OVER A PERIOD OF YEARS, A&E DEPARTMENTS have become busier and, paradoxically, the increased workload has been felt most in well-run departments. The increase has been due to:

- A true rise in the number of cases being seen
- A greater filtering function performed by the department. The filtering function is time-consuming because it requires doctors requesting X-rays and pathology tests that would have been requested by inpatient staff a decade ago when there were more beds available
- The greater need to discharge patients back into the community to save on hospital admissions
- The process required in making a wise and safe decision by A&E and inpatient staff means that the time spent in A&E can be increased.

The medical staffing of A&E has changed in the past 15 years. It was common for A&E departments to be staffed with doctors who had more experience. They managed well in the less litigation-prone atmosphere that prevailed at the time. Now departments tend to recruit locally qualified doctors, most of whom are doing A&E work as their first post-registration job. The learning cycle for these doctors is therefore extended and their training needs intrude upon their service commitment (this intrusion is warranted).

Information and supporting technology (IT) is often seen as a bureaucratic process rather than an aid to expedite the patient process, depending on systems in place. For example, electronic systems can order blood tests, prioritise requests and print the necessary supporting documentation far more efficiently than the laborious task of filling in multiple request forms by hand and making many phone calls to the laboratory. Some A&E doctors get more involved in resuscitation room work that is more attractive than sorting out intermediate type major cases and minor injuries and illnesses. Another feature to be considered is the level of disillusionment and resultant lack of motivation among some doctors; although every August the senior house officers in A&E medicine are excellent, those employed in February can be a mixed bunch. It is not unusual for A&E consultants to bemoan the lack of motivation of some of these doctors. In addition to these difficulties, there are bottlenecks caused for reasons that are outside the control of the department. Second opinions from specialty doctors can take time because the registrar or SHO is busy doing other things, a bed may not be available when the patient needs admission and significant delays can be experienced in obtaining radiology and pathology tests.

The work load
At the Central Middlesex A&E department, the workload of major cases defined as those needing a trolley and of an intermediate level of severity, is about 15 to 45 per cent of the total new attenders depending on the location of the department, the public transport available and the quality of primary care. The introduction of ENPs in the walking wounded area has done much to improve the quality of care and minimise the waits and aggravation. It seems logical to see if the same can be done for the trolley area, which mostly sees the general medical, surgical and gynaecological cases. These cases are kept waiting for long peri-
ods of time while they are being investigated and a backlog is created.

**Material and methods**

One of us (SST) has spent some time in the majors or trolley area in an attempt to see if the idea of ENPs managing major cases can be implemented. ENPs take a history and perform a patient examination relevant to the presenting complaint as part of the assessment process. ENPs will request X-rays and blood tests as per the various protocols that exist in the department. It would be more effective if they went on to complete the examination, carried out the investigations and discharged those patients according to specific criteria.

A new patient study was conducted over a period of one month in the A&E department at Central Middlesex Hospital. It was easy to print out a list of patients who had been triaged as major cases - a benefit of IT. The casualty cards and hospital notes of these patients were studied to find those patients with definable discrete symptoms by studying what the receptionists and triage nurses had written. We already have protocols related to major cases which are in use in the department. Comparing the A&E record and the protocols identified the number of cases that could have been managed by those existing protocols. Finally, those cases which had waited more than 30 minutes to be seen by a doctor were counted. These were the cases in which the ENPs managing major cases would have reduced the delay. A breakdown of the workload studied over a period of a month is shown in Table 1.

**Discussion**

There are several possible solutions for the reduction in waiting time for major cases.

- **Increase the number of casualty officers**
  This would be a conventional solution. The pool of casualty officers is limited and difficulty would be experienced in obtaining permission from the regional postgraduate dean, the NHSE and the colleges to employ more doctors. Also, it is important to address the problem of a variable quality of doctor each February. In many respects we could be perpetuating the problem.

- **Primary care practitioner present at all times**
  This is a potentially exciting option but is likely to be fiercely expensive. Doctors would be more trainable but doubts have been expressed whether they would be interested in such a highly specific service commitment for an extended period of time. However, with the formation of primary care trusts, there might be radical changes to the way in which A&E's are funded in the future, attracting more GPs to work in such an environment.

