PwC would like to express sincere gratitude to the local public and private hospitals, as well as insurance representatives that contributed to the development of this publication through their knowledge, experience and time.

Special thanks goes to the following for their time and for providing us with invaluable insight:

- Dr. Natasha Azzopardi Muscat – Chief Medical Officer, MHEC
- Dr. Neville Calleja – Director, Department of Health Information and Research, MHEC
- Dr. Martin Balzan – President, Medical Association of Malta (MAM)
- Dr. Josie Muscat – Chairman, St. James Hospital Group
- Ms. Catherine Calleja – Chairman of Health Sector, Malta Insurance Association
In 2012, healthcare is the fastest growing industry sector in the economy.

Healthcare is an important priority for Malta. The substantial investment in the healthcare infrastructure is testament to this. The Government is allocating a substantial portion of its budget to health. Spurred inter alia by ageing, technology, chronic disease as well as the growing expectations of the population; health spending is growing faster than inflation. Exacerbated by the global recession, governments in all countries face increasingly gaping deficits, making private investment, health insurance and expertise even more vital to address their health system needs. Like other European countries, the challenge in Malta is to reconcile health needs, and public and professional expectations, with the available financial and physical resources. More and more, the public sector is recognising the need to enhance its efficiency and effectiveness through improved hospital management, quality assurance procedures, amongst other measures.

In recognition of these accelerating factors, PwC is providing through this publication an outline of Malta’s key healthcare activity indicators. The objective is to give insight into current practices in the local healthcare sector, and disseminate emerging trends, opportunities and challenges. This publication focuses on one aspect of healthcare delivery services – hospitals. It is part of an ongoing effort intended to address the healthcare sector in its entirety, including the elderly, long-term care, technology and innovation, such as mHealth, which have been excluded in this paper. We hope that it helps stakeholders – the service providers, payers, and the users themselves - understand, plan and participate in the challenges ahead.

Kevin Valenzia
Territory Senior Partner
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Introduction and background
**Introduction**

The healthcare sector is extremely broad and diverse. It is highly regulated and socially very sensitive since it deals with a very special commodity: life.

Good health service means the delivery of effective, safe, quality care to those who need it, when needed and with minimal waste\(^1\). Key determinants for an effective health service delivery are primarily health facilities (the Providers) and finance (the Payers) operating under a sound jurisdiction. These are in turn dependent on the availability of resources and support services.

Healthcare delivery is an important priority for Malta. The substantial investment in the healthcare sector is testament to this. More recently, Government also started applying the concept of *clinical governance* in healthcare, to maintain and improve the quality of patient care within the health system.

*Figure 1: A holistic approach to healthcare delivery*

A holistic view of healthcare delivery inevitably includes the elderly and long-term care, as outlined in the figure above. However, this publication excludes the review of the elderly and long-term care, and instead focuses on providing an outline of Malta’s key healthcare activity indicators. The first part focuses on healthcare facilities outlining recent trends in the number of hospital beds, operating theatres, human resources and their utilisation within the health sector.

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Like other European countries, the challenge in Malta is to reconcile health needs, public and professional expectations with the available financial and physical resources. For this reason we then look into the financial resources, outlining inter alia, the trends in total health expenditure, its relation to other EU countries and the main financing sources.

Looking ahead Malta, like its neighbouring countries is facing a number of challenges: the demographic and epidemiological transitions associated with an ageing population, advances in medical technologies and pharmaceuticals, rising public expectations and persistent health inequalities.
Healthcare in Malta

“A society that fosters an environment that is conducive to persons attaining their maximum potential for health and well-being.”
Mission statement set by the Ministry of Health, the Elderly and Community Care (MHEC), Malta

Providers
The present health service in Malta can be considered as essentially hospital-based. Specialised ambulatory services, inpatient care and highly specialised care all take place side-by-side in the main general hospital, Mater Dei, and in some other private and public hospitals, including private clinics. In terms of hospital-based care, the Government has recently embarked on the development of a new oncology centre, which should be operational by 2013.

Primary healthcare is provided by both the private sector and the state. These two systems of general practice function independently of one another. Private primary care is mostly provided by general practitioners and specialists who set up their practice within retail pharmacies. The more established practitioners and specialists typically have their own clinics. The private sector accounts for approximately two thirds of the workload in the primary healthcare. In terms of the state primary healthcare system, the services cover general practice, which is the care offered through health centres, community care, immunisation and the school health service.

