DEMOGRAPHY

THE IMPACT OF DEMOGRAPHIC CHANGES IN MALTA ON HEALTH AND THE HEALTH SYSTEM OVER THE PAST TWO DECADES

Kathleen England, Sandra Buttigieg

ABSTRACT

Population growth, ageing, changing fertility patterns and net immigration within the working age group have characterised the demographic transformation in Malta over the last twenty years. Life expectancy has continued to increase and is above the EU average. However population growth and ageing were associated with an increase in morbidity and healthcare usage resulting in increased demand on the healthcare system. Net immigration has been associated with an increase in the cultural diversity of the population and has had an impact on the epidemiology of various conditions. Planning and delivery of health care services needs to become more targeted to meet the needs of diverse communities within the population in order to maintain and continue to build on the healthcare gains achieved so far.

Introduction

Many countries in Europe are currently experiencing a decline in the rate of population growth, population ageing and an increase in life expectancy [1], [2]. The average life expectancy at birth in the European Union in 2017 was 78.3 years in males and 83.5 years in females [3], while the median age has increased to 42.8 years[4]. In most EU Member States, this is accompanied by fertility levels which are below replacement levels[5] and the average EU fertility rate in 2017 was 1.59 [3]. Countries within the EU are also experiencing varied migration flows. In 2017, 2.4 million immigrants from outside the EU immigrated into the European Union[6] Also some countries especially in Eastern Europe are also experiencing high emigration rates of their working age population [1]. These people often migrate to other EU countries in search of work. Over the past 20 years Malta has also experienced changes in its population size and structure. Life expectancy (LE) has continued to increase and in 2017, LE in males was 80.2 years whilst that in females was 84.6 years, both above the EU average [3]. The median age in 2017 was 40.6 years [4]. Over the past two decades, demographic changes in Malta have impacted upon health and healthcare in a number of ways. While many changes have taken place within the healthcare system [7], these changes have not necessarily kept up with the evolving population changes. This paper aims to discuss the main demographic changes in Malta occurring over the past 20 years in light of their impact on the health of the Maltese population, and on the Maltese healthcare system.

Demographic trends in Malta

A number of demographic changes occurred during the period 1998-2017 in the Maltese Islands. The estimated resident population grew from 385287 in 1998 [8](mid-pop 1998) to 468056 in 2017 (mid-population 2017)[9] resulting in a 21% increase in the resident population. Population growth over this period changed from a relatively stable population growth rate up to 2011 to a much faster rate thereafter [10] (Figure 1).

This population growth was a result of different dynamics occurring across different age groups. Following the second world war similar to other European countries, Malta experienced a baby boom, which led to the rapid growth in ageing population sixty to seventy years later [11]. Gains in life expectancy over the past twenty years, which were mainly attributed to a decrease in mortality in the older age groups [12], together with a low fertility rate resulted in an increase in the older population, with persons over 65 years making up 19% of the population in 2017, when compared to 12% in 1998 (Figure 1).

A cause for concern is the fertility rate which has fallen from a low level of 1.84 in 1998 to a record low level of 1.26 in 2017 [3]. However, in contrast, the number of births has been increasing from 2007 onwards and in 2017 the number of births was similar to that observed 20 years ago. This increase in the number of births despite a decrease in the number of births per woman is mainly attributed to the increase in the number of women of child bearing age, due to net inward migration [13],[14].

In fact the number of deliveries by non-Maltese women increased from 4.9% of all deliveries in the year 2000 to 22.2% of all deliveries in 2017 [15]. Migration has affected Malta like the rest of Europe since the post second world war period[16][17]. Net immigration levels were quite low in the past, with only 5% of the population in 1995 being born outside Malta, most of them being return migrants [18].

Irregular migrants mainly from Africa started coming to Malta from 2005[19], however the greatest increase in net migration started in 2012 and continued to increase, contributing to the increased population growth in recent years. The recent increase in net migration is mainly composed of migrants from both other EU countries, as well as from countries outside the EU and outside Europe, who have entered the Maltese labour market. Indeed, 76% of net migrants in 2016 were under 40 years of age [13], resulting in an increase in the population aged 15-44 as shown in Figure 1 below

