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# AMBEX abstracts

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**WINNER OF THE EMERGENCY MEDICINE JOURNAL (EMJ) AWARD FOR MOST ORIGINAL RESEARCH**

## 001 THE IMPACT OF SHIFT WORK ON EMERGENCY MEDICAL DISPATCHING

S. Roshanzamir, A. Heward<sup>1</sup>, E. Glucksman. <sup>1</sup>London Ambulance Service

**Introduction:** Healthcare professionals are required to work to consistently high standards 24 hours a day, 365 days a year necessitating shift work to be employed. Shift work is often perceived to result in disruption to the worker, manifesting itself in terms of sleep, health, and social disruption, as well as job performance, standards, and safety, with substantial differences in fatigue identified between day and night shift workers.

The London Ambulance Service NHS Trust (LAS) receives 1.1 million medical 999 emergency calls annually. To deal with these the LAS employs emergency medical dispatchers (EMDs), who use the AMPDS call prioritisation software, to triage emergency calls into an order of clinical need. In line with the evidence presented above, concerns have been raised about the potential for reduced levels of care to be delivered on night shifts.

Use of AMPDS is measured through "compliance", which measures the correct application of the protocol against the call taken. Low compliance has been shown to result in reduced levels of accuracy in identifying the patients presenting condition.

It is hypothesised that working at night is associated with a decrease in AMPDS compliance.

**Sources and data analysis:** Compliance data for 176 EMDs were collected for October 2004 and analysed against hours worked, time of day worked, and overall compliance scores. Day shifts were defined as those between 0700 and 1900. Night shifts between 1900 and 0700.

**Results:** Mean compliance overall 97.5%; mean compliance night shifts 96.5% (out of 100%); mean compliance night shifts 98.4%; p value N/S.

**Discussion:** The data analysed identifies EMDs working the night shift do not have decreased levels of compliance. This could be because of quieter caller volumes, but may equally be influenced through the use of the structured and systemic process of the AMPDS call taking system. Consideration must be given to the fact that results may also be influenced by system design, competence of the managers, staff moral, and/or commitment.

**Conclusions:** Whether though the use of AMPDS, system design, or reduced call volume, it is not tenable to presume that night work will have a detrimental impact on the performance of the EMD. Questions remain unanswered about the exact aspect(s) that maintains high levels of compliance on nightshifts.

**WINNER OF THE EMERGENCY MEDICINE JOURNAL (EMJ) AWARD FOR BEST POSTER**

## 002 EMERGENCY CARE OF OLDER PEOPLE WHO FALL: A MISSED OPPORTUNITY

M. Halter<sup>1</sup>, H. Snooks, J. Close, W. Y. Cheung, F. Moore, S. E. Roberts. <sup>1</sup>London Ambulance Service

**Introduction:** Ambulance services routinely respond to 999 calls for falls in older people, and leave many at home, despite not generally having protocols to do this. This study aimed to describe the profile and short term outcomes of older people left at home by emergency crews following a fall. **Methods:** 999 patients, aged 65+ years, coded as "fall", not conveyed to hospital within the catchment areas of three London hospitals, September 1 to October 31 2003, were included in the study.

Patients were followed up using ambulance service, accident and emergency (A&E), GP, and coroners' records to identify contacts within two weeks of their call.

**Results:** A total of 194 patients met the inclusion criteria: 11 were excluded because of incomplete details and 8 opted out. The average age of the 175 remaining patients was 83, range 65-99 years. One hundred and eleven

patients (63.4%) were female. Most callers (78.3%, n = 137) were coded as "no injury or illness", with 13 (7.4%) as "minor cuts and bruising". Three quarters of the patients (n = 126) were recorded as "assisted/treated but not conveyed"; 15% (n = 27) as "declined aid against advice"; 4% (n = 7) as "GP to call/left in care"; and 4% (n = 7) other codes.

Eighty three patients (47.4%) called 999 again. Thirty nine of these were conveyed to A&E and an additional three (1.7%) attended A&E by other means. Thirty nine patients made more than one call (range 1-7). Four patients (2.3%) died, with an increased risk of mortality (SMR) of 5.4 (95% CI = 1.4, 11.9) compared to the general population of the same age in London. Only 22 (25.3%) of 87 patients with GP contact details available had made contact.

**Comment:** The rate of subsequent emergency healthcare contacts and increased risk of death for older people who fall and are left at home following a 999 call is shocking. Further research needs to explore this practice and appropriate models for delivery of care for this vulnerable group on a wider scale.

**WINNER OF THE JOINT ROYAL COLLEGES AMBULANCE LIAISON COMMITTEE (JRCLC) AWARD FOR RESEARCH MOST LIKELY TO AFFECT PRACTICE**

## 006 COULD PARAMEDICS MANAGE ACUTE LOW BACK PAIN ACCORDING TO ROYAL COLLEGE OF GENERAL PRACTITIONERS GUIDELINES?

L. Robinson<sup>1</sup>, J. Dapaah, A. Walker. <sup>1</sup>West Yorkshire Metropolitan Ambulance Service

**Introduction:** The ambulance service frequently responds to patients experiencing acute non-traumatic (musculoskeletal) low back pain (ANLBP). Between April 2003 and April 2004, the West Yorkshire Metropolitan Ambulance Service (WYMAS) responded to 1684 such emergency calls.

We found patients transported to hospital were often discharged from the emergency department within two hours after assessment and oral analgesia.

This audit aimed to identify a possible safe alternative care pathway for patients diagnosed with simple acute non-traumatic lower back pain.

**Methods:** A literature search identified the Royal College of General Practitioners (RCGP) guidelines for the management of acute lower back pain as a potential care pathway for use by the ambulance service. Patients taken to Pinderfields and Pontefract emergency departments by emergency ambulance during the same 12 month period were identified using Advanced Medical Priority Dispatch System (AMPDS) codes and evaluated retrospectively using the RCGP guidelines. Full data sets included AMPDS codes, Patient report form (PRF), and emergency department and hospital notes.

**Results:** A total of 215 patients were identified by AMPDS as appropriate, of which 100 patients had a full data set.

Of the 100 cases, eight patients were correctly identified by crews as a AMPDS classification other than non-traumatic low back pain; 18 patients were medically diagnosed (13 identified by crews, the remaining five would have been brought for emergency department assessment under the guidelines); 15 patients were diagnosed with a surgical condition (14 identified correctly by the crew, the remaining one would have been brought for assessment under the guidelines); 59 patients were diagnosed with mechanical back pain (54 were discharged from the emergency department, five were admitted who would have been transferred for assessment under the guidelines).

**Conclusions:** The RCGP ANBP guidelines could potentially be used by the ambulance service to manage patients safely in conjunction with primary care without transfer for emergency department assessment.

**Recommendations:** A prospective study is required to fully evaluate the effectiveness of this care pathway.