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National Audit Office
MALTA

Performance Audit: Outpatient waiting at Mater Dei Hospital

November 2017

Performance Audit:

Outpatient waiting at Mater Dei Hospital

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List of Abbreviations

CPAS	Clinical Patient Administration System
CPU	Clinical Performance Unit
DAS	Departmental Accounting System
EU	European Union
GIT	Gastrointestinal tract
GP	General Practitioner
HST	Higher Specialist Trainee
IT	Information Technology
MAM	The Medical Association of Malta
MDH	Mater Dei Hospital
MOP3	Medical Outpatient 3
NAO	National Audit Office
NHSS	A National Health System Strategy for Malta 2014 – 2020
NICE	National Institute for Health and Care Excellence
PPP	Public Private Partnerships
RTR	Registering Ticket of Referral
SOP	Standard Operating Procedure
UK	United Kingdom

Executive Summary

Introduction

1. Demand for Mater Dei Hospital (MDH) Outpatient consultation services arises from a high level of need for health care, an ageing population and technological developments. On the other hand, the Hospital has limited capacity. The disequilibrium between these two elements creates waiting lists, which consequently impinges on patient waiting times. The foregoing highlights the need for a robust management function to ascertain that resources deployed at the Outpatient Department are optimally utilised. Against this backdrop, this audit aimed to determine the extent to which:

    a. the management of the outpatient demand is affecting waiting time and lists at MDH's Outpatient Department;
    b. MDH's Outpatient processes and work practices are conducive to minimising waiting time; and
    c. MDH's management structures and mechanisms are enabling the efficient management of waiting time and lists at the Outpatient Department.

2. This audit mainly focused on consultation visits within five clinical specialties during October 2016. The five specialties comprised Genetics, Medicine Gastrointestinal tract (GIT), Neurology, Urology and Vascular.

Demand-side issues

3. Hospital records show that around 500,000 patients visit the Outpatient Department annually. However, senior Hospital clinicians contend that between 20 and 50 per cent of referrals for new Outpatient appointments are inappropriate, as they could have been dealt with at Primary Health Care level. These statistics are likely to increase further if minor cases are discharged back to primary health care rather than followed-up at the MDH Outpatient Department.

4. During 2016, over a quarter of Outpatient visits related to patients who turned up at this Department without a scheduled appointment. Walk-ins raise a number of issues:

    a. Most walk-ins, particularly those that require authorisation for investigative tests, originate from consultants who provide services in both the public and private sector. In many instances, these walk-ins do not involve that the patient actually visits the Hospital as the referring consultants merely register the patient as an outpatient and authorise the necessary tests.

b. Walk-ins are intended to fast-track urgent cases. However, there is ample evidence to imply that many walk-ins are bypassing the Hospital's appointment procedures, and can thus be considered as queue jumpers.

5. During 2016, patients did not turn up for a fifth of the scheduled appointments for the five clinical specialties under review. This no-show rate is double that experienced by hospitals in the United Kindgdom (UK). No-shows create system inefficiencies as they distort demand trends, influence the Hospital's logistical and operational arrangements, as well as impinge on waiting times. Recent MDH initiatives, which include reminding patients of their appointments, has reduced no-shows to 11 per cent of scheduled appointments in the areas targeted.

Supply-side issues

6. Delivering Outpatient services entails an estimated cost of €32.2 million. This figure would in reality increase if MDH managed to recruit additional staff to fill in existing vacancies and to extend outsourcing of services to boost its supply of Outpatient consultation visits. Nevertheless, the following issues lead to inefficiencies within outpatient operations, which also contribute to the disequilibrium between demand and supply for these services:

a. Non-sychronisation of shifts of the various professionals providing outpatient services: Consequences of this situation range from idle time to the absence of support staff during scheduled and over-running consultation clinic hours.

b. The Hospital being limited on the extent to which it can extend outpatient consultation visits beyond early afternoon on weekdays: This situation materialises as more than two thirds of the consultants are engaged on a Contract B basis, which entitles them to perform duties in both the private and public sector. Moreover, a fifth of the nurses perform duties on a reduced-hour schedule. Consequently, the Hospital encounters chronic difficulties in terms of resource availability to utilise the Outpatient Department infrastructure beyond early afternoons.

c. Inefficient utilisation of the Outpatient infrastructure: Primarily this occurs since a large proportion of this infrastructure is not utilised on a 24/7 basis. This state of affairs creates additional problems since the current infrastructure is not adequate to cater for outpatient throughput during the morning and early afternoons peak hours.

Management structure and mechanisms

7. Management direction and control is critical to efficient and effective operations. MDH is in the process of developing its Outpatient strategies. This constitutes the starting point of the Hospital's management focus on streamlining processes at the Outpatient Department.

8. Some control mechanisms within the Outpatient Department are either not fully operational or lacking. These mechanisms include basic controls such as electronic logging of personnel and more complex Information Technology (IT) systems, which integrate management information derived through processes involving patient pathways. The foregoing culminates in the non-synchronisation of resources where coordination between the various professionals providing these services is not always optimal. To varying degrees, these circumstances ultimately impinge on service delivery and outpatient waiting time.

9. Management control mechanisms are not appropriately robust when dealing with walk-in and priority cases. While walk-ins constitutes an essential mechanism to deal with urgent or high priority cases, the Hospital lacks robust internal controls to ascertain audit trails and transparency concerning these cases.

Overall conclusions

10. Over the years, the Outpatient Department has evolved in many ways, namely in the rising trends in patient visits, the provision of services within an increasing number of clinical specialties and the work practices adopted. Nonetheless, excessive waiting time for an Outpatient consultation appointment remains an issue of concern to both patients and the Hospital's management. The causes are multifaceted, complex and involve competing interests.

11. Primary health care is not acting as an effective gatekeeper to secondary health care access. Senior MDH clinicians contend that many outpatient referrals are unwarranted. On the other hand, primary health care specialists with both the public and private sector do not always have the necessary resources and access to patient information to deal effectively with such cases – especially in an environment where public demands for accountability and liability are rightly increasing in their importance.

12. The continued oscillation of patients between the private and the public sector implies consumer choice but such circumstances also influence the Outpatient Department on various levels. As most clinicians employed by the Hospital also provide services in the private sector, MDH generally has severe limitations to extend its outpatient hours beyond early afternoon. Moreover, waiting lists and times tend to be significantly longer with respect to these consultants as their private patients opt to continue their care at MDH under the same clinician. This implies an unequal distribution of cases between consultants. Additionally, most walk-in patients pertain to clinicians working in both sectors. However, the Hospital does not have robust internal controls to ascertain a strong audit trail and transparency associated with these cases.

13. The Hospital does not have an integrated administrative IT system. This state of affairs influences the level and quality of management information as well as the administrative processes concerning outpatient appointments. In the absence of such a framework, some clinical specialties and administrative units within the Outpatient Department developed stand-alone

systems, which render them beyond the Hospital's management immediate control. Despite the high involvement of the private sector and the oscillation of patients from this sector to the public Hospital, the former does not have off-site access to administrative patient information. Consequently, all referrals are deemed as new appointments irrespective as to whether MDH consultants are cognisant of specific case details through their respective private practice.

14. Some patients opt not to turn up for their scheduled appointments without notifying MDH in advance. Unjustified no-shows are capricious, costly and prohibit other patients from being attended to earlier. The Hospital has been successful in its recent initiatives to reduce no-shows. Nonetheless, the relative statistics show that, despite the decrease, no-shows are still a cause for concern.

15. The issues referred to in this Conclusion have historical roots. Recently, MDH has stepped up its efforts to address Outpatient related concerns, including waiting times. To date, however, the Hospital does not have a specific Outpatient strategy. On the other hand, the National Audit Office (NAO) is informed that MDH is planning a new outpatient premises within the Hospital. While the new block will provide more room and be better equipped, its full potential will only be realised through more robust strategic and policy direction, stronger management control as well as streamlined work practices, which consider the competing interests of the various professional providing Outpatient services.

Recommendations

16. In view of the findings and conclusions emanating from this performance audit, the NAO is proposing a number of recommendations. These proposals relate to issues, which are considered as the main factors influencing outpatient waiting time at MDH. Within this context, recommendations are presented in terms of their strategic, operational and IT relevance.

Strategic recommendations

i. MDH is to expedite action to enable the introduction of strategies, policies and protocols relating to the Outpatient Department. These should include the definition of Outpatient waiting time, stipulate maximum waiting times for first appointments as well as provide guidance on referring and discharging patients. Moreover, MDH is to supplement its regulatory framework with the appropriate mechanisms to enable management control and enforcement.

ii. In the short to medium-term, MDH is to further consider the feasibility of extending the provision of services through contracting out and Public Private Partnerships (PPP) to decrease outpatient-waiting time. Such options are to be resorted to in instances where the Hospital has ascertained that services cannot be provided in-house and where cost-benefit analysis justifies farming out and PPPs.

iii. MDH is to consider increasing its collaboration with the private health sector. As patients oscillate between both the private and public health sector, collaboration between the two providers is critical to streamline health care for the benefit of patients and the more efficient use of Hospital resources. Collaborative measure in this respect include:

   a. Access to private sector clinicians to book investigations at MDH through an online based services.

   b. The exchange of clinical and administrative patient information between the two sectors would facilitate the scheduling of appointment, the duration of consultation visit and follow-up visits. This is especially relevant in chronic disease cases.

iv. Options to expedite the recruitment of key staff, particularly those considered as essential for the Hospital's Outpatient Department are to be explored. Such approaches include increasing MDH's autonomy over the recruitment function.

v. MDH is to consider broadening the accessibility of financial management information to senior management positions, including those related to clinical specialties. Cognisance of cost information would raise awareness among senior positions of efficiency related issues within their respective areas of responsibility.

vi. MDH is encouraged to step up efforts to ascertain the coordination and cooperation of the various professional bodies providing services at the Outpatient Department. This enables better synchronisation of resources, improves efficiency of operations and ascertains that the Hospital infrastructure is increasingly utilised for longer periods. Changes to historic work practices entails that these are complemented with the appropriate level of change management. Changes in current work practices become more critical given the significant investment in the new Outpatient block, which is scheduled for completion by 2020/2021.

Operational related recommendations

vii. MDH is to step up its efforts to broaden the use of the electronic referral ticket. The use of an electronic referral ticket facilitates information exchange between primary health care and the Hospital. Such information would also enable the Hospital to discharge patients back, where circumstances dictate, to the referring specialist within primary health care where patients can be followed-up at community care level in accordance with the National Health System Strategy for Malta 2014 – 2020 (NHSS) principles.

viii. Efforts are to be stepped up so that the Outpatient Booking Office processes all referral tickets. Centralising this function implies that MDH management would have a better visibility and control over the issue of appointments. Another benefit of centralising this function relates to the strengthening of audit trails, and hence transparency and accountability over the issue of appointments.

ix. MDH is to step-up efforts to minimise the incidence of unjustified no-shows. The Hospital is encouraged to adopt a stricter stance in such cases in lieu of current practices whereby MDH issues another appointment automatically. It would be necessary to complement this proposal with awareness campaigns and to involve concerned stakeholders.

x. Clinical Chairs are to increasingly complement their clinical duties and guidance with administrative direction and control within their areas of responsibility. This will improve efficiency within their respective Departments, as the decision making processes and monitoring functions could be expedited.

xi. MDH is to extend the use of job plans for all clinicians performing duties within the Hospital, including within the Outpatient Department. This enhances individual accountability as the Hospital can exercise more effective monitoring over throughputs. Within this context, Clinical Chairs are to, as far as possible, ensure that job plans reflect an equal distribution of workload among clinicians.

IT related recommendations

xii. MDH is to consider publishing real time information relating to the waiting times pertaining to different consultants. This implies that patients together with their referring practitioner can make more informed decisions regarding their care.

xiii. The Hospital is to introduce and publish key performance indicators relating to reduction in waiting times. This proposal is intended to further motivate the clinicians to reduce patient waiting times at the Outpatient Department.

xiv. MDH is to improve its practices to capture data relating to the referring source, reasons why a particular priority was assigned, for walk-ins and no-shows. These would enhance management control over operations as audit trails concerning patient movement along the Outpatient pathway would be considerably strengthened.

xv. MDH is to consider integrating the various standalone IT systems concerning outpatients as a matter of priority. This includes electronic systems pertaining to financial management. This proposal, in conjunction with improvements in data capturing methods referred to in the previous recommendations, would enhance the availability, quality and timeliness of management information.

xvi. The Hospital is to give due consideration to introducing electronic attendance recording across the board. This would be in line with generally accepted business practices, particularly as the Hospital employs over 4,300 employees, and has staff engaged with suppliers contracted to provide various services. Furthermore, the Hospital does not have any effective means to monitor the necessary staff movement between the various Hospital Departments.

Chapter 1

Terms of Reference

1.1 Introduction

1.1.1 Mater Dei Hospital's (MDH) Outpatient waiting time regularly features on the public agenda. Demand for Outpatient services arise from a high level of need for health care, an ageing population and technological developments. On the other hand, hospitals have limited capacity. The disequilibrium between these two elements creates waiting lists, which consequently impinges on waiting times.

1.1.2 The aforementioned situation influences patients' treatment accessibility, health deterioration and can have a financial impact. The latter materialises as the patient may seek alternative methods of treatment, for instance within the private sector, and higher expenses are incurred through multiple visits to the state Hospital to monitor and treat a deteriorating condition. Thus, the effective management of waiting time is essential.

1.1.3 Excessive waiting times can also imply symptoms that there are inefficiencies in the health care systems.[1] The Health Systems in Transition Report (2014) remarked that the opportunity exists for MDH to further optimise resources availability at the Hospital's Outpatient Department.[2] Furthermore, Government's financial liability can increase as patients seek treatment within the European Union (EU) at the formers' cost in terms of the Cross Border Health Directive in case of prolonging the provision of care.

1.1.4 During 2016, MDH management set up the "Outpatient Working Group" to identify factors that were impinging on the Outpatient Department patient waiting times. To this effect, this group identified five major factors, namely:

a. process turnaround in clinics is too long and at times chaotic;
b. procedures are not always clear and consistent across clinics;
c. appointments being set too far in the future;
d. a single body is not designated full responsibility for the overall outpatient operation and its performance; and
e. Information Technology (IT) systems in place were never designed to capture the whole process from referral to patient discharge back to the original referrer.[3]

[1] NHS Scotland, (2003). Managing Waiting Times: A Good Practice Guide, page 1 accessed from http://www.gov.scot/Publications/2003/09/18035/25475 as at 18 November 2016.

[2] Azzopardi Muscat N, Calleja N, Calleja A, Cylus J. ,(2014). Malta: health system review Health Systems in Transition, 16(1), page 71.

