

OCCASIONAL PAPER

Projection of Foreign Manpower Demand for Healthcare Sector, Construction Workers and Foreign Domestic Workers

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**National Population and Talent Division,
Prime Minister's Office**

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Introduction

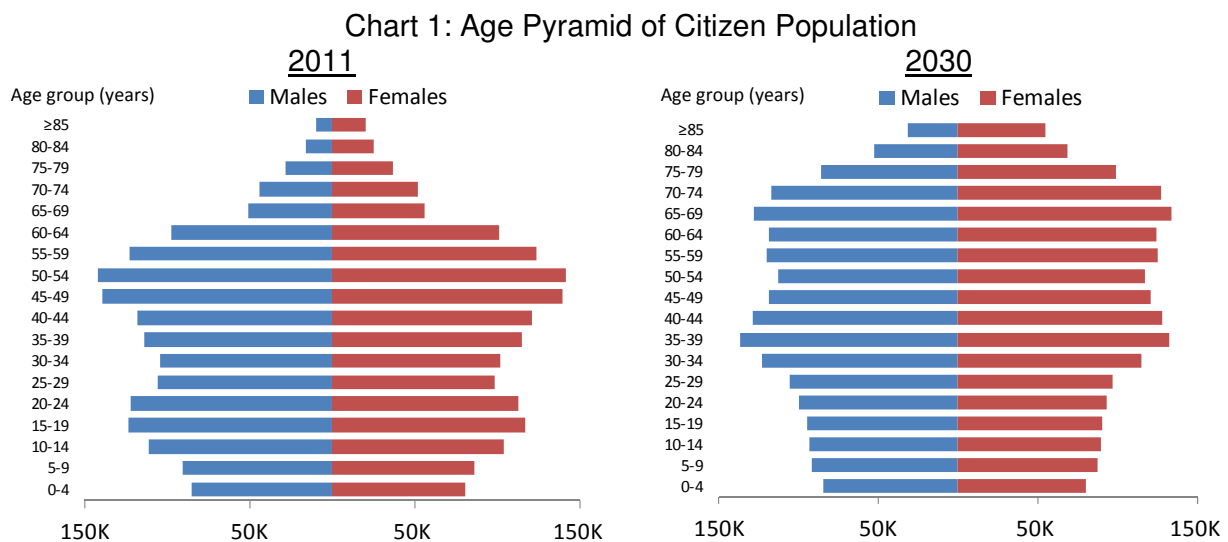
1. This paper discusses the projection of manpower needs in the healthcare sector, and for construction workers and foreign domestic workers, till 2030. These are sectors which primarily serve the needs of Singaporeans. Construction workers build our housing, transport and social infrastructure such as hospitals and educational institutes. Workers in the healthcare sector, particularly in Intermediate and Long-term Care, and foreign domestic workers, play a role in supporting the elderly, and families with children as our population ages and there are fewer young people for each elderly person.

2. The projections are not targets. They are illustrations of the growth and change in the demand for workers in these sectors based on certain assumptions drawn from our demographic and demand trends.

Citizen Population Age Structure

Our citizen population is ageing, with fewer young people for each elderly person

