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# The Physician

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Research & Innovation Competition Abstracts

AURORA  
*DAWN OF A NEW ERA*  
BAPIO ANNUAL CONFERENCE 2020

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## The Physician

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# British Association of Physicians of Indian Origin



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## Aurora

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- Supporting Learning and Learner wellbeing in the virtual world
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### Speakers



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### 01. The Effect of SNP rs752551 on Caffeine Metabolism

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**Background:** Caffeine is a CNS stimulant which increases systolic blood pressure (SBP) and heart rate (HR) by upregulating sympathetic activity, and improves cognitive performance. Caffeine is primarily metabolised by the enzyme CYP1A2, expressed by the CYP1A2 gene. rs752551 is a single nucleotide polymorphism (SNP) in this gene which alters caffeine metabolism rate. Homozygotes for the A allele (AA) metabolise caffeine rapidly, whereas those with CC genotype metabolise caffeine slowly. We aimed to compare post-caffeine administration SBP, HR and reaction time (RT) between AA, AC and CC genotypes.

**Methods/Design:** 17 participants received 166 mg caffeinated coffee on one day and decaffeinated coffee on another, as a part of a single blinded, randomised control crossover trial. Exclusion criteria included age <18 or >25 years, pregnancy, consumption of caffeine or food interfering with CYP1A2 for 24 hours pre-experiment, or regularly taking medication interacting with CYP1A2. HR, SBP and RT were measured before administration and at 1hr intervals for 4 hours. SNP analysis of participants was done by Sanger Sequencing.

**Results:** Results showed a significantly reduced increase in RT after caffeine administration ( $P=0.039$ ) in individuals with AA genotype compared to CC. No significant changes were observed in SBP or HR.

**Discussion and Conclusion:** Similar experiments demonstrated reduced increases in SBP in AA genotype compared to CC. This experiment, despite not replicating previous trials, shows similar trends for cognitive functions, such as RT. The discrepancies with previous studies may be due to factors affecting other caffeine metabolising enzymes and not accounting for habitual caffeine consumption. Further study will help to personalise concentrations of drugs affecting CYP1A2.

Caffeine metabolism- change in reaction time between genotypes.

### 02. Using bioinformatics to assess placental dysfunction in pregnancies complicated by gestational diabetes mellitus resulting in aberrant fetal growth

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**Background:** Gestational diabetes mellitus (GDM) is the most common metabolic complication of pregnancy. Mother and baby are at risk of various complications despite sufficient glycaemic control. This includes infants being born large for gestational age (LGA). LGA infants have heightened risks of cardiometabolic diseases in adult-

hood, and GDM themselves. While vague, the aetiology of GDM mothers with LGA infants (GDM/LGA) is associated with placental dysfunction. To confirm this, we investigated if there is a placental transcriptome associated with the GDM/LGA placenta linked to key functional processes. **Methods:** Transcriptomics data was obtained from the Effect of metformin on maternal and fetal outcomes in obese pregnant women (EMPOWaR) trial via Array Express. Using GenomeStudio we compared placental tissue from 6 GDM/LGA samples to 23 GDM samples with appropriate birthweight for gestational age (GDM/AGA) to discover differentially expressed genes (DEGs). Gene enrichment analysis of the DEGs was performed via STRING which identified significantly enriched gene ontology (GO) terms. **Results:** We established that there were 12,371 differentially expressed genes (DEGs) (detection  $P < 0.01$ ) in the GDM/LGA placenta compared to the GDM/AGA placenta. Gene enrichment analysis revealed that the GO terms associated with DEGs included angiogenesis, inflammation, ribosomes, and mitochondria. Of the DEGs, there were 44 biologically and statistically significant genes ( $-0.41 \log_2$  foldchange  $0.58$ ;  $P < 0.01$ ). A literature search highlighted their involvement with angiogenesis, ribosomes, and mitochondria once again.

**Conclusion:** Our findings show that there may be a placental transcriptome associated with the LGA infant phenotype in pregnancies complicated by GDM. Further investigations could deliver putative transcriptomic biomarkers for predicting GDM pregnancies at risk of LGA. This pathological transcriptome highlights dysregulation of placental development and functional processes including mitochondrial dysfunction. Research into the modes of placental dysfunction may provide therapeutic answers to end the transgenerational impact of GDM.

### 03. The IMG Mentor: A Mentorship Initiative

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**Introduction:** The IMG Mentor is a voluntary mentoring initiative, led by an international medical graduate (IMG) working in the UK, which aims to support other IMGs wishing to pursue a career in the UK. The career advice, mentoring and guidance provided by The IMG Mentor helps novice international doctors to navigate the complexities of the different training pathways in the UK.

**Methods:** With the aid of virtual conferencing tools and social media, this initiative has built a network of medical students and doctors helping one another. Mentoring is provided via webinars, one-to-one sessions and emails. The IMG Mentor has successfully collaborated with various medical student associations and given talks at various conferences. Feedback is gathered from each session, which has been used in a cycle of continuous improvement. The IMG Mentor has an established website, has a presence on social media and provides weekly educational and support sessions as a minimum.

**Results:** The social media page has been supported by at

least 1160 individuals in various stages of their medical career. Likert 5-point scale and short responses were used for feedback. As an example, the feedback analysis from one webinar found that 94.3% of attendees were satisfied with the content of the webinar and 91.4% were satisfied with the overall webinar. 60% of attendees were unaware of the various medical opportunities in the UK, with 60% agreeing that their knowledge of the UK medical system had been improved. 90.9% of individuals engaging in an IMG one-to-one mentoring session were satisfied and 100% of individuals thought it was helpful for their career growth. Conclusion: The IMG Mentor has received positive feedback on career mentoring, leadership development and education. Simple social media initiatives, combined with a motivation and dedication to guide peers, has provided the junior international medical community with an increased awareness of the UK medical system and proactively encouraged portfolio building early in the medical career.

#### 04. Oxygen - The Double-Edged Sword

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Background: Oxygen is one of the most frequently used medicines in the hospital settings. All patients who require supplementary oxygen therapy should receive therapy that is appropriate to their clinical condition and in line with national guidance.

However, there is a potential for serious harm and even death if it is not administered and managed appropriately. The NPSA has issued guidance on oxygen safety in hospitals and recommends a series of actions including emphasizing the need to prescribe oxygen.

We performed a 3 cycle Quality improvement project with an aim to improve the oxygen prescription rate across the respiratory ward at a district general hospital to about 90 %.

Methods: Baseline data were collected from 30 patients admitted to the respiratory ward over a period of one week. The data included number of patients who had oxygen prescribed and target saturation documented. The data were collected from the patient's notes and the drug chart. Following baseline measurement, three PDSA cycles took place with evaluation of each by subsequent data collection cycles.

Results: Our baseline measurement showed only 7 % had oxygen prescribed and target saturation level documented. After instituting educational intervention, it went up to 30 %. Following which the second PDSA cycle was carried out where posters were placed at different areas in the ward which showed a significant improvement in the result by 70 %. The third PDSA cycle where the pharmacist highlighted oxygen omissions in the drug chart improved the practice by 83 %.

Conclusion: This study shows that simple interventions like education, posters and input from the pharmacist have significantly improved the oxygen prescription rate within the ward. Considering the huge impact of the Quality improvement project, this will be taken forward to the other medical wards.

#### 05. A rapid review of differential attainment in career progression of doctors in UK

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Background: Medicine, since its inception has been a greatly esteemed but highly demanding career with a few brave souls committing their lives to it. Notoriously known for its long training, when compared to other professions, it requires decades of both physical and mental labour to achieve one's desired position within the field. Unfortunately, for some doctors this journey becomes more daunting than their peers due to discrimination that leads to differential attainment. The aim of the paper is to review the scale and impact of differential attainment as well as to analyse the causes leading to disparities between individual doctors, over the last 10 years in UK, thereby helping to find possible solutions to this problem.

Methods: Firstly, a definition of differential attainment of career progression was agreed. Then, an extensive literature search on the topic was carried out using key words including career progression, differential attainment, doctors and NHS in Pubmed, Google scholar as well as Grey literature were explored. The articles were then collated and carefully screened against exclusion and inclusion criteria. These were reviewed again and used as references to create a document which provided clear evidence of a prevailing difference in career progression between doctors. Results: After careful and detailed review of such publications, ethnicity, gender and working arrangements were identified as determining factors of differential attainment. The discrepancies are caused by differences in culture, language barriers, identity issues, bias of the system finding these doctors unable to build relationships with their peers and seniors.

Conclusion: Difference in career progression exists in our healthcare system and undoubtedly awareness must be brought as underestimating this problem would only intensify this gap leading to dissatisfaction among doctors which in turn would affect patient care. Solutions however complex must be swiftly sought to provide every doctor equal opportunity.

#### 06. FAT Atypical Cadherin 1 (FAT1) is a novel marker of progression from Ductal Carcinoma in situ to invasive breast disease

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## The Physician

Background: FAT atypical cadherin 1 (FAT1) is the human homolog of Drosophila FAT, which functions as a tumour suppressor gene and is required for proper morphogenesis. The FAT1 gene product is one of the members of the cadherin superfamily and has been demonstrated to modulate human cell to cell contact and polarity. The altered expression of FAT1 cadherin has been found in a number of solid tumours, however, its role in ductal carcinoma in situ (DCIS) remains to be defined. We aimed to characterise FAT1 protein expression in DCIS and evaluate its prognostic significance.

Methods: Tissue microarrays (TMAs) were constructed from a well characterised cohort of DCIS (n=776 pure DCIS and n=239 DCIS associated with invasive breast cancer). FAT1 was assessed immunohistochemically and its expression was correlated with the clinicopathological parameters and patients' outcome in both pure DCIS and DCIS mixed with invasion.

Results: FAT1 protein showed significant difference in expression between pure and mixed DCIS, with higher expression in pure DCIS ( $p < 0.0001$ ). Loss of FAT1 was associated with features of aggressiveness including larger tumour size, high nuclear grade, hormone receptor negativity, HER2 positivity, higher proliferation index and aberrant p53 protein. Loss of FAT1 showed significant association with shorter local recurrence free survival in invasive breast cancer patients ( $p = 0.001$ ) as well as the development of invasive local recurrence in pure DCIS patients ( $p = 0.016$ ). Conclusions: FAT1 functions as a tumour suppressor and is an independent predictor of development of invasive local recurrence. Low FAT1 expression is associated with poor prognosis in DCIS and might be a potential marker to predict DCIS progression to invasive disease.

### **07.Comparative Study to Assess the Prevalence of Self-harm amongst Adolescents of government and private school of Delhi**

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Background: Adolescents are the group who are vulnerable to various kinds of stressful situations and adapts negative coping mechanisms in the form of self-harm to deal with stressful situations to get relief. Therefore, a study was undertaken to assess the prevalence and risk of self-harm with a view to develop an information booklet and evaluate the effectiveness of an information booklet in terms of knowledge on the prevention of self-harm behaviour. Methods: Data was collected for phase -I from (100) adolescents of government as well (100) adolescents from a private school and for phase-II, from (39) adolescents from government school and (40) adolescents from a private school who had reported self-harm as well found under a moderate risk of self-harm, by administering self-prepared questionnaire by the researcher. Results: The findings of the study revealed that the prev-

alence of self-harm 40(40 %) among government school adolescents and 38 (38 %) among private schools. The majority of government school adolescents (99%) and private school adolescents (96%) were at low risk of self-harm. Only 1% of government school adolescents were at a moderate risk of self-harm which was slightly lower than (4%) private school adolescents. There was a significant association was found between self-harm and risk factors i.e Impulsiveness, interpersonal relationship issues, academic issues, peer influence, abuse, media influence. The information booklet was effective in increasing the knowledge of Government and private school adolescents on self-harm behavior and its prevention.

Conclusion: Thus, there is a need for conducting regular and well-planned health education programs regarding awareness of self-harm behavior, its prevention, and the availability of help services and nurses are in a position to educate adolescents, parents, teachers, and the community as well, to prevent the number of self-harms.

### **08.Pandemic effect on frontline nurses, a survey**

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Background: Frontline nursing staff, particularly band five, six, and seven, dedicated their energy caring COVID patients, risking their own physical and psychological health. We surveyed them to learn about their perceptiveness. Methods: Google form used to conduct an online survey, publicised through social media and analysed with Microsoft excel.

Results: 58 responses from ten local areas received. 85% were female, 71% were band five. Age was below 30 in 55%, between 40 to 50 in 21%. Experience was less than 2 years for 38%, two to five years in 21%, and 15 to 20 years in 12%. 55% were high-risk. Pre-existing health condition, ethnicity and pregnancy were the risk factors identified. 21% were covering very high-risk area, 31% high risk area, and 17% low risk area. 40% had high-risk family member.45% exposed to COVID on every shift, 17% twice weekly and 14% weekly. Only 50% had easy access to testing. 57% did not have symptoms or antibody. 47% had access to appropriate PPE all the time.69% felt more stressed, 62% experienced increased tiredness, 41% suffered constant anxiety and 45% sensed vulnerability due to pandemic.

Increased work load (62%), witnessing the suffering (45%), fear of infection and fear of transmitting infection (43%) triggered the change in approach to work. 69% felt anxiety, 66% were more stressed 29% felt negative, and 17% lost interest as a presentation to change in approach to work.67% felt physically exhausted and 78% psychologically drained. Psychological impact presented as frustration (62%), burnout (50%), irritability (45%), undue sleepiness (40%) and lack of concentration (38%).5% received psychological support, 14% physical health support and 16% well-being support.

Conclusion: Nurses were subjected to enormous pressure during pandemic with limited support causing negative impact on psycho-physical health. Further studies and actions needed to support them.

### 09.A Rare Cause of Severe Hypoglycaemia

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A 67year old woman presented with an unwitnessed fall and decreased oral intake. She had a background of Learning Disability, HTN, Epilepsy, Asthma, chronic iron deficiency anaemia, chronic mild lymphopenia, osteoporosis and previously treated Uterine cancer. Her regular medications were Oxybutynin, Folic Acid, Ferrous fumarate, phenobarbitone, Paracetamol, Buprenorphine patch and Senna. After clinical review an impression of Hospital Acquired Pneumonia (recent hospital admission) with possible aspiration pneumonia was made, along with hyponatraemia secondary to dehydration. She was commenced on intravenous Levofloxacin 500mg 12hourly and intravenous Metronidazole 500mg 8hourly along with supportive care.

On Day 1 of admission, venous plasma glucose was noted to be 7.1. She was not known to have diabetes. On day 3 of admission she was found unresponsive with an EWS of 4, capillary blood glucose was found to be 0.6mmol/l, this improved with 10% glucose. The low blood glucose was attributed to poor oral intake. Blood sugars continued to be low requiring further intravenous glucose. A medication review was undertaken and Levofloxacin was discontinued. After 24hrs of discontinuation, the hypoglycaemic episode resolved. A Short Synacthen test showed normal cortisol response (At 0min - 262nmol/l, 30mins- 467nmol/l).

Patient was observed for during the remainder of her in patient stay with continuing capillary blood sugar monitoring and no hypoglycaemic episodes were observed. As the patient had no further hypoglycaemic episodes after stopping Levofloxacin, a diagnosis of Levofloxacin induced hypoglycaemia was made, and no further investigation was deemed appropriate at that point.

Discussion: The FDA Adverse Event Reporting System, and in published medical literature, during 1987-2017 Fluoroquinolones are said to have caused about 67 cases of life-threatening hypoglycaemic coma including 13 deaths and 9 permanent disabling injuries over a 30-year period. Most cases were associated with Levofloxacin. Its hypoglycaemic effect is found to occur more in the elderly and those with diabetes using an oral hypoglycaemic agent or insulin<sup>1</sup>.

Mechanism of Fluoroquinolones causing Hypoglycaemia: Fluoroquinolones are thought to induce hypoglycaemia by increasing the insulin release via blockade of adenosine triphosphate-sensitive K<sup>+</sup> channels in the  $\beta$  cells of the pancreas. This effect may not be clinically evident in all patients because of physiologic mechanisms that regulate blood glucose levels. In experimental studies with rat islet cells exposed to quinolones, an increase in insulin secretion via blockade of adenosine triphosphate (ATP) depend-

ent potassium channels was observed. Thus, the possible mechanism could be increased insulin release via blockade of ATP-sensitive potassium channels in the beta-cells of the pancreas.

Conclusion: Health professionals should be aware of the potential risk of severe hypoglycaemia with the use of Fluoroquinolones which are first- or second-line treatment for common infective processes. Fluoroquinolones should be stopped immediately and switch to a non-Fluoroquinolones antibiotic if possible. In elderly patients who are not having good oral intake or in those with other comorbidities, regular blood glucose monitoring should be carried out to avoid life threatening hypoglycaemic episodes.

### 10. Analysis of change in patient-reported outcome measures following first metatarsophalangeal joint arthrodesis? Do baseline scores or comorbidities make a difference?

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Background: First metatarsal phalangeal joint (MTPJ) arthrodesis is a well-established procedure in the treatment of end-stage arthritis. Patient reported outcome measures (PROMs) are an important part of the modern healthcare system. The aim of surgery is to improve pain, function and health related quality of life (HRQoL). The Manchester-Oxford Foot Questionnaire (region-specific) and the Euro-QOL 5 dimension (generic) are both PROMs, known to be sensitive to change following foot/ ankle surgery at 6-months post-procedure (Maher & Kilmartin, J of Foot & Ankle Res, 5: 17, 2012). However we dont know if baseline scores and the presence of comorbidities influence the change in these PROMs. This is important to understand so that we can identify which patients to offer MTPJ arthrodesis surgery to.

Aims: 1. To identify the change in two patient-reported outcome measures (PROMs) following MTPJ arthrodesis: The Manchester-Oxford Foot Questionnaire (MOxFQ) and the Euro-QOL 5 dimension tool. Do baseline scores make a difference to the change? 2. To describe the impact of co-morbidities on the change in both PROMs.

Methods: Data was collected prospectively from patients who had undergone a first MTPJ arthrodesis. Patients with complete pre- and post-PROMs data were included in the analysis. PROMs data was collected on average 5.2 months post-operatively. Surgery notes were crosschecked with radiographic findings. A comparative analysis was done between pre and post-operative data using SPSS (version 20). The MOxFQ generates a total score, as well as 3 sub-domain scores for pain, walking/ standing and social interaction. The EQ5D generates a total score and a health today score (visual analogue scale: VAS from 0-100).

Results: 90 patients were identified, 52 had complete data. Mean (SD) age 56.9(17.8) years, 78% female. Comorbidities: diabetes 2%, hypertension 21%, rheumatoid arthritis (RA) 43%, current smokers 10%, average (SD) weekly units of alcohol 5.2 (9.1). Most cases were unilateral (94%) and fixed with two screws (87%). 37% had other foot procedures carried out concurrently. Table 1 shows the change in MoxFQ total, domain scores and the EQ5D total score,

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health today (VAS). The correlation between baseline EQ5D total and the change for this outcome was  $r=0.6$  ( $p<0.001$ ). The correlation between baseline MOxFQ total and the change for this outcome was  $r=0.5$  ( $p<0.001$ ). The only comorbidity to have an influence on PROMs was RA- the presence of RA significantly reduced change in EQ5D total ( $p<0.05$ ).

Discussion: Conclusions: Following MTPJ arthrodesis, statistically and clinically significant changes were observed in EQ5D total score, MOxFQ total scores (and all sub-domains). The EQ5D VAS did not change. Baseline scores in both PROMs were correlated with the change scores following surgery- suggesting that we may be able to identify a baseline score which could predict the outcome in PROMs and target who we offer surgery to as a consequence. Comorbidities had little influence on the change in both PROMs following surgery, other than the presence of RA dampening the change in EQ5D total score. Again, this is useful to inform pre-operative discussions.

### **11. Implementation of an electronic inpatient hypoglycaemia bundle at Leicester Royal Infirmary**

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Background: Our Trust developed an electronic hypoglycaemia bundle to allow pre-prescription of a bedtime snack, IV Glucose and IM Glucagon to improve access to hypoglycaemia treatments for in patients with diabetes. Trust guidance stated: all patients with diabetes treated with insulin and/or sulphonylureas should be pre-prescribed the hypoglycaemia bundle. Our aim was to measure compliance with this guidance and implement any necessary actions if required.

Methods: We conducted two audit cycles in medical wards (November 2019 and July 2020), our recommended interventions taking place in between. Prescriptions for all patients with diabetes on insulin and/or sulphonylureas were reviewed. The audit focused on compliance with guidance to pre-prescribe the bundle and timing of prescribing.

Results:  $N=95$  (first cycle):  $n=59$  (second cycle). Compliance: The percentage of patients on insulin with the bundle prescribed rose from 40% to 70.9% between the two cycles. The percentage of patients on sulphonylureas having bundle prescribed increased from 22.2% to 60%. Timing: for patients on insulin, 69.2% had the bundle prescribed prior to any hypoglycaemic episode (first cycle) and 92.3% (second cycle). For those on sulphonylureas the bundle was prescribed prior to any hypo episode in 50% (first cycle), rising to 100% in the second cycle, eg. all patients had pre-prescribed treatment available in second cycle. Conclusion: This article illustrates the value of undertaking a complete audit cycle to effect and demonstrate change. By educating staff and raising awareness of the hypoglycaemia bundle, we demonstrated improvement in both

compliance and in timing of pre-prescription of hypoglycaemia treatments.

### **12. Rapid implementation of video-calling technology to facilitate virtual visiting during the COVID-19 pandemic. A Quality Improvement Project**

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Background: On the 23rd of March 2020, strict new hospital visiting restrictions were introduced across the UK to limit the spread of the SARS-CoV-2 virus. The restrictions meant family members could no longer visit patients while in hospital, and for many, this separation resulted in significant emotional injury. Patients who could not speak English and relied on relatives for language translation or sign language interpretation were especially affected. The restrictions also placed medical professionals under pressure to provide more clinical updates per day. In response, Guys and St Thomas NHS Foundation trust deployed a new video calling initiative, which aimed to mitigate the emotional injury caused by patients becoming isolated from loved ones while in hospital.

Methods: On the 25th March 2020 a family communications team was formed of newly graduated junior doctors and genetic counsellors. The team worked to facilitate video calls, distribute tablets for video calling and train new staff to how to use the video calling technology. We performed multiple plan-do-study-act cycles to track the progress of the service and identify strategies for sustainable integration of video-calling within the trust.

Results: From April to July, the team deployed 78 tablets across 41 clinical areas, and 7477 video calls were facilitated. Over 60 champions were recruited to promote the service in their clinical area. After three months, 87% of surveyed staff were aware of the project and 100% of those who had facilitated a video call felt the service increased patient and relative wellbeing. 83% agreed that video calling should be continued in the trust long-term.

Conclusion: Video-calling technology improves patient and relative wellbeing while helping to limit the spread of SARS-CoV-2. There is a place for virtual visiting long-term in tertiary centres.

### **13. Delivery of virtual, peer-led teaching programme during the COVID-19 pandemic: a pilot study**

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Background: COVID-19 pandemic has re-defined methods of education delivery, due to cancellation of face-to-face teaching. The evidence base for virtual teaching delivery in

medicine is limited. Literature demonstrates that peer-led teaching is as effective as expert-led teaching in specific contexts and promotes professional development in teaching amongst junior staff. This pilot study describes the use of a peer-led, virtual teaching programme for foundation interim doctors (FiY1).

**Aims:** To assess whether virtual peer-led teaching could be effective in improving FiY1 doctors preparedness and confidence for working as a junior doctor.

**Methods:** Participants were the FiY1 doctors (n=60). Teaching materials were developed over four weeks. Weekly 9 sessions created by FY1 doctors, were reviewed by the foundation training programme director and delivered over two months, using Microsoft Teams. Identical pre and post-series surveys were collated to assess impact. Preparedness and confidence were surveyed in 9 parameters.

**Results:** Participants attended a median of 5 sessions with improvement demonstrated in 8 of 9 parameters. Thirty-one responses were collected initially, and 19 respondents in the final collection. There was a 49.5% increase in self-reported preparedness for starting the foundation program. The most significant improvement was displayed in the awareness of welfare resources.

**Discussion:** Peer-led medical education allows doctors to achieve aims set by Good Medical Practice, through targeted teaching and development of teaching skills in junior staff. The pilot study has demonstrated an improvement in 8 out of 9 parameters measured. Despite online platforms being a relatively novel teaching method, the first virtual delivery of education within UHL was successful, a number of core-mandatory teaching initiatives have followed suit.

**Conclusion:** The webinar series enabled FiY1 doctors to feel more confident and prepared for life as a junior doctor. Virtual teaching can be used in the future, assisting new doctors adapt to new responsibilities.

#### **14. The role of tourniquet in postoperative pain in foot and ankle surgery**

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**Background:** Tourniquets are commonly used in elective extremity orthopaedic surgery to reduce blood loss, improve surgical field, and expedite the surgical procedure. Guidelines vary regarding ideal tourniquet pressure, site and duration, while the practice of fixed, high tourniquet pressures remains common. The relationship between tourniquet pressure, duration, and postoperative pain has been studied in various orthopaedic procedures, but there is paucity of data on relationship between site of tourniquet and postoperative pain in foot and ankle surgery.

The purpose of this study was to explore the relationship between tourniquet site and post-op pain scores.

**Methods:** A retrospective analysis of prospectively collected data was conducted on 220 patients who underwent

foot and ankle surgery in a single institution. Intraoperative tourniquet duration, tourniquet pressure and site, type of anaesthetic, postoperative pain scores using Visual Analogue Score (VAS) were collected in recovery, at 6 hours and at 24 hours post-op.