[3] Outpatient Working Group presentation.

1.1.5 Against this backdrop, the National Audit Office (NAO) conducted the performance audit: *Outpatient waiting at Mater Dei Hospital*. The primary aim of this audit was to determine the extent to which MDH is effectively minimising Outpatient waiting times. The scope of this audit was mainly limited to the specialties of Genetics, Medicine Gastrointestinal tract (GIT), Neurology, Urology and Vascular[4]. These specialties were primarily selected as these have the longest average waiting time for a new appointment.

1.2 The definition of waiting time influences the strategy adopted to manage the Outpatients Department

1.2.1 MDH like a number of other hospitals such as those in Ireland is measuring waiting time for an outpatient visit until the first appointment, commonly referred to as "outpatient waiting time". However, countries such as England, Scotland and Nordic countries are moving towards capturing waiting time across the full patient journey from when a referral is made through primary care to the time treatment is provided. This approach is commonly referred to as "referral-to-treatment".[5] The difference between the two approaches generally condition hospital processes and strategies. From a patient's perspective, these two different measures influence waiting time for treatment. Furthermore, the different focus of the two systems complicates comparisons between countries.

1.2.2 MDH's approach to measuring "outpatient waiting time" rather the "referral-to-treatment" primarily emanates as the latter information is not available electronically. Furthermore, the "Outpatient Working Group", as a matter of priority, during 2016, was identifying and planning to address inefficiencies leading to significant waiting time for the first appointment in many clinical specialties.

1.3 On average there is a waiting time of more than 250 days for a first outpatient appointment

1.3.1 As at 31 October 2016, there were 63,233 patients waiting for their first appointment at MDH. On average, these patients had a waiting time of 250 days within the respective 51 clinical specialties catered for at this Department.

1.3.2 Due to limitations in MDH's electronic systems, the aforementioned waiting time calculates from when the patient was booked on MDH's electronic system to the time of the first appointment. This calculation excludes the time from when MDH receive the referral form up to the point the patient is assigned an appointment. Such a situation materialises as the provision of appointments is captured by another system, which is not integrated to MDH's main administrative electronic system.[6]

[4] For the purpose of this audit, the vascular specialty entails the following clinic codes: SLSURKCASSPC, SLSURKCASVSC, SLSURNPETVAS and SLSURSPEJNEW.

[5] OECD, 2013. WAITING TIME POLICIES IN THE HEALTH SECTOR: WHAT WORKS?, Chapter 2: Measuring waiting times across OECD countries, page 34.

[6] Reference is being made to Clinical Patient Administration System (CPAS).

1.3.3 A number of countries have established protocols on what is considered to be acceptable waiting times. For instance, the waiting time for non-urgent consultant-led treatment in the United Kingdom (UK) stands at 18 weeks.[7] It is to be noted, that in the UK, this target reflects referral-to-treatment rather than the waiting time for the first outpatient visit as in the case of MDH. The foregoing highlights the prolonged waiting times at MDH, where on average waiting times for a new Outpatient appointment averages 36 weeks.

1.3.4 Similarly, it transpires that on average, MDH actual waiting time for a first appointment also exceed the average actual waiting time for outpatients in public hospitals in Ireland by seven weeks.[8] This situation remains evident for the specialties sampled in this performance audit, namely GIT, Neurology, Urology and Vascular.[9] Table 1 compares the average waiting time for outpatient services pertaining to the afore mentioned specialties.

Table 1 : Comparison of MDH and Hospitals in Ireland of average waiting times in the sampled specialties (as at end of October 2016)

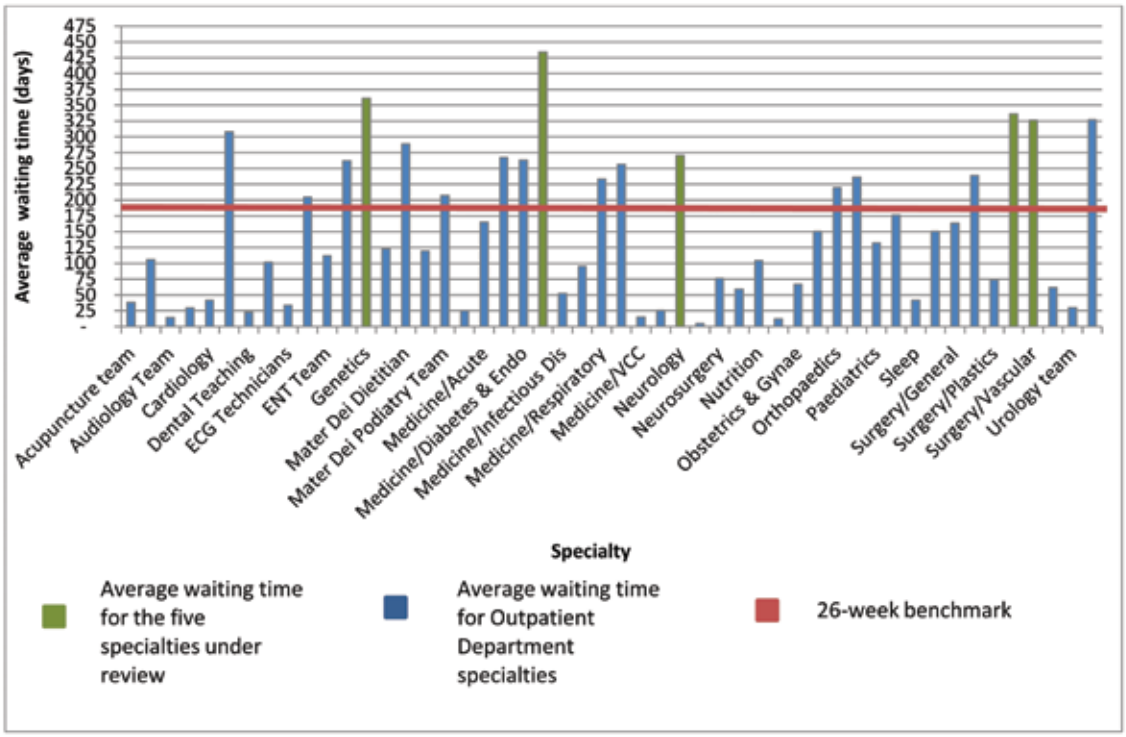
Clinical specialty	Hospitals in Ireland			Mater Dei Hospital		
	Total patients on the waiting list	Patients waiting more than six months		Total patients on the waiting list	Patients waiting more than six months	
	No.	No.	%	No.	No.	%
GIT	9,775	3,317	34	3,147	2,721	86
Neurology	16,470	8,342	51	1,773	1,134	64
Urology	24,275	12,455	52	2,394	2,197	92
Vascular	7,777	2,419	31	876	461	53

1.3.5 Table 1 shows that there is a significant discrepancy in waiting time for patients who use MDH's Outpatient Department and those who use Ireland's hospitals services. Further extrapolation of data pertaining to waiting times at MDH and hospitals in Ireland shows that, with respect to the specialties listed in Table 1, the number of patients who have been waiting for more than six months for an appointment ranges from 53 per cent to 92 per cent. This contrasts with the waiting times for hospitals in Ireland where the number of patients who have been waiting for six months ranges between 31 and 52 per cent.

1.3.6 Despite the critical relevance of waiting times, MDH's Patient Charter does not refer to maximum waiting times for new appointments at the Outpatient Department. Nonetheless, MDH's management has set an internal target of 26 weeks for the first outpatient visit. Figure 1 compares waiting times at MDH Outpatient Department with the internal target set by the Hospital.

[7] http://www.nhs.uk/NHSEngland/appointment-booking/Pages/nhs-waiting-times.aspx as at 21 November 2016.
[8] These Hospitals were selected for benchmarking purposes due to their online availability and similar set-ups as that of MDH.
[9] Statistics available for average waiting time for Hospitals in Ireland did not relate to Genetics.

Figure 1: Average waiting time for first appointment (as at 31 October 2016)



Source: Clinical Patient Administration System (CPAS).

1.3.7 Figure 1 shows that 38,159 patients across 33 specialties exceed MDH's own internal 26-week target for a new appointment. Moreover, these statistics increase sharply when compared to the UK and Ireland's benchmarks.

1.4 During 2015, a consultation visit at the Outpatient Department had an average cost of €3.18 per minute

1.4.1 MDH like other EU countries' hospitals needs to address simultaneously the twin objectives of containing costs while ensuring high access and quality of services.[10] This situation prevails as public expenditure on health absorbs a significant and growing share of EU countries' resources.[11] During 2015, MDH incurred an expenditure of around €204 million.[12] This expenditure represents 49 per cent of the total recurrent expenditure allocated nationally for health care services. During the same period, the Hospital's Outpatient Department incurred an expenditure of €32.2 million. The NAO's approach to base the review on activities occurring in 2015 rather than 2016 was mainly related to the availability of the Hospital's management accounts.

1.4.2 MDH elicited activity-based costings estimated that the average cost to provide a consultation visit at MDH Outpatient Department during 2015 amounted to €3.18 per minute. On the basis of the five sampled specialties, the NAO acknowledges that the methodology adopted by MDH to estimate these figures comply with generally accepted accounting practices and principles. A detailed account of the NAO's evaluations in this regard is attached at Appendix I.

[10] http://ec.europa.eu/economy_finance/publications/eedp/pdf/dp037_en.pdf as at 18 January 2017.

[11] http://ec.europa.eu/economy_finance/publications/eedp/pdf/dp037_en.pdf as at 18 January 2017.

[12] This figure represents the expenditure outlined in Government Estimates which is based on cash basis. However, if any accruals, prepayments and depreciation were taken into account, this expenditure would increase to €289 million.

1.4.3 The cost per minute of Outpatient consultations pertaining to the five specialties reviewed in this performance audit ranged from €1.93 to €4.58. Table 2 estimates the cost of an outpatient visit by considering the average duration of a consultation within the five specialties under review.

Table 2: Consultation costs for new and follow-up cases for the five specialties under review (2015)

Clinical specialty	Cost per minute[13]	New Appointment		Follow-up Appointments	
		Average duration of visit	Average cost of visit	Average duration of visit	Average cost of visit
	€	Minutes	€	Minutes	€
Genetics	3.75	20	75	15	57
GIT	4.58	30	137	20	92
Neurology	1.93	30	58	20	39
Urology	3.64	20	73	15	55
Vascular	3.70	20	74	15	56

1.4.4 The Neurology Department incurs a lower cost than the Hospital's average cost for Outpatient consultation. The costs of the remaining clinical specialties under audit are higher than the MDH average. On the other hand, a comparison of the average costs outlined in Table 2 with private sector charges show that GIT costs are significantly higher than the latter. Costs with respect to the other clinical specialties are deemed comparable to private sector fees.

1.5 Audit focus and methodology

1.5.1 The discussion within this Chapter has defined the waiting time problem at the Outpatient Department and the costs incurred to provide such service. This performance audit sought to evaluate the extent to which MDH is effectively managing the Outpatient Department. Consequently, this audit aimed to determine the extent to which:

a. the management of the outpatient demand is affecting waiting time and lists at MDH's Outpatient Department;
b. MDH's Outpatient processes and work practices are conducive to minimising waiting time; and
c. MDH's management structures and mechanisms are enabling the efficient management of waiting time and lists at the Outpatient Department.

1.5.2 This audit mainly focused on Medicine Gastrointestinal tract (GIT), Urology, Neurology, Vascular and Genetics clinical specialties. These were selected in view of longest average patient waiting time, which can have a major impact on the health of the patients. Moreover, as these

[13] The cost per minute include salaries relating to the consultant's firm, pharmaceutical and medical supplies, overheads, and expenditure relating to support services.

specialties adopt different practices in their management of outpatients enables comparative analysis between the processes adopted by the different specialties.

1.5.3 The methodology adopted to realise the audit's objectives entailed various approaches, namely documentation review, semi-structured interviews, and data analysis. The analysis was undertaken on MDH's waiting list as at 31 October 2016 and Outpatient attendance at the five specialties under review during October 2016. This month was selected as historically, it ranks within the top three months with the highest number of visitors.

1.5.4 This audit also entailed a review of MDH's management accounts. During the course of the audit, MDH was concluding management accounts relating to 2015. Thus, the NAO reviewed the methodology utilised and the assumptions undertaken to deliver management accounts. As the exercise is laborious, the focus was on the specialties of Medicine GIT and Urology. Through such an analysis, the NAO reviewed two specialties pertaining to the largest departments within MDH, namely Medicine and Surgical.

1.6 Report structure

1.6.1 Following this introductory Chapter, the Report proceeds to discuss the following:

- Chapter 2 seeks to discuss demand management at the Outpatient Department. The focus therein relates to concerns relating to referral tickets, walk-ins and no-shows.

- Chapter 3 reviews the supply processes concerning the Outpatients Department. The discussion revolves around the appropriateness in the Hospital's allocation of infrastructural, human resources and work practices, all of which factors, directly affect outpatient waiting times; and

- Chapter 4 focuses on the extent to which, MDH management structures and mechanisms are conducive to a qualitative Outpatient service delivery. To this end, this Chapter evaluates, amongst others, MDH's organisation structure, internal policies, management information and financial control.

1.6.2 The performance audit's overall conclusions and recommendations are included in the Report's Executive Summary on pages 7 to 10.

