

The Acute Medicine – Speciality Interface: Experience in a large teaching hospital

JL Southgate, P Ruparelia & S Phillips

Background

The Norfolk and Norwich University Hospital opened at its present site in 2001. The purpose built Acute Medicine Unit (AMU) is on the ground level, co-located with Emergency Radiology and the Emergency Department (ED). There are, on average, 220 ED attendances and 70 AMU admissions each day, with a split of approximately 30% General Practice referrals and 70% ED referrals. (see table 1) There is no observation ward in the ED, although there is an arrangement for the Emergency Physicians to manage patients with uncomplicated head injury for up to 48 hours.

There are 8 registrars and 10 senior house officers (3 foundation year-2, 2 core medical trainees, 4 ACCS trainees and 1 GPVTS trainee) on full shift rotas providing comprehensive cover of the AMU. Foundation year-1 doctors are attached to the unit for 2-week blocks. Nurse staffing levels and other AMU data are summarized in Table 2.

The Speciality triage system

For the past decade a triage system has been in operation in Norwich. This was introduced in 1999 as a way of equalising the workload between teams on a daily basis and ensuring specialist care for patients. A similar system had been in operation in Liverpool prior to this. There is a set of agreed criteria, based on the presumed or confirmed diagnosis, the likely need for social input or the

Number of beds	68
Total capacity	74 (once a full complement of nursing staff have been appointed)
Number of side rooms	4 each unit, 8 in total
Advanced care beds	4 each unit, 8 in total
Nursing levels	1:7 in the bays (includes side rooms) 1:4 in the advanced care areas
Single sex accommodation	Two separate units

Table 2. Acute Medicine Unit details.

patients' age (see Figure 1). The criteria exist to attempt to avoid any dispute and ensure a smooth system irrespective of the level of experience of the doctor clerking the patient in the AMU. Specific face-to-face training is provided at induction for all doctors and close supervision ensures accurate triage.

How the System Works

Medical referrals are accepted from General Practitioners, Emergency Care Practitioners (ECP) and Nurse Practitioners (NP) in the community. The ECP and NP have had specialist training. Referrals are also accepted from any grade of junior in the ED, and from other doctors in the Trust when there are no available beds in the speciality area.

The calls are taken by a specialist nurse (called a GP liaison nurse) between 0930 and 2000, 7 days per week, and by the senior nurse coordinator (band 6) at other times.

Each patient is clerked by a junior doctor or medical student and reviewed by a senior doctor (registrar or above) prior to leaving the AMU. The patients are triaged to a speciality by the junior doctor, verified by the senior doctor, based on the agreed criteria. Triage destination is recorded in the patient's notes and also on a specific triage proforma, which is held by the GP Liaison nurse during the day and the senior nurse coordinator at night.

This system applies to the following specialities: Medicine for the Elderly, Cardiology, Respiratory, Gastroenterology, Renal, Endocrinology and

Dr Jo Southgate

Acute Medicine Consultant,
Acute Medicine Unit,
Norfolk and Norwich
University Hospital Trust,
Norwich NR4 7UY

Dr Prina Ruparelia

Consultant Respiratory
Physician, Respiratory
Medicine Department,
Norfolk and Norwich
University Hospital Trust,
Norwich NR4 7UY

SRN Sue Phillips

GP Liaison Nurse, Acute
Medicine Unit,
Norfolk and Norwich
University Hospital Trust,
Norwich NR4 7UY

Corresponding: Dr Jo Southgate

Acute Medicine Consultant,
Acute Medicine Unit,
Norfolk and Norwich
University Hospital Trust,
Norwich NR4 7UY
Email: joanne.southgate@
nnuh.nhs.uk

Type of hospital	Teaching hospital
Number of acute beds (NNUH only)	1010
Population for secondary services In Norfolk and North Suffolk	654 900
Population for tertiary services	822 500
Number of medical admissions per 24 hours – average (range)	70 (40-100)
Number of ED attendances per annum	921 282
Tertiary services	PPCI, stroke thrombolysis, dialysis

Table 1. Hospital statistics.