Scatter plots were used to analyse the data and to test for the statistical correlation between tourniquet pressure, duration, site and pain scores.

**Results:** All the patients who underwent foot and ankle surgery had tourniquet pressure of 250 mmHg for ankle tourniquet and 300 mmHg for thigh. Scatter plot showed a no correlation between site of tourniquet and pain scores in recovery, at 6 hours and after 24 hours.

There was a very weak correlation between tourniquet time and Pain Score immediately post-op (0.14).

**Conclusions:** This study shows that there was no correlation between tourniquet pressure, site and post-op pain in patients undergoing foot and ankle surgery. There is need for prospective randomised clinical trial to investigate this.

#### **15. Patient characteristics and comorbidities in patients attending specialist foot and ankle outpatient clinics in the UK. A report of 2000 patients.**

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**Background:** For integrated care and appropriate referral pathways, it is important to understand the patient demographics, pathologies, and comorbidities of patients with foot and ankle pain. We are aware of the burden of foot and ankle problems in UK primary care, with a large number of referrals to outpatient orthopaedic clinics (Ferguson et al. Br J Gen Pract e422, June 2019). With increasing demands on secondary and tertiary care settings, it is important to think of innovative solutions. To our knowledge there is no large patient case series looking at these aspects of care in foot and ankle patients attending outpatient clinics in the UK.

**Aims:** 1. To gain a better understanding of the demographics and pathologies of patients attending a specialist foot and ankle clinic. 2. To develop our existing knowledge of the types and prevalence of comorbidities within this population.

**Methods:** Data was collected prospectively. All new patients attending a specialist foot and ankle clinic in one centre in the UK were asked to complete a proforma at their first assessment (figure 1). Information was collected on gender, age, occupation, hobbies, location of ankle pain, previous injuries, compensation issues, presence of comorbidities and medications. A descriptive analysis of the data was conducted using SPSS (version 19, IBM).

**Results:** Data from 2001 patients was collected. The mean (SD) age was 52.9 (16.9) years with 76% being female. Nine percent of patients had diabetes (though others may have been seen in diabetic/vascular clinics and not captured here) and 16% were current smokers. Thirty-three percent of patients had a previous history of injury to the foot and/or ankle. The right foot was affected in 49% and

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the left in 51%. Location of pain was in the forefoot (52%), midfoot (21%) and hindfoot (27%). Compensation issues were reported in 3%. The proportion of patients in work was 64.4% meaning 35.6% were unemployed (including those who had retired).

Discussion/ conclusions: This large study demonstrates that more women attend specialist foot/ ankle clinics in the UK. Both feet are equally affected; the forefoot was the most common site of pathology. The prevalence of diabetes and smoking are in line with the general UK population (reported as 9% and 15%). A small proportion of patients had compensation issues, with the majority of patients working. This data can be used to help streamline referral pathways and to establish innovative ways of working (e.g. virtual clinics). In turn, this may reduce the burden on outpatient clinics, the health economy and improve patient satisfaction.

### **16. QR code posters improve access to paediatric patient information e-leaflets - an innovative quality**

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Background: In the digital age, patients may use unreliable sources of medical information on the internet. Patient information leaflets provide a reliable source of written advice on specific medical conditions, medications and procedures. However, in current practice, verbal advice is not always supplemented with written health advice. Barriers to giving out leaflets include lack of availability, accessibility and time.

Aim: We aimed to develop a poster using QR codes to improve access to Trust paediatric patient information e-leaflets.

Methods: We conducted pre-implementation surveys on patients and clinicians in the paediatric department. We developed a poster with QR codes which linked to 20 commonly used Trust paediatric e-leaflets (Figure 1) and piloted its use in the paediatric emergency department, wards and outpatient clinics. Post-implementation qualitative and quantitative feedback was collected from patients and clinicians.

Results: 84% of patients found the poster extremely or very useful, and 74% strongly agreed or agreed that it encouraged them to read the information leaflets (n = 19). Patients reported that it was an excellent way to save on paper, offer a wider variety of information and more convenient, although some patients did report a preference for paper leaflets.

70% of clinicians found the poster useful, and 60% strongly agreed or agreed that the poster encouraged them to ensure patients leave with a leaflet after a consultation (n=10). Clinicians found it convenient to have all the information in one place, visible and accessible and easy to use.

Conclusion: QR code posters offered a novel method to improve the accessibility and availability of reliable

information to paediatric patients and their parents. They also provided a timeless hyperlink to the most up to date information. Overall, QR code posters were well received by both patients and clinicians and we are now exploring their use in other departments.

### **17. Exam Result Inequity and International Graduate Non-disclosure of Ethnicity to the GMC**

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Background: GMC progression reports consistently demonstrate differential attainment (DA) in UK medical specialty exams. White candidates have higher average pass rates than BAME colleagues, both amongst UK graduates and international medical school graduates (IMGs). These disparities have informed research and policies by the GMC, Royal Colleges and HEE. Progression reports also include the pass rates for candidates who prefer not to what their ethnicity is. These are unknown as candidates are often omitted from DA discourse. However, this group's size and performance provide useful and novel insights. The aim of this project was to scrutinise the relative performance of candidates who withhold their ethnicity and determine whether non-disclosure relates to the levels DA.

Design: Publicly available exam performance data was extracted from progression reports for 2014 to 2019 for all specialties. This was used to calculate descriptive data which informed novel analysis and comparisons.

Results: 1) More IMGs (9.8%) withhold their ethnicity than UK graduates (4.2%). 2) Non-declaration of ethnicity is associated with poor exam performance. 3) The performance of unknown ethnicity group is poorer than would be anticipated if it contained a proportional number of white and BAME candidates. 4) Across specialities, a significant correlation exists between the proportion of IMGs withholding ethnicity and the magnitude of DA seen relating to primary medical qualification (Pearson coefficient  $r=0.5$ ,  $p=0.045$ ) When analysis is limited just to larger specialities (i.e. those with over 4000 candidates) a very strong correlation with greater statistical significance occurs (Pearson coefficient  $r=0.9$ ,  $p=0.0014$ ).

Discussion: At the group level, rates of disclosure of protected information relates the extent of inequity in exam performance. Worryingly candidates who choose to withhold their ethnicity status have on average particularly poor exam performance. It is possible that ethnicity declaration is a marker reflective of candidate's level of trust in their professional institutions.

### 18. Detailing Landmarks in the Dorsum of the Foot to Guide Surgery Near the Deep Peroneal Nerve and Dorsalis Pedis Artery: Application in Treating Lisfranc Injuries

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**Background:** Open reduction and internal fixation (ORIF) of Lisfranc injuries poses a potential risk of iatrogenic injury to the medial branch of the deep peroneal nerve (mbDPN). The rate of injury has been reported to occur in up to 11% of primary surgeries, and 15% of hardware removals. The mbDPN is at risk due to its close proximity to the Lisfranc joint complex and may be injured when gaining access, mobilising the neurovascular bundle, or placing/removing hardware. The aim of this study was to detail the course of the mbDPN in respect to soft tissue and bony landmarks that can be visualised/palpated intraoperatively. **Methods:** Anatomical dissection was performed on four embalmed foot and ankle specimens to identify the mbDPN from the second tarsometatarsal joint to its distal termination. Its relationship to the extensor hallucis brevis (EHB) tendon, dorsalis pedis artery, and the first and second metatarsals was measured.

**Results:** The study demonstrated that the mbDPN passed inferior to the EHB tendon in all specimens. The mbDPN continued 1.67 mm lateral to the first metatarsal base and bifurcated within the first intermetatarsal space into dorsal digital nerves 45.74% along the length of the second metatarsal. No variations in cutaneous innervation were observed.

**Discussion:** The study proposes the novel technique of using the percentage bone length of the second metatarsal to locate the mbDPN bifurcation. This technique allows for the mbDPN bifurcation to be estimated without direct visualisation reducing the required surgical window and mitigating the risk of potential iatrogenic injury following Lisfranc, midfoot, and forefoot surgeries.

**Conclusion:** The study supports the use of the EHB tendon to reliably locate the mbDPN at the level of the midfoot and proposes the use of percentage bone length of the second metatarsal to locate the mbDPN bifurcation reliably.

### 19. Assessment-driven, protocol-based pain management post cardiac surgery significantly improves measured pain scores.

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**Introduction:** We hypothesised that changing the pain management for our post cardiac surgical patients to an assessment-driven, protocol-based approach using fast acting and easily titratable agents will significantly improve patient satisfaction by reducing pain intensity in the first 24h after surgery as suggested by Society of Critical Care

[1] guideline.

**Methods:** We prospectively assessed 101 and 99 (05.2018 vs 06.2019) consecutive patients before and after introducing our pain management protocol. The nursing and medical team received rigorous training on the guideline as well as the correct assessment using appropriate pain scores measured at least hourly (Numeric Pain Score, 2 is moderate to severe or Critical Care Observation Tool, > 2 is moderate to severe). We introduced a multimodal approach with a combination of fast acting iv, long acting oral opiates, regular paracetamol and rescue iv boluses for difficult to control situations and we created a prescription bundle on our electronic prescribing record. Among other variables we assessed hours spent in moderate to severe pain in the first 24h after surgery and compared to the data collected before the guideline was introduced.

**Results:** We analysed 101 patients from 2018 and 99 from 2019. Baseline characteristics were similar between the two groups. In 2018 only 41.6% of the patients spent less than 5 hours and 29.4% spend more than 10 hours in moderate to severe pain. The 2019 data showed significant improvement in that 79.5% of patients spent less than 5 hours and only 5% patients who spent more than 10 hours in moderate or severe pain. ( $p < 0.0001$ , Chi Square). Only 9% of the patient needed rescue medications. 3% of time was the protocol inadequate necessitating other approach.

**Conclusion:** Introducing an assessment driven, stepwise, protocolized pain management significantly improved patient satisfaction by reducing pain intensity in the first 24h on our Cardiothoracic Intensive Care Unit.

### 20. The UK Foot and Ankle COVID-19 National (FAILCoN) Audit "Rate of COVID-19 infection and 30-Day Mortality in Foot and Ankle Surgery in the UK during the COVID-19 Pandemic"

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**Background/ Aims:** The primary objective was to determine the incidence of COVID-19 infection and 30-day mortality in patients undergoing foot and ankle surgery during the global pandemic. Secondary objectives were to determine if there was a change in infection and complication profile with changes introduced in practice.

**Methods/ Design:** Multicentre retrospective national audit. **Setting:** UK-based study on in patients who underwent foot and ankle patients who underwent surgery between the 13th January to 31st July 2020 examining time periods pre-UK national lockdown, during lockdown (23rd March to 11th May 2020) and post-lockdown. **Participants:** All adult patients undergoing foot and ankle surgery in an operating theatre during the study period included from 43 participating centres in England, Scotland, Wales and Northern Ireland. **Main Outcome Measures:** Variables recorded included demographics, surgical data, comorbidity data,

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COVID-19 and mortality rates, complications, and infection rates.

Results: 6644 patients were included. In total 0.52% of operated patients contracted COVID-19 (n=35). The overall all cause 30-day mortality rate was 0.41%, however in patients who contracted COVID-19, the mortality rate was 25.71% (n=9); this was significantly higher for patients undergoing diabetic foot surgery (75%, n=3 deaths). Matching for age, ASA and comorbidities, the OR of mortality with COVID-19 infection was 11.71 (95% CI 1.55 to 88.74, p=0.017). There were no differences in surgical complications or infection rates prior to or after lockdown, and amongst patients with and without COVID-19 infection. After lockdown COVID-19 infection rate was 0.15% and no patient died of COVID-19 infection.

Conclusions: COVID-19 infection was rare in foot and ankle patients even at the peak of lockdown. However, there was a significant mortality rate in those who contracted COVID-19. Overall surgical complications and post-operative infection rates remained unchanged during the period of this audit. Patients and treating medical personnel should be aware of the risks to enable informed decisions.

### **21. Adenoid Cystic Carcinoma of Maxilla Case Report**

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Background-Adenoid cystic carcinoma (ACC) is an uncommon malignant neoplasm that develops within secretory glands. They are classically slow growing, with patients being aware of their presence over months or even years.

Design- case report of Adenoid Cystic Carcinoma Of Maxilla

Conclusion-Total adenoid cystic carcinoma involving the maxillary sinus without any visible lesion over the palate is quite rare. Diagnosis should be made with clinical and radiological evaluation and confirmed by tissue biopsy. The maxillectomy with post-operative radiotherapy is the preferred mode of treatment.

### **22. A magic bullet in ST elevation myocardial infarction (STEMI)with resistant massive thrombus in right coronary artery (RCA)**

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Introduction: Usually, during primary percutaneous coronary intervention (PCI), balloon dilatation is sufficient to clear thrombus or sometimes, direct stent implantation is performed. Even though thrombus aspiration or intracoronary administration of tirofiban is not recommended routinely by current guidelines, these procedures enable thrombus clearance when there is a heavy thrombus. This case report demonstrates the effectiveness of intracoronary tenecteplase for the lysis of huge thrombus which is resistant to all of the above-mentioned procedures.  
physicianjnl.net DOI: [10.38192/1.6.3.4](https://doi.org/10.38192/1.6.3.4)

Case report: A 72year old woman who was presented with fatigue and multiple episodes of vomiting was diagnosed as cardiogenic shock secondary to inferior wall myocardial infarction with complete heart block. Coronary angiogram revealed triple vessel disease with acute RCA occlusion and significant thrombus in whole RCA after proximal lesion. Temporary pacemaker implantation was done and during the procedure, thrombus was resistant which could not be cleared with thrombosuction and intracoronary tirofiban. Hence intracoronary thrombolysis was done with 10mg tenecteplase. Afterwards as minimal thrombus remained at distal branches of RCA, 10mg tenecteplase was given peripherally. Then proximal RCA lesion was stented successfully and immediately afterwards, patient had an episode of vomiting and desaturation for which endotracheal intubation was done. Post procedurally patient had a prompt and early ST segment resolution, complete heart block reverted back to sinus rhythm, and later patient developed lower respiratory tract infection, mild impairment in renal function and elevated blood sugar levels which were managed by multidisciplinary team. While discharging, symptoms were significantly improved with stable vitals.

Conclusion: Catheter directed intracoronary thrombolysis with tenecteplase can be effectively performed when myocardial reperfusion cannot be achieved with balloon dilatation, manual aspiration and intracoronary drug therapy with tirofiban in STEMI patients with large thrombus burdens.

### **23. Parathyroid Adenoma Associated with Rickets Case Report**

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Background: a 11year girl present with rickets finally diagnosed with parathyroid adenoma.

Discussion: Parathyroid adenoma is a rare benign encapsulated neoplasm. Presentation in paediatric patients with primary hyperparathyroidism are usually nonspecific like anorexia, nausea, vomiting, constipation, irritability, polyuria and polydipsia. Nephrolithiasis, bone pain, rickets or acute pancreatitis like symptoms may also occur. In children hyperparathyroidism diagnosed by serum calcium, PTH levels, high frequency USG, CT scan and subtraction scintigraphy. Most sensitive test is Technetium99 M-Sestamibi scan. After the resection, one has to continue supplements of calcium & active vit. D.

Conclusion: Childhood presentation of parathyroid adenoma causing primary hyperparathyroidism is rare and bone deformity is unusual presentation in children. Parathyroid adenomas are well circumscribed and easy to excise. calcium level normalizes after excision of adenoma and bone mineralize well with calcium and vit. D supplement.

#### 24. A case of Purple Urine Bag Syndrome with negative urine culture report.

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**Background:** Purple urine bag syndrome (PUBS) is a relatively rare phenomenon, most commonly seen in elderly female patients who are bedridden. Pathophysiology of PUBS has been correlated to aberrant metabolism of tryptophan, commonly due to the exchange of bacterial colonisation of the urinary catheter. Urinary discoloration is generally due to changes in urochrome concentration associated with the presence of other pigments. A spectrum of urine colours can be seen in urine bags of hospitalized patients and may provide valuable information about presence of infections, medications, poisons, and haemolysis.

**Methods and results:** We present a case of Purple Urine Bag syndrome in 86-year-old woman who was brought to the emergency room from her home for evaluation of disorientation and loss of appetite. Her son was the informant and stated her medical history included hypertension, prior cerebro-vascular accident (with subsequent neuro-deficits), paranoid schizophrenia and osteoarthritis, which left her bedridden with long term catheterisation. Her lab reports revealed hyponatremia ( $\text{Na}^+$  - 125mmol/L) and hypocalcaemia ( $\text{Ca}^{++}$  - 8.2mg/L). Blood picture revealed microcytic hypochromic red blood cells with mild eosinophilia (Neutrophils and lymphocyte counts being normal). Of interest is the finding that urine routine and microscopy revealed no signs of infection. Patient was treated for sodium deficit and given empirical antibiotics (Inj Ceftriaxone 1g BD). T. Risperidone was withheld temporarily. Her condition improved after 24 hours and urine turned a pale yellow.

**Conclusions:** As the urine culture report was sterile, the question was raised regarding human error in collection, or the side effects of Risperidone, which was withheld during treatment. It is believed that the urine culture was sent not from the purple urine in the catheter bag, but from a new sample collected. Nevertheless, more research needs to be done to explore the relationship between risperidone and this phenomenon of purple urine.

#### 25. Low grade adenocarcinoma of nasopharynx, A case study of rare nasopharyngeal tumour

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**Background:** Nasopharyngeal carcinoma (NPC) is commonly diagnosed in South-eastern Asia, particularly in southern China. It originates from the epithelial lining of the nasopharynx and has a variety of pathological subtypes. The vast majority of NPC cases are keratinizing or nonkeratinizing squamous cell carcinoma. Additional pathological types of NPC, which include adenocarcinoma, lymphoma, sarcoma, and minor salivary gland tumour, constitute <5% of all NPC cases. Therefore, primary nasopharyngeal adenocarcinomas (NPACs) are extremely rare, with only a limited number of cases reported in the

literature.

**Methods:** A 51 years old male patient was nasal endoscopy and biopsy under Local anaesthesia for left nasal mass under investigation at Dhiraj Hospital, waghodia.

**Result:** A rare case of low-grade adenocarcinoma of nasopharynx.

#### 26. Severe Acute Pancreatitis in Pregnancy Secondary to Hypertriglyceridemia - A Case Report and Literature Review

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**Background:** Hypertriglyceridemia is a common and well described phenomenon in normal pregnancy arising from adaptive physiological changes during gestation. It is rarely complicated by acute pancreatitis in pregnancy (APIP). The majority of APIP cases arise secondary to gallstones with the remainder linked to alcohol and hypertriglyceridemia primarily. Compared to gallstone pancreatitis, hypertriglyceridemia related pancreatitis has relatively worse outcomes with increased incidences of preterm delivery and pseudocyst formation.

**Case Report:** A 38-year-old woman at 29 weeks gestation presented with epigastric pain. After initial investigations revealed raised inflammatory markers, elevated amylase, hypertriglyceridemia and hyponatraemia, a diagnosis of APIP was made. This was complicated by type 1 respiratory failure. She was promptly transferred to ITU where severely raised serum triglycerides were discovered. An unsatisfactory CTG necessitated an emergency C-section. Post-partum, she again required support in ITU. Following NG feeding, blood transfusion, bezafibrate and IV antibiotics, she made a full recovery.

**Discussion:** Many cases of APIP are related to genetic defects in lipid metabolism. A case of this aetiology requiring intensive treatment is rare in the literature. Various medical treatments for hypertriglyceridemia, such as fibrates and insulin infusions, have been described. Plasmapheresis use in severe cases is also noted. Termination of pregnancy and urgent C-section are also prospective treatment options. With foetal complications to consider, management of APIP requires multidisciplinary input and early diagnostics.

**Conclusions:** APIP is a serious and rare complication of pregnancy. The current lack of consensus on treatment of hypertriglyceridemia and pancreatitis in pregnancy warrants further inquiry, especially given its often complex clinical course. The merits of routine screening for gestational hypertriglyceridemia are yet to be elucidated; the morbidity and mortality associated with its complications, coupled with its rising incidence justify a push for screening. Neonatal outcomes are also poorly characterised and warrant further research and long term follow up.

**27.To study the effects of oral lycopene in cases of oral submucosal fibrosis: a prospective, observational study.**

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Background: Oral submucous fibrosis (OSMF) is a chronic insidious process characterized by juxtaepithelial deposition of fibrous tissue in the oral cavity and pharynx. The disease is widely seen in India due to habit of betel-nut chewing.

Oral submucous fibrosis (OSF) is the chronic debilitating and crippling condition of oral mucosa. It is potentially malignant disorder which is associated mainly with the use of arecanut in various forms. It is characterised by inflammation and progressive fibrosis of the submucosal tissue. The prevalence of osmf in India is 6.3%.

Methods: In this study 8 adult individuals having history of consumption of betel leaves and areca nut with decreased mouth opening (up to at least 3 to 2.5 finger mouth opening) and intolerance to spicy foods who attended ENT OPD were given treatment with tablet lycored 8mg in BD dosage and were advised to quit the habit and were taught mouth opening exercises. Close follow up for twelve weeks was done with measuring of improvement in mouth opening via Vernier callipers. Results were measured by appropriate statistical tests.

Results: Results showed that there was significant improvement with therapy of lycopene along with mouth opening exercises. The results showed significant improvement in mouth opening over the course of therapy along with significant improvement in intolerance to spicy foods and lessening of burning sensation in mouth.

Conclusions: Early detection and treatment accompanied with mouth opening exercises and cessation of habits will significantly result in near normal reversal of changes in osmf.

**28.Impact of The Covid-19 Pandemic on Maternal Mental Health**

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Background: As many countries adopt strict quarantine and lockdown strategies, increasing attention has been given to the impact on mental and emotional wellbeing. The influence of this on perinatal mental health and service provision specifically is important to consider, as women in the perinatal period may be particularly vulnerable to the negative effects we are already seeing in the general and psychiatric populations.

Aims: The ongoing impact on global mental health of Covid-19, and the isolation measures used to combat its spread, is increasingly acknowledged. We were interested in considering the effect the pandemic has had specifically

on the mental health of women in the peripartum period. By reflecting on our experience working in this field during the pandemic, we hope to generate ideas to improve future services.

Methods: We considered the effects of the pandemic in this high-risk population during each stage of contact with our services. This included pre-conception, during the antenatal and postnatal periods, the potential longitudinal effects, and the impact on service provision. To support this, recent case examples were identified and described from our busy and diverse South London community perinatal psychiatry service.

Results: In our service we have noted many recent referrals in which it is evident that the current world health crisis has been a key stressor or trigger for the development or deterioration of women's mental health difficulties. This includes women who have been impacted by various factors related to the pandemic, at all stages of the perinatal period.

Conclusions: In these challenging times, it is vital to maintain equality of access to perinatal specialist services and to continue to consider how to deliver the best care circumstances allow. This will involve adapting to the new working environment, and optimising care delivery using remote technologies where appropriate, in a way that is safe, accessible and acceptable to service users.

**29.COVID-19 in the General Surgical Department at Leighton Hospital**

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Aim: This audit puts a light on the number of surgical patients who possibly contracted the infection during the hospital stay in the surgical department for both elective and emergency. The data were to compare with national and international available data and to show the impact on the outcomes.

Methods: We reviewed the surgical hospital admission between 15/03/2020 and 15/05/2020 at Leighton Hospital. The following data has been collected. Total number of elective General Surgical admission excluding Breast patients 21 patients. Total number of Emergency General Surgery 412 patients Total surgical case turnover 431 (963 in the same time period in 2019) Elective surgery performed 21 cases Emergency surgery performed 37 operations Compare the rate of surgery on emergency case within similar period of last year (186 operations 135 elective, 61 emergency) Total number of positive Covid19 for the whole setting 8 Total number of positive Covid19 in Emergency admission 8 Possible contract infection in the community ,swabbed within 48 hours ,positive or symptomatic and proven later positive 4 Possible contract infection in the

hospital, swabbed after 48 hours 5 patients. The complication rate on positive Covid 19 patients in surgical department (5 died, 3 survived). One of the 5 patients readmitted within 48hrs post discharge and died of covid19 (having had 1 had a +ve swab on discharge not known about). 1 Additional patient d/c having had -ve swab, died following readmission with 48hrs.

Recommendation: Elective and emergency, any difference in the contracting rate?

If not could add evidence to practice elective results show relatively low rates throughout both groups. This would suggest that precautionary measures were adequate for the numbers of patients. However, the substantial decrease in operations leads to a bias in this regard.

### 30. Acute promyelocytic leukaemia: an overview and its implication for nurses working in oncology department

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Background: Acute promyelocytic leukemia (APL), used to be the most fatal kind of leukemia, but now with the advent of the ATRA therapy it became potentially curable subtype of adult acute myeloid leukemia. Cure of the patients with APL not only depends on the effective use of combination therapy involving differentiating and classical cytotoxic agents, but also the supportive care measures as the biology of the disease and the complications associated with molecularly targeted therapy can be fatal, if not handled proactively. Oncology nurses should be familiar with the complications associated with APL, as nurses play a critical role in providing supportive care to the patients. This study is aimed to review the disease trajectory of APL, to describe the advances in research and clinical practice and their impact on patient outcomes

Methodology: A computerized literature search of the PubMed, Cochrane, Medline and google scholar databases in the English language was conducted using the key words acute promyelocytic leukemia with subheadings anthracycline, all-trans retinoic acid, arsenic trioxide, retinoic acid/differentiation syndrome, Q-T prolongation, disseminated intravascular coagulation (DIC), stem cell transplantation, and febrile neutropenia without specifying the year of publication. Relevant abstracts, summaries and conclusions, research articles, published guidelines etc. from national and international journals and other literary sources were reviewed.

