Conjugate vaccines protecting against type b (Hib) and serogroup C were randomised to 500 healthy infants aged 6–12 weeks were randomised to vaccine (Hib-MenC-TT) in British and Polish infants (103974). Immunogenicity and safety of a novel combined Hib-MenC conjugate vaccine in infants demonstrated that the vaccine had comparable immunogenicity and reactogenicity profiles to those of the control group. The reactogenicity profiles of the Hib-MenC-TT vaccine were similar to the MenC-CRM197 vaccine and DTPa-IPV vaccines were similar to the MenC-CRM197 and DTPa-IPV vaccine. Conclusion: On an interim analysis of the sera from 144 participants, Hib-MenC-TT recipients had significantly higher anti-PRP geometric mean concentrations than participants in the control group (17.0µg/ml [13.8-20.8]) versus 2.1µg/ml [1.2-3.7]). SBA-MenC geometric mean titres were lower in the Hib-MenC-TT recipients (637.4 [510.9-795.2] versus 1202.5 [861.7-1678.0]). However, 100% of Hib-MenC-TT recipients had SBA-MenC titres ≥1:8 and anti-polyribosylribitol phosphate (anti-PRP) antibody concentration of ≥0.15µg/ml were used as correlates of protection against MenC and Hib respectively.

**Methods:** 500 healthy infants aged 6–12 weeks were randomised to a control group, receiving a MenC-CRM197 vaccine (Meningitec™) administered concomitantly with a diphtheria, tetanus, acellular pertussis, inactivated polio and Hib vaccine, DTPa-IPV-Hib (Pediacel™) or to a study group receiving Hib-MenC-TT and DTPa-IPV (Infanrix™-IPV) at 2, 3 and 4 months. Serum samples were collected at baseline and 1 month after the 3rd immunisation. A serum bactericidal antibody assay (SBA-MenC) titre of ≥1:8 and anti-polyribosylribitol phosphate (anti-PRP) antibody concentration of ≥0.15µg/ml were used as correlates of protection against MenC and Hib respectively.

**Results:**

- **Introduction:** The school health service consists of a small group of doctors and nurses who provide various services to children within all State and Church schools.
- **Aim of this needs assessment:** Changes in our society's lifestyle and in the health needs of children and their families, coupled with the financial and human resource constraints of the Health Service raised the need to evaluate the present modus operandi of the School Medical Service, with the intention of obtaining a clearer perspective as to how this service could be improved in its efficiency and efficacy.
- **Methods:** A monthly report of the work done in schools is one of the routinely collected data. The monthly reports from January 2005 to June 2006 for the work done in the Cottonera, Paola and Tarxien areas were collected.
- **Results:** The fact that children are seen at school means that there is a high "catchment" rate. The school environment is a "neutral territory" for both the child and the family. This tends to demedicalise the issues concerned. The screening carried out yields substantial positive results. However there is room for greater effectiveness and efficiency of this service.
- **Conclusions:** There is need for a review of the modus operandi of the School Health Service with emphasis on creating networks of teams with other departments providing child services. This would integrate work without the need for further human and financial resource recruitment.
Oral Presentations

O-004
Community services for Malta’s growing elderly population: screening - the missing link in our portfolio?
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Aims: to review the basis for screening of community dwelling elders in other EU countries such as Sweden, Germany and the UK and discuss the feasibility/missed opportunity in Malta’s failure to even conceive such screening.

Methods: a brief review of the available services in the community to address the needs of Malta’s growing elderly population is presented. A thorough assessment of the basis for the decision to screen elderly persons in their homes in other EU countries and the evidence that exists at present in favour of such screening. Expected gains in terms of the population’s health and in potential cost-benefit are discussed with the aim of quantifying what Malta stands to gain or lose by such screening.

Results: costs involved in national screening programmes of community dwelling elderly persons are clearly very high. However, gains expected in terms of quality of life, reduced admissions to residential care and even life years gained could well outweigh such costs.

Discussion: Malta’s current economic situation is such that, despite the potential gains, including financial ones in terms of health care savings, it is unlikely that such a strategy will be considered in the foreseeable future locally.

Conclusion: screening of Malta’s growing elderly population could remain the missing link in our range of services. Such an expensive facility could reduce the evident, growing demands for institutional care which is ultimately a more costly option.

O-005
The implications of the European Union on the Maltese health care system
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Department of Institutional Health

Following a national referendum Malta joined the European Union (EU) on the 1st of May 2004 to become the smallest Member State, at the southern most border of the enlarged European Community. As a small island state with a long tradition of medical care it has a sophisticated medical infrastructure that compares very favorably with industrial Western European countries offering a wide scope of treatment as a benefits-in-kind health care package. A challenging scenario could develop when the Single European Market rules as applicable to the EU healthcare policy are transposed to the Maltese Health Care System with its unique geopolitical context. Proactively reacting to these challenges necessitates policy makers to consider from various options, the two main ones being: 1. Construct the offered health care package, and re-dimension the medical infrastructure so as to have a similar situation akin to that of Luxembourg, another small EU Member State with a comparable population base. 2. Build on the existing medical infrastructure in a way to take advantage of the recent EU membership. Malta as an island in the Mediterranean, with a service economy based mostly on tourism, could project itself as an ideal country for Northern European elderly citizens to have an alternative residence.

A predilection to this option, or its possible hybrid variations could well succeed in preserving the ‘ethos’ of the Maltese Health Care System. To follow this re-crafted strategy, the Maltese Health Care system needs to re-orient to the realities and implications of EU policies in healthcare and contribute in their development at EU level in a manner to derive advantage from their evolution. Recommendations are suggested on how this could be achieved and transform EU membership from a potential threat to the Maltese Health Care System into an opportunistic challenge.

O-006
Is MRSA control an achievable target in Malta and what will it cost?
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Infection Control Unit, St Luke’s Hospital, Malta.

Methicillin resistant Staphylococcus aureus (MRSA) infections remain a major infectious disease challenge within the Maltese Islands. From the first outbreak with St Luke’s Hospital in 1995, cases have continued to increase in the past decade to reach a situation whereby more than 45% of Staphylococcus aureus isolates from blood cultures are methicillin resistant, one of the highest in Europe. In addition there is evidence of an ever-increasing prevalence of community MRSA. Several factors undoubtedly play a role in the local endemicity of MRSA. Overcrowding within St Luke’s Hospital (St Luke’s Hospital) has already been identified to be a major instigator behind MRSA incidence especially in medical wards. Antibiotic consumption is recognised as a major driver of resistance and indications are that antibiotic use in Malta is also on the high side. Furthermore studies of hand hygiene compliance, a cornerstone of nosocomial infection prevention, suggest a need for major improvement. Targeting these three risk factors is vital to achieve a successful outcome but will not necessary reverse the situation. Isolation of positive MRSA cases remains critical to ultimate control. Recent mathematical modelling data suggests that a comprehensive search and destroy policy is the only effective solution to eradicate MRSA.

In high endemicity situations this will require a comprehensive programme of patient screening both on admission as well as of all contacts of cases diagnosed during the hospital stay, both patients and staff. The availability of sufficient isolation beds is a prerequisite and even if this were to be done, the modelling data suggests that based on current prevalence in St Luke’s Hospital, 15 – 20 years will need to elapse before full control is achieved.

O-007
MRSA in autopsy cases
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Nasal carriage of Staphylococcus aureus has become a means of persistence and spread of multiresistant Staphylococci, especially Methicillin-resistant Staph. aureus (MRSA). MRSA has become a public health threat, both in hospitals and more recently in the community.

Aim: This study should indicate whether antibiotic medication and hospital stay predispose to nasal colonisation with Staph. aureus including MRSA when compared to a second cohort that had not been admitted to hospital recently.

Method: Nasal swabs were obtained from cadavers prior to undergoing post-mortem examinations. The nasal swabs were taken to the Bacteriology Lab where attempts were made to culture Staph. aureus from the nasal swabs. Staphylococci were tested for their antibiotic susceptibility. The organisms that were resistant to oxacillin were tested using a Penicillin Binding Protein (PBP2a) Latex Agglutination test, which is a confirmatory test for MRSA.

Results: From the 43 specimens taken, 34 of these had not been hospitalised before death. The remaining 9 died in hospital. 44% of the patients not hospitalised were colonised with Staph. aureus; 3 out of the 15 patients colonised with Staph. aureus, were MRSA positive (i.e. 9% of the non-hospitalised population).

This cohort is compared to hospitalised patients, where 33% were colonised with Staph. aureus; of these, 2 out of 3 patients were MRSA positive (i.e. 22% of the hospitalised patients were colonised with MRSA).

Conclusion: These preliminary findings provide confirmatory evidence that hospitalisation increases the incidence of MRSA carriage compared to the non-hospitalised population.
Hand hygiene practices amongst medical doctors at St Luke’s Hospital, Malta

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Introduction: The ease of acquisition and transfer of transient pathogens on the hands of healthcare workers is an important factor in the spread of hospital infections. Thorough hand decontamination before and after patient contact is therefore essential for prevention.

Methodology: An observational study of doctors was carried out at St Luke’s Hospital, Malta, between November 2005 and February 2006. The frequency and preferred method of hand hygiene before (if an inanimate object was touched previously) and after patient examination / contact was observed, together with concurrent availability of hand hygiene facilities. Observations were made at outpatient departments as well as in hospital wards.

Results: A total of 898 observations were made from 49 firms, each comprising an average of four doctors. Overall compliance before and after patient contact was 22.7% and 33.5% respectively. Poorest compliance was evident in house officers (16.7% before contact) as compared to the most compliant group - registrars (45.5% after patient examination). Within specialties, hand hygiene practices were lowest in Obstetrics & Gynaecology (10.6% overall) and highest in specialised surgical units (52.5%). There was no significant difference in hand hygiene compliance between ward-round and out-patient settings. The presence of adequate facilities resulted in a statistically significant improvement in compliance. Nevertheless, even when adequate facilities were available within easy reach, 74.8% and 64.6% of doctors failed to perform hand hygiene before and after patient contact. Alcohol hand rub was the preferred method in the wards whilst handwashing was mainly utilised in the outpatient setting.

Conclusion: Hand hygiene amongst doctors in St Luke’s Hospital is low and could be a factor in the high MRSA endemicity. Campaigns are clearly required to improve compliance and reduce risk of transmission of nosocomial infections.

Impact of the introduction of antibiotic prescribing guidelines in St Luke’s Hospital, Malta

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Background: Antibiotic prescribing guidelines were introduced in St Luke’s Hospital in 2004 as part of an educational initiative, aimed at improving the use of antibiotics, started three years earlier.

Methods: The impact of the guidelines was assessed through a questionnaire sent to 300 medical professionals working in St Luke’s Hospital. The respondents were asked to provide feedback on the impact that the guidelines had in their practice, as well as to respond to various conceptual questions relating to antimicrobial resistance and antibiotic use. The yearly consumption of selected antibiotics was also analysed to evaluate whether the guidelines resulted in any appreciable differences in the patterns of use.

Results: The questionnaire was replied by one hundred and seventy-six doctors at St Luke’s Hospital, Malta, between November 2005 and February 2006. The frequency and preferred method of hand hygiene before (if an inanimate object was touched previously) and after patient examination / contact was observed, together with concurrent availability of hand hygiene facilities. Observations were made at outpatient departments as well as in hospital wards.

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A group of General Practitioners participate every year throughout October up to May the following year, and provide daily information on the incidence of influenza like illnesses seen in their practices. The aim is to collect timely information on influenza activity to reduce the morbidity and mortality associated with this disease.

O-012

A pilot evaluational study assessing adherence to recommendations for avoidance of hypoglycaemia in insulin-treated Maltese diabetic drivers

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Hypoglycaemia, a common side-effect of insulin therapy for diabetes, may be associated with significant morbidity and interfere with everyday activities such as driving. Laboratory studies have demonstrated that cognitive functions which are critical to driving, such as visual information processing, attention reaction times and hand-eye coordination are impaired by hypoglycaemia, resulting in an increased risk of car crashes. This is particularly relevant for drivers receiving intensive insulin therapy. Patients should be advised to test blood glucose before driving, ensure an emergency carbohydrate supply, carry a blood glucose meter at all times when driving, and allow an adequate time to recover before resuming their journey if they should experience hypoglycaemia when driving. Results from a cohort of twenty consecutive insulin treated Maltese diabetic drivers presenting to Diabetes Clinic at St Luke’s Hospital suggests little compliance in this regard, and forms the basis of a further in-Department study currently being carried out.

O-013

Audit of the management of patients admitted with diabetic ketoacidosis (DKA) to St Luke’s Hospital

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Aim: To analyse the management of patients admitted with DKA according to the existing protocol.

Methods: Patients admitted with ‘DKA’ between 14th August 2004 and 14th August 2005 were identified from the Admissions book at the A+E Department. Data was obtained from patients’ medical records and analysed according to a preset proforma. Parameters measured, investigations taken, insulin regime, intravenous fluids and potassium supplements given were recorded.

Results: From a total of 56 patients, 50 files were traced, of which 19 satisfied the criteria for the diagnosis of DKA. In the population studied the mean age was 35 years with a male predominance of 58%. 11 patients were Type 1 diabetics, 4 were Type 2 and another 4 were newly diagnosed Type 1 diabetics. Only 2 patients had their parameters checked regularly according to protocol. In the majority of patients fluids given in the first 22 hours coincided with the amount of fluids stated in the protocol whilst according to protocol. In the majority of patients fluids given in the first 22 hours coincided with the amount of fluids stated in the protocol whilst 47% of patients (n=9) were administered the stipulated amount of insulin regime, intravenous fluids and potassium supplements given were according to a preset proforma. Parameters measured, investigations taken, insulin regime, intravenous fluids and potassium supplements given were recorded.

Conclusion: Various problems have been identified on analysis of audit results. These principally included errors with parameter monitoring, and dose of insulin and potassium supplementation. Deviations from the protocol resulted in increased length of stay in hospital. Consequently, an audit cycle is recommended after introduction of the new DKA guidelines.

O-014

An audit of culture and sensitivity reports of infected diabetic foot ulcers

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Fifteen per cent of people with diabetes develop foot ulcers. The most common risk factors for ulceration include diabetic neuropathy, structural foot deformity and peripheral arterial occlusive disease. Diabetic ulcers are highly susceptible to infection, which is a major cause of amputation. Systemic antibiotics are regarded as part of standard treatment for invasive infections associated with diabetic foot ulcers.

An audit of wound swab results of diabetic foot ulcers of patients being followed up at the podiatry unit of the Diabetes Clinic was carried out. This involved a total of 144 culture and sensitivity reports of wound swabs. The aim of the audit was to assess the most common infective organisms and their sensitivities.

Bacteria were cultivated in 88.17% of cases. 7.6% of swabs revealed highly mixed flora suggestive of contamination whilst no pathogens were isolated in 4.16%. In 59.7% of swabs more than one organism was cultured from the same ulcer. A high recurrence rate of diabetic ulcers was also noted.

The most commonly isolated organisms were Staphylococcus aureus, 43% of which were MRSA, Streptococci, Pseudomonas aeruginosa and Enterococci. Other common organisms were Proteus mirabilis, Morganella morganii, Escherichia coli, Klebsiella oxytoca and Citrobacter koseri. A common pattern of antibiotic sensitivities was noted though rarely some strains were resistant to antibiotics to which the same strain was usually sensitive.

Wound swabs of infected ulcers are essential to guide antibiotic therapy in the treatment of the diabetic foot, with the ultimate aim of preventing morbidity and mortality.

O-015

Charcot foot: an often misdiagnosed diabetic complication

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Charcot neuroarthropathy is a progressive degenerative condition characterized by joint dislocation, subluxation and pathological fractures of the foot of neuropathic patients, often resulting in a debilitating deformity. In developed countries, the condition is most commonly encountered in diabetic individuals (incidence 0.1-0.5%) and results in a foot that is at risk for ulceration and amputation. Acute Charcot neuroarthropathy can be misdiagnosed as cellulitis, osteomyelitis, inflammatory arthropathy, fracture or deep vein thrombosis. We present a series of initially misdiagnosed cases of Charcot neuroarthropathy, highlighting the need for a high index of suspicion. This may allow the early institution of appropriate treatment, namely immobilization, bedrest, offloading and possibly pamidronate, if one is to reduce significant morbidity and severe deformities.

