant to go alone, and they need to care for younger children at home (Kusuma et al. 2013A). Choudhary and Parthasarathy (2009) showed a higher level of stunting among migrant girl children. Under-nutrition among women would have an intergenerational effect to the extent that these women are likely to be future mothers. Thus, the rural migrant population is not only nutritionally insecure at present but is likely to be perpetually malnourished and vulnerable. Bias against women and girl children is also likely to be more conspicuous among people of rural origin, further affecting the nutrition outcome of females (Choudhary and Parthasarathy 2009). Gender was seen to play a vital role in moderating the risk of overweight/obesity among migrants (Varadharajan et al. 2013).

It is important to underscore the fact that migration networks—among skilled and unskilled workers—are significantly gendered. Gender and gender relations have much to do with conditioning who ones contacts are, what ones relationship is to them, and how networks are accessed, managed, and taken advantage of (Vertovec 2002). Intra-household relationships—such as relationships between spouses—are also critical gendered factors that have a direct impact on access to knowledge about the risks associated with migration (Samuels et al. 2014). Research by the Overseas Development Institute in support of the EMPHASIS project has found that gendered risks also vary according to workplace—many women migrants from Nepal (50 per cent) and Bangladesh (23 per cent) work as housemaids and depend on their employers for wages and security (Samuels et al. 2012). Gender-specific vulnerabilities associated with limited economic and political empowerment, as well as restricted social-capital networks and access to services, at least in part drive the forced migration and trafficking of women and girls, exposing them to further risks and deprivations in the process (UNDP 2009). Lessons from the EMPHASIS project (Walker et al. 2014) show that it is possible to promote safe remittances and provide women at source locations with greater control over remittances by lobbying banks and money-transfer services to develop migrant-responsive banking procedures, and working with migrant populations to build their trust in and encourage use of official money channels.

As women are often not considered a value-neutral workforce but rather symbols of national dignity and pride, the government tends to have protective and restrictive emigration policies for them (Oishi 2002). Some women continue to be trafficked, but protective laws on trafficking treat most illegal women migrants arrested in India—whether trafficked or not—as if they were trafficked victims (Sikder 2008). Treating non-trafficked female Bangladeshi migrants in this way exacerbates the stigma and discrimination they face. Officially only 3 per cent of Nepalese migrant workers are women. However, it is estimated that in reality women account for as much as 30 per cent of the total number of Nepalese migrant workers abroad. This discrepancy is largely due to conditions the Nepalese government has placed on women migrating to Gulf States for domestic work, including a discriminatory requirement that female migrants get written permission from a family member prior to migrating. These measures make it much more difficult for women to use regular migration procedures and, consequently, many migrate through irregular channels to work abroad. As a result, female migrant workers face a higher risk of forced-labour practices (Amnesty International 2011). One of the key lessons from the EMPHASIS project’s interventions at transit points to ensure safe mobility of migrants was to work with the duty bearers to activate



accountability mechanisms. This helps stakeholders, who are co-opted as allies, to identify opportunities to play an active role in addressing safe migration (Walker et al. 2014).

## **MIGRATION-RELATED POLICIES IN INDIA, BANGLADESH, AND NEPAL**

A review of laws, policies, and treaties between India, Bangladesh, and Nepal by Samuels and Wagle (2011) reported that there are many labour laws and policies in India that cater to internal migrants, but that these are poorly enforced and few workers are aware of them. Most of India's legal instruments address employees in the formal sector, which accounts for only 7 per cent of all workers in India, leaving the remaining 93 per cent without social benefit. Despite numerous labour-protection acts and policies, none of them address vulnerabilities faced by cross-border migrants.

The key Indian law relevant to migrants is the Foreigners Act of 1946, which deals with the entry, stay, and exit of foreigners in the country, with the exception of Nepalese. Among other things, this act gives the government the power to: (1) order controls over foreigners; (2) restrict their movement, activity, and residence, and require their proof of identity and regular appearance before the police; and (3) deport them. With the large influx of Bangladeshis in the state of Assam, the Indian government created the Illegal Migration Determination by Tribunals Act in 1983, applicable only to Assam. This allowed legal citizenship for those who had settled in Assam before 25 March 1971. However, there were issues about proving citizenship, and the Supreme Court ruled this act unconstitutional in 2005. Today, the Foreigners Act of 1946 is the only law that deals with cross-border migrants, particularly Bangladeshis in India.

Undocumented migrants from Bangladesh to India obviously have no access to the benefits associated with any of the Indian laws and policies. In Bangladesh, the Ministry of Expatriate Welfare and Overseas Employment is entrusted with protecting the rights and interests of Bangladeshi migrants in host countries, ensuring the welfare of remittance senders, facilitating overseas employment for prospective Bangladeshi migrants and increasing the capabilities and skills of the labour force. However, these services are only provided to documented migrants.

In Bangladesh, the Emigration Ordinance 1982 is the key regulatory instrument on migration, allowing people with valid travel documents to emigrate. Under the ordinance, the government of Bangladesh is authorized to grant licenses to individuals and companies wanting to recruit emigrants for overseas employment. This ordinance has two major limitations: (1) it does not protect migrant workers' rights in destination countries, and (2) migrant workers are subject to imprisonment if they return home without completing their employment tenure. The government of Bangladesh has ratified the International Labour Organization instrument, the Migration for Employment Convention of 1949, and the Migrant Workers Supplementary Convention of 1975. However, it has signed but not ratified the 1990 UN International Convention on Protection of Rights of All Migrant Workers and Members of their Families. This convention ensures full applicability of human rights legislation on female migrants. In Bangladesh, however, unskilled and semiskilled women are not allowed to migrate alone; they can only migrate with a male partner. The ban has loopholes that are sometimes exploited. Overall, ratification of instruments on migration is mainly applicable to legal migrants. As a result, undocumented female workers are still labeled as trafficked victims. Also as per the Bangladesh Passport Order 1973, undocumented migrants (a person who "fails to produce for inspection his passport or travel document" can face imprisonment or fine or both. If migrants are caught without documents in India, they are imprisoned again under India's acts. When adults are caught with children, they are separated and the children are kept in safe custody or shelter/observation homes while the adults are jailed (UNDP 2009).