Results: Remission induction deaths continue to represent one of the major stumbling blocks in modern therapy of APL. Many studies reported that haemorrhage is the single most common cause of death (~5%) during induction therapy, followed by infection (~2-3%) and differentiation syndrome (~1.4%) in patients with APL receiving ATRA and idarubicin (AIDA regimen). Maximum lethal haemorrhages occurred early during induction, while infection and Differentiation syndrome became cause of deaths at later stages of treatment regime. An increased WBC count has been reported as an independent prognostic factor of response to induction therapy in many studies. It is also observed that the presence of coagulopathy and abnormal levels of creatinine significantly posed the higher risk of mortal-

ity, most particularly, haemorrhagic mortality happened during induction remission. Haemorrhagic mortality has been observed despite a generalized and early aggressive supportive care, regardless of prognostic factors. So, the acknowledgement of a particular set of prognostic factors can be useful to identify high-risk patients.

Conclusion: Maximum deaths are happening during induction therapy; over that these are happening even before the initiation of the treatment. So, it become very critical for Oncology nurses to get acquaint themselves with the nuances of APL to play a proactive role in its management.

### 31. Evaluation of Single Surgeons Performance and Compliance with Standards

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Background: National Institute for Health and Clinical Excellence (NICE) has recommended specific standards for General surgeons performing cholecystectomies to comply with in order to maintain safe clinical practice. The aim of this study was to assess the performance and compliance of a single surgeon with standards recommended by NICE for performing cholecystectomies.

Methods: Upon gaining approval from the Clinical Governance Development Unit, all patients undergoing cholecystectomy performed by a single surgeon (KPG) at the Pennine Acute Hospitals NHS Trust located in the North West of England between September 2017 and December 2018 were identified. A data collection proforma including information on patient demographics (age, gender, ASA, BMI, previous cholecystitis, previous pancreatitis, number of admissions within one year before operation), clinical setting (emergency, elective, day case surgery), and the aforementioned standards.

Results: Overall, 70 patients underwent cholecystectomies performed by KPG between September 2017 and December 2018. Among 70 patients, 52 out of 70 (74%) underwent elective cholecystectomy and 18 out of 70 (26%) underwent emergency cholecystectomy. Overall, 46 out of 70 (66%) cases were planned to be done as a day case. Overall, 52 out of 52 (100%) of elective cholecystectomies were completed laparoscopically. The target of 95% is met. Overall, 2 out of 46 (4%) cholecystectomies that were planned to be done as day case were converted to inpatients. The target of < 5% is met. Overall, 4 out of 70 (6%) of patients had unscheduled readmission within 30 days after cholecystectomy. The target of < 10% is met.

Discussion: The baseline audit demonstrated that KPG performance has been compliant with the recommended standards in terms of the number of procedures performed per year, the proportion of procedures completed laparoscopically, the proportion of emergency cholecystectomies performed maintaining low postoperative 30-day complications and readmissions.

Conclusion: To maintain the same standards.

## The Physician

Table 1. Baseline Characteristics of the included population

Number of Patients	70
Mean Age	50 (95% CI 46-53)
Male Gender	17 out of 70 (24%)
Female Gender	53 out of 70 (76%)
BMI	29 (95% CI 28-31)
ASA	
1	21 out of 70 (30%)
2	37 out of 70 (53%)
3	12 out of 70 (17%)
4	0 out of 70 (0%)
Previous cholecystitis	35 out of 70 (50%)
Previous pancreatitis	8 out of 70 (11%)
Median number of hospital admission within one year before operation	1
Elective operation	52 out of 70 (74%)
Emergency operation	18 out of 70 (26%)
Day case surgery	46 out of 70 (66%)
Day case surgery changed to inpatient	2 out of 46 (4%)
Laparoscopic approach	68 out of 70 (97%)
Open approach	2 out of 70 (3%)
Laparoscopic converted to open approach	0 out of 70 (0%)
Readmission within 30 days of operation	4 out of 70 (6%)
Bile duct injury	0 out of 70 (0%)
Referral to tertiary centre for bile duct reconstruction	0 out of 70 (0%)

ASA: American Society of Anesthesiologists; BMI: body mass index; CI: Confidence intervals

### **32. An approach to comprehensive Care for people with Intellectual disability in a community model**

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Background: 10-year-old from Leicester is diagnosed with Cerebral Palsy. The management and care of his disability over the years have gradually improved his quality of life and reduced carers burden substantially as a result of carefully selected interventions. In resource-rich countries, the overall prevalence of CP is 2.0-3.5 per 1000 live births and in the United Kingdom it is noted to be 2 per 1000 live births.

According to the WHO, Health care must be safe, effective, timely, efficient, equitable and people centred, setting the benchmark of appropriate and effective care for people with Cerebral Palsy.

Aim: To compile different approaches and components of comprehensive care for intellectual disability in the context of a patient experience with cerebral palsy.

Methodology: Various modalities of care such as medical, surgical, nutritional and lifestyle modifications considered, and attempts made to layout essential components of care

as explained in the WHO definition of good quality care to improve the quality of life of people with disability.

#### Results

Considerations about the different aspects of 1) Managing medical and surgical comorbidities and complications (antiepileptics, surgical correction for contractures and dislocations etc) 2) Nutritional and lifestyle modifications such as PEG feeding, nutritionally balanced diet etc. 3) Rehabilitation (physiotherapy, occupational therapy, speech and language therapy etc.) and adaptations to home and recommendations were made.

#### Conclusion

This model could be used for the care of individuals with other types of intellectual disabilities as well. This would inform development of new ways of care including virtual and remote sensing options as well as applications to facilitate care in the future. Advancement in technology including AI would hopefully aid in the management of individuals like this patient to have a full life in the future.

### **33. Autoimmune hepatitis: diagnosis, management and outcome. Are we meeting the national standards?**

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Background: Autoimmune hepatitis is a relatively rare condition, with an estimated prevalence of 16 cases per 100 000 people. Prompt diagnosis and initiation of immunosuppressive therapy is vital to prevent progression of the disease, with complete biochemical and histological remission the most desirable treatment end point. The results of a recent UK multicentre audit were published in 2018 and highlighted a number of key points including delayed diagnosis of over 12 months in one fifth of cases<sup>1</sup>. Due to the rare nature of the condition, it is important to collect further data to supplement these larger cohorts and to gauge the experience of other hospitals. This retrospective study evaluates our experience at Kingston Hospital.

Methods: The patient cohort was identified by searching the CRS database between January 2012 and November 2019, using the ICD-code of K75.4 (Autoimmune Hepatitis). Those patients with an overlap syndrome, or not under regular follow up at Kingston Hospital, were excluded. Data collected included patient demographics, baseline biochemical and histological investigations, time to diagnosis and rates of complete biochemical remission.

Results: Between January 2013 and November 2019, a total of 65 patients were diagnosed with autoimmune hepatitis and managed on a regular basis at Kingston Hospital. The mean age at diagnosis was 61, with a predominance of females (75.4%), and those of Caucasian ethnicity (81.5%). The average MELD score on presentation was 10.2 whilst 43.1% of patients had radiological or histological evidence of cirrhosis. The average time from initial abnormality in liver function to diagnosis was 10 months whilst time to remission was >12 months in 63% of cases. A liver biopsy

was performed in 93.2% of patients, with documentation of the necro-inflammatory score in 50%, and the fibrosis score in 73.3%. In total, 66% achieved the desired end point of biochemical remission. A DEXA scan was performed in 19 patients who were prescribed corticosteroid therapy, with 84.2% of these patients demonstrating either osteopaenia (52.6%) or osteoporosis (31.6%).

**Conclusions:** Our experience at Kingston Hospital is broadly similar to that described in the recent UK multicentre audit, with a frequent delay in the diagnosis of the condition, although the cause for this was not identified. Furthermore, there appeared to be little standardisation of histological reporting. Awareness of the side effects of systemic therapy is important, particularly in the more elderly population with multiple co-morbidities, and physicians must be proactive to minimise this.

### 34. A new guideline to improve the management of Upper Gastrointestinal Bleeding in the Emergency Department

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#### Background:

Upper gastrointestinal bleeding (UGIB) is a common medical emergency associated with significant morbidity, mortality and healthcare costs. This was the first QI project conducted in the Trusts Emergency Department (ED) to assess and improve management of UGIB.

**Methods:** Plan-Do-Study-Act (PDSA) methodology was used to assess the Departments management of UGIB compared to the latest NICE guidelines. The standards assessed included: effective resuscitation, reversing coagulopathy, risk assessment with the Blatchford Score, timely endoscopy, avoiding inappropriate proton pump inhibitor (PPI) prior to endoscopy and specific considerations for variceal bleeds. The change implemented was the creation of the Trusts first ED guideline on UGIB management. Performance was assessed pre and post intervention by retrospectively analysing data of patients presenting to ED with UGIB and assessing adherence to NICE guidelines.

**Results:** The first cycle in 2017 pre-intervention demonstrated that although resuscitation and coagulopathy were managed appropriately, the areas that required improvement included assessment of Blatchford Score (only 46.9% had calculated) and inappropriate administration of PPI (in 62.5% of patients). The results were discussed with key stakeholders and presented at the Trust Endoscopy meeting, and after several iterations with cross-departmental feedback, the Trust first ED guideline on UGIB management was created. The results immediately post-intervention in 2018 demonstrated no improvement. The MDT reflected that more time was required to disseminate the guideline and permit a change in culture. The third PDSA cycle in 2020 demonstrated less inappropriate prescription of PPI (82% to 33%), however Blatchford score calculation

showed little improvement (46.9 to 50%).

**Conclusion:** Implementation of the Trusts first UGIB guideline did not have the impact that was expected. Time is required for practice to change; however more innovative methods are also needed in a busy ED with a rapid turnover of staff. This will be the focus of the fourth PDSA cycle.

### 35. A Rare Case of Adenoid Cystic Carcinoma

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**Introduction:** Adenoid cystic carcinoma is a rare malignant tumour arises within secretory glands, mostly major and minor salivary glands of head and neck. The incidence of adenoid cystic carcinoma is 1% of all malignant neoplasm of oral cavity and maxillofacial area. It mostly involves minor salivary glands. It is not commonly found outside major or minor salivary glands and is especially rare when located in the nasal cavity.

**Case report:** A 35-year female presented with complain of nasal obstruction (left>right) since 6 months. CT scan shows ill-defined heterogeneously enhancing soft tissue density mass lesion in posterior nasal cavity, extending laterally to left maxillary sinus causing thinning and destruction of medial, posterolateral and anterior wall of maxillary sinus, raised possibility of neoplastic aetiology. A planned left complete maxillectomy done and sent for histopathological examination. Biopsy report revealed adenoid cystic carcinoma (pT3NxMx).

**Discussion:** Histologically, sections showed tumour cells arranged in solid sheets, cribriform and tubular pattern. The tumour cells comprise of small cuboidal ductal cells and few angulated myoepithelial cells arranged concentrically around the gland like cystic spaces filled with acidophilic material. Individual tumour cells show high N:C ratio, mild pleomorphism and occasional mitotic figures. Necrosis (+3) and areas of haemorrhage are seen. Tumour involves palatal margins (anterior, posterior, lateral, medial), lateral and medial antral margins and posterior nasal wall margin. Lymphovascular invasion present.

**Conclusion:** Final diagnosis in this case Adenoid Cystic Carcinoma (pT3NxMx), Grade 2 (high grade): with solid component [Van Weert 2015, Zhang 2013 and Xu 2018 classification]. ACC is a malignant tumour with indolent growth pattern. Classical cribriform type has slow growth, but mixed and solid type has aggressive behaviour and can spread to surrounding tissue and may cause distant metastasis.

### 36. Impact of COVID-19 on Acute Urology Attendances and Training.

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**Background:** In April 2020 the UK government responded to the global threat of COVID-19, with never before seen restrictions on socialising, travel and a public plea to reduce demand on healthcare services unless deemed unavoidable at the public discretion. Aim of the study to compare the acute urology attendances throughout April 2020, with all patients attending throughout the same month the previous year, in the same tertiary Urology centre.

**Methods:**

We gathered data from electronic records only, identifying patients' demographics, presenting symptoms, diagnoses made, and management recorded.

**Results:** The discharge rates and admission rates were nearly static. The average admission length fell by a third and the cumulative bed stay fell by half in April 2020. Despite the smaller cohort attending acute urology in April 2020 more deaths were seen during the hospital episode. The reduced diagnosis of Pyelonephritis, UTI epididymo-orchitis may suggest a mixture of more proactive discharge of potential referrals from primary care and emergency care services, as well as a delayed-attendance, non-attendance and self-medicating compounded by global health anxiety during the Crisis.

Demographics	Before COVID	During COVID
Acute urology attend	331	225
Average Age	53	55
Male:Female Ratio	1.8M : 1F	2.8M : 1F
Investigations		
USS-scanned	128	55
CT-scanned	46	57
COVID-19 CT changes	-	3
COVID swabs positive	-	5
Diagnosis		
Ureteric colic	17	23
Pyelonephritis	31	15
Urinary Retention	47	25
Epididymo-orchitis	17	12
UTI	57	17
Iatrogenic-related	27	1
Management		
Ureteric stent insertion	3	1
Nephrostomy	5	6
URS+laser	8	0
Scrotal explorations	4	5
Hospital stay		
Ambulatory return rate	21.8%	20.0%
Admission to Urology	31.7%	29.2%
Discharge rates	61.3%	61.6%
Average Admission	6 nights	4 nights
Cumulative Hospital nights for all admissions that month	596 nights	301 nights
Deaths	5	7

Discussion

There was a stark reduction in acute and elective urology operating during the pandemic as reflected in the lower rate of acute attendances with iatrogenic-related diagnoses and lower rate of patients undergoing operations during their acute admission in April 20. We discuss how long the effects of the COVID-19 Crisis may last and what implications this may have on the future length and quality of urology training. And what measures trainers and trainees can consider anticipating this.

Conclusion

We observed a 31.4% fall in acute urology attendances and significant drop in primary operative services and heed the experience from other studies of surgical attendance rates during health crises that have shown reduction in attendances that took 4 years to recover to pre-crisis rates.

### 37. VITAMIN D Supplementation to persons at risk/ patients of COVID 19 in Kerala: A possible low-cost intervention to reduce morbidity and mortality.

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The COVID 19 pandemic has been causing considerable morbidity and mortality throughout the world. The mortality rates have differed from region to region and many explanations have been offered to explain this. The state of Kerala in India has been able to withstand the onslaught for a long time and was featured in the world news with comparatively less case load and less than one percent mortality of the people tested positive. However, the state is now one of the mostly affected areas in the country. The demography of the state with relatively higher number of senior citizens and the presence of known risk factors among even younger people can be challenging. It is, therefore, imperative that the state pursue all the avenues which are available and cost effective.

**Vitamin D: A panacea?** Since the observation that Black, Asian and ethnic minorities are having higher death rate from COVID in United Kingdom, the possibility of lower levels of Vitamin D among them has been postulated to be a risk factor. The association of Vitamin D deficiency with increased incidence of respiratory infections is well known. The reviews on COVID however so far have been inconclusive due to paucity of data. It is clear therefore that Vitamin D levels can be crucial in the following ways in COVID 19. The deficiency of Vitamin D can directly enfeeble the body resistance to viral /bacterial respiratory infections and putatively adversely affect outcomes. The established risk factors in COVID, such as Diabetes and Hypertension could well be part of the long list of comorbidities found in association with Vitamin D deficiency. Vitamin D deficiency as part of these comorbidities could be worsening the immunity and affecting the control in the presence of a viral infection. In the light of existing research and available understanding of the molecular structure and the presence of Vitamin D in a variety of situations, it could also be pos-

tulated that vitamin D as an integral part of the membranes (mucosa etc.) offers resistance to the unhindered entry and passage of the virus, in this context Covid 19, from nasal mucosa to the alveolar membrane. Supplementation of smaller doses of Vitamin D however does correlate with a reliable clinical outcome whereas anecdotal evidence in the form of large cohorts of people taking Vitamin D has made it possible to improve the general wellbeing possibly making them less susceptible to the infection. Not routinely testing people for Vitamin D deficiency particularly in people infected with Covid 19 could have made the emergence of data difficult. It is also to be remembered that Vitamin D supplementation is cheap, logistically simple and also recommended even otherwise for the high-risk category of people with reduced sun exposure, hence useful for the people in quarantine/self-isolation as many would be deprived of natural sunlight or directly or indirectly affected by factors reducing absorption (Proton Pump Inhibitors) and storage (Statins) of Vitamin D among other things as the genotypic variation of people who are incapable of producing it from the sun.

**Objective:** To ascertain the role of Vitamin D in reducing the morbidity and mortality from SARS CoV 2 /COVID in persons exposed to the virus.

**Methodology:** In view of the difficulties and expenses involved in measuring Vitamin D levels in patients at risk, it is proposed to give Vitamin D supplement in optimised (high) doses along with Calcium to people in quarantine/self-isolation following exposure to a case of COVID-19/ following travel from endemic areas. This is proposed to be done on a randomised controlled trial basis and the groups will be followed up for the appearance of COVID 19 symptoms/occurrence of SARS CoV 2 virus by RT PCR. In case of those who are diagnosed COVID positive, the subsequent course of the cases in terms of occurrence of complications, duration of hospital stays, use of oxygen and ventilator support and eventual outcomes. Cohorts of persons with and without co-morbidities will be assessed separately.

**Summary:** There is enough evidence, both circumstantial and empirical, available in published literature to hypothesise a role for Vitamin D in reducing morbidity and mortality in COVID 19. This is a low-cost intervention using a widely available Vitamin in oral form whose deficiency in large populations of the country especially the elderly and those with co-morbidities is well documented. If successful, this intervention can enable Kerala to show a unique way to the world in mitigating the sufferings from COVID 19. This could also lead to more researches looking at the molecular biological basis of the role of Vitamin D in preventing all the medical co-morbidities linked to Vitamin D deficiency to hitherto unknown causes, as hypothesised by the presence of Vitamin D receptors in almost all the cells of the human body.

### **38. Psychiatric practice requires a holistic approach and medicine remains an integral part of it.**

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**Background:** The advances in the field of medicine are not appropriately translated into the practice of psychiatry and the discipline has now become fragmented. It is important to revisit the medically unexplained symptoms in the context of advances in medicine, as in contrary to the popular belief, majority of the medically unexplained symptoms seemed to have organic basis.

**Aim:** To pose questions which should hopefully highlight and encourage new research on MUS from the clinicians who observe a link between the symptoms, investigations, diagnosis and treatment. Further, to identify, explore, and apply those observations using a biological research paradigm.

**Evidence:** Robust evidence depends on a variety of factors including findings from new research and deeper understanding of MUS. Attempts should be made to translate such new knowledge into the clinical practice.

**Discussion:** Careful consideration of alternative and uncommon explanations of the rare associations as well as a detailed enquiry into recurrent common themes should help our understanding of medicine and psychiatry. For example, Vitamin D deficiency is found to have an association with a large number of difficult to diagnose cases, including depression, anxiety, fibromyalgia, ME, connective tissue disorders, IBS, allergies, asthma, immunodeficiencies, endocrine abnormalities, Alzheimer dementia, Autism, ADHD, Multiple Sclerosis, Sphincter dysfunction, overactive bladder etc apart from the more known causes. In addition to that epilepsy - particularly autonomic seizures, movement disorders, medication side effects etc remain some of the most common causes of those diagnosed with MUS.

**Conclusion:** There is an urgent need for better causative models of MUS. Currently, in the absence of such models, a collaborative approach is required in medical practices and hopefully with the proposed newer causative links as above will offer newer treatments rather than operating with existing consensus models populated by the outdated classification systems

### **39. Thinking Straight in the Age of Information Overload Problem statement: A study to assess the influence of information overload on general public in a selected setting in Mumbai.**

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**Introduction:** Information Overload is an increasing problem both in the workplace and in life in general. It is a state in which the amount of available information is so overwhelming that a person is unable to effectively process and utilize it. Information hits us from all directions, newspapers, television, voice mail, cellular phones, email,

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electronic memos, and the World Wide Web, to name a few. Current research suggests that the surging volume of available information-and its interruption of people's work-can adversely affect not only personal well-being but also decision making, innovation, and productivity.

**Methodology:** A descriptive study was done selecting Students, Employed & Unemployed individuals in a selected setting in Mumbai. Data was collected about the concept of information overload, influence of information overload in different strata of general public, effects of information overload on health status of general public .and strategies adopted by the general public to overcome the impact of information overload using interview technique with the help of semi-structured questionnaire.

**Findings:** A] Demographic data. The study involved samples from different age group and strata of society so that the researcher could get an opinion from most individuals in the community. With regard to age 30% samples belong to the group of 18 to 22 years. These samples were college students and their stream of education was bachelor, nursing, law, accounts etc. 37% samples were in the age group of 28 to 35 years. These samples were working population employed by different private organisations. 33% samples were above 35 years of age which included individuals who were also employed as housekeeping, farmer, railway employee, nurses, driver, yoga trainer and few of which were housewives too. In relation to the sources utilized for deriving information 73% samples used mobile, 20% samples used computers/laptops, 47% used television and 13% used radio. This means maximum percentage of the population utilized mobiles for retrieving information being an easily available source at all times of the day. B] Concept of information overload - 7% samples replied that the meaning of information overload was information infoxication, 3% samples mentioned the meaning was information anxiety, 47% samples replied information explosion and 43 % samples replied all the above. 30% samples mentioned social media was used widely to derive information, web wages was not mentioned by any of the samples, 7% samples each replied email and mobile apps, where as 63% samples replied all of the above. C] Effects of information overload on the samples - With regard to the effects 10% samples experienced stress and burn out ,67% samples experienced increased radiation and eye strain, 23% were reliant on internet and devices, 43% samples had decreased physical activity, 10% samples had shortened attention span, 10% samples also experienced decreased memory, none of the samples mentioned about depression and anxiety, 30% samples experienced bad posture , aches and pains. In addition, none of the samples opted for absent mindedness and social distractions. D] Strategies adopted to control information overload - 3% samples used strategy like clumping together similar task, 37% samples limited distraction of the email, 40% samples prioritized important task, the widely strategy was taking breaks that was adopted by 43% samples, 23% samples provided balanced and supporting information, 7% samples delegated information responsibility, 10% samples highlighted the key points. Multi-tasking and filtering of information was not used by any of the samples.

**Conclusion:** Managing information in daily life is no longer restricted to a wealthy elite but is a problem which faces nearly everyone. There are some simple tips to minimize both information overload for the community and which we can use to prevent information overload on ourselves.

### **40. Intubation in A Patient with Post Burn Contracture Of Neck Using TaScope - A Case Report**

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**Background:** Airway management in patients with orofacial and neck burns is often a challenge to the anaesthesiologist. Restricted mouth opening decreased oropharyngeal space, limited atlanto-occipital joint extension, reduced submandibular space compliance and heavily fibrosed neck inevitably leads to difficult airway Contracture of the neck, microstomia and fibroses of nose are sequelae of orofacial burns. Airway management in this setting is a challenge to anaesthesiologist owing to fixed flexion deformity resulting in nonalignment of oral, pharyngeal and laryngeal planes for intubations. We present to you a case of difficult intubation in post burns contracture patient using TA-Scope.

**Case report:** We present a case of 35 years old female patient with 5% burns by electric shock injury over the face, right upper back, right ear pinna and left lower limb after which she developed contracture after 2 months of injury. Patient was planned for debridement over the left foot, neck with amputation of right great toe and partial repair of ear pinna with STSG. Pre-operative anaesthetic check-up revealed mouth opening of 2 ½ fingers and MPG 3 with restriction of neck movements.

**Methods and Result:** After getting informed and written consent, she was shifted into the Operation theatre. Patient was pre medicated with Inj. Glycopyrrolate 0.2mg IV, Inj. Emset 4mg IV, Inj. Midazolam 1mg IV. After preoxygenation with 100% oxygen for 3 minutes, Patient is induced with Inj. Propofol 150mg IV + Inj. Atracurium 30mg IV. Patient was intubated orally with 7.5 portex cuffed ET Tube by using TA-Scope.

**Conclusion:** Using TA-Scope proves to be a better modality for smooth intubation in a post burns neck contracture patient.

#### 41. Impact of COVID-19 on Management of Ureteric Colic presenting to a Tertiary Acute Urology Service

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**Background:** The global impact of COVID-19 has affected all specialties. In the UK we have seen government restrictions to limit spread, simplified by the mantra to Stay Home, Protect the NHS and Save Lives.

**Aim:** To identify those diagnosed with Ureteric Colic and report on differences in management before and during the Crisis.

**Methods:** We reviewed all acute urology attendances to a Tertiary Urology centre throughout April 2019 and April 2020 and gathered data from electronic records only.

**Results:** There were 23 radiologically confirmed ureteric colic cases in April 2020 with 1:1 ratio of male to females, compared to 17 cases in April 2019 with 7:1 ratio of men to women. In 2020 the average presenting age was lower at 41 compared to 47 in 2019. The average calculus diameter was 6.7mm (2019) and 6.8mm (2020). In 2020 there was greater reliance on CT-scan as imaging modality of choice over USS. Far more symptomatic calculi were managed conservatively in the first instance in 2020 (87%) compared to 2019 (35.3%).

