

## **Elective Report- Mater Dei Hospital, Malta**

### **Objective 1: What are the most prevalent reasons for attendance to the Emergency Department in Msida? How does this compare to Malta and the UK?**

During my six weeks in the Emergency Department at Mater Dei Hospital, I witnessed a variety of presenting complaints, but by far the two most common were chest pain and shortness of breath. These ended up as diagnoses of various degrees of myocardial ischaemia or pulmonary oedema most of the time, with some being simply manifestations of anxiety or no discernible medical cause. There was also a high number of musculoskeletal injuries such as fractures from work accidents or falls. In the UK, the top three most common recorded diagnoses first recorded across A&E departments nationwide were non-classifiable, followed by fractures/dislocations and gastrointestinal conditions <sup>[1]</sup>. This is markedly different from Malta, most likely due to cardiac patients attending the ED rather than being directed to cardiac centres as in the majority of the UK (or at least my London experience), as well as the higher proportion of cardiovascular disease in the population.

### **Objective 2: How are emergency departments organised and delivered in Msida? How does this differ from other tertiary centres in Malta and the UK?**

The country of Malta consists of 2 islands, Malta and Gozo, with an overall approximate population of 430,000 <sup>[2]</sup>. This figure vastly increases in the summer months, when tourists flock to the country. There are only two hospitals which provide acute care: Gozo General Hospital, which is a smaller unit with more basic facilities, and Mater Dei Hospital, located on the main island. Mater Dei is the only tertiary centre in the country, with a full range of medical and surgical services, so the most critically unwell patients throughout Malta and Gozo end up being transferred in through ambulance or helicopter <sup>[3]</sup>. There are also hyperbaric units at both hospitals, given the popularity for diving and its associated complications in the region. <sup>[3,4]</sup>

The layout and organisation of the Emergency Department of Mater Dei is very similar to the UK. Patients arrive at the front desk and then are triaged, with a brief history and initial observations taken by nurses. They are then siphoned off according to clinical priority, and are transferred to the cubicle areas. These are divided into three, linked with the urgency of the care needing to be provided. Patients brought in by ambulance services are triaged in a different area, and then are brought to the cubicle areas or one of the three resuscitation bays if necessary. In addition, there is a paediatric sub-department, and plaster rooms for those with fractures. [5]

Once in a cubicle, the patient is then assigned a doctor, usually an F2 grade or above, who performs an initial clerking and orders initial tests, imaging and other investigations. They will also be reviewed by one of the more senior doctors assigned to their cubicle section, who help with decision making and further plans of action. It is also worth noting that most emergency registrars and consultants are trained in bedside ultrasound, so this is a common reason for senior input and allows for swifter diagnostic accuracy, or at least rules out serious pathologies such as a leaking abdominal aortic aneurysm. As in the UK, nurses and healthcare assistants are closely involved with patient care in the emergency department, performing practical procedures, assisting with delivery of treatment, and ensuring observations continue to be carried out.

Patients are tracked on a large screen in the central area, displaying their name, age, ID number, named nurses and doctors responsible for them, reason for attendance, status of pending actions, and length of stay in the department. This is facilitated by a barcode system, allowing quick updates of the overall flow without requiring a computer. The pathology and radiology services are all electronic, and all samples are delivered via pneumatic tubes to the lab. There are also two blood gas machines, allowing point of care processing of arterial and venous samples.

### **Objective 3: What are the primary causes of death in Malta? Is this reflected in those who attend the emergency department?**

The government's annual mortality report of 2013 named the largest overall cause of death in Malta as Ischaemic Heart Disease, followed by Cerebrovascular Disease and other Chronic Heart Diseases. The overall share of deaths by bodily system was mainly (unsurprisingly)

cardiovascular, with an overall share of 40.1% of the 3236 deaths recorded in that year. These rates are much higher than the EU average. The government's report also names diabetes as a major contributing factor to these deaths due to increasing vascular risk factors, although it was responsible as an underlying cause of 3.2% of the deaths. Smoking and obesity are still prevalent in Malta, which could well explain these trends. In those aged 15-44, trauma was the leading cause of death, followed by Ischaemic Heart Disease and intentional self harm, at a rate higher than older adults. [6]

