Title: A simple tool to predict admission at the time of triage
Category: Research
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Aim

To create and validate a simple clinical score to estimate the probability of admission based solely on information available in triage.

Methods

This was a multi-centre, cross-sectional study of all unscheduled adult hospital attendances in North Glasgow over a two year period. The model comprised a mixed-effects multiple logistic regression of all those clinical variables available in triage that demonstrated highly significant associations with admission on univariate analysis. Model coefficients were simplified into a simple clinical admission prediction score, which was tested in a different subset of the same population using ROC analysis and Chi-squared goodness-of-fit tests. The score's ability to predict re-attendance and admission within 28 days of discharge from the front door was also assessed using logistic regression.

Results

322,846 attendances were analysed, using a 2:1 derivation to validation split. The derived score is shown in table 1, and associated admission probabilities in fig 1. The score showed excellent discrimination in predicting admission (area under the ROC curve 0.8774, 95% CI 0.8752-0.8796). Goodness-of-fit tests showed no significant difference in score performance between derivation and validation samples. Logistic regression demonstrated a positive linear relationship between admission score and early readmission for discharged patients.

Conclusion

Our results show that a simple objective score with six variables can be used to both accurately estimate the probability of admission at the point of triage, and predict re-admission within 28 days for patients discharged from the front door.
Aim

To determine if WCC, albumin and bicarbonate levels measured at the time of emergency medical admission are associated with physiological derangement.

Methods

A prospective observational study of consecutive acute medical admissions to the Royal Victoria Hospital, Belfast between 1\textsuperscript{st} and 30\textsuperscript{th} November 2012 (n=539, median age 70) was conducted using computerised datasets. Non-pregnant patients over 16 years old were eligible for inclusion. NEWS\textsuperscript{1} was calculated from the initial physiological observations recorded in the emergency department (ED). Biochemical indices were filtered from the admission blood profile. In addition, functional capacity was quantified using the Modified Rankin Score (mRS)\textsuperscript{2}. Trust research governance procedures were followed.

Results

Spearman’s correlation coefficient was employed for analysis due to the distribution of data. Significant correlations were identified between NEWS and: WCC ($r_s = 0.268$, $p<0.001$); albumin ($r_s = -0.213$, $p<0.001$); and bicarbonate ($r_s = -0.128$, $p=0.001$). Tests of partial correlation revealed that these individual relationships between variables remained highly statistically significant even when the effects of the other biochemical parameters, age and mRS were controlled for.

Conclusion

Statistically significant correlation was found to exist independently between WCC, albumin, bicarbonate and physiological derangement at time of ED presentation. WCC and NEWS are positively correlated while albumin and bicarbonate demonstrate negative correlation. The association was strongest with WCC on admission.

Reference

\textsuperscript{1}Royal College of Physicians. National Early Warning Score (NEWS), standardising the assessment of acute illness severity in the NHS. London: RCP 2012.

AIM

To assess the impact of weather conditions on the number of daily referrals to medical receiving.

METHODS

This was a multi-centre, retrospective, cross-sectional study examining the number of daily referrals to medical receiving in North Glasgow over the two-year period 21 March 2011–20 March 2013. Local temperature, rainfall, snowfall, atmospheric pressure, wind speed and cloud cover were found for the same period using on-line resources and entered into a Poisson regression against daily referral counts. Confounding effects, such as time of year, day of the week and autocorrelation, were accounted for in the model, which was then simplified by stepwise deletion.

OUTCOMES/RESULTS

75,852 patients were referred over the 731 day study period, averaging 103.8 per day. Significant associations were seen between referrals and temperature (0.53% increase per degree Celsius increase, p<0.0001), pressure (0.12% decrease per millibar increase, p=0.002) and snowfall (2.5% decrease per hour of snow, p<0.001). Rain, wind, and cloud cover had no significant correlation with referrals. There was however a highly significant increase in referrals over time (6.0% increase per annum, p<0.0001).