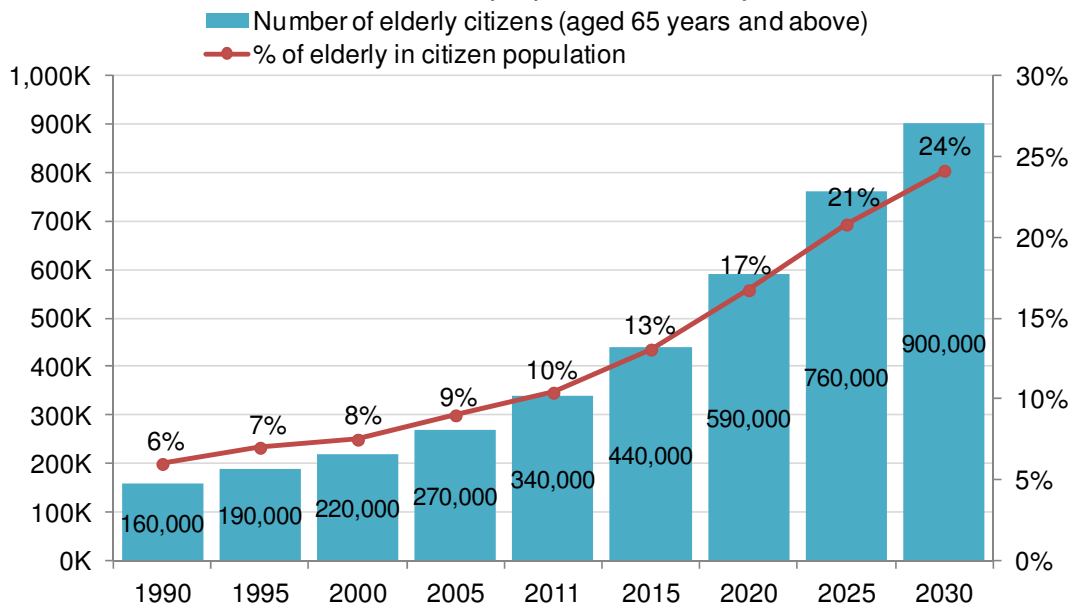
3. Singapore's life expectancy has increased by 10 years over the last three decades: 72 years in 1980 to 82 years in 2011. At current fertility and immigration rates¹, we will have more citizens in the older age groups compared to the younger age groups in 2030, resulting in a 'top-heavy' age pyramid (Chart 1). This effect is amplified without immigration.



¹ Assume current Total Fertility Rate of 1.2 and 20,000 new Singapore Citizens granted every year.

4. At current fertility and immigration rates, the median age of the citizen population will increase from 39 years in 2011 to 45 years in 2030. The number of elderly aged 65 years and above will increase from 340,000 (10%) in 2011 to 900,000 (24%) in 2030 (Chart 2). In particular, the number of citizens aged 80 years and above who will require more care and support, will increase from 70,000 in 2011 to 210,000 in 2030. We anticipate an increasing demand for healthcare services and care-giving support for our growing elderly population.

