




# ACUTE & GENERAL MEDICINE

POSTER ZONE 2018

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Commended	

## Poster 1

### Audit of Psychiatric Co-Morbidities Impacting On General Internal Medical Patients Outcomes

**E.Kyriacou (1) A.Johar (1) M.Hagger (2) Department of General Internal Medicine Royal Free Hospital NHS Foundation Trust (1) and Liaison Psychiatry Service Royal Free hospital, Camden and Islington NHS Foundation Trust**

#### **Aim**

The aim of this audit was to highlight the real risk of adverse outcomes of patients admitted to medicine who have a co-existent psychiatric condition.

#### **Background**

The phenomenon that inner city urban centres are overpopulated with patients with longstanding psychiatric co-morbidities whose socioeconomic and emotional development is ravaged by years of chronic isolation, vulnerability, psychiatric illness is well known: The recent report by the National Confidential Enquiry "Treat as One" - discusses patient outcomes and deaths from psychiatric and physical care in the hospital setting and makes corresponding recommendations for best practice.

#### **Methods**

We randomly looked at a 3 month period from mid February to mid May 2018 and prospectively collected 10 patients with at least 1 definite previous psychiatric diagnosis each - (excluding cognitive impairment alone or learning disabilities without behavioural or psychiatric disturbance, or neurodegenerative disease) from the general internal medicine (GIM) caseload.

1 auditor collected these weekly from seeing patients on the ward and from the weekly handover sheets for GIM at the Royal Free Hospital site: The GIM service accepts the more complex patients who pose difficult management problems and require complex discharge planning.

Age, sex, psychiatric diagnosis together with repercussions due to the psychiatric status of the patient were noted as were the medical co-morbidities- and the outcomes-either length of stay (LOS) or if they died and any pertinent notes about their progress noted too.

#### **Results**

These are shown below in the summary grid of GIM patients complicated by psychiatric disease-either past or current.

#### SUMMARY GRID OF SAMPLE INTERNAL MEDICINE PATIENTS WITH PSYCHIATRIC HISTORY:

Key OA=osteoporosis, PVD=peripheral vascular disease, UTI =urine tract infection, vit D=vitamin D, AKI/CKD= acute kidney injury

/chronic kidney disease, SFA superficial femoral artery, HT=hypertension, CCF=congestive cardiac failure, IHD=ischaemic heart disease.

I D	Age/Sex	Psychiatric diagnosis	Specific complications	Present complaint	Physical co—morbidities	LOS (day s)	Comment s)
1	70/F	Personality disorder	Self neglect	UTI, poor nutrition incontinence	CKD/ESRF, frailty	33	Died day 33
2	62/M	Schizoaffective+ bipolar disorder paranoia	Tardive dyskinesia AKI/CKD mild L hydronephrosis, BPH	urological	Diabetes	23	thick walled bladder found
3	70/M	Ethanol excess Depression anxiety, self neglect	Alcohol withdrawal. Vit D deficiency	Vomiting aspiration	Falls Cervical myelopathy, spastic paraparesis decompression c spine 2009 Restless legs syndrome, gout	10	Treated for ethanol withdrawal
4	77/M	Falls due to alcohol, obesity	Long lie with rhabdomyolysis	Fall	Parkinson's disease, CKD, slow AF, CCF, HT, postural instability	11	Alcohol relevant, obesity
5	62/M	Learning disabilities Aspergers, behaviour and personality disturbance	Unstable diabetes- non compliance with diet poor behaviour	Blood sugars unstable mainly high	Requiring insulin, PVD , recent foot debridement previous month	17	delayed discharge-home with 24 hour care
6	74/M	Reported alcohol excess	Recurrent falls	Fall	PVD-RSFA stenosis IHD	24	At some time in past
7	70/M	Severe depression, abusive, not compliant-	Failed to attend community diabetes clinics for 2 years in person although prescription picked up by carer	Painful legs, reduced mobility gangrenous feet- Osteomyelitis: known Diabetic peripheral neuropathy PVD,	vitamin D, folate, iron deficient, osteoporosis L1 fracture , OA spine, smoker underlying small vessel disease brain	83	Metatarsectomy R foot , L heel debridement , 2 angioplasty attempts 6 weeks antibiotics Not motivated for rehab
8	70/M	Severe depression, Emaciated, not eating	Recent diagnosis colon cancer but BMI< 18 too frail for surgery yet	Refeeding syndrome ,HAP	Clostridium difficile colitis	54+	ongoing

9	75/M	PTSD/RTA in Somalia, cognitive impairment underlying	Schrapnel wounds and small stable SDH	Landlord swapped him to ground floor-flat has sewage problem needing fixing	Diabetes, HT, glaucoma, OA knees	5+	Landlord difficult to contact to check flat ready-ongoing
10	73/F	Paranoid schizophrenia vulnerable	Social admission	Vitamin D deficiency	Social vulnerability will be complex discharge	3+	Made homeless by family

## Discussion

GIM as a service at the Royal Free accepts complex medical patients with multiple co-morbidities aged between 60-79 ( below the geriatric age group) who pose difficult management problems and require careful discharge planning.

8 out of 10 patients were males. All patients were aged between 62 and 77. Average age was 70.3 years.

Both of the 2 females were in the older group 70 and above.

This audit uncovered a large number of patients in this urban setting with psychiatric disease in this age group presenting with medical problems-often directly related to their psychiatric disease:

For example a man who had not been seen personally in the community diabetic clinic for 2 years, presenting with infected gangrenous diabetic feet requiring various vascular and orthopaedic procedures. This lack of motivation translated also into non engagement with therapies and therefore lack of rehabilitation potential. Another patient died of end stage renal disease- presenting with sepsis, self neglect and general debility. 2 had active alcohol dependence leading to falls. Another 2 were mainly complex due to their social vulnerability and impending homelessness or difficulties getting them home.

40% were diabetic and at least 1 was listed as being obese. There were compliance issues in at least 75% of these.

A smoking history was not included in the audit but it seems likely a high percentage of these patients were or had been smokers.

Only 20% had either tardive dyskinesia or Parkinsonism of any cause , making possible psychoactive drug side effects less common than type 2 diabetes therefore. Diabetes is known to accelerate the body's internal ageing clock and these people die earlier than diabetics with no co-existent psychiatric problems.

Self neglect either due to alcohol dependence or personality disorder or schizophrenia is most likely a major factor resulting in the patients being , much older biologically than their chronological age would suggest .

1 patient with severe depression was severely emaciated and posed a problem as to how to engage him in his recovery with regards to his nutrition . He was also self neglecting but his case had similarities with people with eating disorders although not his primary diagnosis. The behavioural disturbances if present in patients with learning disabilities would seem to pose the same risks and outcomes.

These groups need more complex discharge planning-such as packages of care and may incur longer length of stay, or present a challenge as delayed discharges.

## **Conclusion**

Having a psychiatric history still remains a major complicating factor adversely affecting people's ability to look after themselves properly, making them more likely to present with many and significant medical problems , and serious complications which are highly likely to significantly complicate discharge planning . The NCEPOD Treat as One document rightly stresses the importance of close working between medical and liaison psychiatry professionals in all these cases.

## **References**

Report By The National Confidential Enquiry "Treat as One"- Patient Outcomes and Deaths from Psychiatric and Physical Care in the hospital setting.

## Poster 2

### Copper Deficiency Myelopathy Diagnosis Should Not Be Overlooked

**E.Kyriacou, Senior Clinical Fellow Acute Medicine (GIM) Senior registrar grade**

E.Kyriacou (1) A.Johar (1), A.Yousseif (2) Departments of General Internal Medicine (1) and Endocrinology (2) Royal Free Hospital NHS Foundation Trust

Our aim was to present the important facts related to copper deficiency myelopathy (CDM) as it pertains to diagnosis and management in particular treatment and prognosis and to illustrate this with an anonymised vignette of a case.

#### **Case Vignettes: Typical Scenarios**

Often the patient has a myelopathy where standard investigation for B12 folate deficiency, paraneoplastic, viral transverse myelitis, demyelinating disease and even peripheral neuropathies where diabetic neuropathy and others have been extensively ruled out- but there may be clues such as previous bariatric surgery in the form of Roux en Y-Gastric bypass, or short bowel syndrome following surgery, malabsorption if profound from any cause, anaemia related to copper deficiency and in particular related to zinc excess as well such as is present in elderly people using excessive dental fixatives containing zinc.

#### **Tests**

Low serum copper levels and low urine copper in contrast to Wilson's where urine copper is not low.

#### **Treatment**

Consists of copper replacement therapy. Regular monitoring is essential especially in bariatric patients.

#### **Prognosis**

Often treatment comes too late and there is no neurological resolution where paraplegia is the main result. Haematological recovery is more likely. A review of 55 cases made this clear point (references 1-4).