- **ENPs working to protocols for major/resuscitation cases**
  The experience at Central Middlesex Hospital of ENPs managing skeletal injuries has dramatically improved the service. It can be argued that without them, there would have been severe problems in trying to provide a service to an underprivileged population. As has been mentioned earlier these experienced ENPs are highly motivated. They already request investigations when they have the time and work to a set of protocols. They will need to be taught how to manage a proportion of the patients seen in the major and resuscitation areas of the department.

The concept of ENPs managing major cases is a bit worrying for some doctors as there will be any more large payments for cases mishandled by ENPs than by senior house officers. Our experience with the ENPs managing MATS indicates that they actually request less radiographs and miss fewer abnormalities on the radiographs than senior house officers. Also the quality of their documentation is better and they seem to be able to follow protocols better than doctors.

**Potential benefits**
- Application of experience to other sites
- Greatly reduced waiting times for major cases
- Reduces violence in the A&E department because of less waiting
- Patient satisfaction is increased
- Aids patients leaving on corridors in the A&E department
- More time for medical staff to act in a more advisory role
- The advanced skills and experience of nurses are utilised appropriately
- Holistic approach means one nurse completes triage, treatment and advice
- Allows individualised care by a named nurse
- ENP satisfaction is increased. It is significant that some of the ENPs are actively seeking new skills and roles
- Multidisciplinary planning results in development of sensible protocols
- Avoids much of the stress and risk to the A&E of new SHOs on the steep part of the learning curve in February and August

**The consultation process**

It is clear that extensive consultation is mandatory. Any A&E department needs to be absolutely sure of the commitment of its chair, chief executive, director of nursing, finance director, and some of the clinical directors that this is a path the trust wishes to follow. This is enhanced by the health authority's desire to be innovative about the provi-

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**TABLE 1. A BREAKDOWN OF THE WORKLOAD STUDIED OVER A PERIOD OF A MONTH**

<table>
<thead>
<tr>
<th>Type of Case</th>
<th>Number of Cases in 1/12</th>
<th>Total Cases</th>
<th>% of Total Cases</th>
<th>% of Major Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major cases</td>
<td>1591</td>
<td>3633</td>
<td>43.79</td>
<td>100.00</td>
</tr>
<tr>
<td>Definable discrete symptoms</td>
<td>1289</td>
<td>3633</td>
<td>35.48</td>
<td>81.01</td>
</tr>
<tr>
<td>Subject to protocols achievable by ENPs</td>
<td>645</td>
<td>3633</td>
<td>17.75</td>
<td>40.54</td>
</tr>
<tr>
<td>Delay could have been avoided</td>
<td>397</td>
<td>3633</td>
<td>10.92</td>
<td>24.95</td>
</tr>
</tbody>
</table>

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# Table 2: Three Week Course for ENPs Managing Major A&E Cases

## Week One

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.00-10.30</td>
<td>Introduction; aims of majors management; course objectives; Diagnostic systems</td>
<td>Asthma, General</td>
<td>Pneumothorax</td>
<td>Revision of respiratory system</td>
<td>X-ray interpretation</td>
</tr>
<tr>
<td>11.00-12.30</td>
<td>Respiratory system A&amp;P causes of breathlessness</td>
<td>Reading a chest X-ray</td>
<td>COPD</td>
<td>Radiation legislation, Update for majors</td>
<td>Examining patients in A&amp;E</td>
</tr>
<tr>
<td>1.30-3.00</td>
<td>Examination of respiratory system</td>
<td>BTS asthma protocol</td>
<td>Influenza</td>
<td>Chest X-ray, revision and quiz</td>
<td>Anatomy and physiology of CVS</td>
</tr>
<tr>
<td>3.30-5.00</td>
<td>Breathlessness, differential diagnosis</td>
<td>Pneumonia; general information and</td>
<td>Miscellaneous; respiratory problems</td>
<td>Practice in examination of the respiratory system</td>
<td>Causes of chest pain</td>
</tr>
</tbody>
</table>