Nepal and India have an "open-border" policy adopted by both governments through the 1950 bilateral Peace and Friendship Treaty. The porous border makes it difficult to capture accurate data on cross-border movement, but most migrants are men travelling to India to work as unskilled labourers in the informal sector. Despite the 1950 act, which provides Nepalese with specific entitlements, they are unaware of these entitlements and often view themselves as living in India illegally.

Governments in the destination countries have a responsibility to take the necessary action to prevent exploitation and forced labour of migrant workers, including the deprivation of documents, physical restrictions on workers' movements, and the use of physical violence against migrants. In its report, Amnesty International (2011) states that the government of Nepal has not taken appropriate action in its own jurisdiction to reduce and eliminate incidences of trafficking for exploitation and forced labour among Nepalese migrant workers and is consequently

not in full compliance with the ILO's Forced Labour Convention. With the enactment of the Foreign Employment Act in 2007, the Nepalese government has recognized the need to monitor and regulate the recruitment process in order to protect the rights of Nepalese workers migrating for foreign employment. However, Amnesty International's research indicates that the government is not ensuring that recruitment agencies function in accordance with the provisions of the act. The act also states that recruitment agencies should be punished if they do or cause anything to be done contrary to the contract, or if they conceal or alter documents. However, no recruitment agency has been punished under the act. As a consequence, agencies that have provided false or substituted contracts and collected fees above the maximum permitted by law have all done so with impunity. Although the government has set up complaints and compensation mechanisms in Nepal, Amnesty International's research shows that migrants were generally unaware of how to access them.

## **REGIONAL BODIES AND INITIATIVES**

A number of regional initiatives exist that are important to issues of cross-border mobility and HIV. The South Asia Association of Regional Cooperation (SAARC), established in 1985, was initially dedicated to economic, technological, social, and cultural development, emphasizing collective self-reliance. As member states faced common emerging health-related issues, health became a part of SAARC's work. Eight South Asian countries are now members of SAARC—Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. In 2004, SAARC signed a Memorandum of Understanding with UNAIDS to help member states work toward the goals of HIV prevention and appropriate care and support for PLHIV. In the same year, the SAARC Regional Strategy on HIV and AIDS (2006–10) was formulated, which emphasized regional-level coordination, collaboration, and partnership with organizations and national programmes and also stressed promotion of regional dialogue on cross-border issues relevant to HIV and AIDS. In addition to SAARC, the Colombo Process, or the Ministerial Consultation on Overseas Employment and Contractual Labour for Countries of Origin in Asia, was initiated in 2003. The governments of five South Asian countries (Bangladesh, India, Nepal, Pakistan, and Sri Lanka) participate in this process alongside six other Asian-labour exporting countries. The priorities are protection and provision of services to migrant workers; optimizing benefits of organized labour migration; and capacity-building, data collection, and interstate cooperation.

## **MIGRATION RESEARCH AND DATA GAPS**

The exponential increase in significance of international migration in Asia has not been accompanied by a concomitant increase in the amount and quality of data collection regarding it. This is a major constraint upon the research effort in this area and needs to be systematically addressed. Measuring migration is especially problematic because of the widespread occurrence of undocumented migration.

Stock migration data is usually obtained from censuses, but the enumerations of only a minority of countries has a full range of the basic questions of relevance to migration. Moreover, temporary migrants are rarely detected in censuses. A similar situation prevails with respect to migration flow data. While all nations have border systems, data on arrivals and departures are often not maintained in a way that makes them amenable to analysis, especially departures. The improvement of collection of both stock and flow data in the region is a crucial priority. Managing migration effectively is dependent, among other things, on the availability of comprehensive timely and accurate data relating to the scale and composition of that migration (Hugo 2005).

Despite the importance of migration to India, few studies exist on Bangladeshi and Nepalese migrants in India. One reason for the limited research regarding Nepalese migrants in India might be that Nepal and India share a common border and the two countries have a longstanding history of migration between them, which is often not perceived as "foreign employment." Illegal migration is extremely difficult to measure, and in the Indian context it is far more complex in view of the ethnic ties that the migrants from Bangladesh share with the native population. Fewer studies are available that look at the migration process from both the source-region and the receiving-country perspective.

Some of the most compelling results to emerge from recent migration research have explained "chain migration", the tendency for past migration to be strongly associated with further migration (Kuhn 2005). But few studies have addressed the importance of weak and strong ties in chain migration, and most have focused on differences between family networks and community networks that are specified contextually (Winters et al. 2001; Collyer

2005). Few studies have looked into the role of social networks in addressing health problems. The process of reintegration and rehabilitation of returnee migrants is perhaps least explored in migrant literature.

Beyond an economic perspective that regards migration as an extension of development, there needs to be a better understanding of migration and migrants in terms of factors beyond income, and health outcome seems to be one of the most important but also one of the most understudied factor. Relatively little is known about the magnitude, causes, and consequences of migration in South Asia or the economic, social, cultural and behavioural mechanisms underlying the relationship between migration and health-related vulnerabilities. It is important to fill this gap and develop appropriate responses. Related health studies have shown that there are several ways in which migrants are at a disadvantage compared with the non-migrants. An investigation of whether migration results in better or worse health outcomes should differentiate the stress associated with migration from possible (though not necessary) unhealthy changes in lifestyle (Madrigal et al. 2011). Few studies have addressed and explained this differentiation.

Several studies have documented that a more mobile global population brings increased potential for the spread of diseases, such as HIV, malaria, and TB. Studies on migration and health outcomes in India, Bangladesh, and Nepal predominantly concern migration and communicable diseases such as HIV, malaria and TB, with most of the research related to HIV and migration. There is not much literature available on other non-communicable diseases, such as malnutrition, diabetes, cancer and hypertension.

Migration and migrants specifically have played a significant role in the history of the global HIV pandemic, and migration and mobility have been the focuses of HIV disparities research since the beginning of the epidemic. Migration and HIV studies are subject to many methodological and measurement challenges, because there are many forms of migration from short-term circular labour migration to lifetime rural-to-urban migratory patterns (Deane et al. 2010). There are many unresolved empirical questions concerning the drivers of HIV transmission within and across populations that may help explain disease disparities. The relationship between malaria transmission and population movement is complex, but there needs to be more investment in understanding this link as future attempts to eradicate or control malaria will be futile if they are not based on understanding this link (Martens and Hall 2000).