#### **Outcomes**

Patients' signs often do not resolve with treatment of the CDM particularly if there has been a delay in diagnosis and often they remain wheelchair bound with some modest improvement in symptoms.

#### **Conclusion**

It is vitally important that CDM although not common is kept in mind in cases of unexplained myelopathy, or anaemia and that copper deficiency-particularly in the presence of hyperzincemia or iron overload is corrected.

#### **References (100 words)**

1 Zinc containing fixative causing copper deficiency myelopathy. Lim Stuart Carroll et al al; BMJ Case Rep 2017; doi 10.1136/bcr-2017-219802.

2.Copper deficiency myelopathy. Stephan R. Jaiser et al; J Neurol 2010; 869-881.  
Copper Deficiency Myelopathy Resembling B12 Deficiency: Partial Resolution of MR  
Imaging B.P.Goodman et al.  
3.Copper Deficiency Myelopathy Produces A Picture Like Subacute Combined  
Degeneration. 4.Neeraj Kumar et al. Arch Neurol 2004;61:762-6.  
Copper Deficiency Myelopathy and Pancytopenia Secondary to overuse of Zinc  
Supplementation. J.Rowin et al. J Neurol Neurosurg Psychiatry 2005;76:750-1.



## Poster 3

# DVT management @Ambulatory Care, The Hillingdon Hospital, Vs NICE Quality Standards 2016

Dr Visalakshi Subbian ST5 Acute Medicine SPR The Hillingdon Hospital

### Background

The incidence of venous thromboembolism (VTE) is 1-2/1000 of the population and increases with age. If left untreated about 1 in 10 people with a deep vein thrombosis (DVT) will develop a pulmonary embolism (PE).

### Aim/Objective

To explore whether the Ambulatory care (AC) at the Hillingdon Hospital was meeting the DVT quality standards (QS) set by NICE-2016. The specific objectives were to find out whether there was an improvement in the number of DVT patients receiving

- a) Dalteparin < 4 hours
- b) US doppler < 24 hours
- 3) Thrombosis clinic referral for unprovoked DVT.

### Methods

Retrospective analysis of case notes, blood tests and imaging were undertaken.

- Audit: Nov 2017, 70 adult patients presenting with leg swelling, pain, erythema, a Wells score of > 2 and a positive d-Dimer.
- AC team was educated about the NICE DVT Quality Standards.
- Re-audit: May 2018, 70 patients meeting the above criteria.

### Results

In suspected DVT patients with a Wells score of >2 and D dimer positive,

	<u>REAUDIT</u>	<u>AUDIT</u>
a) Dalteparin < 4 hours	64%	84 %
b) US doppler of legs < 24 hours	44%	62 %
c) Thrombosis clinic referral (unprovoked)	15%	7%

### Conclusions

Broadly, the Hillingdon Hospital AC is meeting the NICE DVT QS.

Specifically, the AC has improved in giving Dalteparin <4 hours, in arranging US doppler of legs <24 hours in suspected high risk DVT patients. Also, the unnecessary thrombosis clinic referral in unprovoked DVT has reduced (by doing CT CAP to rule out malignancy).

### Implications

In suspected DVT patients,

- 1) Therapeutic Dalteparin <4 hours **prevent life threatening thrombosis (PE).**
- 2) US doppler leg < 24 hours **prevent life threatening bleeding** (by avoiding unnecessary Dalteparin in doppler negative patients.)

Overall, the AC DVT pathway is cost-effective.

## DVT PATHWAY @ THE HILLINGDON AMBULATORY CARE.

Suspected DVT & Wells Score >2

US doppler < 24 hours,  
Dalteparin < 4 hours if D dimer +  
Anti coagulate if DVT +

Refer unprovoked DVT to thrombosis clinic.  
DVT + cancer, review anti coag in 6/12. Otherwise in 3/12.

### References (100 words)

- 1)VTE in adults: diagnosis and management: Quality Standard (QS29), Published date: March 2013.Updated: April 2016.[www.nice.org.uk](http://www.nice.org.uk)
- 2)Wells PS et al (2003) Evaluation of D-dimer in the diagnosis of suspected DVT. New England Journal of Medicine 349: 1227-35

## Poster 4

### Troponin Quality Improvement Project: Should we request one in an Acute Setting?

**Dr Wei Jun How (lead author & project lead), Dr Vishal Patel (co-author) Junior doctor Jersey General Hospital**

#### **AIM**

Cardiac troponin is currently the gold standard biochemical marker for detecting myocardial infarction<sup>1</sup>, but can also be raised in other clinical presentations that do not involve occlusion of the coronary arteries<sup>2</sup>. As such, troponin requests should be done in conjunction with assessment of the patient and to confirm the clinical impression of an acute coronary syndrome. A quality improvement project was therefore started in Jersey to ensure that troponin requests for patients in an acute setting were done in a clinically appropriate context and documented accurately.

#### **METHODS**

All troponin requests for patients who were admitted through the emergency department (ED) or emergency admissions unit (EAU) were collated in two separate time periods (October 2017 & June 2018). Each request was correlated to the patient's presenting complaint and ECG. After the first time period, changes were introduced to TrakCare (Jersey's hospital electronic request system), prompting clinicians to answer pre-requisite questions prior to troponin requests:

- Is troponin indicated?
- Time of peak symptoms
- Is there an abnormal ECG?

Data was then collected again 2 weeks after these changes were introduced.

#### **OUTCOMES/RESULTS**

During the first phase of this quality improvement project,

- only 58.6% of troponin requests in ED/EAU were done in the context of chest pain or ischaemic changes on the ECG. After TrakCare changes were introduced, this figure had improved to 92.3%.
- 17% of patients did not have their time of peak symptoms documented in the notes and as such it was difficult to ascertain whether they needed a 6 hour follow up sample. The TrakCare questions helped achieve perfect documentation and guide when to repeat the blood test

#### **CONCLUSION**

Selection of patients for cardiac troponin testing should be a clinically based decision. These changes were proven to help guide clinical staff in requesting troponin and subsequent management of patients.

### References (100 words)

- 1) Hasić, S., Kiseljaković, E., Jadrić, R., Radovanović, J., & Winterhalter-Jadrić, M. (2003). Cardiac troponin I: the gold standard in acute myocardial infarction diagnosis. *Bosnian Journal Of Basic Medical Sciences*, 3(3), 41-44.  
doi:<http://dx.doi.org/10.17305/bjbms.2003.3527>
- 2) Korff, S., Katus, H. A., & Giannitsis, E. (2006). Differential diagnosis of elevated troponins. *Heart*, 92(7), 987–993. <http://doi.org/10.1136/hrt.2005.071282>

## Poster 5

### Think of Gluten Ataxia: A rare but potentially reversible cause of progressive neurological disorder!

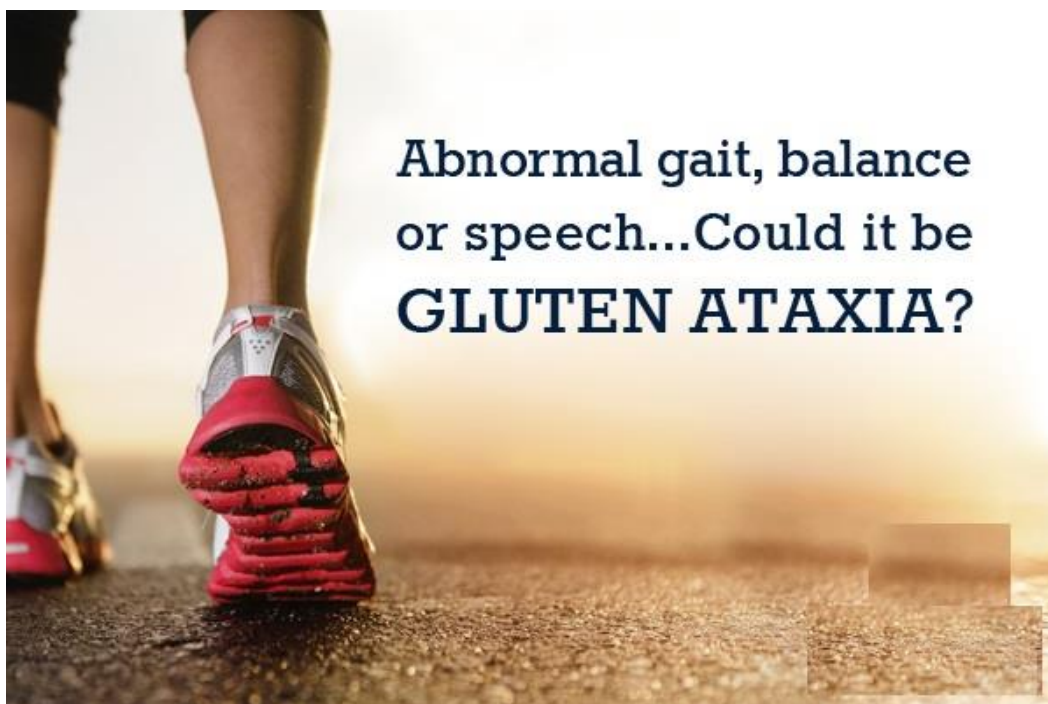
**Lal, K; Kyi, A; Shar Baloch, K A; Mathur, R  
Dr Kartar Lal Medical Registrar Grantham District Hospital**

#### **Aims:**

Celiac disease is the established but not only manifestation of Gluten sensitivity disorders. Gluten ataxia is a rare form of Gluten sensitivity disorder and a reversible cause of cerebellar ataxia (Khawaja et al. 2015). This results from consuming gluten diet in patient with known or unknown gluten sensitivity disorders. An unusual cause of ataxia in a patient with known Celiac disease who was admitted in Grantham District Hospital will be discussed in this case study.