O-016

Association study of Libyan and Maltese patients with type II diabetes mellitus

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Type II Diabetes Mellitus is a common disease with onset in middle-aged individuals, caused by an imbalance between insulin production and action. Genetic studies point to major genetic components with an exposition of maturity onset diabetes of the young (Mody), specific diabetes susceptibility genes remain to be identified. Single nucleotide polymorphisms (SNPs) and mutations in different genes may be implicated in developing Type II Diabetes. In this study we analyzed 9 such genes that include IPF, MTHFR, mitochondrial trNA, Resistin, PPP1R3, ADRA1beta2, MIF, PTPN1 and
TLR4. SNPs were chosen from each gene according to stringent criteria based on developing Type II Diabetes in other populations. SNPs were genotyped in the Libyan and Maltese patients and compared with healthy Maltese citizens. DNA was extracted from whole blood, and genotyping of each gene determined by PCR-RFLP. Concurrently, pools of DNA from random Maltese newborns were carried out using fluorometry for accurate quantification. All genes were in Hardy-Weinberg Equilibrium and statistical analysis was carried out by SPSS (student package 12). Chi square analysis of all data in between populations and across populations revealed a significant association of the ADRABbeta2 gene of both Libyan and Maltese Type II Diabetic patients with healthy Maltese controls (p < 0.05 for both). There is no difference between Libyan and Maltese Diabetics (p=0.07) indicating that this gene has a common predisposition to both populations. On the other hand, IPF gene was only associated with the Libyan Diabetes Type II and not with the Maltese population (p < 0.05). All other genes were not statistically significant associated with Type II Diabetes. The results show a strong association of the ADRABbeta2 (Arg16Gly) and IPF (missense mutation Cys18Arg) genes with Type II Diabetes.

Objective: To assess whether any additional information is obtained through the routine requesting of chest X-rays on all adult medical admissions. Design: Observational study. Setting: Accident and Emergency Department, St Luke’s Hospital, Malta.

Aims: The accuracy of death certification by doctors completing death certificates in the Maltese Islands is not known. Since death certificate information forms an important public health tool, this study was carried out to assess the knowledge, attitudes and behavior of certifying doctors in relation to death certification, to determine the scope for future intervention.

Methods: A postal questionnaire was sent to doctors having completed at least three death certificates during the year 2002. Closed questions established personal and career details, death certification experience and knowledge, attitudes and behavior in relation to death certification and its uses. Four case studies were also included. Doctors had to fill in ‘cause of death statement’ for each study presented.

Results: 67% of doctors answered the questionnaire. Only 6% of all doctors had received formal training in death certification and 84% of doctors felt that training in death certification was needed. Training during housemanship years was ranked as the best method of training followed by training during medical school, information handouts and last seminars/CME initiatives. Factors which made filling in of death certificates more difficult included patients with multiple pathology (65%) and not knowing the patient enough (75%). Most doctors (95%) felt that accurate death certification was important and used as a legal proof of death, source of demographic data and for epidemiological research. Error rates in the case studies presented ranged from 30% in case study 1 to 80% in case study 4.

Conclusions: The results of the case studies reflect a lack of training in death certificate completion at all levels of medical experience. However there was a generally constructive attitude to the importance of death certification which would indicate that most doctors would be receptive to a training program.

Participants: All adult acute medical admissions, irrespective of age and gender.

Main outcome measures: The number of cases where unexpected findings were reported on routine chest X-rays.

Method: Participants were subdivided according to their smoking status as smokers, non-smokers and ex-smokers. They were then in turn divided into 2 age groups: <50 year-old, >50 year-old. The respective chest X-ray reports, as documented in the admission medical notes, were revisited and categorized as normal chest X-rays, confirming a diagnosis or whether unexpected findings were reported.

Results: Out of a total of 109 patients assessed, 23 were smokers, 70 were non-smokers and 16 were ex-smokers. Normal chest X-rays were reported in 19, 41, and 4 of smokers, non-smokers, and ex-smokers respectively. Diagnosis was confirmed on chest X-rays in 1, 15, and 6 of smokers, non-smokers, and ex-smokers respectively. Unexpected findings were diagnosed in 3 smokers, 14 non-smokers, and 6 ex-smokers making up a total of 23 cases out of the 109 gathered. Out of these 23 cases, 7 were unexpected findings requiring further investigation including: possible lung primary (2), newly diagnosed lung metastases (2), pneumonia (2), aortic aneurysm (1); 6 of these cases being in the >50 age group. Interestingly 3 were smokers.

Conclusions: The practice of requesting routine chest X-rays in all patients admitted to medical wards is almost exclusively useful in those over the age of 50 years especially in smokers, We suggest reviewing current practice. practice.wed.

Aims: The accuracy of death certification by doctors completing death certificates in the Maltese Islands is not known. Since death certificate information forms an important public health tool, this study was carried out to assess the knowledge, attitudes and behavior of certifying doctors in relation to death certification, to determine the scope for future intervention.

Methods: A postal questionnaire was sent to doctors having completed at least three death certificates during the year 2002. Closed questions established personal and career details, death certification experience and knowledge, attitudes and behavior in relation to death certification and its uses. Four case studies were also included. Doctors had to fill in ‘cause of death statement’ for each study presented.

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Conclusions: The results of the case studies reflect a lack of training in death certificate completion at all levels of medical experience. However there was a generally constructive attitude to the importance of death certification which would indicate that most doctors would be receptive to a training program.

Oral Presentations

O-017

Death certification in Malta: attitudes and knowledge
K England, H Agius Muscat, N Calleja
1Department of Health Information,
2Department of Public Health

Aims: The accuracy of death certification by doctors completing death certificates in the Maltese Islands is not known. Since death certificate information forms an important public health tool, this study was carried out to assess the knowledge, attitudes and behavior of certifying doctors in relation to death certification, to determine the scope for future intervention.

Methods: A postal questionnaire was sent to doctors having completed at least three death certificates during the year 2002. Closed questions established personal and career details, death certification experience and knowledge, attitudes and behavior in relation to death certification and its uses. Four case studies were also included. Doctors had to fill in ‘cause of death statement’ for each study presented.

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Conclusions: The results of the case studies reflect a lack of training in death certificate completion at all levels of medical experience. However there was a generally constructive attitude to the importance of death certification which would indicate that most doctors would be receptive to a training program.

O-019

Audit on the treatment of patients admitted to medical wards with a diagnosis of COPD exacerbation
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An exacerbation is a sustained worsening of the patient’s symptoms from their usual stable state which is beyond normal day-to-day variations and is acute in onset. In all patients with an exacerbation referred to hospital, a chest X-ray should be obtained, ABGs should be taken and urea and electrolytes should be measured. In the absence of significant contraindications, oral corticosteroids should be used, in conjunction with other therapies, in all patients admitted to hospital with an exacerbation of COPD. Antibiotics should be used to treat exacerbations of COPD associated with a history of more purulent sputum. Oxygen therapy should be used to maintain adequate levels of oxygenation. Before discharge, spirometry should be measured, patients should be given appropriate information to enable them to fully understand the correct use of medication, including oxygen and arrangements for follow-up should be made. The aim of the audit is to compare practices at St Luke’s Hospital with the recommended guidelines as published by the British Thoracic Society. Particular attention was given to the use of systemic steroids, oxygen, antibiotics and ventilatory support. Regarding the long-term management of these patients various aspects that could influence outcome were looked into including inhaler technique testing, smoking cessation information, respiratory outpatient review and patient compliance with treatment after discharge.

O-020

A full cycle audit on the correct assessment of postural blood pressure
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Zammit Clapp Hospital, St Julians, Malta

Background: Recurrent falls are very common in older people. One of the causes of recurrent falls is orthostatic hypotension. The correct measurement of blood pressure (BP) change with posture is thus central in making this important observation. There is great variation in the clinical practice of measuring postural change in BP.

Aim: To assess whether nurses at ZCH have the correct theoretical knowledge of how and when to measure postural BP in patients.

Methodology: The study population comprised nursing staff who had
the responsibility of measuring postural blood pressure when such a measurement was requested by a doctor. A set of 3 short multiple completion type questions were distributed to the nurses on duty on 2 consecutive days, including evening shifts. It was emphasised that the audit was anonymised and confidential. A 45 minute lecture on the physiology of blood pressure control, the reasons why we measure postural BP and the correct technique of measuring postural BP was delivered by the author to all the nursing shifts. During the discussion that followed, it was agreed that a printed proforma would be devised on which the definition of postural hypotension would be printed, together with the correct technique and a separate area for charting a patient’s BP and the symptoms experienced by that patient if any, during the procedure. Six months later, in the second cycle of this audit, the same multiple completion questions were repeated. Results from the first and second audit cycles were compared.

**Results:** 34 and 27 nurses respectively participated in the first and second audit cycles. There was an overall improvement in knowledge from 82% to 96% getting 1 question right, 28% to 96% getting 2 questions right and 3% to 56% getting all 3 questions right.

**Conclusion:** This full cycle audit was successful in improving nurses’ knowledge in the correct practice of measuring postural change in BP.

O-021
Audit of congenital adrenal hyperplasia diagnosed at an endocrine outpatient clinic

_S Vella, MJ Cachia_

**Department of Medicine, St Luke’s Hospital**

Congenital adrenal hyperplasia is an autosomal recessive group of disorders characterized by a deficiency of one of the enzymes necessary to cortisol and/or aldosterone biosynthesis. There is a wide clinical spectrum, ranging from neonatal presentation with salt wasting and virilization, to non-classic presentation in adulthood with hirsutism, acne and oligomenorrhoea. Hypertension is also a recognized important manifestation. Congenital adrenal hyperplasia should be considered in the differential diagnosis of hirsute patients. We present an audit of twenty five patients diagnosed with congenital adrenal hyperplasia at an endocrine clinic at St Luke’s Hospital, outlining the diagnostic criteria used. This audit has identified that there is no need for a synacthen test to establish a diagnosis if baseline levels of 17-hydroxyprogesterone and testosterone for the Maltese population, and stratify for age to ensure the correct cut-off point for these tests for the Maltese population.

O-022
Childhood obesity: a critical Maltese health issue

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Overweight and obesity is becoming epidemic, worldwide, in both adults and children. This problem is particularly evident in all most all westernised societies due to particular lifestyle and dietary habits. 20% of Europe’s school-age children are estimated to be overweight and of these, 1 in 5 is obese. The local situation is reaching critical levels, with childhood and, indeed pan-population, obesity being very widely prevalent. Up to 22% of Maltese children are overweight (85-95 centiles for BMI), and 8% are obese (>95 centile for BMI). In certain age groups, Maltese children are the most obese worldwide, surpassing countries such as Italy, Greece and the US. These figures are the result of genetic factors indigenous to the population, but significantly compounded by an exercise-poor, increasingly sedentary lifestyle together with a startling national penchant for fat-rich, unhealthy food consumed in large quantities. The direct, indirect and long term health risks including the evening shifts. It was emphasised that the audit was anonymised and confidential. A 45 minute lecture on the physiology of blood pressure control, the reasons why we measure postural BP and the correct technique of measuring postural BP was delivered by the author to all the nursing shifts. During the discussion that followed, it was agreed that a printed proforma would be devised on which the definition of postural hypotension would be printed, together with the correct technique and a separate area for charting a patient’s BP and the symptoms experienced by that patient if any, during the procedure. Six months later, in the second cycle of this audit, the same multiple completion questions were repeated. Results from the first and second audit cycles were compared.

**Results:** 34 and 27 nurses respectively participated in the first and second audit cycles. There was an overall improvement in knowledge from 82% to 96% getting 1 question right, 28% to 96% getting 2 questions right and 3% to 56% getting all 3 questions right.

**Conclusion:** This full cycle audit was successful in improving nurses’ knowledge in the correct practice of measuring postural change in BP.

O-023
Breastfeeding in Malta: why are rates so low?

_H Borg, M Buttigieg- Said, S Attard Montalto_

**St Luke’s Hospital**

**Background:** Malta has one of the lowest breastfeeding rates in Europe. Mothers report of a lack of support from family members and health professionals and early cessation of breastfeeding remains widespread.

**Aim:** This study reviewed statistics for the first 6 months of life and identified reasons why mothers discontinue breastfeeding.

**Method:** A random sample of 405 new mothers who chose to breastfeed at St Luke’s Hospital, were contacted by phone at 1 week post delivery and then each month up to 6 months, and asked to voice their feeding experience.

**Results:** Breastfeeding attrition rates were high with very few babies still breastfed at 6 months. The most common reason for introducing artificial feeding was on the advice of health professionals, usually without any medical indication. Mothers who introduced bottle feeds in hospital lacked confidence to breastfeed and most stopped breastfeeding soon afterwards.

**Conclusion:** This study highlights that the majority of health professionals are not sufficiently committed to supporting breastfeeding mothers. Artificial feeding methods are still widely recommended with no scientific-based rationale and, once advised to do so, many mothers felt that bottle-feeding was necessary for the well being of her child. The introduction of a clear hospital policy and compulsive education for all health professionals involved in maternity care is strongly recommended.

O-024
The management of asthma in schools

_R Zammit_

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**Aims:** Asthma is one of the most common chronic disorders of childhood. Teachers find themselves responsible for supervising schoolchildren with asthma during school hours. They are involved in decisions regarding emergency treatment and the administration of regular prophylactic treatment. In this study a short descriptive situation followed by a questionnaire was designed to assess the knowledge of asthma amongst school teachers, to identify lacunae of limited understanding, and to assess how teachers feel about managing children with asthma in particular regarding policies for giving medications.

**Methods:** The teachers attending the yearly In-service Training Programme organized by the Education Division and enrolling in the module Health at School, were invited to participate in the study by answering the questionnaire. This consisted of 5 statements about the nature of asthma, its treatment and management, that the respondents marked true or false. With 100% participation rate the answers of 140 respondents were analysed using the Statistical Package for Social Sciences (SPSS) to provide tabulations and statistical calculations.

**Results:** By cross tabulations of the respondents’ results it was found that: 45.7% of the respondents were not willing to assist an asthmatic child take their medications because they lacked the appropriate knowledge. 6.4% did not feel safe to give treatment notwithstanding they thought they knew enough on asthmatic treatment presumably because of lack of a school medication policy/protocols. Of concern is that 35.0% would offer help only when they felt they did know enough regarding asthmatic treatment. Only 12.9% felt confident enough to assist children have their medications because they lacked the appropriate knowhow. 6.4% did not feel safe to give treatment notwithstanding they thought they knew enough on asthmatic treatment. Only 12.9% felt confident enough to assist children have their medications because they lacked the appropriate knowhow. 6.4% did not feel safe to give treatment notwithstanding they thought they knew enough on asthmatic treatment.

**Conclusions:** Whilst a protocol regarding medications at school is needed, teachers need more guidance in supervising asthma and its management. The school health services could play a larger role in educating teachers.
Current trends in child abuse in Malta
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Background and Aims: The socially complex aetiology of child abuse makes its eradication difficult yet it's significant negative impact demands early identification and appropriate management. To this end, local authorities have established efficient tracking and processing protocols for suspected cases, covering medical, social, legal and police aspects. This review presents the current status of abuse in Malta.

National Statistics: Child abuse is steadily on the increase: from 1993 up to 2004, Agenzia Appogg recorded a total of 6,711 reports under the Child Protection Services, of which 4,136 involved some form of child abuse, 55% in those aged 6-15 years and 12% in preschool children with a M:F ratio of 1:1.5 (1.5 for sexual abuse). 2% were referred from Health Services, 30% from Appogg, 27% relatives, 25% other agencies, 12% Education and 4% from the Police.

Types of abuse: As in other countries, physical abuse comprises 30% of cases; neglect 17% and sexual abuse 13%, although all types are likely to be under-reported. This is especially so for sexual abuse that involves preschool children who may not report the event compounded by the absence of penetration and external physical signs in just 2 out of 11 cases in one local review. Abuse by proxy (Munchausen syndrome) is only diagnosed once every 10 years in Malta.

Conclusion: Whilst case identification has increased steadily, the enhanced support services (Paediatric team, Appogg, Vice Squad, Family Court, etc.), have considerably improved the overall liaison and medico-socio-legal package available, and those filing reports are protected by the Data Protection Act. Nevertheless, much still needs to be done to improve inter-agency liaison.

Declining birth rates and social factors - implications for paediatric private practice
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Malta exhibits many secular western trends including declining birth rates, declining fertility rates and increasing numbers of single parents. Moreover, the number of practising paediatricians is continually rising. This is expected to have a significant impact on private practice, which is widely used by local doctors to supplement low (by European standards) salaries. Like Dr. Tertius Lydgate in George Eliot's 'Middlemarch', many doctors may find this a further compelling reason to leave Malta in order to seek greener pastures.

Invasive meningococcal disease in Maltese children and adolescents
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Background and aims: Neisseria meningitidis is one of the leading causes of meningitis and septicaemia in children and adolescents. Serogroups B and C constitute the majority of meningococcal disease in most developed countries today. The incidence of serogroup C disease has decreased in those countries introducing the conjugate meningococcal C vaccines in their national immunisation schedules. The aim of this study was to look at the incidence and serogroup distribution of meningococcal disease in children and adolescents, in Malta.

Method: All laboratory and clinically confirmed meningococcal cases occurring during 2000–2005 in 0-18 year old children and adolescents were retrieved from data collected by the Public Health and Microbiology Departments. The total number of meningococcal cases in all ages was also noted.

Results: The incidence rate for laboratory and clinically confirmed meningococcal disease was 2.7-5.6 per 100,000 population per year. Disease burden was highest in 2-4 year old children (mean: 42%). Serogroup B was responsible for most laboratory confirmed cases, followed by serogroup C. The proportion of invasive disease caused by serogroup C in 0-18 year olds has increased from 5.6% in 2000-2002 to 14.2% in 2003-2005.