Although there have been a few significant studies on health issues linked to migration status, the issue of malnutrition in this context is understudied. There are limited studies to showcase the relationship between migration and mortality. An understanding of the mortality risks associated with rural–urban migration has the potential to influence health policy and the provision of health services through an appreciation of the differential health needs of rural–urban migrants relative to non-migrants. Against the background of ever-increasing migration and lower age at migration, research on the reproductive health of migrants assumes importance.

Gender-specific vulnerabilities and the role of gender-based differentials in knowledge and perceptions, access to health information and services, safety, and associated costs have been documented in influencing health risks among migrants, but this area warrants further study. Compared with male migrants, there are not many studies where the influence of migration among married women who move along with their husbands or women who are left behind by the husbands at the origin have been studied.

Duration of migration and how it correlates with different health outcomes is also an area where more research could better inform interventions. The majority of available studies focus on rural-to-urban migration. Urban-to-rural migration has been understudied, but this can help demonstrate whether the effect of migration is reversed with the return to the rural milieu. Further research is needed to understand the health care utilization of rural–urban migrants in order to inform the provision of appropriate health care. An interesting area of future research could be the utilization of health services among poor migrants by their changing economic status over time. A number of studies underscore the need to understand migrants as more than a homogenous category and that some specific categories of migrants, such as poor migrants, neo-migrants, female migrants, migrants from specific communities such as Dalits in Nepal, might need special attention. Studies focusing on these special groups who might be most vulnerable among migrants may be needed to better cater to their specific vulnerabilities and needs.

## CONCLUSION

Migrant workers may be subjected to serious exploitation and human rights abuse both during the migration process and after reaching destination countries. If exploitation and human rights abuses are to be tackled effectively, measures should be taken by government and non-state actors (e.g., recruitment agencies and brokers) in both origin and destination countries (Amnesty International 2011).

Migrants adapt and integrate best in situations where they have strong social-support networks to assist and support them. It is crucial for migrant workers to be linked to such social networks where they are not linked already Hugo (2005). This involves better preparation for migrant workers before they leave their home country, more and better information about what to expect, and mechanisms to contend with crises at the destination. The Philippines, for example, has been quite effective in empowering their overseas workers through appropriate departure training and information provision and linking them to appropriate networks in the country. Use of modern technology (mobile phones) is also suggested for improving access to such information and networks (Hugo 2005).

Governments tend to have protective and restrictive emigration policies for women, exposing them to further risks and deprivations in the process. These restrictive policies need to be reexamined. Lack of policy frameworks for facilitating the reintegration of the returnee migrant workers also poses challenges for the returnee migrants (Siddiqui and Abrar 2002).

Interventions on migration should address both the source and destination areas. Available evidence suggests that interlinked HIV epidemics are evolving along the border areas and in some inland pockets where migration is common. Collaborative research and interventions covering both sides of the border are desirable to fully understand and address the prospect of HIV epidemics associated with cross-border migration (Nepal 2007). Analysis of the five-year EMPHASIS project in India, Bangladesh, and Nepal suggested that reaching cross-border migrants with information in their home countries and at their destinations can lead to safer mobility and positive health outcomes.

Given that studies have shown that husband-related social and behavioural factors mostly determine the risk of HIV infection in wives, prevention efforts must incorporate behaviour-change approaches targeting labour migrants and their wives (Thapa et al., 2014). Studies on migrants have shown that the risk for extramarital sex increased with a longer period of separation and also provided evidence of association between temporary separation from the spouse and extramarital sex. More explicit messages may be required, targeted to married men and women who will be temporarily separated as a result of work migration, as well as single migrants. Counseling could be introduced as part of the official migration process, with promotion of voluntary counseling and training (VCT) for those returning from abroad (Mercer et al. 2007). Studies have shown significant association between spousal migration and women's HIV status. Based on this finding it is recommended that prevention programs take into account the sociocultural context, including gender relations that may hamper women's ability to avoid exposure.

Migrant malaria is virtually invisible to organized disease-control measures. From a control perspective, migration malaria is particularly challenging because migrants generally are thought to remain out of the ambit of organized health services, they are hard to track and monitor, and they generally do not have the resources or access to comply with the control strategies of the country (Kumar et al. 2012). Although not specific to cross-border migrants, malaria-related information, prevention measures, and early diagnosis and appropriate treatment should be made easily accessible for migrants regardless of their migration status, not only to ensure that they are equipped with appropriate knowledge and devices to protect themselves, but also to ensure that they are properly diagnosed and treated, to prevent further transmission, and to ensure that they are captured by the surveillance system.

Studies have highlighted the importance of family support in improving treatment adherence, making it imperative that patients such as migrants who do not have adequate family support are given special attention by treatment providers to ensure adherence to ATT (Kirwan et al. 2009, Kulkarni et al. 2013). Migrants are a particularly challenging subgroup of TB patients and the social reality of migrant workers makes compliance with daily DOT

treatment quite difficult (Kirwan et al. 2009). To address this, treatment providers need to provide migrants with more flexibility to be able to comply with the treatment. While the attention of different governmental programs, especially in industrialized countries, seems to focus on mass screening programs for active TB and/or LTBI, these kinds of interventions should not represent a standalone intervention, but rather be a component of a wider approach. TB care should be offered and integrated with other health care activities within the context of a holistic approach to ensure the health and well-being of new entrant migrants (Zammarchi et al. 2014).

Apart from the increased potential for the spread of infectious disease that a more mobile global population brings, there is also a rising concern that migrants' health needs are not always adequately met. (WHO, 2008) To prioritize migrant health, WHO has called upon its member states to promote migrant-sensitive health policies, equitable access to health promotion, and disease prevention and healthcare programmes for them (WHO 2008).

