PART 1: CASE STUDIES

HEALTH AND IMMUNIZATION SERVICES FOR THE URBAN POOR IN EAST ASIA

Part 1 of the main report explores health and immunization services for the urban poor in East Asia through case studies from seven countries.
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Part 1 of the main report explores health and immunization services for the urban poor in East Asia through case studies from seven countries.
The East Asia and Pacific Region is undergoing significant social changes, fast growing economies, demographic transitions, and rapid urbanization. Rapid urbanization specifically has the potential to bring both opportunities and challenges to the development of its social systems.

Everyday in our region, families leave their rural homes, with dreams of a better life and future for their children, moving into cities, or places where urbanization is under way. In a rapidly changing world, children are the most vulnerable group in a society. Children need special care and protection including adequate access to essential health, sanitation and social services.

The public health emergency of measles and diphtheria outbreaks in certain cities in our region is causing deaths and suffering to many children. This rings loud bells for the development community. The phenomenon of vaccine preventable disease outbreaks indicates an increased public health risk for urban populations. This may only be the tip of the iceberg. There are many other public health and development challenges for the urban poor that are affecting the well-being of millions of children and families. Among them are pneumonia and diarrhea.

Considering the important transition the East Asia and Pacific Region is undergoing, I am pleased to introduce our work on HEALTH AND IMMUNIZATION SERVICES FOR THE URBAN POOR IN EAST ASIA. The Summary Report and two detailed reports share existing evidence and analysis to examine how effectively health systems are responding to rapid urbanization in the region. They also map out policy and service gaps to close, and recommend strategies to reduce inequities of access to health care in urban settings. They clearly articulate the complexity of urban development systems. It shows the essential need for public and private sectors to work collaboratively to respond to the rapidly changing social conditions in the region.

UNICEF in East Asia and the Pacific is committed to protecting the rights of every child in the region, and leaving no one behind. We are also committed to working tirelessly and cooperatively with national and local governments, international partners and civil society agencies, to enhance social development systems to meet the needs of children and families. It also provides the opportunity to offer special support to those most suffering deprivation in what is a rapidly urbanizing region of the world.

We count on you to address the urgent need to tie down accountability for management and financing of health services for the urban poor.

Karin Hulshof
UNICEF Regional Director, East Asia and the Pacific
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ACRONYMS AND ABBREVIATIONS

ARMM  Autonomous Region in Muslim Mindanao
CHC   commune health centre
cMYP  comprehensive multi-year plan (for immunization)
CDC   Centers for Disease Control and Prevention (United States)
DHS   Demographic and Health Survey
DOH   Department of Health
DPT3  three doses of combined diphtheria/pertussis/tetanus vaccine
EAPRO East Asia and Pacific Regional Office (UNICEF)
EPI   Expanded Programme on Immunization
FGP   family group practice (Indonesia)
FHC   family health centre
HIV   human immunodeficiency virus
HPV   human papilloma virus
HSS   health systems strengthening
JICA  Japan International Cooperation Agency
LGU   local government unit
MICS  Multi Indicator Cluster Survey
MMR   measles, mumps and rubella vaccine
MOH   Ministry of Health
MCH   maternal and child health
NCDs  non-communicable diseases
NCR   National Capital Region (the Philippines)
NDOH  National Department of Health (Papua New Guinea)
NGO   non-government organization
NIP   national immunization programme
OPV   oral poliomyelitis vaccine
PATH  Program for Appropriate Technology in Health
PHC   primary health care
REC   Reaching Every Community
RED   Reaching Every District
REP   Reaching Every Purok
TB    tuberculosis
WPRO  Western Pacific Regional Office of WHO
UN    United Nations
UNICEF United Nations Children’s Fund
VDPV  vaccine-derived polio virus
VHV   village health volunteer
WHO   World Health Organization
ACKNOWLEDGEMENTS

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INTRODUCTION

Urbanization, along with rapid economic growth and persisting or widening inequalities, is the dominant demographic and social trend in Asia. As of 2010, 45.6 per cent of the population in the Asia Pacific were living in urban areas. By 2030, urbanization levels in South-East Asia will reach 56 per cent while the levels in East Asia are expected to reach 72 per cent. This presents a major challenge for government and civil society partners, who are struggling to adapt public services and social protection systems to the social conditions arising from demographic transition and increasing population mobility. Modern health sectors, which have been traditionally based on a rural model of primary health care (PHC), are also endeavouring to adapt governance, financing and service delivery arrangements to meet the needs of an expanding urban population, particularly of the urban poor. The overall number of slum dwellers in low- and middle-income countries is expected to double from 1 billion to 2 billion globally by 2030. Based on the most recent population data from 2016, there is an estimated 64.6 million people living in slum communities in the six out of the seven countries under study in this review (Cambodia, Indonesia, Mongolia, Myanmar, the Philippines, and Viet Nam – with no data available for Papua New Guinea).

One of the health programmes that has initiated action to manage this transition are national immunization programmes (NIPs). Over the last 30 years, these programmes have been highly successful across the region in administering rural programmes for control of vaccine-preventable diseases such as neonatal tetanus, polio and measles. But the recent emergence of substantial disease outbreaks in major cities of the region, including Ulaanbaatar, Yangon, Manila and Hanoi, in addition to evidence of substantial coverage gaps between wealth quintiles in urban areas, is now raising questions about the effectiveness and equity of immunization programmes in urban areas.

So just how are countries responding to rapid urbanization, and how are they adapting their programmes policies and plans to the realities of this rapidly changing social context?

Through examination of published literature, country policy and planning documentation, and relevant survey data bases, this review examines the policy and planning responses of countries to urban health and immunization in seven countries of the region, and, based on these findings, makes recommendations on potential next steps for improving coverage and equity of access.

To undertake this review, data has been sourced from several locations, which include the following:

(a) Secondary analysis of relevant data from Demographic and Health Surveys (DHS) and Multi Indicator Cluster Surveys (MICS) data using the ages of 12-59-months as the denominator.

(b) More general development indicators on demography and urbanization have been sourced from the website of UN Habitat.
The policy perspective of each country has been obtained through two principal sources—the national health sector strategic plans and comprehensive multi-year plans for immunization (cMYP) from each country.

Elsewhere, complementary information and data has been sourced from evaluations and peer reviewed literature sources on health and immunization services in urban areas.

The study was originally designed to assist UNICEF EAPRO to tailor its technical support to the needs of the urban poor in the region. Hence, the countries for this review were selected based on their membership of the East Asia and the Pacific grouping of UNICEF.

This report is in two parts.

In Part 1 of the report, Case Studies, we develop the set of seven country case studies to track the overall development of the immunization systems. The case studies are from Cambodia, Indonesia, Mongolia, Myanmar, Papua New Guinea, the Philippines and Viet Nam. These case studies were collated from published and unpublished literature sources, through consultations with country offices of UNICEF in each country, and through analysis of published data sets on immunization coverage and disease outbreaks. The case studies are organized around the headings of (a) background to urbanization and health system trends (b) impacts on current immunization policy and practice in urban settings and (c) lessons learned for future modelling of immunization programmes in urban settings.

In Part 2 of report, the Thematic Analysis, we extract themes from the seven country case studies to inform a wider regional view of current approaches, lessons learned, and potential policy and practice developments. A detailed set of recommendations for actions by government agencies and development partners based on this thematic analysis is also included. We explore the following main themes in the second part of the report:

1. Health and social conditions of the urban poor
2. Demographic trends in urban areas
3. Immunization coverage and vaccine-preventable diseases in urban areas
4. Evidence of vaccine-preventable disease outbreaks in urban areas
5. Innovations in immunization operational strategy in urban areas
6. Governance arrangements for immunization and urban health care

Part 2 concludes with an agenda for action on reducing inequities of access to immunization and related health care services for the urban poor in East Asia.
PART 1: CASE STUDIES
Health and Immunization Services for the Urban Poor in East Asia

CAMBODIA

Summary

- There is a rapid inflow of migrants to Phnom Penh with peri-urban growth, and large agglomerations of populations in slum areas and squatter settlements. The population is expanding at a more rapid rate than the expansion of health facilities.

- The city master plan views health as a joint local government and Ministry of Health responsibility, although financing by local governments of health facilities remains unclear.

- Recent surveys have demonstrated narrowing of gaps between wealth quintiles in immunization coverage, although gaps in coverage in very poor communities remain a programmatic concern.

- The multi-year plan for immunization has adopted a ‘high risk’ strategy to prioritize service implementation in urban poor areas.

Table 1  Basic urban demographic and health indicators, Cambodia

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<thead>
<tr>
<th>Indicator</th>
<th>Result</th>
<th>Data source</th>
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<tbody>
<tr>
<td>Total urban population</td>
<td>3,228,210</td>
<td>World Bank 2017⁵</td>
</tr>
<tr>
<td>% population living in urban areas, 2014</td>
<td>20.7%</td>
<td>UN Habitat 2017⁶</td>
</tr>
<tr>
<td>Proportion of urban population in slum areas</td>
<td>55.1%</td>
<td>UN Habitat 2014⁷</td>
</tr>
<tr>
<td>Total urban population living in slums</td>
<td>1.7 million</td>
<td>WHO Urban Health Profile⁸</td>
</tr>
<tr>
<td>Expected % urban population by 2025</td>
<td>23.6%</td>
<td>UN Habitat⁹</td>
</tr>
<tr>
<td>National immunization coverage urban areas, highest wealth quintile (DPT3)</td>
<td>99.3%</td>
<td>DHS 2014¹⁰</td>
</tr>
<tr>
<td>National immunization coverage urban areas lowest wealth quintile (DPT3)</td>
<td>87.1%</td>
<td>DHS 2014</td>
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Background to urbanization and health system development in urban areas in Cambodia

The urban centres in Cambodia are still expanding, although the rate of growth slowed to 2.38 per cent between 2005 and 2015.\(^1\) It is estimated that 55 per cent of Cambodian urban areas are taken up by slums. This is equivalent to an estimated 1.7 million in population who are residing in slum areas.\(^2\) A study conducted in 2010 in four poor communities identified typical slum areas as high-rise tenement buildings, communities residing along railway tracks and graveyards, along riversides and large squatter settlements near the centre of the city.\(^3\) One study reported that there were 22 different recognized squatter settlements. In 2015, the NIP identified up to 16 per cent of communities in Phnom Penh (109 of 695 communities) as being at-risk of higher disease transmission of vaccine-preventable diseases due to low coverage of service.

In a survey of 160 respondents in four poor communities in Phnom Penh in 2010, it was found that 71 per cent of the respondents identified themselves as ‘migrants’, and 29 per cent identified themselves as ‘mobile.’ Participants in both the in-depth interviews and focus group discussions talked of exclusion and social isolation mostly related to social determinants of health, including income capacity, education access and social marginalization. Although immunization coverage was found to be satisfactory (and accessed through the public sector on site or through outreach service), health workers expressed some concern about locating the hard-to-reach urban poor:

> “We are not sure what is going on there now….Funding for outreach has stopped so we cannot be sure where they are….These places are confusing – people are coming and going all the time.”\(^4\)

These communities, therefore, exhibit many of the main characteristics of slum communities – which include poor and crowded housing, high rates of mobility, unsafe water and sanitation conditions and insecurity of land tenure. There is no indication that conditions will ease, given that there is projected to be an overall growth rate of 170 per cent in the Phnom Penh population over the 30-year period between 1995 and 2025 (see Figure 1).

Much of this rapid inflow of migrants to Phnom Penh and other cities is attributable to several factors. The growth of the textile industry resulted in the establishment of manufacturing bases on the edge of Phnom Penh, resulting in a rapid influx of workers from rural villages. Rates of economic growth, further stimulated by growth in both the tourism and garment industries, are projected to remain between 6 per cent and 7 per cent for 2016 and 2017.\(^5\) This has resulted in the emergence of a domestic private economic sector providing income opportunities for poor rural residents. This, in turn, has led to the emergence of large peri-urban centres on the perimeter of Phnom Penh, with limited associated expansion of health, education, and other public services to meet needs.
Figure 1  Growth in urban population, Phnom Penh, 1995–2025

Figure 2  Trends in urbanization, Cambodia, 1995–2025
Management of urban health care

By law, the municipalities are urban districts. At this level, only three ministries are represented by district offices. These include health, education and land management, including urban planning and management functions. Overall, there are seven health districts in the Municipality of Phnom Penh, of which four are classified as urban and three of which are classified as rural. Within each district there are public sector health centres with a defined population catchment. Current available data indicates that there are 37 health centres in Phnom Penh. With a population estimated at 1,731,000 in 2015, this indicates an average population catchment of one facility per 46,000, which is far beyond the initially planned model of one facility per 10,000 population catchments as envisioned in the original health coverage plan from 1996.