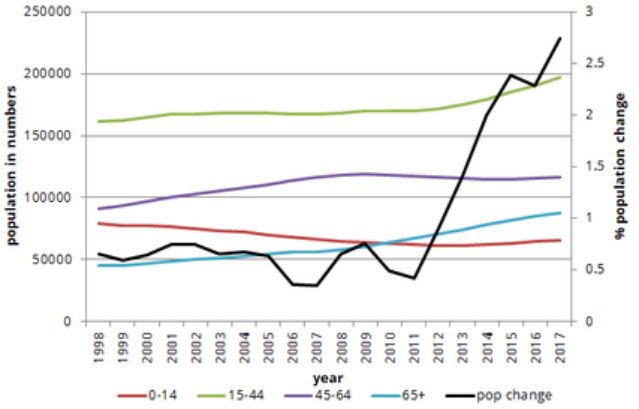

Figure 1: Trends in population figures by age group and % yearly population change from 1998-2017(10)(9)

Changes in the age structure of the population have also been accompanied by changes in the male to female ratio. For the first time, in 2014 men started to outnumber women [13] with a male to female ratio of 101.8 in 2017 compared to 98.4 in 1998. Whilst traditionally boys outnumber girls at birth and in the younger age groups (0-14 years), other age groups have observed an increase in the male to female ratio which can be attributed to an increase of inward migration of more males compared to females[13] as well as to improved mortality outcomes in males.

Demographic impact on public health

While an increase in life expectancy is a positive outcome, whether or not a person is spending that increased time in good health reflects his/her quality of life and the potential increased need for healthcare services. Over the last 10 years (Figure 2), life expectancy at age 65 years in females increased from 19.4 to 22.1[3] years. However, on average less than 60% of those years were spent in good health. In males while life expectancy at age 65 years is lower than that in females (16.2 in 2005 and 19.7 in 2016)(3), more years were spent in

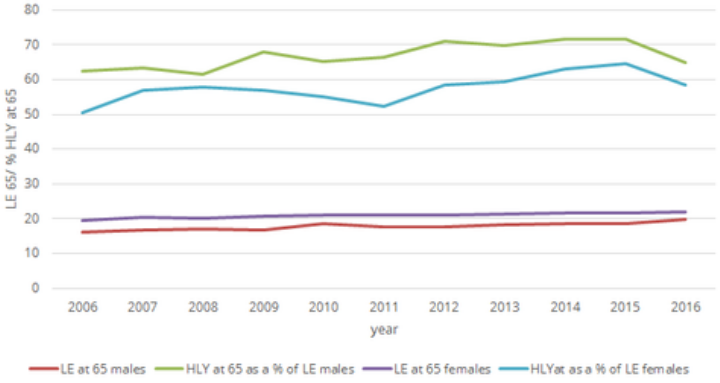

Figure 2: Life expectancy at 65 and Healthy life years at 65 as a % of life expectancy by gender (3)

According to the European Health Interview Survey carried out in 2014/15 [20], 58.7% of males and 65.1% of females aged 65 years reported a long-standing health problem, and 11.8% of males and 19.6% reported being severely limited in performing activities of daily living because of health problems. Morbidity conditions in persons 65 years and over are common (Figure 3) with the main prevailing conditions being arthritis, obesity, hypertension and diabetes in those aged 65+ years [20]. Major contributors to mortality in old age (65+) include cardiovascular diseases, neoplasms - mainly lung and colorectal cancers, pneumonia, diabetes and dementia [21].

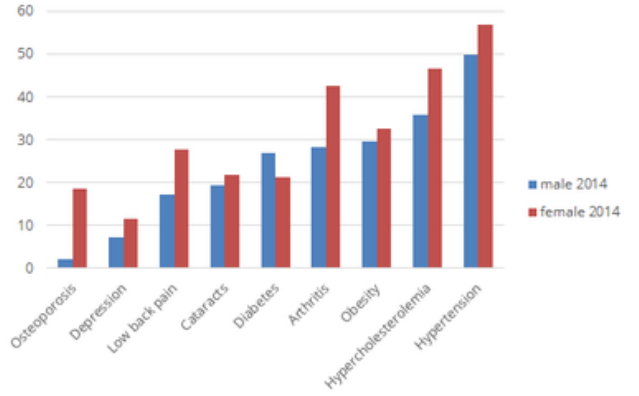

Figure 3: Major causes of morbidity in persons 65years and over (20)

Increased inward migration of a younger population as well as Malta being an attractive tourist destination has resulted in an increase in the heterogeneity of the population. This together with a more liberal society are factors which have contributed to the rise in STIs [22] [23] including HIV [24]. The incidence of HIV increased by over 50% from 2008 to 2017[25]. This increase is largely being driven by new cases amongst non-Maltese nationals. These accounted for 72% of new cases in 2018 compared to 40% in 2012 [26]. As a consequence, in 2016, Malta reported one of the highest rates of new cases of HIV in the EU/EEA[27].