There is a need for an inclusive health care strategy that accounts for the perspective of migrants and targets migrants in the provision of health services. Migrants are a vulnerable group and will benefit from social support, and specific preventive strategies which may differ from those relevant to the native population (Kirwan et al. 2009, Kumar et al. 2012, Kusuma 2009, Thapa et al. 2014, Mercer 2007). Some studies have also highlighted the lack of awareness on different health issues among migrants which points to the need for awareness generation programs for migrants. Ongoing programmatic efforts should also focus on some specific categories of migrants like neo-migrants, female migrants, migrants from specific communities (Dalits in Nepal), the poorest of the poor groups such as poor-migrant women who might be more vulnerable.

Studies reiterate that health care access is inequitable to migrants in general, and programs and policies are needed that are aimed at tackling the inequities in health and health care among migrants. Despite the high concentration of health care services in urban areas, inequities in access exist and access to the health system is lower in migrant populations compared with native subjects (Kusuma 2013A), Singh et al. 2012, Choudhary and Pathasarathy 2009). Identifying determinants of health care utilization among migrants is important to help governments understand and recognize migrants as a specific vulnerable group to provide services for and to develop migrant-sensitive strategies for improvement of their health. Comprehensive research and health-promotion programs targeted to migrant populations are urgently needed.

Asian countries have a long way to go to ensure adequate protection of cross-border migrants. Regional fora in Asia are critical for addressing issues in an integrated manner, including establishing the nexus among mobile populations, trafficking, and HIV. However their focus tends to be on labour migration to the Middle East and other developed countries, rather than cross-border mobility from Bangladesh and Nepal to India (Samuels and Wagle 2011). Given India's strong economic growth, migration from Bangladesh and Nepal is likely to increase. To create a safer environment for migrants, there is a need to recognize the existence of undocumented labour migrants going from Bangladesh to India; address weak labour laws and policies; distinguish between trafficked victims and cross-border migrants; include migrants in India's health and HIV/AIDS services; raise awareness about migrants' rights; and strengthen implementation of regional and national policies.

To ensure better health for migrants, there is need to promote migrant-sensitive health policies, develop disease prevention and health care programs targeted to the needs and vulnerabilities of migrants, and ensure equitable access to health care for all migrants.

## REFERENCES

- Adsul, B.B., P.S. Laad, P.V. Howal, R.M. Chaturvedi (2011) Health problems among migrant construction workers: A unique public-private partnership project. *Indian J Occup Environ Med.* 2011 Jan; 15(1): 29-32. doi: 10.4103/0019-5278.83001.
- Alvarez, G.G., B. Gushulak, K. Abu Rumman, E. Altpeter, D. Chemtob, P. Douglas, C. Erkens, P. Helbling, I. Hamilton, J. Jones, A. Matteelli, M.C. Paty, D.L. Posey, D. Sagebiel, E. Slump, A. Tegnell, E.R. Valin, B.A. Winje, E. Ellis (2011) A comparative examination of tuberculosis immigration medical screening programs from selected countries with high immigration and low tuberculosis incidence rates, *BMC infectious diseases*, 11 (3).
- Amnesty International (2011) *False Promises: Exploitation and Forced Labour of Nepalese Migrant Workers*. Amnesty International, United Kingdom.
- Anarfi, J.K. Reversing the spread of HIV/AIDS: What role has migration? In: United Nations Population Fund (UNFPA). *International Migration and the Millenium Development Goals*. Selected Papers of the UNFPA Expert Group Meeting, Marrakech, Morocco, May 11–12, 2005. New York: United Nations Population Fund, 2005: 99–109.
- Asia Foundation, The (2013) *Labour Migration Trends and Patterns: Bangladesh, India, and Nepal 2013*. November.
- Bailey, Phillippa K., Charles R.V. Tomson, Sanjay Kinra, Shah Ebrahim, K.V. Radhakrishna, Hannah Kuper, Dorothea Nitsch and Yoav Ben-Shlomo (2013) The effect of rural-to-urban migration on renal function in an Indian population: cross-sectional data from the Hyderabad arm of the Indian Migration Study. *BMC Nephrology* 2013, 14: 240 doi:10.1186/1471-2369-14-240
- Bajracharya, R. and Sijapati, B. (2012) *The Kafala System and Its Implications for Nepali Domestic Workers*. Policy Brief, Centre for the Study of Labor and Mobility, Social Science Baha, Kathmandu, Nepal. March.
- Bam. K., R. Thapa, M.S. Newman, L.P. Bhatt, S.K. Bhatta (2013) Sexual behavior and condom use among seasonal Dalit migrant laborers to India from Far West, Nepal: A qualitative study. *PLoS One*. 2013 Sep 5; 8(9): e74903. doi: 10.1371/journal.pone.0074903.
- Basu, Alaka Malwade, Rob Stephenson (2002) Spatial variation in contraceptive use in Bangladesh: Looking beyond the borders. *Demography* May 2002, Volume 39, Issue 2, pp 251–67.
- Behra, S. (2011) Trans-border Identities: A study on the impact of Bangladeshi and Nepali Migration to India. ICRIER Policy Series, No. 1, May.
- Bhagat, R.B. (2010) Internal migration in India: are the underprivileged migrating more? *Asia-Pacific Population Journal*, 25: 27–45
- Bogaerts, J., J. Ahmed, N. Akhter, et al. Sexually transmitted infections among married women in Dhaka, Bangladesh: Unexpected high prevalence of herpes simplex type 2 infection. *Sex Transm Infect* 2001; 77: 114 –19.
- Brokerhoff, M., A. Biddlecom (1998) Migration, Sexual behavior and HIV diffusion in Kenya, Policy Research Division Working Papers, Population Council, No. 111. Available: Accessed 12th February 2015.
- Bondurant, T., B. Franklin, G. Neilsen (2001) HIV/STI prevention and care strategies for the Far western, mid-western and western regions of Nepal. Available: <http://fhi.org/NR/rdonlyres/esbcy2pfc2qk3izosh3txudd7wmags7qc7e4yg7yamz4hbdq4clkjksyv5q45ydc0ahrzixe6njug/hivcarestartegiesenhv.pdf>. Accessed 20 January 2015
- Boyd, M. and E. Grieco (2003) 'Women and migration: incorporating gender into international migration theory', special issue of *Migration Information Source on Women and Migration*, March, Washington, DC: Migration Policy Institute.
- Cassels S., S.M. Jenness, A.S. Khanna (2013) Conceptual Framework and Research Methods for Migration and HIV Transmission Dynamics. (2013) *AIDS Behav.* 2013 Nov 21.
- Castles, S. and M.J. Miller (2003) *The Age of Migration*, 3rd edition, Basingstoke: Palgrave Macmillan.
- CDC (2012) Reported Tuberculosis in the United States, 2011. Department of Health and Human Services.
- Charsley, Katherine and Alison Shaw (2006) South Asian transnational marriages in comparative perspective, *Global Networks* Volume 6, Issue 4, pages 331–44, October 2006.
- Choudhary, N. and D. Parthasarathy. Is migration status a determinant of urban nutrition insecurity? Empirical evidence from Mumbai city, India. *J Biosoc Sci.* 2009 Sep; 41(5): 583–605. doi: 10.1017/S002193200900340X. Epub 2009 Jun 10.
- Collyer, Michael (2005) When Do Social Networks Fail to Explain Migration? Accounting for the Movement of Algerian Asylum-Seekers to the UK. *Journal of Ethnic and Migration Studies* 31(4): 699–718.
- Datta, P. (2009) *Immigration from Bangladesh to West Bengal*, Population Studies Unit, Indian Statistical Institute, Kolkata.
- Deane, K.D., J.O. Parkhurst, D. Johnston (2010) Linking migration, mobility and HIV. *Trop Med Int Health.* 2010; 15(12): 1458–63.