CONCLUSION

Atmospheric pressure, snowfall and seasonally-adjusted temperature have statistically detectable associations with daily referrals to medical receiving, but their overall effect is small. Even under quite severe weather conditions, the effect would be largely drowned out by random fluctuations and the variation seen across different days of the week. We conclude that, despite popular belief, weather conditions do not have a noticeable effect on the number of referrals to medical receiving on any given day.
Introduction

Improving the management of patients with sepsis is a key challenge for Acute Physicians. Intravenous antimicrobial therapy should be administered within 1 hour of admission but this is achieved in only 26% of patients nationally (1). Sepsis is more prevalent among cancer patients and is associated with poorer outcomes(2).

Methods

We performed a retrospective analysis at the largest Oncology hospital in Europe. Nurse-led administration of initial antibiotic therapy was introduced to the AMU in 2009. The data for patients presenting to the AMU with sepsis between April and July in 2008 and 2012 were compared. The effects of early antibiotic administration on mortality and length of hospital stay were examined.

Results

225 patients presented in the study period in 2008 compared to 301 in 2012. The nurse led protocol increased compliance with the 1 hour target from 40% to 88.6%. There was a statistically significant decrease in the mean length of stay (p=0.045) which was more pronounced in the neutropenic population (p=0.006) (see table 1). There was a trend to improved 30 day mortality – 5.8% in 2008 vs 5.0% in 2012. (see figure 1)

Conclusions

A nurse led protocol for the administration of first dose intravenous antibiotics in septic patients can be effective in improving compliance with the 1 hour target. Early administration of intravenous antibiotics in cancer patients with sepsis is associated with a shorter length of inpatient stay and a trend to decreased mortality.


2. The Epidemiology of Sepsis in Patients With Malignancy. P Danai, M Moss and D Mannino, G Martin. 6, s.l. : Chest, 2006, Vol. 129, pp. 1432-1440
Introduction

In the current climate financial resources are at a premium and all aspects of patient care has a cost. We wanted to see if junior doctors were aware of how much routine blood tests cost, and if it would affect their practise if they knew the price.

Method

Total spent on basic blood tests for all MAU admissions at Bradford Royal Infirmary (1226 patients; 590 male, 636 female) were collected for the month of September 2012. In December 2012 price cards with the cost of all routine blood tests were circulated to all medical house officers, SHO’s and registrars working on MAU for that month. Large posters with the same information were also displayed around MAU. The total spent on December admissions (1218 patients; 596 male, 622 female) was then calculated and compared to Septembers results.

Results

Total spent in September was £3,371.61, and total spent in December post intervention was £3,221.03, with similar amounts being spent on each blood test.

Conclusion

There was no significant difference in spending after making doctors aware of the prices. This indicates that price did not influence how many tests the doctors requested for their patients.
**Title:** Investigating the Effect of the London 2012 Summer Olympic Games on Acute Medical Referrals to a DGH

**Category:** Research

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**Aim:** Viewing of televised sport has been associated with increased presentation of certain medical conditions. We investigated the impact of the London 2012 Summer Olympics on acute medical referrals to a UK DGH.

**Method**

Using prospectively collected data from an electronic list of referrals, we analysed the 17 Olympic days in comparison to the 34 peri-Olympic days (July 9-26 and August 13-28).

The primary endpoint was number of referrals. Secondary endpoints comprised the incidence of: cardiac referrals; referrals with exacerbation of a pre-existing condition; re-referrals within 28 days.

**Results**

In total, 1351 patients were referred during the study: 431 on Olympic and 920 on control days (25±8 vs. 27±9 per day respectively: P>0.05).

Moreover, 107 patients (24.8%) and 241 patients (26.2%) with cardiac conditions were referred in the Olympic and control periods (6±3 vs. 7±3 patients per day: P>0.05).

Similarly, no differences were seen regarding patients referred with an exacerbation of a pre-existing condition (34.1% [147] vs. 32.5% [299]: P>0.05).

In total, 111 patient episodes (8.2%) represented re-referrals within 28 days whilst 23 (1.7%) were re-referrals within 7 days. These proportions did not vary during the study.

Furthermore, gender (49.7% men: 50.3% women), mean age, proportion of referrals overnight (26.3%) and ratio of GP:A+E referrals (1.8:1) showed no variation.