Payers
Healthcare in Malta is based on the Beveridge model as it is primarily funded by the tax system and operates by means of an integrated health services system that is organised at a national level. It is estimated that c. 65% of total health expenditure is financed through general taxation. This is complemented, to a small extent, by private financing through Out-Of-Pocket (OOP) expenditure and health insurance. The latter is a voluntary system which provides supplementary financing and does not replace any mandatory statutory contributions.

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3 In the Beveridge model, funding is based mainly on taxation and is characterized by a centrally organized National Health Service, provided mainly by public health providers. This model, developed in post-Second World War Britain, is based on universal coverage where public financing is used to fund more centralized health-care systems. This is the basis for the British National Health System, as well as the Swedish and Italian health-care systems.
4 ‘Healthcare systems — an international review: an overview’ N. Lameire, P. Joffe and M. Wiedemann University Hospital, Gent, Belgium.
National Health Accounts - global health expenditure database.
The approved estimate for recurrent expenditure within the Ministry of Health, the Elderly and Community Care (MHEC) has increased by 8% compared to 2011\(^5\).

\(^5\) Approved estimate for MHEC in 2012 is €376 million.
**Patients**

Healthy life years is a European structural indicator that measures the life expectancy of a person based on a healthy condition without disability – it reflects the quality of life and is used as a measure of a nation’s health status.

*Figure 3: Healthy life years at age 65 (in 2010)*

In 2010, the healthy life year indicator showed that on average, men in Malta at the age of 65 are expected to live a further 12 years in a healthy condition. Similarly, women aged 65 are expected to live a further 11.9 years. This compares favourably to the EU-27 average.

In 2010, coronary heart disease and stroke were the major cause of mortality and morbidity in Malta. This was followed by accidents for individuals under 65 years while cancers accounted for 29% of deaths. Other local health problems include diabetes, with a prevalence of 10% in adults over the age of 35 years.

Source: Adapted from Eurostat News release 60/2012- 19 April 2012

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Healthcare delivery: Where are we?
Healthcare indicators

“Optimal care delivery remains the cornerstone of the Mater Dei Hospital, and therefore rising and maintaining high levels and standards of care remains, consistently, our scope and purpose.”

Hon. Joe Cassar, Minister of Health, the Elderly and Community Care, PR 0685 (23.03.12)

Healthcare facilities

Number of hospital beds

Malta currently has a total of 1,833 hospital beds. Mater Dei is the main acute general hospital in Malta, housing a total of 825 beds. It is also the teaching hospital used by all medical, dental and pharmacy students. The new oncology centre adjacent to Mater Dei hospital is expected to accommodate a further 74 beds, of which 16 are expected to be allocated exclusively for palliative care⁸.

Table 1 : Number of hospital beds in 2012

<table>
<thead>
<tr>
<th>Name</th>
<th>Number of beds</th>
<th>%</th>
<th>Type of hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Sector</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mater Dei Hospital</td>
<td>825</td>
<td>45%</td>
<td>Acute General Hospital (HP 1.1)</td>
</tr>
<tr>
<td>Gozo General Hospital</td>
<td>158</td>
<td>9%</td>
<td>Acute General Hospital (HP 1.1)</td>
</tr>
<tr>
<td>Mount Carmel Hospital</td>
<td>512</td>
<td>28%</td>
<td>Mental Health and Substance Abuse Hospital (HP 1.2)</td>
</tr>
<tr>
<td>Sir Paul Boffa Hospital</td>
<td>41</td>
<td>2%</td>
<td>Other Specialty Hospitals (HP 1.3)</td>
</tr>
<tr>
<td>Rehabilitation Hospital/Karen Grech Hospital</td>
<td>212</td>
<td>12%</td>
<td>Other Specialty Hospitals (HP 1.3)</td>
</tr>
<tr>
<td>Private sector</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. James Capua Hospital</td>
<td>79</td>
<td>4%</td>
<td>Acute General Hospital (HP 1.1)</td>
</tr>
<tr>
<td>St. James Hospital Zabbar</td>
<td>6</td>
<td>0%</td>
<td>Acute General Hospital (HP 1.1)</td>
</tr>
<tr>
<td></td>
<td>1,833</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

Source: MHEC

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Given its geographical location, and the fact that there is equitable and freely accessible healthcare, Malta is popular amongst EU and third-party nationals. It is also susceptible to an increasing number of asylum seekers and irregular migrants. Malta's accession to the EU implies providing state healthcare to EU nationals visiting the Island and requiring state healthcare services, upon presentation of a European Health Insurance Card. Statistics show an upward trend of non-Maltese residents receiving healthcare services in Malta. In 2010, c. 20,400 non-residents received healthcare in Malta, which is 13% higher than 2009.