Conclusion: Similar to other European countries, serogroup B Neisseria meningitidis is responsible for the majority of invasive meningococcal disease. Continued surveillance for serogroup C is warranted in view of the recent increase in meningococcal C cases and the availability of effective conjugate meningococcal C vaccines.

Assessment of the appropriate use of medicines at the medical admissions section of the emergency department
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Background: Appropriate prescribing remains an important priority in all medical areas of practice. Medication appropriateness can be defined as the outcome of a process of decision-making that maximises net individual health gains within society’s available resources.

Objective: To apply a Medication Appropriateness Index (MAI) to identify issues of inappropriate prescribing amongst patients admitted from the Emergency Department (ED)

Method: This study was carried out at St Luke’s Hospital on 125 patients following a two-week pilot period on 10 patients. Patients aged 18 years and over and on drug therapy were included. Patients who were not reviewed prior to the post-take ward round and direct admissions were excluded. Drug treatment for inappropriateness was assessed by using a MAI, which was tested for content validity and reliability.

Results: Treatment charts of 125 patients, including 697 drugs, were assessed using a MAI. Overall, 115 (92%) patients had ≥1 medications with ≥1 MAI criteria rated as inappropriate, giving a total of 384 (53.1%) drugs prescribed inappropriately. The mean ± SD MAI score per drug was 1.78 ± 3.29. The most common drug classes with inappropriateness problems were supplements (20.1%) and antibiotics (20.0%). The most common problems involved incorrect directions (26%) and incorrect dosages (18.5%). There were 36 omitted drugs with untreated indications.

Conclusion: Considerable inappropriate prescribing was identified, which could have significant negative effects on patient care.

Molecular dynamics of the androgen receptor
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Aims: This is a comparative in silico investigation of the binding modalities of different ligands to the Androgen Receptor, and the effects that these different ligands have on its dynamics.

Methods: The AMBER 8 suite of programmes was used in order to simulate the binding and the trajectory of the Androgen Receptor over a period of 4.8ns. The trajectory of the Androgen Receptor was simulated for both the apo and the holo forms of the protein, with the holo form being bound to vinclozolin, diethylstilboestrol, corticosterone and metribolone. Co-ordinates for the Androgen Receptor bound to metribolone were obtained from the Protein Data Bank (PDB).

Results: Both the apo form, and the protein-ligand complexes equilibrated well over the period studies, and hydrogen bond analysis and principal component analysis indicated that the androgen receptor bound with high affinity but with different modalities to non steroidal ligands.
Conclusions: The Androgen Receptor is promiscuous, binding both steroidal and non steroidal ligands. An in-Department understanding of how non-steroidal ligands bind to the active site of this receptor is fundamental to the design of non-steroidal pharmacologically active agents.

O-030
Beyond the lipid-lowering view of statins: modulation of T cell response in autoimmune disease
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The pharmacological interference within T cell effector pathways is one therapeutic strategy for chronic inflammatory autoimmune disorders that are mediated by CD4+ T helper (Th) cells, such as multiple sclerosis (MS), diabetes and rheumatoid arthritis (RA). One candidate group of drugs for this therapeutic approach is the family of 3-hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) reductase inhibitors, collectively known as statins. These orally-administered drugs have been used for several years as the gold standard for lipid-lowering therapy but have also shown (from early clinical trials and animal experiments) therapeutic benefit in autoimmune disease including MS and RA. Although a plethora of molecular processes have been reported for their mode of action, the main biological alterations responsible for modulating T cell response by statins involve an interference with cell cycle progression and induction of anergy; a differentiation towards a regulatory phenotype; and a disruption in cytoskeletal dynamics necessary for migratory function. While most of our findings have been reported in the animal model or using in vitro systems, a Phase II clinical trial in relapsing-remitting MS that we are currently finalizing will clarify the implications of preclinical data and help identify in vivo therapeutic targets in the pathogenesis of the disease.

O-031
Novel anti-cancer agents, PBTs: inhibition of Gleevec-resistance in leukemic K562 CML cells by the PBTs
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Leukemia is a heterogeneous disease characterized by malignant proliferation of cells of the hematopoietic system. CML is characterized cytogenetically by the Philadelphia (Ph) chromosome, resulting in the generation of BCR-ABL chimeric fusion protein and is associated with increased levels of tyrosine kinase activity shown to play a role in generation of CML in animal models. Several studies have suggested that K562 cells, a tumor cell line derived from a CML patient in blast crisis, are resistant to apoptosis induction. Gleevec, a promising new inhibitor of tyrosine kinase is effective against BCR-ABL-positive leukemia. However, Gleevec use has been complicated by the development of resistance with subsequent leukemia relapse. We have developed K562 cells that are resistant to apoptosis by Gleevec. In the studies reported herein, we demonstrate that PBTs cause apoptosis of Gleevec-resistant K562 cells in vitro. These studies indicate that PBTs overcome Gleevec resistance possibly acting through a different mechanism than through tyrosine kinase inhibition. Previously we showed that PBTs control neoplastic cell growth in vitro and in vivo and that the effect in vivo lasts 3-4 cycles longer than the treatment period. Furthermore we showed in vivo that PBTs and Gleevec are synergistic. These studies suggest that PBTs may provide novel anti-cancer agents to lower the concentration of chemotherapeutic drugs needed thereby decreasing the observed side effects of these drugs. (Supported by the OCRN)

O-032
Role of nicotine in memory formation, neural cell proliferation and apoptosis
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Nicotine is the neuroactive compound that is considered to be responsible for the development and maintenance of tobacco addiction. Despite the abuse potential of nicotine, the acute effects of this drug are considered to have a neuroprotective effect on the adult brain to the extent that nicotine-derived compounds have been proposed for the treatment of age-related brain pathologies and as enhancers of cognitive performance. However, in heavy smokers, abstinence from nicotine is accompanied by significant cognitive impairments possibly indicating the presence of drug-induced changes in brain plasticity. This observation suggests that chronic administration of nicotine might impair brain mechanisms important for learning and memory formation. The area of the brain involved in these processes is known as the hippocampus. The subgranular zone of the dentate gyrus within the hippocampal formation is one of the few areas of the brain in which neural cell proliferation continues to occur in adulthood. This cellular process can be enhanced by a variety of treatments including an enriched environment, physical activity and antidepressant drugs. Recent research work in our laboratory has shown that chronic administration of nicotine dose-dependently decreases cell proliferation and increases cell-death in the rat hippocampus. Similar doses of nicotine have also been found to inhibit the acquisition of a spatial memory task. These results suggest that chronic nicotine administration can have adverse consequences on the adult brain, raising an additional concern about the consequences of tobacco smoking.

O-033
Development of personalized medication strategies for the treatment of neuroblastoma
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Neuroblastoma is the most common solid tumour of childhood and is the third most common cancer in children under five years of age. Initial treatment for children afflicted with advanced neuroblastoma usually involves chemotherapy. However, the main problems associated with chemotherapeutic agents are the dose-dependent adverse effects occurring mainly through interactions with non-tumour related cells, and the risk of the emergence of drug resistant tumours. Recent advances in molecular biological analysis and genetics research have opened new frontiers in the quest for the development of ‘tailor-made’ drugs, according to the individual patient’s metabolic and genetic make-up and is part of the emerging translational medicine ‘bench to bedside’ approach to drug development.

Aim: To develop hypothesis led derivatives of chemotherapeutic agents currently used in neuroblastoma chemotherapy and possessing enhanced specificity for target tumour genes, thus identifying risk categories and reducing adverse effects in the patient whilst increasing the effective dosage.

Methods: qPCR and micro-array data and analysis to determine genes dysregulated due to the chemotherapeutic agents are used for studying the specificity of drug - target gene interactions. Evolutionary molecular modeling approaches will consequently be applied for modifying the drugs in order to enhance target gene specificity.

Results: At the time of writing of this abstract, preliminary analyses relating to micro-array and qPCR data are being finalized.

Conclusions: This molecular translational medicine approach to drug development, in the context of neuroblastoma, will produce drugs with improved efficacy and reduced ill effects for the neuroblastoma patient.
Incidence and survival of childhood CNS tumours in Malta - 1995 to 2004
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Introduction: CNS tumours comprise approximately 1/5 of all childhood cancers and pose particular management challenges. This study is a retrospective descriptive study of all CNS tumours in Maltese children aged up to 14 years from Jan 1990 to Dec 2004.

Methods: Cases were highlighted from the Malta Cancer Registry as well as from case records of the Paediatric Oncology Unit at St Luke’s Hospital. The main aims of this study were to look at the incidence and survival of children with brain tumours in Malta, and to compare these with similar data from other European countries.

Results: There were 40 cases during the period encompassing 1990 to 2004. This translates into an incidence rate of 5,41 per million child years.

Boys slightly outnumbered girls. Histology was available for 33 cases, and the most common histological type was astrocytoma followed by medulloblastoma / PNET. The main management modalities were surgery, chemotherapy and radiotherapy. The overall survival probabilities using Kaplan-Meier survival estimate, are 64% and 57 % at 5 and 8 years after diagnosis respectively.

Discussion: This is the first study looking at paediatric CNS tumours in Malta. The main points which emerge from this study are (a) the overall incidence rate compares favourably with that of many European countries, (b) management is compatible with state of the art knowledge and guidelines for management of these problems and (c) the overall survival rate compares favourably with that of other European countries.

A descriptive study of childhood leukaemia in Maltese children from 1980 to 2000
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Aims: This presentation is a retrospective descriptive study of childhood leukaemia in Maltese children from 1990 to 2000 and aims to describe the incidence and survival of Maltese leukaemic children during this period. The presentation will also compare the incidence and survival of Maltese leukaemic children during the study period with that of a previous study from 1981 to 1990.

Methods: The incidence of leukaemia in Maltese children from the ages of <1 to 14 years will be worked out using the data obtained from the Malta Cancer Registry. The data on survival and treatment will be obtained from the patients’ hospital records. Kaplan-Meier survival curves will be used.

Recurrent and malignant pleomorphic adenomas in major salivary glands
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The pleomorphic adenoma is the most common salivary gland tumour and accounts for about 60% of all salivary gland neoplasms. The clinical management of these benign tumours can be complicated by their tendency to recur. A 10-year recurrence rate of roughly 7% has been reported for parotid pleomorphic adenomas. Furthermore malignant transformation has been reported in 1.9 - 23.3% of all pleomorphic adenomas. This study was carried out in order to establish the recurrence rate and the rate of malignant transformation in major salivary gland pleomorphic adenomas in Malta as well as to establish the incidence of carcinomas and metastasising pleomorphic adenomas. The histopathology archives from 1970 to 2005 at St Luke’s Hospital, Malta were searched for all cases reported as pleomorphic adenomas, carcinoma ex pleomorphic adenomas and metastasising pleomorphic adenomas. The patients’ histories were reviewed in order to ascertain whether the tumour was a first presentation or a recurrence. Pathology slides were reviewed when required. The data obtained was then compared to that reported in the literature. The incidence of major salivary gland malignancy was also compared to that of intra oral minor salivary glands.

Differences in the in vitro bioactivity of crude Maltese honeybee propolis collected at different sites across the Maltese islands
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Background: Propolis is a complex honeybee product deposited in the beehives, where it is thought to protect the hive and its occupants from microbial infection. Propolis has several reported medical applications in view of its antiseptic, antimycotic, antibacterial, antiviral, antiprotozoal and anti-inflammatory properties.

Aims: The purpose of this study was to analyse the chemical constituents of the methanol extract of Maltese honeybee propolis, collected from different locations in Malta, and to investigate the in vitro cytotoxic activity of these extracts against human cancer cell lines.

Methods: Crude Maltese honeybee propolis was first extracted in water and then in methanol. The final methanol residue was dissolved in dimethyl sulphoxide (DMSO) and used for cytotoxicity testing on human cancer cell lines using standard MTT (3-[4,5-Dimethylthiazol-2-yl]-2,5-diphenyl- tetrazolium bromide) assays. Propolis contents were also analysed by GC-MS.

Results: Results obtained show that the propolis collected from different areas in Malta has widely varying cytotoxic activity on cancer cells in vitro; the mode of cell death observed is morphologically consistent with apoptosis.

Conclusion: Propolis collected from different sites showed variations in the cytotoxic effects reflecting the differences in the species of plants on which the bees had foraged, including seasonal variation of flora.

Dynamic contrast enhanced MRI (DCE-MRI) predicts radiation response in cervical cancer
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3Gynaecology, Cambridge, UK,
4Histopathology, Cambridge, UK,
5Genomics, Cambridge, UK.

Aim: To assess the predictive role of DCE-MRI parameters in the regression of cervical cancer

Method: Patients with locally advanced cervix cancer (stages Ib2-IVa) undergoing primary chemoradiotherapy were recruited. Each patient underwent DCE-MRI at three time points: prior to start of treatment, after 2 weeks of external beam radiotherapy (EBRT) and at the end of EBRT. Each examination included pre-contrast T2 sequences for optimal tumour localisation and dynamic Ti scans. The parameters evaluated for predictive purposes consisted of the relative signal intensity (rSI), the rate of contrast uptake, the area under the curve at 90seconds (AU90), the volume transfer constant (Ktrans) and rate transfer constant (kep) between the intravascular and extracellular-extravascular compartments. The correlation between the DCE-MRI parameters and the tumour regression was investigated using Spearman’s correlation coefficient (r) with 2-tailed significance testing.
**O-039**

**Novel methods for symptom control in palliative care in Malta**

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**Aim:** The introduction over the last year of several novel methods of symptom control by the author involving both invasive and non-invasive methods in terminally ill patients at the Palliative Care Clinic at Boffa Hospital is explained.

**Methods:** The data in this report was collected retrospectively from Procedure Lists and analysis of follow-up in patients’ case notes. Patient confidentiality was maintained at all times. The invasive methods reviewed include the following:

- a) long term epidural and intrathecal catheterisation
- b) coeliac block for upper GIT malignancies
- c) multilevel sympathetic ablation for lower GIT
- d) hypogastric block for pelvic malignancies
- e) chemical ablation of solitary metastasis

Non-invasive methods include pain management using new indications for old drugs (e.g. ketamine for intractable pain relief) that have been introduced.

**Results:** The use, mechanism of action and results of these methods in palliative control of pain in patients suffering from cancer is discussed.

**Conclusion:** The role of the multidisciplinary team with different specialties, including oncologists, palliative care physicians, anaesthetists, pharmacists, physiotherapists, nurses and members of other caring professions, in the management in both pre- and post-procedure phases is highlighted. The role of radiofrequency and chemical neuroablution as well as neurolytic and non-neurolytic nerve blocks is discussed.

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**O-045**

**Occurrence of post-tonsillectomy haemorrhage in Malta: do pre/peri/post-operative antibiotics influence outcome?**

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**Introduction:** Haemorrhage is the most common complication after tonsillectomy. It requires re-admission of the patient to hospital, most commonly for observation, but active intervention is sometimes needed.

**Method:** The notes of 1464 patients who underwent tonsillectomy with or without adenoidectomy over a 3½ year period were analysed retrospectively to determine the incidence of post-tonsillectomy haemorrhage and its relationship to pre/peri/post-op antibiotic cover.

**Results:** Secondary haemorrhage occurred in 41 (2.8%) patients. The majority of these, 29 (70.7%) required no active treatment, whilst 12 (29.2%) required further surgery to achieve adequate haemostasis. In 2 cases (4.9%), bleeding was severe and the patient required a blood transfusion. Thirty eight (92.6%) patients who suffered secondary haemorrhage had received pre/peri/post-op antibiotics. Only 3 (7.3%) had not received any antibiotic cover.

**Conclusion:** Antibiotic administration pre/peri/post-tonsillectomy does not influence the incidence of secondary haemorrhage.

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**O-046**

**Conventional or laser stapedotomy – a comparison of functional results and outcomes**

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**Introduction:** Surgery for the conductive hearing loss of otosclerosis was the result of the pioneering work of Shea and his collaborators in the sixties. The use of the laser in stapes surgery was first proposed by Perkins, and quickly taken up by many other surgeons. Laser assisted stapes surgery allows for minimal manipulation of anatomical structures, with precisely delivered forces, the principle advantage of this being reduced morbidity and improved functional results.

**Aims:** In this retrospective study the authors attempt to identify advantages and benefits of Laser assisted stapedotomy as opposed to conventional stapedotomy.

**Methods:** The functional results and clinical outcomes for two groups of selected stapedotomy patients, one group after conventional, and the other after laser assisted stapedotomy, are compared. The technical advantages and drawbacks for the two techniques are also discussed.

**Results:** Patients after laser assisted stapedotomy were more comfortable, and suffered from less vertigo postoperatively, than those undergoing conventional stapedotomy. Conservation of the 8KHz frequency was almost always obtained for the laser assisted procedure, not so for the conventional procedure. There was no difference in obtaining closure of the
air-bone gap for the two groups. The laser assisted procedure was, on the other hand, technically more difficult than the conventional approach. The actual expense incurred in obtaining a laser unit was considered another drawback.