Table 1: Ureteric colic attendances in April 2020 compared to April 2019

Demographics	Apr19	Apr20
Radiologically confirmed Ureteric Colic cases	17	23
Average Age	47	41
Male:Female Ratio	1.1M:1F	6.7M:1F
Investigations		
Average calculus dia	6.7mm	6.8mm
USS-scanned	41%	8.7%
CT-scanned	64.7%	95.7%
COVID-19 CT changes	13%	
Management		
Conservative	35.3%	87.0%
Ureteroscopy+Laser	47.0%	0.0%

**Discussion:** The significant gender ratio skew may suggest dissimilar effects of health anxiety and non-attendance. We observed a greater tendency to request CT in April 2020, possibly due to social-distancing considerations or COVID-19 diagnostic sensitivity. A 17% fall was seen in the admission rate whilst average admission length fell by half, linked to the significantly limited operative interventions offered in April 2020, resulting in some patients re-attending or having delayed interventions.

**Conclusion:** The GIRFT report calls for definitive management over temporalising measures for urinary calculi. In spite of the pandemic, must we prioritise providing an acute operative urology service to get it right for our patients the first time?"

#### 42. Skin closure technique in reversal of stoma; are we doing the best practice?

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**Background:** The best available evidence showed that purse-string skin closure (PSC) is associated with significantly lower risk of surgical site infections and better patient satisfaction compared with Linear skin closure (LSC) in closure of stomas and should be the closure technique of choice. Aim to perform a multi-centre retrospective study to assess the most common skin closure technique used during stoma reversal in our Trust.

**Methods:** A multicentre retrospective study was conducted in the General surgery departments of two centres (Centre 1 and Centre 2) within a Trust located in the North West of England.

**Results:** Overall, 237 patients were included. The mean age of the included patient was 59 (95% CI 57, 61). In terms of gender, 62% were male (147 out of 237) and 38% were female (90 out of 237). In terms of stoma type, 70% (167 out of 237) underwent reversal of ileostomy and 30% (70 out of 237) underwent reversal of colostomy. PSC technique was used in 16% of patients (39 out of 237) and LSC technique was used in 84% of patients (198 out of 237). In Centre 1 PSC technique was used in 46% of patients (38 out of 83) and LSC technique was used in 54% of patients (45 out of 83); in Centre 2 PSC technique was used in 1% of patients (1 out of 154) and LSC technique was used in 99% of patients (153 out of 154).

Table 1. Baseline characteristics of the included population

	All sites	NMGH	ROH
Number	237	83	154
Age, mean (95% CI)	59 (57, 61)	58 (55, 61)	59 (56, 61)
Male	147 (62%)	50 (60%)	97 (63%)
Female	90 (38%)	33(40%)	57 (37%)
Procedure			
Reversal of ileostomy	167(70%)	53 (64%)	114(74%)
Reversal of colostomy	70 (30%)	30 (36%)	40 (26%)

NMGH: North Manchester General Hospital, ROH: Royal Oldham Hospital, CI: confidence interval

**Discussion:** The best available evidence suggests that PSC should be the skin closure technique of choice in patients undergoing stoma reversal, many surgeons within our trust still use the LSC technique.

**Conclusion:** PSC is associated with significantly lower risk of SSI and better patient satisfaction compared with LSC in closure of stomas and should be the closure technique of choice.

### 43. Large Inguino-Scrotal Cystocele with Bilateral Ureters A Rare Unusual Presentation

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Background: Inguinal bladder hernia (IBH) is a rare condition accounting for 1-5% of all inguinal hernias [1]. We present 79 years male patient presented with shortness of breath with recent discharge by the cardiologist who was treated for heart failure. He also had huge scrotal hernia with renal impairment and significant drop in eGFR. CT scan shows large inguinal hernia containing bladder and back pressure changes causing bilateral hydronephrosis with bilateral ureters entering into the scrotum (Fig 1-5). With worsening renal functions, patient was taken for the- atres immediately with intraoperative finding shows large direct hernia containing bladder and bilateral ureters along with sigmoid colon and lipoma of the cord as the sliding component. Content reduced completely and posterior wall strengthening performed along with modified Lichtenstein repair done. Postoperative period was uneventful and patient was discharged home with follow up with urologist. This is the first case to be reported as urinary bladder with bilateral ureter as the content which will benefit the young surgeons.

Fig 1,2,3 & 4 shows - Right hydronephrosis, Left hydronephrosis with dilated torturous ureters, Distal right and left dilated ureters entering into the scrotum

Discussion: Scrotal cystocele (SC) or IBH was first described by Levine in 1951 [2]. Incidence is high in obese male, age >50 years [3]. Bladder tone weakness, weakness of the surrounding structure of the bladder, weakened abdominopelvic wall has been pathophysiological hypothesized to IBH. The pathognomonic symptoms are two stage micturition i.e double micturition manual compression of scrotal swelling to void urine along with recurrent urinary tracts aids in diagnosis [4]. CT scan is not routinely recommended for hernias but with IBH it is recommended as urological malignancies and variety of other fatal complications are estimated to be 11.2% and 23.5% respectively [5]. Open surgical repair with mesh is the treatment of choice. [3]. However, partial resection of the herniated bladder is performed if there is any evidence of bladder wall necrosis or any other urinary pathology [5].  
Conclusion: Proper preoperative assessment and imaging can help in identification of SC. The general surgeons and urologists must be aware of this rare condition during the surgical repair of inguinal hernia especially sliding hernias.

### 44. Impact of COVID 19 Pandemic in the Management of Acute Cholecystitis

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Background: Acute Cholecystitis is a defined as inflammation of Gallbladder. NICE guidelines recommend early Laparoscopic Cholecystectomy (within one week of presentation) as the first line of management for patients presenting with Acute Cholecystitis. However, During the pandemic surgical societies advised non-operative management of emergency conditions avoiding the risk of viral transmission from affected or undiagnosed patients to health careworkers. This is a retrospective observational study to analyse the impact of Covid 19 Pandemic on the management of Acute cholecystitis.

Methods: Patients admitted with clinical features of Acute cholecystitis and with proven radiological evidence were included in this study. A study period of 4 months was included in total. Group I included study period of 2 Months before the start of the pandemic. Group II included 2 months during the pandemic. Various parameters including Severity, Surgical/Conservative management, Readmissions, 30 day follow up, ITU admissions and COVID infection were analysed.

Results: 66 patients were analysed during this period. Group I had 31 patients and Group II contributed 35 patients. Among the 31 patients in group I, 8 patients underwent Cholecystectomy during indexed admission. Among 35 patients from group II, 3 patients underwent Cholecystectomy during indexed admission. The remaining patients were treated conservatively with antibiotics. 1 patient did not survive the conservative management. 14% of patients in Group II developed COVID 19 following Indexed admission.

Conclusions: Early Laparoscopic cholecystectomy is a recommended for management of Acute Cholecystitis. The results in this study show that 25% of patients from Group I underwent Cholecystectomy during indexed admission and only 8% of patients from Group 2 underwent Cholecystectomy increasing the risk of recurrent presentations and readmission.

### 45. A Service Evaluation on the Consent & Documentation Process for Operative Procedures at the Eastman Dental Hospital

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Background: Valid consent for any operative procedure is an important aspect of NHS care. Within this, it is equally important that the process is recorded correctly & accurately. Although the same forms are used across all dental disciplines in the Eastman Dental Hospital (EDH), there is significant variation about how consent is recorded. As a result, patient safety issues can arise with regards to unclear treatment plans, especially when working within

the wider MDT. Our service evaluation aimed to assess the compliance of the consent process across all dental specialities (Oral surgery, restorative, paediatrics, oral medicine and special care) and create an action plan that standardises them across the disciplines.

**Methods:** Seventy records were retrospectively sampled from all dental specialities between January and February 2020. Clinical notes, written consent and letters to the referrer were assessed on various parameters including procedure specific risks and benefits, options of no treatment and number of consent stages. 1st stage was defined as consent obtained pre-operatively and 2nd stage as confirmation of consent on the day of procedure.

**Results:** Of the clinical notes & letters reviewed, most did not include benefits of the procedure or the option of no treatment (80% & 90% respectively). 50% of procedures had a consent form completed prior, but only 20% of these had confirmation on the day. Specific risks based on the procedure was recorded for 90% of oral surgery patients but ranged between 30-50% in the other departments.

**Conclusion:** In order to follow best practice all departments should move towards obtaining two stage consent for all modalities of treatment. Because of the use of templates, the oral surgery department often scored highest to the assessed criteria. In order to improve compliance in the other disciplines, templates were created for risks, benefits and alternative treatments for all procedures.

#### 46. Ear, Nose & Throat Rapid Access Clinic Referral Audit

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**Introduction:** ENT Rapid Access Clinic at the Manchester Royal infirmary is an urgent access clinic established to see semi-urgent and time sensitive referrals from the Accident and Emergency Department and GP clinics. Follow up patients from otology, rhinology, head & neck clinics and cancer patients are not seen in the ENT rapid access clinic due to the complexity of cases and need for senior input. These are usually deferred to their respective main clinics where consultant input can be easily sought. Inappropriate referrals can lead to increased consultation times, delayed patient management and need for consultant input in an otherwise registrar/ senior house officer led clinic.

**Aim:** To determine whether the introduction of an online referral pathway would help reduce the number of inappropriate Rapid Access clinic referrals.

**Methods:** 1st cycle- All referrals to the ENT Rapid Access Clinic for the month of July 2019 were reviewed and compared to the referral criteria established by the local departmental guidelines. 2nd cycle- An online referral system was introduced after clinical governance approval that enabled doctors in the trust to make an online request that was proof checked by the on-call registrar prior to being booked onto the Rapid Access clinic list.

**Results:** The number of inappropriate referrals from the emergency department had come down by 22%. This was particularly relevant as most referrals in both months are from the A+E (65% in July vs 67% in September).

**Conclusion:** Significant improvement in appropriate referrals from A+E. Since GPs also do send in referrals, they have been instructed to call the ENT team to discuss referrals on a patient to patient basis to streamline referrals as they did not have access to the online referral pathway on the trust site.

#### 47. Common misconceptions amongst doctors in approach, management and follow up of COVID-19 patients

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**Background:** The acute medicine department at Northampton general hospital formed local guidelines based on national recommendations in the light of the COVID pandemic. Our aim was to obtain a baseline assessment of knowledge of new doctors joining the trust, with regards to COVID, in order to tailor training based on the results. **Methods:** A questionnaire was sent out to a mixed group ranging from physicians associates to consultant physicians.

**Results:** Our questionnaire demonstrated an average score of 37.62/85, amongst 26 participants, with the highest being 51/85 and a few of the key aspects have been highlighted below. With regards to presentation, only 11.5% of people were able to identify the incubation period. 42.3% of people wrongly believed high risk patients should be admitted even if they did not meet the admission criteria, instead of following them up in 8-10 days. With respect to in-patient management, 61.5% wrongly identified Troponin as prognostic indicators. Only 46.2% of people knew that administering steroids in mild cases could further increase the duration of symptoms. 42.3% of participants erroneously thought PEEP should be reduced before oxygen for patients being weaned off CPAP. Additionally, 72% of people could not identify the correct FiO2 at which proning should be offered (28%). Regarding discharge and follow-up, 65.4% of participants incorrectly thought therapeutic LMWH should be offered to COVID pneumonia patients admitted to ITU/HDU for one month, 61.5% wrongly believed GP should refer for mood assessment following discharge and 73.1% erroneously believed they should be

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followed up 4-6 weeks after any hospital admission.

Conclusion: To conclude, we demonstrated that there was generally a lack of understanding pertaining to the various aspects of COVID and addressing these points could reduce unnecessary investigations, avoidable admissions, prolonged hospital stay and unnecessary follow-ups.

### **48. HIV risks in the transgender Hijra community of the Indian Sub-continent (specifically India and Pakistan), and potential prevention methods.**

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Background: HIV prevalence in Asia is disproportionately concentrated among high risk groups such as sex workers and injecting drug users at epidemic levels. This Literature review aims to identify risk factors that link Hijras to HIV transmission, as well as suggest some potential interventions. Hijra is a Hindi-Urdu umbrella term given to a self-identifying group of eunuchs, transgender and intersex people in South Asia. This marginalised community is identified as bearing a high HIV burden.

Methods: 10 pieces of original research, 6 studies from Pakistan & 4 from India, were selected via Medline & PubMed. Their self-identified weaknesses and methods were compared. Data was tabulated on key issues that influence HIV transmission.

Results: Despite regional variation, the literature highlighted elevated HIV transmission due to a lack of HIV awareness & education, low contraception use & sex work. Substance abuse and a wide sex network are also major contributing factors. Disturbingly, 40% of respondents in one study claimed they had non-consensual/forced sex. Hijras were more likely to prostitute due to poverty & lack of job opportunities, at 78.6% vs 0.15% (Heterosexual men) and 2.2% (MSM).

Conclusions: It is important to note a discrepancy on an official level. While India's National AIDS Control Organization includes Hijras in the MSM category, the government assigns them as female for administrative purposes, thereby hindering community specific interventions. STI education & medical care must be improved. 25.5 % thought sharing a meal could spread HIV. About half of Hijras visited a physician after STI symptoms, but less than 5% of those were in government facilities. Also, only 0.6% of condoms were government sourced. It is evident that social stigma & discrimination (i.e. 69% rejected by family by age 21), renders this population vulnerable to risk taking behaviours & disease blame.

### **49. To Study the effects Of Oral Lycopene in Cases of Oral Submucous Fibrosis: A Prospective, Observational Study.**

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Background: Oral submucous fibrosis (OSMF) is a chronic insidious process characterized by juxta epithelial deposition of fibrous tissue in the oral cavity and pharynx. The disease is widely seen in India due to habit of betel-nut chewing. Oral submucous fibrosis (OSF) is the chronic debilitating and crippling condition of oral mucosa. It is potentially malignant disorder which is associated mainly with the use of arecanut in various forms. It is characterised by inflammation and progressive fibrosis of the submucosal tissue. The prevalence of osmf in India is 6.3%.

Methodology: In this study 8 adult individuals having history of consumption of betel leaves and areca nut with decreased mouth opening (up to at least 3 to 2.5 finger mouth opening)and intolerance to spicy foods who attended ENT opd were given treatment with tablet lycored 8mg in BD dosage and were advised to quit the habit and were taught mouth opening exercises. Close follow up for twelve weeks was done with measuring of improvement in mouth opening via Vernier callipers. Results were measured by appropriate statistical tests.

Results: Results showed that there was significant improvement with therapy of lycopene along with mouth opening exercises. The results showed significant improvement in mouth opening over the course of therapy along with significant improvement in intolerance to spicy foods and lessening of burning sensation in mouth.

Conclusions: Early detection and treatment accompanied with mouth opening exercises and cessation of habits will significantly result in near normal reversal of changes in osmf.

### **50. An audit of platelet monitoring are all patients with platelets greater than 450 being followed up as per the NICE suspected cancer guidelines 2015.**

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Background: The NICE suspected cancer guidelines 2015 recognised elevated platelet count as a reason for consideration of referral for suspected cancer. Thrombocytopenia has been linked to the LEGO cancers (lung, endometrium, gastric and oesophageal.) A BJGP study showed elevated platelet count in men provided an 11.6% positive predictive value of cancer with a positive predictor of 6.5% in women. Therefore, a guideline for management of incidentally found thrombocytopenia was implemented with the aim of ensuring a robust monitoring and action plan was followed with appropriate monitor and referral to cancer services if required.

Method: A search of practice population was run identifying patients with thrombocytopenia set as >450. Each patient from the data set was individually assessed for exclusion criteria, medical reasons explaining their elevated platelet count and to see if NICE guidelines had been followed regarding investigation/referral. The audit was then repeated following implementation of the thrombocytopenia practice-based guideline to see if there was

improvement to clinical practice.

Results: There was a 46% improvement in appropriate investigation of patients with thrombocytopenia following implementation of the practice-based guideline with 75% of patients appropriately investigated and referred. It is hoped that this improvement could identify early malignancy in our patient and encourages GPs and nurse practitioners continue to recognise elevated platelet count as a strong positive predictor of malignancy.

## 51. Accuracy of Information on Discharge Letters in General Surgery.

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Background: It has been observed that routinely collected discharge letters contain insufficient details in terms of procedures, diagnoses and co-morbidities. Inaccurate discharge letters can negatively affect the care of patients after discharging due to inappropriate communications between the secondary and primary care. Discharge letters are also commonly used by coders and inaccurate record of diagnoses, procedures and co-morbidities can result in inaccurate coding which have implications in terms of research outcomes and hospitalisation costs. We aimed to determine the baseline sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) of diagnoses, procedures and co-morbidities in discharge letters in General Surgery setting. We aimed to develop an action plan following the baseline audit and aimed to repeat the audit after implementation of action plan.

Methods: Upon gaining approval from clinical audit department, for the baseline audit 100 patients aged more than 18 who were admitted to our General Surgical Department in September 2017 were identified. For the re-audit, 101 patients aged more than 18 who were admitted to our General Surgical Department in April 2019 were identified.

Results: Results improved on Re-audit. The comparison is depicted in the table.

Table 2. Accuracy, sensitivity, specificity, PPV and NPV of primary diagnoses, procedures, and co-morbidities (Re-audit)

	TP (95% CI)		FP (95% CI)		TN (95% CI)	FN PPV (95% CI)		Accuracy NPV (95% CI)	
Primary Diagnosis	79	0	22	0	100%	100%	100%	100%	100%
Primary Procedure	79	0	22	0	100%	100%	100%	100%	100%
All co-morbidities	63	0	1038	10	99%	86%	100%	100%	99%
Hypertension	20	0	78	3	97%	87%	100%	100%	96%
IHD	9	0	92	0	100%	100%	100%	100%	100%
MI	3	0	98	0	100%	100%	100%	100%	100%
Heart failure	1	0	100	0	100%	100%	100%	100%	100%
Asthma	4	0	97	0	100%	100%	100%	100%	100%
COPD	5	0	96	0	100%	100%	100%	100%	100%
Stroke	2	0	98	1	99%	67%	100%	100%	99%
TIA	2	0	98	1	99%	67%	100%	100%	99%
Diabetes mellitus	8	0	91	2	98%	80%	100%	100%	98%
Hyperlipidaemia	6	0	92	3	97%	67%	100%	100%	97%
CKD	3	0	98	0	100%	100%	100%	100%	100%

PPV: positive predictive value; NPV: negative predictive value; TP: true positive; FP: false positive; TN: true negative; FN: false negative; IHD: Ischaemic heart disease, MI: myocardial infarction; COPD: chronic obstructive pulmonary disease; TIA: transient ischaemic attack; CKD: chronic kidney disease; CI: confidence interval

Discussion: The reported outcomes of our study and analysis should be viewed and interpreted in the context of inherent limitations. Our study was conducted in a single centre which may affect generalized ability of our findings. Moreover, we only considered 11 comorbidities in: subjecting our results to potential selection bias.

Conclusion: Efficient methods of exploring patients' comorbidities during surgical clerking and documenting them in discharge letters should be incorporated into.

## **52. Electronic Documentation of Informed Consent According to the Montgomery Judgement in the Emergency General Surgery Unit Setting**

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**Background:** Since the Montgomery Judgement in 2015, the consent process has been refined to include material risks. This audit aims to compare decision-making documentation to the standards outlined in the Royal College of Surgeons of England's Consent: Supported Decision-Making document. We set an initial target of 25% compliance with RCSEng benchmark consent quality standards during the first phase of our audit.

**Methods:** A total of 116 operations performed in our tertiary Emergency General Surgery Unit in March 2020 were identified. Consent documentation was assessed for compliance with RCSEng benchmark standards. Electronic consent templates specific to diagnostic laparoscopic appendectomy, incision and drainage of abscess and of perianal abscess were then introduced to increase compliance. The templates were designed to include name, age, occupation where applicable, material risks and allows for additional risks discussed to be added. Interventions included an audit presentation at the local mortality and morbidity meeting, email reminders, focused teaching to each individual and incorporating it in the induction handbook in August 2020. A re-audit was performed from 11/7/2020-12/8/2020 for the three specific operations to assess the effect of this intervention, and Fisher exact test was used to assess its statistical significance.

**Results:** In the first audit period, no consent processes included electronic documentation in adherence with RCSEng recommendations. After consent template implementation, our re-audit showed increased compliance of 25.7% ( $p=0.0001$ ).

**Discussion/Conclusion:** Electronic consent templates significantly improved compliance with our audit standard across our three most commonly performed emergency surgical procedures. Unfortunately, a signature in the consent form is not equivalent to a valid informed consent and would not be classified as legitimate evidence to stand in the court of law. The next phase of planned interventions includes an educational session with a medico-legal lawyer, additional consent templates as part of a multicycle audit process, departmental education and further email reminders.

## **53. COVID testing in suburban India Novel experiences in a 2020 pregnancy.**

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**Background:** To summarize the experiences of healthy pregnant women undergoing COVID testing before admission for delivery at private hospitals in Bengaluru, India.

**Methods:** Qualitative samples through surveys, 5 interviews

and questionnaires at point of admission and before discharge were collected from 40 pregnant women. Medical history of the patient was obtained via patient charts and previous medical records. The results were summarized in a narrative form, detailed using visuals, charts and tables. **Results:** Of 40 surveyed, 38 reported a decrease in satisfaction of ante natal care, compared to previous experiences at the same hospital. 95% of women stated they were more anxious about their delivery due to the pandemic. 70% of women were uneasy about the additional COVID test requirement prior to delivery, sighting physical and mental discomfort, perceived exposure to the virus as a result of testing in public areas, and additional cost of the test, which was born by the patients privately. 4 patients reported additional complaints such as trauma to the nasal passage during test causing epistaxis and headache.

**Conclusion:** COVID testing has become a mandatory screening test prior to admission for delivery or Caesarean section in major maternity centres in suburban India. The rationale behind this is to prevent spread of COVID in labour wards, by ensuring no COVID positive pregnant patients are admitted for safe confinement without proper isolation measures. By detailing the experiences of COVID testing, which was mostly a negative one, the study hopes to diminish the need for compulsory testing and instead proposes alternative means of confirming COVID negative status such as contact tracing and symptomatic diagnosis. To alleviate fears, home COVID sample testing could be introduced instead of on-spot tests.

## **54. How novel is Dapagliflozin?**

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**Introduction:** Diabetes mellitus is a challenging disease of the 21st century, and the mortality rate due to this insidious disease is increasing worldwide in spite of availability of effective oral hypoglycaemic agents. Satisfactory management of glycaemic control in patients affected with type 2 diabetes mellitus (T2DM) remains a major clinical challenge. Identification of potential pharmacological target sites is therefore continuing as an integral part of the diabetes research. Dapagliflozin is one of the novel class of glucose-lowering agents known as sodium-glucose co-transporter-2 (SGLT2) inhibitors and is used in the treatment of patients with type 2 diabetes. Diabetes Ketoacidosis (DKA) is defined by the triad of hyperglycaemia, anion-gap acidosis, and increased plasma ketones. Euglycemic DKA is defined as DKA without hyperglycaemia. This can be caused by SGLT2 inhibitors. Euglycemic diabetes ketoacidosis is a rare complication that occurs in patient taking SGLT2 inhibitors. Here we describe a patient with euglycemic DKA.

**Case presentation:** This 55-year-old gentleman has past medical history of obesity, type 2 diabetes (since age of 27 yrs.), hypercholesterolemia, hypertension and osteoarthritis. He recently suffered from myocardial infarction discharged

2 days back and presented to emergency department with central chest pain radiating to both arms in the morning. ECG reported as normal and venous blood gas showed pH- 7.10, pCO<sub>2</sub>- 3.84, pO<sub>2</sub>- 5.54, glucose- 10, lactate-1.8, bicarbonate- 8.5, base excess 19.2, anion gap 25. Urine dipstick revealed Glucose +2, ketone +4, pH 5. He was diagnosed to be suffering from euglycemic diabetic ketoacidosis & treated as per protocol. When he recovered from DKA his insulin was optimised and dapagliflozin was stopped as a part of discharge planning and followed up in our diabetes clinic.

Discussion: In patients on dapagliflozin, cases of euglycemic diabetes ketoacidosis are increasingly being reported. Diagnosis of euglycemic diabetes ketoacidosis can be easily missed in the emergency department due to absence of marked hyperglycaemia, often leading to delayed diagnosis and treatment. Mechanism of action of dapagliflozin is by selectively inhibiting the transporter protein SGLT2 in the renal proximal, which prevents glucose reabsorption and subsequently induces the elimination of filtered glucose via urine, the process is known as glycosuria which reduces the blood glucose levels. SGLT-2 inhibitors should be initiated by a clinician cautiously and only after adequately weighing the risks and benefits of treatment. It is advisable to do urine test on patient taking dapagliflozin on admission which will help diagnose euglycemic DKA early. To prevent this potentially dangerous complication, patients taking SGLT2 inhibitors who become ill should discontinue the medication, undergo ketone evaluation, and start basal insulin, if ketones are positive. In addition, patients should be educated to stop their SGLT2 inhibitor at least 1 week prior to elective procedures.