The ratio of hospital beds available in Malta in relation to the population over the 5 year period 2005-2009 remained more or less constant at 486 beds per 100,000 inhabitants. As at 2009, Malta was in line with countries like Greece, Netherlands and Slovenia while Germany and Austria had a higher number of hospital beds per 100,000 inhabitants. There have been various efforts, across EU member states including Malta to decrease the number of hospital beds, since a lower number of beds drives both financial and operational efficiency.

**Hospital beds by ownership**

Healthcare delivery in Malta is dominated by the public sector with 96% (1,748 beds) of the beds being publicly owned and managed, whilst the remaining 85 beds are privately owned. France and Italy have a similar bed ownership structure, where almost 70% of the beds are publicly owned. In contrast, only 40% of hospital beds are owned by the state in Germany. This is reflective of a country with a strong health insurance base.

**Hospital beds by function**

Malta allocates 58% of its beds to acute care, 28% to psychiatric care and the rest (14%) are allocated to other specialty care such as rehabilitation and oncology.

**Figure 4: Hospital beds by function**

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9 Treatment is offered on the same financial basis as local residents covered for state healthcare in the country you visit.
10 Non-Maltese residents include EU and third-party nationals.
12 European Health for All Database (HFA-DB). Number of hospital beds for the years 2005-2008 adjusted to exclude geriatric beds housed in St. Lukes Hospital (153 beds) and St. Vincent De Paul Residence (1,046 beds in 2005-2007, and 1,013 beds in 2008), and include growth from Karen Grech Rehabilitation Centre to Zammit Clapp (313 beds).
We noted that the Government is undertaking a number of initiatives to reduce the need for hospitalisation of psychiatric cases. Among these activities is the provision of care to patients in community settings.

**Operating theatres**

At present, there are 35 operating theatres, 25 of which are housed at Mater Dei hospital and the remaining 10 are situated in private hospitals. The number of operating theatres significantly increased in 2009 with the commissioning of Mater Dei hospital.

**Public primary healthcare**

At present, public primary healthcare is offered in 8 health centres and 42 clinics. These represent the hub of the primary health care services provided by the Government.

Various initiatives were undertaken by the Government to reform the primary health care sector. The Government is undertaking a €1 million investment for the refurbishment of healthcare centres. Other initiatives currently underway include the redefinition of family doctors to become the first point of contact enabling the follow-up treatment of hospital - discharged patients in their nearest health centre.

Up to July 2012, public primary healthcare in Malta provided more than 678,000 services to patients including 243,000 examinations at health centres, 62,000 at clinics, 10,000 home visits, 43,000 blood tests and 14,000 X-rays. By the end of 2012, the number of services provided through the public primary health care system is projected to increase to 1.4 million services.\(^{13}\)

**Human resources**

The health sector in Malta is one of the largest employers, with a total workforce of 11,100\(^ {14}\). Malta is well placed with respect to the number of practising physicians per 100,000 population ranking midway across the EU countries.\(^ {15}\)

Over the years, Malta experienced a high outflow of qualified doctors, who pursued career specialisation in other member states. In 2008, a structured training programme was introduced offering general practitioners the possibility to take up an area of specialisation. This training programme was set up in collaboration with the UK Foundation Programme Office to encourage recently qualified Maltese doctors to continue their postgraduate specialisation locally. This process has succeeded in reducing the migration trend of newly qualified medical graduates.

Complementing this programme was the material salary revisions for physicians, which came into effect in 2008. These two measures are considered the main contributors to the increase in the retention of qualified doctors from 64% in 2007 to 84% in 2010.

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\(^{15}\) European Health for All Database (HFA-DB). Data relates to 2009 and EU-27 countries exclude Cyprus, Denmark, Finland, Netherlands, Slovakia and Sweden.
Other interesting trends relating to human resources are:
- the significant increase in the take up of the nursing profession - more than 30% over the last decade;\(^1\)
- the recognition of nursing as a regulated profession;
- an increased demand for more complex nursing care leading to the establishment of specialised degrees in a number of specific areas;\(^2\)
- the recruitment of qualified nurses and care workers from overseas to address staff shortages in the field; and
- the increased participation of women in medical schools, surpassing the 50% mark locally.