Conclusions: Although laser assisted stapedotomy is considerably less cost-effective and more difficult than the conventional procedure, the significantly superior functional results and clinical outcome outweigh the disadvantages.

O-047
An assessment of the validity of the current practice of antibiotic prophylaxis in uncomplicated nasal surgery
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Introduction: Despite the large number of studies on the usefulness of antibiotic prophylaxis in surgery, there is little or no guidance on how to implement new codes of practice, or how to audit current guidelines.

Aims: In this study the authors analyse clinical outcomes in order to assess the validity of antibiotic prophylaxis in uncomplicated nasal surgery.

Methods: Three groups of selected patients were studied. One group was treated with a single peroperative intravenous antibiotic dose, a second group was postoperatively given a standard five day course of antibiotic, and a third group was given no antibiotics at all. Incidence of complications, average recovery times and drug adverse reactions was compared for the three groups.

Results: There was no significant difference in incidence of complications, in average recovery times or in the incidence of drug adverse effects, between the three groups.

Conclusions: In the absence of any evidence of clinical benefit obtained from the use of antibiotic prophylaxis in uncomplicated nasal surgery, it is not felt that the application of this practice is justified.

O-048
A comparison of the effects of paracetamol and a corticosteroid against a non-steroidal anti-inflammatory drug on the sequelae following the surgical removal of mandibular third molars
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Aim: In this double-blind randomised controlled clinical trial, a combination of oral paracetamol 1g and oral dexamethasone 1mg four times daily, was evaluated against oral diclofenac sodium 50mg three times daily, for the control of postoperative pain, swelling and trismus following the surgical removal of mandibular third molars under local anaesthesia. The purpose for such a study was to find an alternative drug regimen for the control of the common postoperative sequelae of oral surgery, especially for those patients in whom the usual drug regimens (e.g. NSAIDs) are contraindicated.

Method: Postoperative pain was recorded 8-hourly by the patients using a visual analogue scale pain chart for 7 days, while facial swelling and trismus were assessed by the investigator on the second, fourth and seventh postoperative days. Facial swelling was determined using a measuring tape, while trismus was evaluated by measuring maximal interincisal opening.

Results and conclusions: ANOVA for repeated measures analysis indicated that the patients in the paracetamol and dexamethasone group experienced an overall mean reduction of 36% in pain (p<0.05), of 76% in facial swelling (p<0.001) and of 50% in trismus (p<0.001) as compared to the patients in the diclofenac sodium control group. Levene’s test for equality of variances showed that the inter-patient variation with respect to pain, swelling and trismus in the paracetamol and dexamethasone group, was also significantly less than that in the diclofenac sodium group (p<0.05).

Pearson bivariate correlation tests show that the reduction in swelling and trismus (p<0.05) are significantly correlated in both groups. None of the patients reported any adverse drug reactions.

O-049
Acute management of dentoalveolar trauma in children
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Introduction: Cases of orofacial trauma presenting to the general dental practitioner, general medical practitioner and doctors working in casualty are a relatively common event. These clinicians should be well versed in the immediate management of trauma to both primary and permanent teeth. Dental injuries usually involve a combination of injuries to a tooth and its supporting structures with certain types of injuries requiring more immediate treatment than others. Prompt, accurate diagnosis and appropriate emergency treatment will greatly improve the prognosis for many dentoalveolar injuries.

Materials and Method: Data on 159 cases of trauma to children aged between 5 and 23 years of age (250 traumatised permanent teeth) was collected over a period of 5 years (Aug 2001 – Aug 2006). Treatment was carried out either at the School Dental Clinic, St Lukes Hospital Dental Department, University Dental Clinic or a private dental clinic. These patients will be recalled to assess the outcome of treatment

Results: 4 % attended casualty Department as a first line emergency assessment prior to being referred on. Males accounted for 63 % of the children in the sample. Dental injuries that presented most frequently in permanent dentition were uncomplicated crown fractures of enamel and dentine (54%), 72% of the traumatised permanent teeth suffered a form of luxation injury and 3% were cases of avulsion (complete loss of tooth from socket).

Conclusion: A clinical audit of the management of trauma anterior teeth is required to evaluate the efficacy of immediate emergency treatment.

O-050
Postgraduate training in surgery
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Mr Dick Rainsbury is the Past President of the Section of Surgery of The Royal Society of Medicine, Foundation Chairman of the Breast/Plastic Surgery Interface Group, Foundation Breast Tutor The Royal College of Surgeons of England and Chairman of the National Breast Reconstruction Audit Steering Group. He has a particular interest in breast surgery, based in Winchester, UK, and is the Director of the Raven Department of Education of the Royal College of Surgeons of England.

He has a wide experience in postgraduate instruction and will discuss the recent, radical changes in postgraduate surgical training in the UK, including the implementation of the new curriculum and its impact on foreign trainees and on breast surgery.

O-051
Audit on the ability of house officers to predict the results of pre-operative blood investigations in patients undergoing elective surgical procedures
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Introduction: It is usual practice for house officers within the surgical department at our hospital to request routine pre-operative blood investigations in all patients undergoing elective surgery regardless of their medical fitness or ASA scoring. This audit assessed whether house officers were able to predict the outcome of blood investigations taken pre-operatively, and whether this prediction influenced the outcome of the
surgery. It also assessed whether UK guidelines on the indications of pre-operative blood investigations could be safely adopted in Malta.

**Methods:** House officers within our firm were asked to request appropriate blood investigations only in patients who had any obvious clinical indication or were ASA grade more than two. A full blood count was taken in women of childbearing age and a haemoglutost was performed in the admitting ward on all patients. However, if the UK guidelines suggested blood investigations, these were also requested. House officers were also asked to indicate the predicted result of these investigations.

**Results:** 429 patients were operated by our surgical firm over one year. Data was collected for 266 (62%) patients, on whom 498 blood tests were requested. 454 blood results were correctly predicted as normal. 11 test results were predicted to be abnormal but were in fact normal. 18 blood tests were correctly predicted as abnormal, and 15 blood tests had incorrectly predicted abnormal results. No complications arose, and no surgical procedure was cancelled as a direct result of blood investigations that were not requested.

**Conclusions:** House officers are able to correctly predict the result of pre-operative blood investigations in the vast majority of cases. This can result in significant cost saving if pre-operative blood tests are only requested based on good clinical judgment.

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**O-052 Operative cholangiography in the laparoscopic era: back to the future**

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**Aim:** Operative cholangiography, once a routine part of open cholecystectomy, appears to have declined in the laparoscopic era, with increasing numbers of patients receiving MRCP/ERCP. We aim to evaluate our conventional practice of routine operative cholangiography at laparoscopic cholecystectomy and aim to demonstrate its benefits.

**Methods:** Patients were recruited prospectively and a total of 1688 procedures were analysed. The median age was 51.5 years (IQR = 25) and the male: female ratio was 1:4. Pre-operatively patients were divided into two groups for further analysis. Group 1 (n=530, 31.4% of total) had one or more risk factors for choledocholithiasis (jaundice, pancreatitis, altered liver function tests and/or ultrasound evidence). Group 2 (n=1156, 68.6%) had no such pre-operative risk.

**Results:** In Group 1, duct stones were confirmed at cholangiography in 247 cases (47% yield). In Group 2, 73 patients (6.3% yield) were actually found to have duct stones. A total of 323 common bile duct explorations were performed - 173 (55%) had laparoscopic trans-cystic clearance, 150 (43%) had laparoscopic choledochotomy, whereas 15 patients (4%) were open conversions. We further subdivided Group 2 into four age groups and performed sub-group analysis. With increasing age, we found that operative cholangiography has a statistically significant higher stone yield (p<0.001) in patients not previously suspected to have duct stones: 2.2% in patients aged 29 or less (n=131), 4.4% in those aged 30 to 49 (n=461), 6.9% in those aged 50 to 69 (n=475) and 24% in patients aged 70 or more (n=91).

**Conclusion:** Routine operative cholangiography facilitates single-session management of bile duct stones without need for pre- or post-operative ERCP. Moreover, it detects unsuspected choledocholithiasis in a significant percentage of low risk subjects. In this group of patients there is a significant incremental stone yield with advancing age.

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**O-053 The influence of peritoneal lavage on bacterial concentration in patients undergoing appendicectomy**

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Department of Surgery, St Luke’s Hospital, Malta.

**Background:** The value of intraoperative peritoneal lavage in the treatment of peritonitis is controversial. Surgeons that are in favour argue that this is beneficial others argue that this is detrimental.

**Aim:** To measure bacterial concentration before and after peritoneal lavage in patients undergoing emergency appendicectomy.

**Methodology:** We recruited 30 patients with a possible diagnosis of appendicitis. Patients were randomly allocated either in the lavage group or in the control group. Once the peritoneum was opened, the nasogastric tube was clamped. Patients in the lavage group underwent peritoneal lavage with 500 cc of saline at the end of the operation. The tube was then aspirated and swabs were taken from the same sites. Patients in the control group did not undergo peritoneal lavage but swabs were be retaken from the same sites all the same.

**Results:** The results showed: 1) A significant statistical reduction in bacterial concentration in patients undergoing peritoneal lavage; 2) lavage did not predispose to bacterial dissemination.

**Conclusion:** Peritoneal lavage is beneficial as it dilutes the bacterial population and reduces the majority of organisms.

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**O-054 Empyema thoracis in children with community acquired chest infections**

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2 Department of Paediatrics, St Luke’s Hospital, Malta.

**Introduction:** A retrospective study of 22 consecutive cases of children who presented to St Luke’s Hospital between January 2000 and December 2005, with a community acquired chest infection which required surgery, was conducted. The presenting symptoms, clinical course and outcomes were monitored and analyzed. Baseline observations and patterns of empyema thoracis in the local community were recorded.

**Methods and Patients:** 22 children were included in the study. The age range was between 3 months and 12 and a half years. The average age was 3 years 8 months. 5 were girls (23%) and 17 were boys (77%).

**Results:** All the children in the study presented with fever (n=22). Most (21 of 22) had a cough on presentation. The cough was equally divided between dry (n=11) and productive (n=10). Other symptoms on presentation were shortness of breath (n=6), vomiting (n=12), leukocytha (n=6), irritability (n=5), epigastric pain (n=10) and tachypnoea (n=9).

**Conclusions:** 1. Ultrasound reporting in empyema thoracis in children by paediatric radiologists will decrease the need for CT scanning. 2. Introduction of video assisted thoracoscopic surgery may result in a shorter hospital stay for selected patients with less trauma to the child. 3. The introduction of guidelines for the treatment of empyema thoracis in children with a community acquired chest infection is recommended.

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**O-055 Validation of a Maltese translation of the IPSS score (IPSS-Mlt.)**

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**Objectives:** To test the psychometric properties of a Maltese version of the IPSS score and compare the outcome with the psychometric properties of the original American score.

**Methods:** A prospective observational study was conducted at the Urology Outpatient’s Department, St Luke’s Hospital in 50 patients with Benign Prostatic Hyperplasia (BPH) (age >50 years) and 60 control subjects (age 18 to 49 years) in order to test the validity and reliability of the IPSS-Mlt. Eligible subjects were given the translated version of the Maltese IPSS at the outpatients clinic and then where asked to submit another questionnaire one week after the initial one.

**Results:** Construct Validity was assessed by correlating the IPSS-Mlt. scores with the QOL question in the IPSS and another global question on bother with Urinary symptoms. Discriminatory Power was assessed by calculating the area under the receiver operating curve (ROC). Reliability was evaluated using the test-retest method and checking for Internal Consistency reliability was done using Cronbach’s alpha coefficient. Sensitivity to change was...
calculated as the effect size in pre-TURP vs. post-TURP scores in a subset of patients undergoing TURP.

**Discussion**: The validation of a Maltese version of the IPSS is a necessary exercise in the standardisation of care of patients with LUTS.

O-056

**The impact of artificial reproductive technology on neonatal mortality in the Maltese islands**

*P Soler, D Soler*

**Background**: Epidemiological studies have clearly demonstrated a positive correlation between multiple pregnancy and an increased neonatal morbidity and mortality. Studies have also shown that an increase in the number of multiple births closely follows an increase in the number of couples being treated for infertility.

**Aim**: To determine the effects of high order pregnancy on the survival of babies (singletons, twins and higher-order) admitted to the SCBU in the period 1989-2005.

**Methods**: Retrospective data collection from the SCBU Neonatal Admission Register: gestation, birth weight, cause of death, pregnancy order, fertility treatment.

**Results**: There is a rising trend in the number of twins and higher-order pregnancies with the increasing availability of assisted reproductive technology; there is a six to ten fold increase in the death rate of babies resulting from high-order pregnancy. The costing of “futile” intensive care delivery is estimated.

**Conclusion**: The findings are in agreement with studies conducted in Europe and USA; the implications on NIC services at a National level are discussed.

O-057

**A review of central and peripheral vascular access lines in Maltese neonates**

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**Department of Paediatrics, St Luke’s Hospital, Malta**

**Aim**: To categorise the use and problems encountered with vascular access lines in neonates admitted to the local neonatal unit.

**Method**: Prospective data for all umbilical, peripheral arterial and venous lines from 1st January 2003 to 31st June 2006 were captured into a custom database application. This included birthweight, gestation, diagnosis, indication, catheter lifespan, reason for removal and complications.

**Results**: A total of 264 lines were inserted in 172 neonates. The gestational age ranged from 25 to 40 weeks (median 34), 129 umbilical arterial catheters (UACs), 39 umbilical venous catheters (UVCs), 28 femoral venous lines, 41 radial arterial lines and 11 peripherally inserted central catheters (PICC) were performed. The median lifespans were 5 days (range 0-33), 4 days, (range 0-14), 12 days (range 2-37), 5 days (range 1-24) and 5 days (range 2-10) respectively.

12.4% of UACs were removed because of suspected or proven sepsis, 4.7% because of suspected onset of necrotizing enterocolitis, 3.9% because of vascular changes to the lower limbs, 3.4% of UACs were dislodged. 15.4% of UVCs were removed because of sampling difficulty, 35% of femoral venous lines were removed for suspected or proven sepsis, 27% of radial arterial lines were dislodged, while 36% of PICC were blocked. No neonatal deaths were directly attributable to the presence of a central line.

**Conclusions**: The median durations and complications are compared with published series.

O-058

**A series of cases of spontaneously aborted foetuses**

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**Introduction**: Spontaneously aborted foetuses frequently have developmental anomalies. Chromosomal abnormalities have been reported in 30-50% of cases.

Aims: This paper presents the results of a detailed anatomical examination of a series of cases of spontaneously aborted foetuses, together with their cytogenetic testing.

**Methods**: Foetuses were obtained following informed parental consent for any post mortem tests necessary for the purpose of establishing the cause of intra-uterine death.

The maternal histories were used to obtain information on the ultrasonography carried out during the mother's pregnancy, as well as any other findings relevant to establishing the cause of foetal death. The procedures for examining the external features and for dissection of small foetuses are discussed. X-ray imaging was used to view the skeletal system of foetuses, as a diagnostic investigation. Cytogenetic testing was used to diagnose cytogenetic abnormalities.

**Results and conclusions**: The abnormalities found included limb abnormalities, facial abnormalities, lung abnormalities, omphalocele and encephalocoele. Cytogenetic testing used in other cases revealed the occurrence of Turner Syndrome, trisomy 18, and a case of triploidy.

O-059

**Screening cranial ultrasound examinations in sick preterm and term neonates - the spectrum of findings**

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**Special Care Baby Unit, Department of Paediatrics, St Luke’s Hospital, Malta**

**Aims**: To review the spectrum of cranial ultrasound findings and to determine whether the proportion of those within high to low prognostic risk categories is consistent with reports from other units.

**Methods**: A retrospective analysis of all cranial ultrasound scans carried out within our unit from October 1999 to October 2001 was performed. Scanned neonates were divided into a Preterm group (<36 weeks gestation) and a Term Group (>36 weeks gestation). Scans were categorized into normal or abnormal based on ultrasonographic standards. Distribution of grey to white matter lesions was also noted within the groups. Findings were then categorized into prognostic risk groups.

**Results**: Forty percent (269/674) of babies admitted during the study period were scanned. Most were preterm 167 (58%) while 112 (42%) were term. Most abnormal scans were seen in babies born before 28 weeks gestation. Milder grades of intraventricular haemorrhage (GMH/IVH2) were present in 4.5% of preterm and none in term babies. Cystic periventricular leucomalacia was an uncommon finding in all gestations. Congenital brain abnormalities were the commonest abnormalities in term babies. Low risk scans were found in 86-95% of preterms born between 28-36 weeks while only 43% were low risk type in those born before 28 weeks. White matter lesions were commoner in preterm group.

**Conclusion**: Findings in this group are comparable with that published from other neonatal units. Ultrasound identification of babies with high risk scans remains a valid tool which helps the clinician to identify those requiring close follow up because of associated increased incidence of neurodevelopmental problems.