In 2004, the Government of Cambodia legislated an ‘Organic Law’ that defined the decentralized roles of local government in the provision of health care. A published plan for the development of the Municipality of Phnom Penh envisions the expansion of public health services as coming within its area of governance accountability. In its vision for improved social services in the municipality, the City Plan proposes functions such as promoting health awareness, strengthening health services, and expanding the number of health centres and ensuring they are adequately supplied with essential equipment and medicines. Interestingly, the City Plan views these essential functions as being the joint responsibility of the Department of Health (provincial level MOH), local government, non-governmental organizations (NGOs) and charities. However, consultations for this study indicate that no resources are available from local government for health services provision in urban areas.

The gap in services offered by the public sector in urban areas is being filled in part by the emergence of private health and education services. The most recent DHS (2014) confirmed the private sector as the first option for seeking out primary care by Cambodians. The private medical sector also serves as a magnet for the medical workforce. There is a concentration of hospital and health workers in Phnom Penh. It is estimated that 40 per cent of medical staff are employed in urban areas. Even in rural areas it was found that 65 per cent of patients first seek care through private providers. The main issue in Phnom Penh is therefore not availability of services – the main issues are whether services are being used, whether they are affordable and whether they are of acceptable quality.

NGOs have also been highly active in the health sector in Cambodia. Traditionally, NGOs focused on supporting development of district health programmes, and outreach support for service delivery in rural and remote regions of Cambodia. In recent years, NGOs, although not providing immunization service directly, have remained highly active in support of reproductive health and financial protection schemes for improving access to care by the urban poor.

This complexity of management, delivery and stakeholder interest is coordinated through a Ministry of Health nationwide coordination network referred to as the Provincial Coordinating Committee (Prococom). No data is currently available on the effectiveness of this coordination system. Traditionally, the role of this system was to coordinate the inputs of various stakeholders for the implementation of an annual operational plan that reflects both the technical and resource inputs of all stakeholders.
Impacts on current immunization policy and practice in urban settings

Programme Implementation and Service Delivery Models:

The development of the rural PHC system is very recent in Cambodia. Prior to the civil war from 1975–1979, the health care system was principally urban and hospital based, although the royalist regime had made some early attempts to develop rural health care centres. At the end of the of the civil war and during the years of Vietnamese government occupation (1980-1992), a model of rural district health care and ‘commune clinics’ (staffed by rural midwives) was established and expanded. In 1986, with the assistance of UNICEF, the first vaccination programmes were commenced. The rural PHC system, utilizing commune midwives and networks of volunteers, and implementing a model of health outreach, formed the backbone of the immunization delivery system from the early 1990s right up until recent times. Since 2008, there has been increased emphasis on a ‘fixed site’ strategy, whereby, to promote a more sustainable and efficient health care system, advocacy efforts are made to encourage communities to come to facilities for immunization services rather than relying solely on health workers to come to them through outreach services.
After a period of political, social and economic reform in the early 1990s, the government embarked on a policy of health coverage reform. Infrastructure plans were implemented to ensure there was one PHC facility for a defined population catchment. Although some improvements in immunization coverage were noted in the 1990s, it remained the case that between 30 per cent and 50 per cent of eligible children were not being reached. In 2002, with technical support from WHO, a Reaching every District (RED) strategy was developed and implemented from 2003, resulting in coverage improvement up to 80 per cent for DPT3 by 2010. Main features of this strategy were the listing of communities with high numbers of children who were not immunized and acceleration of outreach programmes.

Concerns were raised regarding the equity and effectiveness of immunization programming in 2005 and 2006, when several cases of vaccine-derived poliovirus (VDPV) were identified in very low coverage areas in slum communities in the centre of Phnom Penh. This necessitated nation-wide immunization campaign responses. Also, micro-planning exercises in urban settings confirmed that recent migrants, particularly in peri-urban areas, were not being ‘counted’ or ‘registered’ and therefore were not included in population denominators and follow-up lists.

These programme challenges resulted in the NIP programme refocusing its nationwide Expanded Programme of Immunization (EPI) review in 2010 on an assessment of the un-immunized and the strategies currently designed to reach them. What the EPI review found was that the un-immunized populations were frequently socially marginalized, and included such groups such as remote ethnic populations, migrant workers and the urban poor. This review then recommended refocusing micro-planning at the sub-district level, to gain a more granular picture of the needs of these small and mobile pockets of marginalized groups. A more recent joint government and development partner review confirmed that 2,000 villages in Cambodia are classified as ‘high risk’, and these include remote, mobile and urban poor populations.

A high-risk strategy has been developed in Cambodia that has five operational elements – listing high-risk areas, making micro-plans of these high-risk areas, preparing budgets, implementing outreach visits and monitoring the results using card checking. The most recent comprehensive multi-year plan for immunization (cMYP) identifies four high-risk groups across the country, of which the urban poor is one. Unregistered populations are at particularly high risk. The plan notes that micro-planning in city districts has not been extensive, although the generic high-risk strategy is now being implemented across the country.

Published evidence and data from recent DHS surveys suggests that the RED Strategy (implemented between 2003–2004) has provided some impact in Cambodia. Per the 2014 DHS results, there was a 12.2 per cent gap between the lowest (87.1 per cent) and wealthiest quintiles (99.3 per cent) for DPT3 coverage in urban areas. This has narrowed sharply from a 49 per cent gap between the lowest and highest wealth quintiles in the 2014 DHS (see Figure 4).
Current policy and planning directions for urban EPI

Part of the limitation of an urban strategy is that, due to greater concentration of resources and overall better accessibility of services and health outcomes in urban areas, there is a tendency to concentrate strategy development on rural models. For example, no information is provided in the health strategic plan on urban health strategy, over and above recognizing the greater concentration of health resources in urban areas, expansion of private sector, and increased risk of non-communicable diseases (NCDs) such as traffic accidents, injury, and diabetes. What this approach ignores is the general unevenness of human development within urban areas, and the fact that low rates of utilization and poor outcomes are concentrated in hidden pockets of the urban poor, even though overall urban health status in Cambodia is generally better than rural health.

The cMYP makes note of the findings of the EPI review in 2010, which recommended the implementation of a Reaching Every Community (REC) strategy to reach marginalized groups, including mobile populations, remote populations, ethnic minorities and migrants, and the urban poor. The cMYP also makes the following observation on partners for immunization:
The NIP and partners (e.g., UNICEF and PATH) have assisted with advocacy for EPI with local authorities. However, follow-up action on the advocacy has not been clearly defined. Local authorities also assisted significantly with immunization campaigns. It is likely that in coming years the power and influence of local authorities over health issues is likely to increase.

Other areas of relevance for urban EPI mentioned in the cMYP include the need for the establishment of private public partnerships for EPI, and recognition of the fact that the National Institute of Statistics may reclassify urban populations. The publication of a recent survey of immunization services reinforced the importance of public private partnerships in the urban setting. This survey found that of the 127 clinics surveyed, 93 per cent were providing immunization services. The survey also described questionable professional practices with regards to immunization schedules, vaccine management and waste management in the private sector.

By 2015, the REC had further evolved and was described in more detail in a submitted health systems strengthening (HSS) proposal. This proposal states the following:

Increase immunization coverage in high-risk communities: this will target 1,832 communities defined as high risk (where full immunization coverage is greater than 80 per cent). The target communities fall into four categories: those in remote rural locations, the urban poor, migrant and mobile workers, and ethnic minority groups. NIP has developed a strategy to reach these communities.

The strategy then describes a variety of other interventions that include cold chain improvements, management and planning, increased surveillance, and communication strategy implementation. These interventions are described in the context of a generic overall ‘at-risk’ strategy, rather than in the context of an urban strategy specifically. So, the reader is not enlightened as to the unique features (if any) of an urban health or immunization strategy, as opposed to, for example, the strategy to reach remote mountainous ethnic populations.

In summary, in recent years there has been an increased focus on the needs of the socially marginalized in Cambodia and the evolution of a generic high-risk strategy, although there is limited information on the details of a distinctly ‘urban’ health or immunization strategy.
INDONESIA

Summary

- Indonesia is now primarily an urban country. In absolute numbers, Indonesia has the largest numbers of urbanized residents in South East Asia. A substantial proportion of these residents are slum residents.

- There is evidence to suggest that economic inequalities are widening in Indonesia.

- Significant proportions of the urban poor are migrants who are not registered by local authorities, raising the risk that such groups are not gaining adequate access to health and education services.

- The most recent survey data demonstrates a 18.9 per cent gap in DPT3 coverage between the highest wealth quintile (84.0 per cent) and the lowest wealth quintile (65.1 per cent) in urban areas.

- Several initiatives have been implemented to improve access for the urban poor. An urban immunization strategy is required in Indonesia, along with closer links between health and social policy to secure access by the poor to health and education services.

Table 2  Basic urban demographic and health indicators, Indonesia

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Result</th>
<th>Data source</th>
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<tr>
<td>Total urban population</td>
<td>138,419,950</td>
<td>World Bank 2017</td>
</tr>
<tr>
<td>% population living in urban areas, 2014</td>
<td>53.7%</td>
<td>UN Habitat 2016</td>
</tr>
<tr>
<td>Proportion of urban population in slum areas</td>
<td>22%</td>
<td>UN Habitat 2014</td>
</tr>
<tr>
<td>Total urban population living in slums</td>
<td>29.2 million</td>
<td>WHO Urban Health Profile 2016</td>
</tr>
<tr>
<td>Expected % urban population by 2025</td>
<td>63%</td>
<td>UN Habitat 2016</td>
</tr>
<tr>
<td>National immunization coverage in urban areas for DTP3, highest wealth quintile</td>
<td>84.0%</td>
<td>DHS 2012</td>
</tr>
<tr>
<td>National immunization coverage in urban areas for DTP3, lowest wealth quintile</td>
<td>65.1%</td>
<td>DHS 2012</td>
</tr>
</tbody>
</table>
Background to urbanization and health system development in urban areas in Indonesia

In 1995, 36.1 per cent of the population was urbanized, and, in 2015, UN Habitat estimated that 53.7 per cent of the population were residing in urban areas, meaning that Indonesia is today primarily an urban country in terms of its population. By 2025, it is estimated that over 60 per cent of the population will reside in urban areas (see Figure 5).

Indonesia currently has 28 cities with populations of above 300,000. The projected growth for Jakarta, Indonesia’s largest city, is expected to reach more than 12.5 million by 2025 (see Figure 6).

An assessment by the World Bank concluded that 18 per cent of urban residents are classified as poor, and the number of urban poor would surpass the numbers of rural poor by 2020 in Indonesia. The urban poor include migrants, child labourers, street children and those living in informal settlements. Conditions in the slums are, like elsewhere, associated with low-quality housing, poor security of land tenure, low incomes, and lower utilization of public services. In addition to high rates of urban poverty, there are indications that the gap between socio-economic groups is widening across Indonesia. Between 1996 and 2010, the value of household consumption grew three times faster for the richest households when compared to the poorest.

A description of the high-risk strategy by UNICEF in Jakarta points out that there are high concentrations of rural-to-urban migrants in Jakarta, with substantial riverbank occupation on illegal land. As well as contributing to marginalization and social distance, the areas are also flood prone. This description also points out that there is a large population not officially registered in Jakarta province, which increases the risk that they will not be reached by health workers.