**Healthcare utilisation of resources**

**Average length of stay (ALOS)**

The Average length of stay (ALOS) in hospitals is often regarded as an indicator of efficiency. It is generally influenced by the overall categorisation of the hospital beds, i.e. curative, psychiatric and specialty care. In broad terms, countries having a large proportion of beds allocated for long-term and convalescent patients tend to have a higher ALOS.

Based on data available, Malta registered an ALOS of 6.5 days and 6.8 days in 2009 and 2010 respectively. As at 2009, Malta was at par with Bulgaria, Ireland and Slovenia. The Nordic countries, particularly Denmark and Sweden enjoyed a low ALOS (average of 5.3 days) whilst Finland, Germany and Czech Republic had an ALOS of c. 10 days.

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The ALOS for acute care in Malta stood at 4.8 days in 2009. This is one of the lowest averages in the EU and is preceded only by Finland and Sweden at 3.9 and 4.5 days respectively in 2009. Meanwhile, patients receiving acute care in Luxembourg, Germany and Belgium spent an average of 7.7 days.

In all European countries, the ALOS in hospitals has decreased, mirroring, albeit to a lesser extent, the declining trend in the number of hospital beds. This is reflective of the progress in medical technologies, which have enabled day-surgeries (i.e. less–invasive procedures), as well as programmes allowing patients to return home and receive follow-up care.

*Figure 6: Trend of ALOS vs. number of hospital beds (EU-27 Average)*

*Source: European Health for All Database (HFA-DB)*

**Hospital discharges**

In 2009, the discharge rate in Malta was 11.5 per 100 population. This is one of the lowest in Europe, and is in line with discharge rates of Spain and Netherlands. Discharge rates in the EU vary from 11.3 in Spain to 26.5 in Austria per 100 inhabitants.

Consultants in Malta are striving for a shorter length of stay, which will in turn increase discharge rates. The aim is to free up unnecessary occupied beds and eliminate as much as possible the time lag for alternative placement to long-term facilities or other supported community environments. This is also in line with insurance companies’ policy which only cover acute care.

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18 Acute care hospital discharges per 100 population – figure for Malta refers to the main acute public hospital – Mater Dei Hospital. In 2008 Cyprus had the lowest Acute care hospital discharges per 100 at 9.2 (no data for Cyprus is available for 2009).
**Number of operations**

The number of operations per year in the public sector has nearly doubled over the period 1996-2011 from 22,708 in 1996 to 43,747 in 2011\(^9\). A marked increase in the number of operations was registered with the opening of Mater Dei hospital, brought about primarily by the increase in operating theatres. Another contributing factor to the increase in the number of operations is the doctors’ agreement, which is essentially output-based, rather than time-based. The number of operations held between January and May of 2012 totalled 19,409 equivalent to an increase of 1,009 over the same period last year.\(^{20}\)

**Figure 7: Number of operations performed per year**

Despite the marked increase in operations, the general outlook among patients is that waiting lists particularly for elective surgeries such as orthopaedic interventions and cataracts are still relatively long. Increasing the number of operations inevitably leads to a higher healthcare budget allocation, but then how sustainable is this for Malta?

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The cost of a nation’s health

Healthcare expenditure – an introduction

Healthcare spending has increased substantially over the years and total healthcare expenditure (THE) (capital and recurrent) in 2010 exceeded €530 million. Based on the latest available statistics of NSO, we estimate recurrent total expenditure (public and private) in 2010 to be in the region of €495 million\(^1\). As is illustrated below, public funding dominates the healthcare sector.

*Figure 8: Total healthcare expenditure in Malta*

![Figure 8](#)

Source: National Health Accounts - global health expenditure database

Total healthcare expenditure varies significantly, in absolute and relative terms among EU Member States as is illustrated in the figure opposite.

"It is envisaged that healthcare expenditure will become more of a Government priority - this pressure opens up opportunities for the private sector to work with Government"

*Dr. Josie Muscat*

\(^1\) Refer to Methodology section for derivation of figure.
In 2010, Malta’s total healthcare expenditure in relation to GDP was 8.6%. This compares well to the EU-27 average of 9%. In the same year, the ratio of health spending to GDP in the EU ranged from around 5.6% in Romania to just below 12% in Netherlands.

Due to the global recession, governments are allocating a substantial portion of their budgets to health. Spurred also by ageing, chronic disease and technology, as well as the growing expectations of the population, health spending is growing faster than inflation. This explains the sharp increase in the ratio of EU health expenditure as a percentage to GDP.