Chapter 2

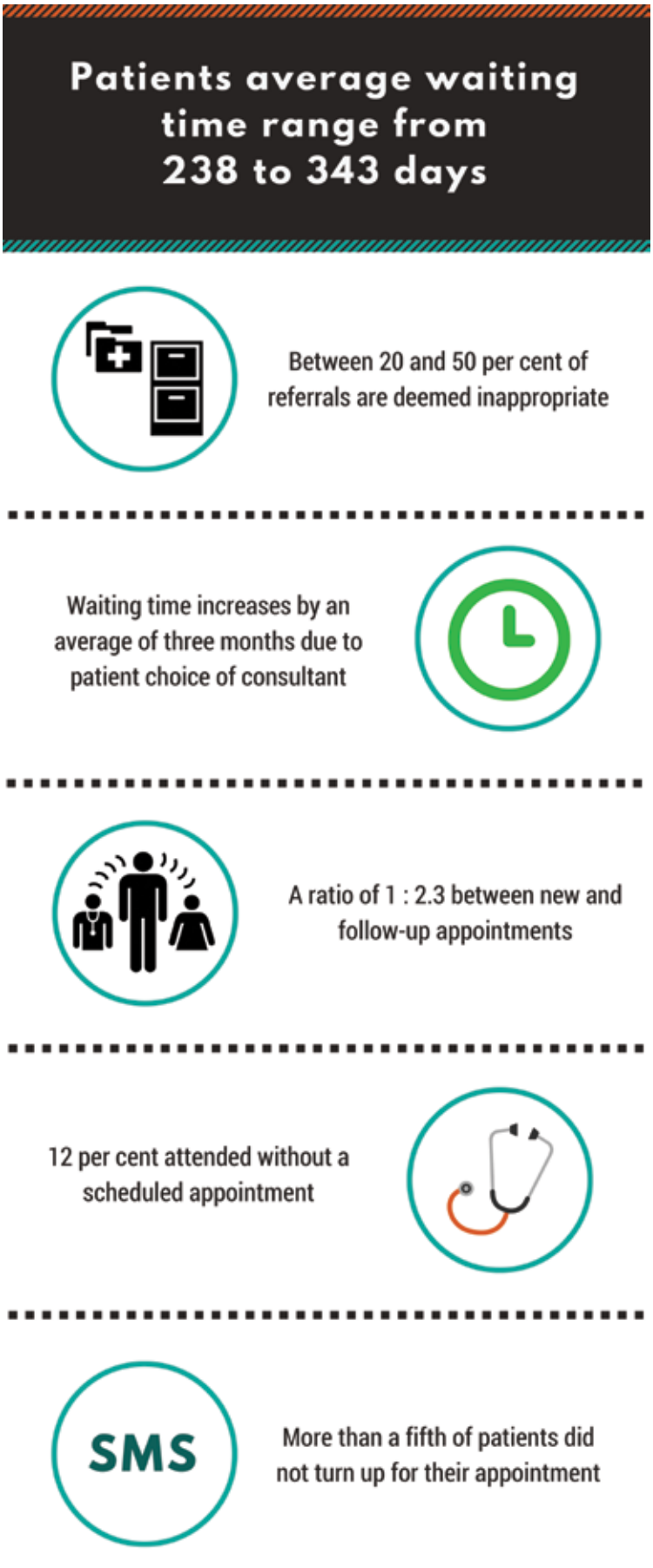
Managing the demand of MDH's Outpatient consultation services

2.1 Introduction

2.1.1 Disequilibrium between the high demand for the Outpatient Department and Mater Dei Hospital's (MDH's) supply of services is the primary factor, which influences patient waiting time. In the face of such a situation, clinical specialities resort to informal networks and processes to deal with cases deemed as urgent. Additionally, waiting time is influenced through patients' expressed preference for a particular physician. These elements coupled with internal operational and logistical issues within MDH are all affecting significantly the degree to which patients are allocated their first appointment within the 26-week benchmark, which is being considered by MDH's management as the accepted waiting time period.

2.1.2 This Chapter discusses demand-side factors, which are influencing patients' waiting time. Figure 2 portrays the main issues impinging on waiting time for the five clinical specialties under review, namely Genetics, Medicine Gastrointestinal tract (GIT), Neurology, Urology and Vascular. The ensuing sections discuss chronologically the issues presented in this diagram.

Figure 2: Factors influencing Outpatient waiting time of the five specialties under review (October 2016)



2.2 Inappropriate referral tickets are influencing waiting time for an Outpatient Department

2.2.1 Effective communication between the health sectors ensures timely, smooth transition and specialised care for the patient.[14] However, the absence of an appropriate referral ticket is influencing patient accessibility to the Outpatient Department. Referral forms are the means through which General Practitioners (GPs) and consultants working both in the public and private sectors refer their patients for outpatient visits at MDH. In view of the importance of an appropriate referral ticket and its effects on waiting time, this Section discusses the following:

a. MDH's referral template is limiting information exchange between health sectors;
b. The introduction of electronic referrals is still in its initial phases;
c. Inappropriate referrals inflate demand for new appointments by 20 to 50 per cent; and
d. Patients waiting time is influenced by the demand for a particular consultant.

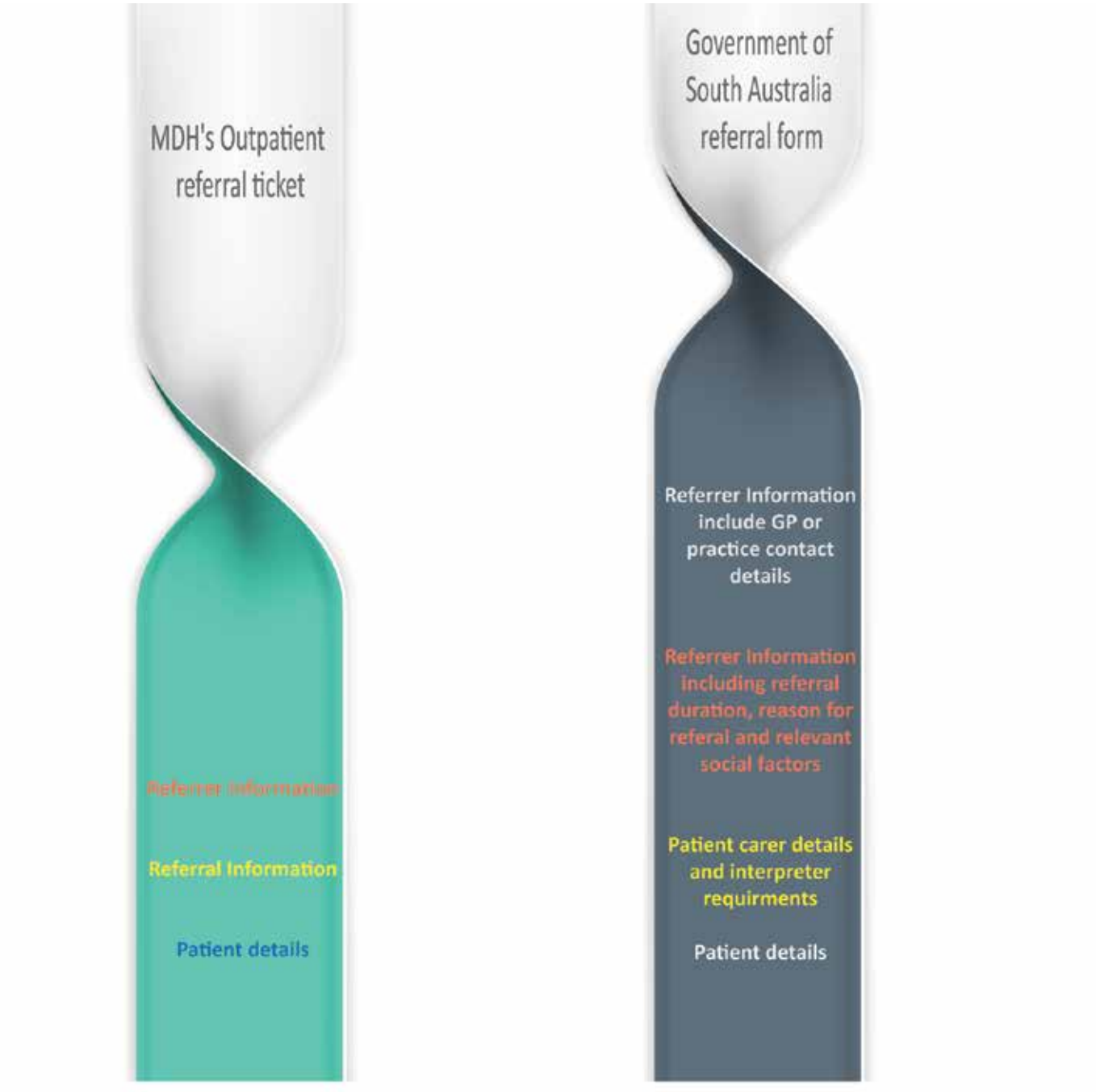
MDH's standard referral template limits information exchange between primary and hospital care

2.2.2 The quality and lack of information presented in MDH's referral ticket is influencing the length of each outpatient visit, as the consultant has to review the case thoroughly as if the patient was not seen at primary health care setting. Moreover, as the information regarding the referring health practitioner is limited, it affects the degree to which MDH's consultants can liaise with the former regarding clinical information.

2.2.3 A comparison of the current referral ticket with the one used by the Government of South Australia, shows that MDH form is not as comprehensive. The Government of South Australia referral form amongst other key factors also includes the referral duration (three, six, 12 months and indefinite), reason for referral (assessment only, diagnostic procedure, second consultant opinion, hospital to share management with GP) and relevant social factors. Figure 3 portrays the requirements listed in the MDH Outpatient Department and South Australia referral forms.

[14] Cassar *et al*. (2016). Referral tickets to secondary care: is communication effective? In Malta Medical Journal, Volume 28, Issue 1, page 48.

Figure 3: Comparative assessment of MDH referral ticket with the one in use by the Government of South Australia



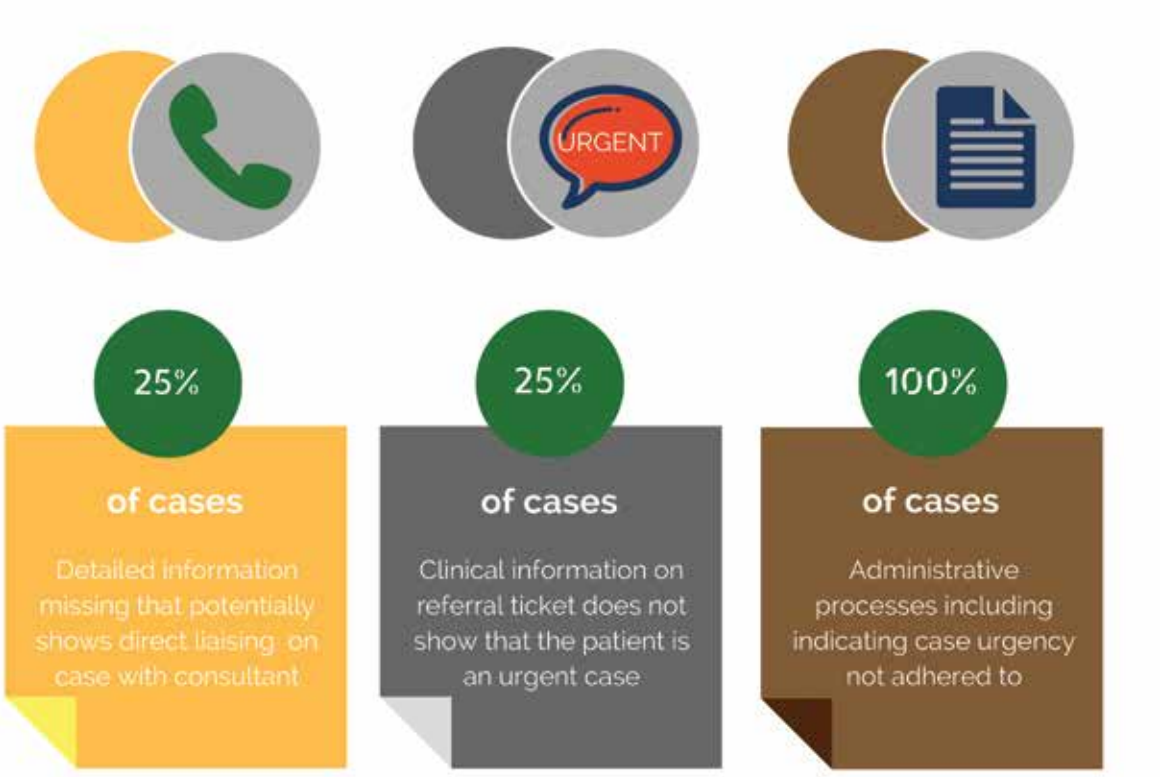
2.2.4 Comparative analyses between the two referral forms depicted in Figure 3 shows that the MDH referral form does not require referring clinicians to provide comprehensive patient information. To this end, Cassar *et al*, recognises that despite the improvements registered

following the introduction of a revised referral form in 2014, clinical details were poor. This 2015 assessment showed that a third and fourth of referrals did not include a past medical or drug history and no examination findings written respectively.[15]

2.2.5 This audit elicited similar findings to those presented in the preceding paragraph. The management of the five areas under review outlined that, currently, consultants are encountering similar problems relating to a lack of patient clinical information when dealing with "New" cases at MDH's Outpatient Department.

2.2.6 Referral ticket template related problems become compounded due to information limitations presented therein. This assertion considers both information elicited through interviews with clinicians and MDH administrative staff. Twelve randomly selected Urology urgent case studies undertaken together with the Hospital's Clinical Performance Unit confirmed this qualitative information. Figure 4 shows the findings emanating from a review of these case studies.

Figure 4: Referral ticket template problems (Urology – October 2016)



[15] Cassar *et al*. (2016). Referral tickets to secondary care: is communication effective? In Malta Medical Journal, Volume 28, Issue 1, page 50.

2.2.7 The issues raised in Figure 4 prevail as MDH internal processes, in many instances, prohibit the enforcement of comprehensive completion of the referral template. These circumstances materialise as MDH customer care staff are only verifying the patients' personal details. Moreover, MDH referral ticket enforcement is further limited as non-medical personnel vet referral tickets.

The introduction of electronic referrals is still in its initial phases

2.2.8 To enhance the effectiveness of its referral processes, in February 2017 MDH enforced more the use of electronic referrals. The Hospital made this facility available to all physicians within both the public and private sector. MDH envisaged that the uptake of electronic referrals would be more significant in the public sector as the Information Technology (IT) infrastructure was already in place.

2.2.9 However, this scenario has not fully materialised as during June 2017, only 10 per cent of the 5,000 referrals were received electronically. This percentage includes referrals received from different sources, including public and private GPs, as well as consultants. MDH's drive and enforcement of electronic referrals is limited, as the Hospital does not have the required mechanisms in place to determine the ratio of electronic referral tickets received from the public and private sectors. Additionally, MDH contends that the limited uptake of the electronic referral is also due to the complexities involved in completing the current form, which clinicians consider as laborious and time consuming.

2.2.10 While acknowledging the positive elements associated with the introduction of electronic referrals, the current system employed by MDH is not integrated with the Hospital's Clinical Patient Administration System (CPAS) – the system, which generates the appointment systems. Other hospitals, such as those in the United Kingdom (UK), have been using a fully-fledged computerised referral system, which allows a patient or healthcare professional to select a hospital / clinic and book an appointment convenient to the patient or that has short waiting times. The booking is immediate, speeding up the time it takes for a patient to be treated, improves the accuracy of recorded clock starts by automatically generating a date in the hospital computer systems and can lead to lower rates of failure to attend appointments.

Inappropriate referrals range between 20 and 50 per cent of MDH's demand for New Appointments

2.2.11 A qualitative analysis pertaining to the five areas under review showed that inappropriate referrals[16] during October 2016 ranged between 20 and 50 per cent of referral tickets received. Inappropriate referrals influence the Outpatient workload and hence effect waiting time for the first appointment. Additionally, these circumstances also impinge on the appropriate use of resources and cost efficiency.