Impacts on current immunization policy and practice in urban settings

Immunization coverage and equity in urban areas

Data available through WHO demonstrates that immunization inequities within urban areas have been a significant problem. The last DHS survey in 2012 indicated that coverage for measles was 91.7 per cent in the highest urban wealth quintile, and was 77.5 per cent in the lowest quintile. This gap proves to be wider than between urban coverage (85.1 per cent) and rural coverage (79.0 per cent) for measles, demonstrating once again that socio-economic exposures rather than locational ones are more sensitive markers for detection of high risk for vaccine-preventable disease.
Figure 5  **Trends in urbanization, Indonesia, 1995–2025**

![Graph showing trends in urbanization in Indonesia from 1995 to 2025. The percentage of population in urban areas increases from 36.1% in 1995 to 60.3% in 2025.](image)

Figure 6  **Projected growth, Jakarta, 1995–2025**

![Graph showing projected growth in Jakarta from 1995 to 2025. The number of people in thousands increases from about 8,000 in 1995 to about 14,500 in 2025.](image)
Despite these gaps, comparative data from successive DHS surveys for DPT3 coverage in Indonesia between 1997 and 2012 demonstrates that gaps between highest and lowest wealth quintiles have narrowed over a 15 year period from a 26 per cent gap in 1997 to a 19 per cent gap in 2012 (see Figure 7).

A publication of the most recent WHO UNICEF estimates on DPT3 coverage, demonstrates that only 59 per cent of districts nationwide have achieved a coverage rate of greater than 80 per cent. A global review of immunization inequities concluded that there was substantial economic-related inequality in DPT3 immunization coverage in five high priority countries, one of which is Indonesia (the others being Democratic Republic of the Congo, Ethiopia, Nigeria and Pakistan).

There are some indications that lower coverage in poor urban areas are contributing to disease outbreaks. There have been annual measles outbreaks in slums in North, East and West Jakarta districts comprising two thirds of annual confirmed measles cases (2014). An annual country progress report submitted to GAVI for 2014 indicated that urban immunization coverage is a nationwide issue, with plans in a HSS proposal to improve routine immunization in 10 provinces in urban and slum areas, including improving communications and training with private providers who work in these areas.
A joint government and development partner review conducted in 2014 for Indonesia stated that the Health Sector Steering Committee had recently met to strategize improvements to coverage in the lowest performing areas. Thirty-one districts were identified with low coverage and high mortality. The districts identified represented 20 per cent of the birth cohort of 4.6 million. Most of these were reported to be residing in densely populated poor urban areas. This is a significant finding, given that low coverage in Indonesia is normally interpreted as referring to populations that reside in rural and remote regions (as is the case in most developing nations). This probably is reflective of rapid urbanization and widening poverty gaps in the Indonesian setting. The subsequent 2015 joint review also highlights urban EPI issues, and points to quality of services, safe injection practices and waste management as areas of concern across the country.

Programme implementation and service delivery models

In the Indonesian service delivery system for immunization, the central government has the responsibility for policy and guidelines, supplementary immunization activities, procurement of vaccines and syringes, and technical assistance. Local governments have the responsibility for implementation in their areas, and provide budgets for human resource recruitment and management, including for incentives, transportation, operational and maintenance. One of the challenges here is that fiscal capacity of the local governments is extremely limited in poorer provinces.

The 2015 joint review also noted that the main service delivery constraints relate to high drop out from immunization programmes due to low awareness about the benefit of completing the required number of immunization visits, in-country migration of families, lack of regular and systematic tracking, and the low window (half day per month) of immunization opportunity in the ‘posyandu’ service delivery system. Gaps in immunization services are also mirrored by gaps in maternal and child health services in the urban setting. The UNICEF Annual Report Indonesia 2015 indicates that nationwide 37 per cent of mothers deliver at a health facility, but that figure is only 28 per cent in Jakarta.

Current policy and planning directions for urban health and EPI

In terms of urban health, no specific urban health strategy or master plan has been identified through literature search. There is a free insurance scheme for the poor provided by the city government (i.e., in Jakarta and is referred to as Kartu Jakarta Sehat). Some other districts/cities may also have their own insurance schemes. However, the Government of Indonesia has developed Kartu Indonesia Sehat for all citizens, which ensures free access to health care for poor people (subsidized by the government), managed by a body called Badan Pengelola Jaminan Sosial (BPJS).

UN Habitat has been active in Indonesia since the early 1990s in such areas as pilot projects for the City Development Strategy, training for Improved Municipality Solid Waste Management, earthquake disaster response in West Sumatra, support to post-tsunami reconstruction in Aceh, peace and integration in West Timor, support for Urban Initiatives for Local Development (BUILD) in nine cities, and integrated Urban Infrastructure Development Programme in 12 cities.
The Government of Indonesia has a comprehensive poverty reduction strategy with various social assistance packages including rice subsidies, student loans, and conditional cash transfers for the very poor occur. A World Bank review found that there was an issue of under coverage of the urban poor in the informal settlements for these cash transfers, as these populations were not considered eligible for benefits – which once again revisits the chronic urban policy question in Asia of social protection and public service coverage for unregistered and, therefore, invisible urban residents.

UNICEF is currently collaborating with the Provincial Health Office in Jakarta to implement a high-risk strategy in the urban slums. **Mobilization** involves awareness raising at mosques for immunization days. **Monitoring** involves quarterly monitoring of coverage at household level by supervisors using rapid card checks, with local midwives and community members as key informants, as well as increased monitoring of vaccine stocks. **Micro-planning** is also conducted to assess transport and stock needs, deploy staff, assist with targeting of areas, and specify the number of infants to be vaccinated. One component of this strategy is an SMS reminder system, which includes an important sub-component for the registration of all new births. Because of implementation of this project, UNICEF is reporting that coverage levels have increased in target areas from 46 per cent in May 2015 to 71 per cent in December 2015. The main elements of the strategy are summarized in the figure below.
So far, the REC strategy is the only urban EPI approach, and is currently being implemented as a demonstration project with the support of UNICEF. Elsewhere the posyandu approach is being applied, which involves providers waiting for community members to come to the health post (although posyandu originally had a social mobilization approach).

The Government of Indonesia cMYP2010-2014 makes no specific mention of an urban EPI strategy. Rather, immunization improvement is mentioned in generic terms, although it is noted in the plan that demand for immunization services is increasing in urban areas. The cMYP 2015-2019 proposes to scale up strategies in urban areas for reaching hard-to-reach populations. Specifically, the plan proposes increased mapping and outreach in urban slum areas. A Sustained Outreach Service model is proposed, with a minimum package of immunization and vitamin A provision.

In its Programme Review of urban poverty alleviation in Indonesia, the World Bank makes an interesting distinction between setting of economic and urbanization policies on the one hand, and social policies on the other. Under the umbrella of economic and urbanization polices, areas covered include improving economic productivity and development of urban infrastructure. Under social policy, areas covered include better access to education and health services, and social protection. Within social policy, other areas included are the concept and practice of cash transfers to the poor, conditional on utilization of education and health services (including other protection measures to protect the very poor from catastrophic health care costs). It is important to note that in most policy documents related to urban planning in this review, the overwhelming emphasis has been on economic and infrastructure policy, with social policy hidden under a very general banner of ‘improving public services.’

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**Figure 9** Main elements of the Reaching Every Community Approach in Indonesia

| 1. **Micro-planning** | main components of REC strategies for an effective and efficient service delivery with costed planning for a vaccination session, including human resources, vaccine and logistics stocks, and transportation, as well as community involvement during the planning. |
| 2. **Birth registration** | the registration of all births in target sub-villages with recording of cell-phone numbers of care providers. |
| 3. **SMS reminders** | pre-programmed SMS messages are used to remind care givers and health providers of critical contact moments in the child’s vaccination schedule. |
| 4. **Rapid card checks** | community-based micro-surveys of households with children aged 12-23 months to document levels of vaccination coverage. |
| 5. **Stock-level monitoring** | health workers used mobile applications to record the stock levels of specific vaccines at the end of each month. |
MONGOLIA

Summary

- Although traditionally Mongolia has been characterized as a rural herding-based economy and society, it is now primarily an urban country, with over 70 per cent of the population living in urban areas.

- A large agglomeration of the urban poor in the ger (traditional round Mongolian tent) districts of Ulaanbaatar is exposing the population to high communicable disease risk, as evidenced by recent large measles outbreak in the capital city.

- Gaining access to essential health and education services for unregistered urban migrants is an ongoing policy, operational and financing challenge.

- Early implementation of the REC strategy has demonstrated the potential to reach high-risk groups, although sustaining the strategy within routine health system functions will require additional work.

- Recent initiatives in health law and policy, including expansion of immunization units across urban locations, present improved prospects for reducing inequities in access.

Table 3  Basic urban demographic and health indicators, Mongolia

| Indicator                                                      | Result       | Data source                          |
|                                                               |              |                                     |
| Population living in urban areas                              | 2,131,760    | World Bank 2017                      |
| % population living in urban areas                            | 71.2%        | WHO Urban Health Profile 2016         |
| Proportion of urban population in slum areas                  | 42.7%        | UN Habitat 2014                      |
| Total urban population living in slums                        | 0.9 million  | WHO Urban Health Profile 2016         |
| Expected % urban population by 2025                           | 78.4%        | UN Habitat 2016                      |
| National immunization coverage in urban areas for DPT3, highest wealth quintile | 95.1%        | MICS 2013                            |
| National immunization coverage in urban areas for DPT3, lowest wealth quintile | 90.7%        | MICS 2013                            |
Background to urbanization and health system development in urban areas in Mongolia

Historically, Mongolia has been a rural-based society based on a herding culture. Over 70 years of Soviet dominance created a centrally planned administration, society and economy, and development of modern social sectors such as health and education in rural areas. With the transition to an open political system in the early 1990s, and the introduction of free-market economic models, much of the coverage and quality of the rural infrastructure began to decline – this included housing, employment, and health and education services. As the rural poor went to seek out new opportunities in employment and education, there was a significant drift of rural populations into the main urban centre of Ulaanbaatar.

Urbanization is now developing at a remarkable rate in Mongolia, and there are no indications that the rate of growth is slowing. In fact, the rate of growth has increased from 1.9 per cent between 1995 and 2005 to 2.8 per cent between 2005 and 2015 (see Figure 10). Almost all this growth is in the capital city of Ulaanbaatar. The growth rate in the city, from 1995, just after the political transition, when the population was 661,000, has ballooned to over 1,377,000 in 2015 (see Figure 11). This represents a population doubling in 20 years, and there is no indication that the rate of growth is slowing. This obviously has put extensive pressure on local government capacity to provide urban infrastructure to support the expansion, with this rapid increase in population placing great strain on the capacity to sustain water and sanitation services, employment, and health and education services. This strain is further reflected in the fact that 42.7 per cent of the population in 2015 is living in slum areas, most of which are dominated by ger communities.

Probably in no city in Asia has the rural to urban drift so visibly evident as is the case in Ulaanbaatar. In the hillsides surrounding the capital city, the tradition rural ger have been gradually tracking up the hillsides and around the perimeters of the expanding city, where rural residents locate their ger generally in the direction of the rural location from which they originate. The ger are so prevalent, that some districts in the capital city are referred to as ‘ger districts.’

As has been the case noted in other country case studies, there are several intractable problems that have been observed in relation to this rural to urban migrant drift. The first is retention of rural-based living practices in dense urban settings. In the rural setting, normally just two or three ger are located near each other, with the nearest neighbouring ger located beyond eye distance (or frequently tens of kilometres between each cluster of ger). But in the city, thousands of ger are clustered together in small communities, with all the associated slum issues of water and sanitation, crowded living conditions, and accumulation of smoke from cooking and heating coal.
Figure 10  
Trends in urbanization, Mongolia, 1995–2025

Figure 11  
Projected growth, Ulaanbaatar urban population, 1995–2025
Secondary problems of this rural urban drift are the inadequate uptake of registration by local government and health services, meaning that the new vulnerable residents then fall outside of the social security net and the surveillance networks for monitoring of coverage. The outcome is then high public-health risk, social marginalization and poorer health outcomes, in addition to the social risks associated with income poverty, communicable diseases and high rates of domestic violence and alcohol use. A recent study of multi-dimensional poverty (education, child protection, housing, water, and sanitation) in one district in Mongolia found that there was a significant overlap in various risk exposures for poverty. Children who are stunted, live in a ger, live in larger households and live in households headed by a female are more likely to be multi-dimensionally deprived.58

Impacts on current immunization policy and practice in urban settings

Immunization coverage and equity in urban areas

Since its introduction in 1986, the NIP has been a public health programme success, with national coverage rates maintained at above 90 per cent since the early 1990s. These high rates have been sustained by an extensive PHC network, based on the model of the Family Group Practice (FGP), which links upwards to a network of soum hospitals in rural areas, and district hospitals in the sub-district or khoroo of the urban areas.