**Conclusion:** No Olympic effect was evident in the acute take of a single UK hospital. Electronic patient lists offer benefits beyond improved communication and patient safety. We are seeking regional and national inter-hospital collaborations to better investigate Olympic admissions.
Aim:
Necrotising SSTIs are rapidly progressive, immediately life threatening infections caused predominantly by Gram positive organisms (notably Streptococcus pyogenes and Staphylococcus aureus). Prompt and intensive medical and surgical management is required. Daptomycin is a rapidly bactericidal antibiotic with anti-Gram positive activity. Outcomes from patients with necrotising SSTIs included in the European Cubicin® Outcomes Registry and Experience (EU-CORE℠) database are presented.

Methods:
Data were collected from the non-interventional, multicentre registry, for patients diagnosed with necrotising SSTIs who received daptomycin between January 2006 and June 2012. Investigator-assessed outcomes were success (cured plus improved), failure or non-evaluable. Safety assessments were conducted up to 30 days after completion of daptomycin treatment.

Results:
48 patients with necrotising SSTIs were included in the registry of 5,551 patients. Mean (SD) age: 58.1 (17.79), male: 33 (69%). 23 (47.9%) received treatment in intensive care. Daptomycin was second line therapy in 30 (63%) patients with the main indication being treatment failure. Initial dose of daptomycin: 4 mg/kg, 17 (35%); 6 mg/kg, 18 (38%) and >6 mg/kg in 7 (15%). 37 (77%) received concomitant antibiotic therapy (carbapenems 25, 52%). Mean (SD) duration of inpatient therapy was 11.5 (8.77) days. Mean (SD) time to improvement was 4.9 (4.3) days. Outcomes were: success, 37 (77%); failure, 4 (8%); non-evaluable, 7 (15%). 10 (21%) adverse events related to DAP were reported. Blood creatine phosphokinase increased in 2 (4%) patients.

Conclusion:
Daptomycin is an effective agent in the management of life-threatening Gram positive necrotising SSTIs. Optimal therapy requires a combined medical and surgical approach.
Title: Older and Sicker? Time to rethink! Correlation between age, functional status and National Early Warning Score (NEWS) in emergency medical admissions

Category: Research

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Aim

To determine if age or functional status at the time of emergency admission correlate with physiological derangement.

Method

A prospective observational study of consecutive acute medical admissions to the Royal Victoria Hospital, Belfast between 1st and 30th November 2012 (n=539, median age 70) was undertaken. Non-pregnant patients over 16 years old were eligible for inclusion. NEWS¹ was calculated from initial physiological observations recorded in the Emergency Department (ED). Functional ability was quantified by a senior nurse using the Modified Rankin Scale (mRS)². Trust research governance procedures were followed.

Results

Measures of age were positively skewed and NEWS negatively skewed. mRS results had a bimodal distribution. As such Spearman’s correlation coefficient was employed for analysis. Age was significantly correlated with NEWS (rₛ=0.087, p=0.022) but to a lesser extent than mRS (rₛ=0.236, p<0.001). Since age and mRS were strongly correlated (rₛ=0.483, p<0.001), partial correlation analysis was subsequently undertaken to assess confounding. When controlling for the effect of mRS, age and NEWS were no longer significantly correlated. When controlling for the effect of age however, mRS and NEWS remained significantly correlated (r=0.236, p<0.001).

Conclusion

Functional dependence, as measured by mRS is strongly correlated with an abnormal NEWS at the time of ED assessment. This implies that patients presenting with ‘acute on chronic’ illness are likely to have more greatly disturbed physiology than acutely ill patients with good functional baselines. These results suggest that mRS out-performs age when predicting physiological derangement on admission.

References


AIM:

The pre-endoscopy Glasgow Blatchford Score (GBS) is a prognostic tool in patients presenting with upper GI bleeding (UGIB). Higher scores predict a higher probability of therapeutic intervention, whereas outpatient management is known to be safe for patients with GBS 0. This study sought to assess the safety of extending outpatient management to patients with GBS 1.

METHODS:

Following local consultation and education, our UGIB protocol was changed in December 2011 to recommend outpatient management of patients with GBS≤1. All presentations with UGIB over the following 12 months were recorded electronically. Adverse outcomes were defined by a 30-day combined end-point of death, endotherapy, transfusion or level 2/3 care. The negative predictive value (NPV) of GBS ≤ 1 for adverse outcomes in UGIB was then calculated.