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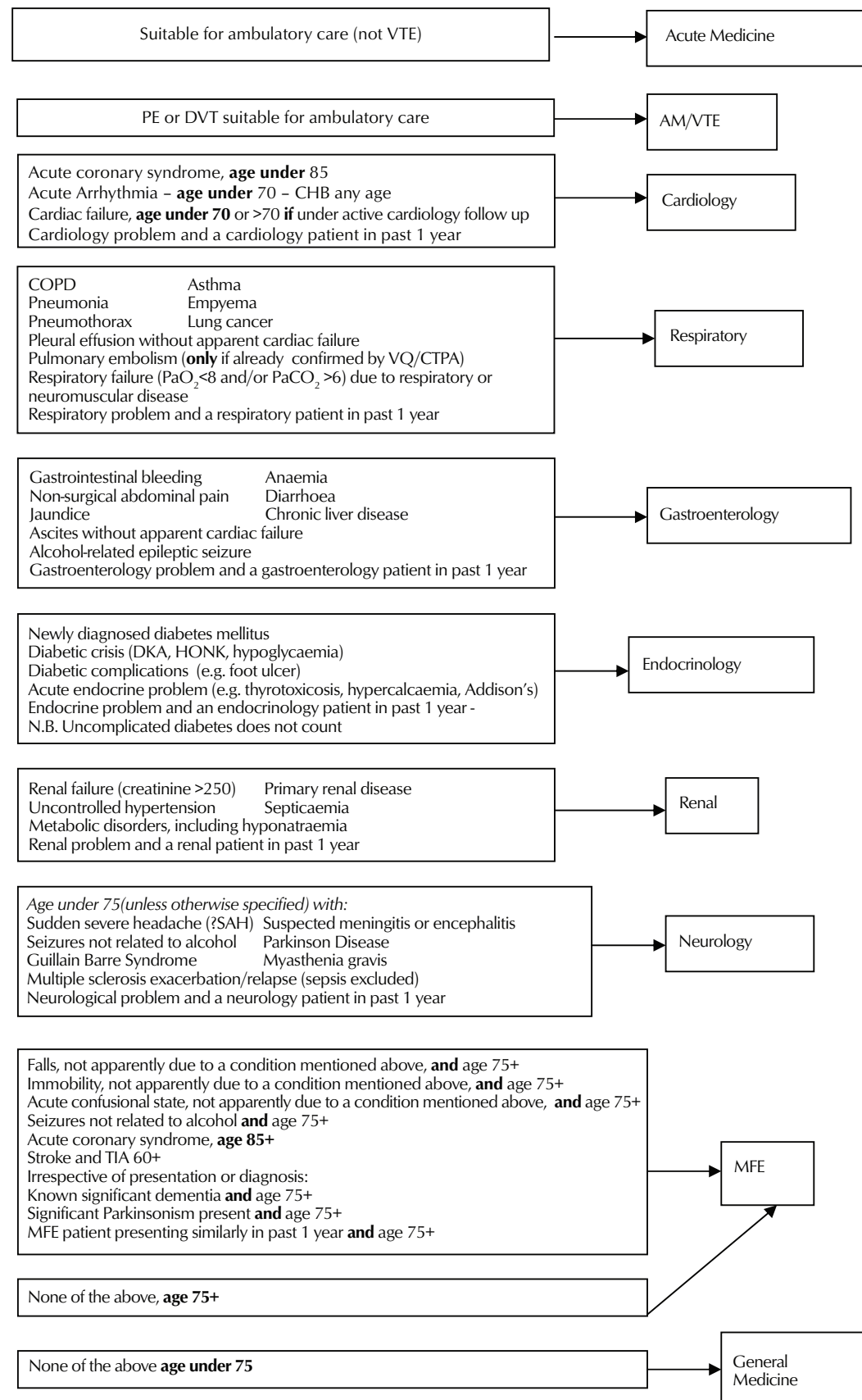


Figure 1. Criteria for deciding specialty.

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Neurology. The numbers of consultants for each of these specialities is outlined in table 3. Triage to Haematology, Oncology, Rheumatology and Dermatology occurs by specific arrangement when required.

Once triaged to a speciality, patients become the responsibility of that consultant team, which will arrange further investigations and treatment as required. Patients remain on the AMU until a speciality bed becomes available. There are twice daily consultant-led speciality ward rounds at 0800 and 1700, plus an additional ward round at 1500 for Medicine for the Elderly firm.

Patients who do not present with an obvious speciality condition are referred to as 'general medical' patients. By arrangement these patients are looked after by the renal and endocrine teams. This system has evolved over time as the specialist teams have become more specialized. Increasingly these patients are cared for by the AMU team if they remain on the AMU, which has the advantage of permitting early morning discharges where appropriate.

Monthly meetings of all speciality consultants take place to review the criteria and make alterations to meet changing patients' needs and recommendations. For example:

- (i) Increasing the age of triage of patients with suspected acute coronary syndrome to 85 years with the introduction of the Primary Percutaneous Coronary Intervention service in Norwich.
- (ii) The introduction of venous thromboembolism triage, with the introduction of the new clearly-defined out-patient PE service, which is coordinated by the Specialist VTE clinic nurses.

Where a triage is made to a consultant who may feel that care under a different speciality is more appropriate, care of the patient is transferred following consultant-to-consultant discussion.

Renal	5
Endocrinology	6
Gastroenterology / Hepatology	6/2
Respiratory	8
Medicine for the Elderly	12
Neurology	6

Table 3. Numbers of consultants on the rota for each speciality.

