Comparison of initial diagnosis of ED staff and final diagnosis of ward staff for patients admitted directly to Medicine from the ED

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The Emergency Department (ED) at Darlington Memorial Hospital has approximately 60,000 attendances per year. Approximately 20% of patients attending the ED are admitted; the majority of these being to medical wards.

The aim of this study was to compare the diagnosis made by ED medical staff with the discharge diagnosis made by medical staff on the Medical Admissions Unit (MAU). Additionally, information was collected on recording the results of investigations and whether the case was discussed with senior medical staff, as per ED policy.

Methodology

- A hand search of the ED records for patients presenting in November 2012 was performed to identify 55 consecutive patients who were admitted to the MAU.
- The diagnoses of the admitting ED doctors were compared to those of the MAU medical staff.
- Data were collected from the ED records (ED doctor diagnosis) and compared to the diagnosis recorded on the iSoft system by the doctor completing the GP discharge letter on the MAU

Results

- 29(52%) were male and 26(48%) female
- Length of stay varied greatly with a mean of five days, median of three days and a maximum length of stay of 18 days. (See Table 1/Figure 1)
- The grade of doctors attending to patients is shown in Table 2.
- Chest Xray interpretation was documented in ED notes in only in 11/35 (31%) patients who had a CXR.
- When initially seen by non-senior doctors, documentation of "Discussed with seniors" before transferring patient to MAU occurred in 12/43 (28%) patients
- The ED discharge diagnosis was the same as the MAU discharge diagnosis in 32 (58%) patients. The differences in diagnosis are shown in Table 3/Figure 2

Table 1. *Length of stay*

Length of stay	Number of patients	Cumulative total
Less than 24 hours	8	8
24 - 48 hours	16	24
48 - 72 hours	7	31
3 – 7 days	14	45
7 – 14 days	6	51
14 – 21 days	4	55

Figure 1

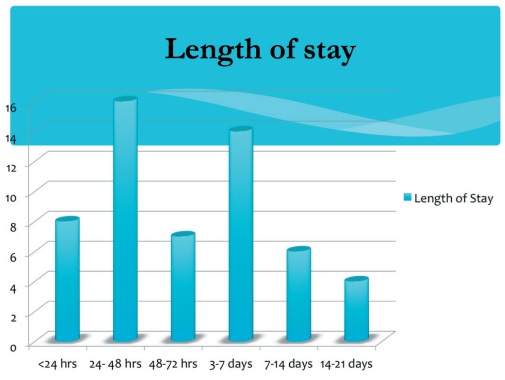

Table 2. *Grade of doctor attending to patient*

Clinical Fellow	28 (51%)
FY2	15 (27%)
Seniors (Consultant, Associate Specialist, SpR, Specialty Doctor)	12 (22%)

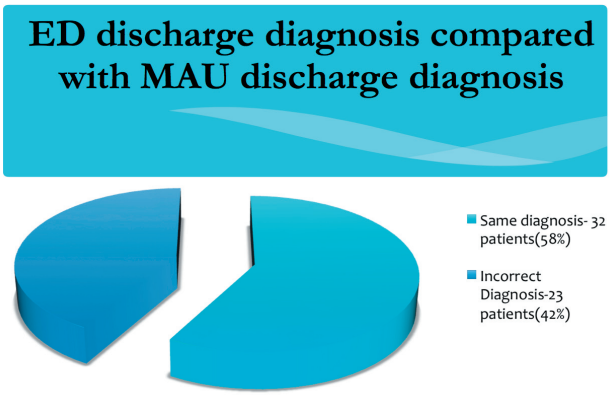

Figure 2

Table 3. *Discrepancy in diagnosis made in the ED and MAU*

ED Diagnosis	MAU diagnosis
ACS	Musculoskeletal pain
ACS	Infective exacerbation of COPD
Allergic reaction	Anaphylaxis
Cellulitis	Exacerbation of COPD
Collapse	LRTI
Confusion	Morphine overdose
Confusion	UTI
Confusion/Silent MI/ARF	Haemolytic Uraemic Syndrome
COPD/ACS	CCF/Angina
Exacerbation of COPD	Community acquired pneumonia
Fall/Complete heart block	Mechanical Fall
Fast AF	CCF
Haematemesis	LRTI
Haematemesis	Pneumonia
Haematemesis	Pneumonia
Head Injury	Collapse
LRTI	PE
LRTI	Viral gastroenteritis
PE	Musculoskeletal pain
Pulmonary oedema	LRTI
Reduced mobility (Social)	Postural Hypotension secondary to medications/autonomic neuropathy
Stroke	Post ictal state because of sub therapeutic levels of phenytoin level
Subarachnoid haemorrhage	Simple Vomiting
Unwell	Musculoskeletal pain

Conclusion

- In this small study, the diagnosis recorded by ED staff on direct Medical Admission[1,2,3] was the same as the final diagnosis recorded by MAU medical staff in just over half of patients admitted to MAU. This is perhaps not surprising as MAU doctors have the advantage of making a diagnosis based on further or repeated investigations. MAU doctors may also benefit from having more time to obtain further information regarding the patient's condition from relatives, GP and their medical records, which are not always available in ED.
- The national four hour target means ED staff are under pressure to discharge or admit patients quickly and it is often not possible to make a final diagnosis within this limited time.
- Only investigations thought to be relevant to the patient's presentation are performed in the ED: some tests e.g. a 12-hour Troponin cannot be carried out in the ED. As ED staff often don't have the results of all investigations, the decision to admit to MAU is not always based on a formal diagnosis, but more on a decision that the patient requires admission.
- This study did not look at the appropriateness of MAU admission, but the number of patients being discharged within 24 hours of admission, suggests that these patients may not have required formal admission and may have been more appropriately assessed and treated in a Clinical Decision Unit or equivalent, such as RAMAC. This could be the aim of a future audit.

Recommendations

- Junior doctors need to discuss all potential admissions to MAU with a senior doctor: it is possible that this may decrease the number of unnecessary referrals, though we are aware that previous studies have shown that seniority of attending ED clinician does not always result in decreased admission rates.
- An audit of appropriateness of MAU admissions could be carried out.
- We suggest that departmental practice be re-audited in six months, though it is recognised that new junior medical staff will be in post by that time, making direct comparisons difficult.
- The results of investigations performed in the ED e.g. CXR and blood tests, should always be recorded in the ED records once known

References

1. Eric E Howell, Edward S Bessman, Haya R Rubin. Hospitalists and an Innovative Emergency Department Admission Process. J Gen Intern Med. 2004 March; 19(3): 266–268. doi: 10.1111/j.1525-1497.2004.30431

2. Amarasingham R, Swanson TS, Treichler DB, Amerasingham SN, Reed WG. A rapid admission protocol to reduce emergency department boarding times. Qual saf Health Care. 2010 Jun;19(3):200-4. DOI: 10.1136/qshc.2008.031641. Epub 2010 Feb 8.

3. Nataloni R Dallas. Hospital Substantially Reduces Time from ED to Admission. ACP Hospitalist. December 2007. Available at: http://www.acphospitalist.org/archives/2007/12/dallas.htm