Chart 2: Number and proportion of elderly citizens²

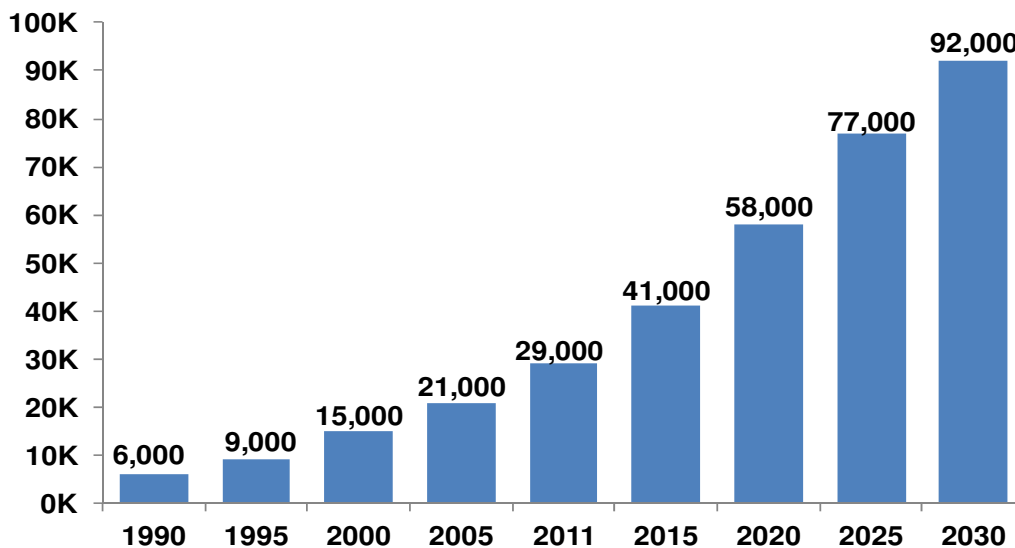


Source: DOS

5. Due to our declining fertility rate, the elderly of tomorrow will have fewer children to care for them, compared to the elderly of today. There are also more singles. More elderly are hence projected to be living alone by 2030. The number of elderly citizens living alone increased from 6,000 in 1990 to 29,000 in 2011, and may reach 92,000 by 2030 (Chart 3). There will be a need for more community and home-based care to support the needs of our elderly.

² Assume current Total Fertility Rate of 1.2 and 20,000 new Singapore Citizens granted every year.

Chart 3: Number of citizen elderly (aged 65 years and above) living alone³



Source: DOS

Singapore's Growing Healthcare Needs

Rising demand for healthcare manpower

6. Our ageing population will also require more healthcare services. First, the elderly require more frequent and intensive medical care. Studies⁴ have shown that they are about four times more likely to be hospitalised than those in the younger age groups, and also require more long-term care in the community. Second, the changing lifestyles and diet of Singaporeans have led to the increased incidence of chronic diseases such as diabetes and high blood pressure. These chronic conditions require more healthcare resources and more care support from family and caregivers. Third, new healthcare investigations and treatments, while improving health outcomes, may also require more healthcare resources for each health episode or condition.

7. We will need to expand our healthcare capacity to meet this increasing demand. At the same time, we will also need to shift our focus from episodic care in the acute hospitals to a more holistic approach involving primary and long term care in the community and home setting. To support this, we will need to expand our professional healthcare workforce comprising doctors, dentists, nurses, pharmacists and allied health professionals (AHPs) by about 32,000 staff by 2030 (Chart 4). This is an increase of about 70% from today.

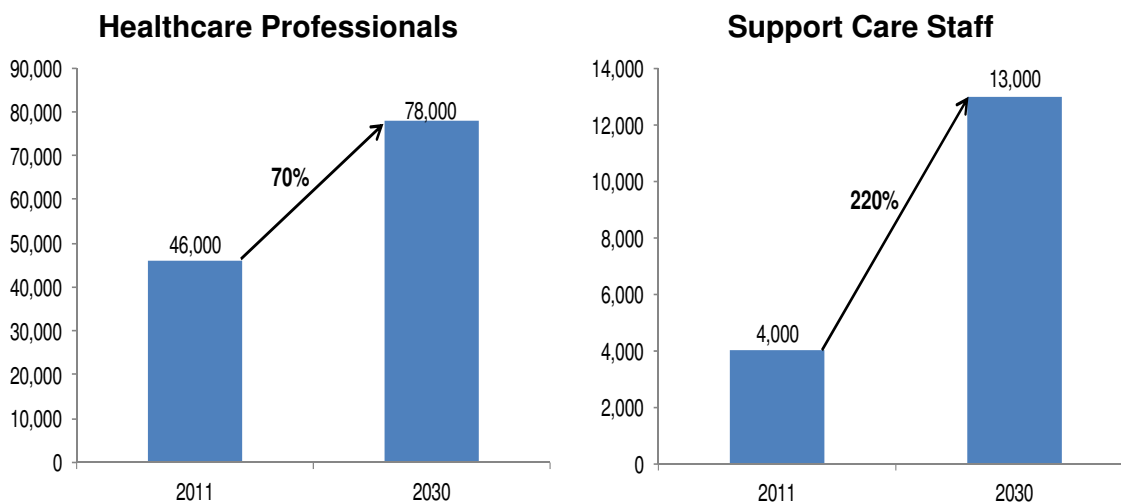
8. Besides healthcare professionals, we will also need to more than double the number of support care staff such as healthcare assistants and nursing aides by 2030. This is an increase of about 9,000 support care staff to help care for patients,

³ Historical trends on living arrangements from the Population Census 2000 and 2010, and General Household Survey 2005 were extrapolated forward and applied onto the projected citizen population projections to derive the projected number of elderly living alone.