There are 9 districts and 121 khoroo in Ulaanbaatar City. The FGP are public-private collaborations financed to provide a package of PHC services (including immunization) to a population on a capitation-based funding model.59 The establishment of the FGP was a major health reform of the 1990s. Performance contracts are established between the FGP practitioners, the Ministry of Health and local governments. The population is registered for social sector provision (including health and education services) through local government offices. Most immunization services are provided through on-site provision of care at the FGP facility. Overall, the system in urban areas has become increasingly decentralized and privatized, with expanded roles for local government in financing and oversight. This is a major shift from the standard rural-based PHC model.

In 2008, in response to some evidence that urban poor unregistered populations were not adequately accessing services, the Reaching Every Community strategy (REC Strategy) was re-assessed and redesigned. Situation analysis studies (including local area mapping and barrier analysis by FGP practitioners) confirmed that a subset of the population (in the range of 5-10 per cent) was not registered, and was not adequately accessing social security benefits, and health and education services. A 2008 study in Byanzurkh district found that of a population of 272,000, there were 52,000 people not registered by local authorities.60 Being unregistered means that the per-capita funding system does not allocate resources for this group of people (see figure below, source of data Lhamsuren et al 2012).61
These unregistered populations were invariably new rural migrants living on the edge of the city. The 2008 study in the district Byanzurkh also found that 100,000 of the 272,000 population had moved there in the last three years, and that 90 per cent of this district population resided in a ger. Populations living in these areas included those living in newly established ger areas, the three biggest markets of the city, in areas where student dormitories or child care centres are located and in locations with extremely under-developed infrastructure. The FGP practitioners identified a range of community and health system barriers to access by these vulnerable populations, including lack of registration status, failure to include populations in population denominators, under resourcing by local government of services for the vulnerable and unregistered, and the experience of ‘shame’ and fear of financial hardship experience by unregistered clients in presenting to health services. The 2010 RED assessment clarified what being ‘marginalized’ means in practical terms as being:

Outside the health system in terms of unregistered status at the FGP, being outside the administrative system, as measured by lack of civil registration, being outside the economy, as measured by unemployment or low-income status, being outside of any social system, as measured by the lack of caregivers (single mothers, orphans without caregivers, elderly people without caregivers and school drop-outs).

In 2010, the strategy was redesigned to reflect the needs of these vulnerable groups. The main components of the RED strategy were retained, but with a focus on household-level mapping and visits on foot to ‘reconnect’ marginalized populations with mainstream health and social service providers and benefits (including immunization). Given that access to immunization and other benefits are linked to local government registration and subsequent financing of services by local governments, efforts were made with the design to ensure accountability for performance rested not only with the FGPs and communities, but also with local government authorities.
Various governance arrangements were put in place to sustain the management and financing of the strategy. In addition to city-level monitoring, a district-level RED working group was established comprising the District Health Director, social development staff, an accountant and other district health staff, as well as civil registration representatives and the involvement of an NGO liaison officer with the Family Group Practice.65

A 2014 assessment of the RED strategy concluded that the limited success with integrating the RED strategy effectively into routine health system functions (especially of financing and supervisory support) means that RED had questionable sustainability. The evaluation recommends that in the future, technical agencies such as UNICEF focus a lot more closely on upstream policy, planning and technical support efforts, to ensure that such initiatives graduate from project trials towards system-wide practice.

**Main features of Reaching Every District (RED) design in Mongolia**

- The RED strategy focussed on a delivery of an essential maternal and child health services package for the hardest-to-reach populations. Mapping, barrier analysis and house-to-house checks of high-risk areas were conducted. FGP staff planned to link with social sector staff to increase rates of civil registration, to expand access to care on a more sustainable basis. Ministerial Decree 154 stated that, “reach every soum, district, khoroo and bagh, cover all children under immunization activities, and deliver essential healthcare and social services to vulnerable groups, children and mothers, the poor and remote households, through strengthening of the health care system.”

Despite international technical and financial support, successful trial implementation, and expressions of high-level political commitment through issuing of a Ministerial Decree, implementation has still not resulted in the sustaining of the intervention beyond a project lifetime. This raises questions regarding to what extent these strategies are most suited to institutionalizing pro-equity planning initiatives. The experience from Mongolia and other locations would seem to suggest that ‘bottom up’ demand pressure may also be needed to act in coordination with ‘top down’ policy pressures to bring about sustainable institutional change. Income poverty and unregistered status, in a new free market society where money and recognition are the main markers of power and influence, means that such marginalized populations are invariably addressed last, or even left out completely, in the race for universal health coverage. So, the policy question is, how can such groups be given recognition and representation in terms of equitable access to public services?
Current policy and planning directions for urban health and immunization

Urban health

The last health sector Master Plan (2006–2015) makes note of rapid urbanization and poverty, which has contributed to “increased numbers of homeless, street children and vulnerable groups such as one-parent families, women, adolescents and children in difficult circumstances and the single elderly.” Widening inequalities are described, including the growth of the rapidly increasing urban poor in the peri-urban areas, resulting a higher incidence of diseases caused by environmental pollution, and the poor living and sanitary conditions.

The Master Plan indicates this is a problem in the ger districts, where conditions are aggravated by lack of access to safe water, food and sanitation. The plan points out that the growth of the ger districts far exceeds the ability of the city administration to provide the needed infrastructure to support a healthy living environment. These observations in the Master Plan fit well with the trends across Asia, where post-transition congestion, coupled with hidden ‘unregistered populations’ in crowded messy living environments, is testing the policy and resources boundaries of local government institutions.
To address these issues, the Master Plan proposes a universal health coverage strategy for primary care as implemented through a network of FGPs. FGPs or family health centres in urban settings deliver PHC services to a catchment population based on a performance contract with the local governor’s office and the health department. In this regard, the system has become increasingly decentralized in recent years, and from a managerial perspective, more complex and pluralistic. Since the 1990s, the number of private hospitals has risen dramatically, with over 11 per cent of beds being private in the capital city by 2011, and increasing problems have been noted with lack of reporting of health data from private facilities without beds.

Consultations at the county level have indicated there is no specific urban health plan or strategy in Mongolia. However, there is a section on health in the Mayors City Plan 2016-2020 for Ulaanbaatar City, which includes a commitment to support pneumococcal vaccine introduction and improvements to measles coverage in the coming years. The smaller provincial towns have health plans, but there is limited emphasis on the specific needs of growing urban populations. The city government and district governors’ offices provide some financing for services during disease outbreaks, but there are no planned actions with committed financing.

**Immunization services**

Immunization services are provided through provision of an essential health care package. In the RED context, the package includes integrated management of childhood illness, services, immunization, reproductive health, micronutrients supply, monitoring of water and sanitation and social welfare support.

Reported WHO and UNICEF estimates of coverage in Mongolia are very high, with Mongolia being one of six countries in the region (the Western Pacific Region of WHO) for which DPT3 coverage was greater than 95 per cent in 2015. Although reported immunization coverage is very high, and narrow gaps are reported between wealth quintiles in the urban setting, there must be questions about coverage given the well-reported difficulty of health access by unregistered new migrants to Ulaanbaatar. Persistent disease outbreaks in Mongolia in urban areas also raise questions regarding the level of immunization coverage and public health services coverage. A measles outbreak occurred in 2016, with over 23,000 suspected cases reported by May 2016. Of these, there were 105 fatalities with 90 per cent of the fatalities under the age of 8 months. The outbreak was first reported in Ulaanbaatar City, and the largest number of cases was reported from there. Although it is the case that measles can spread even in populations that are immunized (10 per cent of people who undergo routine MMR immunization only at nine months of age may not develop immunity), analysis by WHO indicates that the large number of cases and fatalities is indicative of certain immunity gaps in the population.
The evaluation in 2010, and the micro-planning sessions and barrier analysis associated with this assessment, confirmed that there were very poor sub groups that were not being immunized. These included peri-urban groups, new urban poor and homeless children. The most recent multi-year plan that can be located (2007-2012)\(^7\) does outline the problem of urbanization and the urban poor, including issues of new migrants and unregistered status. However, no specific urban strategy is provided. This finding would seem to support the 2014 evaluation recommendation for increased emphasis on policy to sustain commitment and financing of the RED strategy in urban areas.

There are indications that the Government of Mongolia is adopting legal and policy measures to address health inequalities. A recent UNICEF Mission Report concluded that, “A family group practice constitution was issued in January 2017 which states primary health services should be provided to all regardless of their registration status. The immunization law also states all children could access immunization regardless of their registration.”\(^7\) There are also new laws to diversify funding sources for Family Health Centres (FHCs). There are plans to provide 5 per cent extra budget to FHCs to cover the cost of services to the unregistered. “These policies and laws are being implemented in conjunction with expansion of immunization units in Family Health Centres (FHCs).” Of the 133 FHCs across Ulaanbaatar, 92 currently (2017) have immunization units.

Figure 12  Ger district in Ulaanbaatar
Lessons learned for future modelling of immunization programmes in the urban setting

Perhaps more than in any other setting, the case of Mongolia illustrates the impact of globalization and political transitions on the population, dividing the community into a set of socially advantaged and a set of disadvantaged. The disadvantaged are concentrated in the ger districts, which share very little in the benefits of increased economic growth and expanded civil freedoms of the post-political transition. The markers of post-transition loss are income poverty and unemployment, limited access to public health services, under provision of the most basic of public health services (water and sanitation) and high rates of communicable disease. The effect seems to be magnified by concentration of these ill effects in the ger districts. The role of social policy and health policy is to cushion the effects of transition on those most negatively affected, and guarantee a minimal level of social justice in terms of universal access to health, education, and other social benefits. In every respect, this social policy role is as central to the notion of good governance in a transition context as is the expansion of civil freedom and economic growth.

In Mongolia, there have been effective approaches designed and implemented by the Ministry of Health, international partners and civil society agencies to develop a more humane governance response to the transition impacts of inequality and rapid escalation of urban poverty. Despite these efforts, evaluators are indicating that the initiatives are still not being adequately institutionalized, which raises questions about the sustainability of the interventions.
Summary

- Recent political, social and economic changes have had significant demographic impacts, with increased population mobility and urbanization, and growth of peri-urban areas in Yangon and Mandalay.

- Forty-one per cent of urban dwellers reside in slum areas.

- There is evidence to indicate significant rich/poor gaps in immunization coverage in Myanmar. In urban areas there is a 29.2 per cent gap between highest and lowest wealth quintiles for DPT3 coverage. There is high public health risk in the informal settlements, and outbreaks of vaccine-preventable diseases have been reported in Yangon in recent years.

- Immunization services are provided through a network of urban health clinics under the management of the Township Health Department. A REC Strategy is being proposed for urban areas to expand accesses to immunization for the urban poor.

Table 5  Basic urban demographic and health indicators, Myanmar

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Result</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population living in urban areas</td>
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</tr>
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<td>% population living in urban areas</td>
<td>30%</td>
<td>National Census 2014</td>
</tr>
<tr>
<td>Proportion of urban population in slum areas</td>
<td>41%</td>
<td>UN Habitat</td>
</tr>
<tr>
<td>Total urban population living in slums</td>
<td>7.4 million</td>
<td>WHO Urban Health Profile</td>
</tr>
<tr>
<td>Expected % urban population by 2025</td>
<td>39.8%</td>
<td>UN Habitat</td>
</tr>
<tr>
<td>Urban/Rural under-5 mortality rate</td>
<td>477/79 per 1,000</td>
<td>Draft National Health Plan 2015</td>
</tr>
<tr>
<td>National immunization coverage in urban areas for DPT3, highest wealth quintile</td>
<td>88.0%</td>
<td>DHS 2015</td>
</tr>
<tr>
<td>National immunization coverage in urban areas for DPT3, lowest wealth quintile</td>
<td>58.8%</td>
<td>DHS 2015</td>
</tr>
</tbody>
</table>
PART 1: CASE STUDIES

Background to urbanization and health system development in urban areas in Myanmar

Post-independence, Myanmar developed an urban hospital and clinic health care system based on the model of the colonial health system, after which the socialist military government rapidly expanded a PHC network according to the Alma Ata declaration, rapidly covering a large geographic area of the country by the 1980s. From the 1980s, the country has experienced economic decline, culminating in the 1988 political events, which saw a military government installed with a more free market orientation. Up until 1988 (and subsequently to a large degree) the historical challenges facing the Myanmar health care system (and likewise the immunization programmes) has been to extend health programme benefits beyond urban and more accessible rural centres to ethnic minorities and remote populations in the States, where poor infrastructure, shortages of human resources, and ethnic and communal conflicts have restricted availability and utilization of health care services.