#### **Case history:**

A 71 years old gentleman, admitted in Grantham District Hospital after had a fall and sustained neck of femur fracture which was repaired on next day. He was a known case of Coeliac disease and was not on gluten-free diet prior to his admission. Whilst inpatient, he developed chest infection which was refractory to broad-spectrum antibiotics. He was also noted to have ataxia, oropharyngeal dysphagia and horizontal nystagmus. A nasogastric tube was inserted and was given Gluten-free diet. His symptoms improved in few weeks and started eating normally. His MRI brain showed generalised atrophy.



## Discussions:

Although this patient was initially diagnosed as Parkinson's disease by Neurology team and commenced on anti-parkinson medications, however, his symptoms did not improve with anti-parkinsons medications and his DaT Scan was negative. His anti-parkinson's medications were stopped and commenced on gluten-free diet.

A review of literature found that improvement in the neurological symptoms after gluten-free diet confirms the diagnosis of Gluten Ataxia (Khawaja et al. 2015). Hadjivassiliou et al. (2014) found that prevalence of gluten ataxia in 10-22% cases of established Coeliac disease. MRI brain does not necessarily show cerebellar atrophy in all the cases of Gluten Ataxia (Hadjivassiliou et al., 2005).



## Conclusion:

The diagnosis of Gluten ataxia should be considered in patients presenting with unexplained neurological symptoms in known or unknowns cases of Gluten sensitivity disorders.

### References (100 words)

Briani C, Zara G, Alaedini A, et al. Neurological complications of coeliac disease and autoimmune mechanisms: a prospective study. *J Neuroimmunol.* 2008;195:171–75.

Hadjivassiliou M, Duker AP, Sanders DS. Gluten-related neurologic dysfunction. In Biller J, Ferro JM editors *Handbook of Clinical Neurology. Neurologic Aspects of Systemic Disease Part II Vol 120 Elsevier press; 2014. pp.607-619.*

Hadjivassiliou M, et al. Gluten sensitivity: from gut to brain. *Lancet Neurol.* 2010;9:318–30.

Khawaja, A. et al. Gluten Sensitivity – A Potentially Reversible Cause of Progressive Cerebellar Ataxia and Myoclonus - A Case Report. *J Clin Diag Res* 2015; 9 (11).



## Poster 6

### Review of iBleep calls for the medical on-call team at Good Hope Hospital

#### Dr. Samira Siddique Trust Grade FY2 Level Good Hope Hospital

I-bleep is used by ward nurses to communicate jobs to the on-call doctors covering the wards during on-call and on weekends. The hospital covered by the on-call team is divided into towers and outliers.

#### Aims

To review the I-bleep calls sent to the medical on call team at Good Hope Hospital.  
To identify the proportion of calls those are appropriate on-call tasks.

#### Methods

Retrospective observational study.  
Data was collected from the Informatics department and statistically analysed by Stata 15.  
Time period -01<sup>st</sup> to 30<sup>th</sup> March 2018.

#### Results

Per shift, average call received by the junior doctor covering tower during a weekday was 70 and mean calls per hour was 5.1. As for the junior doctor covering the outliers, he/she received 50 iBleeps on average and the mean call per hour was 4.2. The mean call per shift during the weekend for both the tower and the outlier junior doctor was 1.5 which was less than half when compared to the weekdays and the comparison had a P value of <0.0001. The jobs on the iBleep were reviewed which showed on an average the maximum number of calls were pertaining to prescribing reviewing patients, IV fluids, prescribing medications and MEWS 4 or more. About 1/5<sup>th</sup> of all calls were prescribing (including warfarin) and 20% of all calls were IV fluids prescribing.

#### Recommendation

To ensure that all plans made on the ward round are implemented by the day team including prescribing patients' regular medication including warfarin and simple analgesia.  
If IV fluids are to be given to patients, to ensure they are prescribed for the 24 hours.  
To modify the electronic prescribing (EP) to allow prescribing IV fluids on EP.  
Also to modify the timing of warfarin prescribing from 1800 hrs to 1400hrs to ensure prescribing unless otherwise indicated.

#### References (100 words)

Data was collected from the IT department in Good Hope Hospital, UHB trust



## Poster 7

### PRN Insulin prescribing practices

Fang Wen Gan Foundation Year 2 trainee Queen Elizabeth Hospital, Woolwich,  
London

NT Kalyal, FW Gan (joint first author), EL Bezzina, A Akeredolu, A Saqib, DA Charles.  
IT Chika-Ezerioha, S Ibrahim

#### Background

About eighteen percent of hospital inpatients are diabetic.<sup>1</sup> During illness and stress blood glucose rises. Prescribing "PRN" rapid/short acting insulin is a practice employed by doctors to combat hyperglycaemia when encountered, usually done without the involvement of a diabetes specialist.

#### Aim

To explore PRN rapid/short-acting insulin prescribing in our district General Hospital.

#### Methods

Inpatient drug charts on every ward excluding intensive care, paediatrics and women's health were reviewed on a single day. Data were collected on the number of patients, number of diabetics, number of patients on regular insulin, and if any PRN insulin was prescribed. Doctors were also surveyed on their prescribing practices and knowledge of insulin.

#### Results

Twelve wards were audited including various medical and surgical specialties. Three hundred and fifty-four drug charts were reviewed, with forty-eight (13.6%) diabetic patients. Eight instances of PRN insulin were identified, as indicated below in Table 1:

Ward	Number of patients	Total diabetics on ward	PRN Insulin
Acute medical unit	39	4	Novorapid 2 units, max frequency PRN, <b>if BM&gt;12 after meal, bedtime or 3am</b>
			Novorapid 4 units, max frequency PRN, <b>if BM&gt;12 after meal, bedtime or 3am</b>
Acute frailty	39	3	Nil
Respiratory	28	2	Nil
Cardiology	24	2	Nil
Endocrine & diabetes/Elderly care	39	13	Novorapid 2 units, max frequency 4 hourly, <b>if BM&gt;20</b>

			Novorapid 4-6 units, max frequency 4-6 hourly
			Humalog 4 units, max frequency QDS, <b>with meals</b>
Surgery	39	5	Nil
Gastroenterology	20	2	Actrapid 2-4 units, <b>if BM &gt;16</b>
Orthopaedics	28	3	Nil
Elderly care	28	3	Actrapid 4-8 units OD, <b>if BM &gt;16</b>
Elderly care	28	5	Novorapid 4 units 2-4hourly, <b>if BM&gt;20</b>
Elderly care	26	4	Nil
Haematology/oncology	16	2	Nil

TABLE 1 Summary of diabetic patients and PRN insulin prescription

One-sixth (16.7%) of diabetic patients were prescribed PRN insulin. Rapid-acting insulins (Novorapid and Humalog) were most commonly prescribed. Actrapid, a short-acting insulin, was also prescribed. Rapid/short acting insulin should ideally be prescribed at mealtimes. Prescribing insulin without a frequency could lead to repeated doses of insulin given leading to accumulation of insulin and resultant hypoglycaemia. Almost all prescriptions contained errors which could result in hypoglycaemia.

### Conclusion

Our snapshot audit identified prescriptions that have the potential to cause harm to patients. Prescribing insulin without a frequency could cause repeated doses of insulin given leading to accumulation of insulin and resultant hypoglycaemia.<sup>2</sup> Certainly, at our institution, we have managed hypoglycaemia secondary to PRN insulin. Knowledge gap exists with the understanding of rapid and short acting insulins and the appropriate management of patients with deranged blood glucose measurements. One measure to correct this prescribing practice may be a guideline for PRN insulin prescriptions.