### 55. Audit of adrenal crisis management at University Hospitals Leicester NHS Trust

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Background: Adrenal crisis is a life-threatening emergency with an incidence of 5-10 adrenal crises/100 patient-years with mortality around 0.5/100 patient-years. Audit of inpatient adrenal crisis management was undertaken in line with Society for Endocrinology (SFE) guidance 2016 (Trust audit No: 9763).

Methods: Retrospective evaluation of electronic and paper case records of 2 years (January 2017 to December 2018). Results: Over 2-year period, 34 adrenal crises episodes in 25 patients (n=25; 13 M: 14 F) was identified. Mean age= 50 years; mean length of stay= 7 days. Hyponatraemia noted in 13/25 (52%); hyperkalaemia in 11/25 (44%). 19/25 (72%) received intravenous hydrocortisone; 25/25 (100%) steroid doses doubled. 24/25 (96%) were under Endocrine outpatient care; 12/25 (48%) received endocrine inpatient input. 2/25 (8%) died of malignancy; none from adrenal crisis.

Table SFE guidance	Compliance
IV Hydrocortisone	18/25 (72%)
IV fluids	23/25 (92%)
Endocrine input	12/25 (48%)
Tapering steroid dose instruction	23/25 (92%)
Endocrinology OPD follow-up	25/25 (100%)
Emergency hydrocortisone kit	21/25 (84%)
Medic-alert device advice	5/25 (20%)
Steroid Emergency Card	21/25 (84%)
Patient education leaflets, web	0% recorded in notes
Doubling of steroids	25/25 (100%)

Discussion: Although compliant in majority of measures, suboptimal management was noted in providing inpatient endocrine input, patient information dissemination, medic alert advice etc. Following interventions were undertaken: Adrenal crisis Trust guideline in accordance with SFE was introduced (1). Electronic prescribing alert of intravenous hydrocortisone and doubling of steroids was inserted to remind clinicians, similar to Newcastle upon Tyne model (2). Electronic alert of steroid-dependent patients upon admission is currently underway.

Learning point: We feel that clinician awareness is vital for optimal management of adrenal crisis. Electronic prescription alert of emergency steroid management as well as electronic steroid dependent patient alert at the point of admission will aid reduce morbidity and potentially mortality.

### 56. Exploring trends in hand trauma presentation, treatment and consequent service development implications

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Background: Statistics show that more than 50% of the population will sustain animal bites in their lifetime. Although structures injured in animal bites rarely require repair, envisaging the extent of repair required from clinical examination alone is difficult. This is compounded by the increased severity of the animal bites referred to secondary care. Accurate diagnosis of the extent of bite damage is important to decrease the burden of infection. As part of the initial diagnosis, surgical explorations are commonly performed. The results of these are often negative - costing valuable theatre time. With a 6.5% national increase in dog bite admissions from 2013-2014, the surgical management of animal bites places an increasing burden on plastic surgery services. This study aims to retrospectively compare trends in animal bites to the hand to predict how service provision will need to change in the future.

Methods: A six-week retrospective service evaluation exploring trends in hand animal bite injuries was conducted in the Plastic Surgery Department in Pinderfields General Hospital (PGH). 120 records were analysed covering a period from March to May in the years 2017, 2018, and 2019.

Results: 95 patients presented to PGH with hand animal

bites of which 64% were caused by dogs, 18% by cats, 14% by humans and 4% by other animals. Of these, 69% of patients received at least one exploration, but only four had a structural injury and one required a structural repair. Conclusions: Most surgical explorations found no structures to be formally repaired; however, the procedure was also used to debride devitalised tissue. Few patients had subsequent infections and trips to theatre evidencing the effectiveness of current infection prevention measures and speeding return to function. Regional anaesthetics make the treatment of this patient group more efficient with shorter stays in hospital.

### **57. Utility of English and Hindi animation to increase antibiotic education in a Southall primary care setting**

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Background: Research has shown antibiotic education is necessary, especially in deprived areas and Asian populations in the UK- 38% surveyed believed antibiotics were effective against common colds, despite leaflet-based public health campaigns. We aimed to increase antibiotic education, through an animation in Hindi and English, creating a unique and engaging resource adapted around the language barrier in the Southall primary care patient population.

Methods/Design: A survey about antibiotic use and antibiotic resistance (AR), was distributed to 31 patients in a Southall GP waiting room, exploring baseline knowledge. On another day, the video was played, then the same survey was distributed to 23 patients. 65% preferred watching in Hindi over English. Chi-Squared tests were done.

Results: Patients were stratified based on ability to define antibiotics: Yes- if accurate definition, maybe; if they thought antibiotics treated viral +/- bacterial infection and No for other responses. Post-video, the proportion of people significantly increased in the Yes group ( $p=0.0389$ ), significantly decreased in May be ( $p=0.00267$ ) and remained unchanged in No. ~20% accurately defined AR, which remained unchanged post-video. Patients watching in English showed greater improvement in understanding antibiotic uses and AR compared to pre-video baseline, than those watching in Hindi.

Discussion and Conclusions: This suggests the video helped clear misconceptions on antibiotics for those with some knowledge. Further education on AR is needed. Lower improvement in those watching in Hindi could be due to Punjabi being their first language, despite preferring Hindi to English, highlighting the importance of adapting communication to a patient's most preferred language when explaining complex concepts e.g. AR. Limitations of this study include: confounding factors e.g. age and education, pre-video population was not stratified by language preference, and two separate samples were surveyed pre and post video. This study showed videos in patient-preferred languages are effective in antibiotic education.

### **58. Retrospective observational study of medication compliance of patients with Parkinson's Disease admitted to a District General Hospital**

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Background: Parkinson's Disease is a progressive condition characterised by motor symptoms (tremor, rigidity, bradykinesia) and non- motor symptoms (anosmia, insomnia, depression, anxiety and memory impairment). With disease progression, timely administration of medications forms the cornerstone of management and symptom control. The purpose of this retrospective, observational study was to discern our success in giving timely medications, reasons behind delays of medications and proper documentation of medications. This was a follow up to a similar observational study implemented previously for service quality improvement.

Methods: All Parkinson's patient admitted to hospital during a 6-month period from January 2020 - June 2020 had their medication chart reviewed to assess the objectives. Results: Sample size was 45 due to decrease in patient attendance following the COVID19 pandemic. 42 of the 45 patients assessed had their medications documented. 1 patient had been taken off medication as she was bedbound and another had had it stopped after specialist review which is why they had not been written up. Therefore 44 of the patients in total (97.8%) were deemed to have proper documentation of medications. 2.2% of the patients ( $n=1$ ) did not have the dosage of the medications documented. Of the 22 patients (48.9%) who missed doses, the commonest cause (36.36%) was unavailability of the prescribed medication. Patients refusal to take medications, reduced alertness, unclear prescription and the patient being kept nil by mouth at the discretion of the medical team each accounted for 13.64% ( $n=3$ ).

Conclusion: The main reason identified behind missed doses in this study was difficulty in finding the prescribed medication which was similar to the previous study although there was an improvement in overall numbers. As a result, a protocol was created enabling clinicians and nurses to prescribe alternative medications thereby ensuring better medication compliance.

### **59. CARDIOVID-19: An investigation into the incidence of cardiac abnormalities in COVID-19 positive inpatients at the Royal Surrey**

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Background: The emergence of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and COVID-19 pandemic has placed a significant strain on healthcare provision and economies worldwide. Recent studies have demonstrated a trend of cardiac abnormalities in COV-

ID-19 patients including arrhythmias, myocarditis, and acute or latent onset myocardial damage. A number of mechanisms have been proposed, including acute onset hypoxia, inflammation, and electrolyte disturbance. Our study aimed to determine the presence of cardiac and electrolyte abnormalities in patients admitted with COVID-19 infection.

**Methods:** Retrospective analysis of COVID-19 positive admissions during March 2020 at the Royal Surrey NHS Foundation Trust. Data was collected using patient records, discharge summaries and serological markers available online.

**Results:** Data gathered from 98 patients (57 males, 41 females, aged 24-99 years, median age 71, 81 of a white demographic). Average duration of 8 days between symptom onset and admission. 13 presented with cardiac symptomology including atrial fibrillation (n=6) and chest related pain or tightness (n=7). 36 cardiac disturbances were seen during admission, 10 of which were significant including atrial fibrillation n=8, ventricular tachycardia n=1, NSTEMI=1. 66 patients demonstrated some form of electrolyte abnormality, most commonly hypophosphatemia (n=34) and hypokalaemia (n=25). A Chi2 test showed that rhythm disturbances were positively correlated with electrolyte imbalances (p=0.029).

**Conclusion:** Our investigation found evidence of cardiac abnormalities and electrolyte disturbances within a cohort of COVID-19 inpatients. There was a positive correlation between rhythm disturbances and electrolyte imbalance, and expectedly, hypoxia was also well established. It is likely that these factors play a role in the pathogenesis of cardiac abnormalities. However, the extent to which SARS-CoV-2 increases risk of cardiac events remains uncertain. Data comparison to a control non-Covid-19 group would be useful to explore trends.

### 60. Atypical Presentation of Invasive Mole in a Young Female.

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**Background:** Gestational trophoblastic disease encompasses a spectrum of tumorlike conditions characterized by proliferation of either villous or trophoblastic components. Major disorder of this type are associated with an increased risk of invasive mole or choriocarcinoma. The incidence of about 1 in 2000 pregnancies has been reported in south east Asia. The term invasive mole (Chorioadenoma destruens) is an infiltrative lesion in which chorionic villi penetrate deeply the myometrium and/or its blood vessels. In some instances, the chorionic villi may metastasize to distant sites.

**Case Report:** A 36-year-old female was admitted to tertiary care hospital with history of continuous bleeding per vaginum since 10 days. Diagnostic suction and evacuation done on 5/08/2020 revealed hydatidiform mole. Ultrasonography report suggestive of retained products, with arteriovenous malformation? excessive trophoblastic myometrial invasion. On admission serum  $\beta$ -hcg level was

65548 mIU/ml after which patient underwent abdominal hysterectomy. Final histopathology report confirms invasive hydatidiform mole. After post-operative day 7 serum  $\beta$ -hcg level has decreased from initial level to 2525 mIU/ml. Patient was advised to review in OPD after 2 weeks along with  $\beta$ -hcg value which has decreased to 760 mIU/ml.

**Methods:** A cut- open hysterectomy specimen was received measuring 11.5x8.5x4.5cm. There is presence of invading cavity lesion in the wall of uterus measuring 2.5cm in diameter it was then processed, embedded in paraffin, stained by haematoxylin and eosin. Microscopically it showed presence of chorionic villi and atypical trophoblastic cells infiltrating into myometrial tissue which confirms invasive hydatidiform mole.

**Conclusions:** Early diagnosis by ultrasound and histopathological examination is the key to avoid associated complications such as acute hemoperitoneum, perforation, metastasis, hyperthyroidism and pre-eclampsia. The best treatment option is chemotherapy and in patients where fertility is not of consideration, hysterectomy can be done.

### 61. A survey of COVID-19 and its toll on frontline health-care workers mental wellbeing

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**Background:** The COVID-19 pandemic put immense pressure on NHS frontline staff with many having to work outside of their normal roles to support the critical care workload. This was likely to have an impact on staff wellbeing. We conducted a wellbeing survey of various different staff involved with direct clinical care of COVID-19 patients.

**Methods:** During April 2020 a survey was distributed using Google forms which sought to assess the wellbeing of staff during the peak of the pandemic. Staff surveyed included junior doctors of all grades and specialities, critical care nurses, consultant anaesthetists and intensivists, theatre nurses and operating department practitioners.

**Results:** There were 285 responses. Most felt well supported by senior colleagues and safe in the PPE provided but admitted to some anxiety when first working with COVID-19 patients. 90% of staff showed at least one sign of reduced wellbeing. The average Warwick Edinburgh mental wellbeing short score was 22.4 suggesting staff are at risk or do have reduced wellbeing, with 10% having severely affected wellbeing. Over one third felt it had a negative impact on their mental health. Wellbeing scores were the lowest in the theatre staff that had been redeployed to support critical care. Very few staff had accessed the wellbeing resources available in the Trust. The single word emotional response showed seven main categories: happy, sad, angry, fearful, bad, surprised and disgusted (see figure). The biggest positive responses were the increased teamwork and new learning.

**Conclusion:** Overall the pandemic has had a negative impact on wellbeing particularly in staff redeployed to support other areas and a significant proportion felt it had

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impacted on their mental health. As we adapt to this new way of working it is extremely important to monitor and improve wellbeing amongst all members of the clinical team.

### **62. WhatsApp Doc: "An intervention to improve healthcare in remote areas"**

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**Background:** The onset of COVID-19 has channelled a large portion of medical personnel and resources towards COVID-19 related illness and prevention. As a result, there are fewer resources available for the general public to access regular health services. This disparity is even more evident in remote areas in India, such as the North Eastern state of Manipur, where the study was conducted.

**Methodology:** Telehealth consulting platforms offer a viable solution to bridge this gap. However, most require payment which individuals from vulnerable populations will not be able to afford given income cessation due to the pandemic. Hence, a simple social media approach using Whatsapp as a platform of conducting telehealth consultations was implemented.

**Results:** A survey was done to measure the effectiveness of the whatsapp consultations and compared with existing data from in-person consultations.

More compliance was seen for follow up consultations via telehealth than in person. There was no decrease in the perceived level of care by the patient or difficulty in following instructions relayed through telehealth.

**Conclusions:** With the advent of digitalisation in India, many people even in small towns have access to a smart phone with internet connection for the video calls. Telehealth offers a viable solution for healthcare access, specifically in remote areas.

### **63. Post-operative LA instruction satisfaction within the Eastman Oral Surgery department: A service evaluation**

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**Background:** Patient satisfaction is an important and sometimes undervalued aspect of NHS care. Postoperative education plays a key role in this, as it improves patient insight, experience and helps to manage expectations regarding recovery and complications. Postoperative education can either be delivered verbally or with written instructions prior to discharge. Given the variety of clinical experience within a multidisciplinary team, there is some variability in the quality of information received by patients. This service evaluation aimed to assess whether patients were given satisfactory post-operative instructions after minor operative procedures at the Eastman dental Hospital.

**Methods:** Fifty patients in January 2020 were called 5-10 days postoperatively and asked questions following a set proforma. This included recording their symptoms post procedure, the format of advice that was given, and if the information was adequate to deal with each specific symptom.

**Results:** 92% of patients reported receiving verbal & written feedback. Pain & swelling were the most common reported symptoms (50% & 24% respectively). 92% declared the information received was adequate for symptom management. 20% said they would benefit from more information on keeping the area clean. Overall, 94% of respondents had a positive experience with the department (rated 7+/10).

\*Rated 7+/10

#### **Conclusion**

The majority of patients found the information given to them was adequate & deemed their overall experience satisfactory or above. Pain, swelling & bleeding sockets were the most commonly symptoms reported, which are expected findings post procedure. Further improvements for the service include documentation of the format of postoperative instructions in the patient notes (verbal or written) and including pictures in the written patient information leaflets.

### **64. Psychological Impact of COVID-19 on Junior doctors**

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**Background:** COVID-19 has impacted health-care systems globally. Being frontline staff, junior doctors were laboriously involved during these uncertain periods, with limited resources available. Hence, we surveyed junior doctors in England and Wales to evaluate the psychological impact of the pandemic on them.

**Methods:** Online survey was created using Google forms and the survey link was shared through social media networks. Specific questions were formulated after careful thought process along with free text options to capture the broader aspects.

**Results:** A total of 88 doctors from 14 cities; 56% foundation grades, 30% core grades and 15% registrars responded to the survey. 51% of responders were females, 85% were below 35 years of age of which 44% were between 25-30 years.

12% were living with high-risk family members and 3% relocated to protect their family members. 27% identified themselves as high-risk. 55% covered high-risk or mix of high-risk COVID areas. 43% were anxious about self, 37% about colleagues and 87% about family members. Approach to work became more stressful for 56%, while only 16% reported no change. Increased workload, fear of contracting infection and fear of transmitting infection were the

triggers for change in the approach. 47% reported physical and psychological exhaustion. 51% reported burnout, 41% frustration and 33% reported undue exhaustion as their psychological impact. The news of colleague's infection increased fear (42%) and exaggerated anxiety (28%).

63% reported lack of availability of appropriate PPE. 44% developed either clinical or antibody positive infection. 6 people received mental health support, 6 received physical health support and 9 received well-being support.

**Conclusions:** There was significant psychological impact on junior doctors due to the pandemic. Despite this, support for them was inadequate. Stress, anxiety and exhaustion are the themes high on the list at the beginning of second wave.

### **65. A study to determine the prevalence of risk factors during pregnancy and to evaluate the effectiveness of structured teaching programme on prevention & management of risk factors in pregnancy in terms of knowledge and practice of antenatal mothers in R.H.T.C Najafgarh, Delhi**

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**Background:** Risk factors during pregnancy can occur anytime before, during or after delivery. Recognizing the risk factors during pregnancy both by mother and health care team is an important aspect of maternity care. The WHO has reported that globally almost 810 women per lakh live birth die daily as a result of complications during antenatal period and childbirth.

**Aims:** 1) To assess the prevalence of risk factor among the antenatal mothers. 2) To assess and evaluate the effectiveness of structured teaching programme in terms of knowledge and practice among antenatal mothers with risk factor.

**Methodology:** The research approach was Quantitative with descriptive survey design. A structured risk factor assessment proforma was administered to assess the prevalence of risk factors during pregnancy, and interview scheduled was organized to assess the knowledge and practice. The study was conducted from 18th December 2019 to 12th January 2020 at Rural Health Teaching Centre, Najafgarh. The 105 antenatal mothers were selected by purposive sampling technique

**Major Findings:** The findings of the study include Majority of antenatal mothers (51 %) belongs to age group of 20-25yrs. (65%) were in mild risk category. The prevalence of risk factors was found i.e. anaemia (30%), APH (9%) and risk of pre-eclampsia and GDM (4%), Study shows that there was considerable gain in knowledge and improvement in practices after administration of structured teaching programme. Data also shows that there was positive correlation ( $r = 0.5$ ) between the post-test knowledge score post- test practice score

**Conclusion:** It is concluded that Majority (83%) of mother were in mild to moderate risk category out of which. (65%) were in mild risk category. Study shows that there was con-

siderable gain in knowledge and improvement in practices after administration of structured teaching programme.

### **66. Covid 19 and NHS doctors with overseas families**

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**Introduction:** Spread of COVID-19 pandemic from its initial outbreak in Wuhan in Dec 2019 has now become the biggest peace time emergency requiring extraordinary restructuring of healthcare delivery. For the health care workers potential inability to help or support their own family is an additional burden. The NHS has a significant proportion of doctors with overseas families.

**Methods:** An open access survey was designed focused on doctors with overseas families and responses gathered over 2 weeks period.

**Results:** The results show that the restrictions due to COVID have had a great impact and need for urgent measures by the respondent doctors. It also emphasized significant personal interactions between their family units. The responses suggested that COVID 19 is a life changing experience for some including their career and some may have no local support.

**Conclusion:** This survey raises awareness about the additional dimension of stress for medical colleagues, and raises a small but real possibility of impact on medical workforce retention. It also shows that that one's health and quality time with the family have become even more relevant. Some of the findings could be transferable to any doctors with global family connections. The scale and the gloomy nature of the unprecedented pandemic with variable management strategies perhaps has exposed the fears and pressures of international doctors, which are otherwise rarely expressed. A further survey would be required to analyse the support the doctors enjoy or perceive as a professional.

Q1 Do you have any close relatives living in other countries to whom you provide significant other support or visit them regularly? Choose one of the first 4 and the 5th if applicable

Q2 How often do you meet them in person?

Q3 Did you have to make changes to your travel plans due to COVID-19 and what was the financial loss that won't be covered by insurance etc?

Q4 Due to lockdown or possibility of one, what new arrangements did you need to develop for them? Choose all applicable

Q5 Which of the following describes their (relatives') current situation? (chose all applicable)

Q6 If there is any crisis regarding their personal health or other needs, and as you may not be able to travel, which of the following apply to you.

Q7 Who have you discussed your concerns with or have felt reassured by?

Q8 A list of issues expressed through social media are listed below. Which of these have affected you? In the comment box, please identify the 3 most important ones for you.

### **67. Learning lessons and improving services - An audit on case identification and presentation for Northern Ireland Plastic Surgery morbidity and mortality meetings**

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**Background:** The Royal College of Surgeons (RCS) A guide to good practice, Morbidity and mortality meetings gives standards on case collection and presentation at morbidity and mortality (M+M) meetings.

**Aims:** The aim of the audit was to evaluate the Northern Ireland (NI) plastic surgery services effectiveness at identifying cases, logging these appropriately, and the format of presentation at meetings. Through education, standardisation, and re-audit the overall aim was to improve adherence to RCS standards.

**Results:** Over a 2month period no cases were collected via the established electronic log system, instead being collected by a number of informal methods. Additionally there was no previous standardisation for case presentation. These findings were presented at the NI Plastic Surgery M+M meeting and advice disseminated regarding electronic recording of cases. An additional electronic logging system was established for the Burns unit. A standardised template for presentation was also proposed. The subsequent 2month period was audited using the same standards. Over the re-audited period, all morbidity and mortality cases were collected correctly via the electronic logs and were presented in a standardised format at meetings using the proposed template.

**Discussion and Conclusions:** Morbidity and mortality meetings represent an opportunity to learn valuable lessons from outcomes to improve services and patient outcomes. The usefulness of such meetings is determined by adequate case identification, good presentation, and an open forum for discussion. Simple interventions and education can improve effectiveness of such meetings.

### **68. Echocardiographic presentations of Rheumatic heart disease cases in and around Kanpur, India.**

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**Background:** Rheumatic heart disease (RHD), the only long-term sequelae of acute rheumatic fever (ARF), continues relentlessly among middle-income and low-income countries and in some industrialized world indigenous communities. This study aims to identify all possible RHD presentations using echocardiography, know the percentage involvement of different valves, and study the effectiveness of echocardiography in picking up subclinical or latent RHD cases. Echocardiography raises the possibility that people with previously undiagnosed RHD, including those without a known ARF history, can be diagnosed,

and secondary prophylaxis started at an earlier stage of the illness than previously possible, potentially reducing morbidity and mortality.

**Methods:** This study was a cross-sectional study with a sample size of 350 RHD cases conducted in the Department of Medicine at Ganesh Shankar Vidyarthi Memorial Medical College, Kanpur from December 2017 to March 2020.

**Results:** Our study showed that the female sex was predominantly affected (57.14%). The study found that females develop RHD at an earlier age compared to males. 68.5% of females develop RHD by the age of 25 yrs. In contrast, only 38% of males develop RHD by this age. This difference was statistically significant (P-Value was <0.0001). Pure MS was the most common lesion found (70.29%). In 350 RHD cases, MS/MR was the most common mixed valvular lesion present (4.00%). In 350 RHD cases, Mitral Valve was the most common valve to be affected (78.86%). At RHD diagnosis, congestive heart failure was the most common complication found at diagnosis (4.00 %). In 350 RHD patients, a history of Rheumatic fever was present only in 41.71 % of patients.

**Conclusion:** This study suggests that echocardiography-based screening for RHD is practicable and allows rapid detection of clinical and latent RHD cases so that secondary prophylaxis can be started at an earlier stage of the illness than previously possible, reducing morbidity and mortality.

### **69. Compliance with General Surgery Hot Clinic Standards and Criteria**

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**Background:** General Surgery Hot Clinic: facilitates investigating and management of patients in ambulatory setting and is associated with significant reductions in admission rates and inpatient beds. Aims to perform a prospective baseline audit to assess on average how many patients are seen in the General Surgery Hot Clinic and what proportion of Hot Clinic patients meet the criteria for ambulatory care and also to implement a specific criteria-based guideline and monitoring programme to improve the compliance.

**Methods:** The audit included three cycles: baseline audit (15 days between 1 October 2018 and 15 October 2018), first re-audit (15 days between 29 October 2018 and 12 November 2018), and second re-audit (15 days between 13 November 2018 and 27 November 2018). During each cycle, all consecutive patients who attended the Hot Clinic were included.

**Results:** Overall, 112 patients were seen in Hot clinic during baseline audit. During the baseline audit, only 19% of patients had been seen by the on-call General Surgery team prior to Hot Clinic; this improved to 100% in the first re-audit (P < 0.0001) and remained 100% in the second re-audit. During the baseline audit, only 19% of patients

met the eligibility criteria for review in Hot Clinic; this improved to 100% in the first re-audit ( $P < 0.0001$ ) and remained 100% in the second re-audit ( $P < 0.0001$ )  
 Discussion: Existence of a criteria-based guideline for identifying eligible patients for ambulatory care would allow the on-call General surgery clinician to distinguish between the patients who can be managed as ambulatory patient and those who require to be managed as inpatient or outpatient. Moreover, it would help to improve the overcrowding in Hot Clinic.  
 Conclusions: A specific criteria-based Hot Clinic guideline improved the compliance with General Surgery ambulatory care criteria, the efficiency of General Surgery Hot Clinic and fluency of General Surgery on-call commitments

## 70. Raising Awareness on Anaesthetic Consent Documentation

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Background: Consent is a process and not a fixed point in time. In anaesthesia, consent begins when the procedure necessitating anaesthesia is first discussed with the patient. At that point, the mode of anaesthesia should be mentioned and written information about anaesthesia be provided. However, consent must still be confirmed on the day of the procedure by the anaesthetist (AAGBI Guidelines). The Aim of our audit was to raise awareness regarding the consent by recording its related documentation on the anaesthetic chart on the day of anaesthetic assessment. RCOA mandates 100% documentation as an important medicolegal aspect of providing an anaesthetic.