A phenomenon which has been observed for some time now is the decrease in deliveries to Maltese nationals complemented by an increase in deliveries by foreign nationals [28] mostly from western and eastern Europe, but also from Asia, Middle East and Africa [15]. A local study comparing pregnant women of Maltese and foreign nationality from 2008-2017 found that whilst women of foreign nationality were less likely to be obese and have diabetes, they were more likely to have significant lower rates of first trimester antenatal visits, significant risk of more caesarean section rates and significant risk of having very lower birth weight babies [29]. Different cultures may require the healthcare services to put additional efforts to ensure the wellbeing of the pregnant mother and her baby. Also, as maternal age is increasing this too is associated with potentially increased risk during pregnancy[15][30].

Demographic impact on healthcare services

Major contributors to population change with a visible impact on the Maltese healthcare system include population growth, the ageing population and increased net immigration. These demographic changes primarily resulted in the population becoming more culturally diverse with corresponding impact on the health and healthcare needs of the population. The challenges of the ageing population had already been identified in 1987 with the establishment of a Parliamentary Secretary for the Care of the Elderly and the setting up of the Elderly Care Department in that year [19] [31].

A University of the third Age was also opened in 1992. Other changes, which were the result of pressures caused by the ageing population included the growth of residential homes for the elderly managed by public-private partnerships, the reorganisation of Zammit Clapp Hospital and Karen Grech Hospital as acute rehabilitative geriatric settings, and the setting up of a Commissioner for the Elderly [19].

The opening of a Migrant Health Unit also corresponds to the period when Malta was experiencing a high influx of irregular migrants. All these changes occurred against the background of major political changes for Malta, namely Malta's EU accession in 2004, which spearheaded changes within the healthcare system, as well as facilitated mobility of EU citizens across member states.

Population growth and population ageing resulted in increasing demand on healthcare services, which is bound to continue both due to the influx of foreigners and more so due to the ageing population. Figure 4 shows increase in the utilization of various services within St Lukes /Mater Dei Hospital [32][33]. Other services including primary care and Sir Paul Boffa Hospital/Sir Anthony Mamo hospital have also seen a rising trend in the utilization of their services [32][33].

Whilst an increasing number of visits to the A&E department has been observed between 2005-2017 for both Maltese residents as well as foreign residents and non-residents, a proportional increase in A&E attendance has been observed in both foreign residents and non-residents (Figure 5) with a corresponding decrease in the proportion of visits by Maltese residents.

Health expenditure as a percentage of GDP increased from 6.5 in the year 2000 to 9.6 in 2015. Health Vision 2000 had in 1994 already predicted increased demands on the healthcare system due to demographic shifts [31]. This increase in health expenditure was not only due to growth and ageing of the population, but also due to more advanced health technology, due to the provision of increased treatments, medicines including more costly medicines[19][31] as well as infrastructural developments including Mater Dei Hospital and Sir Anthony Mamo Hospital.

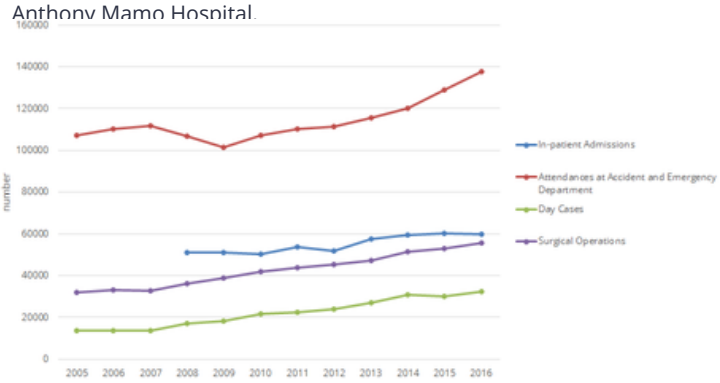

Figure 4: Trend in hospital (St Lukes/ MDH) activity between 2005-2017 [32][33]

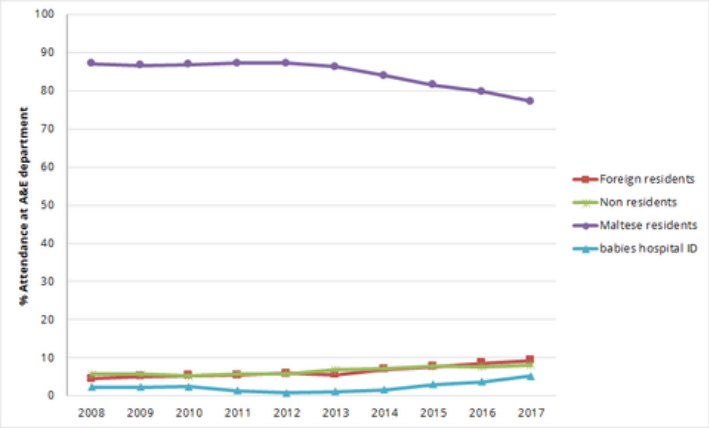

Figure 5: Trends in visits to the A&E department of SLH/MDH by type of resident[32]