### References (100 words)

1. Diabetes UK, *National Diabetes Inpatient Audit 2017*. March 2018. Available from: <https://digital.nhs.uk/data-and-information/publications/statistical/national-diabetes-inpatient-audit/national-diabetes-inpatient-audit-nadia-2017> [Accessed 6th Sep 2018]
2. National Institute for Health and Care Excellence (NICE), *Diabetes: Safer insulin prescribing [KTT20]*. 2017. Available from: <https://www.nice.org.uk/advice/ktt20> [Accessed 3rd Sep 2018]



## Poster 8

### Who's responsible? Optimising the transition of patients from Secondary to Primary Care

**Prashan Bhatti, Byron Lu Morrell, Gautom baruah, Foundation Year 2 Doctors, Kings College Hospital Trust, QEQM Hospital Margate, Medway Maritime Hospital**

#### **Background**

The transfer of patients from secondary to primary care upon discharge from hospital is a weak point for continuity of care. The discharge letter represents the interface for this transition of care. It is not always clear or consistent as to what is deemed an appropriate request to make of a GP.

#### **Aim**

Our aim is to optimise the transition of patients from secondary to primary care. Firstly, by evidencing that what is considered an appropriate request is inconsistent across secondary and primary care physicians. Secondly, to clarify accountability for outpatient follow-up and to reiterate contractually agreed referral pathways<sup>1</sup>.

#### **Method**

Conducted at Maidstone General Hospital. A standardised questionnaire was created from anonymised excerpts of discharge summaries and their requests. Requests were categorised into: Referrals, Medication Reviews, Chasing Investigations, Clinical Reviews and Arranging Investigations. Questionnaires were distributed to both hospital doctors and local GPs. The degree to which a cohort agreed with one another was calculated using and study-specific 'agreeability score', ranging from +1 to -1.

#### **Results**

Results were analysed by request type, physician grade, and secondary versus primary care. Between primary and secondary care responses were largely dissimilar. Amongst secondary care doctors there was widespread inter- and intra-grade variability, often with no clear consensus per request. By contrast, GP responses were much more homogenous.

#### **Conclusion**

Overall, our findings demonstrate a clear discrepancy as to what is deemed an appropriate request between secondary and primary care doctors. More coherence within GP responses may be due to fewer junior grade doctors in the cohort. Intervention needs to be undertaken locally to publicise these discrepancies prior to implementing guidance to correct them. Possible interventions include; up-to-date referral pathway algorithms, a discharged patient investigations list and an accessible document outlining appropriate and inappropriate GP requests.

#### **References (100 words)**

1. NHS England, 2017/19 NHS Standard Contract: updated January 2018

## Poster 9

Samuel Kim Doctor Northwick Park Hospital

### **Evaluating Current Practice for Bone Biopsy Selection Criteria following Hip Fracture**

#### **Background**

Bone metastases are a common consequence of many cancers, and represent a significant and sudden source of morbidity. Suspected pathological fracture should be appropriately investigated to avoid the risk of dissemination. Definitive diagnosis with a bone biopsy allows accurate staging and appropriate adjuvant treatment and therapy.

Ongoing improvements in systemic therapy for metastatic disease and the wide prevalence of skeletal metastases (60-90% of patients) represent a growing healthcare burden, yet no guidelines exist for when surgeons should do bone biopsies following fragility fractures.

#### **Aim**

This report aims to evaluate the current local practice for when and why bone biopsies are performed.

#### **Methods**

Data was collected retrospectively from discharge summaries and histology reports of all traumatic hip fractures discharged from Central Middlesex Hospital from 1/8/17 to 18/11/17. A data collection form was used to record patient age, gender, whether biopsy was performed, and history of cancer.

#### **Results**

Of the seventy-five patients who were admitted, seven (9%) patients had received a bone biopsy and of these, one (14%) showed evidence of malignancy- a metastatic lesion from prostate. Twelve patients had a history of cancer, of whom three (25%) had a biopsy. Four of 62 patients without history of cancer received bone biopsy (6.3%). The indication for bone biopsy in these cases was not clearly documented.

#### **Conclusion**

Bone biopsies are done infrequently and sporadically. The criteria to receive a biopsy are unclear. Most patients with a history of cancer did not have a biopsy (75%).

The prevalence of skeletal metastases in patients, the paucity of literature regarding the benefit of routine biopsy, and the variability of current practice mean that a prospective study which takes biopsies of all non-elective hip fracture repair over a year could provide useful epidemiological data. This data can help guide best practice on when to biopsy following suspected pathological fracture.

#### **References (100 words)**

1. Bryson DJ, Wicks L, Ashford RU. The investigation and management of suspected malignant pathological fractures: a review for the general orthopaedic surgeon. *Injury*. 2015;46(10):1891-9.

2. Bubendorf L, Schopfer A, Wagner U, Sauter G, Moch H, Willi N, et al. Metastatic patterns of prostate cancer: an autopsy study of 1,589 patients. *Hum Pathol.* 2000;31(5):578-83.
3. Lee YT. Breast carcinoma: pattern of metastasis at autopsy. *J Surg Oncol.* 1983;23(3):175-80.
4. Buggay D, Jaffe K. Metastatic bone tumors of the pelvis and lower extremity. *J Surg Orthop Adv.* 2003;12(4):192-9.

## Poster 10

### Developing A Rapid Access Frailty Service In West Norfolk

**Kate O'Shea and James Casson, ST3 in Geriatric Medicine and Consultant Geriatrician**

#### **AIM**

Frailty is a distinctive health state related to the ageing process in which multiple body systems gradually lose their in-built reserves. West Norfolk has an ageing population with those aged 85 or older growing by 3 - 4% annually. Locally, attendances to the Emergency Department have increased by 14% over the past year and for over 65 year olds there has been a 23% increase. We set out to establish a single point of access for patients identified as frail, to be accessed by community healthcare providers to offer consultant geriatrician-led advice and guidance and review at a Rapid Access Frailty Clinic appointment where appropriate as an alternative to acute admission.

#### **METHODS**

The service was set up in October 2017 in partnership with West Norfolk CCG. It was advertised to local GPs, Community Matrons, Community Therapists and Specialist Paramedics. Referrals were taken for patients over 65 years identified as frail (4 or above on the Clinical Frailty Scale) who were felt to be high risk of acute admission. All calls were taken by a consultant geriatrician and the outcome documented on SystemOne. 6 rapid access frailty clinic slots were available per week supported by a consultant geriatrician, rapid assessment therapy team and a Treatment and Investigation Unit for procedures such as transfusion.

#### **OUTCOMES/RESULTS**

As of June 2018, 132 health professionals have contacted the service for advice and guidance and 83 patients have been seen in the Rapid Access Clinic. The majority of patients were assessed as moderately or severely frail and at high risk of admission. Admission avoidance was 70% within 30 days of referral to the service.

#### **CONCLUSION**

Rapid access frailty services can be an effective adjunct to traditional ambulatory care models in avoiding acute admissions in this complex and high risk patient group.

Poster 11  
A new model of streaming, urgent care and mist in the emergency  
department

**Mohammad Ansari**  
**Consultant Accident Emergency Medicine**  
**George Eliot Hospital, Nuneaton**

**AIM**

To organise multiple streams of care for patients in the Emergency department (ED) to achieve the 4- hour target and improve patient flow. To reduce waiting times in the department by having suitable staffing and improve patient care by reducing admissions and avoiding unnecessary investigations.

**METHODS**

The department at George Eliot Hospital, Nuneaton already has multiple streams including an Urgent care stream, Ambulatory care, Paediatric and Major resuscitation stream. To add another stream we had to change the layout of the department to make room for the introduction of Minor Injuries See and Treat (MIST) which was staffed by a senior ED clinician and supported by a dedicated Nurse. We introduced a streaming nurse to direct patients to different streams. Our streaming nurse was able to refer some patients to the General practice surgery to be seen the same day. We also introduced acute Medical Consultants in ED to get involved with patient care on their arrival.

Now our streams include Ambulatory Care, Urgent care, MIST, Paediatrics, Majors and Resuscitation stream.

**RESULTS**

The Urgent care centre was staffed by a General Practitioner and an Advance Nurse Practitioner who treated nearly 14% of patients. The MIST stream, staffed by a senior ED Clinician treated nearly 27% patients. In total 36 to 45% patients were seen by these two streams. Introduction of a new stream improved waiting times in the department. The average waiting time in the Urgent care and MIST Streams is now a maximum of two hours. Investigations have reduced and the discharge rate from ED has increased from 75% to between 82-86%.

**CONCLUSION**

Our innovation in the department for patient care has improved waiting times in the department, reduced investigations and admissions in the hospital.

**References (100 words)**

1 Mitchell G, Del Mar C, Francis D. Does primary medical practitioner involvement with a specialist team improve patient outcomes? A systematic review. *The British Journal of General Practice*. 2002;52(484):934-939.

2 Wadhwa, Sandeep Lavizzo-Mourey, Risa et al. Do Innovative Models of Health Care Delivery Improve Quality of Care for Selected Vulnerable Populations? A Systematic Review

3. Osman L M, Abdalla M I, Beattie J A G, Ross S J, Russell I T, Friend J A et al. Reducing hospital admission through computer supported education for asthma patients BMJ 1994; 308 :568  
Poster 11



## Poster 12

### A 'front door' frailty service – improving patient outcomes with geriatrician input on the clinical decisions unit

**Simon Hervey<sup>1</sup>, Lisa Ramsawak<sup>1</sup>, Thomas Saunders<sup>2</sup>**

**1. Registrar in geriatric medicine 2. Consultant geriatrician  
Worthing Hospital**

#### **Aim**

The Clinical Decisions Unit (CDU) is a destination for many patients via A&E, and en route to either discharge or admission under a specialist team.