**Figure 9: Total Health Expenditure (THE) as a % of GDP**

<table>
<thead>
<tr>
<th>Percentage Range</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% - 12%</td>
<td>Greece (10.3%), Belgium, Austria, Portugal, Denmark, Germany, France, Netherlands (11.92%)</td>
</tr>
<tr>
<td>8% - 10%</td>
<td>Malta (8.6%), Slovakia, Finland, EU-27 Average (9.0%), Ireland, Slovenia, Italy, Spain, Sweden, United Kingdom (9.6%)</td>
</tr>
<tr>
<td>6% - 8%</td>
<td>Estonia (6.0%), Latvia, Bulgaria, Lithuania, Hungary, Poland, Luxembourg, Czech Republic (7.99%)</td>
</tr>
<tr>
<td>4% - 6%</td>
<td>Romania (5.6%), Cyprus (6.0%)</td>
</tr>
</tbody>
</table>

Source: National Health Accounts – global health expenditure database

In 2010, Malta’s total healthcare expenditure in relation to GDP was 8.6%. This compares well to the EU-27 average of 9%. In the same year, the ratio of health spending to GDP in the EU ranged from around 5.6% in Romania to just below 12% in Netherlands.

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**Figure 10: Total Health Expenditure (THE) as a % of GDP - EU-27**

Source: National Health Accounts
**Public health expenditure**

Recurrent public healthcare expenditure increased from c. €230 million in 2006 to c. €330 million in 2010\(^{(24)}\), which represents an increase of 44%.

A marked increase of c. 23% in the recurrent health expenditure occurred in 2008 with the commissioning of Mater Dei hospital. In addition, over the 5 year period 2006-2010, Government invested a total of €243 million\(^{(25)}\) in capital expenditure.

There has been a consistent upward trend in public healthcare expenditure on a per capita basis, and in 2010 the spend per capita was €1,150\(^{(26)}\).

**Figure 11: Cost analysis of 2011 recurrent public healthcare expenditure**\(^{(27)}\)

Public recurrent health expenditure comprises predominantly personal emoluments (€137 million, or 47% in 2011), which is closely followed by medicines and surgical materials with a total allocation of over €66 million in 2011 (equivalent to 22%). The latter includes an allocation of €2.3 million for the Pharmacy of Your Choice (POYC), a scheme introduced by Government in 2008 enabling the distribution of eligible free medicines to patients from their local pharmacy. The POYC

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26 National Health Accounts - global health expenditure database – Exchange rate used was $1.288 based on average rate from 02/01/2012 to 26/07/2012 as per ECB website Available from: http://www.ecb.int/stats/eurofxref/eurofxref-hist.zip?647b66a503b457f91ca76e0126e159 [Accessed 26 July, 2012].
27 Ministry of Finance, the Economy and Investment (2011), Financial Estimates. Figure excludes the following elderly related expenditure items: Residential Care in Private Homes (€3,682,000), Homes for the elderly (€4,000,000), and Mellieha Home for the Elderly (€3,145,000).
Healthcare delivery in Malta is currently extended to 129 pharmacies, and is expected to increase to 208 by the end of 2012. The main aim of the POYC is to reduce the long queues at the Health Centre Government Dispensaries and to improve healthcare delivery in community settings.

Trends of particular relevance in the Government's pattern of expenditure include an increased allocation to the non-medical equipment facilities management and to specific initiatives such as the National Cancer Plan, National Health Screening, the outsourcing of waiting lists for medical services and other Public Private Partnership (PPP) arrangements.

**Total healthcare expenditure per capita**

In terms of total healthcare expenditure, Malta spent on average €1,800 per capita in 2010. This spend per capita is in line with countries like Cyprus, a health system that is also generally based on the Beveridge model. In the same year, the EU average for total health expenditure per capita was c. €2,200. We note that the Northern and Western European countries spend more than the EU average on a per capita basis.

*Figure 12: Total healthcare expenditure per capita in 2010 (Purchasing Power Parity (PPP), €)*

Source: National Health Accounts

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28-29 National Health Accounts - global health expenditure database – Exchange rate used was $1.288 based on average rate from 02/01/2012 to 26/07/2012 as per ECB website. Available from http://www.ecb.int/stats/eurofxref/eurofxref-hist.zip?64716c6a503d570012c662692126ed9 [Accessed 26 July 2012].
Financing healthcare

Public vs. private expenditure

It is estimated that in Malta as much as 65% of total healthcare expenditure is financed by the Government. Countries that have a similar proportion of expenditure funded by Government are Slovakia, Portugal, Hungary and Ireland. Denmark has the highest public healthcare financing, at 85%\(^30\).