- Durand, Jorge, Douglas S. Massey, Rene M. Zenteno (2001) Mexican Immigration to the United States: Continuities and Changes. *Latin American Research Review* 36(1): 107–27.
- Ebrahim, S., S. Kinra, L. Bowen, E. Andersen, Y. Ben-Shlomo, T. Lyngdoh, L. Ramakrishnan, R.C. Ahuja, P. Joshi, S.M. Das, M. Mohan, G. Davey Smith, D. Prabhakaran, K.S. Reddy; Indian Migration Study group (2010) The effect of rural-to-urban migration on obesity and diabetes in India: a cross-sectional study. *PLoS Med.* 2010 Apr 27; 7(4): e1000268. doi: 10.1371/journal.pmed.1000268.
- FHI (2002). *HIV/AIDS Prevention and Care in Resource-Constrained Settings: A handbook for the design and management of programs*. Arlington VA, Family Health International.
- Gagliotti, C., D. Resi, M.L. Moro. Delay in the treatment of pulmonary TB in a changing demographic scenario, *The International Journal of Tuberculosis and Lung Disease: The Official Journal of the International Union Against Tuberculosis and Lung Disease*, 10 (2006) 305–9.
- Ghent, Alice. Overcoming migrants' barriers to health: With increasing numbers of people on the move, migrant health has become a key global public-health issue. *Bulletin of the World Health Organization*, August 2008, 86 (8).
- Godfrey, R. and M. Julien. Urbanisation and health, *Journal of the Royal College of Physicians Clinical Medicine* March/April 2005 Vol. 5 No. 2 137–41.
- Government of Bangladesh (2003) *HIV in Bangladesh: Is Time Running Out*. National AIDS/STD Programme, Directorate General of Health Services, Ministry of Health and Family Welfare, Government of Bangladesh, Dhaka, Bangladesh.
- Government of Nepal (GoN) (2004) *Nepal Living Standards Survey 2003/2004*. Kathmandu: Central Bureau of Statistics.
- Gulati, L. (1993) *In the absence of their men: the impact of male migration on women*, New Delhi: Sage.
- Gupta, R., A. Agrawal, A. Misra, S. Guptha, et al. (2012) Migrating husbands and changing cardiovascular risk factors in the wife: a cross sectional study in Asian Indian women. *J Epidemiol Community Health* 66 (10): 881–9.
- Health Protection Agency (2010) Tuberculosis in the UK: Annual report on tuberculosis surveillance in the UK, Centre for Infections, Health Protection Agency, London.
- Heaman, M., H. Bayrampour, D. Kingston, et al. (2013) Migrant women's utilization of prenatal care: a systematic review. *Maternal and Child Health Journal* 17, 816–36.
- Hugo, G. (2005) Migration in the Asia-Pacific Region. A paper prepared for the Policy Analysis and Research Programme of the Global Commission on International Migration. Global Commission on International Migration. September.
- Ibrahim, A.S., A. Alkhal, J. Jacob, W. Ghadban, A. Almarri. Hepatitis E in Qatar imported by expatriate workers from Nepal: epidemiological characteristics and clinical manifestations. *J Med Virol.* 2009 Jun; 81(6): 1047–51. doi: 10.1002/jmv.21474.
- IBBS (2010). Integrated Biological and Behavioral Surveillance survey among male labor migrants (Round III): Mid and far-Western regions of Nepal. Save the Children, and Success Search Option (P) Ltd., Kathmandu, Nepal.
- International Institute for Population Sciences and Macro International (2007). *National Family Health Survey (NFHS-3), 2005–06: India: Volume I*. Mumbai: IIPS.
- International Labor Organization (2005) Dalits and Labor in Nepal. Kathmandu, Nepal: Discriminations and Forced Labor Office. Available: [http://www.ilo.org/wcmsp5/groups/public/@asia/@ro-bangkok/@ilokathmandu/documents/publication/wcms\\_112922.pdf](http://www.ilo.org/wcmsp5/groups/public/@asia/@ro-bangkok/@ilokathmandu/documents/publication/wcms_112922.pdf). Accessed 24 January 2015
- International Labour Office (2010) International Labour Migration: A rights-based approach. Geneva: International Labour Office. Available at: <http://migration.itcilo.org/en/resources/papers/international-labour-migration-a-rightbased-approach> (accessed 23 January 2015.)
- International Organization for Migration (IOM) (2003) *World Migration 2003: Managing Migration, Challenges and Responses for People on the Move, Volume 2*, IOM World Migration Report Series, Geneva.
- Kaspar, Heidi (2004) Impacts of International Labour Migration on Gender Relations. A Case Study of Kalabang, Nepal. Zurich: Master's Thesis, University of Zurich.
- Kirwan, D.E., B.D. Nicholson, S.C. Baral, J.N. Newell (2009) The social reality of migrant men with tuberculosis in Kathmandu: implications for DOT in practice. *Trop Med Int Health.* 2009 Dec; 14(12): 1442–7. doi: 10.1111/j.1365-3156.2009.02405.x. Epub 2009 Oct 5.
- Kuhn, R.S. (2005) Community or Connections? A Social Networks Approach to Chain Migration. Population Program. Institute of Behavioural Sciences, University of Colorado. September.
- Kulkarni, P., S. Akarte, R. Mankeshwar, J. Bhawalkar, A. Banerjee, A. Kulkarni. Non-adherence of new pulmonary tuberculosis patients to anti-tuberculosis treatment. *Ann Med Health Sci Res.* 2013 Jan; 3(1): 67–74. doi: 10.4103/2141-9248.109507.
- Kumar, A., L. Chery, C. Biswas, N. Dubhashi, P. Dutta, V.K. Dua, M. Kacchap, S. Kakati, A. Khandeparkar, D. Kour, S.N. Mahajan, A. Maji, P. Majumder, J. Mohanta, P.K. Mohapatra, K. Narayanasamy, K. Roy, J. Shastri, N. Valecha, R. Vikash, R.