⁴ Based on statistics on Singapore's public healthcare utilisation

particularly in the Intermediate and Long-Term Care (ILTC) sector⁵ (Chart 4). Support care staff are important partners to the healthcare professionals in delivering quality care. They include healthcare assistants and nursing aides, who assist nurses by performing tasks such as feeding and bathing of patients, lifting, moving and transferring patients and implementing infection control practices.

Chart 4: Projected Growth of Healthcare Professionals and Support Care Workforce⁶



Source: MOH

We will expand our resident healthcare manpower

9. To expand our resident⁷ healthcare manpower supply, the Ministry of Health will work with the Ministry of Education to increase the annual intake of healthcare training programmes in Singapore, and attract caring and passionate individuals to pursue healthcare careers (Table 5). We will also facilitate mid-career professionals to join the healthcare sector, promote back-to-practice schemes for trained healthcare professionals and support retiring staff who are keen to continue working for as long as they can. At the same time, we will step up efforts to attract Singaporean healthcare professionals who are trained overseas to return to work in Singapore's public healthcare system.

⁵ The ILTC sector provides a comprehensive range of residential and community based healthcare services that cater to the long term care needs of Singaporeans. It includes community hospitals, chronic sick hospitals, nursing homes, sheltered homes for the ex-mentally ill, inpatient hospice institutions, home medical, home nursing and home hospice care services, day rehabilitation centres, dementia day care centres, psychiatric day care centres and psychiatric rehabilitation homes.

⁶ The figures are based on professional registration and healthcare manpower employment data from the public and ILTC healthcare institutions. Singapore's projected healthcare manpower need is based on our projected population and demographic profile in 2030.

⁷ Residents comprise Singapore Citizens and Permanent Residents.

Table 5: Planned Annual Intake Expansions to Healthcare Training Programmes in Singapore

Profession	2011	Target Intake (Steady State)
Medical	336	500
Nursing	1,747	2,700
Pharmacy	164	240
Dentistry	48	80
Allied Health (Physiotherapy, Occupational Therapy, Diagnostic Radiography, Radiation Therapy)	225	290

Source: MOH

Continued efforts to raise productivity of the healthcare sector

10. While growing the supply of healthcare manpower, MOH is also focusing efforts on raising productivity. In the public healthcare institutions, continuous improvement teams comprising members from the different healthcare professions constantly review and enhance the provision of healthcare services through the application of process management tools. More recently, MOH established the Healthcare Cluster Tripartite Workgroup comprising NTUC's Healthcare Cluster of Unions, MOH and the six public healthcare clusters. The workgroup will provide a platform for the continued sharing of best practices and innovations, and will help our public healthcare institutions improve productivity through greater mechanisation, changing workflows and skills upgrading. We are similarly investing in productivity improvements in the ILTC sector, through the use of IT, demand aggregation, redesigning jobs and processes, and skills upgrading and continuous training.

11. Through such productivity efforts, our healthcare institutions will be able to provide patients with better and more cost-effective care, improve the work environment as well as raise the skills and employability of healthcare staff. These will in turn attract more Singaporeans to work in the sector.