[16] Inappropriate referrals are cases that primary health care rather than a specialised setting such as MDH's Outpatient Department could deal with.

2.2.12 A number of reasons contribute to this situation, namely:

a. The principles relating to referral tickets outlined in the National Health System Strategy, which envisages that primary care sector strengthens its role as gatekeeper to specialist and secondary care is yet to be implemented.[17]

b. Primary health care services provided by both the private sector are not guided by formal referral criteria for the various clinical specialties.

c. In many instances, primary health care specialists are constrained to refer cases to the Outpatient Department, as they cannot prescribe the full range of investigations – most of which need the authorisation of a clinical consultant.

d. Primary health care specialties are not fully resourced with to carry out in-depth investigations and follow-ups. Thus, to avoid liability associated with missed diagnosis, primary health care specialists are more readily disposed to refer patients to secondary care.

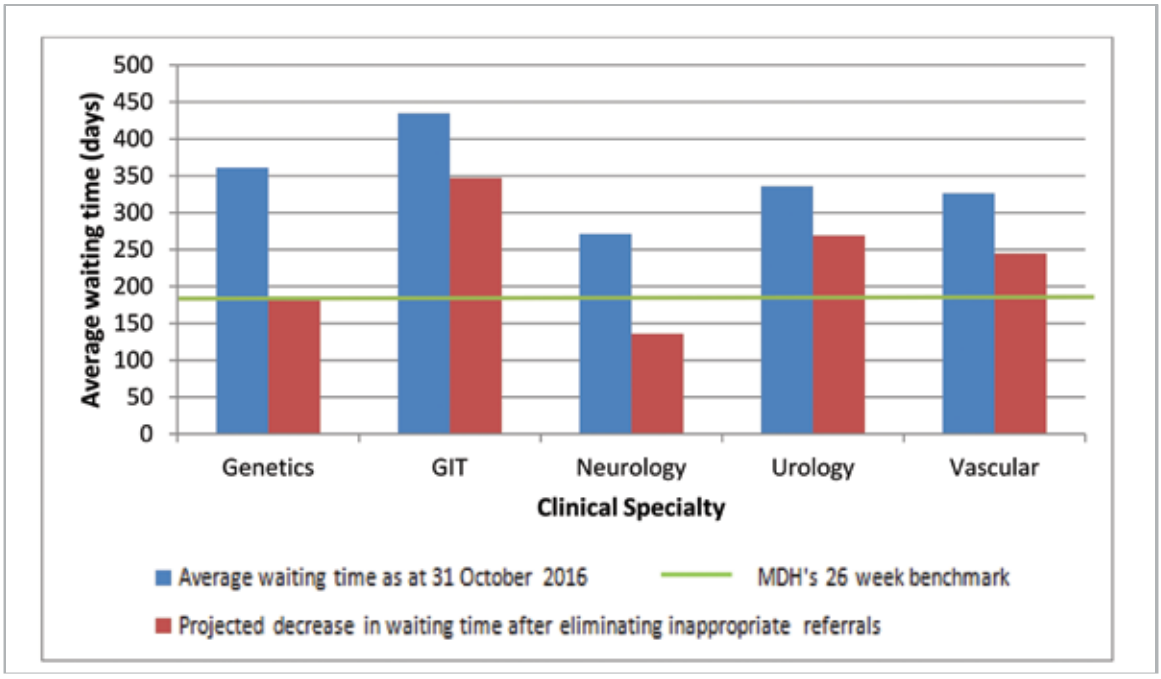
e. The Health Systems In Transition reports issued both in 2014 and 2017 revealed that patients prefer to be referred to secondary care. In this regard, MDH records estimate that patients double book new appointments with different consultants with the intention of securing an earlier Outpatient appointment.

2.2.13 The above clearly indicate that primary health services, both public and private, are not appropriately fulfilling their role as gatekeepers to secondary care. Moreover, due to the aforementioned circumstances, the heads of five clinical specialties reviewed estimate that inappropriate referrals in the respective departments amount to 50, 20, 50, 20 and 25 per cent for Genetics, GIT, Neurology, Urology and Vascular respectively. The foregoing implies that in the same circumstances outpatient waiting time could go down significantly.[18] Figure 5 refers.

[17] Parliamentary Secretariat for Health, Ministry for Energy and Health (2014). A National Health System Strategy for Malta, 2014-2020, page 94.

[18] Assumption: Inappropriate referrals are equally distributed across patients less than 18 weeks, between 19 and 26 weeks and more than 27 weeks.

Figure 5: Projected decrease in average waiting time for first appointment when eliminating inappropriate referrals



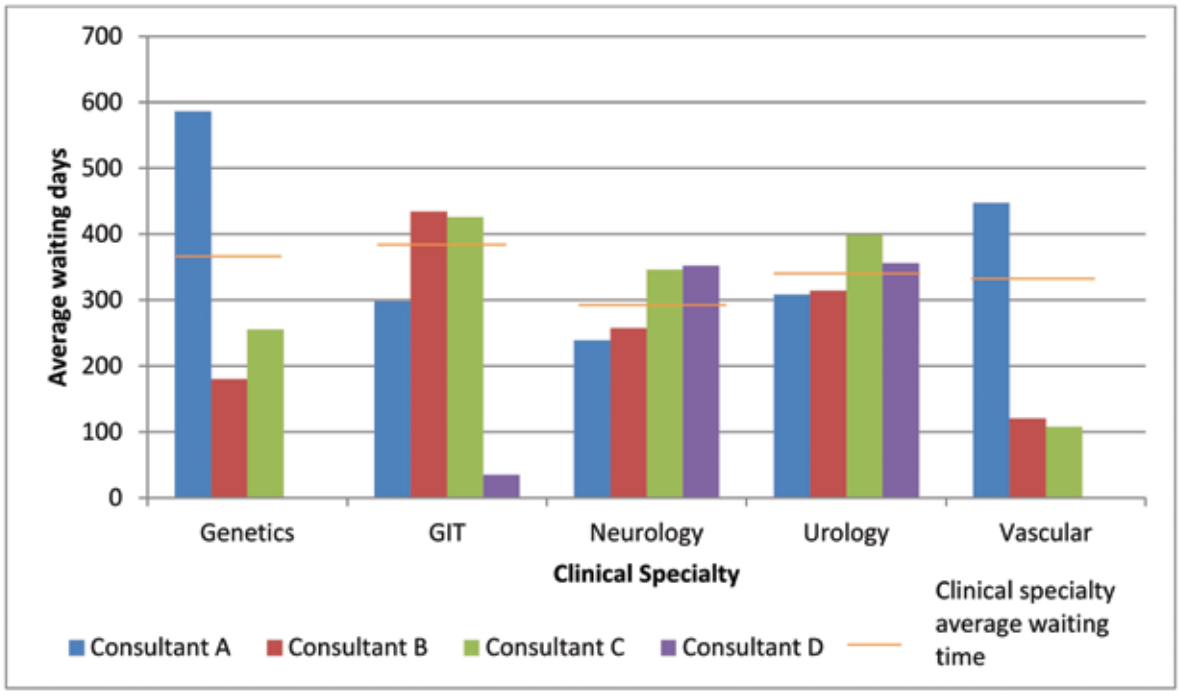
2.2.14 Figure 5 shows that waiting time decreases significantly if inappropriate referrals are decreased to the maximum estimated by the respective heads of Departments. In the case of Genetics and Neurology, the average waiting time would decrease to the levels considered by MDH's management as appropriate.[19]

Demand for specific consultants is influencing waiting time for first appointment

2.2.15 The unequal distribution of referrals between consultants, within the same clinical specialities, influences average waiting times. The unequal distribution of patients among consultants is mainly due to MDH's practice that enables its clients to choose their preferred consultant. Figure 6 refers.

[19] MDH's management considers a wait of 26 weeks as acceptable.

Figure 6: Difference between the consultants' average waiting time for first appointment (as at 31 October 2016)[20]



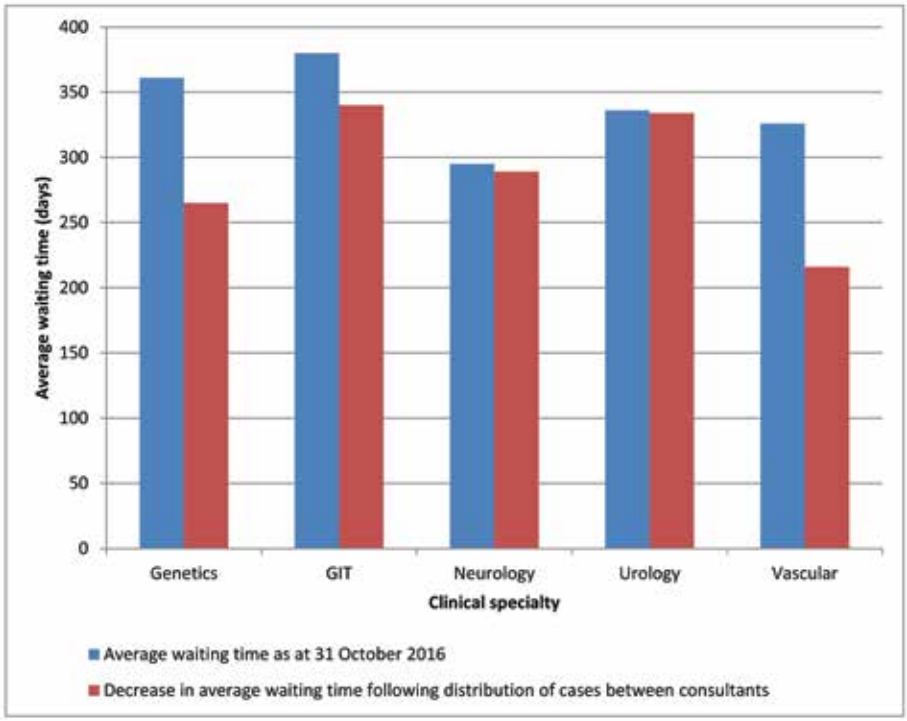
2.2.16 Figure 6 shows a variance in the consultants' average waiting time within the same specialty. While the Hospital waiting list is owned and managed by MDH, patient choice is a key factor influencing waiting lists and times. However, patients do not have accurate information regarding consultants' respective waiting time, as most referring clinicians do not have access to this type of information.

2.2.17 Consultants' availability within the public and private sector also influences patients' choice of clinician. The Hospital electronic records do not show whether the source of referral emanated from the private or public sector health services. The only exceptions within the five specialities under review relate to Genetics and Vascular specialities, whereby consultants perform duties solely at MDH.

2.2.18 Assuming that demand remains constant and MDH makes the necessary logistical arrangements to enable a more balanced distribution of patients, average waiting times would decline. Figure 7 refers.

[20] For the clinical specialties of GIT and Neurology analysis was carried out on the main sub-specialty.

Figure 7: Distribution of new appointments between consultants[21]



2.2.19 The foregoing questions current practices where MDH has limited discretion on the distribution of patients among consultants. On the one hand, patients, as consumers of hospital services, are sovereign over their choice of consultants. On the other hand, MDH has an obligation to ensure the timely delivery of outpatient services. The statistics outlined in Figure 7 clearly shows that there is a disequilibrium exists between these two principles.

2.3 The ratio between new and follow-up appointments is influencing Outpatient waiting for the first appointment

2.3.1 An analysis of the total appointments scheduled for October 2016 in the five specialties under review shows that, generally, a significant proportion of consultant's time is allocated for follow-up appointments. This implies longer waiting time for new cases. Table 3 refers.

Table 3: Ratio of New to Follow-up Cases (October 2016)

Specialty	Total New Cases Booked	Total Follow-up Cases Booked	Ratio of New to Follow-up Cases
Genetics	169	51	1 : 0.3
GIT	292	667	1 : 2.3
Neurology	281	487	1 : 1.7
Urology	253	1,338	1 : 5.3
Vascular	207	265	1 : 1.3

[21] When distributing patients equally between consultants, the NAO considered the size of the consultant's firm.

2.3.2 Table 3 shows that the ratio of New to Follow-up Cases vary between specialties. However, with the exception of Genetics, where MDH clinical specialists contend that follow-up appointments are required minimally, the other specialties have a high ratio of New to Follow-up cases. This situation is impinging on waiting time for new cases. A similar situation prevails even when considering the total 2016 Outpatient activity throughout MDH has a New to Follow-up ratio of 1 : 2.5. This is at par with the ratio of 2.3 for Outpatient Activity across England attained for the period 2015/2016.

2.3.3 It is to be recognised that according to the National Institute for Health and Care Excellence (NICE) guidelines a number of follow-ups are required in many long-term conditions. However, the situation outlined in the preceding paragraph, goes against the principles of "A National Health System Strategy for Malta 2014 - 2020" (NHSS). The latter outlines that there is the need to restructure as well as invest in community services and primary health care sectors to increase their capacity in terms of following up patients that had a visit at the Outpatient Department. This results in, partially shifting follow-up services from secondary to primary health care sector.

2.3.4 MDH is currently constrained to sustain further the low ratio between new and follow-up outpatient appointment as consultant's job plans also outline such ratios. It is, however, unlikely that the Hospital is able to remedy the situation in the short-term. To date, the mechanisms required within primary health care to enable discharging patients and to transfer them to receive further care through primary health care are not yet fully in place. For instance, it is doubtful whether the current resource availability and set-up within both the public and private primary health care systems could cope with the increased work-load and adhere to the continuity of care principle.

2.4 During 2016, more than a quarter (26 per cent) of the patients attended the Outpatient Department as walk-ins

2.4.1 During 2016, the Hospital's Outpatient Department examined 130,917 patients without an appointment. This number includes consultations and investigations. Walk-ins constitute 26 per cent of the total attendances registered at the Outpatient Department. This figure impinges on the degree of new and follow-up cases that that MDH can accommodate. Having more than a quarter of the patients classified as walk-ins also influences the daily workflow and administrative requirements.