RESULTS:

514 patients presented with UGIB in the study period. 183 (35.6%) had GBS ≤ 1 (111xGBS 0, 72xGBS 1). Of the 88 (48.1%) managed as outpatients, none had an adverse outcome. Of the 95 (51.9%) managed as inpatients, 80 (84.2%) had co-morbidities requiring inpatient care. The remaining 15 patients had no clear indication for admission, but one of them subsequently needed transfusion for ongoing bleeding from a Mallory-Weiss tear. Therefore, GBS ≤ 1 had a NPV of 182/183, or 99.45% (95% CI: 95.53% to 99.97%) in predicting adverse outcomes within 30 days of UGIB.

CONCLUSION:

GBS ≤ 1 has a high NPV for adverse outcomes in UGIB. This suggests outpatient management of patients with UGIB and GBS ≤ 1 is safe in our population.
Title: Patterns and predictors of re-admission to the emergency department with deliberate self harm.

Category: Research

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Aims

In the first year, recurrence rates for non-fatal deliberate self harm (DSH) range from 6%-30%¹ and long-term rates approach 40% but previous studies have been hampered by cases lost to follow-up and out of area cases.

We aimed to investigate recurrence rates and characteristics of those who re-present to the A&E department at Leicester Royal Infirmary (UK). Our sample has the advantage of only one large A&E for the county with a high chance of local re-attendance.

Method

Retrospective review of an adult cohort presenting between 1 January 2006 and 31 July 2008, using the A&E database and the “10-Step” DSH Referral Form. Follow-up completed in July 2013. The mean follow-up period was 6.5 years (minimum 5.5 years, maximum 7.5 years).

Results

In the recruitment phase we collected data on 310 individuals; follow-up data was available on 280 individuals (90.3%). At 3 months 24.6% had repeated self-harm; at 6 months 30.7% and at 12 months 37.5% had repeated. Our 4 year recurrence rates were 53.6%. Of those with 6 year follow-up data, 56.1% had repeated.

Self-poisoning was the most common method of DSH. Risk factors associated with DSH recurrence were female gender, previous DSH, personality disorders and illicit substance or alcohol misuse.

Conclusion

In this sample with robust local follow-up, the DSH recurrence rate is much higher than previously published data suggesting a much higher risk sample in Leicestershire or, more likely, a more complete data capture. Identifying the active risk factors for DSH recurrence may help to inform future interventions.

References:

Title: Predictors of mortality in patients with Acute Coronary Syndrome - A hospital admissions study: 2000-2013

Category: Research

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Aim

Acute Coronary Syndrome (ACS) is a common condition that has been well studied. However, the predictors of mortality in patients with ACS have not been well studied in a large hospital population in the UK. We investigated the predictors of mortality in patients with ACS from a large sample of hospital admissions.

Methods

Anonymous information on patients with ACS, co-morbidities and procedures attending large multi-ethnic general hospitals in Manchester, United Kingdom in the period 2000-2013 was obtained from the local health authority computerised hospital activity analysis register using ICD-10 and OPCS coding systems. Statistical analysis was performed using SPSS version 20.

Results

Out of 1221216 patients admitted, there were 25322(2.1%) patients with ACS; mean age 66.6years±14.4(S.D); Male(64.2%), Female(35.8%). The main co-morbidities were Hypertension (11397;45.0%), Previous Myocardial Infarction (9184;36.3%), Hyperlipidaemia (6271;24.8%), Type 2 Diabetes Mellitus (4759;18.8%), Heart Failure (4670;18.4%), Chronic Kidney Disease (1612;6.4%). A multi-nominal logistic regression model accounting for variations in age, sex and ethnic group showed that Hypertension (RR0.8;C.I0.7-0.9), Previous Myocardial Infarction RR1.2;C.I1.1-1.3), Hyperlipidaemia (RR0.5;C.I0.4-0.6), Type 2 Diabetes Mellitus (RR1.5;C.I1.3-1.6), Heart Failure (RR2.9;C.I2.6-3.2) and Chronic Kidney Disease (RR2.3;C.I1.9-2.7) as significant predictors of mortality (p <0.05).