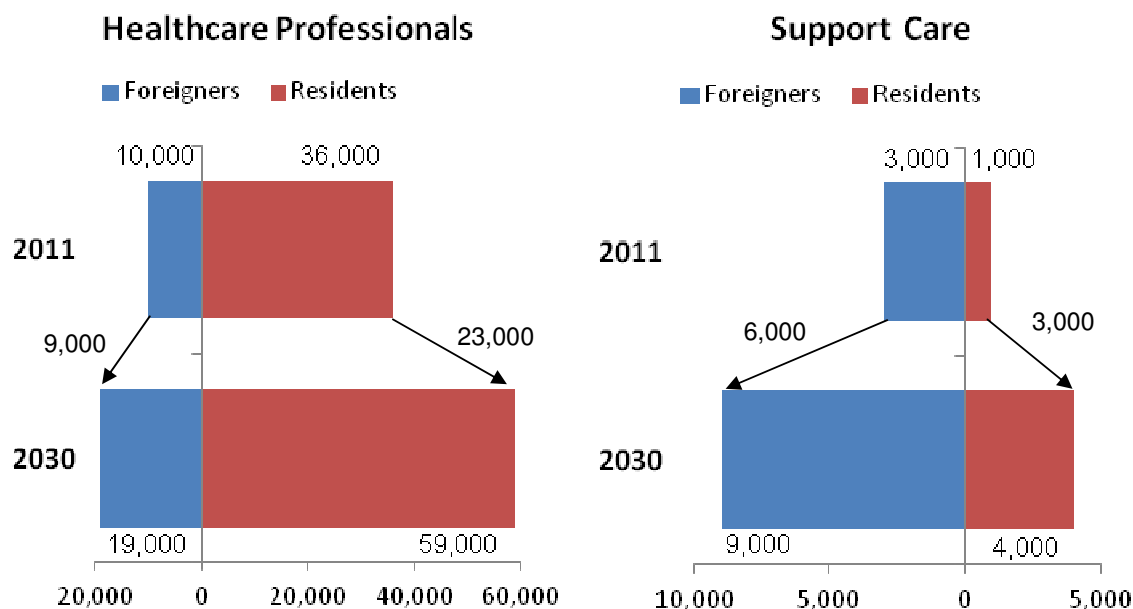
But we will still need foreign healthcare workers to supplement our resident healthcare manpower

12. Even with these measures, our supply of resident healthcare manpower will not be sufficient to meet the sharp increase in manpower demand. Hence, we will continue to need to supplement our resident training pipeline with foreign recruitment. We expect the majority of the 32,000 new positions for healthcare professionals to be filled by our residents, with the remainder filled by foreign healthcare professionals. These foreign healthcare professionals not only help us meet our healthcare service needs, they also add diversity to our local clinical development, research and education scene, and help develop our local capabilities in various clinical specialities.

13. However, it will be increasingly challenging to attract enough residents to fill the support care jobs. While we will continue to enhance the job scope and pay of support care staff in order to attract and retain residents, we expect that 70% of the

new support care manpower demand, or 6,000 new positions, will need to be met through foreign recruitment. Chart 6 shows the distribution of the resident and foreign healthcare manpower from 2011 to 2030.

Chart 6: Projected Growth of Healthcare Professional and Support Care Workforce⁸



Source: MOH

14. There are various initiatives in our public healthcare institutions which support the assimilation of the foreign workforce to our local culture and promote good fellowship and mutual understanding. For example, there are local language classes, such as Mandarin, Malay and various dialects, to help improve communication with non English-speaking patients.

Foreign Domestic Workers

Foreign domestic workers provide care-giving support for families with elderly and children

15. Even as centre-based care facilities are expanded to provide care for our elderly and children, foreign domestic workers (FDWs) will continue to play a role in supporting families with elderly and children. Having FDWs to assist with care-giving duties allows Singaporeans, especially women, to enter or remain in the workforce. FDWs can play a complementary role to the ILTC sector by helping to provide care-giving services for the elderly in the familiar environment of their own home with their family and friends. Currently, Singaporean families with an elderly relative aged 65 years and over, and staying in the same household, are able to enjoy a concession of \$95 on the monthly foreign domestic worker levy. On top of this, families caring for