Methods: 100 patients charts were reviewed for a month period beginning from 15/06/2020 till 14/07/2020. Patients were randomly selected from various specialities like General Surgery, Urology, Orthopaedics, Vascular, Neurosurgery, ENT, Max Fax, Gynaecology and Breast surgery. Both elective and emergency surgeries were included. Audit consisted of reviewing the documentation of Consent for various anaesthetic procedures (GA, Prone position, Central Neuraxial Blockade, Peripheral nerve blockade, Lines including arterial and central lines, Blood transfusion, Written leaflets if any, or any other information explained).  
 Results: Out of 100 anaesthetic charts reviewed, only 4 of them contained consent related necessary 100% complete documentation pertaining to the procedure and related complications. 82% charts had partial documentation and 14% had absolutely no documentation whatsoever.  
 Conclusion: The audit displayed a poor documentation practice of consent for anaesthesia and its related procedures, which signifies the need to increase the awareness around this issue within the anaesthetic community.  
 Any intended anaesthetic procedure, as part of a patient's care should be discussed with the patient along with discussion of any significant risks and consequences. The

decision to perform such procedures must be recorded in the patients notes (AAGBI Guidelines).

## 71. PLAB II participants Perception: Plight, pain & panic during Pandemic

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Background: Pandemic affected almost everyone globally. PLAB 2 examination is also cancelled and postponed. About 250 aspiring PLAB 2 participants trapped in foreign land, virtually without any support. This survey attempting to learn about their acclimatisation, subsistence and endurance during harsh world event.

Methods: An anonymous online survey questionnaire, using google forms, consisting of 27 questions was created. The participants response was requested through social media platform and 50 responses were collected and analysed using Microsoft excel sheet.

Results: Doctors from eight countries participated. 92% were less than 30 years of age and 66% were females. 96% were on visitor visa. 32 candidates came with plan to stay less than three months and 63% among stayed more than six months. 70% needed visa extension and 34% paid for extension. 36% came without expecting cancellation and 34% had mild concern about exam cancellation. 46% felt stress, 32% felt stranded, 30% felt anxiety and 30% felt hopelessness following first cancellation. 74% stayed with hope of exam in months. 58% stayed with family or friends 8% stayed with BAPIO accommodation. Rent expenses (64%), lack of psychosocial support (48%), risk of getting COVID (44%) and reduced access to expensive healthcare were the main concerns. 70% frustrated, 38% felt lonely, 34% irritable, 34% felt burn out, 28% sleeplessness and 28% had undue exhaustion as psychological affect. 84% more stressed when exam cancelled second time. 88% needed psychological support but 8% sought support. Health support needed by 68%, 14% received, financial support by 72%, 28% received, Psychological support by 88%, 14% received, and accommodation support by 80%, 36% received. 58% received some help from BAPIO.

Conclusions: Many stranded doctors suffered psychosocial and financial impact of pandemic, the adverse experiences influenced their perceptive positively building resilience and appreciation for freedom and life in general.

## **72. Haemorrhagic renal angiomyolipoma: Unusual but not a rare.**

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**Background:** Angiomyolipomas (AMLs) of the kidney are typically benign, with an incidence of 2% of all the renal masses. Tumour is triphasic and is composed of smooth muscles, adipose tissue and blood vessels. AML may be found incidentally on radiology or may present with complications like massive retroperitoneal haemorrhage, following spontaneous rupture of tortuous aneurysmatic blood vessels. Nearly 20% of the patients are known to show association with Tuberous Sclerosis.

**Case Report:** We present a case of 50-year-old male, who presented with left flank pain for last one month in state of shock. Radiological findings were suggestive of left renal angiomyolipoma measuring 10.9 x 11.3 x 14.6 mm. Hematological investigations revealed decline in haemoglobin from 13.1 mg/dl to 8.9 mg/dl. Patient was operated for partial nephrectomy with excision of angiomyolipoma and evacuation of hematoma. Partial nephrectomy with evacuation of the hematoma was performed and sent for pathological evaluation which revealed AML.

**Methods:** Left partial nephrectomy specimen was received which had a variegated appearance with predominant yellow areas, admixed with haemorrhagic areas. Multiple sections submitted were embedded in paraffin and stained with hematoxyline and eosin stain. Microscopy revealed a triphasic tumour comprising of islands of mature adipose tissue, tortuous thickened blood vessels and bundles of spindle shaped smooth muscles characteristic of AML. Few atypical polygonal cells were also seen. The tumour cells were immunoreactive for HMB45 and desmin.

**Conclusion:** Renal AML can present rarely with spontaneous rupture leading to massive hematoma formation. Radiology along with aggressive management is necessary. As these have a benign course, nephron sparing surgery should be approached. Presence of triphasic pattern with HMB45 immunoreactivity are essential for definitive diagnosis.

## **73. Know your pregnancy team- a review of womens baseline knowledge of healthcare workers involved in a patients peripartum management.**

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**Background:** Throughout a woman's pregnancy, they will come into contact with different healthcare professionals. According to the Royal College of Obstetricians and Gynaecologists to organise delivery of care in labour, a central theme is the need to improve communications between

professionals and women (1,2). The aim was to look at patient's baseline knowledge regarding healthcare professionals' roles to see whether patient education may be required and whether this would improve patient satisfaction of their pregnancy journey.

**Methods:** Phase one consisted of a patient questionnaire that was given out in antenatal and assessment areas within the Obstetric department. Sixty responses were collected over a two-week period. Phase two involved the production of patient information posters displayed in waiting areas to give patients further information regarding team member roles. Following this a follow-up questionnaire was given out to patients to collect their feedback regarding the posters. Fifty-three questionnaires were collected in phase two.

**Results:** Overall our initial questionnaire showed that 50% of patients were happy with their knowledge of each different specialties roles in their care. This correlated to a mean satisfaction score of 6.9/10 (range 2-10). People felt a poster would be 75% useful in providing further information. Following the poster information in phase two, knowledge had improved of all specialties except midwifery. This ranged from 64-98% of patients being aware of their roles. Overall patient satisfaction had improved from 6.9 to 7.8/10 with 75% of patients reporting the poster was useful for them.

**Conclusion:** Based upon our results we can conclude the poster information has helped with patient education, however to a limited extent with the greatest improvement in awareness of theatre staff roles. Further projects should look at alternative ways of disseminating information are more effective such as text message hyperlinks to antenatal women in the second trimester.

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## **74. Postoperative Pain Management: Survey of Clinical staffs knowledge and understanding in assessing postoperative pain control**

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**Background:** Good postoperative pain management helps in early recovery of postoperative surgical patients and aids in short hospital stay. Satisfactory pain control, early mobilisation with short hospital admissions are components of enhanced recovery after surgery. Aim of this survey is to assess the knowledge of postoperative pain, understanding

of pain control and assessing the efficiency of the clinician and the staff in achieving appropriate pain control following surgery.

Method: A questionnaire was prepared regarding the pain control following surgery and a feedback was obtained from all surgical doctors and clinical staffs.

Results: Analysis of the collected data was done. Components looked from the database were the number of participants including doctors and nurses working in the surgical wards, level of estimation of the severity of the pain, duration of action of the analgesia, most effective analgesia, quickest analgesia, subjective perception of pain by the patient, pain assessment scale and the role of preoperative education regarding pain control and analgesia.

Conclusion and Recommendation: Formulate a better pain scoring scale or system. Organise teaching sections to all clinicians and staffs in the surgical specialities. Incorporate pharmacist and pain team into the teachings. Mandatory training under the hospital policies for all clinician and staffs working for surgical patients.

### 75. Conventional treatment of chronic hypoparathyroidism results in suboptimal calcium homeostasis

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Background: Conventional treatment for chronic hypoparathyroidism (CHP) is Vitamin D analogues and calcium supplementation, and not replacement of lacking hormone, as done in other hormone-deficiency states.

Objectives: Retrospective evaluation of CHP management in line with European Society of Endocrinology Guideline was undertaken, to assess adequacy of calcium homeostasis and morbidity.

Methodology: Retrospective case note and electronic record review of 93 consecutive CHP cases (Post-surgical-56, Genetic-15, Autoimmune-6, Unknown-16), minimum 12 months follow-up between 1989 and 2017, was undertaken.

Results: n=93 (67-females, 26-males), mean age 53 years (17-94yrs), mean duration of follow-up 13.5 years (1.2-29 years). 94% (87/93) treated with Vitamin D analogues (86% alfacalcidol, 8% calcitriol) with or without calcium salts and 6% (6/93) calcium salts only. At follow-up, target range achieved: serum adjusted calcium 58% (54/93) (2.10-2.40 mmol/L); 24-hr urinary calcium 63% (17/27 performed) (2.5-7.5 mmol/L); serum phosphate 81% (75/93) (0.8-1.5 mmol/L); magnesium 92% (54/59 performed) (0.7-1 mmol/L) and vitamin D 54% (43/79 performed) (>50 nmol/L). Regular monitoring was not undertaken in 71% (66/93) for 24-hr urinary calcium, 37% (34/93) for magnesium and 15% (14/93) for vitamin D. 365 hypocalcaemia episodes (Ca <2.0 mmol/L) in 62% (58/93); 56 hypercalcaemia episodes (Ca >2.60 mmol/L) in 18% (17/93) patients; 37% (34/93) required hospital admissions related to

calcium dysregulation resulting in 253 total inpatient days over 8 years (2010-2017). There was progression to CKD3 17% (16/93) and CKD4 2% (2/93); Renal stones 3; Nephrocalcinosis 1; Cataracts 4; unrelated death 5.

Discussion: Conventional CHP management resulted in suboptimal calcium homeostasis in half of patients; 1/3rd required hospital admissions for calcium regulation. Suboptimal monitoring of 24-hr urine calcium and magnesium was noted.

Regular biochemical monitoring and dose adjustments may improve outcomes.

Evidence seems to be growing for recombinant human parathyroid hormone (1-84) for challenging cases.

### 76. Rickets in A 6-Month-Old Child Picked Up in An Urgent Care Setting

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Abstract: The diagnosis of rickets in a child can be delayed or even missed because of its uncommon presentation. In this article, we report a case of rickets in a 6-month-old child to increase its awareness and early diagnosis and treatment so that complications like hypercalcaemic seizures can be avoided<sup>4</sup>. Key words: Rickets, Vitamin D deficiency, Hypocalcaemia, epiphysis

Case report: In this article, we report a 6-month-old Afro-Caribbean child who was recently brought to our Urgent Care Centre by parents after falling over and the child refusing to use the right arm. Subsequent X ray of the Right arm showed classic changes of splayed and frayed epiphyses, poor bone quality and some additional cupping suggestive of underlying rickets. The child was referred to the Paediatric team and blood tests later revealed a very low Vit D 13 ng/ml, a high Alkaline Phosphatase 1277, a low Phosphate 0.82 and a high PTH of 34.3. The child was started on with Vit D supplements.

Discussion: The recommended dose of vitamin D intake per day is 10 micrograms<sup>2</sup>. Around 2 or 3mcg are found in a usual diet and so people are required to either make vitamin D naturally from sunshine or take it as a supplement. Vitamin D deficiency causes the growth plate at the end of the bone to grow irregularly and in a disorganized fashion. Vitamin D is necessary for absorption of calcium and phosphate into the bones<sup>1</sup>. Children of African, Pacific Islander, and Middle Eastern descent are at the highest risk for rickets because they have dark skin.

Conclusion: The take home message is early detection of rickets is possible as an incidental finding if we closely examine routine X rays, looking for rachitic changes.

## **77. Post-Thrombotic Syndrome- Diagnosis, Epidemiology and Treatment Strategies: A Systematic Review.**

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**Introduction:** Post-thrombotic syndrome (PTS) usually manifests within two years of a deep vein thrombosis (DVT) and is associated with increased morbidity. There is marked heterogeneity in PTS diagnostic criteria and severity gradation which significantly compromises the study of this condition and development of interventions. We conducted a systematic review and qualitative synthesis of the published literature on PTS.

**Aims:** (1) To refine the PTS diagnostic criteria (2) To utilise our diagnostic criteria to delineate PTS epidemiology; severity grading; disease predictors and prevention strategies (3) To establish whether further studies are mandated to generate clear guidelines

**Methods:** Articles pertaining to adults (aged 18 and older) developing lower limb PTS were identified following a systematic literature search of The Cochrane Peripheral Vascular Diseases Group Specialized Register, CENTRAL, MEDLINE, Embase, CINAHL, National Institute Clinical Excellence (NICE) evidence, Theses (WorldCat, Ethos), and trial registers.

**Results:** Thirty-three full text papers were reviewed after exclusion. The criteria to diagnose PTS is four-fold and includes a proven thrombotic event; a 24-month latency period after index DVT; clinical assessment made with an assessment score and evidence of progression of venous insufficiency. Incidence ranged from 7 - 39% and was unaffected after 24 months. A variety of scoring systems with overlapping subjective and objective themes were identified, with the Villalta scale being most popular. Obesity was the singular significant predictor of PTS development (RR 1.5, 95%CI 1.2-1.9). Elastic compression stocking (ECS) therapy failed to demonstrate significant improvement in PTS prevention while further studies on anticoagulation and exercise were deemed necessary.

**Conclusions:** We have defined a robust diagnostic criterion for PTS. However, there is a paucity of high-level evidence advising on disease predictors and PTS prevention strategies. Further work is necessary to establish the beneficial effects of ECS, anticoagulation and exercise with high quality randomised control trials.

## **78. Frailty in Emergency Department Audit**

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**Aims:** 1. Identify needs of frail patients in ED 2. Establish ED pathways for frailty 3. Improve care of frail patients.  
**Objectives:** 1. Identify frail patients using the Clinical

Frailty Score (CFS) 2. Identify specific needs of frail patient 3. Evaluate numbers and causes of breaches 4. Establish whether different ED areas are utilised appropriately  
**Background:** Frailty syndromes are increasingly recognised as complex management problems in older people presenting to Emergency Departments. Frail patients pose a major challenge for EDs aiming to meet their 4-hour target while ensuring quality patient care and safety.

**Methods:** Inclusion criteria: 70-year-old patients that presented to St Helier hospital ED (Majors, Resus, RAT) in December 2018 Exclusion criteria: <70 years of age, UCC and Minors areas 100 patients were randomly selected using a computer algorithm.

**Results:** 32% of 70-year-old patients that presented to ED in December 2018 were mildly to severely frail. The majority of these patients (54%) breached the 4-hour target and 52% required hospital admission. Those numbers were significantly higher compared to the non-frail cohort. 41% of frail patients were brought in via ambulance and were less likely to represent to ED. Only 12% of patients required rapid response therapy input in ED and there was no significant difference in referral rate between the frail and non-frail groups.

**Conclusions:** 1/3 of patients that presented to ED during the evaluated period were considered severely frail according to CFS. The majority of these patients were brought to hospital via ambulance, breached the 4-hour target and required hospital admission.

**Implemented changes:**

- Screening and identification of frailty within 30 minutes of presentation through triage
- Electronic flagging of patients aged 70 with frailty score 5
- CFS checklist on ED clerking proforma
- Testing of 'silver frailty zone' in ED.

## **79. Comparison of initial management of ureteric stones against NICE guidelines 2019.**

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**Background:** NICE has published guidelines on the management of ureteric stones in Jan 2019. This guideline covers assessing and managing ureteric stones. It aims to improve the detection, clearance and prevention of stones, hence reducing pain and anxiety, and improving quality of life of patients. We have done audit on our initial management of ureteric stones against the NICE recommendation to ascertain our performance. The main objective of this audit is to ascertain our compliance in initial management of ureteric stones with NICE standards.

**Methods/Design:** The data was collected from Electronic patient record (EPR) and PACS. The data of patients who have undergone CT KUB via A/E with suspected ureteric colic were collected from IT help desk. We have reviewed the CT KUB reports and picked up patients who had ureteric stones. The data was collected between January 2019 to

December 2019.

**Results:** In total 408 patients who has presented with suspected ureteric colic has undergone CT KUB amongst those 143 patients were found to have ureteric stone ,39 have renal stone and 226 normal CT findings. Of these 408 CT scans ,99.8% were done within 24 hours, which shows that we are almost 100% compliant with NICE standards. In terms of prescribing NSAIDS, as first line of drug for pain management we have offered NSAIDS for only 28 % patients presented with ureteric colic. Among 143 patients, who have presented with ureteric stones, only 23 patients were eligible for surgical treatment within 48 hours. As we are referral centre for ESWL (Extracorporeal shockwave Lithotripsy), we have offered ESWL as surgical treatment for these 23 patients, however only 17.4 % of patients have managed to get appointment within 48 hours ,47.83 % were able to get ESWL between 3-5 days and rest of them received it after 5 days.

**Discussion:** NICE has made recommendations to manage the ureteric stone, for early detection and clearance ureteric stone. The researches and evidences says that delay in treatment of ureteric stones results in the increase in complications such as persistent pain, infections ,ureteric stricture ,recurrent hospital admissions and poor quality of life for the patients. Therefore, we should aim at offering treatment for patients with ureteric stones during their initial presentation and every hospital with urology service should have logistics to provide treatment of the stone at the earliest they can offer.

**Conclusion:** We have observed that, we have performed well in the area of detection of ureteric stone ,however improvement is needed in terms of offering surgical treatment to patients with 48 hours in eligible patients .Therefore ,after discussing the audit in our local governance meeting ,we have decided to increase the number slots for ESWL and the discussion was initiated to look for the feasibility of starting the emergency operations service for ureteric stone (Primary ureteroscopy and LASER lithotripsy).

#### **80. A study of knowledge, attitude and practice regarding organ and tissues donation among nursing officers and attitude and scope of practice of Nurse Transplant Coordinators (NTCs) in AIIMS, New Delhi.**

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**Background of the study:** Nurses have a significant role in the organ donation process because they can take responsibility for referring potential donor cases to transplant team, making the request for a donation, initiating the organ donation process, and supporting the family through this process. This influence places nursing officers in a position to increase the supply of organs for donation. Nurses as a transplant coordinator certainly have a wide scope of practice, roles and responsibilities. In the process they can act as a counsellor, educator, consultant and researcher, which in result can ensure ethical practice in transplant coordination.

**Methodology:** A cross-sectional descriptive design was used on 215 nursing officers (three groups: group 1) nursing officers (n=100) who did not undergo CNE on organ donation, group 2) nursing officers (n=100) who underwent CNE on organ donation, group 3) nursing officers (n =15) working or worked as NTCs, by a convenient sampling method from AIIMS, New Delhi. Tools: Subject data sheet for socio-demographic and selected variables, knowledge questionnaire, attitude scale and practice questionnaire regarding organ and tissues donation, attitude scale and semi-structured questionnaire to find out NTCs attitude and opinion about scope of practice to work as transplant coordinator, developed by researcher. Validity and reliability of the tools were tested before use.

**Results:** In the overall three groups (n=215) the mean age was  $33.3 \pm 6.4$ , more than half of the nursing officers (58%) were females, the major source of information about organ donation was during their academics and through public lectures (59%) followed by workshop/CNE on organ donation (53%) 93% of the NTCs in group 3 hold a donor card whereas only 16% of the nursing officers in group 2 and 10% in group 1 hold a donor card. There was a favourable attitude among all three groups of nursing officers and NTCs towards organ and tissues donation. A statistically significant difference of knowledge, attitude and practice scores ( $p < 0.05$ ) were found among three groups (n=215). A positive significant correlation was found between the knowledge and attitude and between knowledge and practice scores ( $p < 0.001$ ), there was no significant correlation between attitude and practice. NTCs (100%), had a favorable attitude to work as Nurse Transplant coordinator with a mean score of  $55.2 \pm 3.9$ . NTCs (100%), had good practice while working as Nurse Transplant coordinators with a mean score of  $33.7 \pm 3.1$ . NTCs opinion about scope of practice is extensive and have prescribed roles and responsibilities, includes various dimensions of practices which are comprehensive, structured and task based.

**Conclusion:** Nursing officers who worked as NTCs had more knowledge, favourable attitude and good practice regarding organ and tissue donation, followed by nursing officers who received an education program, whereas nursing officers who are not trained or have not received education on organ donation, lack the adequate knowledge and have poor practice towards organ and tissue donation. Some nursing officers also showed ambiguous attitude toward organ and tissue donation with the overall positive attitude. Thus the present study highlighted the great need for educating (mandatory annual update) in-service nursing officers in all the aspects of organ donation and procurement process and training, postings as NTCs, to develop positive attitude and practices towards the organ and tissue donation in order to improve the rate of potential donor pool and possible transplantations.

### **81. Are x-rays useful in investigating children with sickle cell disease presenting with limb pain?**

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**Background:** Children with sickle cell disease (SCD) present acutely with limb pain. Differentials include vaso-occlusive crisis (VOC) and osteomyelitis (OM). X-rays expose these to children to radiation, but rarely aid in diagnosis. We audited the use of x-ray in investigating children with SCD presenting with limb pain to a South London hospital, and analysed clinical utility of limb radiography in the diagnosis of osteomyelitis.

**Methods:** We identified patients aged 0-18 with SCD using the hospital SCD database. Admissions from January 2010 to September 2019 in which limb pain was a documented symptom were included. Clinical features, investigations and diagnosis were identified.

**Results:** We identified 188 admissions with limb pain among the 342 patients investigated. Diagnoses at discharge were: 174 VOC, 4 OM, and 10 others. 44 (25.3%) of those with VOC had limb x-rays, compared with 3 (75%) of those with OM. Of those x-rayed, 11 (25%) with VOC and all with OM had a subsequent MRI. Only 1 patient with VOC had an MRI without prior x-ray. X-rays did not contribute to the diagnosis or change management in any case. Of the VOC patients, more of those x-rayed had swelling (48% vs 8%,  $p < 0.001$ ) and fevers (57% vs 37%,  $p = 0.021$ ), and peak CRP was higher (109 vs 75,  $p = 0.044$ ). There were too few OM cases to identify significant clinical differences to those with VOC.

**Conclusions:** X-rays were frequently used to investigate children with SCD. Limb swelling, fevers and higher CRP, features potentially suggestive of OM, were more common in those x-rayed. X-rays are unlikely to aid in distinguishing VOC and OM, or change management, so are rarely indicated. MRI is the investigation of choice if there is suspicion of OM, although these can also be inconclusive.

### **82. Improving the efficiency of COVID-19 research related data collection in a tertiary teaching hospital.**

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**Background:** The COVID-19 pandemic has necessitated the need for rapid research into both the virus and the patients it affects. Due to the evolving nature of the situation, there is a need for both ethical and accurate data collection and analysis. We describe the process in which a large dataset was amassed in real time at a tertiary teaching hospital.

**Aims** to optimize the efficiency of data collection, focusing on ethicality, safety and usefulness using limited resources. During a public health emergency with limited information about COVID-19, we set a local standard of collecting 100 patient records to create a dataset.

**Methods:** We included patients admitted on our medical take who were PCR positive/clinically suspicious for COVID-19. Parameters collected included clinical features and therapeutic outcomes. A data collection protocol was developed. A pilot scheme was conducted to ensure inter-rater reliability by comparing data collected from different individuals. The first cycle commenced on the 1st of March 2020 and the data collection period was 2 weeks. Following this, recruitment of trained data collectors increased from 2 to 15 and Microsoft Teams was used. The second cycle commenced on the 20th of March 2020 and was carried out over 8 weeks.

**Results:** During the first cycle, data was collected from 150 patients through electronic and paper records by 2 participants. Following implementation of changes, 15 participants collected data from 700 patients. Use of Microsoft teams allowed active supervision of the participants and allowed for quicker data collection. Using electronic records limited clinical footfall, thus adhering to infection control practices.

**Conclusion:** The use of modern digital platforms has greatly enhanced the data collection process, especially when time is of the essence. This audit has improved the hospital's capability at creating a large dataset on COVID-19 and allowed for rapid and accurate data collection in a pandemic.

### **83. The Occult Rheumatic Scourge: An Autopsy Analysis of Missed Rheumatic Heart Disease**

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**Aim:** To study the clinical and pathological manifestations of missed cases of RHD and postulate possible reasons behind a missed diagnosis.

**Background:** Chronic rheumatic heart disease (RHD) is the major sequel of healing of acute rheumatic fever (ARF), which often results in crippling valvular deformities. The patients are usually young and present with features of mitral and/or aortic valvular dysfunctions. However, at times, the disease may remain asymptomatic and may be seen as incidental findings at autopsy or may even be a cause of sudden cardiac death.

**Methods/Design:** A retrospective 20-year (2000-2019) autopsy data of chronic RHD was reviewed and patients, in whom the valvular deformities had been incidental autopsy findings, were selected. The clinical details of these patients were correlated with morphology of the affected valves. On this pathological analysis, the patients were assigned to a category of stenosis with or without regurgitation and regurgitation. Also, the cases were analysed on the basis of subtle or significant valvular deformity and their clinical diagnosis.

**Results:** Among 475 cases of chronic RHD identified at autopsy in the study period, the disease was diagnosed incidentally in 69 patients (14.5%). Significant valvular deformity was noted in 61 cases while others had subtle valvular deformity. The most common cause of death was cardiac failure (39 patients, 56%). 11 cases had experi-

enced sudden cardiac death. Amongst the undiagnosed cases, only 5 were clinically diagnosed with cardiac pathology while others had non cardiac overwhelming diseases which most commonly included acute febrile illness (most commonly pneumonia or fever of unclear aetiology). The most common misdiagnosis was pulmonary thromboembolism and cardiomyopathy.