What works well:

The system is well-established and senior nurses, consultants and managers all have a clear understanding of how it operates. There are a number of benefits:

Speciality consultant input

There is early specialist consultant opinion, typically within 12 hours.

Each speciality has agreed the set of criteria and therefore which patients should be assigned to their care. These criteria have been updated a number of times with constant improvements.

Continuity of care for patients is provided at consultant level. The system allows prompt discharge, appropriate arrangement of out-patient investigations and follow-up in speciality clinics. Patients with a specific problem are managed by a team with a specialist interest in that condition. The team will often already know the patient providing continuity of care and earlier discharges – particularly in patients with chronic disease. Appropriate out-patient follow-up can be made with specialist nurse input.

Patients with social needs are cared for primarily by Medicine for the Elderly consultants with knowledge of local services.

Handover and Hospital at Night

There is a specialty representative present at the evening handover meeting. This junior doctor attends the evening triage round and receives handover from other ward firms in their speciality.

Hospital-at-Night medical registrars are either Acute Medicine registrars or specialty registrars seconded to Acute Medicine, directly supervised by Acute Medicine consultants.

Education

There are many opportunities for specialist teaching in AMU. Trainees are encouraged to present patients on the speciality triage rounds and follow-up patients that they have seen. Medicine for the Elderly, Endocrinology, Renal and Respiratory registrars are seconded to Acute Medicine for 2-month placements to gain General Internal Medicine (GIM) experience and achieve the GIM competencies.

GP Liaison and specialist nurse role

The role of the specialist nurse cannot be under-estimated, both to reduced admission, by redirecting patients to other more appropriate pathways or to fast track services. The specialist nurse is able to advise the junior doctors on triage based on a full understanding of the system and knowledge of the patients' previous attendances using the patients information system.

Minimising impact on Speciality Clinics

The morning and evening triage ward rounds occur at the beginning and end of the working day to enable speciality firms to continue regular commitments such as out-patient clinics and procedural lists.

What works less well

With the current triage system there is a no control on maximum number of patients per consultant per triage. This particularly affects the Medicine for the Elderly (MFE) department. There is also the tendency for the numbers of elderly patients awaiting care packages to escalate, such that the MFE teams may be responsible for half of the patients on AMU.

This system requires large numbers of consultants to provide a workable rota, and also large numbers of junior

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doctors so that patients can be managed by speciality teams while on AMU, within the constraints of the European Working Time Directive. A system such as this may not therefore be manageable in smaller hospitals.

The fact that the juniors from many different teams manage patients on AMU can create challenges for the nursing staff in identifying the appropriate junior doctor to review a patient on the ward; however the AMU team will provide support for any acutely deteriorating patient, or to undertake routine tasks such as prescribing analgesia.

Morning handover is directed to the speciality firms on an individual basis as it clashes with the morning triage round. Any delay to the triage round would impact on clinics. Whilst every effort is made to feedback to junior doctors who have seen a patient, the large number of simultaneous ward rounds means that it is frequently impossible for the junior doctor who clerked the patient to present the patient on the post take ward round.

When patients have multiple problems the most appropriate speciality is not always clear at the time of admission. During busy periods, the pressure to move patients from the unit may result in inaccurate triages; this can result in the delay of appropriate specialist care and the need for a transfer of care to a different team, resulting in increased length of stay

Plans for the Future

These include:

- **Increasing numbers of Acute Medicine consultants** to enable 24 hour / 7 day per week cover of the unit by Acute Physicians. This would also enable general medical patients and those with a predicted length of stay less than 48 hours to remain under the care of the Acute Physicians, except when speciality input is essential for follow-up or speciality investigations. Most patients triaged to general medicine have a stay less than 48 hours, or a diagnosis that is unclear on admission but may become clear within the first 24 hours of admission.
- **Enhanced numbers of Medicine for the Elderly consultants on ward rounds:** A recent pilot has tested whether two Medicine for the Elderly consultants in the mornings may reduce the numbers of patients on the triage round to more manageable levels.
- **Extend Specialist nurse hours of duty,** at least from 0700 to 2400, and employ clerical staff overnight to take the pressure off the coordinator at night.
- **'Patient flow' and streamlining discharge planning:** Recent work on single point of referral for supporting services such as Occupational Therapy and Social Services, identifying the delays and streamlining the process for needs assessment and arrangement of appropriate care in the community has resulted in fewer patients remaining in an acute bed unnecessarily.
- **Increasing use of IT to record patient admission details,** produce triage lists which can be accessed from any computer terminal in the Trust, record the number of medical referrals from the wards and audit the performance of the unit against our Standard Operating Procedure, to highlight deficiencies in the service, e.g. at night and weekends.