O-060

**National birth weight for gestational age centile charts and their inferences**

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Department of Mathematics, University of Malta*

**Aim**: The development of national weight for gestational age centile charts with pathological subgroup analysis and comparison to other populations.

**Method**: Aonymised birth weight for gestational age data with relevant maternal and neonatal observations over the period 1995-2005 were obtained from national statistics. The formats were standardized and imported into an SQL database that enabled filtration for single live births and grouping by sex. The data was scrutinized manually for obvious keying errors. The best estimate of gestational age from last menstrual period (LMP) and expected date of delivery (EDD) was selected using established
The incidence of immunological disorders is greater within the R package. ICD 9 coding of the original data enabled selection of maternal and infant pathological subgroups. AutoRegressive Integrated Moving Average (ARIMA) was used to check for seasonal variation in birth weight.

Results: Processing of the initially filtered 22,396 males and 20,356 females revealed the expected paucity of births below 35 weeks but still enabled the fitting of charts starting at 24 weeks. Infants of diabetic mothers, those with pregnancy induced hypertension, plus other infant pathology groups were compared to the fitted model.

Conclusion: Centile charts for Maltese neonates are presented. Median Maltese term birth weight was just under 100g of standard Caucasian models. Possible reasons for this are proposed.
Direct Combs's test was positive. The patient was treated with prednisolone 60mg daily and within ten days of starting steroids, the haemoglobin had increased to 10.19 g/dL. Steroids were gradually tapered down over a three month period and the patient's haemoglobin level has remained stable.

**Conclusion:** A review of cases of Combs's positive haemolytic anaemia in association with ulcerative colitis shows that there is a marked preponderance of female patients (F:M = 7:1), the anaemia appearing at a mean of 10 years after the onset of the colitis, independent of the age of the patient. Although corticosteroids and/or immunosuppressive therapy are often successful, some patients require splenectomy and occasionally colectomy.

**O-069**

**Is the degree of stereo acuity affected by correction of the refractive error?**

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**Purpose:** The aim of this study was to consider changes in the level of stereo acuity in childhood in Malta with different levels of corrected and uncorrected hypermetropia and myopia.

**Method:** The study was a prospective study with a cross-sectional design. 55 candidates were selected from a database of ametropic subjects. 42 subjects accepted the invitation; 5 were eliminated, 18 were hypermetropic, while 19 were myopic. The level of stereo acuity was measured with and without correction, using the Frisby Plate mounted on a specifically designed bench.

**Results:** Using regression analysis, in both the hypermetropic and myopic groups, the threshold of stereo acuity was not significantly influenced by the degree of refractive error when measured with the appropriate correction (Hypermetropic group: p>0.05; Myopic group: p>0.05). However when the threshold of the level of stereo acuity was measured in the same subjects without the appropriate correction, then these levels were significantly reduced (Hypermetropic group: p<0.001; Myopic group: p<0.0001). The mean threshold levels of stereo acuity in the hypermetropic group and the myopic group measured 33.5 and 22.5 seconds of arc respectively when measured with correction. Without the correction the mean threshold was significantly reduced to 76.4 and 75 seconds of arc respectively. Using Paired Sample t-test to compare means, it was found that the difference in means (Hypermetropic group: p<0.05 and Myopic group: p<0.05)

**Conclusions:** In this study corrected ametropic subjects had a normal threshold level of stereo acuity. All subjects when uncorrected had significantly reduced stereo acuity. Finally subjects with myopia had a better threshold level of stereo acuity than those with hypermetropia.

**O-068**

**A single centre experience of the Arterial Revascularisation Trial (ART) - a randomised trial to compare survival following bilateral versus single internal mammary grafting in coronary revascularisation**

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**Aim:** The aim of this study is to present very early data from a single centre participating in the ART study, a unique multicentre international surgical randomised controlled study comparing the use of single versus bilateral mammary artery grafts in surgical revascularisation of patients with multi-vessel coronary disease.

**Methods:** Between November 2005 and May 2006, a total of 76 patients who were referred for CABG (coronary artery bypass grafting) were screened for the ART study. Of these, 39 patients have been enrolled and 23 of these have undergone surgery. All of the enrolled patients had multivessel disease affecting at least, the LAD and circumflex branches of the left coronary artery. They all had exertional angina CCS class III or IV or presented with a NSTemi.

**Results:** 13 of the patients who were operated on were randomised to receive a single mammary artery and supplemental conduits (long saphenous vein/radial artery) and 10 were randomised to have bilateral mammary arteries and supplemental conduits. There were no deaths or
major morbidities and at 6 weeks, all patients were angina free.

**Conclusion:** Although this unique surgical randomised controlled trial was long in the planning, its execution has been trouble free. Bilateral internal mammary artery grafting for multivessel coronary disease can be performed with minimal morbidity and its early results are as good as the more traditional operation using a single internal (left) mammary artery graft.

**O-069**

**Early use of dialysis after cardiac surgery**

_A Manché_

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**Introduction:** Renal replacement therapy may become necessary after cardiac surgery. An important risk factor for this development is pre-operative renal impairment that is more prevalent with increasing age. Over the past 12 years the percentage of patients over 70 undergoing cardiac surgery has increased from 21% to 30%. Our use of dialysis has increased from 1% to 7% over this period. The timing of dialysis after surgery is crucial to the outcome of these patients.

**Aim:** To determine the optimum timing of dialysis in acute renal failure after cardiac surgery.

**Methods:** A retrospective analysis was made of our changing practice in this field.

**Results:** In the first 6 years of this series (phase 1) only 3 (19%) of the 16 patients who underwent dialysis were discharged from hospital. During the latter 5.5 years (phase 2) 38 (79%) of the 52 patients who underwent dialysis survived. In phase 2 we used dialysis in the early phase of acute renal failure after cardiac surgery, when oliguria set in, and before the metabolic consequences of renal shutdown occurred.

**Conclusion:** We believe this protocol of early dialysis was responsible for our improved results and also enabled us to accept more patients with renal impairment for surgery.

**O-070**

**A retrospective audit of the outcome of patients who performed exercise stress tests**

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**Aims:** To determine how many patients with a positive stress test actually proved to have coronary artery disease on coronary angiography and to identify situations where exercise stress test has a low sensitivity.

**Methods:** The subjects chosen for this study were patients who performed exercise stress test during 2003, as provided from the records at Cardiac Lab. Case notes of patients were then reviewed retrospectively. Any relevant past medical history, stress test result, coronary angiogram and/or MIBI report, relevant admissions or consequent discharges were noted, together with the management of patients with positive coronary angiogram. Coronary angiogram was taken as the gold standard investigation for identification of coronary artery disease.

**Results:** Out of approximately 1500 patients who performed a stress test during 2003, 1148 case notes could be traced. The population studied was predominantly male (64.3%). Average age was 54.8 years. 238 patients were diagnosed with a positive stress test. Of these, 187 proceeded to coronary angiography and 73% (136) had a positive result. A lower incidence of risk factors was reported in the group with false positive stress tests. Out of the patients who were diagnosed as having a normal exercise stress test, 52 also had a coronary angiogram done; 66% (36) resulted positive. Of these 13 proceeded to PCI and 8 proceeded to CABG. In patients with false negative stress tests, 28% had a past history of MI, PCI or CABG; 19% presented with acute coronary syndrome and 11% with established myocardial infarction. 135 patients had an equivocal stress test; 35 proceeded to angiography of which 57% were positive.

**Conclusions:** Analysis of risk factors as well as past history of ischaemic heart disease is necessary for improved interpretation of stress tests and earlier referral of the cardiac patient to coronary angiography.
on bisphosphonates, 30 women were on calcium supplements, 44 women were premenopausal and 38 women had confirmed vertebral fractures. Age and weight difference were noted across groups and statistical.

The vertebral fracture group was noted to have the lowest disc height (1.57±0.1cm) of the 3 discs D1-D3. The D1-D3 disc height in the HRT and premenopausal groups were similar (2.15±0.14 cm) and (2.05±0.12 cm) respectively. The disc heights in the other three groups (Calcium 1.77±0.08, Untreated menopausal group 1.82±0.12cm, Bisphosphonates 1.88±0.12cm) were significantly lower than the oestrogen replete groups but were significantly higher than the osteoporotic vertebral fracture group.

**Conclusion**: Postmenopausal women with vertebral fractures have significantly low disc heights. The disc heights are significantly lower then untreated and HRT treated/premenopausal women. These results suggest that the discoid shape and viscoelastic properties of the intervertebral discs may be relevant to the genesis of osteoporotic vertebral fractures.

**O-074**

**Poly cystic ovaries produce 75 times more anti-Müllerian hormone (AMH) than normal ovaries**

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AMH has been identified in the adult ovary. Serum AMH levels in women with PCOS were 1.5–5 fold higher than in women with normal ovaries, the rise assumed to be secondary to increased number of follicles. Interestingly, treatment with metformin caused a significant reduction in serum AMH levels. We measured AMH in follicular fluid and granulosa cells (GCs) from normal and PCO (ELISA, DSlabs). Granulosa-luteal cells (GLC) were incubated a metaformin (10–7 M) and cell lysate AMH protein and mRNA assessed by ELISA and qPCR. Follicular fluid AMH was mean (range) 4 (0.3–16) ng/ml (n=18). Levels declined exponentially with increasing follicle size, being undetectable in follicles > 9mm. AMH in granulosa-conditioned medium ranged from undetectable to 1.7 ng/ml (n=17) with levels again falling with follicle size, becoming undetectable above 10mm and in GLC. AMH in GCs from anovPCO was on average 100 times higher than from normal and ovPCO (p<0.001; mean anov P<0.001; mean ovPC 27.4 ng/ml (n=6, range, 17.2–42.7), ovPCO 1.4 (n=12, 0.025–7.6) and normal 0.29 (n=14, 0.025–1.7). FSH (5 ng/ml) significantly reduced AMH in GCs from POC (p=0.006)(n=8), but not normal ovaries. Both AMH mRNA and protein were significantly reduced by metformin (n=4, p<0.05).

In summary, AMH production falls as follicles grow. Levels of AMH are 100 times higher per granulosa cell from anovPCO compared to normal. FSH reduced AMH production and metformin down-regulated AMH protein and mRNA levels. These data indicate that removal of AMH is essential for follicle selection and implicate raised AMH in the mechanism of anovulation in PCOS.

**O-075**

**Use of antenatal dexamethasone in late pregnancy and its effect on incidence of neonatal respiratory distress after elective caesarean sections**

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**Background**: Delivery by elective caesarean section at term has been associated with a higher incidence of neonatal respiratory distress compared to normal vaginal delivery. A previous multicentre randomised study showed that antenatal betamethasone and delaying delivery until 39 weeks both reduced the risk of neonatal respiratory distress in mothers who will have a policy to give treatment to consented mothers compared to those who will carry on with their practice as is currently usual.

Treatment includes two intramuscular doses of 12mg dexamethasone given 12 hours apart, with delivery occurring at least 48 hours after the first dose of dexamethasone. Statistical analysis will be carried out using a one way ANOVA to compare the different groups, and significance levels will be calculated.

**Outcome variables**: The primary outcome is admission to the Special Care Baby Unit with respiratory distress. Other variables assessed include age of the mother and parity, gestational age, weight of baby, apgar scores and type of anaesthesia.

**O-076**

**The effect of sildenafil citrate on the Sultan and Modified Sultan scores in women with severe dysmenorrhoea**

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**Aim**: To investigate the Sultan and Modified Sultan Scores after treatment with sildenafil in women suffering from severe dysmenorrhoea.

**Method**: A small (8 patients) double blind placebo controlled trial, using Sildenafil citrate and ibuprofen during the first 3 months, followed by placebo and ibuprofen for the next 3 months. Symptoms and quality of life were assessed with the Sultan score and Modified Sultan score before, hour and 2 hours after medication.

**Results**: During the 3 months of treatment with sildenafil, there was a statistically significant improvement in abdominal pain (p<0.017), pelvic heaviness/pain (p<0.047), lethargy (p<0.026), number of days off work (p=0.024), the Sultan and Modified Sultan scores (p=0.012), compared to baseline. Comparing the 3 months of treatment with placebo to baseline, there was a significant improvement in abdominal pain (p<0.016), pelvic heaviness/pain (p=0.016) days off work, the Sultan and Modified Sultan scores. When comparing sildenafil to placebo there was a statistically significant improvement in back ache (p=0.046) and pelvic heaviness/pain (p=0.023).

**Conclusion**: In this small study, sildenafil appears to positively improve the Sultan and Modified Sultan scores. Certain symptoms such as backache and pelvic heaviness/pain improved significantly. One possible explanation may be that sildenafil’s vasoactive influence, especially in the genital region and pelvic region, may be relevant to the genesis of osteoporotic vertebral fractures.

**O-077**

**Dydrogesterone: a possible preventative treatment for preterm delivery**

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Two recent trials indicated that progesterone may be useful in preventing preterm labour in high risk patients. Both treatments have their problems especially in assuring compliance.

A possible alternative is dydrogesterone which is a progestin in oral form. Dydrogesterone is used in cases of miscarriage with significant success. The rationale of this study is that preterm labour is a continuum of pre-eclampsia. Dydrogesterone has also been implicated in reducing the incidence of preterm labour in mothers with significant success. Therefore, the rationale of this study is that preterm labour is a continuum of pre-eclampsia and dydrogesterone is used in cases of miscarriage with significant success. The rationale of this study is that preterm labour is a continuum of pre-eclampsia and dydrogesterone is used in cases of miscarriage with significant success. Therefore, the rationale of this study is that preterm labour is a continuum of pre-eclampsia and dydrogesterone is used in cases of miscarriage with significant success.

**Method**: Patients were recruited from two firms which have a significant input from the miscarriage clinic and SANDS (Stillbirth and Neonatal Death
Results: The high risk group parameters were compared to a group of contemporaneous women at low risk and the background population. Preterm delivery occurred in 5 out of 58 (8.6%) women at high risk of preterm delivery compared to 7 out of 120 (5.8%) in the low risk group. The occurrence of preterm delivery in the Maltese population is 5.4% similar to the low risk group.

Conclusion: Dydrogesterone appears to attenuate the incidence of preterm delivery in the high risk group assessed in this study. The above results may be due to the immunomodulatory properties exerted by dydrogesterone possibly preventing preterm labour and reducing the onset of pre-ecclampsia.

O-078
The emotional well-being of Maltese men and women during the transition to parenthood
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Background: There is an impressive amount of literature suggesting that the stress of the adaptation to parenthood can lead to non-psychotic depression in mothers during the antenatal and the postpartum period. On the other hand, literature examining prenatal and postnatal mental health in men is still in its infancy.

Aims and methods: A longitudinal study using a mixed methodology design is underway to explore ways how midwives may educate and support the needs of men and women during their adjustment to parenthood and to examine the pregnancy and the postpartum period experience of Maltese parents. Maltese first-time parents were randomly recruited from the Antenatal Clinic, Karen Grech Hospital, between February–September 2005, by means of an interview (mean: 19 weeks). Four hundred and forty-two first-time parents (221 men, 221 women) were assessed using a number of self-report questionnaires. Data was collected in three phases, during pregnancy, at 6 weeks and again at 6 months postpartum. This paper presents results on the emotional well-being of men and women on using the Edinburgh Postnatal Depression Scale.

Results: Highlight that both men and women are suffering from emotional distress during the transition to parenthood. The immediate postpartum period, is the most stressful time for men and women, however parents were found to be still stressed at 6 months postpartum.

Conclusion: Men and women appear to be ill-prepared for the impact of parenthood on their lives.

O-079
Geriatric and General Medicine: together or apart?
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Geriatric medicine is that branch of internal medicine that is concerned with that group of older people whose health is compromised by multiple pathological, disability, frailty and/or psychiatric co-morbidity. A number of sub-specialties have now been recognised (e.g. continence, falls, stroke). In most countries of the world geriatricians train first as internists and then in geriatric medicine. In the UK almost all geriatricians are also recognised specialists in general medicine. In addition the majority but not all practice as internists. Generally, geriatric medicine is usually delivered to hospital. In addition to ‘take’ the geriatrician may visit admissions units daily, provide immediate expertise to surgery and orthopaedic wards and run stroke units as well as providing specialist geriatric medicine care to their own patients. It is now common to find hospital teams of five or more geriatricians with perhaps 80% undertaking acute and rehabilitation duties whilst others concentrate on community aspects of care. With increased numbers of consultants it is possible to provide early interventions for all frail older people who need specialist involvement including those admitted to the acute hospital.

O-080
An evaluation of prescribing habits in a chronic care institution for the elderly
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St Vincent de Paule Residence, Luqa, Malta

Aim: To evaluate whether prescribing habits and related documentation in a chronic care institution reached recommended optimal levels.

Methods: All prescription charts at St Vincent de Paule Residence were examined. Data collected included the amount and types of both regular and ‘as required’ medications. Prescription documentation was assessed by noting whether (a) basic patient details including allergies were entered appropriately (b) all drug entries were written and signed in an approved manner by an identifiable doctor (c) stopping or altering a medication was carried out in the recommended manner.