The emergence of the free market economy from the 1990s, and the impact of political reforms since 2008, has resulted in a redirection of demographic trends, with rapid urbanization and economic growth centred in major urban areas. This free market period has witnessed the growth of urban centres in Yangon and Mandalay, with the growth of Mandalay being accelerated by increased trade with China. In the early 2000s, a new capital city was established in Nay Pi Taw in central Myanmar, to which all civil servants were relocated from Yangon. Since the enactment of the new Constitution in 2008, there has been increased foreign investment and development cooperation aid flows, leading to economic growth rates of greater than 6 per cent and expansion of a private medical sector. These forces have resulted in increasing and ongoing internal migration to cities and towns. After the Nargis disaster in 2008, a wide array of national and international NGOs emerged that remain active in the health sector.

Myanmar is primarily a rural agriculture-based society, but recent demographic trends suggest the essentially rural character of the country is beginning to change. The three largest urban centres in Myanmar are in Yangon, Nay Pi Taw and Mandalay. These three centres alone constitute over 40 per cent of the urban population of Myanmar. All these cities demonstrate rapid growth rates.

In 2000, the population of Yangon was estimated at 3.55 million, and in 2010 this was estimated at 4.36 million, with population projections of an estimated 5.62 million by 2020 (see Table 6). The average rate of growth in Yangon increased from 2.04 per cent in 2000, to 2.55 per cent in 2010. This means the population of the largest city has nearly doubled in a 20-year period, with this doubling effect set to continue. Even faster rates of growth have been experienced in Nay Pi Taw and Mandalay. This truly represents a ‘great migration’. The three largest cities represent only 42 per cent of the total urban population in Myanmar, with the remaining urban population scattered across the 17 state and regional capitals and 313 townships.
The primary motivation for movement to cities and towns has been the seeking out of improved economic and social conditions. There is also emigration and urban to rural population movements linked to conflict situations and humanitarian emergencies, but these tend to be outweighed by the overall larger migration rates to larger cities and towns.

Nationally, poverty rates were reported to have declined from 32 per cent in 2005 to 26 per cent in 2010. The main impacts of poverty are low enrolment or drop out from school, child labour, increased vulnerability to exploitation and inability to access health services. Urban populations are wealthier and healthier than rural populations, although too often these urban rural differentials do not consider wide disparities in access between social groups within the boundaries of urban areas.

There are high levels of public health risk in urban settings in Myanmar. In Yangon, for example, only a small percentage of the urban population has access to treated water, and only 50 per cent of the population has access to piped municipal water systems. There is no piped supply provision for most of the highly populated resettlement areas, informal settlements, and slums or squatter areas, and the presence of stagnant water in many of these locations raises the risk for vector borne diseases. This is not to suggest however that urbanization has an overall net negative health impact, as populations who migrate also enjoy the benefits of a more agglomerated economy and connected society, including improved access to a higher concentration of health care services.

### Table 6  *Population trends in three major urban centres of Myanmar, 2000–2020*[^10]

<table>
<thead>
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<th>2000</th>
<th>2010</th>
<th>2020 (estimate)</th>
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<td>Annual rate of growth</td>
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<td>National share of urban population</td>
<td>6.6%</td>
<td>6.7%</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Nay Pi Taw</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban population</td>
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<td>1,390,000</td>
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<td>Annual rate of growth</td>
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<td>No data</td>
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<td>National share of urban population</td>
<td>No data</td>
<td>6.7%</td>
<td>7.1%</td>
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<tr>
<td><strong>Yangon</strong></td>
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<tr>
<td>Urban population</td>
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<td>4,360,000</td>
<td>5,620,000</td>
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<td>National share of urban population</td>
<td>29%</td>
<td>28%</td>
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</tr>
</tbody>
</table>

[^10]: Mandalay, Nay Pi Taw, and Yangon are three major urban centres in Myanmar.
One in-depth study of the health of women who migrated within Myanmar found that there is an urban advantage to maternal health services, specifically for use of antenatal care and delivery with a skilled attendant. However, a more recent study found that in peri-urban areas, younger women, due to a range of economic, social and cultural factors, were less able to access essential reproductive health care services. In other words, availability of services does not automatically translate into utilization services by the peri-urban poor.

The proportion of the urban population that are now living in slums in Myanmar is estimated at 41 per cent, which in number terms is equivalent to 7.4 million. This number is expected to grow, as current population projections demonstrate that urban centres will take up nearly 40 per cent of the total population of Myanmar by 2020. Much of this growth is occurring in the peri-urban areas of Yangon. The 30 townships of Yangon are now gradually extending into the rural countryside, as rural migrants flood into the city in search of improved economic opportunities. These peri-urban communities are characterized by increasing population density, slums, poor regulation and absence of provision of public services, with most of the population engaged in daily wage labour.
Impacts on current immunization policy and practice in urban settings

Programme implementation and service delivery models

The NIP was launched in 1978, with OPV and measles vaccines being introduced in 1987. The response by the programme in the early 1990s was to extend health outreach services using the PHC system, particularly through implementation of a programme referred to as ‘crash’ strategy, whereby mobile and outreach teams were organized with three to six monthly campaign efforts to reach the most difficult to access areas (mostly three times a year to give three doses of OPV and DPT) with a minimum of one month apart (in line with national schedule). In 2010, a REC approach was designed, after it was recognized that many of the unreached were not in physically remote populations, but were rather in socially marginalized groups, including migrants working in peri-urban areas. This response has been taken up in the most recent multi-year plan for immunization, though limited information is provided on the operational guidance or details involved with reaching these groups.

Health services in urban areas are the responsibility of state and regional health departments including township health departments. The township health department is responsible for micro-planning and budgeting and ensuring adequate supervision. Routine immunizations are now delivered at fixed sites at maternal and child health (MCH) centres, urban health centres and township hospitals in urban areas (in the form of delivery of services at health facilities or fixed sites at the ward administrators office once a month). This contrasts with rural areas, where most immunization services are being provided through outreach activities in wards and villages. There are reported to be 884 government hospitals, 86 primary and secondary health centres, 80 school health teams and 348 MCH centres providing health services to the urban populations of Myanmar.
Although there is evidence of increasing private-sector ambulatory care, particularly in some facilities providing institutional care in Yangon and Mandalay and some other large cities in recent years, no evidence is available of direct private-sector participation in immunization services in urban areas. Nevertheless, the private sector is growing rapidly, with most of the medical doctors concentrated in towns and cities. Given that over half of Myanmar’s medical workforce is engaged through the private sector, it is reasonable to expect an uptake of private-sector immunization services in urban areas in the coming years. Statements in the cMYP to the effect of identifying alternative models for contracting out of vaccine delivery also raises the potential for public-private partnerships for immunization.

Although NGOs have taken up an increased role in MCH services, particularly since the Nargis disaster in 2008, no direct evidence is described for direct participation by NGOs in urban immunization services. However, national NGOs such as the Myanmar Maternal and Child Welfare Association, Myanmar Red Cross Society and Myanmar Women Affairs Association participate in health activities across the nation. There is no available literature evidence of direct financing of health service delivery by local government in urban areas. However, there is a system of township health committees throughout both the urban and rural health care system, which is responsible through the Chairmanship of the Township Administrator for ensuring the smooth operations of health services within the administrative catchment.

Coverage in Myanmar has been generally lower than in other countries in the region, with Myanmar being one of four countries in the Western Pacific Region with reported coverage of DTP3 of between 50 per cent and 75 per cent in 2015. Coverage data in Myanmar generally reflects better urban than rural coverage for immunization. Preliminary results from the 2015 DHS survey demonstrate a coverage rate in urban areas for fully immunized children of 67.5 per cent, compared to 50.4 per cent in rural areas. However, if data is further disaggregated in to poverty levels, we can observe that immunization rates between the poor and non-poor are wider than the urban/rural differences, which would seem to indicate that socio-economic status is a more significant factor than geographic location in determining immunization status. As an illustration of this point, the most recent DHS findings state that for the highest wealth quintile, coverage was 77.1 per cent (all vaccinations), compared to just 41.2 per cent in rural areas. There is a 30 per cent gap between coverage in the highest and lowest wealth quintiles in urban areas, compared to a 20.5 per cent gap between the same groups in rural areas (see Figure 15).

There are some indications that pockets of low coverage have contributed to emergence of vaccine-preventable diseases in urban areas in Myanmar. In 2007, a VDPV case was detected in a Yangon Township, and diphtheria outbreaks were reported in Yangon in 2016. Myanmar experiences widespread measles outbreaks every five years, with the last reported nationwide outbreak in 2012, leading to the implementation of nationwide campaigns, including reaching 50-100 children in every urban ward across the country.
A Joint Government Development Partner Review in 2014 found that “the national political reform process has been associated with significant population displacements to urban areas resulting in large numbers of children being lost to routine EPI,” highlighting the problem of expanding immunization coverage in growing peri-urban areas. The 2015 Review more specifically highlights the issue of urban drift, “presenting major contextual challenges in terms of the growth of urban poor settlements, as well as making it more difficult to calculate population denominators and identify populations at risk of not being immunized.”
Urban Health Policy and Strategy

UN Habitat has prepared a set of guidelines for urban planning in Myanmar. The guidelines encourage planning within a given framework, which encompasses compactness and maximizing land efficiency, promoting diverse and thriving communities, encouraging walkable neighbourhoods, promoting street connectivity, fostering employment and local consumption, and providing a diversity of housing options that are adapted to social needs. Expansion of health services is mentioned, but only in the context of expanding services for an increased population catchment. The issues of the urban poor, and all the surrounding public health and inequality issues associated with it, are not addressed by these guidelines. The same applies to a Master Plan of Urban Development for Yangon, prepared with the assistance of JICA, which provides substantial mapping of infrastructure, traffic flow, urban space and disaster preparedness, but includes no mapping of public social service requirements such as health and education. In recognition of the growing infrastructure gaps in peri-urban areas, a proposal was endorsed to construct or upgrade 20 peri-urban health facilities in the Yangon Region.

A Draft National Health Plan (2016-2021), a National Universal Health Coverage Strategy and a Programme of Health Reform all tackle the issues of inequities of access to health care in Myanmar, and propose strengthened programmes of financial and social protection, and universal access to a minimum package of services and essential pharmaceuticals. But interestingly, none of these recent reform policies, plans and strategies outlines a special requirement for development of an urban health strategy, over and above implementation of nationwide universal health coverage approaches. Based on this review, there are substantial policy and planning gaps with regards to urban health strategy.

Current policy and planning directions for urban immunization

In response to increasing migration to urban areas, and evidence of barriers to coverage based on social distance, the NIP in its most recent multi-year strategic plan has proposed to implement a REC strategy. The objective is to “strengthen immunization programme management, human resources, financing and service delivery to provide equitable services to all target populations including special strategies for peri-urban, slum, migratory populations, geographically and socially hard to reach and conflict areas.” The specific strategy is to “ensure every township has an updated micro plan to reach every community.” However, the multi-year plan does not detail the governance arrangements, financial commitments, or details of operational strategy. Consultations have indicated that the Ministry of Health is proposing the establishment of immunization clinics in all 100 of the major hospitals in Myanmar, which are mainly found in urban areas. This is expected to increase coverage and reach children who sometimes are not reached. In addition, the Ministry has been looking into the possibilities of increasing the number of immunization sessions in most of the urban health centres, and is proposing increasing frequency of sessions from the current monthly sessions to weekly sessions.
A recently updated multi-year plan for immunization (2017-2021) takes note of a “higher level of population mobility and urban drift, presenting major contextual challenges in terms of the growth of urban poor settlements, as well as making it more difficult to calculate population denominators and identify populations at risk of not being immunized.” This plan makes frequent mention of the need to develop a special strategy for urban poor settlements (specifically peri-urban communities and slums) throughout the plan, although the specifics of such a plan are still not described.

Lessons learned for future modelling of immunization programmes in the urban setting

The historical challenge of the Myanmar health system has not only been the provision of universal coverage, but more particularly coverage for populations in remote regions and in the ethnic states. However, by 2050, based on current trends, half the population will be urbanized. This rapid urbanization and widespread economic inequalities, with poor public health infrastructure in many of the informal settlement areas, along with the emergence of a more pluralistic health care system, means that new urban-based health system challenges are emerging for the country.