Discussion: Looking to the future

Over the past twenty years Malta has undergone a rapid demographic transition with population growth, population ageing and change to a multiethnic population. Although ageing of the local population was a predictable event, the healthcare system did not prepare well enough for it but rather attempted to respond in a reactive manner with a resulting increasing strain on the main acute hospitals, emergency services and primary care services.

The needs of the ageing population emanate both from health and social services, which are often interrelated and need to be considered collectively. Better coordination and planning between the different levels of healthcare is also essential [2]. While the need for this has been recognized in the past [7] [19] [18] [31], most major health projects were constructed in isolation without adequate system-wide reorganization.

Indeed, despite the intentions by policy makers for the construction of Mater Dei Hospital to be supported by further development of primary, community and long-term health services, so as to decrease the load on Mater Dei, this in actual fact did not materialise. It had also been envisaged way back in 1994, that there would an increase in community health and social services support for the older people to remain housed in the community. This would then reduce the load on hospitals and residential care [31].

However, while some community health and social services were developed and are still running, demand rapidly outstripped supply with the impact immediately visible by overcrowding of the A&E Department and the main hospital operating at close to full capacity. Policy makers are thus attempting to balance demand and supply when it comes to the demographic shifts of the Maltese populations by investing in more public-private partnerships in geriatric settings and reorganising secondary care so as to cope with the acute inpatient population's needs.

A more positive undertaking by policy makers in labour employment, health, social policy and education has been the promotion of active ageing.

The National Strategic Policy for Active Ageing focuses on measures to promote work participation of the older age groups including involvement in the voluntary sector, promotion of social integration and promotion of independent living with effective health interventions focusing on the needs of the elderly [34].

The National Health Systems Strategy published in 2014 aimed to take a life course approach in developing health strategies with specific focus on certain population groups including children, the elderly and vulnerable groups. It also stressed the need to keep the older people in the community as far as possible, as well as emphasised the importance of strengthening health promotion, healthy behaviour and early diagnosis [35] in view of high proportion of morbidities, including hypertension, obesity and diabetes being more prevalent in older age groups. There is clear evidence of the benefits of maintaining a healthy lifestyle, as well as of exercising in old age[36].

The increasing social diversity due to net immigration being observed in recent years requires special attention to the healthcare needs of the different migrant groups. A study comparing utilization of preventive healthcare services amongst non-nationals in five different EU countries found that in most countries non-nationals particularly from countries outside the European Union had poorer access to preventive health services than nationals of that country. However this observation was not found in Malta and though may be due to limited sample size it is possible that the public health service in Malta does target these vulnerable groups[37].

The Mental Health Strategy also highlights the increased risk of mental disorders amongst migrants and their increasing demand on the mental health services[38] . However little research is available locally on migrant health and further research into this is needed to identify healthcare needs of migrants and gaps in the healthcare system vis a vis migrants.

The Maltese population today is markedly different to that of 20 years ago. Population growth, population ageing and the multi-ethnic society that has developed means that the healthcare and social needs of this population are changing and health care systems need to plan and adapt to these changes if we wish for Malta to achieve good health outcomes.

The demographic shifts have transformed the population into a heterogeneous one, whereby the social determinants of health and illness have become an urgent priority to be addressed in the planning and evaluation of services that should be more tailor-made to suit the diverse socio-economic strata of the population.

Indeed, the principles of universality and solidarity that have characterised the Maltese political system including education, health and social policies should remain prominent irrespective of the major challenges emerging from the demographic shift. Indeed, in keeping with the mantra of the Sustainable Development Goals[39], Government needs to make sure that no one is left behind.