Figure 1: Cause of death in Malta in 2013 by bodily system

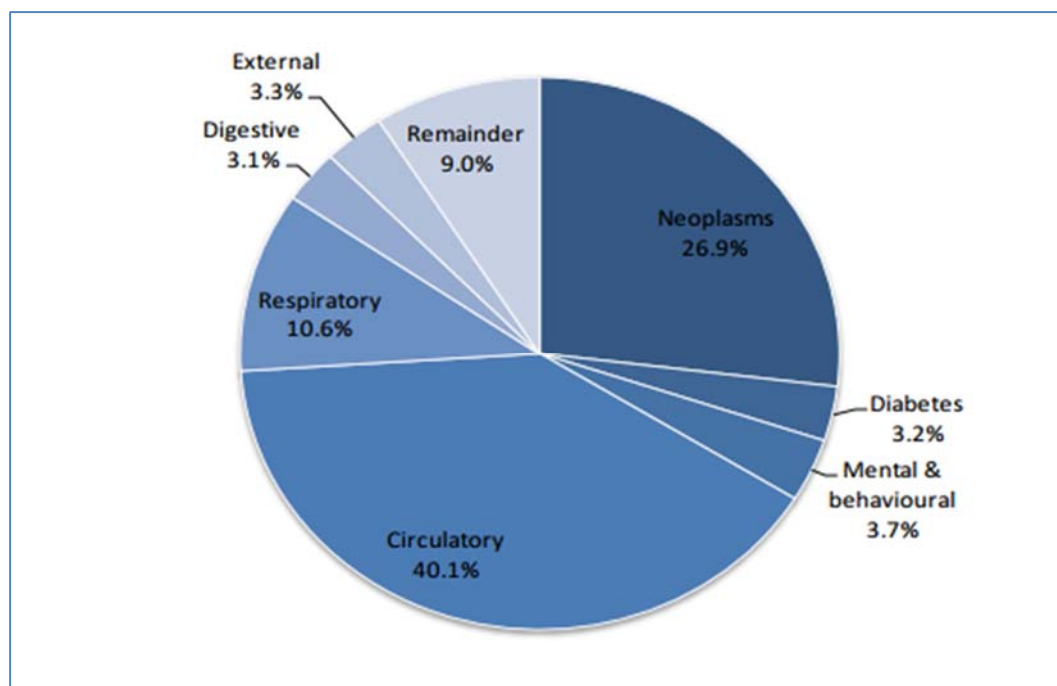


Table 1: Cause of death in Malta in 2013 by diagnosis

Cause of death (ICD-10 code)	Number of deaths			SDR/100,000 (ESP)*			% of total deaths
	M	F	T	M	F	T	
Ischaemic heart diseases (I20-I25)	387	318	705	140.2	73.9	103.2	21.8
Cerebrovascular diseases (I60-I69)	113	161	274	41.4	28.5	39.2	8.5
Other heart diseases (I26-I51) including heart failure (I50)	98	136	234	36.8	31.6	34.2	7.2
Malignant neoplasm of trachea, bronchus and lung (C33-C34)	117	37	154	40.3	11.4	24.0	4.8
Pneumonia (J12-J18)	61	74	135	17.3	17.0	19.9	4.2
Dementia (F01-F03)	36	83	119	13.2	18.3	16.9	3.7
Malignant neoplasm of colon, rectum and anus (C18-C21)	61	48	109	21.1	14.2	17.0	3.4
Diabetes mellitus (E10-E14)	54	51	105	19.3	13.2	16.1	3.2
Malignant neoplasm of breast (C50)	0	83	83	0	24.9	13.6	2.6
Chronic lower respiratory diseases (J40-J47)	66	12	78	24.0	3.1	11.3	2.4
Malignant neoplasm of pancreas (C25)	34	38	72	12.4	11.1	11.8	2.2
All other causes	609	559	1168	242.9	157.2	189.1	36.1
<b>Total</b>	<b>1636</b>	<b>1600</b>	<b>3236</b>	<b>608.9</b>	<b>404.4</b>	<b>496.3</b>	<b>100.0</b>

\*Standardised death rate per 100,000 (on the European Standard Population)

Table 2: Cause of death in Malta in 2013: Age group 15-44

Underlying cause of death	Number			% of all deaths
	M	F	T	
Transport accidents (V01-V99)	7	3	10	13.2
Ischaemic heart disease (I20-I25)	9	0	9	11.8
Intentional self harm (X60-X84)	7	1	8	10.5
Remainder of diseases of the nervous system (G04-G25, G31-G98)	6	2	8	10.5
Other heart diseases (I26-I51)	4	1	5	6.6
Remainder of malignant neoplasms (C17, C23-24, C26-C31, C37-C41, C44-C49, C51-C52, C57-C60, C62-C66, C68-C69, C73-C81, C88, C96-C97)	2	2	4	5.3

Compared to what I witnessed in the department, this fits fairly closely: cardiovascular disease and its complications were a large part of the daily workload. Sepsis, although well-represented in day-to-day work, does not appear to be a major enough cause of death to stay in the top 10 causes. Furthermore, many of those who attend ED do so due to non-life-threatening but still adverse reasons such as fractures following accidents or falls. The trauma I witnessed during my time involved patients older than 44, and had good prognoses due to swift and effective pre-hospital and intra-hospital assessments and interventions.

**Objective 4: To improve my communication in a semi-English speaking environment in the context of medical emergencies, and generally improve my clinical skills in an emergency environment.**

Maltese may be the national language of Malta, but English is the other official language, and so a high proportion of the population speak it to some degree. Most conversations with patients, relatives and other staff are all in Maltese, but all medical documentation is in English. I found that most patients I spoke to had a decent proficiency with the language, but I found myself needing to adjust my communication style both in my speed of speaking and my choice of words, as well as using more nonverbal gestures to convey what I was trying to say. The speed of speaking was definitely something I needed to work on, as in emergency situations adrenaline tends to be high and I tend to rush my speech! This was also a good opportunity to cut down on usage of any jargon that I might get away with in the UK. Keeping things simple has vastly improved my communication skills, as it ensured that there were fewer misunderstandings and that I would be more likely to truly understand a

patient's symptoms as they experienced them, as opposed to hiding behind terms such as "heartburn" or "angina".

I also had many great opportunities to improve my clinical skills. I was able to examine patients with a wide variety of acute pathology, perform practical procedures such as taking blood and inserting cannulas, interpret lots of ECGs, pathology and radiology results, present to senior colleagues succinctly and form differential diagnoses and management plans. I was also able to get involved with Advanced Life Support, assisting with the management of several cardiac arrests presenting from both within and outside of hospital, which made me much more comfortable with staying calm and performing my role when such a daunting situation will inevitably arise in future practice. This essence of calmness extended to every patient I saw who was unwell or deteriorating: acquiring more experience of observing and assisting staff manage these patients calmly has definitely transferred on to me. I am now much more confident at managing acutely unwell patients, and more importantly, staying focused whilst doing so.

**Word count: 1,198**

**References:**

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