The aim of our study was to evaluate the impact of daily geriatrician input at Worthing CDU, focussing on admission rates to elderly care wards, 30 day hospital re-attendance rates, average length of hospital stay and total number of occupied bed days.

#### **Methods**

We collected data prospectively from CDU admissions between October and December 2017. This included age, presentation type, Rockwood clinical frailty scale (CFS) <sup>1</sup>, and outcome including length of hospital stay and 30 day re-admission rates. Data was obtained from patient notes and speaking with members of the CDU team (doctors, nurses and therapists).

Following this, a registrar in Geriatric Medicine began to attend the daily CDU board round, identifying and reviewing patients that may benefit from specialist input. Further data was collected from January to March 2018 and compared with the initial findings.

#### **Results**

Table 1 summarises our key findings and outcomes from both groups. In the pre-intervention group, 66 per cent of patients had presented with falls, immobility, instability or impaired consciousness/confusion. By comparison, the number of patients with these presentations represented 48 per cent of all CDU admissions in the post-intervention group. Twenty five per cent of CDU admissions in the post-intervention cohort received input from a geriatrician.

	<b>Pre-intervention</b>	<b>Post-intervention</b>
Number of patients	71	73
Mean age	75	74
Median age	80	81
Percentage of patients with CFS of 5 or above	36	40
Percentage of patients admitted to an elderly care ward	10	15

Average length of stay for patients admitted to an elderly care ward	19	9.5
Total occupied bed days for all admissions to elderly care wards	133	105
Percentage of patients with CFS of 5 or above re-attending A&E within 30 days	24	5

Table 1: Findings and outcomes for patients seen pre and post-intervention

### **Conclusion**

A 'front door' frailty service would appear to provide a significant benefit by reducing average length of stay, total occupied bed days and 30 day re-attendance rates. We suggest that this may be due to the impact of early specialist input, as well as linking in with other key services (such as community matrons). Data collection is ongoing, and preliminary analysis demonstrates sustained positive outcomes. We intend to continue this intervention on a long-term basis.

### **References (100 words)**

1. Rockwood K, Song X, MacKnight C, Bergman H, Hogan DB, McDowell I, Mitnitski A. A global clinical measure of fitness and frailty in elderly people. *CMAJ*. 2005 Aug 30; **173(5)**: 489–495.

## Poster 13

### Audit to review respiratory services ability to respond to referrals for NIV assessment for Motor Neurone disease patients in a DGH

**Trishna Patel, Respiratory Registrar, Colchester General Hospital**

In 2016/7 an audit evaluated access to respiratory services at Colchester Hospital for MND patients. Within a one year period, 1 patient was seen within 2 months, 2 were not seen at all. This was urgently reviewed with a view to reduce waiting times, improve patient experience, reduce the risk of hospital admission and increase respiratory support for MND patients.

The service was offered to MND patients identified by neurorehabilitation team with respiratory symptoms or deteriorating FVCs. Patients were invited to attend an ambulatory clinic run by a respiratory registrar with support from a designated consultant. They were assessed, counselled on starting and withdrawing NIV. If appropriate, NIV was started. The registrar worked alongside the palliative care team and respiratory physiotherapists, attending joint consultations and bi-monthly MND multidisciplinary meetings.

All referred patients (n=7) were seen within 2 months. 2 were seen as IPs. 6 patients seen within 6 weeks (85.7%). 4 MND patients started on NIV; 3 as outpatients (2 on the first consultation), 1 as inpatient.

The introduction of the registrar delivered service has reduced wait times for patients and ensured all are offered rapid respiratory review following referral. There were no incidences of hospitalisation due to delay in respiratory review; however some overlap in services led to a delay in starting treatment for 1 patient. The respiratory service is better involved in MND MDT and care pathways. For the registrar, this has been a positive training and learning experience in managing respiratory complications of progressive neuromuscular conditions.

In the future, the registrar delivered clinic will continue with consultant support. There is no standard best practice for managing these referrals. Writing agreed local guidelines would be beneficial. In light of short prognosis in MND, it might be advisable to aim for review in <6 weeks. Community support for patients started on NIV who encounter difficulties, still needs to be addressed.

## Poster 14

### Title: The effectiveness of respiratory hot clinic service in two North West centres, UK

**Aziza Aini Abdul Rashid, Foundation year 2 doctor, Lancashire Teaching Hospitals NHS Foundation Trust**

#### **Background**

Effective hospital discharge is a sustained national concern. Whilst discharging patients too early may result in risks of preventable readmissions<sup>1</sup>, delayed discharges lead to increased morbidity and mortality<sup>2</sup>. The respiratory hot clinic was set up to support the emergency and acute medical services to reduce the number of unnecessary hospital admissions and facilitate early and safe discharges of inpatients.

#### **Aim**

To evaluate the advantages of the hot clinic service and to identify factors that impact on its effectiveness.

#### **Methods**

This is a retrospective study of all patients who attended the hot clinic between Sept 2016 and Jan 2018. The dates of admission and discharge, reasons for referral and dates seen in clinic were identified from patients' medical notes and correspondence. The appropriateness of referrals was defined by established hot clinic inclusion and exclusion criteria.

#### **Results**

A total of 107 patients were identified, of which 58% were appropriately referred. The median length of hospital stay was 1 day [interquartile range: 0-3]. Only 4% of patients who were discharged from hospital had unplanned readmission. The average clinic waiting time was shorter in appropriate referrals when compared to those who did not meet referral criteria (31 days and 45 days, respectively), however this did not reach statistical significance ( $p= 0.2$ ). More patients were discharged from hot clinics after first clinic review from the group who met referral criteria compared to those who did not (31% and 18%, respectively). The majority (55%) of patients with inappropriate referrals required further investigations and follow-up compared to 32% among those appropriately referred.

#### **Conclusion**

The service is effective in supporting early and safe discharge and prevents readmission of patients who presented with respiratory complaints. Inappropriate referrals to hot clinic impacted on the effectiveness of the service, and therefore a clear referral pathway to allow appropriate triage is recommended.

#### **References (100 words)**

1. Forster AJ, Clark HD, Menard A, *et al.* Adverse events among medical patients after discharge from hospital. *CMAJ*2004;**170**:345–9

Rojas-Garcia A, Turner S, Pizza E, *et al.* Impact and experiences of delayed discharge: A mixed-studies systematic review. *Health Expect.* 2018 Feb; 21(1): 41-56

## Poster 15

### Referrals to Acute medicine for Hypertension: Are these true 'hypertensive crises', and are we managing them appropriately?

**Dr Tehreem F Butt**

**Consultant in Acute Medicine and Clinical Pharmacology/Hypertension**

**Shanmuganathan K, Hodges D, Khan N, Shetty M, Butt TF. Broomfield Hospital, Mid Essex Hospitals NHS Trust**

#### **Aim:**

Hypertension has been reaffirmed as the single biggest risk factor contributing to death rates worldwide.<sup>1</sup> General practitioners play a crucial role in management; however, this challenge may also present to the acute physician in the form of a 'hypertensive crisis'.

Currently, there is little data examining such patients presenting to acute medical services.

We aimed to determine whether patients referred to either the ambulatory care unit (ACU) or acute medical Unit (AMU) with 'hypertension', are true hypertensive crises, to characterise this group of patients demographically, and to determine whether their management is in accordance to existing guidance.

#### **Methods**

A retrospective analysis of case notes and electronic records of patients identified as having 'Hypertension' as their primary diagnosis over a 12 month period (Jan 2017-Dec 2017) was undertaken. Data collected included source of referral, blood pressure (BP) at presentation, investigations undertaken, treatment, and follow-up arrangements.

#### **Results**

Fifty-eight patients were included in the audit. Mean age was 62 years with age range of 29-86 years. 51.7% were referred from primary care, and 34.4% from the emergency department (ED). Mean systolic BP at presentation was 217.3 mmHg and mean diastolic BP 116 mmHg. Most patients met criteria for a 'Hypertensive crisis' (94.7%). Investigations for end-organ damage were undertaken inconsistently (e.g. fundoscopy 36.2% vs. renal function tests 82.7%). Although only 69% were treated in accordance to NICE guidelines<sup>2</sup>, reasons such as drug intolerance were not always recorded. Most (95%) were followed up (e.g. by GP or specialist hypertension clinic).

#### **Conclusion**

Referrals to ACU and AMU for hypertension were appropriate. Although investigations to assess end-organ damage were inconsistently performed, most were referred for follow-up where these may have been subsequently undertaken. Further work is needed to assess outcomes in such patients, including efficacy of treatment in achieving BP control.