Conclusion: Our study indicates that mortality and morbidity due to RHD is under-determined. Patients remain undiagnosed due to either insignificant valvular involvement, clinically silent in the presence of significant valvular deformity presence of other overwhelming diseases or misdiagnosis partly due to resemblance with other pathologies.

#### **84. Study of Non-Genetic Risk Factors for Cognitive Impairment in Elderly population in a Tertiary hospital in South India.**

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Introduction: Mild cognitive impairment defines a transitional stage between aging and dementia. It is essential to identify the risk factors for mild cognitive impairment in elderly to prevent progression to dementia. Early treatment of risk factors delays progression to dementia.

Methods: In our study 500 individuals aged above 60 years were included. It was cross sectional study and a history of comorbidities obtained. Subjects were divided into normal cognition and mild cognitive impairment (MCI). This was done based on mini mental status examination (MMSE) and Montreal cognitive assessment (MOCA).

Observation: In the present study out of 500 subjects, 340 (68%) of them had normal cognition. 160 (32%) of them had mild cognitive impairment. Among the study subjects 344(68.8%) were males and 156(31.8%) were females. Among 160 subjects with MCI, 122(76.2%) were males and 38(23.8%) were females. The mean age in years was higher in subjects with MCI as compared to subjects with normal cognition  $p < 0.001$ . Subjects with MCI had prior history of diabetes mellitus(40.6%), hypertension (33.3%), Cerebrovascular accident(21.3%), ischemic heart Disease (20.6%), renal disease (13.8%), hypothyroidism (29.4%) as compared to subjects with normal cognition.  $p < 0.001$ . Mean systolic blood pressure was higher in subjects with MCI as compared to subjects with normal cognition. ( $P < 0.001$ ). Mean HbA1C, RBS, serum cholesterol, serum triglyceride, serum creatinine, serum TSH was higher in subjects with MCI as compared to subjects with normal cognition.  $p < 0.001$

Conclusion: Significant risk factors for development of MCI were diabetes mellitus, hypertension, IHD, CVA, hypothyroidism, vitamin B 12, folate deficiency, dyslipidaemia, anaemia, hyponatremia and renal failure. It is even more pertinent and critically important to evaluate elderly for mild cognitive impairment, since reversible risk factors can be intervened by appropriate treatment.

#### **85. Adherence to Methadone treatment protocol: The Leicester experience**

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Background: According to the Drug Misuse and dependence UK guidelines and UHL Guidelines for management of adult patients with opioid dependence; all known patients who are on Methadone during admission should have an initial assessment with a urine drug screen and should confirming treatment compliance and prescribe methadone within 72 hours. It is also required to monitor usage of other illicit drug use for psychosocial intervention. This audit evaluates adherence to Methadone treatment Protocol at Leicester Royal Infirmary and judges its success against national targets

Method: Manual data collection was performed retrospectively in a set time period of 3 months in 2019 .146 patients with opioid dependence who attended the hospital were included as the sample population and data processed using Microsoft excel.

Results: Only 15% of patients had urine drug screen done (22/146) on admission. While 90% were found to be compliant with the medication (2/22), 83% (120/146) of the patients received methadone within 72 hours. 72% of the patients were on another illegal drugs'-audit done showed 15% improvement in drug screening.

Discussion: Overall, current practice does not meet the standards set. For all inpatient's referral, the first point of contact should be UHL substance Misuse Liaison Team, run by turning point, who helps in finding the dose the patient was previously on. They can liaise with the nearest pharmacy and initiate treatment.

Conclusion: Action plan is to arrange for methadone prescribing alert on electronic chart and to introduce urine drug screen dip in acute medical ward.

#### **86. Needs of Patients with Opioid Dependence Syndrome: Differences and similarities in Perspectives of Patients vs. Family Caregivers**

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Background: There are more than ten thousand opioid dependent patients visiting the study setting annually, depicting the serious public health issue associated with opioid use. As there is upheaval in all the phases of life of patient, active involvement of patient and caregiver is inevitable. The importance of need assessment of patient by patients themselves and their caregivers need to be separately assessed to provide holistic care to opioid dependent patients.

Aim: The aim of this study was to assess the needs of patients with Opioid Dependence Syndrome as perceived by patients themselves and their family caregivers.

Methodology: This comparative cross-sectional study

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included 105 opioid dependent patients and their caregivers from an addiction treatment facility in India. Needs of patients were assessed using Camberwell Assessment of Need Short Appraisal Schedule (CANSAS).

Results: The typical patient was in his twenties and the caregiver was in his/her forties. The mean total numbers of needs according to the patient was  $8.92 \pm 2.96$  and according to the caregiver was  $7.52 \pm 2.65$ . The most common unmet needs of patients as rated by patients themselves were physical health, money and company. The most common unmet needs of patients rated by caregivers were money, looking after home and day time activities. The agreement of needs of patient was poor in some domains.

Conclusion: Addressing the needs of the patients with opioid dependence might help in developing a more holistic management plan for the patient, which may result in favourable patient outcomes. Mental health professionals should be active part of communication system, participate in family interaction and fill the gap existing in the needs of patients, by doing appropriate interventions during hospital visits.

### **87. A study of sensitivity, specificity, and compliance to Ottawa knee rules in a UK hospital**

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Introduction: The Ottawa knee rules are a set of rules used in trauma cases where Knee fracture is suspected. The study was carried out in Isle of Wight NHS Trust as part of a Quality Improvement Project to check the compliance of A&E practitioners to the Ottawa knee rules and also to validate the sensitivity and specificity of the said rules. Methods: The CRIS software was accessed to collect data regarding the past one month's Knee x-ray referrals in cases of knee Trauma. Referral letters were used to see the patient history and indications That was correlated with the x-ray results to check the sensitivity and specificity of the rules and the compliance of the A&E practitioners these rules. An excel spreadsheet was used to enter relevant data and analyse the results. Two separate audits were conducted with a teaching session between them to raise more awareness about the rules.

Results: Audit in September 2019 showcased the Sensitivity 83.33% and Specificity - 25% and the Audit in December 2019 showed the Sensitivity 100% and specificity 15%. The compliance to the rules improved from 76% to 86% which was evident in the audits before and after the teaching session.

Conclusion: Whilst there was a generally good level of compliance, the rules are highly sensitive but not very specific in identifying a knee fracture in acute trauma cases. These rules will reduce the unnecessary irradiation and amplify patient safety.

### **88. A comparative evaluation of King Vision and Hansraj video laryngoscopes in patients undergoing tracheal intubation with cervical spine immobilization - a prospective randomized clinical study**

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Background: Patients with cervical spine immobilization requiring intubation, direct laryngoscopy results in a poor laryngeal view leading to difficulty in intubation. This randomized prospective study was designed to compare the laryngeal view and ease of intubation with King Vision and Hansraj video laryngoscopes in patients with immobilized cervical spine.

Aims: Intubation time was the primary objective and success rate, Intubation difficulty score (IDS) number of attempts, adjustment manoeuvres and complications were the secondary objectives of our study.

Methods: Seventy adult patients aged 20-50 years of either sex, ASA grade I-II with immobilized cervical undergoing elective cervical surgery were enrolled. The patients were randomly allocated into two groups to achieve tracheal intubation with King Vision (KV group, n=35) and Hansraj (HR group, n=35) video laryngoscopes spine using manual inline axial cervical spine stabilization technique. Parameters observed were the intubation time, Intubation difficulty scale (IDS) score, intubation success rate, the percentage of glottic opening (POGO) score, number of attempts, optimisation manoeuvre and any airway complications were recorded.

Results: First attempt success rate were 94.28% (33/35) and 88.57% (31/35) and comparable in patients using King Vision and Hansraj video laryngoscopes, respectively. The Intubation Difficulty Score (IDS) (KV group  $1 \pm 0.58$ ; HR group  $1.8 \pm 0.805$ ) and time for intubation in seconds (KV group  $14.9 \pm 2.07$ ; HR group  $21.06 \pm 3.83$ ) were lesser and statistically significantly with King Vision group as compared to Hansraj group. The number of optimization manoeuvres used was lesser in King Vision group as compared to Hansraj group and was not statistically significant. Good grade glottis visualization was obtained with both the video laryngoscopes.

Conclusions: The use of a King Vision video laryngoscope resulted in better glottis visualization, easier tracheal intubation, and higher first attempt success rate as compared to Hansraj video laryngoscopes in immobilized cervical spine patients. Keywords: cervical spine immobilization, glottis visualisation; Hansraj video laryngoscope; King Vision video laryngoscope.

### 89. COVID-19 and the effect on the wellbeing and training of junior doctors

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**Introduction & Aims:** The COVID-19 pandemic is likely to have had a huge effect on the wellbeing and training of junior doctors in the UK with the restructuring of rotas, redeployment of specialties and daily risk of COVID-19 exposure. We completed an anonymous survey at a London tertiary centre to better understand the impact of COVID-19 on the wellbeing and training of junior doctors.

**Methods:** An anonymous online survey was sent to 600 junior doctors at St. George Hospital, three weeks after the peak of COVID-19 admissions.

**Results & Discussion:** Wellbeing: 161 junior doctors responded to the survey, with 34% (n=47) of doctors reporting a high level of concern regarding risk to their personal health and 71% (n=102) reporting a negative effect on their sleep. Clinical capabilities: 26% (n=34) of doctors reported high levels of concern related to their clinical competency in dealing with COVID-19 patients, with surgeons making up the majority of this group. Support: 82% (n=112) of doctors felt supported during the pandemic with friends, family and informal peer support being the most used coping systems. 22% of trainees (n=31) changed their living arrangements with 52% (n=13) of those moving to a different accommodation to protect their families. Training: 40% (n=52) of doctors felt the pandemic was going to have a long-lasting effect on their careers with reduced clinical competencies and clinical exposure. 44% of surgeons (n=7) and 50% of on-acute specialties (n=12) wanted training to be formally extended.

**Conclusion:** This study highlights the need for hospital trusts to recognize the impact that COVID-19 has had on their workforce. National training bodies will need to closely supervise future training specific to each specialty needs and expectations. Further development and implementation of effective wellbeing and psychological support systems may be required in order to adequately support junior doctors in their new work environment.

### 90. Ethnic and demographic variation in consenting for research in the context of fertility treatment

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**Background and aims:** A retrospective service evaluation was conducted in a tertiary reproductive medicine unit to assess factors influencing the inclinations of individuals with fertility problems to consent for their information to be

used for research (non-contact research) and their willingness to be contacted for future research studies (contact research).

**Methods:** Self-reported data on ethnicity, country of birth, and United Kingdom postcode were obtained from the Human Fertilisation and Embryology Authority registration forms of 18,384 patients undergoing intrauterine insemination, in vitro fertilisation or gamete/embryo storage for fertility preservation between January 2010 and September 2019. The postcode was used to assess socio-economic deprivation using the Index of Multiple Deprivation (IMD). Patient data indicated that 24% were of non-white ethnicity, 32% had been born overseas and 46% resided in more deprived areas (deprivation deciles 1 to 5). Binary logistic regression was performed to adjust for the simultaneous impact of covariates.

**Results:** Non-white patients were significantly less likely to consent to research than white patients (contact research: aOR 0.36, 95% CI 0.33 to 0.39; non-contact research: aOR 0.35, 95% CI 0.32 to 0.38), as were patients born overseas (contact research: aOR 0.86, 95% CI 0.79 to 0.94; non-contact research: aOR 0.89, 95% CI 0.82 to 0.97), and those living in more deprived areas (contact research: aOR 0.85, 95% CI 0.80 to 0.91; non-contact research: aOR 0.79, 95% CI 0.74 to 0.85).

**Conclusions:** The findings of our study indicate that ethnicity, country of birth and socio-economic are independent factors that significantly influence willingness of patients receiving fertility treatment to participate in research. This could result in a skewed participant profile among future research subjects and limit the generalisability of findings. Therefore, researchers should consider measures to increase uptake of research among minority ethnic, overseas-born and socially deprived participants.

### 91. Stakeholders Perception of Nurses Professional Values Tertiary Healthcare Institution, Delhi, India (2019).

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**Background and Aim:** Professional values are guidelines and standards of a profession. In health care, professional value development is essential and associated with professional practice. Unprofessional behaviour cuts off communication, undermines morale, inhibits team work and compliance with new practices. Addressing unprofessional behaviours enhances job satisfaction, reputation and retention, patient safety and experience in risk management. Thus, the study was undertaken to measure stakeholder's perception of nurse's professional values.

**Methods:** Stakeholders comprised of nurse professionals (n=251), nursing students (n=392) and physicians (n=310) participated in a quantitative cross-sectional survey. By using total enumeration and random selection through computer generated numbers, subjects were enrolled from randomly selected four tertiary healthcare institutions hav-

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ing B.Sc. Nursing programme each one from autonomous, central and state governments, and from the private sector in Delhi. Data were collected through self-report questionnaires (Nurses Professional Values Scale-Revised and Communication Skills and Empathy Scale). Ethical Clearance was obtained from Institute Ethics Committee.

Results: Findings revealed that stakeholders gave most importance to, maintain patients confidentiality (89.6%), protect moral and legal rights of patients (87.2%), safeguard patient's right to privacy (86.8%). Refuse to participate in care if in ethical opposition to own professional values (45.7%), act as a patient advocate (53.1%) and participate in public policy decisions affecting distribution of resources (45.7%) were given least importance. No association between stakeholder's perception of nurse's professional values and their socio-demographic/professional variables.

Conclusion: Stakeholders perception of nurse's professional values were high. Caring and trust were perceived the most important professional values and activism was the least important. It is necessary to inculcate and sensitize the professional values related activism such as research, patients' rights, assertiveness, social discrimination, cultural understanding and role of nurse in professional activities to reflect in patient care activities.

Table 1: Perception of Stakeholders on Nurses' Professional Values: Item Specific Analysis

Item No.	Nurses' Prof Values Stakeholders			Nursing students (n=392)			Physicians (n=310)		
	Nurse prof (n=251)			Mean±SDCum (%) with score			Mean±SD Cum (%) with score		

### Part I: Nurses' Professional Values Scale-Revised (NPVS-R)

#### Domain of Caring

25	Maintain confidentiality of patient	4.53±0.7	90.8	1	4.53±0.6	91.6	1	4.44±0.7	86.1	1
21	Safeguard patient's right to privacy	4.41±0.7	85.3	4	4.51±0.6	90.8	3	4.36±0.8	83	5
16	Protect moral and legal rights of patients	4.4±0.7	84.9	5	4.56±0.6	91.6	1	4.37±0.8	83.5	4
20	Provide care without prejudice to patients of varying lifestyles	4.21±0.9	76.9	12	4.19±0.9	80.1	9	4.19±0.9	77.4	9
24	Practice guided by principles of fidelity and respect for person	4.11±0.8	75.6	14	4.02±0.7	73	15	3.99±0.8	68.4	14
23	Protect rights of participants in research	3.82±1	63	20	4.02±0.8	75	12	3.8±0.9	63.2	16
18	Act as a patient advocate	3.62±1.1	57.8	21	3.8±0.8	65.1	22	2.95±1.1	34.2	26
22	Confront practitioners with questionable or inappropriate practice	3.5±1.1	50.2	24	3.97±0.8	71.7	16	3.57±1.1	58.1	18
17	Refuse to participate in care if in ethical opposition to own professional values	3.25±1.2	45.4	26	3.31±1.2	44.9	26	3.4±1.1	46.8	23

#### Domain of Activism

10	Advance the profession through active involvement in health related activities	4.22±0.7	82	7	4.22±0.8	82.9	8	3.87±0.9	69.7	13
26	Participate in activities of professional nursing associations	3.94±0.9	71.7	16	3.87±0.8	67.3	18	3.37±1	46.8	23
11	Recognize role of professional nursing associations in shaping health care policy	3.99±0.8	70.2	17	3.86±0.8	67.1	19	3.51±0.9	49.3	22
19	Participate in nursing research and/or implement research finding appropriate to practice	3.81±0.9	63.3	19	4.03±0.8	74.5	13	3.7±0.9	57.1	19
4	Participate in public policy decisions affecting distribution of resources	3.52±1	49	25	3.47±0.9	48.5	24	3.31±0.9	39.7	25

	Nurse prof (n=251) Mean±SD Cum (%) with score			Nursing students (n=392) Mean±SD Cum (%) with score			Physicians (n=310) Mean±SD Cum (%) with score					
Domain of Trust												
9	Seek additional education to update knowledge and skills			4.45±0.6 90.5 2			4.38±0.7 86.2 5			4.15±0.8 80.6 7		
15	Maintain competency in area of practice			4.21±0.8 78.9 10			3.82±0.9 66.8 20			4.37±0.8 84.8 3		
14	Accept responsibility and accountability for own practice			4.19±0.9 76.5 13			4.29±0.7 84.2 6			4.29±0.8 81.3 6		
2	Request consultation/collaboration when unable to meet patient needs			4.03±0.8 73.3 15			3.86±0.8 65.8 21			4.24±0.7 84.9 2		
1	Engage in on-going self-evaluation			3.87±1 63.8 18			3.92±0.8 70.4 17			3.91±0.8 70.3 12		
Domain of Professionalism												
7	Promote and maintain standards where planned learning activities for students take place			4.27±0.7 84.8 6			4.21±0.7 83.2 7			3.96±0.9 73.9 10		
8	Initiate actions to improve environments of practice			4.23±0.8 79.7 8			4.03±0.8 73.2 14			3.97±0.9 70.6 11		
6	Establish standards as a guide for practice			4.18±0.8 78.9 10			4.16±0.8 78.9 10			3.85±0.9 65.2 15		
5	Participate in peer review			3.69±0.9 56.2 22			3.45±0.8 45.4 25			3.47±0.9 50 21		
Domain of Justice												
3	Protect health and safety of the public			4.45±0.7 88.5 3			4.39±0.7 89.1 4			4.18±0.9 78.4 8		
12	Promote equitable access to nursing and health care			4.14±0.8 79.2 9			4.07±0.8 76.2 11			3.72±0.9 59.7 17		
13	Assume responsibility for meeting health needs of the culturally diverse population			3.62±0.9 56.2 22			3.7±0.9 58.7 23			3.61±0.9 55.8 20		
Part II: Communication Skills and Empathy (CSES)												
Domain of Empathy												
27	Empathetic to client's needs and concerns			4.05±0.8 75.7 2			4.07±0.8 75.8 5			4±0.8 73.9 6		
Domain of Communication Skills and Interpersonal Relationship												
30	Demonstrate effective communication and interpersonal skills (verbal, non-verbal and listening) with patient			4.26±0.7 82.9 1			4.26±0.7 82.6 2			4.27±0.7 85.8 1		
28	Discuss and exchange ideas to maximize patient care			4.06±0.8 75.3 3			4.15±0.7 81.4 3			4.09±0.7 79 3		
32	Demonstrate effective written communication skills, in charts, letters and information on official records of institution			4.06±0.9 74.1 4			4.01±0.9 72.7 6			4.05±0.8 73.2 5		
29	Maintain professional boundaries with patients			4.08±0.9 73.7 5			4.29±0.8 82.9 1			4.08±0.8 75.8 4		
31	Communicate professionally with members of the multidisciplinary team			4.01±0.9 71.8 6			4.15±0.8 78.8 4			4.15±0.7 80.3 2		

## **92. Effect of Anti-Tobacco Health Messages after implementation of COTPA act 2003 in India; A Review.**

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**Background:** Tobacco related deaths are on rise although; it is a preventable man made epidemic. Globally tobacco accounts for death of 6 million people each year. Tobacco kills about 2500 Indians every day. To fight tobacco India made significant attempt by endorsing WHO Framework Convention on Tobacco Control (FCTC) in February 2004. This review summarises the effect of anti-tobacco health messages (ATHM's) on Indian population; the influence of different type of anti-tobacco health messages.

**Methodology:** This paper updates studies published after 2003, after the enactment of COTPA act 2003, in India. Studies done internationally where India has representation also included. A comprehensive review of literature was done. A total of 45 pertinent articles were selected. Author checked the abstracts 30 studies were included in the review. Databases searched are: PubMed, Google Scholar and Embase from year 2003 to February 2019.

**Results:** Studies have a mixed support that ATHM can endorse quitting or diminish smoking frequency. Prime channel that efficiently manipulate general public is movies and cinema theatres, television and radio. Negative health affects message found to be most effective at generating quitting intention. The advertisements their intensity, frequency of delivery, recall and effect on knowledge and attitude, quit intentions is not assessed in many of the studies.

**Conclusion:** Impact of ATHM on smoking behaviour differs according to the group studied. Government must focus on high reach and logical ATHM with consistent exposure and inclination towards graphical and live testimonial advertisements. Key Words: anti-tobacco advertisements, anti-smoking health messages, COTPA Act, smokers, non-smokers.

## **93. Review to Assess the Effect of Anti-Tobacco Media Messages on Maintenance of Tobacco Abstinence.**

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**Background:** Globally India comes among first three largest producer and leading consumer of tobacco. Earlier surveys reported that cautionary graphical health warnings on tobacco related products are most lucrative in educating general public regarding negative impacts of tobacco. Although, according to the GATS-2 report, a large percentage of smokers do not notice the tobacco products warning. **Aim:** To find out the effect of media on maintenance of Tobacco abstinence.

**Methods:** Studies focused on role of media messages in maintaining tobacco cessation in languages other than English were excluded. Screening of abstracts yielded 188 potentially relevant articles. Abstracts were evaluated and resulting in 130 studies. Databases searched are: PubMed, Google Scholar and Embase from year 2003 to February 2019.

**Results:** Globally the anti-smoking campaigns are effective in decreasing smoking behaviour, increasing quitting attempts and intentions to quit and decreasing relapse among recent quitters. However, anti-smoking campaigns are not effective in maintaining complete cessation and decreasing relapse process among older quitters. The text-only Anti-tobacco messages are least effective in generating quitting activities. The graphical and pictorial anti-tobacco messages when used judiciously have a great appeal and significant impact on cessation process. Sometimes it is seen that anti-tobacco messages give cues to the tobacco users and thus, increases their craving and complicate the cessation process.

**Conclusion:** The role and effectiveness of media campaigns other than television based is not explored much. There is a major gap in literature on the effect of media campaign on maintenance of tobacco abstinence. Available research mostly focused on health risk awareness, tobacco related attitude, quit attempts and effect on non-smokers rather than on cessation or tobacco abstinence behaviour of tobacco users.

## **94. Oxygen requirement is the determining factor in prone responsiveness in 129 proning sessions in 34 Covid-19 patients**

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**Background & Aims.** Prone positioning (PP) has proven survival benefits in the acute respiratory distress syndrome and is advocated for severe Covid-19. I previously published data which quantified the effect of PP which indicated a reduction in the fraction of inspired oxygen (FiO<sub>2</sub>) by 0.17±0.2 (p<0.0001). To identify factors which influence this effect I constructed a mixed effects model, a form of repeated measures linear model, including 10 fixed effects.

**Methods.** 129 proning session in 34 consecutively admitted patients to St Peter Hospital ICU during the first Covid-19 pandemic wave were included. Patients were included if prone >3 hours while intubated and ventilated >24 hours. Ventilatory settings and blood gas analysis were recorded within 3 hours of the initiation and termination of proning, which formed the repeated measure. Individual patients were categorised as random effects and the patients age, BMI, sex, time to ITU admission, time through the pandemic, time to first prone, duration of proning session, starting FiO<sub>2</sub>, previous change in FiO<sub>2</sub> and admission

apache score were included as fixed effects. The dependent variable was change in FiO<sub>2</sub>.

**Results.** Patients met the Berlin criteria for severe ARDS with a partial pressure of arterial oxygenation: FiO<sub>2</sub> ratio of  $11.7 \pm 3.3$  kPa and positive end-expiratory pressure  $10 \pm 1.9$  cm of H<sub>2</sub>O and were ventilated with tidal volumes of  $7.86 \pm 2.0$  ml/kg of ideal body weight. The only fixed effect with significant effect on the change in oxygen requirement was the starting FiO<sub>2</sub> - effect size 0.623 ( $p < 0.001$ ). Interestingly, the previous change in FiO<sub>2</sub> did not have a significant effect size ( $p = 0.059$ ).

**Conclusion.** This model suggests that the primary effect in determining prone responsiveness is the starting oxygen requirement - a surrogate of the severity of their illness. At our centre this data is now incorporated into decision-making on whether to continue proning patients with Covid-19.

### 95. The Medical Education Foundation a free national development and mentorship platform for NHS workers

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**Background:** Training as a healthcare worker is a long and expensive commitment. Applications, examinations and ongoing professional development are challenging, and many do not find support or mentorship. Resources are often priced at a level which excludes the financially disadvantaged. This shrinks the applicant pool and contributes to burnout and dropout rates which impact healthcare provision.

**Methods:** The Medical Education Foundation (TMEF) is a registered charity, set up in 2020. In under a year, we have published two medical education textbooks and reached over 2000 students. We have partnered with companies and medical schools across the UK to develop structured, complementary teaching curricula focusing on applications, careers and mentorship, both in academia and clinical practice. Tutors provide lectures, workshops and support and, in return, fulfil key components of their portfolios and have the satisfaction of making a positive impact on students and junior professionals.