In Malta, public health expenditure is financed through general taxation. Across the EU, state healthcare is financed by both general government revenues and social contributions.

Figure 13: Financing healthcare in selected EU countries

In Malta, the major source of private funding (93%) is out-of-pocket (OOP) expenditure. The remainder is financed through private health insurance (6%) and non-profit institutions (1%).

\(^{30}\) Data relates to 2010.
Healthcare delivery in Malta

Private health insurance (PHI)

Private health insurance (PHI) accounts for just over 2%\(^3\) of the total healthcare expenditure. This is primarily reflective of the supplementary role assigned to PHI in Malta which in turn reflects the extent and quality of the local public healthcare provision.

Around 21% of the population has some form of private health insurance, whilst 10%\(^3\) are estimated to benefit from an extensive refund plan. It is not uncommon for PHI to be offered as a fringe benefit to employees of organisations within the private sector, however the major part of these insurance policies have until recently, provided only for basic plan cover. Men have higher rates of health insurance coverage than women. However, the ratio of insured men and women employees is similar\(^3\).

Health insurance coverage is popular particularly with people falling within the 25-44 age bracket\(^3\) and is less affordable by the elderly. Any person who applies or is granted the High Net Worth Individual (HNWI) status has to be in possession of health insurance which covers himself and his dependents in respect of all risks across the EU as are normally covered for Maltese nationals. In fact, a market analysis carried out by the insurance sector reveals that PHI is extremely popular with foreigners who obtain work permits in Malta. Another notable trend is the recent shift from basic to more extensive insurance coverage.

Locally, PHI coverage is still relatively low and the private sector believes that this is not likely to increase in the near future unless control mechanisms and significant income tax relief provisions are introduced on insurance premia.

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31 National Health Accounts - global health expenditure database.
32 Felice Anton, Malta Insurance Association, September 2011, “Private sector’s role in national healthcare”, Times of Malta, Available from http://www.google.com.mt/#sclient=psy-ab&hl=en&q=Private+sector%27s+role+in+national+healthcare+Felice+Anton&ei=ZC5yUq26GhtWh4jwlanIBw&sa=X&ved=0ahUKEwipqY4w0LovAhWQF2AKHegQFQUKHgaHgB&biw=1396&bih=588 [Accessed 14th May 2012].
Looking ahead
Emerging trends and challenges

The major challenge facing healthcare delivery in Malta is ensuring financial and operational sustainability of the system.

Faster, better, cheaper healthcare
A combination of demographic, economic, political and technological factors is pushing the healthcare cost curve ever upwards. The challenge facing healthcare players is to bend this curve without compromising access to care or quality.

Issue or challenge

Ageing population
Demographics are changing and countries (including Malta) are facing a population that is living longer and using more medical services as it ages. The cost of treating an ageing population was identified as the most difficult challenge facing health systems35 given that the average cost of illness rises significantly per capita in higher age categories.

Financing health
Public financing is prevalent in the local scenario. There has been a consistent upward trend, in absolute terms, in healthcare expenditure. Sources of funding, other than general taxation may need to be explored. National health insurance and private sector involvement may be possible solutions.
In terms of private sector involvement, Public Private Partnerships (PPPs) are emerging as a new and compelling model for funding not just for infrastructure but also for business operations and care delivery.

A larger provider market could also help mitigate escalating costs as at present, there is very limited competition in terms of healthcare providers.

Controlling costs
The challenge is to lower costs while improving quality without making undesirable trade-offs. This is achieved by driving out existing inefficiencies, improving financial and operational performance.

Satisfying empowered/demanding patients
Increasing demand and consumer expectations are leading healthcare providers to continuously improve access and quality. Patients are also demanding more timely and relevant quality data.

35 PwC’s Health Research Institute Survey.
Meeting workforce supply needs

Human resources are crucial for a high performing and sustainable healthcare organisation. Recruiting sufficient individuals and incentivising staff is therefore paramount to this labour intensive industry. In this regard, workforce incentives might need to be reviewed to ensure alignment of objectives amongst all healthcare stakeholders.

Integrating care

The lack of continuity between the various providers within the healthcare system highlights the need for more support from the primary and community care sector. Although in recent years, there has been a drive for the provision of care within health centres and the community, Malta is still considered essentially hospital-based. While this might not necessarily have implications on the quality of service provided, it has implications on both health care costs and efficiency.