Results: 280 charts were analysed. The mean number of drugs per patient was 6.2 (0 – 15), 35.3% were on hypnotics, 24.0% on anxiolytics and 19.8% on neuroleptics. 20.5% of ‘as required’ prescriptions were for psychoactive drugs. 34.5% of oral hypoglycaemic prescriptions were for long-acting preparations whilst 56.1% of antiparkinsonian medications were anticholinergics. Only 6.9% of prescriptions were written out by the ward doctor whilst 24% remained unsigned. The allergies section was omitted in 82.9% of charts. The starting or stopping date of a medication was not documented in 32.7% and 71.2% of cases respectively. Alterations in dose or frequency without re-writing the prescription were noted in 5.7% and 6.3% of cases respectively.

Conclusions: Poly-pharmacy, a high prescription rate of psychoactive medications and the common usage of drugs which are not recommended in the elderly were identified at SVPR. Several omissions were also noted in prescription documentation. An evaluation of medication charts helps indicate which prescribing habits need correcting to achieve optimal levels in a chronic care institution.

O-081
Does a Parkinson’s disease class improve the knowledge of Parkinson’s disease in patients and their carers?
J Gerada1, P Ferry2, N Calleja3
1Zammit Clapp Hospital,
2Department of Health Information

Objective: To evaluate the knowledge of Parkinson’s disease patients and their carers on the disease before and after a series of educational classes.

Design: An explorative interventional study.

Setting: The Geriatric day hospital at Zammit Clapp, Malta.

Participants: 10 cognitively intact Parkinson’s disease patients aged 60 years and over together with their informal carers.

Method: 10 weekly one hour lectures were delivered to all participants. They were asked to complete a 16 question True/ False format questionnaire (in English or Maltese) on Parkinson’s disease before and after the 10 week course of teaching.

Results: Complete data sets were available for 7 patients and 7 carers. Using the Mann-Whitney U-test, the mean score of the patients was 11.9 and 11.3 (out of a potential total score of 16) before and after the course respectively (p=0.53), while the mean score of the carers was 12.0 and 11.1 before and after the course respectively (p=0.80). Grouping both patients and carers together, the mean score was 11.9 and 11.2 before and after the
course respectively ($p=0.43$).

**Conclusion:** At this stage, there was no documented improvement in the knowledge of Parkinson’s disease through an interdisciplinary Parkinson’s disease class for patients and their carers attending a geriatric day hospital. Larger studies are however warranted in order to further test this hypothesis.

**O-082**

**Evaluation of the Parkinson’s class programme provided at a rehabilitation hospital for the elderly**

**V Massalha**

Zammit Clapp Hospital

**Introduction:** Treatment in Parkinson’s disease mainly focuses on the relief of key symptoms of rigidity, bradykinesia and tremor but other problems consequently experienced such as difficulties with mobility, balance, activities of daily living, communication, eating, swallowing, tiredness and depression progressively affect dependency levels. A comprehensive service consisting of a ten-week programme of one-hour weekly sessions and run on a multidisciplinary basis was designed to help improve patients’ quality of life; to advise on coping skills and provide support whilst addressing important specific difficulties encountered with several common activities; and to increase awareness of Parkinson’s through information and education.

**Objective:** To evaluate and further develop the service provided to patients with Parkinson’s disease and their informal carers.

**Method:** From forty-five patients referred by the interdisciplinary team at Zammit Clapp hospital, fifteen patients were recruited to the programme. On completion of the programme, participants were surveyed through a self-reported questionnaire on the information, exercise sessions and handouts provided; the knowledge gained; activities carried out; level of carer participation; support provided by staff; and facilities.

**Results:** All participants said the information provided was well explained and helpful but that the input provided by team members required repetition. Activities were considered to be relevant and stimulating. However, 67% of patients felt that ten sessions were not enough and that classes should be held regularly. Seventy seven per cent of patients were satisfied with the organisation of the programme.

**Conclusion:** The service provided was found to be effective and assisted in improving patients’ quality of life.

**O-083**

**Official approved translation of the EQ-5D health questionnaire into the Maltese language**

**MA Vassallo**

Zammit Clapp Hospital, EuroQol Group Foundation, Erasmus University, Rotterdam, FACTI Project, Evanston Northwestern Healthcare, Evanston, Illinois.

**Aim:** To have an officially approved translation of a generic quality of life questionnaire, the EQ-5D (EuroQol-5 dimensions), into the Maltese language.

**Method:** A consensus version was obtained from the two translations and sent back to the EUROQOL Trust. A third translation was carried out by two independent translators and these were compared with the questionnaire. When the questionnaire was completed feedback was obtained from the respondents about any difficulties with understanding or answering the question/instruction, ambiguous wording, whether the language used was easy to understand and whether the respondent would ask the question or formulate the instruction in another way. Based on the comments from lay subjects a third consensus version was produced which was sent to the EuroQol translation review team for a final version of the EQ-5D in the Maltese language.

**Conclusion:** An officially approved Maltese version of the EQ-5D has been produced and the next step would be to validate it on a larger sample of the Maltese population.

**O-084**

**Do older people perceive their visual loss?**

**E Hattat, P Ferry**

Zammit Clapp Hospital, St Julians, Malta.

**Background:** Visual impairment in old age is a major health problem that affects an increasing number of older people. As most of the common eye problems progress over time, older people might adapt to these conditions and may not be fully aware of their visual loss. Until the cumulative effects of the visual impairments result in the loss of physical, social and psychological functioning, most of the visual impairments may thus remain undiagnosed.

**Aim:** To test the awareness levels of degree of visual loss of older inpatients in an assessment and rehabilitation geriatric hospital.

**Methods:** In this semi-qualitative study, 10 patients, chosen on a random basis from English-speaking individuals with an abbreviated mental score higher than 6, were assessed with the National Eye Institute Visual Function Questionnaire-25 (NEI VFQ-25) and the Snellen distance visual acuity chart between 6th March 2006 and 1st April in Zammit Clapp Hospital, Malta. The VFQ-25 results were averaged on the sub-scales of general health, general vision, ocular pain, near activities, distance activities, social functioning, mental health, role difficulties, dependency, colour vision and peripheral vision. Both the VFQ-25 results and the Snellen chart results were classified as poor, moderate and good functioning. The overall VFQ-25 results were then compared to the results of the Snellen Chart with chi-squared test.

**Results:** The comparison of the VFQ-25 results and the Snellen Chart results showed an evidence of significant difference between these scores. Comparison of general vision sub-scales with the near activity, social functioning, role difficulty and dependency sub-scales did not show any evidence of significant difference.

**Conclusion:** This study showed that older inpatients were not aware of their visual problems although they experienced functional problems. This finding is especially important in adapting screening tests for visual impairment in older people.

**O-085**

**Regulating doctors in the United Kingdom**

**D Hatch**

Chair, Assessment Committee, General Medical Council, UK.

When established in 1858 the General Medical Council (GMC) confined its disciplinary role to protecting the public from doctors accused of `infamous' behaviour. In 1980 it introduced health procedures to deal with sick doctors and since 1997 it has also regulated poorly performing doctors. Performance is what a doctor actually does, whilst competence is what he/she is capable of. Whilst an incompetent doctor cannot perform reliably, a competent one may or may not do so depending on many factors, including health. Early detection and local remediation provide the best outcome, and since 1997 it has also regulated poorly performing doctors. Performance is what a doctor actually does, whilst competence is what he/she is capable of. Whilst an incompetent doctor cannot perform reliably, a competent one may or may not do so depending on many factors, including health. Early detection and local remediation provide the best outcome, and since 1997 it has also regulated poorly performing doctors. Performance is what a doctor actually does, whilst competence is what he/she is capable of. Whilst an incompetent doctor cannot perform reliably, a competent one may or may not do so depending on many factors, including health. Early detection and local remediation provide the best outcome, and since 1997 it has also regulated poorly performing doctors. Performance is what a doctor actually does, whilst competence is what he/she is capable of. Whilst an incompetent doctor cannot perform reliably, a competent one may or may not do so depending on many factors, including health. Early detection and local remediation provide the best outcome, and since 1997 it has also regulated poorly performing doctors.

Performance is what a doctor actually does, whilst competence is what he/she is capable of. Whilst an incompetent doctor cannot perform reliably, a competent one may or may not do so depending on many factors, including health. Early detection and local remediation provide the best outcome, and since 1997 it has also regulated poorly performing doctors.
Several factors have been associated with increased intensive care medicine. Microarray technology can open the direction to limitations of current diagnostic methods and scoring systems applied in influence on the whole body inflammatory reaction and help to overcome technology. Dissection of the molecular mechanisms based on expression This became possible with the advancement brought by the microarray of injury, response and repairing processes and interplay between them to provide complete information about the extent of injury, mechanisms potential for linking laboratory findings to the real clinical situation and modern medicine needs new biomarkers which are able to provide develop postoperative complications directly related to CPB usage. With “post-pump syndrome”. Up to 20% of all patients from “low risk group” organism which may progress to hyper inflammatory response known as inflammatory, neuroendocrine and metabolic changes in the whole Cardiac surgery under CPB is always associated with a broad array of causes substantial morbidity and mortality worldwide. The study was conducted in three parts. The first part consisted of an audit of current sedation practice and outcomes and was performed over a six-month period. All patients undergoing prolonged (>24 hours) mechanical ventilation were included. The second part involved an educational programme directed at nurses and doctors explaining the rationale behind the introduction of a sedation protocol. The third part saw a re-audit performed after the protocol had been introduced to demonstrate that things had indeed changed and that outcome had improved.

**Aim:** To show that a nurse-led sedation protocol introduced into our local intensive care unit (ITU) leads to a decrease in mortality.

**Methods:** Patients' notes and intensive therapy charts were obtained from the records department. Dermographic data, type of clinical presentation, results of lab tests, length of stay in the intensive therapy unit and mortality in patients undergoing prolonged mechanical ventilation.

**Results:** During the 2-year period 2004-5, 10 patients were admitted to the ITU. Of these 6 were in 2004 and 4 in 2005. Three patients were admitted with meningococcal meningitis while 7 had meningococcal septicaemia. Of these, 3 patients died and 7 patients survived and eventually discharged home.

**Summary:** This study shows a relatively low incidence of meningococcal disease requiring adult ITU admission (3 years and older). The morbidity
Improving service delivery in an outpatient setting

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Problem: increasing waiting lists, inappropriate referrals and mismatched scheduling led to suboptimal clinic use. Better use of clinic resources was identified as a priority to improve patient care. At the time of initiation of this project, no systems existed for prioritization or analysis of referral data, or clinic throughput.

Design: prospective review of referrals during 2004-6 in clinics at the interface of primary and secondary care. The aim was to identify causes of the problem, introduce changes and reassess regularly.

Setting: Two MCC/Schedule V Clinics (Floriana/Gzira) prospectively collated referral data; observation of factors impinging on patient throughput.

Key measures for improvement: waiting lists, inappropriate referrals, availability of patient notes, patient throughput and scheduling, monitoring of non-attenders.

Strategies for change: monitoring of referrals for prioritization, vetting for inappropriate referrals, introduction of protocol, amendments to appointment letter with reminders re investigations, medication and documentation; availability of St Luke’s Hospital notes for all patients; introduction of records for all patients, use of telephone follow-up, and one-stop appointments, management of non-attenders.

Effects of change: reduction in waiting lists from over three months (June 2006); early redirection of inappropriate referrals; improved patient scheduling and throughput; improved record keeping, reduction in non-attenders.

Lessons learnt: appropriate proactive management strategies can result in more appropriate use of limited resources; further improvement will require interdepartmental and intercollage collaboration, as well as improved support services.

Clinic waiting time at the lipid clinic, St Luke’s Hospital

CAzzopardi
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Waiting time in clinic is defined as the interval between the time of appointment and the actual time of encounter with the health care professional.

Objective: To determine the clinic waiting time (CWT) at the lipid clinic, to identify demographic and geographic variables that may affect it, and to compare the CWT with a standard set in the Quality Service Charter.

Design: Cross-sectional study.

Participants and setting: New cases and follow-up cases attending the lipid clinic at St Luke’s hospital between September 2003 and July 2004 and seen by the consultant.

Data collected: Date of clinic; time of appointment as appears on the patient administration system printout for the clinic; time of entry in doctor’s office; age; sex; locality of residence; new case or follow-up case.

Data analysis: Mean and median CWT was determined for both sexes, new cases, follow-up cases, and region of residence.

Results: The mean CWT was 31 minutes (median 15 minutes). For appointments between 8:00 and 10:00 hours the mean CWT was 44 minutes (median 37 minutes) and for appointments after 10:00 the mean CWT was 10 minutes (median 0 minutes). The proportion of patients seen within 30 minutes of their time of appointment was 0.6. Of these, more than one half (0.55) were seen before the time of appointment. The proportion of patients with a CWT longer than one hour was 0.2 and was twice as much for new cases than for follow-up cases (0.4 versus 0.2). This was constant for the various geographic regions.

Conclusion: Clinic waiting times at the lipid clinic compare favourably to those reported for the outpatients in general. New cases have the longest CWT. There is a positive correlation between number of appointments over time and the CWT, but no correlation between region of residence and CWT longer than one hour.

An evaluation of the discharge planning process at Zammit Clapp Hospital

B Vassallo
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Older people are being discharged from hospital to the community with higher levels of dependency. Discharge planning is an essential component of service delivery and has substantial implications for the use of health and social care resources. Quality practices in health care result from structured reflection on what was done, what was achieved and what could be done better, then putting constructive actions in place to change practices.

This study was carried out to assess the extent to which patients’ and carers’ have been involved and have been informed about the discharge process and to assess their level of satisfaction with the discharge planning process at Zammit Clapp Hospital, an acute and rehabilitation hospital for the elderly in Malta.

The study consisted of a convenience sample of 50 patients and 50 carers. A mixed research design consisting of quantitative and qualitative data was used. Interviews were carried out by the researcher one week post discharge from Zammit Clapp Hospital.

The main findings suggested that despite the fact that an adequate amount of information was given to patients and carers some areas in information exchange and education sessions merit improvement. Post discharge needs were assessed and discussed with patients’ and carers’ while at ZCH. The involvement and expectations of carers in the discharge planning process and outcome differed from that of patients. Overall patients were satisfied with the discharge planning practices and services at ZCH. In retrospect carers said that they were well prepared for caring for the patient while in hospital.

Emerging ethical themes in European Research. Ethical aspects of Research Projects under FP6

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Aim: All research activities have to conform with ethical norms and standards; this is particularly so if they are to be eligible for EU funding. An overview of the relevant EU standards for FP6 is presented, together with emergent themes that should be important for FP7.

Resume: Current standards related to European research are presented with special reference to the use of human biological samples, personal data and gene-banking. Research involving persons (including those unable to give consent, children, pregnant women and healthy volunteers) is addressed, as well as personal data protection. The use of animals, including transgenic animals, and non-human primates is another area given great importance in European research. Cooperation with developing countries, the place of national ethical consent, the identification of conflict of interest and its management, and the ethical implications of research results are also addressed. The use of human embryonic stem cells and ‘no-go areas’ under FP6 is described. Some newer emergent areas are described.

Conclusion: An awareness of the relevant ethical norms and legislation, as well as the emergent themes is necessary for many research areas eligible for EU funding. This should be of interest to a wide audience.
**Should pharmacies be involved in surveillance for influenza-like illness?**

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**Introduction:** Over the counter medicines (OTCs) are commonly used as self-treatment for influenza-like illness (ILI). Monitoring sales of OTCs might give earlier indication of the onset of the influenza season. CDSC-NI set up a pilot pharmacy-based surveillance system in Northern Ireland (NI) between October 2005 and April 2006. The aim was to determine whether monitoring sales of cough and cold medicines would provide earlier warning of the onset of influenza seasons.

**Methods:** Weekly sales data were sent to CDSC-NI for all OTC medicines sold from 47 pharmacies representing 12.5% of all pharmacies in NI. Cough and cold medicines were monitored as a proportion of total OTC sales. CUSUM charts and confidence intervals were used to detect significant increases in sales when compared to Serfling-type regression models and generate alerts. Trends in OTC sales were compared with ILI rates from the Northern Ireland General Practice sentinel surveillance scheme.

**Results:** Sales for paediatric influenza medications peaked during week 6 of 2006, two weeks prior to ILI reports. The first alert was generated two weeks before the first detectable increase in sentinel GP ILI rates. The onset of the flu season could not be detected by monitoring sales of adult cough and cold medicines as the increase in sales was too small to be detected.

**Conclusion:** Monitoring sales of children’s flu medications can give advanced warning of the onset of influenza seasons. Surveillance of paediatric cough and cold medicine sales could be considered as an additional surveillance system for influenza like illness.