The rural PHC system has produced some impressive results for Myanmar, as evidenced by declining incidences of tuberculosis and malaria, and improving immunization and maternal care coverage. But there are now indications that rapid urbanization, increased mobility and internal migration, in addition to the emergence of NGOs and growth in the private medical sector, will mean a much more complex and pluralistic health care system in the coming years, and will hence require a much more flexible policy and operational response.
PAPUA NEW GUINEA

Summary

- Papua New Guinea is mainly a rural-based society, and has only one city with a population over 300,000.

- Even though the urban population is expected to grow to only 13.9 per cent by 2025, the National Health Plan proposes to expand services for the urban disadvantaged.

- There is a network of urban health centres (77) across the country that provides a package of primary care services including immunization.

- Improving access to services for the urban disadvantaged is now a stated priority of the National Health Plan, National Development Plan and Multi-Year Plan for immunization.

- Coverage was reported to be 106% for pentavalent 3 in the National Capital District for 2015. The high coverage rate is attributed to the rapid inflow of rural migrants to the urban district. There is no coverage data that disaggregates coverage according to wealth quintile in urban areas.

- The Multi-Year Plan for Immunization (2016-2021) proposes increasing routine immunization frequency for urban disadvantaged areas. There is no literature evidence of a documented urban strategy for immunization.

Table 7  Basic urban demographic and health indicators, Papua New Guinea

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Result</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population living in urban areas</td>
<td>990,890</td>
<td>World Bank 2017</td>
</tr>
<tr>
<td>% population living in urban areas</td>
<td>13%</td>
<td>UN Habitat 2016</td>
</tr>
<tr>
<td>Proportion of urban population in slum areas</td>
<td>No data</td>
<td>-</td>
</tr>
<tr>
<td>Total urban population living in slums</td>
<td>No data</td>
<td>-</td>
</tr>
<tr>
<td>Expected % urban population by 2025</td>
<td>13.9%</td>
<td>UN Habitat 2016</td>
</tr>
<tr>
<td>National immunization coverage in urban areas for DPT3, highest wealth quintile</td>
<td>No published data</td>
<td>An aggregate coverage rate of 106% of pentavalent 3 is reported for 2015 (Sector Review 2015)</td>
</tr>
<tr>
<td>National immunization coverage urban areas for DPT3, lowest wealth quintile</td>
<td>No published data</td>
<td>-</td>
</tr>
</tbody>
</table>
Background to urbanization and health system development in urban areas in Papua New Guinea

Papua New Guinea was 13 per cent urbanized in 2015, but is expected to increase to only 13.9 per cent by 2025 (see Figure 16). Papua New Guinea has only one city (the capital Port Moresby) above 300,000 and is primarily a rural-based society.

The population of Port Moresby is projected to expand from over 223,000 in 1995 (14.1 per cent) to 353,000 by 2025, (13.9 per cent), which is a 58 per cent expansion over a 30-year period (see Figure 17). Neither the WHO database on urban health nor UN Habitat data have confirmed the estimated percentage of urban populations who are living in slums. Papua New Guinea has been described as a highly mobile society, with 37 per cent of these migrants (those not residing in place of birth) residing in Port Moresby.

However, as can be confirmed by UN Habitat data on growth in the capital Port Moresby, it can reasonably be expected that given economic growth rates and poverty levels, slum areas are likely to grow in Port Moresby in coming years. Growth in industry and human services, and the development of markets in cities and towns, has acted as a magnet for the rural population. There are also ‘rural push factors’ at play, including loss of land, conflicts, and educational and income aspirations of rural residents. Despite opportunities, the National Capital District has the highest unemployment rates and more than 50 per cent of these unemployed reside in informal or unplanned settlements. The main features of these unplanned settlements include urban poverty, illegal water connections, inadequate sanitation, informal work patterns, varying access to electric power and very poor environmental conditions. The health outcomes include high rates of communicable diseases including tuberculosis, as well as the spread of HIV. There is also a social dimension to this poor health, as expressed through violence, prostitution, substance abuse, declining law and order, gambling and school drop outs, which were also observations of social impacts of poverty in the slums of Mongolia and Cambodia.

Impacts on current immunization policy and practice in urban settings

Immunization coverage and equity in urban areas

In recent years, immunization coverage has remained very low in Papua New Guinea. The last survey conducted in 2005/2006 confirmed a DPT3 coverage rate of 71 per cent (card and history) with lower coverage in rural and remote areas. There are indications that lower coverage in some urban areas has been a long-standing problem. One published report indicates that in 2002, reported immunization coverage in the National Capital District was 66 per cent for measles, compared to the national rate of 76 per cent. A more recent assessment in 2015 of coverage in the National Capital District was 106 per cent for pentavalent vaccine 3. A Sector Review conducted in 2015 confirmed that this high coverage was attributable to issues with population denominators associated with high rates of migration into the urban areas.
Figure 16  **Trends in urbanization, Papua New Guinea, 1995-2025**

- 1995: 14.1%
- 2005: 13.8%
- 2015: 13.4%
- 2025: 13.9%

Figure 17  **Population growth, Port Moresby, 1995–2025**

- 1995: 250,000
- 2005: 300,000
- 2015: 350,000
- 2025: 400,000
In 2002, 492 patients were admitted to the National Paediatric Hospital with measles, and the cases were from suburbs villages and settlements in the National Capital District. This report confirms that in the 13 years prior to 2001, there had been 3-4 measles disease outbreaks in the National Capital District. Most children with measles were not immunized, with major reasons for not being immunized not related to knowledge, but rather to systems and community factors such as the availability and cost of transport, decision making by fathers, and possibly attitudes of health workers.117 There were also measles outbreaks reported in 2013 and 2014. There were 308 laboratory confirmed cases in 2014, with much of this reporting of cases taking place in the National Capital District.118 The measles outbreak extended into 2015, after which the outbreak extended to all 22 provinces of Papua New Guinea and resulted in a reporting of a total of 11,097 cases.119

Programme implementation and service delivery models

The governance system is highly decentralized in Papua New Guinea. The national government finances the Department of Provincial Government and local level government affairs, which then administer through districts via offices of rural development, which administer grants for health, education and other human services.

In the province of the National Capital, health services are directly under the National Health Standards Branch, of the National Department of Health (NDOH). The National Capital Department of Health (NCDH) gets its funding through this structure. The city government (National Capital District Commission or NCDC) operates on its own, and NCDH receives zero funding from NCDC. Plans are in place to merge the NCDH and NCDC into a Provincial Health Authority structure. As has been noted in other country settings with decentralized systems, funding from the city government may vary from one city to another. However, in general, the funding for health and immunization programmes has two modalities: (a) recurrent budget, which is allocated by the Department of Treasury and disbursed to provinces and districts, and this supports the Minimum Priority Areas (including outreach for immunization), salary of staff and operational costs; (b) the other modality is from the Department of National Planning and Monitoring, which is called the development budget, and includes the Provincial Sector Improvement Programme and District Improvement Programme and other sources of funding. What we appear to have here are multiple funding channels with no clear accountabilities.

Service delivery in Papua New Guinea is mainly provided at government and church health facilities, funded by a mix of government tax revenues, out-of-pocket payments and donor funds. The central government is responsible for the national referral hospital, 1 specialist, 4 regional and 16 provincial public hospitals. Most health service delivery is carried out by provincial and local governments in rural health services, including rural hospitals, health centres, health sub-centres and aid posts. All these services offer a mix of public health and primary and community
care. Church health services are a central part the national health system, and provide up to 50 per cent of ambulatory services. The government finances over 80 per cent of their services. Functions of these centres include management of chronic and acute conditions, basic surgical care, deliveries and paediatric care, and referral between district lower-level facilities and district hospitals. Health centres serve a population of 5,000 to 20,000. In the urban area in 2012, there were 48 government health centres, 10 mission health centres and 11 in the category of ‘other.’

A more recent assessment has confirmed there are now 77 urban health centres.

A published qualitative assessment of the NIP in 2006 demonstrated the impact on staff morale of decentralization policies (‘the Organic Law’) and their impact on logistics, budgeting and supportive supervision systems. Invariably, weaknesses of the system are mostly concentrated in rural and remote areas, and there is no mention in this assessment on challenges of reaching the urban migrants or poor.

As is the case with many of the urban master plans reviewed for this study, this emphasis on urban policy and planning seems to be on infrastructure. Much of this infrastructure has significant public health implications – particularly with regard to housing, water supply and sanitation measures. There is far less emphasis in these master plans on health services provision in urban areas.

Current policy and planning directions for urban health and immunization

The National Health Strategy of the NDOH encompasses both urban and rural. The National Health Plan 2011–2020 is subtitled “Strengthened primary health care for all and improved service delivery for the rural majority and urban disadvantaged,” reflecting an increased focus on urban health. The plan recognizes that health services have been failing the population in urban settlements. Although infants have twice the risk of dying in their first year in rural areas compared to urban areas, and immunization rates are reported to be lower in rural areas, the plan also recognizes elsewhere that the urban poor suffer the poorest health status, which once again confirms the importance of socio-economic disaggregation of data to obtain an accurate portrayal of the public health significance of urban health. Due to increased urbanization, NCDs will also become more prevalent. Crowding and lack of adequate access to water and sanitation increase the public health risk, with the level of crowding increasing from 20 per cent to 40 per cent over the last decade. Improving health for the urban disadvantaged is stated in the overall goal of the health plan, and equity in considered as a main principle. Strategies centre on various disease control objectives (MCH, CDC, HSS, and improved partnership and coordination). More specific strategies include expanding outreach for urban disadvantaged, increasing the number of health facilities in urban settlements, and increasing the number of partnerships with private providers, churches and NGOs in providing services for the urban disadvantaged.
The cMYP2011–2015 observes that the poverty situation is worsening in Papua New Guinea, and that this decline is most noticeable in urban areas. Denser peri-urban populations are also reported in the cMYP to increase both communicable and non-communicable disease risk. The cMYP calls for increased focus on providing technical support to lower performing districts and to urban areas, reflecting the increased urban focus of the National Health Plan. Specific activities that correspond to this strategy include standard EPI approaches such as micro-planning, training, supportive supervision, and IEC strategy etc. It is not possible to glean from this strategy any set of actions that could be described as comprising an ‘urban EPI strategy’ that is in any way distinguishable from a rural approach. The updated cMYP 2016-2020 has some more specific actions, including increasing the number of routine sessions in urban clinics, as well as exploration of new community engagement approaches in urban and peri-urban areas.

This generic character of the approach, including lack of articulation of the social characteristics of the urban poor and how this impacts on the determination of health needs, is characteristic of the approach in most cMYPs in this study, which tend to focus most on the technical requirements of immunization systems rather than on the characteristics of the social systems within which these EPI programmes need to effectively operate.

There is no specific urban immunization strategy. However, there is an Annual Implementation Plan for each of the Key Result Areas in the National Health Plan, and immunization comes under KRA 4 (improving Child Health). The RED-REC Strategy (Reaching Every District-Reaching Every Community) is designed for improving immunization in both urban and rural communities.

Several organizations have been active in urban health in Papua New Guinea. These include the National AIDS council, AusAID, PNG Alliance of Civil Society Organisations against HIV & AIDS, and the Department of Health, who have all supported mainstreaming of HIV/AIDS health services. Various church groups, NGOs and JICA supported programmes have developed partnerships on health and gender issues in urban areas. The National Urban Policy describes seven sectoral areas for long-term action, including population and employment, transport and infrastructure, urban environment and climate change, housing and social issues, land availability, law and order, and institutions and governance. Governance is viewed as the critical area, with local government, the private sector and civil society all being highly active in making decisions that affect the urban population.

Consistent with other master plans and urban polices reviewed in this study, there tends to be less emphasis in this policy on the specific challenges of providing health and education services in these contexts, and the role of local government in addressing these challenges. In some ways, technical human services do not have the same prominence as physical infrastructure development in alleviating poverty and public health threats in urban poor settlements.
THE PHILIPPINES

Summary

- The Philippines is now expected to have a population of 33 million in urban areas by 2025. There are two cities with populations over 1 million and 18 cities with populations greater than 300,000.