Wani, J. White, P.K. Rathod (2012) Malaria in South Asia: prevalence and control. *Acta Trop.* 2012 Mar; 121(3): 246–55. doi: 10.1016/j.actatropica.2012.01.004. Epub 2012 Jan 8.

Kusuma, Y., S. Gupta, C. Pandav (2009) Migration and hypertension: a cross-sectional study among neo-migrants and settled-migrants in Delhi, India. *Asia Pac J Public Health.* 2009 Oct; 21(4): 497–507. doi: 10.1177/1010539509344114.

Kusuma, Y.S. Perceptions on hypertension among migrants in Delhi, India: a qualitative study. *BMC Public Health.* 2009 Jul 28; 9: 267. doi: 10.1186/1471-2458-9-267.

Kusuma, Y.S., R. Kumari, S. Kaushal (2013A) Migration and access to maternal healthcare: determinants of adequate antenatal care and institutional delivery among socio-economically disadvantaged migrants in Delhi, India. *Trop Med Int Health.* 2013 Oct; 18(10): 1202–10. doi: 10.1111/tmi.12166. Epub 2013 Aug 6.

Kusuma, Y.S., S.K. Gupta, C.S. Pandav (2013B) Treatment seeking behaviour in hypertension: factors associated with awareness and medication among socioeconomically disadvantaged migrants in Delhi, India. *Coll Antropol.* 2013 Sep; 37(3): 717–22.

Larsen, J.J. (2010) Migration and people trafficking in southeast Asia. *Trends & issues in crime and criminal justice.* Australian Institute of Criminology. No. 401.

Lindstrom, D.P., E. Muñoz-Franco (2006) Migration and maternal health services utilization in rural Guatemala. *Social Science and Medicine* 63: 706–21 [PubMed]

Lu, Y. (2010) Rural-urban migration and health: evidence from longitudinal data in Indonesia. *Social Science and Medicine* 70: 412–19 [PMC free article] [PubMed]

Madrigal, L., J. Brady, M. Raxter, E. Ruiz, F. Otarola, Blell (2011) Obesity, hypertension, and migration: a meta-analysis of populations of the South Asian diaspora. *M. Hum Biol.* 2011 Feb; 83(1): 71–86. doi: 10.3378/027.083.0105.

Maimbo, Samuel Munzele, Dilip Ratha (2005) *Remittances: Development Impact and Future Prospects.* Washington, DC: World Bank. © World Bank. <https://openknowledge.worldbank.org/handle/10986/7339> License: CC BY 3.0 IGO.

Martens, P., L. Hall (2000) Malaria on the move: human population movement and malaria transmission. *Emerg Infect Dis.* 2000 Mar–Apr; 6(2): 103–9.

McKay, L., S. Macintyre, A. Ellaway. Migration and health: a review of the international literature. In: Petticrew, M., K. Hunt, editors. Glasgow: MRC Social and Public Health Sciences Unit; 2003. MRC Social and Public Health Sciences Unit. Occasional paper series number 12.

Mercer, A., R. Khanam, E. Gurley, T. Azim (2007) Sexual risk behavior of married men and women in Bangladesh associated with husbands' work migration and living apart. *Sex Transm Dis.* 2007 May; 34(5): 265–73.

Migration and Malaria, Vol. 44, Supplement 1, 2013; *Southeast Asian J Trop Med and Public Health.*

Ministry of Health and Family Welfare. National HIV Serological Surveillance, 2004–2005, Bangladesh. Sixth Round Technical Report. Dhaka, Bangladesh: National AIDS/STD Programme, Directorate General of Health Services, Ministry of Health and Family Welfare, 2005.

Ministry of Health and Population (2007), NCASC National HIV/AIDS strategy (2006–2011) Kathmandu, Nepal: Available.

Mor, Z., H. Kolb, M. Lidji, G. Migliori, A. Leventhal, Tuberculosis diagnostic delay and therapy outcomes of non-national migrants in Tel Aviv, 1998–2008, Euro surveillance: *bulletin European sur les maladies transmissibles = European communicable disease bulletin*, 18 (2013).

Mukherji, S. Low quality migration in India: The phenomena of distressed migration and acute urban decay working for unorganised labour—The case of Mumbai. [Last accessed on 2010 Jun 01.] Available from: <http://www.lariw.org/papers/2009.pdf> .[http://www.ncasc.gov.np/uploaded/publication/pub/HIVAIDS\\_Strategy\\_2006\\_2011.pdf](http://www.ncasc.gov.np/uploaded/publication/pub/HIVAIDS_Strategy_2006_2011.pdf). Accessed 22 January 2015.

National Sample Survey Organization (2010) *Migration in India 2007–2008.* National Sample Survey Office, Ministry of Statistics & Programme Implementation, Government of India.