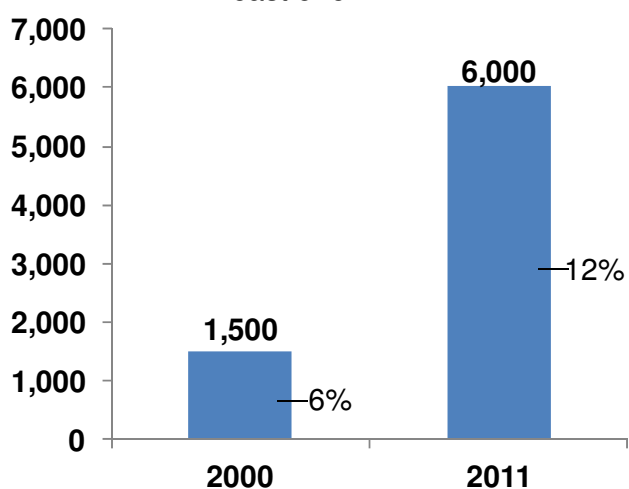
⁸ The figures are based on professional registration and healthcare manpower employment data from the public and ILTC healthcare institutions. Singapore's projected healthcare manpower need is based on our projected population and demographic profile in 2030.

frail elderly or persons with disability can apply for the Foreign Domestic Worker Grant of \$120 per month⁹.

16. Of the resident households with at least one FDW in 2011, the majority (71%) were households where both spouses were working. The majority (75%) were also households with children (aged 12 years and below) and/ or elderly¹⁰.

17. The increase in demand for FDWs among elderly non-working resident households has been strong. In 2011, 12% of elderly non-working resident households had at least one FDW, up from 6% in 2000 ([Chart 7](#)). Other households also registered an increase due to more households requiring support for elderly and children.

Chart 7: Number and proportion of elderly non-working resident households with at least one FDW



Source: DOS

18. With an expected increase in the number of resident households with young and/ or elderly, and an increase in number of households where both spouses are working, we anticipate that demand for FDWs will rise from 198,000¹¹ in 2011 to about 300,000 FDWs by 2030. However, the supply of FDWs could be constrained as demand from other countries also grows. The job opportunities in the major FDW source countries could also improve, or these countries could impose new requirements and restrictions on those who work in this sector.

⁹ Households with a per capita monthly income of \$2,200 or less are eligible for the Foreign Domestic Worker Grant. Please refer to the website of the Centre for Enabled Living for more details.

¹⁰ Figures are based on resident couple-based households, i.e. households with a married head and spouse.

¹¹ This figure refers to the stock of FDWs as at end-Dec 2011. It differs slightly from MOM's employment figures which refer to FDWs employed at any time in the month of Dec, in line with internationally accepted statistical definition of employment.