Conclusion

We have shown that Previous Myocardial Infarction, Type 2 Diabetes Mellitus, Heart Failure and Chronic Kidney Disease are significant predictors of mortality in patients with ACS from a large hospital based sample in the UK. A diagnosis of Hypertension and Hyperlipidaemia seem to confer improved mortality possibly reflecting mortality benefit of drugs such as beta blockers and ACE-inhibitors¹. Our improved understanding of these predictors will guide clinicians to focus on these high risk groups to improve clinical practice and outcomes in patients with ACS.
References:

Prevalence of frailty syndromes in acute care

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AIM

Frailty syndromes, namely falls, cognitive impairment, incontinence and reduced mobility, are associated with functional dependence, increased length of inpatient stay and mortality. Recent evidence suggests that biological deficits and specific socio-environmental stressors accumulated earlier in life predict the development of the frailty phenotype. NICE have recently adopted a life-course approach to frailty. We aim to investigate the prevalence of frailty syndromes in patients requiring emergency admission to hospital and its age distribution.

METHODS

Between the weekdays of the 24th of June – 18 of July 2013 (approximately 1 month), 2 researchers prospectively reviewed the clinical (medical, nursing and other allied health professionals) admission documents for all adults requiring hospital admission via Chelsea and Westminster Hospital’s Acute Medical Unit to a medical specialty (including orthogeriatrics). Patients discharged on the same day were excluded and records were reviewed up to 36 hours from admission to ensure adequate time for frailty assessment. Strict data protocols were iteratively derived to ensure the accuracy and reliability of data collected.

RESULTS

Of the 310 patients reviewed, there was evidence of cognitive impairment in 126 patients (40.6%), falls in 72 (22.9%), incontinence in 46 (14.8%) and mobility problems in 104 (35.5%). Of those with cognitive impairment, only 26 (20.6%) were known to suffer from dementia. Of the 147 patients less than 65 years old, cognitive impairment was present in 41 patients (27.9%), falls in 11 (7.5%), incontinence in 6 (4.1%) and mobility problems in 35 (23.8%). Figure 1 describes the frailty syndrome by age band and Figure 2 displays the frequency of frailty syndromes by age band.

CONCLUSION

Frailty syndromes are not limited to the elderly, with considerable distribution over the age-bands. Frailty assessments should be driven by need and not age.
Aim: This was a study to describe and understand the experiences of the patients who are accessing ambulatory assessment services in secondary care in Oldham.

Background: The Ambulatory Assessment Unit (AAU) project has been operational at Oldham since November 2010. The service was initiated in response to some key drivers both locally and nationally. The researcher was responsible for the initiation of this project and she wanted to evaluate the impact of the service in relation to patient satisfaction; particularly as there was no evidence of research carried out that has measured this in relation to AAUs.

Method: This was a qualitative retrospective cross-sectional study design. Twenty semi-structured interviews were carried out between June and August 2012 with AAU patients. A combination of thematic and comparative analysis was used to interpret results.

Findings: The majority of patients preferred the AAU to inpatient admission. Interactions with staff were valued by patients in terms of communication, reassurance and competence. Although generally patients preferred an open and spacious environment, it was the atmosphere and ethos of the department that was more important. Waiting times, although important, were often negated by information-giving. Privacy to discuss medical problems was important for the majority of patients; however there was a clear disparity between men and women in terms of privacy provision in the AAU.

Conclusions: The introduction of AAU at Oldham had a positive impact on patient experience in emergency care. The information learned also enabled experience-based design of a new service provision on the site.
Title: Rate measurement in Atrial Fibrillation
Category: Research
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AIM

When examining patients’ observation charts, anomalies were noted in the pulse rate measured by pulse oximetry. These were observed more frequently in atrial fibrillation and a project was designed to assess the accuracy of these monitors compared to manual methods.

METHODS

Patients on medical wards were included if they had atrial fibrillation on admission ECG and at the time of assessment. The ECG rate, manual apical pulse, radial pulse and pulse oximetry rates were measured. Pulses were timed manually for thirty seconds and a range of values and average was recorded for the pulse oximetry. ECG rate was used as the gold standard and other methods were compared to this.

OUTCOME/RESULTS

26 patients out of the 209 patients examined were included. Using intraclass correlation coefficient comparing the ECG rate with the apical rate, radial rate and pulse oximetry rate gave values of 0.8 (95% CI 0.6-0.906 p<0.001), 0.476 (CI 0.123-0.724, p 0.002) and 0.115 (-0.295-0.482, p 0.29) respectively. Measurements were less accurate if rate greater than 100 beats per minute; average range of pulse oximeter values was 48.4 beats compared to 19.9 if less than 100.