2.4.2 The Hospital seeks to utilise walk-ins to improve its accessibility to urgent cases. The level of walk-ins, however, raises questions as to whether all such visits constitute priority cases. Conversely, the five clinical specialities reviewed have a much lower rate than the average MDH Outpatient walk-ins. Nonetheless, the following issues arise:

a. A number of walk-ins relate to patients that do not physically attend the Outpatient Department. These circumstances arise since consultants schedule investigative test

appointments for their private patients. Consequently, even if such cases were high priority cases, these patients are being treated earlier than similar cases that were allocated urgent appointments. This audit revealed that during October 2016, the Genetics, GIT, Neurology and Urology clinical specialities had two, three, 11, and 122 investigations out of the 41, 109, 102 and 152 walk-ins respectively. The Vascular speciality did not register any investigation walk-ins during this period.

b. The figures presented in the preceding paragraph imply that the remaining walk-in patients, that is over 66 per cent within the specialities under review, would have been high priority or urgent cases. However, CPAS – the patients' registration system, does not indicate the relative case priority. This situation arises since the Hospital does not enforce that the responsible staff input the relevant administrative case information. Moreover, MDH has not undertaken any medical audits to ascertain the appropriateness of walk-ins. In the absence of such information, this Audit is not in a position to confirm or otherwise the merits of these walk-in cases.

c. The absence of administrative information concerning walk-ins raises transparency related issues. Incomplete fields within CPAS does not provide the adequate level of comfort that all of these cases were high priority cases and deserved to be dealt with immediately.

2.5 No-shows characterise more than a fifth of the total scheduled outpatient appointments within the five case studies

2.5.1 More than a fifth of the patients did not attend their scheduled appointment within the specialties under review. MDH estimate that around 10 per cent of no-shows relate to patients who forgot their scheduled appointment. The percentage of no-shows is higher at MDH than in other hospitals with which benchmarking exercises were carried out.

2.5.2 During 2015, Cork University Hospital had 12 per cent of the total number of patients who were to attend the Hospital for their Outpatient visit, who missed their respective appointment.[22] Similarly, it is estimated that seven per cent did not attend their outpatient appointment in the UK.[23] In this regard, this Office verified the degree to which the specialty type, urgent cases, and patient's history influence the level of no-shows.

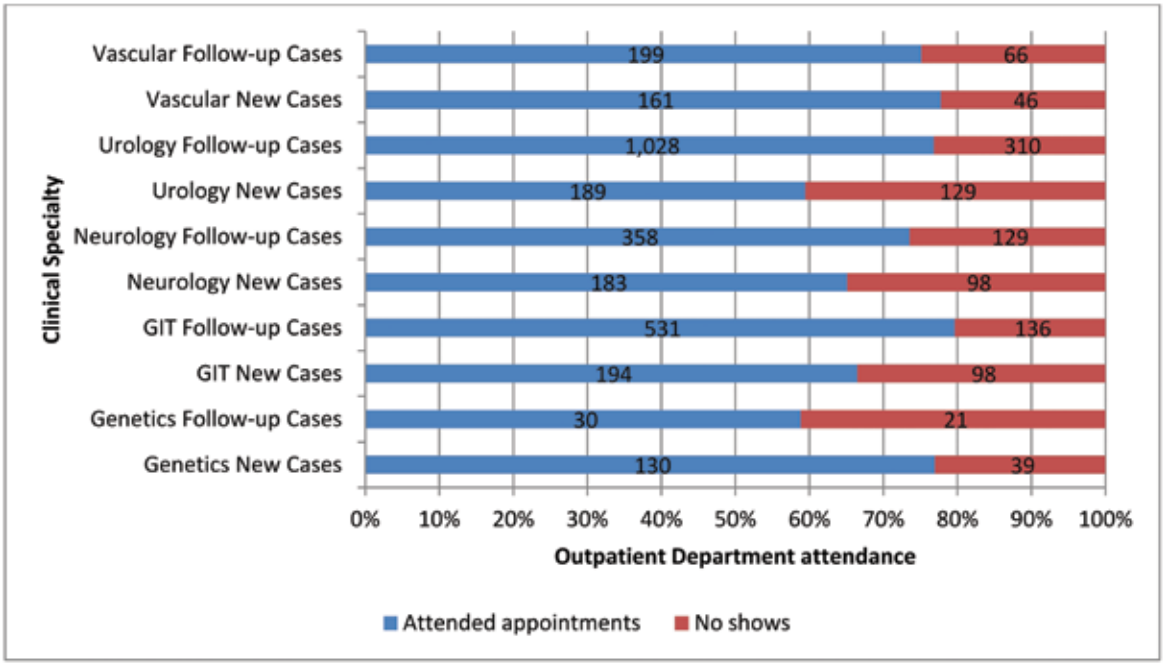
Specialty characteristics influence the level of no-shows

2.5.3 The five specialties under review are heavily characterised by no-shows. This level varies between specialties, especially when new and follow-up appointments are analysed. Figure 8 refers.

[22] CEO blog, Cork University Hospital http://www.cuh.hse.ie/Blog/Out-Patient-Non-Attendances-What-Can-We-Do-About-This-Major-Problem-.html as at 19 December 2016.

[23] EK Blaehr et al., 2016. The effect of fines on nonattendance in public hospital outpatient clinics: study protocol for a randomized controlled trial. Accessed from: https://trialsjournal.biomedcentral.com/articles/10.1186/s13063-016-1420-3 as at 19 December 2016.

Figure 8: Patients who did not turn up for their scheduled appointment (October 2016)



2.5.4 Figure 8 shows that in the case of GIT, Neurology and Urology, the percentage of patients who do not turn up for their first scheduled appointment is higher than for follow-up cases. Similarly, in the case of Genetics, GIT and Neurology, the difference between no-shows for new and follow-up cases is significant. This situation raises questions regarding patients' oscillation between the private and public sectors as well as on the degree to which waiting time impinges on the level of no-shows. In the former case, this Office could not make further analysis as data in this regard is not available. In the latter case, as discussed in the ensuing section, while waiting time impinges on no-shows, a significant proportion of urgent cases still do not turn up for their appointment.

A significant proportion of urgent cases, missed their scheduled appointment

2.5.5 Notwithstanding the urgent classification of scheduled appointments, during October 2016, around a quarter of patients did not turn up for their visit with their consultant.[24] Table 4 shows the percentage of patients who did not turn up for their urgent appointment.

[24] For the purpose of this analysis, an urgent case considers visits classified by CPAS as "priority" and "overbooking".

Table 4: Percentage of patients who missed their "urgent" appointment (October 2016)

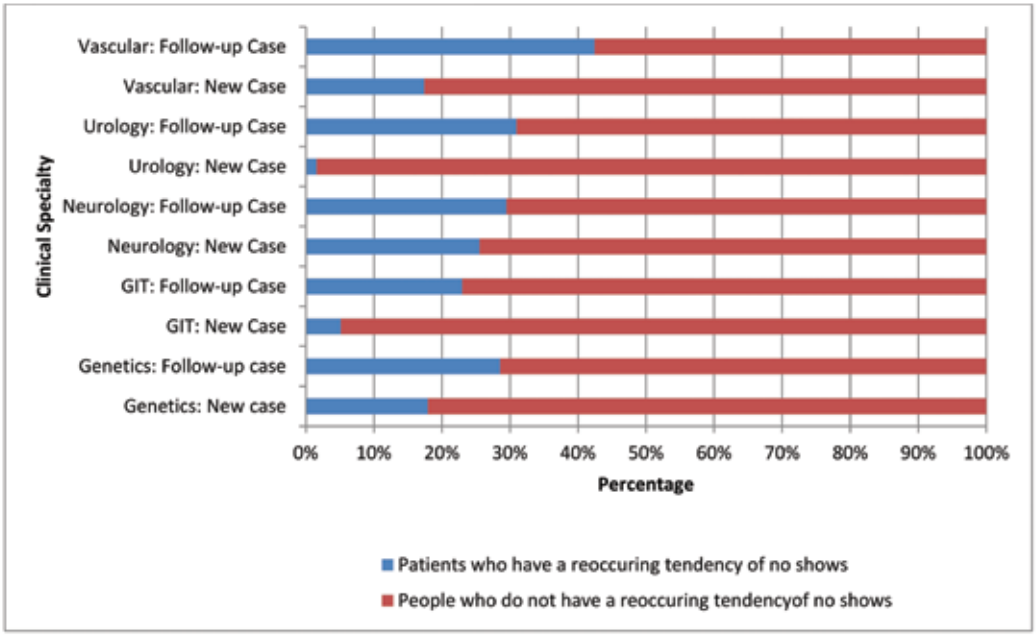
Specialty	Urgent cases booked		No-shows		No-shows as a percentage of urgent cases	
	New Appointment	Follow-up Appointment	New Appointment	Follow-up Appointment	New Appointment	Follow-up Appointment
Genetics	13	1	1	1	7.7%	100% [25]
GIT	95	257	18	35	18.9%	13.6%
Neurology	154	83	39	25	25.3%	30%
Urology	70	697	16	136	22.8%	19.5%
Vascular	84	113	13	22	15.5%	19.5%

2.5.6 Table 4 shows that the percentage of patients who do not turn up for their urgent scheduled appointment is subjectively considered as high. This consideration is based on the simple premise that patients needing urgent care would keep their appointments. No-shows with respect to urgent cases raise two main considerations: Firstly, patients were not prepared to wait for their scheduled appointment and sought care through the private sector; or secondly, the case was erroneously classified or deemed urgent.[26]

Around 22 per cent of patients who do not turn up for their follow-up appointment have a history of no-shows

2.5.7 Another key element that influence the level of no-shows, relates to whether or not the patient has a higher tendency of attending the scheduled appointment. Analysis was undertaken both on a specialty level and whether the appointment was a New or a Follow-up case scheduled during October 2016. Figure 9 refers.

Figure 9: Patients' history influence on the level of no-shows (October 2016)



[25] This figure cannot be considered to be valid as it is based on one case.

[26] Evaluation of no show characteristics revealed that such cases do not relate to deceased persons. Similarly, this evaluation also noted that there is no relationship between no-shows and patents who had previously attended the outpatient department as a walk-in.

2.5.8 Figure 9 shows that on average 22 per cent of the patients who did not turn up for their follow-up appointment had a history of no-shows. This situation is materialising as:

a. MDH does not have a Standard Operating Procedure (SOP) like the one available at Northampton General Hospital, identifying the process that needs to be undertaken when a patient does not turn up. In the case of Northampton General Hospital, the process following a no-show, include checking patient demographics and discharging back the case to the referring GP or consultant.[27]

b. Generally, when a patient does not turn up for the appointment, a second appointment is scheduled, without verification, relating to the no-show episode.

2.5.9 In view of the foregoing, MDH stepped up their efforts. Firstly, as of August 2016, MDH started calling patients to remind them of their scheduled appointment. To sustain this process and potentially reduce costs associated with this exercise, MDH launched a pilot project during July 2017, where patients started to receive a reminder in mobile text format. Secondly, MDH management embarked on an exercise involving calling patients who do not turn up for their appointment to analyse reasons why patients did not turn up. As of end of August 2017, these efforts have reduced the level of no-shows by 11 per cent in areas targeted by this initiative.

2.5.10 Despite recent MDH efforts, the level of patient no-shows remain disturbing. No-shows distort demand trends, influence the Hospital's logistical and operational arrangements as well as impinge on waiting times. Section 3.2 further expands on this discussion and its supply-side implications.

2.6 Demand–side inefficiencies contribute to an estimated average of 194 days additional waiting time for a new outpatient appointment

2.6.1 Inappropriate referrals, the unequal distribution of patients between consultants and patient no-shows are the three main elements, which unnecessarily inflate the demand, and consequently waiting time for outpatient appointments. The National Audit Office (NAO) estimates that these factors, collectively, increase waiting times by an average of 194 days or 43 per cent on waiting times.

2.6.2 These estimates, based on October 2016 figures pertaining to the five clinical specialities under review, were elicited through extrapolations of prevailing waiting lists and the respective average waiting times.

2.6.3 The calculations relating to the decrease of waiting times if patient no-shows were eliminated, assumes that slots vacated by no-show patients are being used to attend to walk-ins and urgent cases. As MDH protocols dictate that these cases are to be dealt with over and above the

[27] Chief Operating Office, Northampton General Hospital, NHS Trust (2014). Elective Patient Access (Adult), pages 18 – 19.

allocated appointment slots, then the implication is that no-shows unnecessarily inflate waiting times by unnecessarily occupying appointment slots.

2.6.4 The estimates presented in Table 5 relate to projections on the impact on waiting times if demand inefficiencies are taken into account. While the estimates in Table 5 assume the total elimination of such inefficiencies, in practice such a scenario would not be achievable. Nonetheless, the figures in Table 5 are being reproduced to indicate the potential decrease in waiting times that are achievable with enhanced demand management.

Table 5: Potential maximum decrease in new Outpatient appointment waiting time through enhanced demand management[28]

	Genetics		GIT		Neurology		Urology		Vascular	
	Days	Days	Days	Days	Days	Days	Days	Days	Days	Days
Average waiting time as at 31 October 2016	361		380		296		336		326	
Less:										
Distribution of cases between consultants		96		40		7		2		110
Inappropriate referrals		180		76		148		67		81
No-shows		83		140		102		84		72
Projected Average waiting time		**2**		**124**		**39**		**183**		**63**

2.6.5 Table 5 shows that enhancements in demand management lead to significant decreases in waiting times across the five specialties under review. Admittedly, the figures therein portray a best-case scenario situation and consider the elements influencing demand as mutually exclusive. In practice, this is not always the case. Nonetheless, the intentions behind Table 5 are to illustrate the potential impact of a more robust demand management. The projected savings achieved in waiting time through better demand management implies that MDH would be in a much stronger position to attain its internal target, that is, a wait of not more than 26 weeks for the first appointment.

2.7 Conclusions

2.7.1 Inefficiencies in three major areas, namely, equal distribution of patients between consultants, inappropriate referral and no-shows, individually and collectively significantly inflate the outpatients' demand. This situation, which has historical roots, has complex origins. These mainly relate to patients' oscillation between the private and public health sectors, health policy and protocols fragmentation, shortcomings in primary health care as a gatekeeper to secondary care, MDH's limited enforcement action over inappropriate referrals and patient no-shows.

[28] As for GIT and Neurology the main sub-specialty was considered for this exercise.

2.7.2 The unequal distribution of demand among consultants' firms is mainly due to patients' concurrent use of the private and public sector health services. This situation prevails as many health care practitioners offer their services in both sectors. While this situation offers consumer choice, it limits the Hospital's ability to distribute cases in a more balanced manner between its consultants.

2.7.3 At the macro level, policies dealing with health care, such as "A National Health System Strategy for Malta 2014 – 2020" (NHSS), establish the strategic objectives and to varying degrees, Key Performance Indicators. However, national policies relating to the attainment of the NHSS's objectives are not yet fully developed. As a result, existing departmental policies and protocols remain in operation. This situation is not conducive to ensure that all departments within the Ministry for Health, including MDH, are working in parallel to attain common goals and targets. Moreover, policy fragmentation minimises strategic control over health care processes. Chapter 4 will discuss in further detail the lacunas in current strategic framework and the subsequent implications of the current state of affairs.