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**A first study on the frequency and phenotypic effects of HFE gene mutations in the Maltese population**


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**Department. of Medicine, St Luke’s Hospital Malta**

Haemochromatosis heterogeneity has been reported in south European populations. However, no genetic studies have been carried out amongst subjects of Maltese descent to determine the allelic and genotype frequencies and assess their phenotypic expression. In this study, 250 anonymous DNA samples from randomly selected newborn subjects, 101 Beta-thalassaemia patients, and 32 patients with a clinical diagnosis of hereditary haemochromatosis were selected. The C282Y mutation was found to be absent in all the subjects tested. The overall allele frequencies of H63D and S65C were 18.5% and 0.6% respectively. Six subjects were found to be homozygous for H63D whereas three subjects were found to be double heterozygote for H63D and S65C. No significant difference was found in the HFE allele frequencies between the three categories of the individuals studied. These results indicate that, unlike most European counterparts, C282Y is not the cause of haemochromatosis in the Maltese islands. The study also shows no significant difference in ferritin levels between different H63D genotypes amongst patients with iron loading disorders, implying that other genetic and/or environmental factors have an important role in the pathogenesis of haemochromatosis in Maltese patients. The search for new HFE and HAMP mutations proved negative; however a genetic framework for S65C is described for the first time.

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**The value of a routine duodenal biopsy at gastroscopy in diagnosing Coeliac disease**

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Department of Medicine, Department of Pathology, St Luke’s Hospital

**Background:** Coeliac disease is thought to be a common and under diagnosed medical condition which is often associated with considerable morbidity and mortality. The presenting symptoms associated with Coeliac disease are often non-specific and clinically silent, as are some of its complications, like osteoporosis. Coeliac disease is best diagnosed by finding increased epithelial lymphocytes and partial/total villous atrophy on histological examination of biopsies taken from the second part of the duodenum (D2) at gastroscopy. Unfortunately some cases with historically proven Coeliac disease will have a normal endoscopic mucosal appearance of D2.

**Aim:** To determine if taking a duodenal biopsy on all patients at gastroscopy will diagnose patients with coeliac disease who would otherwise have been missed.

**Study design:** A prospective study in a teaching hospital endoscopy unit during years 2004 and 2005

**Method:** Altogether 923 consecutive patients attending for gastroscopy were included in this study. At least two distal duodenal biopsies were taken if possible, unless a contraindication was present.

**Results:** In 234 patients a duodenal biopsy was clearly indicated. Duodenal biopsies were also performed on 450 patients from the remaining 689. 5 patients from this group were diagnosed as suffering from coeliac disease, 3 of whom had a normal duodenal appearance at endoscopy. In addition 3 patients were diagnosed with giardiasis while in another patient the biopsy was suggestive of Crohn’s disease. There were no complications from the procedures.

**Conclusion:** Taking 2 duodenal biopsies on all patients at gastroscopy unless contraindicated will diagnose new cases of coeliac disease. The cost of opportunistic screening for coeliac is less than Lm2000 per case diagnosed.
O-098

Analysis of waiting time for cadaveric kidney transplantation

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Kidney transplantation is the most cost-effective form of treatment for end-stage renal disease patients. In Malta, the number of patients starting dialysis has increased dramatically over the past 15 years, with an ever-increasing majority of patients being eligible for a kidney transplant.

The aim of the study is to analyse the time period spent by dialysis patients waiting to receive a cadaveric transplant. 50 consecutive cadaveric transplant recipients under the care of one consultant nephrologist were retrospectively studied.

Results: The mean waiting time in months steadily increased over the 12-year study time frame from 16 in 1993-94 to 58 in 2005-06. Blood group A recipients wait significantly more than their blood group O counterparts before receiving their allograft (mean of 76 vs 43 months).

Conclusion: The waiting list is currently 58 months. Similar to many developed countries, the waiting period has dramatically increased over the last decade or so. The main reasons include acceptance of more potential kidney transplant recipients onto the waiting list and a shortage of organ donors. Possible solutions to expand the donor pool, and hence shorten the kidney transplant waiting time, are discussed in detail.

O-099

Effect of switching from subcutaneous to intravenous erythropoietin in haemodialysis patients

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Recombinant erythropoietin (Epo) is the mainstay of treatment of renal anaemia in patients with chronic kidney disease. In April 2003, it became necessary to switch the route of administration of Epo from subcutaneous (sc) to intravenous (iv). We audited this change to assess the effect on Epo requirements.

Method: Our population consisted of 54 prevalent haemodialysis patients under the care of one consultant nephrologist. Epo and iron doses were adjusted according to an established protocol designed to achieve haemoglobin (Hb) of 11g/dl in the majority of patients by setting intervention thresholds.

Results: Complete data were available on 39 patients.

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<th>Hb (g/dl)</th>
<th>Epo dose (iu/day)</th>
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<td>11.09</td>
<td>587</td>
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<td>11.19</td>
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Conclusions: In these unselected HD patients, a considerable and costly 29.5% increase in Epo dosing was required after switching the route of administration.

O-100

Consumption of medicines among adolescents in Malta

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Aims: Research on adolescents has mainly focused on the use of alcohol, tobacco and illegal drugs but little has been done to investigate medicine use among this age group. The aim of this study was to investigate self-reported medicine use among adolescents.

Method: A self-administered questionnaire was used to survey medicine use by fourth-form Junior Lyceum students. Data were collected among 474 boys and girls of average age 15 years who were selected by stratified random sampling. The questionnaire investigated the prevalence of self-reported symptoms and medicine use during the previous 3 months for ear problems, hay fever and cough and cold; gastrointestinal problems; headache; and menstrual pain. Students also gave information on their use of eye drops, vitamins, topical skin medication, painkillers for sport injuries and antibiotics.

Results: A total of 52.0% of students experienced 3 or more symptoms and a total of 90.3% took between 1 to 9 different medicines during the previous 3 months. Statistically, girls used a significantly greater number of different medicines than boys (p < 0.01). The pharmacy was the most common source for obtaining medicines in the majority of responses (26.8%-76.9%). Of concern is that, 24.5% of the students reported that they had taken medicines without adult guidance.

Conclusion: A high proportion of 15 year-old adolescents reported medicine use in relation to common health complaints. A considerable proportion took medicine without any adult guidance. It is suggested that more information about medicines be built into school health education programs in the future.

O-101

Single-stage management for patients with uncomplicated acute gallstone pancreatitis - are pre-operative MRCP and ERCP really necessary?

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Aim: In our unit, patients with uncomplicated acute gallstone pancreatitis are offered acute single-stage management with laparoscopic cholecystectomy, routine intraoperative cholangiography and if necessary, placement of common bile duct exploration. We aim to assess the outcome of these patients and the requirement of pre-operative common bile duct imaging and clearance.

Methods: Over a ten-year period 96 patients with uncomplicated acute gallstone pancreatitis were followed up in a prospective study. All had evidence on ultrasound of cholelithiasis. The median age was 52 years (IQR = 29). The male: female ratio was 1: 4. Jaundice was present in 30% of cases.

Results: The full cohort of patients was successfully managed laparoscopically. Twenty-four patients (25%) had a positive operative cholangiogram. Trans-cystic exploration and basket trawling was performed in 23 subjects. One patient required a formal choledochotomy, clearance and T-tube placement. No peri-operative deaths were recorded and major peri-operative morbidity was recorded in 2 patients - 1 patient had an iatrogenic small bowel perforation which was dealt with through a mini-laparotomy at the end of the biliary procedure, another patient developed post-operative pancreatic abscess which was managed conservatively. Age and gender were not useful predictors of choledocholithiasis. Likewise, there was no statistically significant link between jaundice in pancreatitis and choledocholithiasis (p=0.07) - 18 jaundiced subjects (62% of this subset) had normal cholangiograms. Although statistically significant (p<0.01), ultrasound evidence of bile duct stones had a positive predictive value of only 48%.

Conclusions: Residual choledocholithiasis is absent in 75% of patients with acute gallstone pancreatitis. In patients with ductal stones laparoscopic single-stage management is safe and effective, rendering routine pre-operative MRCP and/or ERCP unnecessary.
O-102
Incidence of breast cancer in women referred for screening to the breast clinic St Luke's Hospital
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Aims: To outline the demographics, risk factors and incidence of breast malignancy in women referred for breast cancer screening. The results of radiological investigations and any cytology specimens taken were recorded. For patients who underwent surgery, the type of procedure and the histological findings of removed specimens were analysed. Analysis of the risk factors, symptomatology and family history in the affected subjects were done, and compared to the total study population.

Background: Asymptomatic patients who are referred for breast cancer screening are seen at a dedicated session at the breast clinic at St Luke's hospital. This decreases the load from the symptomatic clinic. Although there is no National breast screening programme in Malta, mammography is offered to those at risk. All of these patients are referred by a doctor.

Results: The incidence of malignancy in the study population, the stage and grade of disease at diagnosis and the Nottingham Prognostic index for affected subjects will be reported.

O-103
Modified Mathieu procedure for hypospadias repair
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Introduction: The classical aims of hypospadias surgery are 1. An appropriate urinary stream from the tip, 2. correction of chordee and 3. good cosmesis. To these one might add the preservation of sensation. Any procedure which limits scarring and disruption of the blood supply as well as saving the foreskin, would be contributing to this.

Materials and Methods: The procedure chosen for each particular case of hypospadias repair depends very much on the specific anatomy available. As such a variety of operative techniques are available to the Paediatric Surgeon. The Mathieu repair is one such technique. However the loss of the foreskin and pericoronal scarring may lead to a loss of sensation. The Modified Mathieu Repair, which is presented here, preserves the general principles of the Mathieu technique whilst allowing preservation of the foreskin and reducing the extent of the dissection. A series of ten cases of hypospadias repair using the Modified Mathieu technique and performed over a two year period at St Luke’s Hospital, are presented here. The selection criteria, operative technique and results after an average follow-up of 10 months are discussed.

O-104
A lower than expected incidence of HPV DNA was detected in Maltese benign and malignant breast tumours
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Aims: The purpose of this study was to analyse benign and malignant breast tissue to check whether there was a significant incidence of HPV DNA found in Maltese breast tumours and to assess whether any difference occurs between this incidence in malignant and benign breast tumours.

Background: Human Papillomaviruses (HPVs) are considered quantitatively as the most important group of viruses related to benign and malignant neoplasia in humans. A recent study reported the presence of HPV in malignant breast tissue suggesting that HPV may infect the epithelium of the nipple and areola and proposing a possible association with breast malignancy.

Method: Tumour tissue was isolated by deparaffinisation from thick sections of tumour material identified by pathological examination. DNA was extracted by a previously published method. The polymerase chain reaction (PCR) was performed on this DNA using actin primers (to control for DNA quality and PCR efficacy) and with three different sets of HPV primers (to detect most common strains of HPV).

Results: No HPV DNA was detected in any breast tumour in the initial sample of 20 tested, analysis of a larger sample is in progress. This despite clear actin amplification in all samples and HPV clearly detected in cervical tumour DNA

Conclusion: Maltese breast tumours appear to show a lower incidence of HPV DNA positivity than in some published studies.

O-105
A review of radical cystectomies carried out in Malta over the past 8 years
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Aims: This paper seeks to assess the feasibility, outcome and establish local criteria of performing living-donor renal transplantation.

Methods: This was a retrospective analysis of living donor renal transplantation performed at St Luke’s Hospital under one consultant surgeon (ARA) between October 1998 and August 2006. All patients were discussed by the renal committee. Method of patient selection, preoperative imaging, postoperative complications, renal function, and mortality were analyzed.

Results: A total of 15 patients underwent living-donor transplantation. The median age of recipient was 27years (range 16-61). There was only one
recipient mortality due to overwhelming sepsis, the rest were well after a median follow-up of 36 months postoperatively. The serum creatinine had fallen from a median of 78umol/l (range1168-446) pre-operatively to 38umol/l (range 985-96) at one year post-operatively. There were 2 cases of acute rejection, 2 other of borderline acute rejection and 2 further cases developed chronic rejection. No donor mortality. Conclusion: Living-donor renal transplantation can safely be performed even in such a small institution such as Malta.

O-107
Juvenile Huntington’s disease in Malta
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Huntington’s disease is an autosomal dominant progressive neurological condition characterized by involuntary movements and dementia. The age of onset is related to the number of (CAG)n trinucleotide repeats in the Huntington gene. Rarely, the disease manifests itself first during childhood or adolescence as juvenile Huntington’s disease, and occurs when gene amplification occurs increasing greatly the number of repeats. Over the 11 year period from 1994 to 2006, three cases of Juvenile Huntington’s disease were recorded from among the families with Huntington’s disease referred to the genetic clinic for genetic counselling, pre-symptomatic DNA testing or diagnostic DNA testing. The affected individuals were three boys of ages 10, 14 and 21 years at the time of confirmation of the diagnosis by DNA tests. They were from three different families with strong family histories of Huntington’s disease. The presenting features of the juvenile cases were distinct from those of adult-onset Huntington’s disease. The most characteristic initial manifestations were behavior disorders and a characteristic speech in which words were uttered very rapidly in short phrases separated by short pauses. The speech disorder may be one of the earliest manifestations of motor dysfunction. The other motor manifestations were rigidity and myotonia. Choreiform movements developed later in the course of the disease in one of the youngest of the affected young individuals. All three individuals were males, had over 60 (CAG)n repeats and had inherited the gene from their fathers, with amplification of the trinucleotide repeats occurring in the process. Diagnosis of juvenile Huntington’s disease presents the ethical problems of informed consent and genetic testing in minors, and the delicate procedure of post-test counseling.

O-108
Two-photon imaging of cell-specific fluorophores in transgenic mice - an exploratory tool to study mechanisms of white matter injury
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Relatively little is known about specific pathways leading to structural and functional disruption of axons and glial cells in white matter. Because focal cerebral ischemia in humans damages both gray and white matter, an understanding of white matter injury is important in devising potential therapeutic approaches. We have developed a novel brain slice model from transgenic mice under control of cell-specific promoters to understand interactions between oligodendrocytes and axons under high resolution two-photon microscopy. Our data extends over previous findings the vulnerability of oligodendrocytes and axons both in culture and in slice preparations to glutamate toxicity during stroke and hypoglycemia. Conditions as different as stroke, trauma, perinatal brain injury, and multiple sclerosis may share common mechanisms of white matter injury.

O-109
Are chondroitin and glucosamine in combination effective in the treatment of osteoarthritic pain?
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Aim: As non-steroidal anti-inflammatory drugs today are contraindicated for osteoarthritic pain in elderly patients with cardiovascular disease due to their adverse effects, a review of the evidence was performed regarding the use of oral forms of chondroitin and glucosamine in combination as an alternative treatment.

Method: An internet review for available evidence was carried out of secondary sources (reviews or meta-analyses of primary studies in the Cochrane Database of Systematic Reviews and the Database of Abstracts of Reviews of Effects) and of primary sources (randomised controlled trials in Medline through PubMed and in the Cochrane Central Register of Controlled Trials), followed by a critical evaluation of the results for validity, reliability and applicability.

Results: Three relevant randomised controlled trials with valid, reliable and applicable results were identified.

Conclusion: Chondroitin and glucosamine in combination were found to significantly reduce pain in mild to moderate OA of the knee measured by the global pain visual analogue scale, and in moderate to severe knee OA measured by the WOMAC Scale, while significantly improving disability in mild to moderate knee OA as measured by the Lequesne Index.

Discussion: If the results are generalisable to osteoarthritic of all joints, there are good indications that combined chondroitin-glucosamine in purified therapeutic doses should help care for osteoarthritis patients safely and at modest expense. In order to facilitate any possible recommendations for their use in clinical practice, long-term and larger studies are needed to elaborate more definitive results and investigate their preventive use as disease-modifying osteoarthritis drugs.

O-110
A survey of Paget’s disease of bone in Malta
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Paget’s disease of bone is commonly encountered in the Maltese population. A survey has been conducted on 20 patients with this condition seen at the Medical Outpatient Department/St Luke’s Hospital during the first 6 months of 2007. Various aspects of the disease have been analysed: age and sex distribution, familial aggregates, mode of presentation, complications, pattern of bone involvement and a semi-quantitative assay of disease activity as measured by radioisotope bone scintigraphy and serum alkaline phosphatase levels. These characteristics are being compared to previously published surveys of Paget’s disease in other countries.

O-111
Biological therapy in rheumatic disease: five year experience in Malta
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Advances in understanding the pathogenesis of many rheumatological disorders over the past decade have resulted in remarkable advances in therapeutic options for many patients suffering from these disorders. The pro-inflammatory cytokine tumour necrosis factor alpha (TNF-alpha) has been shown to be a key mediator in a number of inflammatory disorders, and the development of TNF-alpha inhibitors has proved to be a major therapeutic advance. Initially licensed for use in rheumatoid arthritis, TNF-alpha inhibitors have been subsequently approved for a number of other inflammatory arthritides as well, including ankylosing spondylitis and psoriatic arthritis. Case reports and case series have suggested favourable results with these agents in other connective tissue diseases, including various types of vasculitis. Another interesting area in the field of
Community mental health services in Malta and their development: a review

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Epidemiological research has clearly shown the high prevalence of psychiatric disorder in the community, with one year rates of 30% at primary care level and 8% at secondary care and with up to two thirds of GP attenders suffering from mental health problems. This leads to high morbidity, suffering, reduction or loss of function, burden and marked family distress.