CONCLUSION

We should be using manual apical rates on a regular basis in patients with atrial fibrillation especially if rate more than 100 beats per minute. Nurses should be encouraged to assess radial pulse manually. More accurate rates may avoid unnecessary changes to rate control drugs, and minimise false severity scores, such as SIRS or Geneva scores which can influence patient management in the acute setting.
Aim:
To increase awareness of Herpes Simplex Virus Encephalitis

Method:
We present a retrospective cohort study of patients admitted to Forth Valley Royal Hospital between August 2009 and August 2012 who had confirmed or were treated as viral encephalitis.

A search of the hospital eward and helix databases for ‘encephalitis’ as part of the discharge diagnosis was performed. Case notes were reviewed and cross-referenced. Patients were excluded if a non-viral cause or alternate diagnosis was identified.

Data was collected on patient demographics; WCC, CRP and NEWS score on admission; CSF biochemistry, imaging, treatment timing and duration.

Results are presented as a percentage of the study population.

Results:
33 patients were identified (mean age 54y.o; 52% male).

All patients had a CT Brain. 9% were suggestive of encephalitis. 48% of patients had an MRI brain of which 50% suggested encephalitis.

61% of patients had a CRP of <6 and 91% ≤50. 57% of patients had a WCC of <11 and 97% ≤20. 85% of patients had a NEWS score ≤3.

57% of PCR negative patients had an inappropriate duration of aciclovir therapy when compared to current guidelines regarding discontinuation of aciclovir based on LP and imaging findings (Solomon, 2012).

Conclusion:
This cohort represents a group who potentially have a devastating illness but do not present with traditionally associated markers of a severe illness. Extra vigilance and a high index of suspicion are required in patients presenting with higher cortical dysfunction as they may have infection without systemic sign.

Reference:
Title: SHOULD LUMBAR PUNCTURE BE ABANDONED IN FAVOUR OF ANGIOGRAPHY IN CT NEGATIVE SUSPECTED SUBARACHNOID HAEMORRHAGE?

Category: Research

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Aim:

To assess the proportion of patients with conclusive CSF xanthochromia results in a regional health board following negative CT scan in the investigation of SAH.

Background:

With the advent of new CT scanners, some studies [1-3] claim near 100% sensitivity in the investigation of SAH when interpreted by a neuroradiologist, stating that LP is no longer required - preferring CT angiography. Many cases of possible SAH present to district general hospitals without the facility for endovascular intervention, and transfer to another unit is required for this to occur.

Methods:

CSF bilirubin and oxyhaemoglobin spectrophotometric absorbance data were collated for 256 consecutive patients between October 2012 and March 2013, collected from all centres in a regional health board. Results were stratified as positive, negative, or not excluded according to national guidelines [4]. Positive and negative were considered conclusive results, not excluded or insufficient samples were considered inconclusive.

Results:

240 of 256 (93.7%) results were conclusive: 89.1% were negative (228 of 256). 4.7% of results were positive (12 of 256): 8 were evaluated angiographically 3 aneurysms coiled, 1 clipped, 4 negative. 16 out of 256 (6.3%) samples were inconclusive. Only 5 of these patients were transferred to the INS for angiography, with 1 requiring aneurysm coiling.

Conclusions:

LP has a high diagnostic yield allowing safe discharge without angiogram in nearly 90% of patients without the requirement for angiography – saving time, money, radiation and contrast risks – and should remain the investigation of choice in CT negative suspected SAH in hospitals without access to angiography or neuroradiologists.
The Influence of Short-Term Weather Changes on Acute Hospital Admission Rates

Title: The Influence of Short-Term Weather Changes on Acute Hospital Admission Rates
Category: Research
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Aim:

We sought to establish if daily fluctuations in weather are associated with changes in hospital admission rates, as is the case with seasonal climate variation\(^1,2\).