2.7.4 MDH deems that a significant number of referrals to its Outpatient Department are unnecessary; implying that the primary health care's gate keeping function to secondary care is not operating as intended. Various reasons contribute to such circumstances, namely the absence of policies and protocols to guide referring clinicians, the absence of resources at primary health care level as well as patients' insistence to be referred to the Outpatient Departments at MDH on the premise that they would have wider access to specialist care and investigative procedures. Another policy lacuna, which influences the Outpatient Department's demand, relates to discharging and referring back patients from secondary to primary care.

2.7.5 The Hospital is taking active steps to minimise the number of patient no-shows. Yet, statistics still show that the number of no-shows remains problematic. Long waiting times potentially encourage patients to seek care elsewhere. Nonetheless, patients have a civic obligation to inform the Hospital if they do not intend to keep appointments. Again, policy lacunae on how to deal with no-shows limit MDH's stance to curb this wasteful practice.

2.7.6 The next Chapter discusses the Hospital's initiatives to ensure that the supply of Outpatients services address the prevailing demand. To this end, the Chapter identifies the areas, which hinder the attainment of an equilibrium between demand and supply for Outpatients Services.

Chapter 3

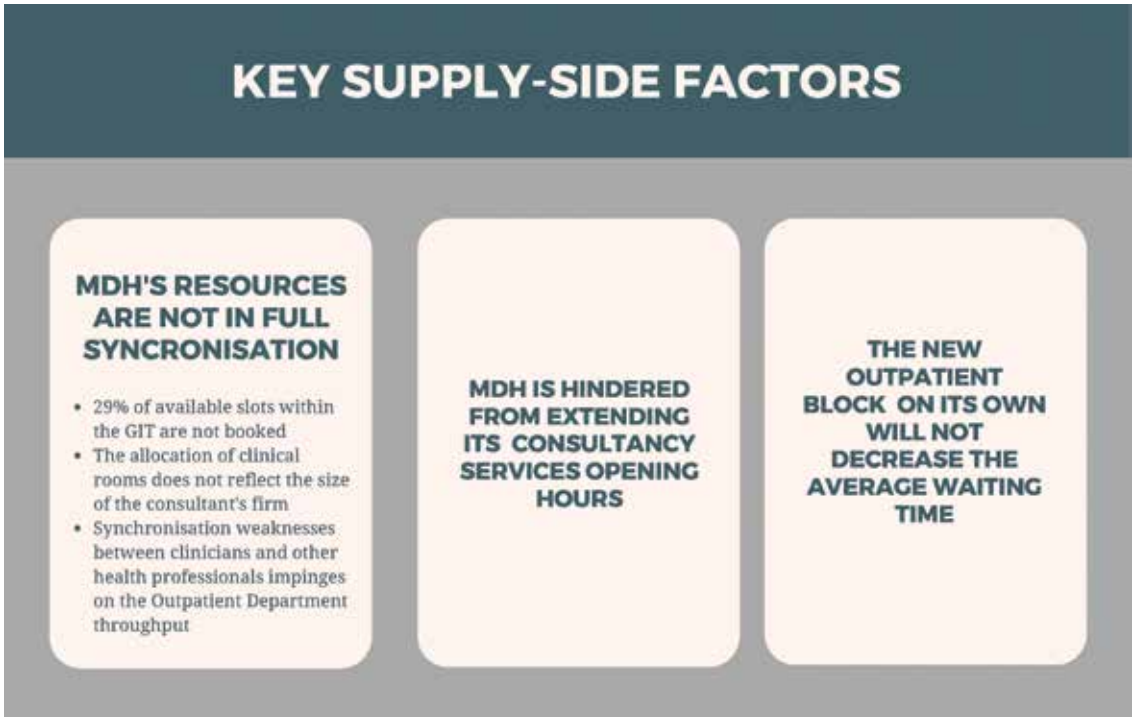
Supply side issues

3.1 Introduction

3.1.1 The prevailing high demand levels overburdens the current supply of resources at the Outpatient Department at Mater Dei Hospital (MDH). The Hospital acknowledges that a high proportion of this demand is inappropriate, as it could have been dealt with at Primary Health Care level. While the Hospital's consulting firms are, generally, providing the services requested of them through their respective agreements, varying degrees of service delivery inefficiencies prevail. These mainly relate to current work practices as well as the historical problems concerning the extension of service delivery beyond early afternoon. As a result, these circumstances contribute to the disequilibrium between demand and supply, which ultimately impinge on patients' waiting times for first and follow-up appointments.

3.1.2 This Chapter discusses supply-side issues that are influencing waiting time for an Outpatient's consultation visits. The analysis is based on the situation as at October 2016 for the five clinical specialties pertaining to the scope of this performance audit. The focus of this review related to identifying inefficiencies in the use of available resources and circumstances, which hinder MDH from increasing its supply of consultations at the Outpatient Department. This performance audit identified a number of key supply-side components that are affecting waiting time for Outpatient visits. Figure 10 refers.

Figure 10: The key supply-side factors influencing throughput of the five specialties under review (October 2016)



3.1.3 The issues presented Figure 10 will be discussed in chronological order in the subsequent Sections of this Chapter.

3.2 MDH resources at the Outpatient Department are not in full synchronisation

3.2.1 The three key resources required in the provision of Outpatient Services are namely consultant's firms, other health professionals, particularly nurses and carers, as well as the Hospital infrastructure, in this case consultation rooms. The full synchronisation of these resources contribute to attaining high levels of efficiency when delivering services. Improving throughput entails making available the highest possible number of appointment slots to respective consultation firms.

Around a third of the GIT clinical specialty available outpatient consultation slots were not utilised

3.2.2 Outpatient consultation appointment slots can be either routine or priority cases. The Hospital centrally allocates appointment slots, which reflect the agreement between the latter and consultants. These agreements incorporate the envisaged throughput by respective consultants' firms. In October 2016, the clinical specialties under review, with the main exception of GIT, utilised all their respective allocated slots. Table 6 refers.

Table 6: Difference between available and utilised slots (October 2016)[29]

Speciality	New Appointments[30]			Follow-up Appointments			Unutilised minutes
	Total available slots	Utilised slots	Variance	Total available slots	Utilised slots	Variance	
GIT	268	301	33	900	531	(369)	(6,390)
Neurology[31]	164	237	73	544	269	(275)	(3,310)
Urology	239	218	(21)	901	1,028	127	1,485
Vascular	188	185	(3)	168	199	31	405

3.2.3 Table 6 raises the following issues:

a. The resultant negative variances in the GIT clinical specialty show that neither new nor follow-up appointment slots were utilised. This situation, in varying levels, was evident throughout three out of the four firms comprising this specialty. This constitutes a breach of the agreement between MDH and its consultants. Moreover, this situation is tantamount to inefficient practices since available resources were not utilised. The seriousness of these circumstances are highlighted when waiting time for a new case and follow-up appointments, at the time, stood at 434 and 238 days.

b. To a much lesser extent, the Neurology Department did not fully utilise its available slots. When considering that a follow-up appointment slot comprises two thirds of the time of a new case, then if slots were to be used to accommodate new cases, 110 more appointments could have been issued during October 2016 by this clinical specialty.

c. The Urology and Vascular specialties both delivered in excess of their agreed appointment schedules. These circumstances are possible since the Hospital grants consultants prerogative over extra cases to be examined.

The allocation of clinical rooms does not reflect the size of the consultant's firm

3.2.4 The determination and allocation of appointment slots is also subject to the availability of consultation rooms. The Hospital's allocation of consultation rooms reflected demand patterns. On the other hand, senior consultants pertaining to the five specialties under review contend that firms are not allocated the required number of consultation rooms. To varying degrees, this is substantiated by the demands made by clinical chairs with respect to room requirement when the Outpatient Department moves to the new block.

[29] The Genetics clinical specialty was not considered for this analysis due to different work practices adopted.
[30] New Appointments utilised slots include also walk-ins.
[31] Analysis was carried out on the main Neurology clinical specialty.

Synchronisation weaknesses between clinicians' and nurses impinges on the Outpatient Department's throughput

3.2.5 The non-synchronisation of resources is influencing the Outpatient Department throughput. Nurses deployed at the Outpatient Department generally perform duties between 7am and 3pm. However, this schedule implies that the nurses' shift is not synchronised with consultants' roster. On the other hand, according to the Hospital's centralised patient administration system, consultants pertaining to the five specialties under review generally commence their duties at the Outpatient Department by 08:30 hours. Clinics' conclusion ranged from 9:15 to 16:00 hours. These consultancy hours contrast with the nurses' roster.

3.2.6 As can be evidenced by the generic timings relating to clinic availability and nurses' rosters reproduced above, the Hospital does not maintain comprehensive records pertaining to these important components of its service supply. Despite the sparse records – some of which are maintained manually, the following concerns relating to the disparity between nurses' roster and clinic timings emerge:

a. Nurses start their session prior to the actual clinic time on the premise that patient's files are prepared beforehand. However, during 2016, MDH management set-up another Section within the Outpatient Department to prepare patient's medical files. To date this Section takes care of all Outpatient files with the exception of Medical Outpatient 3 (MOP3). Despite this development, nurses' roster prevailed.

b. A nurse is assigned to each consultant firm, irrelevant of the number of clinical rooms available, the clinical pre-requisites and the type of appointment. In cases, consultants contend that this situation is resulting in inadequate nursing support.

c. Consultants also lamented that nursing support during clinics is absent in circumstances when the latter's roster precedes the scheduled conclusion of clinics.

d. A similar situation materialises when, for varying reasons, consultants and clinicians need to prolong consultancy sessions at the Outpatient Department. In such circumstances, such clinics proceed without nursing support.

3.3 MDH is restricted to extend its Outpatient Department operating hours

3.3.1 The morning and early afternoon Outpatient services generally operates very near to full capacity. During this period, all consultation rooms are utilised. The opportunity exists for MDH to increase its supply of Outpatient services after this session. Extending the use of existing infrastructure beyond early afternoons would facilitate the Hospital to allocate extra consultation sessions. Extending the use of available resources and infrastructure also reaps economic benefits as fixed costs are spread over a larger number of consultations. Moreover,

extending the operational hours of the Outpatient Department and conducting extra consultancy sessions, lessens patients' waiting times for new and follow-up appointments.

3.3.2 However, MDH has historically experienced difficulties in extending its outpatient services beyond early afternoons. The following refers:

a. 193 out of 269 consultants are employed by the Hospital on Contract B basis. This situation is generally replicated in the five clinical specialties pertaining to the scope of this audit. Contract B signatories are entitled to work in both the public and private health sectors. Consequently, many of these consultants are restricted to work beyond early afternoons due to their commitments within the private sector.

b. Nearly a fifth of the nurses performing duties at the Outpatient Department are on a reduced-hour schedule. Moreover, most nurses performing duties at the Outpatient Department, for family-related reasons, are not willing to extend their working hours. This influences the uptake of afternoon and evening sessions.

3.3.3 The foregoing implies that the Hospital has chronic difficulties, in terms of resource availability, to utilise its Outpatient Department infrastructure beyond early afternoons. Furthermore, MDH efforts to recruit specialists and other health professionals did not achieve the desired results. A case in point relates to the Vascular clinical specialty where, between 2007 and 2014, MDH efforts in the national and international arenas to recruit specialist proved to no avail.

3.3.4 The issues presented within this Section prompted MDH to explore the possibilities of outsourcing a number of outpatient specialties. To this end, during April 2017, the Hospital issued a call for an Expression of Interest with respect to Outpatient services relating to rheumatology, respiratory, diabetes and gastroenterology. However these efforts did not yield the desired outcomes.

3.4 The New Outpatient Block, which is set to be ready by 2020 will not yield the expected return if change in the current modus operandi is not carried out

3.4.1 MDH acknowledges many of the issues raised within this Chapter leading to supply restrictions within the Outpatient Department. To this end, the Hospital is planning to construct a new block within the Hospital's existing footprint to house Outpatient facilities. Planning documentation, comprising mainly of a needs assessment, compiled by MDH shows that the new facilities will include more consultation rooms to cater for current and projected demand.

3.4.2 Within the context of this audit, this project should, to varying degrees, ameliorate waiting lists and times as well as enhance service delivery. However, unless MDH can find ways to extend its delivery of Outpatient service beyond early afternoons and to make such facilities available also on weekends, it is unlikely that the new infrastructure will be optimally utilised.

3.5 Conclusions

3.5.1 The Hospital has a number of constraints to ensure that its supply of Outpatient services is at the appropriate level to address the prevailing demand. These limitations relate to inefficiencies arising out of availability and synchronisation of MDH's resources as well as work practices, which have historical roots that generally prohibit the Hospital from extending its Outpatient consultancy services beyond early afternoon on weekdays.

3.5.2 The Outpatient Department is working to its full capacity during morning and early afternoons on weekdays. Most work practices, as typified by employment agreements with consultants and other health professional rosters, are geared towards maximising throughputs during this period.

3.5.3 Outpatien-related targets outlined in Consultants' agreements have been attained. Nonetheless, available resources in terms of consultants, nurses and consultancy rooms were not optimally synchronised to enable an even higher throughput.

3.5.4 As evidenced by its efforts, MDH acknowledges the importance of extending the duration of its Outpatient services. The Hospital also sought to increase its supply of services through contracting out but this initiative did not bear the desired results.

3.5.5 As was the case in the past, increasing supply is proving to be an insurmountable issue. There are various issues at play, ranging from the economic considerations of clinicians working both in the private and public sector to family friendly considerations and problems related to specialist recruitment. In total these factors constitute a complex web of competing interests, which hinder the Hospital from optimising the utilisation of its resources.

3.5.6 This and the preceding Chapter have raised a number of issues which are hindering MDH from attaining an equilibrium between the demand and supply for outpatient services. Both Chapters have raised various issues of a managerial nature. The next Chapter discusses in detail how MDH's management direction and control is impinging on waiting times for new and follow-up appointments at the Outpatient Department.

Chapter 4

Management structure and mechanisms

4.1 Introduction

4.1.1 Reducing Outpatient waiting time is, to varying degrees, also influenced by the prevailing management structure and mechanisms. Over time, the Hospital management has sought to alleviate concerns relating to the Outpatient Department through *ad hoc* initiatives. It is only recently that Mater Dei Hospital (MDH) management is seeking to invest capital and effort to address Outpatient concerns in a holistic manner.