#### **References**

1. Lim SS, Vos T, Flaxman AD, et al. A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990-2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet* 2012; 380:2224-60.
2. National Institute for Health and Clinical Excellence (2011). Hypertension in adults: diagnosis and management. Clinical guideline [CG127].

## Poster 16

### A review of reasons for not thrombolysing stroke patients in a UK District General Hospital

**Dr Namali Samarasekara, Dr Pratap Rana, Dr Camilla Davies  
ST4 Geriatric Medicine Registrar, Stroke Consultant, FY2  
Calderdale Royal Hospital**

#### **Aim**

Thrombolysis has been proven to improve functional outcomes following stroke and should be considered for all patients presenting within 4.5 hours of onset of symptoms<sup>1,2</sup>. At Calderdale Royal Hospital (CRH), Sentinel Stroke National Audit Programme (SSNAP) data for December 2017 to March 2018 shows thrombolysis rates in patients presenting within 4.5 hours was 12.4%<sup>3</sup> which does not meet the highest performance levels indicated by SSNAP. The upper quartile rate nationally was 14.4%<sup>3</sup>. This prompted a review aiming to investigate whether thrombolysis is underused at CRH.

#### **Methods**

Seventy four patient records were reviewed retrospectively. The sample consisted of stroke patients who had not undergone thrombolysis discharged between January and April 2018.

#### **Results**

The largest proportion (45.9%), categorised as '**uncertain benefit**' either had a low (< 4) National Institute of Health Stroke Severity Scale (NIHSS) or presented with an unknown onset time of symptoms. Next, 23% had '**definite contraindications**' including primary intracerebral haemorrhage. The third group (14.9%) were deemed to have '**low potential benefit**', either resolving symptoms or a modified Rankin Scale of four or above. Next, 8.1% had '**relative contraindications**' including direct oral anticoagulants or low molecular weight heparin use. Lastly, 8.1% had a '**late diagnosis**', as stroke was not suspected on initial presentation.

#### **Conclusion**

This demonstrates the range of reasons patients are not undergoing thrombolysis. A low NIHSS can preclude thrombolysis due to uncertain benefit; however a low score with dysphasia may still prompt clinicians to thrombolysed due to the life altering nature of this deficit. For unknown onset time, radiological scoring methods can be used to estimate time



of symptom onset and guide thrombolysis. We plan to develop a local protocol for thrombolysis in patients with relative contraindications and those with uncertain benefit.

**References (100 words)**

1. Wardlaw JM, Murray V, Berge E et al. Recombinant tissue plasminogen activator for acute ischaemic stroke: an updated systematic review and meta-analysis. *The Lancet*. 2012; **379**: 2364-2372
2. Intercollegiate Stroke Working Party, Royal College of Physicians. National Clinical Guidelines for Stroke. Fifth Edition 2016.

Sentinel Stroke National Audit Programme Clinical Audit Results December 2017- March 2018. <https://www.strokeaudit.org/results/Clinical-audit.aspx>

## Poster 17

### An audit examining the stepdown process of patients from the Intensive Therapy Unit to a ward setting at Worthing Hospital

**Erin Doherty CT1 Royal Surrey County Hospital**

#### **An audit examining the stepdown process of patients from the Intensive Therapy Unit to a ward setting at Worthing Hospital**

Patients on the intensive therapy unit (ITU) are the most unwell patients in a hospital, receiving high level care, monitoring and management. When ITU patients are discharged to general hospital wards the monitoring frequency and intensity reduces. There are national guidelines aiming to ensure safe stepdown of patients from ITU to a ward setting.<sup>1</sup>

#### **Aim**

The audit aim was to assess whether discharge of patients from ITU to a ward setting at Worthing hospital fulfilled the standards advised in NICE guideline CG50 and “core standards for Intensive Care Units” set by the Faculty of Intensive Care Medicine.<sup>1,2</sup> These recommend:

1. Transfers from ITU to general wards should not occur out of hours (22:00-07:00).
2. Patients should be reviewed within 6 hours of discharge from ITU.
3. Discharge documentation should include a plan for ongoing care including CPR status and re-escalation to ITU decision.<sup>1,2</sup>

#### **Methods**

The audit involved retrospective analysis of a database of discharges from ITU to a medical ward between 1<sup>st</sup> November 2015 to 31<sup>st</sup> October 2016. In total we sourced 153 of the 200 patients' notes and extracted the following:

- **Patient demographics**
- **Discharge:** date, time, day of week and ward
- **Initial review:** date, time and doctor's grade
- **Advanced care planning:** CPR and re-escalation documentation

#### **Results and Conclusion**

The audit found discharges were not compliant with the recommended guidelines. The following areas were particularly concerning:

- 24% of discharges took place overnight.
- Only 40% of patients were reviewed by a doctor within the recommended 6 hours post ITU discharge.
- Only 43% of patients had a documented ceiling of care when discharged from ITU.

As a result of the audit we are planning to produce an ITU stepdown protocol within the trust aiming to improve the process and will subsequently re-audit the process.

## References (100 words)

1. National Institute for health and Care Excellence clinical guideline CG50. Acutely ill patients in hospital: recognising and responding to deterioration. [online] 2007 Jul. [cited 19 Jan 2018]. Available online from URL: <https://www.nice.org.uk/guidance/cg50>

Faculty of Intensive Care Medicine. Core standards for intensive care units. [online]. 2013. [cited 19 Jan 2018]. Available online from URL: [https://www.ficm.ac.uk/sites/default/files/Core%20Standards%20for%20ICUs%20Ed.1%20\(2013\).pdf](https://www.ficm.ac.uk/sites/default/files/Core%20Standards%20for%20ICUs%20Ed.1%20(2013).pdf)

## Poster 18

### Geriatrician delivered CGA at front door - Best quality of care for frail older people.

**Shahul Sheriff, Laurenny Guzman, Sanjeev Vasishta, Consultant Geriatricians.  
Royal Gwent Hospital, Newport, Wales.**

#### Background

In March 2018 at RGH: A dramatic 0% of frail older patients were assessed through Comprehensive Geriatric assessment (CGA) and a Multidisciplinary Team in ED. 1 out of every 3 patients over the age of 85 attending ED at RGH stayed in ED for over 12hrs. The average LOS in hospital for a COTE patient was between 9-14 days.

#### Aims

- Provide an early CGA to frail older patients admitted through the front door.
- Coordinate safe yet early discharges from A&E and MAU by a Consultant led service.
- Reduce hospital admissions from A&E.
- To reduce the length of stay of frail patients in Hospital.

#### Methods

2 months trial project, a Geriatrician led MDT provided a CGA, form 09:00 – 17:00 - Monday to Friday to rapidly transfer patients from ED and MAU, coordinating early discharge planning and maximizing the quality of care in a cost-effective manner.