Community mental health services have developed greatly in the developed world and Malta has gradually followed suit. The last years have seen much effort and emphasis given to the development of community psychiatric services and their has been steady progress.

A pilot area of service commencing eleven years ago facilitated the identification of difficulties and challenges in our local context and we learnt much. Following this a strategy document was developed with the participation of all stakeholders.

This has lead to gradual implementation of budding services at primary, secondary and tertiary care levels in the community with the development of multiple teams. This is accompanied by a sense of achievement, excitement and hope but much still needs to be done.

A review of the developments in our community services is done with an exploration of the lessons learnt and our future needs and challenges.

The impact of having a family member facing mental health problems on the caregiver and the family: how can social and psychiatric services be of help?

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Context: With nearly 10,000 patients listed on the Psychiatric Outpatients register and another 400 receiving in patient treatment at Mount Carmel Hospital, circa one person in every eight families faces mental health problems in Malta. In this context, the National Family Commission set up a multidisciplinary research group to assess the prevailing situation with a view to making appropriate recommendations.

Aims: This study seeks to elicit the impact on the caregiver of having a family member facing mental health problems, as well as the effect on children within the family. It also attempts to consider some services available to family caregivers of patients with mental health problems, and to explore research evaluating the effectiveness of these different services.

Methods: As a research tool for the study, the group opted to administer The Involvement Evaluation Questionnaire - European Version (IEQ-EU) by Shene, Wijngaarden and Koeter (1997). The psychometric properties of the IEQ are well established with the questionnaire available in nine languages where some of the translations have been developed, validated and used in the BIOMED-financed Epsilon study of schizophrenia in five European countries. A further 36 questions were devised by the research group in order to reduce the caregiver’s views regarding the quality of service and help being offered to the patient and family by the Psychiatric Outpatients Service and the kind of help and support they would suggest.

Conclusion: The results of the study shed interesting light on a wide range of issues, presenting a comprehensive profile; data relating to levels of care and encouragement, relationships, preoccupations, financial implications, psychological repercussions; and effects on children. It concludes with recommendations based on the interviewees’ responses regarding services used in this sector.

Establishing whether a community mental health team has managed to reduce the number of psychiatric admissions to hospital

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A project for community-based psychiatric services has been set up since June 1995 and caters for a pilot area consisting of Qormi, Zebug and Siggiewi. Three of the main objectives of this project were (1) to reduce inappropriate hospital admissions; (2) to decrease involuntary admissions; (3) to decrease the number of crisis referrals (unplanned admissions). In this study, trends in the number of admissions, including whether these were planned or unplanned, as well as in the length of stay, over a ten-year period have been evaluated. This study is based on data of patients seen at one of two clinics held at Qormi Health Centre, and in particular that on a Monday morning. Initial data indicate that of about 300 patients being seen circa 100 patients had psychiatric admissions to hospital. Then the actual number of admissions and the length of stay for each patient were estimated. This information was subsequently subdivided in two subsets, June 1995 - May 2000 and June 2000 - May 2005 and statistical tests were used to evaluate the data gathered in order to establish whether there was any change in the pattern of such admissions as a result of the team’s intervention.
Two questionnaires were devised; one aimed towards dental professionals, other healthcare professionals and non-medical students. The questionnaires were completed by professionals show that 74% have carried out some form of research after obtaining professional status. Data generated includes frequency of specific difficulties encountered by researchers during specific clinical practice, number of years of clinical practice, frequency of responses per speciality, and subsequently, better quality of life for patients. Therefore, a priority of the CAN is to identify, rather than to describe in detail, serious needs. Thirdly, needs assessment should be both an integral part of routine clinical practice and a component of service evaluation. Lastly, the CAN is based on the principle that need is a subjective concept, and that there will frequently be differing but equally valid perceptions about the presence of absence of specific need. Furthermore the CAN is patient-rated as well as carer-rated and thus it provides both a subjective and an objective view of the situation. It was decided that such a useful and valuable tool be translated and modified to cater for the local scene to enable the needs of severe mental illness to be measured. This presentation describes the process of translation from English into Maltese and back-translation into English with the adoption of the necessary modifications.

O-117
Attitudes of medical and dental professionals and students towards research
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The Camberwell Assessment of Need (CAN) is a tool for the comprehensive assessment of the needs of people with severe mental illness (SMI). Four broad principles governed the development of CAN. First, that everyone has needs and that although people with SMI have some specific needs, the majority of their needs are similar to those of people who do not have a mental illness, such as having somewhere to live, something to do and enough money. Secondly, it was clear that the majority of people with SMI have multiple needs and that it is vital that all of these are identified by those caring for them. Therefore, a priority of the CAN is to identify, rather than to describe in detail, serious needs. Thirdly, needs assessment should be both an integral part of routine clinical practice and a component of service evaluation. Lastly, the CAN is based on the principle that need is a subjective concept, and that there will frequently be differing but equally valid perceptions about the presence of absence of specific need. Furthermore the CAN is patient-rated as well as carer-rated and thus it provides both a subjective and an objective view of the situation. It was decided that such a useful and valuable tool be translated and modified to cater for the local scene to enable the needs of severe mental illness to be measured. This presentation describes the process of translation from English into Maltese and back-translation into English with the adoption of the necessary modifications.

O-118
Gender and performance in the MD Degree Final Examination in Medicine
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Background: The year 2004 marked a change in the structure of the clinical part of the final examination in Medicine from the traditional format to Direct Observation Clinical Encounter Examination (DOCEE). The written part of the examination together with the objective clinical assessment allows the evaluation of different skills.

Objectives: To evaluate the performance by gender in the overall examination and then separately in each part i.e. the MCQ paper, short answer questions paper, paediatrics, the clinical stations A, B and C, the knowledge assessment stations D (diagnostic) and E (emergency) and the communication station F (history taking) to identify any possible differences.

Design: Final year examination results in medicine obtained over a two year period (2005-2006) were retrieved from datasets held by the Department of Medicine. The results of 111 graduates (males n=57) were analysed for all components of the examination.

Results: In 2005, a total of 62 candidates (females n=34) took the examination; the highest grade was B+ with an overall mark of 78% and the lowest grade was D+ with an overall mark of 51%. There were 4 failures. In 2006, a total of 49 candidates (males n= 29) took the examination; the highest grade was A with distinction and an overall mark of 82% and the lowest was again D+ with a final mark of 51%. There were 5 failures.

Overall females were found to have performed better than their male counterparts where median overall mark was equal for the two groups but the mean was higher in the female group with smaller standard deviation and variance. Females were more likely to get better grading and less likely to fail (two tailed t-test P=0.17). Gender difference in performance was more marked in the clinical stations A, B and C (two-tailed t-test P=0.29).

Conclusion: There is a clear disparity in gender performance and further studies are needed to identify possible causes for this in preparation and in gender characteristics.

O-119
Medical students’ perspective on pharmaceutical marketing
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Aim: To survey the attitudes of fourth and fifth year medical students in Malta towards pharmaceutical marketing.

Methods: An anonymous questionnaire was distributed containing several questions designed to assess reactions to statements based on a modified five-point Likert scale.

Results: Response rate was 81 out of 110 (73.6%). The majority of respondents (78.7%) do not object to interactions with pharmaceutical companies in medical school. Almost all (96.3%) have no objection to sponsorship of educational seminars. The majority (78.0%) are not against receiving gifts from pharmaceutical companies in general, males more than females (84.0% vs 71.0%). Respondents are most willing to accept a penlight (87.7%), followed by a textbook (85%), stethoscope (81.8%), lunch (75.9%), electronic organiser (69.6%), entertainment tickets (63.7%), and least willing to accept a watch/jewellery (46.2%). Almost half of respondents (46.3%) stated that when prescribing from a choice of drugs that are otherwise identical, they would preferentially prescribe a drug from a company that provided them with gifts or incentives over one that did not. Almost a quarter of respondents (23.8%) believe that information provided about drug effectiveness from pharmaceutical companies is untrustworthy.

Conclusions: Fourth and fifth year medical students in Malta are largely unopposed to interacting with pharmaceutical companies and receiving...
Another method to assess the thenar atrophy was proposed by the authors, which involves objective evaluation. Hand photos were taken with a digital camera, and the areas were transferred to photo processing software. This method was found to have a statistically significant lower thenar ratio than healthy hands (0.19 ± 0.09 vs 0.30 ± 0.07; P value < 0.0001). So far, the subjective assessment of atrophy cannot be correlated with the objective test.

Conclusion: This method can be a possible objective test for thenar atrophy.

O-123
One year mortality after proximal femoral fractures
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Introduction: Although thenar atrophy is caused by a variety of clinical conditions, it is commonly associated with carpal tunnel syndrome. So far, thenar atrophy has been assessed subjectively.

Aims: a) To test a simple, novel, objective and quantitative test for the assessment of thenar atrophy; b) Correlate this objective test with subjective evaluation of thenar atrophy.

Patients and Methods: The apparatus consists of a box with a clear glass sheet on the top uncovered surface, with a digital camera placed in the base of the box. 45 hands of 23 healthy volunteers and 23 hands with clinical evidence of thenar atrophy of 12 patients with carpal tunnel syndrome were recruited. Thenar atrophy was classified subjectively as mild, moderate and severe. Patients and subjects were asked to press their hands facing down on the glass sheet and digital photos were taken. The technique relies on the fact that the area where pressure is exerted on the palm blanches. Photos were transferred to photo processing software. After enhancement the photos were transferred to an image analysis software. The thenar area (A) and the rest of the palm area (B) were measured. The thenar ratio was calculated as A divided by B.

Results: Hands with thenar atrophy had a statistically significant lower thenar ratio than healthy hands (0.19 ± 0.09 vs 0.30 ± 0.07; P value < 0.0001). So far, the subjective assessment of atrophy cannot be correlated with the objective test.

Conclusion: This method can be a possible objective test for thenar atrophy.
Hand infections severe enough to warrant hospital admission

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Aims: 1. To audit the number of very severe hand infections requiring hospital admission - their incidence, causes and predisposing factors, site, treatment prior to admission, management in hospital, length of hospital stay and outcome. 2. To standardize the treatment of such infections which can cause substantial morbidity.

Methods/Results: Data was collected from patients and their files with proper consenting from February 2005 to date. All data was tabulated and results were analysed.

Conclusion: This is a basic research paper on which to improve our management of such infections.

Hand and wrist configurations in patients with carpal tunnel syndrome

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Introduction: Most cases of carpal tunnel syndrome are idiopathic. Several studies attempted to find an explanation for the idiopathic form of this condition; including body mass index, stature and cross-sectional area of the carpal tunnel.

Aim: To investigate whether there is a correlation between hand and wrist configurations and idiopathic carpal tunnel syndrome.

Patients and methods: Sixty patients with idiopathic carpal tunnel syndrome and sixty healthy volunteers were recruited for the study. The hand and wrist dimensions of each patient and subject were measured using standard engineering Vernier callipers.

Results: The palm width was significantly greater in the patient group. There was no significant difference in hand length between the two groups. Both wrist Department and wrist width were significantly greater in the patient group. The hand ratio, that reflects the difference of both the length and width dimensions of the hand was significantly lower in patients compared to controls (2.20±0.13 vs 2.26±0.14; P value 0.015). The wrist ratio, that reflects the difference of both the Department and width dimensions of the wrist was significantly lower in patients compared to controls (0.61±0.09 vs 0.53±0.07; P value 0.009).

Conclusion: Patients had squarer hands and wrists than controls. Our findings suggest that the anatomy of the hand and wrist may be important in the development of carpal tunnel syndrome.

A review of the relationship between obesity and total knee replacement outcome

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As the prevalence of obesity continues to rise in Malta knowing the relationship between Total Knee Replacement (TKR) outcomes and obesity becomes increasingly more crucial. Since a number of studies have linked obesity with the development of osteoarthritis of the knee and excess bodyweight would result in an increase in the stress transfer through a TKR to the surrounding bone, this would suggest a poorer outcome and higher failure rate in obese patients. However, whilst a number of studies show an adverse effect of obesity on TKR outcome, other studies have indicated no difference between obese and non-obese patients. This paper reviews various studies assessing the possible link between bodyweight and TKR outcome and suggests some simple measures that can be undertaken prior to and after the operation to possibly reduce the adverse effect obesity might have on a TKR’s short and long-term outcome.
was performed on 27 members from two Maltese families with a highly penetrant form of osteoporosis. The phenotype was defined by lumbar and femoral z-scores calculated after measurement of bone mineral density (BMD) by DXA. Both males and females were among the affected individuals. Multipoint parametric and non-parametric linkage analyses were performed by EasyLinkage v4.0 using GENEHUNTER v2.1, assuming dominant and recessive modes of inheritance with variable penetrance.

**Results:** Evidence of linkage was observed at a marker at 1p12 where a non-parametric LOD score (NPL) of 4.99 was obtained. A maximum heterogeneity LOD (HLOD) score of 2.74 (p = 0.0001) for this region was obtained for the dominant mode of inheritance with 90% penetrance and a phenocopy rate of 1%. When performing fine mapping at this region both the NPL and HLOD scores increased to 7.00 and 3.32, respectively. Direct sequencing of the coding and promoter regions of the TRAF6 gene located within this region revealed a number of sequence variants that are being further investigated.

**Conclusions:** These results suggest that a major gene responsible for osteoporosis might be present in region 1p12. Identification of such genes is important for the early identification of individuals at risk and for the development of effective treatments.

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**O-130**

**Translation of IGBP-1 mRNA contributes to the regulation of expansion and differentiation of erythroid progenitors**

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InSt Hematology, Erasmus MC, Rotterdam, The Netherlands and InSt Molecular Pathology, Vienna, Austria

Erythroid progenitors can be expanded in vitro in the presence of erythropoietin (Epo) and stem cell factor (SCF), while they differentiate to enucleated erythrocytes in the presence of Epo only. Our study aims to identify (i) signaling pathways that control expansion of erythroid progenitors and (ii) genes regulated by these signaling pathways. SCF strongly activates phosphotyrosine phosphate 3 kinase (P13K). SCF induced delay of differentiation can be released by inhibiting P13K. An important P13K-dependent process in cell faith is regulation of mRNA translation. P13K controls the activity of mTOR (mammalian target of rapamycin), resulting in phosphorylation of eIF4E (eukaryotic Initiation Factor 4E)-binding protein (4E-BP). Fully phosphorylated 4E-BP releases eIF4F, which can subsequently bind eIF4G, forming the eIF4F cap-binding complex. Translation of mRNAs with a structured UTR (untranslated region) requires optimal availability of eIF4E. SCF, but not Epo can induce full polypeptide translation of eIF4E and efficient formation of the eIF4F complex. Overexpression of eIF4E inhibited erythroid differentiation, indicating that SCF-induced eIF4F activity contributes to progenitor expansion. A major step in mRNA translation controlled by eIF4F is polysome recruitment. To identify genes whose expression is regulated by signaling-induced polysome recruitment, we compared total and polysome-bound mRNA from factor deprived and Epo plus SCF restimulated progenitors using micro-arrays. Polysome recruitment of 13/15 targets is dependent on P13K activation and eIF4E expression. Constitutive expression of these targets in erythroid progenitors revealed that IGBP1 (Immuno globulin binding protein 1) was able to inhibit erythroid differentiation. Constitutive IGBP1 expression maintains phosphorylation of eIF4E in differentiation conditions, possibly contributing to inhibition of erythroid progenitor differentiation.

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**O-132**

**An update of beta-thalassaemia carrier screening in Malta**


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**Background:** Beta-thalassaemia is the most common single gene disorder in the Maltese population with a carrier rate of 1.8%. A national screening program was initiated by the Health Department in 1991 with the goal of identifying couples at risk and providing the necessary medical management and counselling. This study is an appraisal of the results achieved after a 15-year period.

**Procedure:** Data of the total number of subjects tested for beta-thalassaemia was collected. It included haematological data of antenatal mothers and their partners (when required), as well as DNA mutational sequence analysis reports of newborns which were identified at risk of being affected by beta-thalassaemia through the antenatal screening process.

**Results:** On a yearly basis an average of 3852 antenatal mothers were screened for beta-thalassaemia. Of these an annual average of 78 mothers were found to be consistent with beta-thalassaemia trait. After testing the partners of these cases, 1-2 couples annually were found to be at risk of having a child with beta-thalassaemia. These were counselled in view of their 25% chance of having an affected child. During the past fifteen years three new cases of beta-thalassaemia were identified through antenatal screening.

**Conclusion:** Results show that prenatal diagnosis has been successful in identifying the majority of Maltese families at risk of beta-thalassaemia and the thalassaemia birth incidence has decreased considerably. This approach may represent a model for other comprehensive screening programs for significant genetic disorders such as familial Mediterranean fever and Phenylketonuria. However, education programs for the affected families and the general public are much needed.