References

1. England K, Azzopardi-Muscat N. Demographic trends and public health in Europe. Eur J Public Health. 2017;27:9–13.
2. Rechel B, Doyle Y, Grundy E, Mckee M. Health Systems and Policy Analysis. Policy Brief 10. How can health systems respond to population ageing? WHO Reg Off Eur. 2009;43.
3. Eurostat. Eurostat database [Internet]. [cited 2019 Mar 8]. Available from: http://ec.europa.eu/eurostat/data/database
4. Eurostat. Population Structure and Ageing [Internet]. Available from: https://ec.europa.eu/eurostat/statistics-explained/index.php/Population_structure_and_ageing
5. European Commission. Population ageing in Europe. 2014.
6. Eurostat. Migration and Migration Population Statistics. 2019.
7. Azzopardi-Muscat N, Buttigieg S, Calleja N, Merkur S. Health Systems in Transition: Malta (Vol. 19 No. 1 2017). Malta Heal Syst Rev. 2017;19(1).
8. World Bank. Population [Internet]. [cited 2019 Mar 8]. Available from: https://data.worldbank.org/indicator
9. National Statistics Office. Population 2017. Personal Communication 21st October 2018.
10. Bank W. Population Growth Annual % [Internet]. [cited 2019 Mar 12]. Available from: https://data.worldbank.org/indicator/SP.POP.GROW?locations=MT
11. Vella A. Baby Boomers in Retirement: An Analysis. Univ Malta. 2013;(May).
12. England K, Vogt T, Azzopardi Muscat N. The evoluation of life expectancy in Malta over half a decade. Synapse. 2016;(3).
13. NSO. Population Statistics Revision (2012-2016). 2018.
14. National Obstetric Information System. Maternal Parity Accessed on the 16th March 2019 [Internet]. Available from: https://deputyprimeminister.gov.mt/en/dhir/Pages/Registries/births.aspx
15. Gatt M, Borg K. NOIS Annual Report, 2017. 2018.
16. Hiam L, Dorling D, Harrison D, Mckee M. What caused the spike in mortality in England and Wales in January 2015? J R Soc Med. 110(4):131–7.
17. Jakovljevic M, Netz Y, Buttigieg S, Adany R, Laaser U, Varjacic M. Population aging and migration - history and UN forecasts in the EU-28 and its east and south near neighborhood - one century perspective 1950-2050. Glob Heal. 2018;14((1)):30.
18. Azzopardi-Muscat N. Health Care Systems in Transition Malta. Eur Obs Heal Care Syst. 1999;
19. Azzopardi N, Neville M, Calleja A, Cylus J. HiT-Malta. 2014;16(1).
20. Gauci D, England K, Calleja N. European Health Interview Survey (EHIS) 2014/15 Summary Statistics. 2018.
21. Directorate for Health Information and Research. National Mortality Report 2015.
22. Donachie A, Spiteri G, Barbara C, Melillo T, Hadad R, Farrugia AG. Lymphogranuloma venereum (LGV) in men who have sex with men (MSM): a re-emerging problem , Malta , 2018. 2018;1–5.
23. Independent TM. The naked truth: up to 80% of sexually active people encounter one of the HPV viruses.
24. Loving M. HIV in Malta - A snap shot. 2016.
25. WHO. HIV/AIDS Surveillance in Europe 2018.
26. Dr Tanya Melillo. Trends in new cases of HIV; 2012 -2018. Personal Communication 13/09/2019.
27. ECDC. Annual Epidemiological Report for 2016 HIV and AIDS (Surveillance Report). Eur Cent Dis Prev Control. 2018; (August).
28. Gatt M, Buttigieg S. National Obstetric Information System (NOIS) Report 2015. 2015.
29. Gatt M, Muscat-Baron Y, Calleja N. Obstetric outomes in mothers of Maltese and Non-maltese nationality. Are there inequalities. In Malta Medical School Conference 29th November 2018; 2018.
30. Buttigieg S, Connor P. Migrant integration policy index health strand: country report Malta. 2017.
31. Xerri R. Health Vision 2000. 2000.
32. Clinical Performance Unit MDH. Personal communication with Dr Sandra Distefano. 2019.
33. National Stastics Office. Social protection: Malta and the EU 2010. National Statistics Office Malta 2011
34. National Commission for Active Ageing. National Strategic Policy for Active Ageing. 2014;
35. Parlimentary Secretariat Health. A National Health Systems Strategy for Malta. 2014;104.
36. Patterson L. Making our health and care systems fit for an ageing population: David Oliver, Catherine Foot, Richard Humphries. King's Fund March 2014. Age Ageing. 2014;43(5):731.
37. Rosano A, Dauvrin M, Buttigieg SC, Ronda E, Tafforeau J, Dias S. Migrant ' s access to preventive health services in five EU countries. 2017;(August).
38. Office of the Deputy Prime Minister Ministry for Health. Building Resilience Transforming Services A Mental Health Strategy for Malta 2020-2030 Public Consultation Document. 2018;
39. United Nations. Sustainable Development Goals accessed on the 13th March 2019 [Internet]. Available from: https://www.un.org/sustainabledevelopment/sustainable-development-goals/