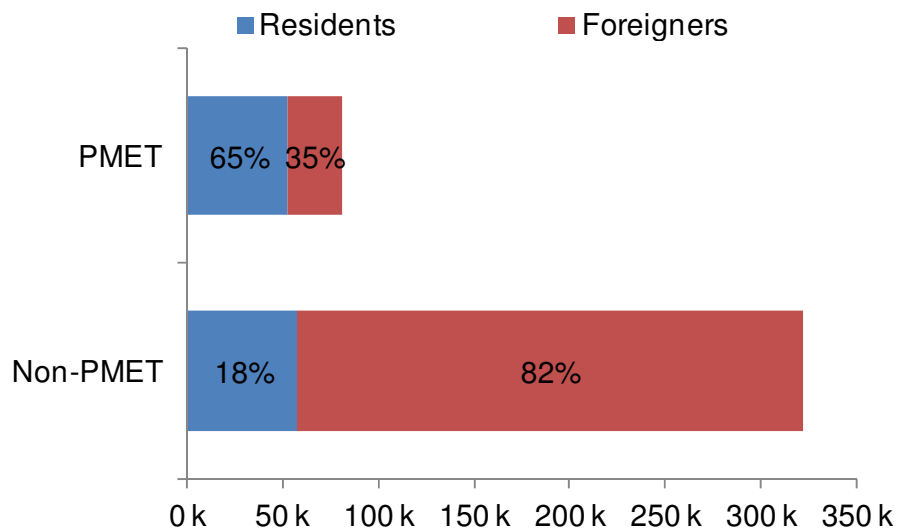
Built Environment Sector

Foreign workers help to build our infrastructure

19. The Government is ramping up infrastructure development. This includes doubling our rail network over the next 10 years, launching more Build-To-Order housing projects, creating more social and educational facilities, and building more nursing homes and hospitals to cater to the ageing population.

20. The construction workload is expected to increase by about 50% as compared to the current level in certain years, depending on the pace of infrastructure development. To support the manpower needs in the built environment sector, the Government has put in place various manpower development programmes including the built environment undergraduate scholarship, diploma scholarships/sponsorship and apprenticeship programmes to increase the resident participation in this sector ([Chart 8](#)). However, given the tight resident manpower supply for this sector, we will still require foreign workers to complement the resident workforce to support our infrastructure development needs.

Chart 8: Manpower Composition of Built Environment Sector Workforce, 2011



Source: NPTD's estimates using data from MOM; Non-resident PMETs comprise Employment Pass and S Pass holders.

21. However, we should not grow the foreign construction workforce without constraints. The Government has therefore introduced measures to promote productivity in the built environment sector through the Construction Productivity Roadmap in order to reduce reliance on foreign workers. These include tightened legislation since July 2011 to require more buildable designs and adoption of labour-efficient methods. Manpower policies have also been tightened to encourage more reliance on productivity improvements, with the progressive reduction in the Man-Year Entitlement (MYE) and increase in the foreign worker levies tiered by skill level. [Table 9](#) illustrates how the foreign worker levies for hiring construction Work Permit

holders have increased over the last two years, particularly for basic-skilled foreign workers, with increases already announced to be phased in till July 2013¹².

Table 9: Dependency Ceiling and Monthly Levy per Construction Work Permit Holder, 2011-2013

Dependency Ceiling (DC)	Worker Category		Jul 2011	Jan 2012	Jul 2012	Jan 2013	Jul 2013
1 local full-time worker to 7 Foreign Workers	Within MYE quota	Higher-skilled	180	200	250	280	300
		Basic-skilled	230	300	350	400	450
	MYE waiver	Higher-skilled	380	450	500	550	600
		Basic-skilled				650	750

22. Even with these measures in place, we expect demand for construction workers to remain strong in the next 2-3 years, due to the increased construction workload. We expect the demand for construction Work Permit holders to increase from some 250,000¹³ in 2011 to about 280,000 in the next 2-3 years. With the projected productivity improvements under the Construction Productivity Roadmap, demand for construction Work Permit holders should be within the range of 250,000 to 300,000 by 2030.

Summary

23. As the citizen population ages, demand for services such as healthcare and home-based care will increase in tandem. We project a demand for 91,000 healthcare workers in 2030, of which about 28,000 are projected to be foreign healthcare workers (19,000 professionals and 9,000 support care workers), compared to 13,000 foreign healthcare workers out of a total of 50,000 in 2011. The number of FDWs is projected to increase to 300,000 by 2030.

24. Notwithstanding the concerted efforts to increase productivity, the built environment sector is projected to need between 250,000 – 300,000 construction Work Permit holders by 2030 compared to 250,000 in 2011.

¹²More details on levy rates and quota for hiring foreign workers are available at <http://www.mom.gov.sg/foreign-manpower/foreign-worker-levies/Pages/levies-quotas-for-hiring-foreign-workers.aspx>

¹³ This figure refers to the stock of construction Work Permit holders as at end-Dec 2011. It differs slightly from MOM's employment figures which refer to Work Permit Holders employed at any time in the month of Dec 2011, in line with internationally accepted statistical definition of employment.