NCASC (2007) National estimates of HIV infections. Kathmandu: HIV/AIDS and STD Control Board: Government of Nepal: National Centre for AIDS and STD Control. Available: <http://www.ncasc.gov.np/uploaded/publication/Reports/Nepal%20Estimation%20Report%202007.pdf> . Accessed 22 January 2015.

Nepal, B. (2007) Population mobility and spread of HIV across the Indo-Nepal border. *J Health Popul Nutr.* 2007 Sep; 25(3): 267–77.

New Era/Sacts/Family Health International. HIV/STD Prevalence and Risk Factors Among Migrant and Non-migrant Males of Acham District in Far-Western Nepal. Khatmandu, Nepal: Report to Family Health International, STD/AIDS Counseling and Training Service, 2002.

New ERA. Integrated biological & behavioral surveillance survey among the wives of migrants in four districts of far western Nepal round II. 2010, [http://www.aidsdatahub.org/sites/default/files/documents/sso\\_2010\\_ibbs\\_report\\_among\\_male\\_labor\\_migrants\\_round\\_3\\_nepal.pdf](http://www.aidsdatahub.org/sites/default/files/documents/sso_2010_ibbs_report_among_male_labor_migrants_round_3_nepal.pdf).



- Oishi, N. (2002) Gender and Migration: An Integrative Approach, Working paper 49, The Center for Comparative Immigration Studies CCIS, University of California, San Diego, November.
- Pande, R.P., A.S. Yazbeck (2003) What's in a country average? Wealth, gender, and regional inequalities in immunization in India. *Social Science and Medicine* 57: 2075–88 [PubMed]
- Population Council (2011) Migration and HIV in India. Available: [http://www.popcouncil.org/pdfs/2011HIV\\_IndiaHIVandMigrationReport.pdf](http://www.popcouncil.org/pdfs/2011HIV_IndiaHIVandMigrationReport.pdf). Accessed 18<sup>th</sup> February 2011.
- Poudel, K.C., J. Okumura, J.B. Sherchand, M. Jimba, I. Murakami, S. Wakai (2003) Mumbai disease in far western Nepal: HIV infection and syphilis among male migrant-returnees and non-migrants. *Trop Med Int Health*. 8(10): 933–9. doi: 10.1046/j.13653156.2003.01110.x.
- Poudel, K.C., M. Jimba, J. Okumura, A.B. Joshi, S. Wakai (2004) Migrants' risky sexual behaviours in India and at home in far western Nepal. *Trop Med Int Health*. 9(8): 897–903.
- Pareek, M., I. Baussano, I. Abubakar, C. Dye, A. Lalvani (2012) Evaluation of immigrant tuberculosis screening in industrialized countries. *Emerging Infectious Diseases*, 18: 1422–9. <http://dx.doi.org/10.3201/eid1809.120128> PMID:22931959 PMCID:PMC3437731
- Puri, M., J. Cleland (2006) Sexual behaviour and perceived risk of HIV/AIDS among young migrant factory workers in Nepal. *J Adolesc Health* 38: 237–46. doi:10.1016/j.jadohealth.2004.10.001. PubMed: 16488821.
- Ratha, D. and W. Shaw (2007) South-south migration and remittances. World Bank Working Paper No. 102.
- Samuels, F., E. Sarin, M. Sultana, and N. Kaur (2014) Fighting HIV on all Fronts: reducing vulnerability but targeting migrants, their spouses and families in source and destination countries. ODI Project Briefing. London: Overseas Development Institute.
- Samuels, Fiona, Miguel Niño-Zarazúa, Sanju Wagle, Tahmina Sultana and Mirza , Manbira Sultana (2011) Vulnerabilities of movement: cross-border mobility between India, Nepal and Bangladesh. Overseas Development Institute. Background Note.
- Samuels, F., S. Wagle, T. Sultana, M. Sultana, N. Kaur, and S. Chatterjee (2012) Stories of harassment, violence and discrimination: migrant experiences between India, Nepal and Bangladesh. ODI Project Briefing, No. 70. London: Overseas Development Institute.
- Samuels, F. and S. Wagle (2011) Population mobility and HIV and AIDS: review of laws, policies and treaties between Bangladesh, Nepal and India. Background Note, Overseas Development Institute. June.
- Sanders, Jimmy, Victor Nee, Scott Sernau (2002) Asian Immigrants' Reliance on Social Ties in a Multiethnic Labor Market. *Social Forces* 81(1): 281–314.
- Shaokang, Z., S. Zhenwei, E. Blas (2002) Economic transition and maternal health care for internal migrants in Shanghai, China. *Health Policy and Planning* 17: 47–55 [PubMed].
- Sharpe, P. (ed.) (2001) University, South Asia Occasional Papers and Theses. Women, gender and labour migration: historical and global perspectives, London: Routledge.
- Siddiqui, T. and C.R. Abrar (2002) Contribution of returnees: An analytical survey of post return experience. International Organization for Migration, Regional Office for South Asia, Dhaka, Bangladesh.
- Siddiqui, T. and C.R. Abrar (2003) Migrant Worker Remittances and Micro-Finance in Bangladesh. Working paper no. 38, Social Finance Programme, International Labour Office.
- Sikder, M.J.U. (2008) Population Movements and the Threat of HIV & AIDS at the Bangladesh-India Border. NTS – Asia Secretariat, S. Rajaratnam School of International Studies, Monograph No. 14. Singapore: Booksmith ([www.rsis.edu.sg/publications/monographs/Monograph14.pdf](http://www.rsis.edu.sg/publications/monographs/Monograph14.pdf) Accessed on 12/09/2010).
- Singh, P.K., R.K. Rai, L. Singh (2012) Examining the effect of household wealth and migration status on safe delivery care in urban India, 1992–2006. *PLoS One*. 2012; 7(9): e44901. doi: 10.1371/journal.pone.0044901. Epub 2012 Sep 7.
- Singh, M.A. (2009) A study on illegal immigration into North-East India: The case of Nagaland. IDSA Occasional Paper No. 8, Institute of Defence Studies and Analysis, New Delhi, November.
- Smith-Estelle, A., S. Gruskin (2003) Vulnerability to HIV/STIs among rural women from migrant communities in Nepal: A health and human rights framework. *Reprod Health Matters* 11(22): 142–51. doi:10.1016/S0968-8080(03)02292-4. PubMed: 14708405.
- Srivastava, R. and S.K. Sasikumar (2003) An overview of migration in India, its impacts and key issues. Paper presented at the Regional Conference on Migration, Development and Pro-Poor Policy Choices in Asia, 22–24 June, Dhaka, Bangladesh.
- Stephenson, R., Z. Matthews, J.W. McDonald (2003) The impact of rural-urban migration on under-two mortality in India. *J Biosoc Sci*. 2003 Jan; 35(1): 15–31.