- Despite urban immunization coverage being generally higher than rural coverage, there are pockets of urban disadvantage, with 17 million living in urban slum areas.

- In urban areas, the gap between highest and lowest quintiles for DPT3 immunization coverage narrowed only slightly from 17.3 per cent in 1993 to 15.5 per cent in 2013.

- There have been significant vaccine-preventable disease outbreaks in metropolitan areas over recent years for both measles and diphtheria.

- The Department of Health is initiating a REC strategy to expand services to the most disadvantaged in urban settings. The strategy relies for its success on a micro-planning strategy, and partnerships with local government units (LGUs) and volunteer networks.

Table 8  Basic urban demographic and health indicators, the Philippines

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Result</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population living in urban areas</td>
<td>44,683,340</td>
<td>World Bank 2017</td>
</tr>
<tr>
<td>% population living in urban areas</td>
<td>44.4%</td>
<td>UN Habitat 2016</td>
</tr>
<tr>
<td>Proportion of urban population in slum areas</td>
<td>38%</td>
<td>UN Habitat 2014</td>
</tr>
<tr>
<td>Total urban population living in slums</td>
<td>17.1 million</td>
<td>WHO Urban Health Profile 2016</td>
</tr>
<tr>
<td>Expected % urban population by 2025</td>
<td>44.9%</td>
<td>UN Habitat 2016</td>
</tr>
<tr>
<td>National immunization coverage in urban areas for DPT3, highest wealth quintile</td>
<td>92.8%</td>
<td>DHS 2013</td>
</tr>
<tr>
<td>National immunization coverage in urban areas for DPT3, lowest wealth quintile</td>
<td>77.3%</td>
<td>DHS 2013</td>
</tr>
</tbody>
</table>
Background to urbanization and health system development in urban areas in the Philippines

In the Philippines, urbanization rates have somewhat stabilized over recent years, but the cities are still projected to grow further over the coming years. The country has two cities above 1 million (Manila and Davao) and 18 cities with a population above 300,000. The urban population in the Philippines has grown from 33 million in 1995 and is projected to grow to 53 million in 2025 (an overall increase in 59 per cent over a 30-year period).

Despite this growth, data from UN Habitat illustrates that the rate of urbanization in the Philippines is expected to stabilize, and is projected to reach 44.9 per cent of the population as being urbanized in 2025 (see Figure 18).

Manila has grown at a remarkable rate. From a population of just over 9 million in 1995, the population is projected to reach over 15 million in 2025, which is a 62 per cent increase over a 30-year period (see Figure 19).

Impacts on current immunization policy and practice in urban settings

Immunization coverage and equity in urban areas

Examination of DHS data over successive surveys between 1993 and 2013 illustrates that some gains have been made in reducing immunization inequities in the urban setting in the Philippines. The surveys illustrate that, although urban coverage is generally higher than rural coverage, there are still significant gaps in coverage between socio-economic groups in urban areas (see Figure 20).

In urban areas, the gap between highest and lowest wealth quintiles for DPT3 coverage narrowed only slightly from 17.3 per cent in 1993 to 15.5 per cent in 2013. These results illustrate the extent to which immunization inequities have become a systemic issue that warrants sustained policy attention, especially given the higher public health risk for disease transmission in slum areas.\(^{127}\)

A UN Habitat study on equity of access to health and social services for slum populations in Manila has reinforced these findings.\(^ {128}\) What the study found was that use of medical treatment for common illnesses was lower in the slums, as was accessibility to essential reproductive health care services and vaccines. Fewer than two in ten children with diarrhoea were taken to either a public or private facility for treatment (with about one third of the cases taken to a private facility), and use of midwives and doctors for prenatal care was lower in slum areas than non-slum areas. Rates of caesarean section and facility delivery were higher in non-slum than slum areas, and a higher percentage of non-slum deliveries take place in private facilities. Rates of fully immunized children varied from 67 per cent in non-slum areas to 63 per cent in slum areas. For ‘never had vaccination’ the rates were 61 per cent for slum dwellers and 69 per cent for non-slum dwellers, indicating that low immunization coverage is an issue that is city wide and not just related to the harder to reach slum areas. In its analysis of health equity in the Philippines, a health system review pointed out that 70 per cent of LGUs have immunization coverage below the national standards.\(^ {129}\) It is 30 per cent of LGUs, usually the metropolitan ones, that ‘prop up’ the national coverage rates.
Figure 18  **Trends in urbanization, the Philippines, 1995–2025**

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage of population in urban areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>48.3%</td>
</tr>
<tr>
<td>2005</td>
<td>48.3%</td>
</tr>
<tr>
<td>2015</td>
<td>44.9%</td>
</tr>
</tbody>
</table>

Figure 19  **Projected Growth of Manila Urban Population 1995–2025**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of population (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>16,000</td>
</tr>
<tr>
<td>2005</td>
<td>14,000</td>
</tr>
<tr>
<td>2015</td>
<td>12,000</td>
</tr>
<tr>
<td>2025</td>
<td>10,000</td>
</tr>
</tbody>
</table>
As is the case with Cambodia, Myanmar and many other countries in the East Asia region, most health professionals are concentrated in urban areas. The more disadvantaged areas are described in the review as being mostly in rural and remote areas, difficult to access islands or mountainous areas, and in conflict-affected areas, such as the Autonomous Region in Muslim Mindanao (ARMM). This review also indicates that low immunization coverage is prevalent in the lowest socio-economic quintiles across the country, as evidenced by population-based surveys and through routine reporting. The urban poor in this equity analysis are not mentioned specifically.

Overall low access of the poorest socio-economic quintiles is related to a range of demand-side barriers, relating to financial hardship, negative perceptions of quality of care in public facilities and lack of knowledge and awareness of services available. But the overall impact of low access to health knowledge and services by the urban poor must be a significant factor in child survival rates, given that the most recent data on child mortality demonstrates that the lowest wealth quintiles in the urban areas have a much higher child mortality rate (41/1,000) compared to the
wealthiest quintile in the urban setting (6/1,000).\textsuperscript{134} Tuberculosis has been confirmed to be much worse in the urban slum populations as compared to the general population.\textsuperscript{135} In addition, high stunting and anaemia rates have been detected in studies of the urban poor.\textsuperscript{136} These findings (coupled with low immunization coverage) indicate very high risk for vaccine-preventable disease outbreaks in the urban slums.

This risk is borne out by the emergence of diphtheria cases and other vaccine-preventable diseases in the Philippines. The DOH reported over 105 cases in 2015, with one third of cases reporting to San Lazaro Hospital in Metro Manila. San Lazaro Hospital in Manila has had, on average, at least one diphtheria death per month over the last seven years, with a case fatality rate > 50 per cent.\textsuperscript{137} WHO reports that “low coverage and high vaccination drop-out rate in depressed areas are the main reasons that diphtheria remains to be a problem in the Philippines.”\textsuperscript{138}

A rising number of measles cases in Metro Manila and in some provinces triggered a nationwide campaign effort in 2014 to eliminate measles.\textsuperscript{139} In fact the highest caseloads of measles were in the National Capital Region (NCR), containing the most densely populated areas of the country (see Figure 21), with large population movements resulting in population mixing of the immune (vaccinated) and non-immune (not vaccinated).\textsuperscript{140}
Programme implementation and service delivery models

In 1993, the national Government devolved responsibility for financing and management of health care services to LGUs (provinces and municipalities). A central department of health coordinated overall technical policy guidance and programme management of the sector, whereas the LGUs deliver the services through a network of hospitals, rural health units and barangay health stations. The DOH has centres of health and development in each province, city and municipality. These centres are responsible for linking programmes to LGUs in the cities and municipalities.

As in nearly all countries of the South-East Asia Region, the Philippines has a pluralist model of health service delivery, with over 30 per cent of the population now utilizing the private medical sector for care. A health facility infrastructure database managed by the DOH currently indicates that there are 738 health facilities (both public and private) in the NCR. Overall, the health care system is primarily financed through out of pocket payments, despite the expansion of a national insurance system (Phil Health).

Also, following the pattern of other countries in the region, the public facilities are mostly utilized by the poor. Although health services normally result in some form of co-payment, there is no indication that user charges are prevalent for major preventive programmes such as immunization. PHC services (including immunization) are delivered through public hospitals, health centres and barangay health stations. In urban areas, immunization is also provided through private sector outlets including paediatric clinics and private hospital outpatient services. NGOs are active in health education, maternal and child health care, and communicable disease control programmes. And finally, and most importantly, LGUs have the critical role (in both urban and rural settings) in coordinating, financing and delivering PHC programmes.

Given this complexity in management and delivery arrangements and the harshness of social conditions, it is not surprising that a review of challenges for expanding immunization services in urban areas in the Philippines reached conclusions that could be applied to just about any dense urban setting in South East Asia. They were as follows:

- High population mobility makes follow-up vaccination difficult.
- Many unregistered children in the health centre area.
- Health centre staffing levels often insufficient.
- Inaccurate population data for planning and monitoring
- High opportunity and financial costs for working mothers to visit health centres.
- High levels of population mixing, resulting in rapid communicable disease transmission.
- Inadequate and delayed active surveillance.
Current policy and planning directions for urban health and EPI

Access to documents to date has not uncovered an overall urban health plan for the Philippines. Some immunization sources indicate the development of a reaching every barangay strategy nationally, and a reaching every purok strategy for urban settings specifically. The National EPI Planning statement on the website of the DOH nominates the reaching every barangay strategy as one of the main strategies of the National EPI (along with immunization campaigns and strengthened surveillance). This strategy describes the five main components of the RED strategy, but does not specifically mention a sub-district planning methodology or an urban focus for operations. A National Health Sector Strategy outlines plans for universal health coverage, financial protection and improved quality of care; however, a sector-specific urban health strategy has not yet been detected.

As is the case in Cambodia, the DOH has utilized strategies from national campaigns to inform the operational strategy for ‘Reaching Every Purok’ (REP) in Metro Manila. This involves identification of high-risk communities, through conducting rapid coverage assessment including house-to-house immunization card checks to validate the high-risk category for each purok. In the high-risk areas, a master listing is done to update the immunization registers. Follow-up immunization is then done using the updated register. Immunization cards are checked in high-risk
**Figure 23** High-risk puroks in the National Capital Region and other parts of the Philippines (source DOH)

_puroks_ as a means of monitoring their progress from high risk to low risk. Using this approach, over 1,000 high-risk puroks were identified in NCR, as well as in other more densely populated areas of the Philippines *(see Figure 23)*. Implementers of the programme indicate that what is required is “higher frequency and intensity of action focused on congested high-risk streets.”

Success factors linked to this strategy include prioritizing highest risk areas in order to concentrate and focus operational efforts; utilizing volunteer networks to assist with master listing and political advocacy with local chief executives to mobilize finance for supporting volunteers; establishing an electronic database to update registers; establishing community posts with immunization and other MCH services; and finally, ensuring good outreach planning, supervision and follow-up quarterly card monitor checks in the communities. All the strategies suggest a community-based approach with networked support from local volunteers, community leaders and local authorities. The significance of the governance strategy in realizing the objectives of the programme is highlighted by the following statement from a programme monitoring report:
In a health system that is decentralized to local government units but with technical oversight from the Department of Health, there is a need for clarity on who is responsible for any level of the planning and implementation of the programme. Governance and accountability for programme implementation coupled with appropriate capacities and authority for decision-making functions is a key success factor for the smooth implementation as well as the sustainability of all programme initiatives.¹⁴³

Many of the challenges of providing services in these environments are highlighted in this report. These include insecurity, transient workers and migration of populations from conflict areas to urban slums. It is very challenging to track migrants for provision of services, especially given the fact there is no system for listing or registering new arrivals, and that knowledge of barangay councilor officers is very low in relation to the services provided at facilities.

The main elements of the REP approach are detailed in Figure 24. A well-established network of barangay health workers is being enlisted to support this initiative, although local political support from mayors is crucial to ensure release of funds for house-to-house visits in local areas. This local government support is dependent on the capacity of the City Health Officer to negotiate with the local chief executives regarding the rationale for the approach and the expected outcome. A simple guide has been developed for health centres that outlines the process for master listing and mapping and supervision.¹⁵⁰ The guide also outlines the benefits of the approach, which includes ensuring that mobile populations or those living in informal settlements are included in health registers and population denominators.