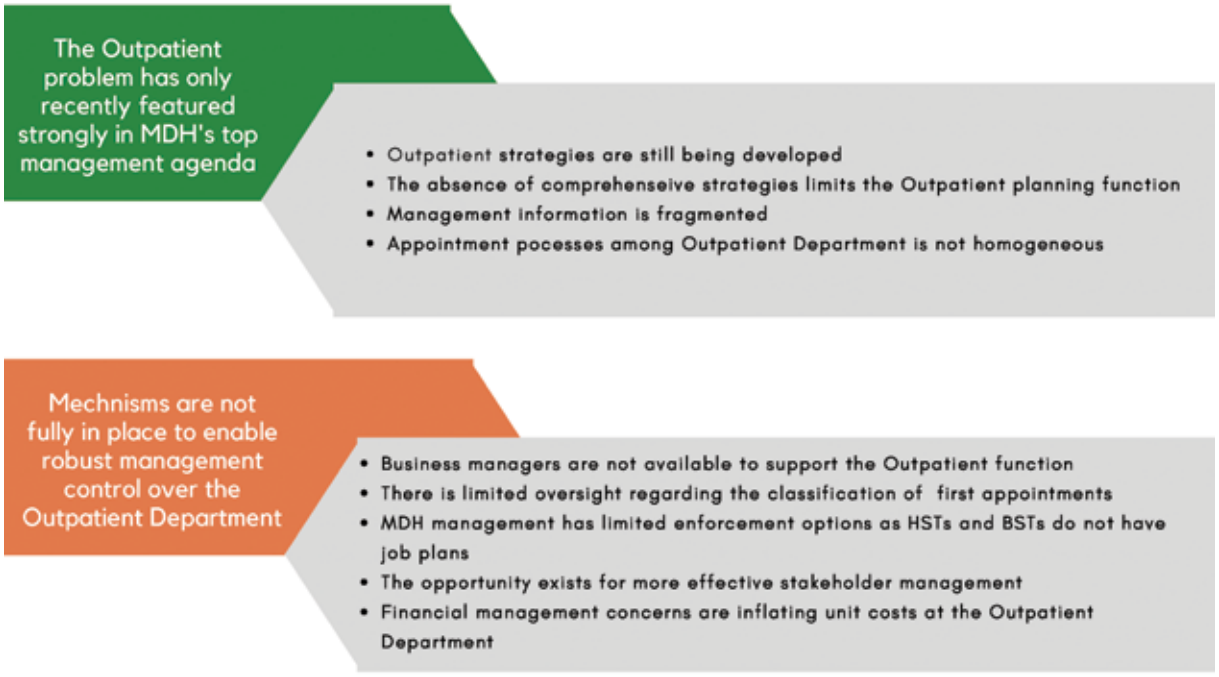
4.1.2 The Outpatient Coordinator is primarily responsible to ascertain that the logistics are in place and to monitor that Outpatient policies and schedules are maintained. This role is tantamount to a project manager role, particularly as this Department draws on various resources, which are managed by the respective heads of the different professional streams.

4.1.3 Nonetheless, the Outpatient Department management is, in instances, operating through structures, which are not always fully conducive to clear direction and control. Additionally, internal control mechanisms are not fully in place or operating efficiently to ascertain the optimisation of available resources. The foregoing hinders the attainment of general health system goals outlined in the Report on the Performance of the Maltese Health System (2015). These include ensuring a sustainable health service through adequate and affordable financing mechanisms, an appropriate governance framework and proper stewardship.[32]

4.1.4 Within this context, this Chapter focuses on three main issues, namely the Hospital's recent initiatives to reduce outpatient waiting times, as well as the Departments' management structures and control mechanisms. The discussion herein considers health sector strategic documents with respect to the clinical specialties under audit. Figure 11 refers.

[32] Ministry for Energy and Health, Parliament Secretary for Health, (2015). Report on the Performance of the Maltese Health System, page 27.

Figure 11: Outpatient management issues influencing average waiting time



4.2 MDH management's agenda includes initiatives to deal with historic concerns relating to the Outpatient Department

4.2.1 Between 2013 and 2016, MDH's management tackled a number of areas of concern within the Hospital. These relate to the operating theatres, the Accident and Emergency Department as well as bed management. However, the Hospital only recently started to address Outpatient concerns. The absence of comprehensive and holistic approaches to deal with Outpatient issues becomes more emphasised as the Public Health Sector's Patient Charter that will come into force in November 2017 does not refer to the Outpatient Department. Such a situation implies that the Hospital was not yet in a position to introduce waiting list and other service delivery targets upon which the Outpatient Department performance could be gauged.

4.2.2 MDH Management embarked to address the Outpatient problem in a more structured manner in 2016. This involved the setting up of an "Outpatient Working Group" during August 2016. These initiatives were given greater substance through the 2017 Budget document, highlighting Government's commitment to address the Outpatient waiting list problem. Moreover, initiatives also included the building of a New Outpatient Block, which is scheduled to be completed by 2020 / 2021. In the interim, a number of studies are being carried out to ensure the optimal allocation of resources within the proposed new building. Despite the foregoing, a number of initiatives remain outstanding.

Outpatient strategies are still being developed

4.2.3 Evaluating MDH's Outpatient strategies entailed establishing the degree to which the current documents, upon which the strategy is based, outline clear objectives, timeframes as well as defines waiting times and is formally approved by Government. This criteria is based on the 2014 Northampton General Hospital Elective Patient Access (Adult) Policy and generally accepted practices.

4.2.4 The current strategic framework deal directly or indirectly with the Outpatient Department waiting list. These documents generally apply to a Hospital wide scenario and do not focus on any particular department or function within MDH. The strategic framework includes the following:

a. A National Health System Strategy for Malta 2014 – 2020[33];
b. National Digital Health Strategy 2017 – 2021[34];
c. Budget 2017; and
d. Agreement between the Government and the Medical Association of Malta (2017).

4.2.5 Table 7 evaluates the above documents against the criteria outlined in Paragraph 4.2.3. For ease of reference cells highlighted in green represent general adherence to the established criteria. Cells highlighted in amber and red imply that there is somewhat or non-compliance with the aforementioned criteria.

[33] The National Health Systems Strategy (NHSS) aims to ensure universal access to high quality health services and economic sustainability, within the available budgetary resources, and incorporate strategies. Thus, it aims to improve and increase available services; promoting and streamline interactions between different services to ensure continuity of care; improve and increase services to citizens who are not patients including prevention and screening, and health promotion services aimed at the population in general and/or specific to identified vulnerable groups.

[34] The Digital Health Strategy complements the NHSS by supporting the attainment of the national health objectives through the use of Information Communication Technology in health care services that empower patients and enable safer and more personalised care. The timeframe for the strategy is five years and will be updated following the NHSS review to ensure that it reflects any changes in national health policies and priorities.

Table 7: Assessing the strategic framework against the established criteria (June 2017)

	A National Health System Strategy for Malta 2014 – 2020	Draft National Digital Health Strategy 2017 – 2021	Budget 2017	Agreement between the Government and the Medical Association of Malta (2017)
Strategic objectives	🟢	🟢	🟢	🟢
Timeframes	🟢	🟢	🔴	🟢
Definition of Outpatient waiting time	🔴	Not applicable	🔴	Not applicable
Identification of maximum Outpatient waiting time	🔴	Not applicable	🔴	Not applicable
Core principals [35]	🟡	🟡	Not applicable	Not applicable
Formally approved	🟢	🔴	🟢	🟢

4.2.6 Table 7 shows that not all documents adhere to the criteria established. In particular, two key factors remain outstanding. These relate to the definition of waiting time and the maximum waiting time for the first Outpatient visit.

4.2.7 In the first case, in the absence of documented policies, MDH management considers waiting time for an outpatient visit as the time from the date of issuing of the first appointment until the time of the first outpatient visit, which MDH commonly refers to as "outpatient waiting time". However, countries like England, Scotland and Nordic countries are moving towards capturing waiting time across the full patient journey from when a referral is made through primary care to the time treatment is provided, which is commonly referred to as "referral-to-treatment".[36] The difference between the two approaches generally condition hospital processes and strategies. On the other hand, the latter approach offers more information and convenience, as patients would have a more reliable date by when they will be treated.

4.2.8 Secondly, the strategic documents do not refer to maximum waiting times. The importance of establishing waiting times, from a management perspective, relates to applying a performance measurement benchmark across all specialties. From a patients perspective this implies a more expedient service, especially in areas where Outpatient Department waiting time is considered to be excessive. However, setting a maximum waiting time impacts other Hospital resources rather than only those invoked to provide the Outpatient Department service. These include the availability of medical tests, capacity to perform surgery and beds within wards.

4.2.9 In addition, the strategic framework does comprehensively discuss the core principles relating to managing the Outpatient waiting list. The Northampton General Hospital contend that the term core principles relate to patient centric approaches, data quality, clinical priorities, risk

[35] The core principals include patient at the core of service delivery, data quality, clinical priorities, risk management and assignment of roles and responsibilities.

[36] OECD, 2013. WAITING TIME POLICIES IN THE HEALTH SECTOR: WHAT WORKS?, Chapter 2: Measuring waiting times across OECD countries, page 34.

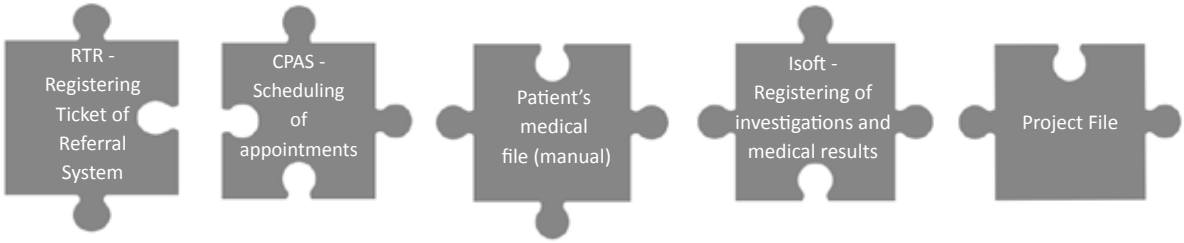
management and assignment of roles and responsibilities. While the National Health system Strategy for Malta 2014-2020 (NHSS) makes reference to these principles with respect to various health sectors, it does not discuss the Outpatient Department in terms of these criteria. The NHSS itself acknowledges the need that these core principles be addressed through an ad hoc policy dealing with Outpatient. The absence of strategies and polices dealing comprehensively with the Outpatient Department and its interrelationship with other health sectors, to varying degrees, limits MDH's planning function.

4.2.10 Other existent strategic gaps relate to the digitisation of various health processes. However, as at the time of drafting this report, the Digital Health Strategy was awaiting Cabinet approval. The importance of the adoption of this policy stems from the need that Hospital management is dependent on integrated Information Technology (IT) systems.

MDH's management information is fragmented

4.2.11 The Outpatient Department's management function is dependent on the availability of reliable and timely information relating to the variables involved to enable planning, management direction and control. However, currently, data fragmentation characterises the various IT systems utilised by the Outpatient Department. Figure 12 refers.

Figure 12: MDH's management information platforms



4.2.12 Users of the five main information platforms, depicted in Figure 12, contend that switching between these systems is cumbersome, time consuming and does not facilitate the generation of general and customised reports. The foregoing illustrates the negative implications arising from prolonging the implementation and formal approval of the Health Digital Strategy. The implementation of the Strategy particularly with the envisaged introduction of the New Outpatient module and the ensuing digitisation, as well as the integration of health sector records implies more robust management information to facilitate direction and control. Moreover, the possibility exists to empower patients to closely monitor their own health.

Appointment processes among Outpatient clinical specialties is not homogeneous

4.2.13 The five specialties under review utilise two different processes to issue a new case appointment at the Outpatient Department. The Gastrointestinal tract (GIT) and Urology clinical specialties opt not to vet referrals prior to issuing appointments. On the other hand, Genetics, Neurology and Vascular specialties vet all referrals prior to the issuing of a new case appointment. The different practices in use imply that the Hospital's position on such a matter is unclear.

4.2.14 The vetting of referrals prior to the issue of a new case appointment is in line with the approach adopted by NHS – UK. This approach enables the Hospital to classify cases more accurately in terms of their urgency. While one of the Hospitals of NHS – UK advocates that the vetting process should not exceed five days, the review of referrals of Genetics, Neurology and Vascular is taking 17, 22 and 26 days respectively.

4.2.15 A contributory factor leading to this situation is that the Outpatient Booking Office report directly to the Customer Care Manager rather than to the Outpatient Coordinator. This limits the degree to which the Outpatient Coordinator ascertains the uptake of all available slots for new appointments, the central registration of all referral tickets and that the vetting of referrals is carried out more expediently.

4.3 Mechanisms are not fully in place to enable robust management control over the Outpatient Department

4.3.1 A number of internal control mechanisms, intended to ascertain compliance with the Hospital's Outpatient policies, as well as to ensure this Department's efficiency, are not fully operative. To varying degrees, such issues place limitations on the extent to which management can effectively monitor and control the Outpatient function.

There is limited oversight regarding the classification of first appointments

4.3.2 MDH's policy stipulates that all referrals are centrally registered at the Outpatient Booking Office. However, a substantial number of referrals bypass the Outpatient Booking Office and are processed by the consultant's firm.[37] On average 21 per cent of the referrals pertaining to October 2016 Outpatient appointments of the five specialties under review were not centrally registered with the Booking Office. Table 8 refers.

Table 8: Formal registering of referral tickets (October 2016)

Specialty	Total attended referrals	Unregistered referral tickets		Priority unregistered referral tickets	
		Number	Percentage of total referrals	Number	Percentage of total referrals
Genetics	130	33	25	2	2
GIT	194	50	26	38	20
Neurology	183	49	27	29	16
Urology	189	13	7	10	5
Vascular	161	34	21	8	5
Total	**857**	**179**	**21**	**87**	**10**

[37] Consultant's firm include both the junior doctors and other health practitioners involved in the provision of the Outpatient services.

4.3.3 Table 8 shows that in many instances health practitioners are liaising directly with consultants' firms when referring patients to the Outpatient Department. This practice is only acceptable by MDH in urgent cases. However, as the statistics in Table 8 notes, only 49 per cent (87 out of 179) of unregistered referral tickets were of an urgent classification.

4.3.4 This situation raises the following issues:

a. Waiting time pertaining to unregistered referral tickets for the five specialties under audit were, on average, 102 days lower than if the Outpatient Booking Office centrally registered these cases.

b. The bypassing of the Outpatient Booking office, on various counts, raises question of management control and transparency of operations. The following refers:

- Audit trails are severed in instances where the Outpatient Booking Office is bypassed. Such circumstances diminish management control and raise transparency issues.

- Bypassing the central booking office together with the ensuing shorter waiting times imply that patients are not being treated equitably through a standard procedure.