Success Search Option, Intrepid Nepal (2010) Integrated Bio-Behavioral Survey Among Male Labour Workers, Mid and Far-Western Regions of Nepal, Kathmandu. Available: [http://aidsdatahub.org/dmdocuments/SSO\\_2010\\_IBBS\\_Report\\_Among\\_Male\\_Labor\\_Migrants\\_Round\\_3\\_Nepal.pdf](http://aidsdatahub.org/dmdocuments/SSO_2010_IBBS_Report_Among_Male_Labor_Migrants_Round_3_Nepal.pdf). Accessed 17<sup>th</sup> February 2011.

Thapa, S., N. Bista, S. Timilsina, F. Buntinx, C. Mathei (2014) Social and behavioral risk factors for HIV infection among the wives of labor migrants in Nepal. (2014). *Int J STD AIDS*. 2014 Jan 27.

Thieme, S. (2006) Social networks and migration: Far West Nepalese Labour Migrants in Delhi. NCCR North South Dialogue, NCCR North-South. Berne.

Trends in International Migration Stock: The 2008 Revision, UN database (UN Department of Economic and Social Affairs, Population Division, 2009).

UNAIDS, THE GAP REPORT (16 July 2014).

UNAIDS. Policy brief: HIV and international labour migration. 2008.

United Nations (2010) UNGASS (United Nations General Assembly Special Session) country progress report. Nepal. Available: [http://data.unaids.org/pub/Report/2008/nepal\\_2010\\_country\\_progress\\_report\\_en](http://data.unaids.org/pub/Report/2008/nepal_2010_country_progress_report_en). Accessed 20 January 2015.

UNAIDS/World Health Organization (2009) AIDS epidemic update. Geneva: Joint United Nations Programme on AIDS and World Health Organization. Available: [http://data.unaids.org/pub/report/2009/jc1700\\_epi\\_update\\_2009\\_en.pdf](http://data.unaids.org/pub/report/2009/jc1700_epi_update_2009_en.pdf). Accessed 20 January 2015.

United Nations Development Programme (UNDP) (2009). *Human Development Report 2009*. UNDP, New York.

UN Women (2013) South Asian Inter-Governmental Group calls for greater efforts to ensure safe migration of women workers, UN Women, available at: <http://www.unwomensouthasia.org/assets/Press-Release-Safer-Migration-of-WomenWorkers-22-March-20131.pdf> (accessed 26 December 2013)

Vaidya, N.K., J. Wu (2011) HIV epidemic in Far-Western Nepal: effect of seasonal labor migration to India. *BMC Public Health*. 2011 May 13; 11: 310. doi: 10.1186/1471-2458-11-310.

Varadharajan, K.S., T. Thomas, D. Rajaraman, A.V. Kurpad, M. Vaz. (2013) Overweight and obesity among internal migrants in India. *Asia Pac J Clin Nutr*. 22(3): 416–25. doi: 10.6133/apjcn.2013.22.3.14.

Vertovec, Steven (2002) Transnational Networks and Skilled Labour Migration, *Ladenburger Diskurs "Migration"* Gottlieb Daimler- und Karl Benz-Stiftung, Ladenburg, 14–15 February 2002.

Verver, S., R. Bwire, M.W. Borgdorff (2001) Screening for pulmonary tuberculosis among immigrants: estimated effect on severity of disease and duration of infectiousness, *The international journal of tuberculosis and lung disease: the official journal of the International Union against Tuberculosis and Lung Disease*, 5: 419–25.

Viswanathan, M., A. Ammerman, E. Eng, G. Gartlehner, K.N. Lohr, et al. (2004) Community-Based Participatory Research (CBPR): Assessing the Evidence. Evid Rep/Technol Assess No. 99: AHRQ Publication 04-E022-2. Rockville, MD: Agency for Healthcare Research and Quality.

Walker, D., N. Bohidar and P. Devkota (2014) Migration, Health and Dignity in South Asia Lessons from the EMPHASIS project on migration, women's empowerment and HIV in Bangladesh, India and Nepal. Shaping Policy for Development, Overseas Development Institute.

Watkins, K. and M. Quattri (2014) Lost in intermediation: how excessive charges undermine the benefits of remittances for Africa. London: Overseas Development Institute.

Watkins, R.E., A.J. Plant. Predicting tuberculosis among migrant groups. *Epidemiology and Infection* 129 (2002) 623–8. <http://dx.doi.org/10.1017/S0950268802007604>.

Winters, Paul, Alain de Janvry, and Elizabeth Sadoulet (2001) Family and Community Networks in Mexico-US Migration. *Journal of Human Resources* 36(1): 159–84.

World Health Organization (WHO) (2004) Global strategy on diet, physical activity and health. 2004. WHO, Geneva.

World Health Organization (WHO) (2008) The 61st World Health Assembly, Migrants health, WHA61.17. Available at [http://apps.who.int/gb/ebwha/pdf\\_files/A61/A61\\_R17-en.pdf](http://apps.who.int/gb/ebwha/pdf_files/A61/A61_R17-en.pdf) (accessed on 16 January 2015).

World Health Organization (WHO) (2012) *Global tuberculosis report 2012*. World Health Organization, Geneva, Switzerland.

Zammarchi, L., F. Bartalesi, Bartoloni (2014) Tuberculosis in tropical areas and immigrants. *Mediterr J Hematol Infect Dis*. 2014 Jun 1; 6(1): e2014043. doi: 10.4084/MJHID.2014.043. eCollection 2014.

Zhao, Yaohui (2003) The Role of Migrant Networks in Labor Migration: The Case of China. *Contemporary Economic Policy* 21(4): 500–511.