

FDG will be metabolised and replaced by unlabelled glucose. If a malignant cell is present, the continued FDG uptake between scans results in higher intensity of retained FDG at 4 hours. Inflammatory cells, which retain normal glucose-6-phosphatase activity, will have decreased signal. In our experience, a rise in SUVmean of 30% correlates with malignant disease, with no increase suggesting benign diagnosis.⁵ In the presence of infection satellite lesions may be missed, thus understaging the disease, with possible unnecessary non-curative surgery. Despite additional cost, a washout study can alter the management strategy of patients.

The authors have no conflict of interest.

Clare Jones, Stephen Badger, Tom Lynch

Department of Radiology
Belfast City Hospital, Lisburn Road
Belfast, BT9 7AB

Corresponding author

Miss C Jones
Surgical Registrar
Tel: 028 90263494
Fax: 028 90263951
Email: cjones82@hotmail.co.uk

REFERENCES

1. Jones C, Badger SA, Lynch T, Diamond T. Role of PET-CT in the management of colorectal metastatic disease. *Oncol News*. 2010; **5**(1): 17-19. Available online from: http://www.oncologynews.biz/pdf/mar_apr_10/ONMA10_imaging.pdf. Last accessed December 2013.
2. Deichen JT, Prante O, Gack M, Schmiedehausen K, Kuwert T. Uptake of [¹⁸F]fluorodeoxyglucose in human monocyte-macrophages in vitro. *Eur J Nucl Med Mol Imaging*. 2003; **30**(2): 267-3.
3. He YX, Guo QY. Clinical applications and advances of positron emission tomography with fluorine-18-fluorodeoxyglucose (18F-FDG) in the diagnosis of liver neoplasms. *Postgrad Med J*. 2008; **84**(991): 246-51.
4. Zhuang H, Pourdehnad M, Lambright ES, Yamamoto AJ, Lanuti M, Li P, *et al*. Dual-time point 18F-FDG PET imaging for differentiating malignant from inflammatory processes. *J Nucl Med*. 2001; **42**(9): 1412-7.
5. Shinya T, Raj K, Okumura Y, Fujiwara K, Matsuo K, Yonei T, *et al*. Dual-time-point F-18 FDG PET/CT for evaluation of intrathoracic lymph nodes in patients with non-small cell lung cancer. *Clin Nucl Med*. 2009; **34**(4): 216-21.

DOCTOR-PATIENT RATIOS AND ACUTE MEDICAL ADMISSIONS: A SIMPLE SOLUTION FOR AN IMPORTANT PROBLEM!

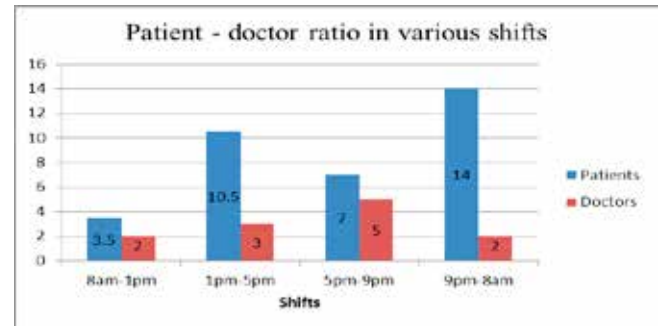
Editor,

There has been a 9% rise in the number of hospital admissions under acute care over the last 5 years in Northern Ireland and majority of these are over 65 years of age and with complex needs¹. The medical admission process has considerably improved over the years with introduction of proformas and risk assessment tools. Both these factors have contributed to an increase in workload for doctors undertaking acute medical admissions. Over a quarter of medical registrars throughout UK reported an unmanageable workload and about 66% reported it as heavy as per the recent survey conducted by the Royal College of Physicians².

At a recent audit meeting within our hospital, a number of clinical incidents concerning the initial admission process were highlighted. These included incomplete venous thromboembolic risk assessments, poor record of medications and, prescription errors. Majority of these incidents happened during night shifts. We hence undertook a project to ascertain the reasons for this by specifically looking at the distribution of doctors.

FIGURE 1.

Average patient and doctor numbers during various shifts in a 24-hour period.

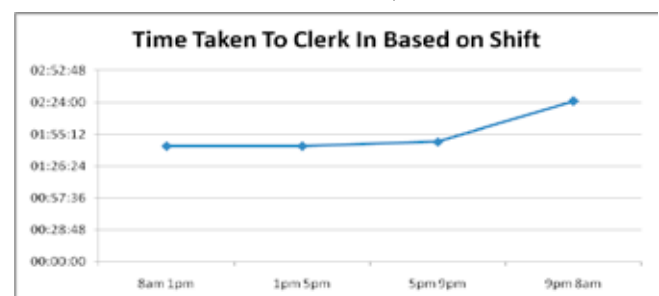


We retrospectively analysed all acute medical admissions during the month of January 2013 in our hospital particularly focussing on their distribution over a 24-hour period. We divided 24-hour period into 4 shifts (8am-1pm, 1pm-5pm, 5pm-9pm and, 9pm-8am) as the number of doctors varied during these time periods as per the existing shift rota. Data was obtained from electronic patient management system (ePMS, Healthintec) and statistical analysis performed using Microsoft Excel (version 2010).

FIGURE 2.

Average time taken to assess patient from the time of emergency department referral.

(Shifts on the X-axis and Time (in hours: minutes: seconds) on the Y-axis).