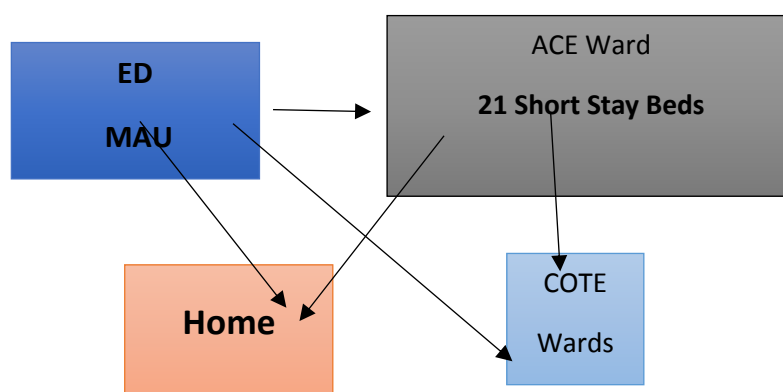
#### Results

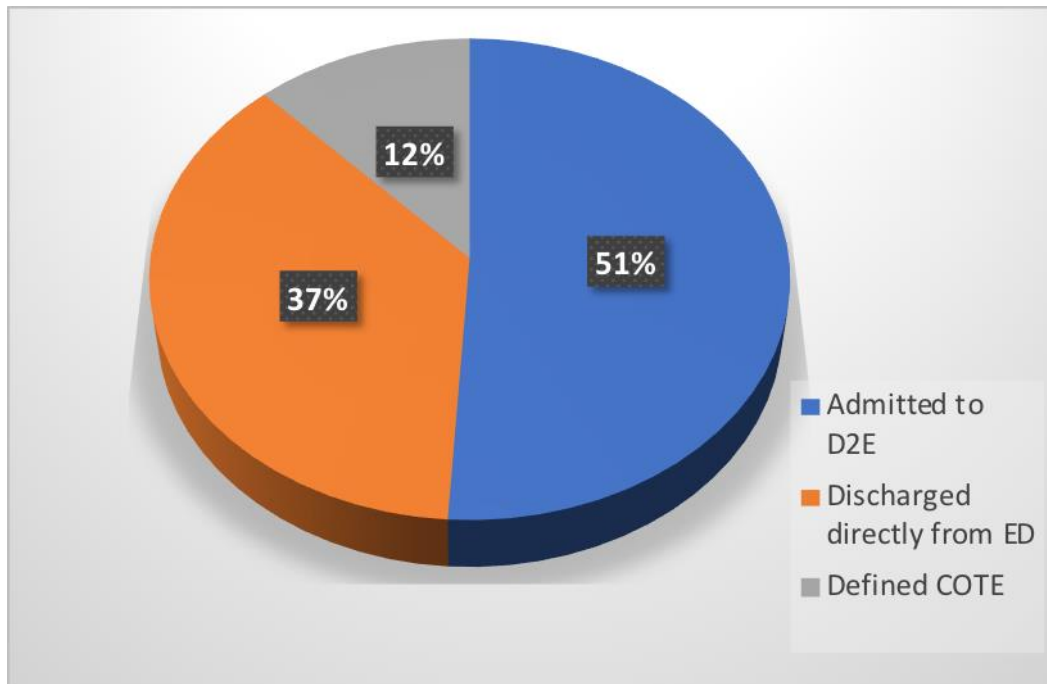
A total of 257 patients were reviewed in ED and MAU (average age 83 years old). 37% of the patients seen in ED were discharged home from A&E same day. 51% of patients were admitted to ACE ward and 12% were transferred to COTE wards. 70% of patients transferred to ACE ward were discharged home in 81 hours. The average time from referral to CGA was **30 minutes** and patients were discharged in an average of 3 hours 10 minutes.

#### Conclusions

During the period of trial, 100% of patients admitted in ED with frailty criteria had a Consultant led Comprehensive Geriatric Assessment. Average LOS in hospital of patients significantly reduced and early and safe discharges were coordinated by a more rapid decision without increasing patient adverse related events.

#### Proposed EFU Model





**References (100 words):**

- Safe, compassionate care for frail older people using an integrated care pathway: practical guidance for commissioners, providers and nursing, medical and allied health professional leaders. NHS England, South. February 2014. Chapters 3, 4. Pages 7-22.
- Royal College of Physicians. Modernising geriatric care: Establishing an acute care unit. Future Hospital Journal 2015 Vol 2, No 2:s25
- Discharging older patients from hospital., Nation **HC 18 SESSION 2016-17** al Audit Office, **26 MAY 2016**. Pages 4-11.

## Poster 19

### From gathering mushrooms to ICU – amatoxin poisoning – a case report.

**Helēna Turauska, EM resident, Riga Eastern Hospital, Accident and Emergency Department**

**Helēna Turauska<sup>1,2</sup>, Oļegs Šuba<sup>3</sup>, Sandra Seimane<sup>1,2</sup>**

**<sup>1</sup>Accident and Emergency Department, Riga Eastern Hospital, Riga, Latvia;**

**<sup>2</sup> Riga Medical College, University of Latvia, Riga, Latvia**

**<sup>3</sup> Clinic of Toxicology and Sepsis, Riga Eastern Hospital, Riga, Latvia**

#### Introduction

Gathering mushrooms could be called a tradition in Latvia. But the more people think they're experts in this field, the bigger possibility of poisoning. Mushroom poisoning usually results in gastrointestinal symptoms like nausea, vomiting, diarrhea, but there are few mushrooms associated with high fatality rates, for example those containing amatoxin like *Amanita phalloides*<sup>1,2,3</sup>. Death usually occurs due to renal and/or liver failure<sup>1,2,3</sup>.

#### Case details

- 59 year old man admitted in Daugavpils Regional hospital (DRH), Daugavpils, Latvia, with fever, exhaustion on 30/08/18.
- He became ill on 28/08/18 in late evening after eating self-gathered mushrooms. He presented with nausea, vomiting 2-3 times, diarrhea.
- On 29/08/18 patient presented diarrhea up to 10 times
- Patient claims that he had no diuresis for last 2 days
- On examination: GKS 15, temperature 38 C<sup>0</sup>, hemodynamically stable, jaundice.
- On 31/08/18 patient was transferred to Clinic of Toxicology and Sepsis (CTS), Riga Eastern Hospital (REH), Riga, Latvia

#### Investigations

Blood tests (Accident and Emergency Department and CTS, REH, Riga, Latvia)

Date	Hb	Gly	AIAT	AsAT	Creatinine	Lipase	Total Bi	Direct Bi	CRO	Protrombine time	INR
31/08/18	13.4	7.65	6362.7		67.45	182.78	51.25	45.29	1.16	<7%	6.4
1/09/18	12.6	5.74	4393.38	3661.03					1.21	10%	4.51
2/09/18	14.1	4.29	3405.41	1809.49	54.88	151.75	142.83	95.33		15%	3.2
3/09/18	14.6	3.97	2819	937	57	162.9	175.5	144.2	3.3	24%	2.27
4.09.18	16	5.84	2291	512	79		157	134.7	5.6	34%	1.75

Table 1.

- No XR, CT or US were performed
- No toxicology screenings performed due to late admission

#### Received treatment

30/08/18-31/08/18 DRH, Daugavpils, Latvia

- Penicillin 6000000 units per day, Aciloc 150mg
- Furosemidi, Konakion, NaCl, Glucose 40%, Glucose 10%, Cerucali, Sterofundini , KCl, Ca Gluconati

CTS, REH, Riga, Latvia

Date	Treatment
31/08/18 - ICU	<ul style="list-style-type: none"> <li>• S.vit B1;B6 āā 6,0 i/v</li> <li>• S.vit C 5.0 i/v</li> <li>• T.Carsil 35mg 10tab (350mg) p/o</li> <li>• S.Konakion 30mg i/v</li> <li>• 2 SSP (Svaigi saldētas plazmas) i/v</li> <li>• S.ACC 36 amp (300mg/3ml - 1amp – 10.8g)+S.Glucose 5% 500ml i/v (1h)</li> <li>• S.ACC 12amp (3.6g)+S.Glucose 5% 500ml i/v (4h)</li> <li>• S.ACC 24 amp (7.2g)+S.Glucose 5% 500ml i/v (6h)</li> </ul>
1/09/18 - ICU	<ul style="list-style-type: none"> <li>• S.vit B1;B6;C āā 6.0 i/v</li> <li>• T.Carsil 350mg p/o</li> <li>• S.Konakion 30mg i/v</li> <li>• S.ACC 60ml (6g)+S.Glucose 5% 1000ml i/v (24h)</li> </ul>
2/09/18	<ul style="list-style-type: none"> <li>• S.vit B1;B6 āā 6,0 i/v</li> <li>• S.vit C 5.0 i/v</li> <li>• T.Carsil 35mg 10tab (350mg) p/o</li> <li>• S.ACC 60ml (6g)+S.Glucose 5% 1000ml i/v (24h)</li> </ul>
3/09/18	<ul style="list-style-type: none"> <li>• S.vit B1;B6 āā 6,0 i/v</li> <li>• S.vit C 5.0 i/v</li> <li>• T.Carsil 35mg 10tab (350mg) p/o</li> <li>• S.ACC 60ml (6g)+S.Glucose 5% 1000ml i/v (24h)</li> </ul>
4/09/18	<ul style="list-style-type: none"> <li>• S.vit B1;B6 āā 6,0 i/v</li> <li>• S.vit C 5.0 i/v</li> <li>• T.Carsil 35mg 10tab (350mg) p/o</li> <li>• S.ACC 60ml (6g)+S.Glucose 5% 1000ml i/v (24h)</li> </ul>

Table 2.

### Diagnosis: Amatoxin intoxication. Acute liver failure

#### Conclusions:

For treatment of amatoxin poisoning there are many recommendations<sup>1,2,3</sup>. In this case Penicillin as hepatoprotector was started on 1<sup>st</sup> admission day, with no conclusive results; afterwards high doses of Acetylcysteinum (ACC) and Silymarinum (Carsil) were prescribed<sup>1</sup>. As a result patient liver function recovered fast – in 5 days, but the jaundice diminished slower – the decline of bilirubin appeared only after 4 days.

#### References (100 words)

1. Liguts V. Toksikoloģijas rokasgrāmata. Nacionālais medicīnas apgāds, 2001.
2. <https://emedicine.medscape.com/article/1008902-overview>.
3. Author: Timothy J Wiegand, MD, FACMT, FAACT, DFASAM Section Editors: Michele M Burns, MD, MPH Stephen J Traub, MD Deputy Editor: James F Wiley, II, MD, MPH - Clinical manifestations and evaluation of mushroom poisoning (uptodate.com).