Planning and operational records weaknesses diminish accountability and management control

4.3.5 Effective management control at the Outpatient Department is to varying degrees diminished due to shortcomings in record keeping pertaining to planning and operational matters. The following refers:

a. Current Hospital practices entail that consultants are held fully accountable for their respective firms' output. To this end, consultants' job plans consider the total firm output. Job plans, however, are not extended to Higher Specialist Trainees (HSTs) and other junior doctors performing duties at the Outpatient Department. While acknowledging Consultant overall responsibility for their firms' output, the absence of designating goals and schedules in job plans to HSTs and junior doctors does not appropriately consider generally accepted business practices. This state of affairs is also seen as diminishing management controls at various levels. Firstly, neither the Chair of the clinical speciality nor the Hospital's management is fully cognisant of HST and junior doctor's output. Secondly, the absence of predetermined key performance indicators pertaining to all key personnel across the Outpatient Department does not uphold accountability related principles.

b. The Hospital does not maintain statistics relating to cases being managed by HSTs and other junior doctors. Clinical specialty statistics are classified by consultant rather than by the medical practitioner actually carrying out the Outpatient visit. This state of affairs severs output-related audit trails, diminishes accountability and impact on effective management control.

c. Currently MDH does not utilise electronic facilities to record and monitor the attendance of its 4,347 employees or staff engaged with suppliers contracted to provide various services at the Hospital. Apart from the difficulties of manually capturing employee attendance data, such records only records the commencement of a specific shift and do not extend to duties carried out within the various Hospital Departments. Moreover, some of the senior management grades, such as consultants and the Hospital's management, are not obliged to sign attendance or time sheets.[38] These circumstances do not enable effective management control over Outpatient operations and financial considerations.

d. The Outpatient coordinator estimates that 40 per cent of Outpatient sessions start after their scheduled time.[39] However, these contentions were not supported with documentation, whereby such instances were reported to MDH's senior management.

e. Hospital's line management, including the Clinical Chairs and Outpatient Coordinator are not cognisant of costs incurred within this Department. The lack of visibility of such costs restricts the Outpatient Coordinator's remit in the optimal allocation of resources in order to ascertain efficient operations.

Financial management concerns are inflating the unit costs at the Outpatient Department

4.3.6 MDH currently incurs an expenditure in excess of €27 million with respect to service provision through contractual agreements, out of which around €7 million relates to the Outpatient Department. As of 2009, the cost of contractual services has been increasing. An internal report shows that there have been increases in the number of clerks, number of care workers, and the cost of cleaning. The internal report cites that such a situation is mainly due to policy drift arising from weaknesses in contract monitoring.

4.3.7 The National Audit Office (NAO) concurs with the issues portrayed in the preceding paragraph. Through the MDH costing review discussed earlier in Chapter 1, the NAO encountered various examples of weak internal control mechanisms such as the mechanisms governing care workers contract, which lead to material increases in the costs of services provided through third parties.

4.4 Conclusions

4.4.1 This Chapter has identified a number of weaknesses related to the strategic and policy framework, the Hospital's organisation structure and MDH's monitoring and control mechanisms. Despite that around 500,000 Outpatient visits annually, these shortcomings imply that the Hospital is forfeiting the opportunity to increase its throughput, decrease waiting time and unit costs.

[38] The 2017 Collective Agreement between Government and the Medical Association of Malta (MAM) outlines the provision of introducing digitalised attendance verification system for the Foundation Doctors.

[39] The NAO is not in a position to analyse late starts, as the actual time of each outpatient visit is not logged in any manual or electronic system.

4.4.2 Gaps in the strategic and policy framework prevail even though the NHSS, which was published in 2014, outlined the need for an ad hoc Outpatient Department related policy. Although, the effective implementation deadline envisaged by the NHSS is 2020, prolonging the formalisation of an Outpatient Department policy stalls reform and development of this critical function.

4.4.3 Moreover, Outpatient Department operational policies tend to be clinical speciality centric. This implies that procedures are not homogenous, which in turn suggest policy fragmentation. This state of affairs leads to clinical specialities pursuing their specific interests rather than Hospital wide goals.

4.4.4 The Hospital's organisation structure portrays a number of management layers, most of which evolved over a substantial period. However, in cases, reporting lines are ambiguous due to multiple communication lines involving the Hospital, the Ministry for Health, line managers and heads of various professional streams. This situation, coupled with the limited jurisdiction of the Outpatient Coordinator, influence Outpatient leadership.

4.4.5 Monitoring and management control mechanisms at the outpatient Department are subject to various limitations. Matters are further complicated by the absence of an integrated administrative IT system, which captures processes and provides up-to-date as well as reliable management information. Furthermore, management control is weakened due to the severance of various operational and throughput-related audit trails.

Appendix I

Costings exercise methodology

Introduction

Fulfilling the objectives of this performance audit entailed that the National Audit Office (NAO) reviews and verifies the cost of providing the Outpatient consultation function within Mater Dei Hospital (MDH) as computed by the Hospital's Financial Consultants.[40] The ensuing sections within this Appendix discuss the methodology employed by MDH to derive the Hospital's activity based costings as well as the NAO's verification exercise to ascertain the integrity of the resultant costings.

NAO's methodology and exercise scope

The NAO reviewed the costings exercise carried out by MDH. The review analysed the activity based costings relating to Outpatient performance during 2015.

The NAO's approach to base the review on activities occurring in 2015 rather than 2016 was mainly related to the availability of the Hospital's management accounts, which are generally concluded by the end of the following year. Such a situation materialises as MDH's accounting records are maintained on a cash basis. Hence, MDH is constrained to undertake an accounting exercise to convert financial estimates from cash to an accrual based format.

Furthermore, the current financial computerised systems in use by MDH, namely the Department Accounting System (DAS) and Access Dimensions do not assign all costs to a specific department or specialty. Consequently, the generation of activity based costings is not an automated process.

This exercise adopted a case study approach, which entailed the review of the Medicine Gastrointestinal tract (GIT) and Urology specialties.[41] These specialties were selected in view of having the longest average waiting time for a new outpatient appointment and can have a major impact on the health of the patients. Furthermore, these two specialties fall within the two major MDH Departments, namely Medicine and Surgical. Through the review of these two specialties, the NAO verified the methodology adopted by MDH to cost 33 per cent of consultation visits at the Outpatients Department during 2015.

[40] An outpatient visit relates to a patient who goes to hospital for consultation relating to a particular ailment.

[41] For the purpose of this audit, the Urology clinic is being reviewed. However, for the purpose of the costings exercise all Urology sub specialties were included. These include Urology-Clinic pre-ops, Urology-Clinic VCC and Urology Male Infertility Clinic. This situation, materialises as the consultants involved deliver all the services provided through the Urology sub-specialties. Furthermore, the delivery of these sub-specialties requires the same type of resources.

GIT comprises a number of sub-specialties, namely Gastro, Gastro Hepatic, IBD, liver, Ceoliac and part of the Medical OP[42]. Any investigations booked by both the GIT and Urology specialties were excluded since the scope of this audit solely related to consultation visits.

This review considered the various consultation services provided through Outpatients. In this regard, the outpatient services reviewed take into account that a person can attend a scheduled appointment as either a "New" or a "Follow-up" case. Additionally, patients also access the Outpatient Department as either "walk-in" or ward attenders[43] rather than through a scheduled appointment.

Activity based costings derived by MDH

The methodology employed by MDH to derive the cost per minute of the Outpatient's Department revolved around collecting and analysing data relating to the three main variables involved in such a calculation. These three factors relate to patients' volumes, consultant's hours and the costs expended in the provision of these services. In this regard, this Office reviewed these three inputs to the management accounts.

Patients' volumes

Patients' volumes were mainly derived from electronic sources, namely the Clinical Patient Administration System (CPAS) and other *ad hoc* electronic systems that are held by a number of departments within MDH. The NAO noticed that patients' volumes, which are utilised for the purpose of MDH's costing exercise, are subject to verification by the Hospital's Clinical Performance Unit (CPU) and by the team within the Finance Department working on activity based costings.

Consultant's hours

Hours expended by the respective consultants' firms constitute another variable required to determine the cost per minute of outpatient consultation services. The Outpatient Department comprises a number of firms whereby a group of medical specialists form a team which is headed by a consultant. The consultants' firms carry out their activity in outpatient clinics, inpatient wards and surgery.

However, due to the non-utilisation of electronic or manual data capturing systems, the actual timings that medical specialists expend in each area are not available. To various degrees, the unavailability of such data poses limitations on MDH's costing exercise. With respect to the outpatient consultation visits, MDH mitigated this data information gap by basing the length of consultation visits on the guidelines stipulated in the Hospital's clinical protocols as well as the advice of respective departmental Chairs. To this end, MDH's costing exercise allocates 30 and 20 minutes for "New" and "Follow-up" cases within GIT. Similarly, the Hospital's costing exercise allocated 20 and 15 minutes for each "New" and "Follow-up" outpatient consultation visit respectively.

[42] The Medical OP includes also patients that their visit is not necessary relating to GIT.

[43] Ward attenders are patients who rather than visiting the Outpatient Department, visit the Wards so that they are either visited by the Consultant or nurse under the direction of the Consultant. The inclusion of this information with "In Patient" data would distort the calculation of bed nights.

MDH clinical protocols do not refer to Walk-ins, Ward Attender and Any Case patient classifications. Consequently, after discussions with the respective Departmental Chairs, for the purpose of the costing exercise MDH assumed that the respective length of visit for Walk-ins and Ward Attenders would be the same as a Follow-up, while the Any Case Patient categorisation would be allocated the same length of visit as that pertaining to a New case. Table 1 refers.

Table 1: Length of Outpatient consultation visit

Outpatient consultation visit classification	Length of outpatient consultation visit (minutes)	
	GIT	Urology
New case	30	20
Follow-up	20	15
Walk-in	20	15
Ward Attender	20	15
Any case	30	20

Costs

The third variable, considered by MDH in the determination of the cost per minute and reviewed by NAO, relates to the main cost components involved in delivering outpatient consultation visits. The trial balance prepared by MDH to enable the drafting of the Hospital's financial statements constituted the main sources of information. The Trial Balance was based on the 2015 dataset maintained in the Departmental Accounting System (DAS) and another parallel accounting software used by MDH's financial controllers (Access Dimension). However, expenditure was not always directly assigned to a particular department. Thus, in these circumstances, in accordance with Generally Accepted Accounting Principles, MDH apportioned costs in accordance with departmental activity.

MDH's costs mainly comprises payroll, medical and pharmaceutical supplies, contractual services and depreciation. The latter constitute 80 per cent of the costs incurred to run the Outpatients Department. These cost categories in turn can be classified as Direct and Indirect costs.

Direct costs

Direct costs mainly relate to the salary costs of consultants and other professions that are directly involved in the provision of the Outpatient service. The calculation of the payroll cost encompasses the salaries, allowances, bonuses, and employers' social security contributions. The salary costs also consider unutilised vacation leave and time in lieu.

MDH's finance section, continuously updates its records with employees movement in terms of engagement, progression, transfers and resignations. However, this Office noted that there is another level of control that is performed during the management accounts computation. These mainly relate to a process whereby the Clinical Chairperson verifies the list of employees that perform duties within the department.

Nevertheless, this Office noted that the computation of MDH's payroll is subject to a number of inbuilt inefficiencies. These are materialising as MDH does not have robust internal control procedures relating to payroll. These limitations range from the process of recording time worked to reconciliation of vacation and sick leave. Chapter 4 of the Report provides further detail in this regard.

Direct costs also include the medical and pharmaceutical supplies. These are distributed between the different Departments and sub-specialties based on activity performed.

Indirect costs

MDH's costings exercise entailed that the Hospital identifies and allocates indirect costs to the respective Departments. These costs related to the management, administrative and support staff salary costs, depreciation and operational expenses namely; utilities, materials and supplies, cleaning services, waste disposal, care worker services, meals, laundry services, other contractual obligation, secretarial services and security services.

Indirect costs, which could not be directly attributed to a particular specialty, were generally apportioned in accordance to departments' activity. Two of the largest components of indirect costs are depreciation and contractual services. MDH calculated depreciation by using the straight-line method over a ten-year period. On the other hand, contractual services apportionment was carried out following a review of activity and their respective cost.

Conclusions

This Appendix provides an outline of the methodology adopted by MDH to determine the cost per minute. This Office, through the verification process undertaken, agrees that the methodology used by MDH is adequate and thus provides robust cost per minute. Such a conclusion is reached as MDH, through its external financial consultant, has adopted generally accepted practices that are in line with the industry standards. Moreover, any limitations encountered were mitigated through either sampling or discussion with MDH's management such as the Clinical Chairs.

Through the reconciliation carried out, this Office can ascertain that the cost per minute reflects cost actually incurred during a particular year. This Office's verification process adopted a top down approach whereby the different levels to derive the cost per minute of GIT and Urology were reviewed. Thus, analysis had to be undertaken at a level where costs were distributed between departments, specialties and cost categories. In this regard, the verification process encompassed a wider analysis.

Nevertheless, this Office has elicited issues relating to weak internal controls that have an impact on the expenditure incurred. Thus such a situation raises cost efficiency issues. These factors are discussed further in Chapter 4 of this Report.

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2016-2017 (to date) Reports issued by NAO

NAO Work and Activities Report

March 2017	Work and Activities of the National Audit Office 2016

NAO Audit Reports

November 2016	Performance Audit: Managing and Monitoring the State Schools' Transport Services
December 2016	Annual Audit Report of the Auditor General - Public Accounts 2015
December 2016	Annual Audit Report of the Auditor General - Local Government 2015
December 2016	An Investigation of Property Transfers between 2006 and 2013: The Transfer of Land at Ta' L-Istabal, Qormi
December 2016	An Investigation of Property Transfers between 2006 and 2013: The Acquisition of 233, 236, and 237 Republic Street, Valletta
January 2017	Contribution of the Structural Funds to the Europe 2020 Strategy in the Areas of Employment and Education
February 2017	Information Technology Audit: Cyber Security across Government Entities
May 2017	Performance Audit: Protecting Consumers through the Market Surveillance Directorate's Monitoring Role
June 2017	Performance Audit: Procuring the State Schools' Transport Service
July 2017	An Investigation of Property Transfers between 2006 and 2013: The Transfer of the Property at 83 Spinola Road, St Julian's
July 2017	An Investigation of Property Transfers between 2006 and 2013: The Expropriation of the Property at Fekruna Bay, St Paul's Bay
September 2017	Performance Audit: Landscaping Maintenance through a Public-Private Partnership
October 2017	Performance Audit: Maintaining and Repairing the Arterial and Distributor Road Network in Gozo
November 2017	Follow-up Reports by the National Audit Office 2017