Technology - implementing and investing in eHealth and mHealth

Investing in health information technology (eHealth) is essential in today’s world. Having a good managerial and technological support system can alleviate work pressures of this labour intensive industry. Technology also provides health solutions that are highly customised. As a result individuals are requiring tailored treatment. Though long-term benefits of eHealth are highly expected, the return on investment is typically long-term and difficult, particularly given our size, which does not permit economies of scale to be achieved.

Another recent technology breakthrough is mobile healthcare (mHealth). Increasingly ubiquitous and powerful mobile technology holds the potential to address long-standing issues in healthcare provision. If the mobile revolution has the same effect in healthcare as it has had in other industries – music, banking – it will transform the way patients interact with their doctors and manage their health, and it will help to address the urgent need for healthcare that’s better, faster, less expensive and more accessible.

Regulation

A regulatory reform driven by demographic changes and the need to address the public vs. private balance of healthcare is essential as new ways are explored to control costs and change practitioners’ behaviour. Key stakeholders within the healthcare system feel that there is the need for a more comprehensive and well-defined regulatory framework for practicing practitioners.

From treatment to prevention

Proactively managing chronic diseases reduces the dependence on more costly acute care services. This shift in focus requires greater collaboration amongst policymakers, providers and practitioners. It implies that the healthcare system is no longer limited to traditional providers such as hospitals and physicians, but is also open to new market participants such as health/wellness clinics, telecommunications and technology.
**Insurance**

The private health insurance market is considered to be relatively small; this is primarily due to the supplementary role that it plays in the local healthcare market. Done well, health insurance may offer financial stability and sustainability. However, it can also lead to spiralling delivery and administration costs, inequity of access, low patient satisfaction and fragmented delivery.

To stimulate the PHI market, there is the need for direct government intervention to promote and regulate the buying of insurance.

**Health/hospital management**

No-one can deny the substantial investment in the healthcare sector in Malta. In a world where higher expectations prevail, there is an increased demand for high quality medical care and facilities. This inevitably requires health/hospital management, which is instrumental for effective and efficient healthcare delivery. Hospital management involves ensuring effective utilisation of physical and financial resources of the hospital as well as creating an organisational environment which contributes to the growth and development of personnel. A first step could be to implement tighter quality control procedures.

**Market barriers**

At present, there is very limited competition within the healthcare service providers. Over 95% of hospital beds are publicly owned implying there is considerable scope for increasing private sector involvement. However, investment in the private sector will only be undertaken if deemed worthwhile and sustainable. This is not likely to increase in the near future unless control mechanisms and proper incentives are introduced.
Appendices
Definitions

Average length of stay
Total number of occupied hospital bed-days divided by the total number of admissions or discharges. Length of stay (LOS) of one patient = date of discharge - date of admission. If these are the same dates, then LOS is set to one day.

Bed occupancy rate in %,
Average number of days when hospital bed was occupied as % of available 365 days. Calculation: utilized bed-days x 100/available bed-days during the calendar year.

General practitioners per 100,000 inhabitants
General practitioners, including assistant GPs. Includes only physicians (preferably as PP) working in outpatient establishments in specialties such as general practice, family doctor, internal medicine, general medicine. The general practitioner does not limit his/her practice to certain disease categories and assumes the responsibility for providing or referring for the provision of continuing and comprehensive medical care.

Hospital beds per 100,000 inhabitants
A hospital bed is a regularly maintained and staffed bed for the accommodation and full-time care of a succession of inpatients and is situated in wards or areas of the hospital where continuous medical care for inpatients is provided. It is a measure of hospital capacity. Beds in all hospitals should be included. The number of hospital beds should be measured, whenever possible, in available bed-years during the calendar year or, if this is not possible, in available beds at mid-year (preferably) or end-year count can be used depending on the current national practice. Hospital beds excludes: cots for neonates; day beds; provisional and temporary beds, beds in storerooms; beds for special purposes or belonging to special health devices, e.g. dialysis, delivery (but not post-delivery beds in maternity hospitals), etc.

In-patient care discharges per 100 population
Discharge is the conclusion of a period of inpatient care, whether the patient returned to his home, was transferred to another inpatient facility or died. The number of admissions/discharges excludes: a transfer from one department to another one at the same hospital; day-cases of day patients; weekend leave when the patient has been released temporarily and the hospital bed is still reserved; cases where treatment is provided by hospital personnel at the patient’s home. Newborns are not included.