Methods:

Daily admission rates to the Emergency Admissions Units at Salford Royal Hospital were recorded during April 2013. Concurrently recorded data from the local meteorological station determined maximum / minimum temperature, mean sea-level pressure, relative humidity, rainfall, and hours of sunlight on each day. Unpaired T-tests were used to establish if there were differences in admission numbers on days with more or less than the median value of each continuous variable, or between days with and without rainfall. 4 admission categories were studied: admissions to all specialities (AAS), acute medical admissions (AMA), admissions due to respiratory disease, and medical admissions aged ≥75 years.

Outcomes/Results:

There were 1509 admissions. 953 were AMA, 205 respiratory, and 510 ≥75 years old. Weather data are shown in table 1. No weather measurements were associated with AAS. There were more medical admissions on days with rainfall (36.8±3.4 per day with rainfall versus 32.4±6.4 without, p=0.031). This was a function of more admissions in patients >75 years on days with rainfall (21.1±7.0 versus 16.3±4.1, p=0.029). There were more respiratory admissions on days preceded by a lower overnight temperature (8.1±2.0 per day versus 6.3±2.2, p=0.032 figure 1), and with lower peak daytime temperature (8.4±2.0 versus 6.2±1.9, p=0.006).

Conclusion:

Short term changes in weather patterns appear to affect hospital admission rates. Furthermore, this is associated with age as well as presenting illness.

References:


Aims

Extended-spectrum β-lactamases (ESBL) are an increasingly important cause of drug resistance in Gram-negative bacteria throughout the world and in the UK. ESBL production is associated with increased mortality and delay in effective therapy in bacteraemic cases. There are a number of recognised risk factors, for example previous antibiotics and hospitalisation. With the majority of medical inpatients passing through the Acute Medical Unit, clinicians should be aware of at risk patients. Peterborough has seen a year-on-year rise in ESBL cases with 124 patients in 2008-2009 and 68 patients between Jan-March 2013 alone, and we wanted to identify the reasons and risks thereof.

Methods

We reviewed the demographics, bacteriology and hospital attendances of patients from 2008-2009 to the 2013. The electronic databases for pathology, biochemistry and haematology, as well as eTrack, the patient hospital attendance database were used to obtain information for each patient.

Results

In 2008-09 there were 124 patients with 199 samples, compared to 70 patients with 96 samples in Jan-Mar 2013. Age range 2008-09 1-95 years; 2013 10-97 years; 25% community acquired in 2008-09 and 72.5% in 2013. 86.3% Urine samples in 2008-09, 90.6% urine 2013; similar M:F ratio. The number of hospital contacts e.g. OP attendance, day-case procedures, urology and gastroenterology OP appointments and associated conditions were higher in 2013; with a higher odds ratio if under OP urology management.

Conclusions

ESBL Gram-negative infections, specifically bacteraemias are on the rise and have overtaken Gram-positive infections as the most common drug-resistant infection. Algorithms and protocols should be developed for Acute Medical Units to identify those at risk and alter antibiotic management early if there is a failure in improvement as currently ESBL-infections identification can take a minimum of 48-72 hours for confirmation with a positive sample.
AIM

It has been seen that AIM has a lower fill rate than many specialities during ST3 recruitment. We wanted to investigate this.

METHOD

The RCP Speciality Recruitment Office co-ordinated surveys sent by email to all those who had applied for AIM in either Round 2 of 2012 or Round 1 of 2013 recruitment.

OUTCOME/RESULTS

A total of 145 individual responses we received.

Of these 25% had applied solely to AIM, 45% had applied to AIM plus 1 other speciality, 16% to 2 others and 10% to 3 others. Of all applicants 52% had either applied to AIM alone or had ranked it as first preference.

When deciding on a speciality the most frequently picked reasons were previous experience (78%), geography (51%) and NTNs available (43%). When choosing individual deaneries the highest reasons were geography and availability of special skill training.

63% had decided to apply for AIM during CMT, 21% during foundation and 10% whilst in HST in another speciality.

Only 52% claimed to have received careers advice from SAM or RCP although 73% reported being influenced by role models (predominantly AIM consultants)

89% said they wanted to train in AIM+GIM with only 11% preferring AIM alone.

CONCLUSION

AIM is often still seen as a 'back up' option by trainees with the result that fill rates remain low. Previous experiences and role models in AIM are very important in choosing a career path but there seems to be a lack of careers advice both from RCP and SAM