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**Figure 24 Main elements of the Reaching Every Purok Approach**

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1.</td>
<td>Master listing door to door of names addresses and immunization status in urban areas where populations are uncertain/unregistered/migrant/living in informal settlements.</td>
</tr>
<tr>
<td>2.</td>
<td>Using master listing data to update immunization registers in health centres.</td>
</tr>
<tr>
<td>3.</td>
<td>Health centre mapping of high-risk areas to be followed up.</td>
</tr>
<tr>
<td>4.</td>
<td>Making one register per urban block to ensure that follow up is easy.</td>
</tr>
<tr>
<td>5.</td>
<td>Catch up immunization based upon findings from master listing.</td>
</tr>
<tr>
<td>6.</td>
<td>Regular sessions including urban outreach.</td>
</tr>
<tr>
<td>7.</td>
<td>Quarterly door-to-door card check in high-risk areas (sample of 20) to estimate risk status.</td>
</tr>
<tr>
<td>8.</td>
<td>Supervisory decision on action per risk status from card checking data.</td>
</tr>
</tbody>
</table>
VIET NAM

Summary

- Viet Nam is rapidly urbanizing, with 33 per cent living in urban areas, and 27 per cent of these urban residents living in slums.
- The two major cities of Ho Chi Minh and Hanoi have experienced 100 per cent growth in the last 20 years.
- There is a high level of uncertainty of urban population sizes due to mobility and migration into urban areas, and lack of registration of new migrants.
- A recent MICS conducted in 2014 found that for DPT3 coverage, there was low urban coverage with a significant gap between wealth quintiles (58 per cent for the highest quintile, and 47 per cent for the lowest quintile).
- Vaccine-preventable disease outbreaks in urban areas reflect significant immunity gaps in the population. There was a large measles outbreak in 2014, with more than 150 infant deaths at the Vietnam National Hospital of Pediatrics in Hanoi.
- This multi-year plan mandates the development of a specific urban immunization strategy to respond to urban challenges of provision of private sector ‘non-EPI vaccines’, waste management in the urban context, variable commitments of local governments to operational financing and information management in what is a highly dense yet mobile population setting.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Result</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population living in urban areas</td>
<td>31,737,15</td>
<td>World Bank 2017</td>
</tr>
<tr>
<td>% population living in urban areas</td>
<td>33%</td>
<td>UN Habitat 2016</td>
</tr>
<tr>
<td>Proportion of urban population in slum areas</td>
<td>27%</td>
<td>UN Habitat 2014</td>
</tr>
<tr>
<td>Total urban population living in slums</td>
<td>8.3 million</td>
<td>WHO Urban Health Profile 2016</td>
</tr>
<tr>
<td>Expected % urban population by 2025</td>
<td>39.9%</td>
<td>UN Habitat 2016</td>
</tr>
<tr>
<td>National immunization coverage in urban areas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>for DPT3, highest wealth quintile</td>
<td>58.4%</td>
<td>MICS 2013-14</td>
</tr>
<tr>
<td>National immunization coverage in urban areas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>for DPT3, lowest wealth quintile</td>
<td>46.9%</td>
<td>MICS 2013-14</td>
</tr>
</tbody>
</table>
Background to urbanization and health system development in urban areas in Viet Nam

Some 33 per cent of the population of Viet Nam is now urbanized, and will reach close to 40 per cent urbanized by 2025. Viet Nam has nine cities with a population greater than 300,000, all of which have rapid growth rates. It is estimated that 27 per cent of the urban population lives in slum areas, which is equivalent to 18.3 million people.

The two major cities in Viet Nam are Hanoi in the north and Ho Chi Minh City in the south, both of which have experienced greater than 100 per cent growth rates over the last 20 years. By 2025, Ho Chi Minh City will have over 9 million residents, a number twice that of Hanoi.

Urbanization was unleashed by the Doi Moi economic reforms of the early 1990s, which reset the economic system in Viet Nam according to free-market principles. Manufacturing industry then developed on the periphery of Ho Chi Minh City, attracting millions of young workers and their families from the rural delta countryside looking for improved economic opportunities.

In 2004, one study confirmed that there were over 5,730,700 residents in Ho Chi Minh City, although the actual population at that time was estimated to be 7.1 million, with up to 1.8 million temporary residents and commuters. Another study in Ho Chi Minh City reported that the NIP was endeavouring to target 1.5 times the demographic estimate, but lack of clear population data means that they can never be sure they have the population covered. The findings of this study on unregistered populations were confirmed by a report in 2014, which found that the registered population was 7,939,702. However, the actual population was more than 10 million due to inflows of temporary residents. During a National Immunization Review in Ho Chi Minh City, monitoring and reporting on coverage for the non-registered population was reported to be a challenge. Interestingly, where people are registered and where people may live may not necessarily correspond. For this reason, innovative solutions may be required to strengthen immunization information systems in urban settings.

“Where people live and where they get EPI services do not match any more (in terms of commune, district and even province). If the Vietnamese EPI assumes the residential area to continue to be the unit of registering target population and providing services, we need ICT solutions to refer doses/targets back to the locations of residence. If we assume free-access as future modality of urban EPI, a nationwide (or city-wide) online ID system probably needs to be pursued.”
Figure 25  
**Trends in urbanization, Viet Nam, 1995–2025**

![Chart showing trends in urbanization in Viet Nam from 1995 to 2025. The percentage of the population in urban areas increases steadily over the period.](chart)

- 1995: 22.2%
- 2005: 29.9%
- 2015: 34.6%
- 2025: 39.9%

Figure 26  
**Projected population growth, Viet Nam’s two largest cities, 1995–2025**

![Chart showing projected population growth in Ho Chi Minh and Hanoi from 1995 to 2025.](chart)

- 1995: 5,000 (Ho Chi Minh) 3,500 (Hanoi)
- 2005: 6,500 (Ho Chi Minh) 4,500 (Hanoi)
- 2015: 8,000 (Ho Chi Minh) 6,000 (Hanoi)
- 2025: 10,000 (Ho Chi Minh) 8,000 (Hanoi)

Legend:
- **Blue**: Ho Chi Minh Population
- **Orange**: Hanoi Population
The same uncertainty regarding population is also evident in Hanoi, where the population is reported as 7.2 million. The National EPI Review in 2015 found that rapid economic growth and investment has caused a large in-flow of the mobile population for construction work, as well as temporary employees for many factories in industrial zones, pushing the population up to nearly 10 million. To overcome this problem, instead of using population estimates, health facility staff undertake household head counts twice a year to consider the comings and goings of mobile and migrant populations. Despite these efforts, the staff indicate that 5–10 per cent of the population may be missed due to mobility.

**Impacts on current immunization policy and practice in urban settings**

**Immunization coverage and equity in urban areas**

As is the case with other countries included in this study, the main issue of health service access in urban areas is not related to availability of staff. Despite having only 30 per cent of the total population, urban areas have 59 per cent of the nation’s doctors and 55 per cent of the nurses.\(^{166}\) Although a national health insurance system has been established in Viet Nam, many of the urban and rural poor still lack adequate financial protection.\(^{167}\)

In both urban and rural areas, the system is divided into provincial, district and commune levels, with people’s Health Committees at the various levels being responsible for financing of health service operations. The health system has been described as a highly unregulated public-private mix, with a rapid expansion of private hospitals and clinics in recent years.\(^{158}\)

A survey conducted in 2010 indicated there were significant differences between the highest and lowest wealth quintiles for DPT3 coverage.\(^{159}\) Between 1999 and 2004, peer review research confirmed that there were 40 clinically confirmed diphtheria cases in Ho Chi Minh City. As outlined elsewhere in this report, this lower coverage may be attributable to a range of factors peculiar to the urban setting – including high mobility, unregistered status and higher use of the private sector.

Vaccine-preventable disease outbreaks in urban areas reflect significant immunity gaps in the population. There was a large measles outbreak in 2014 with more than 150 infant deaths at the Vietnam National Hospital of Pediatrics in Hanoi. A National EPI Review reports that Hanoi health authorities were highly concerned about mothers’ distrust of EPI vaccines, media on fatal adverse events following immunization (AEFI) and delayed vaccination of non-EPI vaccines at private service.\(^{160}\) Seventy per cent of diphtheria cases in Viet Nam between 1993 and 2004 were reported to be in Ho Chi Minh City. The rise in cases was attributed to issues of lower immunization coverage in this rapidly urbanizing setting. Despite follow-up campaign strategies, there were lingering cases in the city post campaigns. Much of this problem is linked to the programme challenge of ensuring unregistered migrants are vaccinated.\(^{161}\)

A MICS conducted in 2014 found that for DPT3 coverage, there was low urban coverage with a significant gap between wealth quintiles (58 per cent for highest quintile, and 47 per cent for lowest quintile).\(^{162}\)
Programme implementation and service delivery models

Immunization services are provided through government commune clinics. Specific “immunization days” are appointed for each month, and most of the population are vaccinated at health facilities by commune health staff. In Ho Chi Minh City, hospitals (mostly public) functioned as the most important service points to provide birth-doses of BCG and HepB vaccine. For mobile populations, regardless of their residential status, immunization services were provided if they were captured either by commune health centres or hospitals. In Hanoi, routine sessions are also once a month, but in 2015, the frequency has increased to twice a month due to Japanese encephalitis second dose. In Hanoi, waste management services are contracted out to a private contractor. Also, the city conducts annual house-to-house surveys to confirm population numbers. There are no indications that private sector services report immunization or vaccine-preventable diseases to the government information system. Active surveillance is conducted in national and district hospitals by the Preventive Medical Centre at provincial level.
An interesting and innovative aspect of the urban immunization delivery system in Ho Chi Minh and Hanoi is the proliferation of fee for service immunization alongside public service delivery. Per this arrangement, public sector scheduled vaccinations are provided free of charge to the population. However, vaccines outside the routine schedule (Hep A, HPV, MMR, rota, varicella and flu) incurred a service charge. The purpose of the service charge was to support the financial self-sufficiency of the health facilities.

In many respects, the immunization system provides central direction through policy, guidelines and financing of vaccines and cold chain infrastructure. But increasingly, local provincial governments must now take on the responsibility for financing the operations of EPI. Supervision and active surveillance were limited due to human resource constraints. Responding to adverse events promptly in the urban setting has proved to be very important, given the high population concentration, use of hospital facilities for immunization and presence of media centres in urban areas.

In Hanoi, the province has 30 districts, among which 12 districts are in the centre (with a population of 3.2 million) and 18 districts are in surrounding suburbs (with a population of 4 million). There are a total of 584 commune health centres and about 3,000 village health volunteers (VHVs). The EPI Review found that financing operations of immunization services in Hanoi from the district and provincial governments are very unstable, which, without doubt, would have an impact on monitoring and active surveillance. Central funding supports cold chain infrastructure, but waste management is contracted out to a private agency. No clear information could be provided by health management on the quality of the waste management services.

In recognition of the increasing significance of urban issues, the cMYP2016–2020 identifies the growing cities of Hanoi and Ho Chi Minh as additional “ecological zones” of the country, along with Central Highlands, Coastal and Red River, and Mekong Delta Regions. This multi-year plan mandates the development of a specific urban immunization strategy to respond to urban challenges of the provision of private sector ‘non-EPI vaccines’, waste management in the urban context, variable commitments of local governments to operational financing and information management in what is a highly dense yet mobile population setting. A large proportion of these migrants were reported in the cMYP to be “young, temporary and un-registered.”

The National Health Plan 2011-2015 outlines the public health threats from urbanization relating to congestion, change in lifestyles, nutrition, the effects of environmental pollution and the rise of NCDs. But no urban strategy per se is outlined in the document. An updated health strategic plan for the years 2016–2020 notes that rapid industrialization has meant that social services can no longer meet the needs of millions of immigrants and urban labourers in the industrial zones. No specific urban health strategy is outlined in this document.
A set of ‘Reaching Every Community’ guidelines for improved coverage was developed in 2011, but it is unclear as to what extent urban agencies have implemented these guidelines. The guidelines outline a seven-step micro-planning process for coverage improvement, with the seventh step discussing mapping and use of local data to make a list of priority *khu pho* (living quarter) and to *dan pho* (house block) locations for action. It is important to observe that only one brief mention is made of ‘volunteer’ in these guidelines. Although volunteers are central to the social mobilization strategy in rural areas, in the urban context in Viet Nam and most other countries of the region, such volunteer networks are far less developed in urban areas.
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