Physicians per 100,000 inhabitants
A physician is a person who has completed studies in medicine at the university level. To be legally licensed for the independent practice of medicine (comprising prevention, diagnosis, treatment and rehabilitation), (s)he must in most cases undergo additional postgraduate training in a hospital (from 6 months to 1 year or more). To establish his or her own practice, a physician must fulfil additional conditions. The number of physicians at the end of the year includes all active physicians working in health

Definitions are taken from the National Health Accounts - Global Health Expenditure Database, and the European Health for All Database.
services (public or private), including health services under other ministries than the Ministry of Health. Interns and residents, i.e. physicians in postgraduate training, are also included. The number of physicians excludes: physicians working outside the country; physicians on the retired list and not practising or unemployed; physicians working outside health services, e.g. employed in industry, research institutes etc.; dentists (stomatologists) who should be defined as a separate group. National practices in using full-time equivalent and/or physical persons differ, therefore the possibility to provide data in both versions is provided.

**General Government expenditure on health**

Government expenditure is the sum of outlays for health maintenance, restoration or enhancement paid for in cash or supplied in kind by government entities, such as the Ministry of Health, other ministries, parastatal organisations, social security agencies. It includes transfer payments to households to offset medical care costs and extra-budgetary funds to finance health services and goods. The revenue base of these entities may comprise multiple sources, including external funds.

**Private households’ out-of-pocket payment on health as % of total health expenditure**

Expenditure on health by households as direct payments, discretionary. A household is an individual or a group of persons sharing the same living accommodation, which pool some, or all, of their income and wealth and which consume certain types of goods and services collectively, namely housing and food.

**Salaries as % of total public health expenditure**

Includes salaries, bonuses to fixed rate wages and salaries, and overtime payments to employees in the publicly financed health sector.

**Social security funds**

Expenditure on health by social security institutions. Social security of National health Insurance schemes are imposed and controlled by government units for the purpose of providing social benefits to members of the community as a whole, or to particular segments of the community. Comprises direct outlays to medical care providers and to suppliers of medical goods as well as reimbursements to households and the supply of services in kind to the enrollees.

**Total expenditure on health**

Funds mobilised by the system. Sum of General Government and of Private Expenditure on Health.

**Total health expenditure, PPP$ per capita**

Funds mobilised by the system. Sum of General Government and of Private Expenditure on Health. The population is the de facto resident population and not the jure population as supplied by the United Nations Population Division.

**Total health expenditure as % of gross domestic product**

Total health expenditure is the sum of General Government and Private Expenditure on Health. GDP is the expenditure-based GDP, the total final expenditure at purchasers’ prices. It is provided by United Nations Statistical Department, otherwise by the International Monetary Fund or the World Bank.
Our methodology

1. To obtain the total recurrent health expenditure, the total public recurrent and capital expenditure figure was extracted from NSO News Release (dated 30th January 2012) “Expenditure of General Government Sector by function: 2006-2010”. The amounts relating to capital expenditure, i.e the gross capital formation figures, acquisition less disposal figures and capital transfer figures were deducted to arrive at the total public recurrent expenditure. The result was grossed up by 66% to achieve total, (i.e both private and public) recurrent health expenditure.

Table 2: Estimate of total recurrent expenditure

<table>
<thead>
<tr>
<th>Year</th>
<th>Total NSO Recurrent + Capital Expenditure</th>
<th>Gross Capital Formation</th>
<th>Aquisitions less depositals</th>
<th>Capital Transfers</th>
<th>Total public Recurrent</th>
<th>Grossed up to 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>€ m</td>
<td>€ m</td>
<td>€ m</td>
<td>€ m</td>
<td>€ m</td>
<td>€ m</td>
</tr>
<tr>
<td>2006</td>
<td>326</td>
<td>95</td>
<td>-</td>
<td>231</td>
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<td>-</td>
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<td>236</td>
<td>356</td>
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<tr>
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<td>27</td>
<td>-</td>
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<tr>
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<td>20</td>
<td>-</td>
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<td>302</td>
<td>456</td>
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<tr>
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<td>349</td>
<td>17</td>
<td>-</td>
<td>4</td>
<td>328</td>
<td>495</td>
</tr>
</tbody>
</table>

2. Financial data was sourced from the National Health Accounts (NHA) through the global health expenditure database-the latest available data of which relates to 2010.
http://apps.who.int/nha/database/PreDataExplorer.aspx?d=1

3. For all other healthcare indicators, the European Health for All Database (HFA-DB) was used which has the latest available data for 2009, and was last updated in January 2012.
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