## Poster 20

### Melioidosis - an underrecognized, potentially fatal tropical infection in Europe – a case report.

**Sandra Seimane, Responsible Doctor, Specialist, Riga Eastern Hospital, Accident and Emergency Department,**

**Karīna Vasiļauska<sup>1</sup>, Sandra Seimane<sup>1,2</sup>**

**<sup>1</sup>Accident and Emergency Department, Riga Eastern Hospital, Riga, Latvia;**

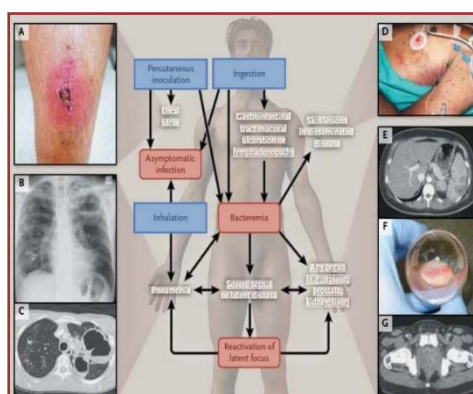
**<sup>2</sup> Riga Medical College, University of Latvia, Riga, Latvia**

#### Introduction

Melioidosis is an infectious disease, caused by the bacterium *Burkholderia pseudomallei*. It is predominately a disease of tropical climates, associated with high case-fatality rates<sup>1,2</sup>. The bacteria are intrinsically resistant to many antimicrobial agents<sup>4</sup>, nowadays there is a fear that it may be used as a biological weapon<sup>2</sup>.

#### Case details

- 63 year old man admitted on ED with fever, exhaustion and mild chest pain on 9/12/17 taken from Riga airport, Latvia.
- He became ill 3 days ago in Thailand as a tourist.
- On examination: GKS 11/15, temperature 40 C<sup>0</sup>, EE 26 times per minute, clear lung sounds. Only after 5 days dry cough, severe malaise appeared, GCS 8/15, T 39-40 C<sup>0</sup>, tachypnea 32.
- Duration of fever – 21 days.



#### Investigations

XR: 10/12/17: 2<sup>nd</sup> segmental unhomogenous mild opacification dx

CT: 19/12/17: massive bilateral pneumonia - multiple consolidations with pleural effusions dx>sin

CT: 29/12/17: developed cavitations dx>sin /Fig. 1/

CT: 16/01/18: small improvement: evaporated effusions, diminished consolidations

- No blood tests confirmed the causative agent.
- After detailed investigation only on 21/12/17 in bronchial washing the specimen was revealed - ***Burkholderia pseudomallei***.



### Received treatment

- Ceftriaxoni 09 -14/12/17
- Clarithromycini 11-14/12/17
- Moxifloxacini 15 -18/12/17
- Erythromycini 15/12/17 – 25/01/18
- Meraponemi 19– 22/12/17
- Imipenemi/Cilastatini 22/12/17 – 26/01/18
- Flucanazoli 19/22/12/17 – 09/01/18

### Discharge on 26/01/18.: **Acute pulmonary melioidosis with cavitation, high severity. Pulmonary candidiasis.**

Patient's sense of well-being and pneumonia had a steady improvement of 1 year.

### Futher discharge recomendations

- TMP/SMX 960mg x2 for 3 months
- Doxycyclini 100mg x2 for 3 months
- Fluconazolum 150mg x1 for 3 months

### Conclusions:

In the coming decades, melioidosis will increasingly affect **travelers throughout many global regions. Infection has a high mortality rate.** The bacteria are **resistant to many antimicrobial** agents, but prolonged treatment, especially with combinations of antibiotics, may be effective<sup>2,4</sup>.

### References (100 words)

1. <https://www.cdc.gov/melioidosis/>
2. Perumal Samy R, Stiles BG, Sethi G, Lim LHK. Melioidosis: Clinical impact and public health threat in the tropics. PLoS Negl Trop Dis, 2017, 11(5).
3. Badran S, Pedersen TI, et al. Imported melioidosis in Danish travelers. Scandinavian Journal of Infectious Diseases, 2010 Jul;42(6-7):445-9.
4. White NJ Melioidosis. Lancet, 2003 May 17;361(9370):1715-22.

## Poster 21

# EVALUATING RAPID ACCESS CHEST PAIN CLINIC (RACPC) SERVICE FOLLOWING IMPLEMENTATION OF THE UPDATED NICE CLINICAL GUIDELINE 95 ON STABLE CHEST PAIN

**Ronald Victor Manorekang**  
**CMT2 Weston park hospital, Sheffield**

### **Background**

National Institute for Health and Care Excellence (NICE) updated the clinical guideline 95 (CG95) on stable coronary artery disease (CAD) in November 2016. Key changes include deletion of pre-test probability and making computed tomography coronary angiography (CTCA) as the first line investigation.<sup>1,2</sup>

### **Aim**

This study evaluates the impact after implementing the updated guideline on our nurse-led RACPC service.

### **Methods**

This is an observational study that was conducted at a district general hospital in England. Investigations of 258 patients presented to RACPC from September 2016-October 2016 (Pre-implementation) and from June 2017-July 2017 (Post-implementation) was studied. Data obtained includes patients' investigations journey and results of the tests. Cost for each investigation was priced based on NICE CG95 2011 costing report. Data from 2016 (pre-implementation) was then compared to 2017 (post-implementation). Chi-square test was used for categorical variables and Mann-Whitney U test for continuous variables.

### **Results**

Total investigations performed was reduced by 42.9% and patients requiring no test was increased by 64%. Myocardial perfusion scan (MPS) became the most performed first line investigation replacing exercise tolerance test. This was followed by coronary angiogram as the second line.

Patients underwent coronary angiogram was decreased by 58.9%( $p=0.002$ ). Positive predictive rate of RACPC referring patients for coronary angiogram who then proved to have CAD was 50% compared to 56.4% on pre-implementation ( $p=0.7$ ).

Number of CTCA was doubled from 13 to 26 scans ( $p=0.008$ ) with a statistically significant increase in waiting time ( $p=0.003$ ).

Cost of investigations was reduced by 31.8% post-implementation.

### **Conclusion**

This study shows a significant improvement in cost reduction and more effective use of NHS resources after implementing the CG95 updated guideline. However, this leads to a longer waiting time for patients who underwent CTCA. Overall, our nurse-led RACPC service performed well in improving service and providing care for those with stable chest pain.

### **References (100 words)**

1. National Institute for Health and Care Excellence. Resource impact report: Chest Pain of Recent Onset: Assessment and Diagnosis (CG95). 2016. <http://nice.org.uk> (accessed 20 December 2017)
2. Lee AJX, Michail M, Quaderi SA, et al. Implementation of NICE Clinical Guideline 95 for assessment of stable chest pain in a rapid access chest pain clinic reduces the mean number of investigations and cost per patient. *Open Heart* 2015;2:e000151.



## Poster 22

Victoria Nicholas

F2 doctor

### **Treating pneumonia and urinary tract infection via OPAT: an under-utilised means of preventing hospital admissions**

**Aim:** Despite being a relatively small DGH with around 400 beds, the outpatient parenteral antibiotic therapy (OPAT) service at West Middlesex Hospital (WMUH) is one of the largest in the country, treating more patients in January to March 2018 than any other registered service [1]. For comparison, Nottingham NHS Foundation Trust, with over 1700 beds [2], treated 31 less patients via OPAT [1]. We aimed to assess why our OPAT service treats such high volumes and whether this affects outcomes.

**Methods:** We collected data on all patients treated via the OPAT service at WMUH from January-March 2018 and compared this to other services using the national outcomes registry database.

**Results:** The WMUH OPAT service treated 179 patients in the 3 month period, saving a total of 1759 bed days. The most common primary infective diagnoses were; urinary tract infection, cellulitis and pneumonia with 47, 47 and 29 episodes respectively. Among other OPAT services, the most common diagnoses were cellulitis, bronchiectasis and osteomyelitis, while pneumonia and UTI were treated infrequently. Pneumonia was one of the least common indications with only 5 episodes across all services. Our outcomes were favourable and comparable to others with only 1 ADR and 3 failures.

**Discussion:** The MWUH OPAT service is unique in that it treats a high volume of pneumonia and urinary tract infection. It is run out of AEC meaning clinical review is utilised alongside OPAT. Pneumonia patients requiring IV therapy can be discharged after <24 hours but can return for further doses and to be seen by a doctor with repeat bloods. Young patients with acute pyelonephritis can return the next day for an ultrasound and IV antibiotics. This service model is a highly effective way of reducing hospital admissions.

#### **References (100 words)**

1. British Society for Antimicrobial Chemotherapy, 2015, National Outcomes Registry Data, available at: <http://e-opat.com/opat-registry/> [accessed 30/8/18]
2. Nottingham University NHS Foundation Trust, 2018, Nottingham University Hospitals NHS Trust, available at: <https://www.nhs.uk/Services/Trusts/Overview/DefaultView.aspx?id=1368> [accessed 30/8/18]