**Results:** The feedback has been overwhelmingly positive, with 100% of those participants providing feedback ( $n = 870$ ) reporting a benefit from attending a session and 99% ( $n = 710$ ) reporting they would like to see similar sessions form a permanent part of their teaching curricula. Several testimonials have remarked on invaluable mentorship, inspirational speakers and a guidance to take the first steps to achieve things that seemed impossible.

**Conclusion:** We are at a historical juncture, not just in medicine but as a population. The 2019 Topol Review of the NHS in a digital age concluded that to respond to

mounting challenges and to capitalise on the opportunities afforded by technology, there must be a focus on workforce development. This was before the COVID-19 pandemic stunned the NHS and its staff. More than ever before, we must support the backbone of the NHS, empowering individuals through mentorship and guidance to become life-long learners and proactive, rather than reactive, workers.

### 96. The COVID-19 Pandemic and the mental health of health care workers: The prevalence of anxiety, depression, levels of perceived stress and increased alcohol intake in two NHS Trust

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**Background:** The COVID-19 pandemic has had a significant impact on the mental health of Health-Care-Workers (HCWs).

**Aim:** To investigate this issue in HCWs working in Leicester, UK.

**Methods:** An online survey was sent to HCWs in one medical trust and one mental health trust between 31/7/2020 and 18/8/2020. The Generalized Anxiety Disorder scale (GAD-7) and the Patient Health Questionnaire scale (PHQ-9) were used to measure the prevalence rates of anxiety and depression. The Perceived Stress Scale-14 (PSS-14) was used to measure levels of perceived stress. Other questions were used to identify the prevalence of increased alcohol intake and possible risk factors.

**Results:** 1009 HCWs completed the survey. Using a cut-off score of 5, which allows the inclusion of mild symptoms, for both GAD-7 and PHQ-9, 80.2% of participants had at least one condition and 71.5% had both. Using the cutoff score of 10 (moderate/severe symptoms), 27.2% had at least one condition and 27.25% had both conditions. 37.5% of those who did not report pre-existing mental health conditions now have at least one condition. 33.6% of participants reported an increase in alcohol consumption. A number of risk factors were identified: having less social support, feeling not supported at work, poor pre-existing mental health.

**Discussion:** Poor support at and outside work and pre-existing mental health conditions are significant risk factors. Health organisations need to monitor and address these emerging effects.

**Conclusion:** The pandemic had a significant impact on mental health of HCWs. The project was approved the UK Health Research Authority (IRAS project ID 285841) and by the Research and Development departments of both trusts.

**97. A study of Knowledge, Attitude and Practice (KAP) regarding voluntary blood donation among health care professionals in Dhiraj Hospital- Vadodara.**

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Background: Blood components like PCV, Whole Blood, Fresh Frozen Plasma (FFP), Platelet Rich Plasma (PRP), Cryoprecipitate demands are increasing day by day in developing countries like India. So, in our study to assess the overall knowledge, attitude and practice regarding the extent of blood donation practice among health care workers have been importance.

Aims: To study the Knowledge, Attitude and Practice (KAP) regarding voluntary blood donation among health care professionals in Dhiraj Hospital- Vadodara. Results are set and designed in tabular and graph format.

Methods and Material: Our study which is a cross sectional study includes total of around 80 health care workers of Dhiraj Hospital - Vadodara. On the basis of socio-demographic characteristics and according to the levels of Knowledge, Attitude and Practice among participants data were collected using a self-administered questionnaire. A structured questionnaire was given to all the health care workers working in the Dhiraj hospital were taken into consideration.

Results: Eighty health care workers were involved in our study which was conducted at Dhiraj hospital Vadodara among which it was found that about 55% donated to serve for humanity. A large group of around 15% were donating as a replacement for their kith and kin. Around 10% were because of self-motivated decisions. And on the other side the reasons for non-donation by non-donors was that nobody approached to them and it constituted to about 6%. Around 57% non-donated due to some health-related reasons while rest of them non donated due to fear of disease transmission and fear of needle which constituted to about 17%.

Conclusions: The health care workers of Dhiraj hospital were having overall level of knowledge, attitude and practice was satisfactory. Health Professionals, various hospitals and blood banks services are demanded to develop new ways so to make blood donation services more reliable and accessible

**98. What factors affect union in patients undergoing low intensity pulsed ultrasound (LIPUS) therapy for non-union following fracture fixation?**

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Background: Non-union is a significant complication of fracture fixation surgery, and can negatively impact a patients quality of life. Low intensity pulsed ultrasound (LIPUS) can be used to treat non-unions and may avoid the need for revision surgery. The aim of this study was to determine the success rate of LIPUS treatment in patients with

fracture non-unions, and to establish the effect of systemic or local factors on its success.

Methods: This was a retrospective, observational study which included all patients undergoing LIPUS treatment in a single institution. Patients deemed suitable for LIPUS underwent treatment for a period of 6 months from initiation. They were followed up with sequential radiographs to assess union at intervals of 6 weeks, 3 months, 6 months and 1 year. LIPUS was considered to be successful when patients achieved clinical and radiological union, without the need for revision surgery.

Results: A total of 46 patients were included in the study; 8 were lost to follow up, leaving 38 patients for the final analysis. The mean age of patients was 47.03  $\pm$  19.7 with a male to female ratio of 1.2:1. Union was achieved in 57.89%; the rest underwent revision surgery. There was no significant association between outcomes after LIPUS and patients age, gender, smoking status or type of non-union. Patients with diabetes and a small inter-fragment bone gap were more likely to have a successful outcome after LIPUS ( $p = 0.03$  and  $p = 0.041$  respectively). Time to treatment did not have a statistically significant impact on outcomes after LIPUS.

Conclusions: This study suggests that LIPUS represents a low risk treatment modality as an alternative to revision surgery in diabetic patients with a small inter-fragment bone gap. However, more research needs to be carried out to further assess the role of LIPUS in the treatment of non-unions.

**99. The qualitative assessment of challenges in Tuberculosis control in public health facilities of Bule hora town, Ethiopia; health workers' and Tuberculosis control program coordinators' perspectives, 2020.**

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Introduction: The Millennium Development Goal target of halting and reversing TB incidence has been achieved on a global scale. Mortality from TB has fallen by 47% since 1990. Despite these gains, however, TB still remains a major worldwide health crisis. According to a recent WHO report, there where in 2018, an estimated 10 million people fell sick with tuberculosis (TB) worldwide. 5.7 million Men, 3.2 million women and 1.1 million children. Poor health systems pose many barriers to effective tuberculosis (TB) control. This study aimed at exploring health workers and TB control program coordinator's perspectives on health systems challenges facing TB control in Bule Hora Town, Oromia Region, southern, Ethiopia. Objective: To identify challenges of health care workers and tuberculosis control program co-ordinator towards tuberculosis control at Public health facilities of Bule Hora town-2020  
Method: Qualitative study was conducted at Public health facilities of Bule Hora town, Ethiopia. Four in-depth interviews with TB control program coordinators and two focus group discussions among 8 health workers were conduct-

ed. Purposive sampling was used to recruit study participants. Thematic analysis was used to identify and analyze main themes.

Results: We identified that shortage of laboratory reagents, Shortages of TB diagnostic tools and intermittent supply of anti-TB drugs, shortage of trained and motivated health care staffs, Poor community TB mobilization and collaboration between health institutions were challenges facing the TB control program performance in the study area.

Conclusion: Ensuring no proper supply of anti-TB drugs, laboratory reagents and Shortages of TB diagnostic tools to all health facilities is essential. Continuous updated training of health workers on standard TB care and data handling, developing and implementing a sound retention strategy to attract and motivate health professionals to work in study areas are necessary interventions to improve the TB control program performance in the study area.

### **100.Improving documentation and reducing waste - An evaluation of plastic surgery trauma documentation in Northern Ireland**

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Background: Most plastic surgery trauma in Northern Ireland is reviewed in a daily trauma clinic and is divided into upper-limb and non-upper limb, the documentation of which is completed on two different proformas. Non upper-limb trauma principally comprises facial and lower limb trauma.

Aim: To review non-upper limb caseload, documentation quality and pro-forma use. The aim was to identify areas of improvement and design a new user-friendly proforma to facilitate documentation completeness and efficiency.

Methods/ Design: Non-upper limb trauma proformas were reviewed over a 2-week period and a re-audit was performed following presentation of findings and introduction of a new trial pro-forma.

Results: Inadequate documentation of more detailed but relevant aspects of history, particularly tetanus, smoking and allergy status. Poor use of the pro-forma with the majority of documentation in incorrect sections. 56% only used the first of a three-page pro-forma and minimal use of 2nd and 3rd pages (33% and 17% respectively) resulting in significant paper waste (estimated at 2,574 sheets/ year). Findings presentation at the regional audit meeting and a new proforma proposed (single sheet of paper, user-friendly layout, space for clinical illustration, and doubling as admission clerking if required). Re-audit revealed general improvement in documentation completeness but same trend of more detailed aspects of history not being recorded. Improved accuracy of pro-forma use resulting in no paper wastage.

Discussion and conclusion: Documentation is a fundamental part of good medical practice and particularly in a trauma situation helps guide operating surgeons with regard to potential injuries, reconstructive options, and follow-up. Reviewing current practice and collaboration with

users allows for development of simple and user-friendly proformas that can encourage better documentation and a reduction in waste.

### **101.Use of abdominal wall or subcutaneous drain to reduce the risk of surgical incision site infections**

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Background: Open abdominal surgery confers potentially greater risk of surgical site infections, and local evidence suggests use of drains can reduce this. Our objectives were: Assessing local rates and risk factors of infections and if use of drains can reduce the rates of infections.

Methods: A retrospective approach was taken looking at a period from 01/01/2018 to 31/12/2018, at all patients who had laparotomy or open cholecystectomy. Data collection on demographics and weight, smoking and alcohol status, Co-morbidities (heart, respiratory or renal disease, or diabetes), steroid use and CEPOD status of the operation, as well as the use of drain and the outcome of infection. Data was collected using inpatient and online patient records.

Results: Of the 84 patients included, 25 patients had drains inserted the remaining 46 did not. In total there were 13 documented cases of surgical site infection, all of whom did not drain in situ post-op. Other parameters which were shown to be most prevalent in the patients with a surgical site infection include being current or an ex-smoker (8/13), having concurrent heart disease (9/13), and interestingly undergoing an elective procedure.

Conclusions: Aiming to reduce the risk of surgical site infections can improve morbidity and potentially mortality outcomes. Our audit data showed that there appears to be a benefit of inserting intra-abdominal or subcutaneous drains. We will create a standard operating procedure of all patient to receive drains post-op and then re-audit to assess the impact this has on infection rates.

### **102 Post-procedure outcomes following interscalene blocks for shoulder surgery**

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Background: Interscalene blocks are used in shoulder surgery for better analgesia than general anaesthesia alone. Success and efficacy of the block varies with approach, e.g. ultrasound (US) or peripheral nerve stimulator (PNS) use, operator experience and local anaesthetic (LA) volume injected. These factors affect post-operative complications associated with the block. We wanted to assess current approaches used within Solihull Hospital where shoulder surgery is frequent, and evaluate pain and complication rate.

Method: Anaesthetists completed surveys detailing procedure and equipment used during blocks. Patients were

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followed up by telephone to identify post-operative pain scores (at various times during recovery), complications and overall satisfaction with the block.

Results: Total cases = 50. Most blocks were performed for arthroscopic rotator cuff repair or subacromial decompression surgery. US was used in 88% cases (N=44), and PNS in 76% cases (N=38) (either with or without ultrasound). The most common LA choice was 0.25% chirocaine (volume 16-20ml N=31, or 11-15ml N=15). Pain scores within the first 24 hours were low; 0-2/10 in 64% cases (N=32), but mixed following 24 hours. There was no significant difference between pain scores in patients whose blocks were performed using US or PNS. However, patients with LA volume 11-15ml and 16-20ml had lowest pain scores on average; pain scores 8.9 and 9.1 respectively, vs pain scores 16 and 13 (5-10ml and 30ml volume respectively). Only 5 patients had paraesthesia in the arm lasting >48 hours. 3 patients experienced bleeding/ bruising, voice hoarseness, difficulty swallowing or eye changes associated with the block.

Conclusion: Nearly all patients reported no complications. Pain scores were unaffected by US/PNS, but lowest with LA volumes 11-15ml/16-20ml. From this we can recommend a standardised approach for interscalene blocks performed within Solihull Hospital.

### **103. Death Certification streamlining the process**

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Background: Death Certification is an important task in the patient journey. If done well it allows bereaved families to carry on with final rites unhindered. A survey of Junior Doctors at St George's Hospital (SGH) showed the task is not viewed as straightforward. There are difficulties in clarifying what to put down as the cause of death. Certification is viewed as time-consuming and is not always completed during normal shift hours. People even come back on their days off to complete death certificates.

Standards audited: 100% of death certificates completed without errors

Methodology: Death certificates from July 2020 to October 2020 on Cardiothoracic ICU (37 total deaths) that were rejected were reviewed to establish the reason for rejection. St George's junior doctors were surveyed to establish feelings and knowledge surrounding death certificate completion, including:

- 1) Suitability of designated Junior for the task.
- 2) Proficiency.
- 3) Hurdles to completion.
- 4) Coroners referrals.

Results: 10.8% of death certificates submitted from CTICU were voided with reasons including needing further discussion, errors in causes of death (Ia, Ib, Ic and II on the death certificate) and incorrect input of last seen alive date. 56% of responders to the survey felt they made at least a few mistakes when completing death certificates. 56% of

responders felt establishing causes of death was the main hurdle to completion while 36% felt the main hurdle was having enough time on shift to complete the paperwork. Conclusion and Actions: Improvements need to be made in confidence and competence of death certification in order to improve the process at SGH. A new guideline has been produced and will be put on the intranet. Teaching will also be delivered. Practice post intervention will be reassessed.

### **104. Differential Attainment in Health Education: Preliminary Results from a Narrative Review**

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Background: Differential attainment (DA) amongst Black, Asian and Minority Ethnic (BAME) medical students has been a widely recognised challenge in medical education. Non-white medical students are 2.5 times more likely to fail high-stake examinations, compared to their White counterparts. The reasons underlying DA are unclear. Examiner bias, prior educational attainment, socioeconomic status, and psychological factors do not fully account for DA. This review aims to identify the mechanisms that facilitate and impede DA in UK undergraduate medical students.

Methods: Seven online databases (PubMed, Scopus, Embase, PsycINFO, ERIC, Google Scholar and WorldWideScience.org) were searched, alongside a formal examination of grey literature. Inclusion criteria included studies on UK medical students (including international students in the UK) from January 1995 to October 2020. An initial content analysis was performed to create a conceptual framework, that is to be used in a later mixed methods analysis. The studies were critically appraised for methodological quality.

Results: There were 13, 394 papers identified in the initial search (including duplicates) from Medline, Embase, PsychINFO, ERIC, Scopus, Google Scholar and WorldWideScience.org. Five themes emerged from the preliminary analysis of 13 papers. These include being different, social capital, continuum of discrimination, institutional factors and external support. BAME undergraduate medical students experienced feeling socially isolated as a minority culture or religion in higher education; being less satisfied with their education experience, and feeling anxious around conforming to staff's negative-stereotypes associated with minority groups (e.g. poor communication among Asian students). Few papers focused on interventions tackling DA.

Conclusions: Understanding the underlying mechanisms to DA is a prerequisite for designing interventions aimed at ensuring fair clinical grades among ethnic minority

students. In particular, the social and cultural mechanisms underlying DA need to be explored further. Organisations like BAPIO should be at the forefront of highlighting and implementing these interventions to tackle DA.

### 105. Ankle Fracture Fixation in A UK Trauma Unit - Review of 5-years Outcome

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**Background:** Ankle fractures represent approximately 10% of the fracture workload and are projected to increase due to ageing population. There is limited evidence reporting on patients' long-term outcome after ankle fracture fixation. We reviewed our 5 years outcome post-surgical management of ankle fractures in a large UK Trauma unit.  
**Study Design & Methods:** A total of 111 consecutive patients treated for an unstable ankle fracture were entered into a database and prospectively followed up. Baseline patient characteristics, complications, further intervention including additional surgery, functional status were recorded during five-year follow-up. Pre-injury and post-fixation functional outcome measures at 2- & 5-years were assessed using Olerud-Molander Ankle Scores (OMAS) and Lower Extremity Functional Scales (LEFS). A p value <0.05 was considered significant.

**Results:** The mean age was 46 with a male:female ratio of 1:1.1. The distribution of comorbidities was BMI >30 (26%), diabetes (5%), alcohol consumption >20U/week (15%) and smoking (26%). Higher BMI was predictive of worse post-op LEFS score (p = 0.02). Between pre-injury and post fixation functional scores at 2- & 5- years, there was a significant reduction in OMAS and LEFS Score (p<0.05). Using very strict radiological criteria, 31 (28%) had less than anatomical reduction of fracture fragments intra-operatively. This was, however, not predictive of patients' functional outcome in this cohort. Within 5-year period, 21 (20%) patients had removal of metalwork from their ankle, with majority 13 (59%) requiring syndesmotic screw removal. Further interventions included: joint injection (3), deltoid reconstruction (1), arthroscopic debridement (1), superficial sinus excision (2), and conversion to hindfoot nail due to failure of fixation (1). Reduction in OMAS was predictive of patients' ongoing symptoms (p=0.01)

**Conclusions:** There is a significant reduction in functional outcome after ankle fracture fixation in all age group. High BMI patients correlate to poorer outcome. Intervention for PTA is low at 5 years.

### 106. Dignity Engagement using a Human Rights based Approach and Co Production in Nurse Education

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Human dignity is a foundational aspect of the social literacy demanded by good nursing care because it captures at a most basic level the value that we accord to human beings in our interactions with each other. Dignity is at heightened risk of being disrespected when individuals are vulnerable and dependent on others to secure their basic needs and wellbeing. This is why dignity is of concern in the health-care context, and why the role of nurses in particular is crucial as they are on the front line of either negative or positive dignity experiences for those receiving care.

The Aim of DESNEHRA was to co-produce Dignity Engagement Space using a Human Rights based approach and to evaluate the extent to which it can influence nurses' confidence in conceptualising dignity and their competence in the practice of delivering dignity in care. This project breaks new ground by adopting a combined focus on a student-centered, co-produced, technology-enabled engagement space, supported by creative intellectual thinking about the protection of human dignity that is relevant within the context of nurse education.

Phase 1 of the project involved an online survey to capture student's understanding of Human Rights, operationalising Dignity in practice using a case study and preferred approaches to Dignity Education and three co-production workshops facilitated by experts in Human Rights Law and Dignity Theory.

This abstract reports primarily on findings from the online survey completed by 136 students. 87.8 % of students rated Right to Life as the most important human right; 80.1% strongly agreed that all nurses had a legal duty to ensure respect for patient's human rights. Most students (90%) perceived respecting a patient's dignity was paramount in all circumstances across all domains of basic and complex care needs. 94.9% of students expressed interest in accessing an online dignity education resource.

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Preferred Mode/s of Dignity Engagement Online	Would Likely Use (%)	Would Definitely Use (%)
Bite size dignity reminders on mobile phone.	41.9 (28.7% not likely)	19.9
Personal Dignity Diary Space	47.1 (27.9% not likely)	18.4
Shared Dignity Diary Space	37.5 (40.4% not likely)	13.2
Written case studies on the concept of dignity out with the context of nursing	50	18.4
Written case studies on the concept of dignity within the context of nursing	45.6	43.4
Video case studies on the concept of dignity out with the context of nursing	44.9	29.4
Patients' stories describing real life experiences	38.2	53.7
Small Group Discussion Online	46.3	16.9
Recorded lectures from experienced nurses on their own experiences of providing dignity in care.	46.3	47.1
Tips from nurses and other healthcare professionals on the provision of dignity in care.	39.7	56.6

### **107. Low Fidelity Simulation on Sensory Impairments in Older Adults: Integration of Pedagogy, Education and Research**

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Sensory impairment is one of the most common morbidities in later life worldwide. Around 50 million people worldwide have dementia, with 10 million new cases occurring annually leading to an estimated prevalence of 152 million by 2050. Hearing, vision and cognitive disorders can often co-exist in older people. Given the global population demographic transition, nurses will have frequent encounters with patients with these impairments. This study reports on the development and evaluation of a low fidelity simulation as part of a wider dementia curriculum initiative for pre-registration nurse education at the University of Highlands and Islands delivered each year to around 150 students across two campuses. Five learning stations, with each station having a clearly outlined activity involving at least two or more sensory impairments, created microworlds for students to experience a combination of either visual, hearing, taste, smell or peripheral sensory impairments. The aim of this study was to evaluate the effect of simulated learning on pre-registration nursing student's knowledge and confidence in caring for older adults with sensory and

or cognitive impairment/s in clinical practice.

A quantitative approach was adopted using an online survey and some free text responses to collect data with three cohorts of nursing students who had participated in the simulation. 87.4% of students reported they had cared for patients with sensory impairments and 98.9% had cared for someone with a cognitive impairment whilst on placement. Findings from this study suggest that students found the simulation critical for their learning and reported improved knowledge, understanding and insight. Students rated the simulation most certainly influenced their understanding on the needs of people with sensory impairment (36.8%) and cognitive impairment (42.1%). The study concluded that a low-fidelity simulation on sensory impairments is effective at developing cognitive and affective empathy through experiential insights and student's learning for practice.

### **108. Post-surgical hypoparathyroidism incidence after total thyroidectomy in University Hospitals Leicester NHS Trust**

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**Background:** There is a lack of consensus in defining post-thyroidectomy hypocalcaemia. British Association of Endocrine and Thyroid Surgeons (BAETS) defines temporary hypocalcaemia as adjusted calcium of < 2.0 mmol/L and late hypocalcaemia as ongoing requirement for calcium/Vitamin-D at 6 months. American Association of Clinical Endocrinologists (AACE) defines permanent post-surgical hypoparathyroidism (PSHP) as dependency on calcium/Vitamin-D at 12 months. Late hypocalcaemia incidence is 12.1% (2012 BAETS audit) and 6.5% (2017 BAETS audit); for PSHP, incidence quoted in literature is 0.9%-4.5%. **Aims:** To evaluate PSHP incidence rate in total thyroidectomy patients beyond 12 months post-operative period. **Methods:** A list of total thyroidectomy cases was obtained from Histopathology department from 2010-2017 and retrospective evaluation of records was undertaken with up-to-date clinical and biochemical data collated. **Results:** Over 8-year period, out of 507, n=201 patients had total thyroidectomy; rest excluded due to lack of data or erroneous coding. n= 58 had temporary hypocalcaemia (incidence 28.9%); n= 21 (19F:2M) (incidence 10.4%) developed PSHP; mean follow-up 6 years. Mean age 48-years, mean BMI 27.7 wt/ht<sup>2</sup>, mean adjusted calcium 1.84 mmol/L (2.10-2.60), mean Parathormone 1.23 pmol/L (4-7), mean Vitamin-D 42 nmol/L (>50 is normal). 94%(19/21) treated with Vitamin-D analogues (86% alfacalcidol, 8% calcitriol). For >60% of patients 12-months post-operative calcium status could not be ascertained. **Discussion:** Our retrospective analysis identified higher incidence rate of permanent PSHP (10.4%) compared to BAETS audits 12.1% in 2012, 6.5% in 2017, and 0.9-4.5% quoted in literature. Temporary hypocalcaemia incidence of 28.9% was similar (23-46%). Female sex, extended neck dissection, post-operative iodine ablation, revision neck surgery were identifiable risk factors for PSHP.

Conclusion: We feel that the incidence rates of permanent PSHP is higher than quoted in literature. Missed diagnosis can result in considerable consequences. Close monitoring of calcium is recommended for at least 12 months for optimal detection and management.

### **109. A retrospective study on seroprevalence of Transfusion Transmitted Infections in blood donors at Dhiraj Hospital, Vadodara.**

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Background: Transfusion of blood and its components help in saving lives but it can also be a life-threatening hazard. Prevention of transmission of infectious diseases through blood transfusion in developing countries is difficult, since the resources available are limited.

Aims: To study the seroprevalence of Transfusion Transmitted Infections in blood donors at Dhiraj Hospital, Vadodara.

Methods and Material: A retrospective study was undertaken to determine the seroprevalence of TTI among the blood donors who donated blood to Dhiraj Hospital Blood Bank between January 2015 and December 2019. The TTI reports of the donors was obtained from the blood donor data records of Dhiraj hospital

Each blood unit was tested by Enzyme-Linked Immune Sorbent Assay (ELISA) method for Human Immune Deficiency Virus, and Hepatitis B virus and Hepatitis C virus. Syphilis was tested by Rapid Plasma Reagin (RPR) card test. Malaria was tested by antigen rapid diagnostic test.

As is the practice in the Blood Bank, all positive samples were subject to repeat test for confirmation, before the seropositive blood unit is discarded

The information extracted from the Dhiraj Hospital blood bank database also included donor Id, Age, Sex, Residential address, donation type, donation frequency.

Results: The data analyzed in the study consisted of a total 20,711 blood donations, of which 2728 (13.1%) were voluntary and 18,288 (86.9%) were replacement donation. The seroprevalence rate of HIV was 0.1, that of HBV was 1.4, HCV 0.1, syphilis was 0.5 and Malaria was 0.3 among all the blood donors. The TTIs were more frequently found in replacement donors in comparison to volunteer donors.

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