1,092 admission episodes were included in the study. The average number of admissions in a 24-hour period were 35, of which 40% (n=14) were during night shift (9pm-8am). Although the total numbers of doctors seemed adequate, we found a significant disparity in the doctor-patient ratios among different shifts i.e. the average number of medical admissions and the number of doctors on various shifts (Figure 1). We also found that there was an upward trend in the average time taken to assess patients following a referral over a 24 hour period with a difference of approximately 40 minutes

between day (8am-9pm) and night shifts (9pm-8am) (Figure 2). Moreover, majority (64%) of the 4-hour breach times in commencing initial assessment occurred during night shifts (9pm-8am).

Our analysis showed that during night shifts the numbers of doctors were disproportionately lower with respect to the clinical need. Following this project we recommended a redistribution of doctors to increase their number during night shifts. This was possible without affecting the working hours and the banding requirements. We believe that by improving doctor-patient ratios we can reduce the individual workload thereby giving doctors more time to ensure adequate completion of the initial admission proformas. We hence recommend that all hospitals should undertake similar projects by looking at the distribution of admissions and doctors, and introducing this simple solution towards improving delivery of patient care and safety.

CONFLICT OF INTEREST

The authors wish to state that one of the authors, Dr. Shaji Chacko, is the owner of the company called Healthintec. This company has created electronic patient management system (ePMS) from which data was obtained for the study stated in the article.

The author has no conflict of interest.

Shaji Chacko, Siddhesh Prabhavalkar

Acute Medical Unit, Ulster Hospital, South Eastern H&SC Trust, Dundonald, UK.

REFERENCES

1. Northern Ireland Hospital Statistics: Inpatient and Day case activity 2011-2012 document. (http://www.dhsspsni.gov.uk/ni_hospital_statistics_-_inpatient_activity_2011_12.pdf)
2. Chauduri E, Mason NC, Newbery N, Goddard AF. Careers: factors affecting recruitment to general medicine in the UK. *Clin Med* 2013; 13:330-5.

THE BURDEN OF MOTORCYCLE TRAUMA AND SEASONAL CHANGE AT A REGIONAL TRAUMA CENTRE.

Editor,

In recent years the incidence of road traffic fatalities in developed countries per road user has decreased.¹ However there is still a disproportionate number of fatalities on the road attributed to motorcycles.² The Department of Environment Transport and regions estimates that a fatality or serious injury occurs with a motorcyclist approximately every 666 000 kilometres travelled compared to approximately 18 662 000 kilometres travelled by car.³

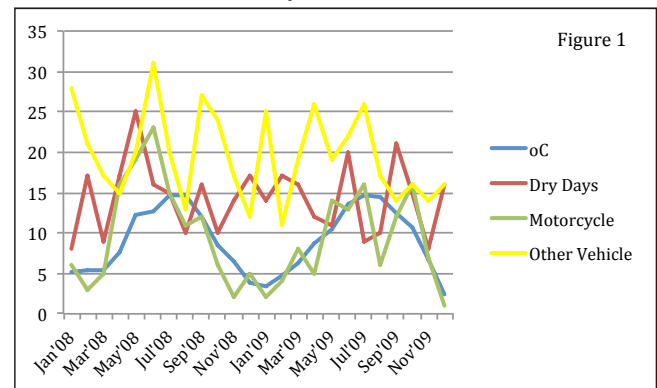
Northern Ireland has a rich history in motorcycles and racing, between 1998 and 2008 there were 4, 416 motorcycle accidents and this accounted for 13% of all seriously injured or killed. The estimated cost to the economy is £62 million annually. Studies in America have demonstrated that there is a significant relationship between temperature and general trauma admissions.⁴⁻⁵

Our study aims to identify predictors for peaks in motorcycle

trauma, including season, weather and frequency of motorcycle events.

MATERIALS AND METHODS

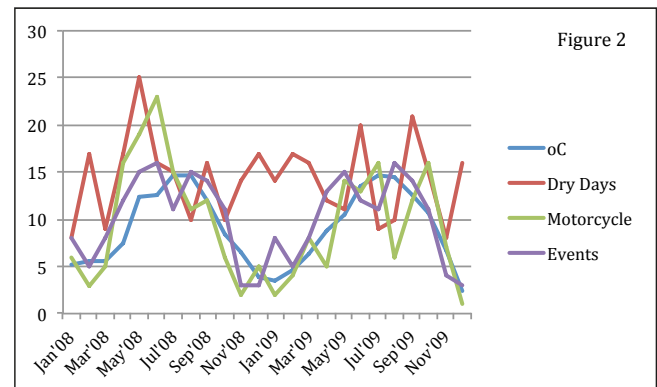
We reviewed 699 trauma referrals to RVH between 1st January 2008 and 31st December 2009. Referrals were recorded in a prospective fracture outcomes database. Weather data was gathered from the UK meteorological office's prospective database. Dry days were considered as days with <1mm rainfall. Dates of all official motorcycling events were collected from the Motorcycle Union of Ireland Ulster Centre



(MCUI UC). All events that the Royal Victoria Hospital may be expected to cover were included.

RESULTS

There were 228 (32%) motorcycle-related traumas, 15 (6.6%) female and 213 (93.4%) were male. The mean age



for motorcycle trauma was 33 years (range 13 -76) versus 38 years (range 13 - 90) for other vehicular trauma. There were no mortalities during admission at RVH.

Figure 1 demonstrates general seasonal trends in temperature, trauma frequency, dry days and frequency of motorcycling events. The trends of peaks and troughs of motorcycle trauma, temperature and number of dry days appear to follow each other closely. This trend would suggest an association between them.

The frequency of motorcycle accidents also closely follows the number of motorcycling events in each month, as demonstrated by Figure 2.