## Week Two

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.00-10.30</td>
<td>ECG interpretation</td>
<td>Differential diagnosis of chest pain</td>
<td>Chest pain protocol</td>
<td>Aortic dissection</td>
<td>A&amp;P of abdomen</td>
</tr>
<tr>
<td>11.00-12.30</td>
<td>ECG interpretation</td>
<td>Cardiac ischaemia, Stable angina</td>
<td>PCI - TIP</td>
<td>Pericarditis</td>
<td>Examining the abdomen</td>
</tr>
<tr>
<td>1.30-3.00</td>
<td>Examination of the CVS</td>
<td>Unstable angina</td>
<td>Purchaser's view</td>
<td>Arrhythmias</td>
<td>Abdominal pain, differential diagnosis</td>
</tr>
<tr>
<td>3.30-5.00</td>
<td>Causes of chest pain</td>
<td>Acute myocardial infarction</td>
<td>ECG practice</td>
<td>Revision of CVS</td>
<td>The de dombal</td>
</tr>
</tbody>
</table>

## Week Three

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.00-10.30</td>
<td>D&amp;V</td>
<td>UTI and pyelonephritis</td>
<td>Stroke</td>
<td>A&amp;P of female reproductive system</td>
<td>Fibril patient</td>
</tr>
<tr>
<td>11.00-12.30</td>
<td>Acute appendicitis</td>
<td>Retention of urine</td>
<td>Severe headache</td>
<td>Referral process</td>
<td>Hypoglycaemia</td>
</tr>
<tr>
<td>1.3-3.00</td>
<td>Renal colic</td>
<td>Practice abdominal examination</td>
<td>Sickle cell bloodtest</td>
<td>Bleeding PV and abortion</td>
<td>Hypoglycaemia</td>
</tr>
<tr>
<td>3.30-5.00</td>
<td>Differential diagnosis of abdominal pain</td>
<td>Anatomy and physiology of CNS</td>
<td>Sickle cell protocol</td>
<td>PID</td>
<td>Wrap up</td>
</tr>
</tbody>
</table>
sion of health care. Specific local consulta-
tion with important services like the general
physicians, general surgeons, gynaecologists,
radiologists and radiographers, physiothera-
pists, pathologists etc must exist.

Once it is decided that such a service is
provided and additional finance is avail-
able, an extensive consultation process needs to
be made with the community health coun-
cil, the FHSA, the LMC, other community
groups, patients etc. Further consultation can
be obtained by using the local media. Much of
this consultation is necessary because the
community health council will be suspicious
that these changes may be the precursors of the
closure of A&Es. The LMC would be par-
ticularly keen to ensure that the ENPs did not
take up an inappropriate caseload from the
GPs. Community groups would be concerned
about the viability of the A&E and the
level of ENP training and capability in such
departments.

Recruitment staffing and training
It is important to ensure that the
nurses recruited are enthusiastic for
the idea of the ENP and will develop the
role to fulfill the continual chal-
lenge. They would have to be persons
who are keen and open to change. De-
pending on patient demand the ser-
vice needs would be ascetned and there
may be a need to alter the ENPs’ shift times.
There might be some problems about the na-
ture of the shifts worked but these are not in-
surmountable. Five new recruits at G grade
would have to be trained to become ENPs
who are able to deal with the caseload in the
walking wounded area to replace the existing
ENPs who had traded up.

A three-week course to train the ex-
isting ENPs is shown in Table 2 following a
training needs analysis of the individuals. Af-
fter the training, the ENPs will see cases with
senior house officers and ENPs (minor
audit Already exists in the department for
ENPs, their clinical and note keeping and
reviewing a few patients (eg greeting, wait-
ing times, confidence in the examining
ENP’s ability, quality of explanation given
etc). We would look into the type of cases
seen, number of X-rays and pathology tests
requested.

Operational matters
The key to a well functioning service will be
its management structure. The existing man-
agement structure of most A&Es functions well.
If there is to be any prospect of extend-
ing the roles of the existing ENPs and the
types of cases that they can see, a significant
medical input and presence is required. Once
proficient, the five ENPs could commence
training identified nurses in the department in
expanded roles. This would permit a degree of
flexibility during sickness and annual leave when trained nurses from the main de-
partment would be able to fulfill such ex-
tended roles. As more and more G grades
accept the idea of such extended training the
A&E department would be in a position to
export some of the nurses to run MATS or ur-
gent treatment centres in different locales.

The initial part of the audit process
would aim to answer two
questions: a) was the ENP’s
assessment and treatment correct?
And b) was the patient satisfied?

Implementation
The key to the successful accomplishment of
this project is the development of good protoc-
ols. The experience at Central Middlesex
Hospital is that protocols can be modified af-
ter a few years to make them common for the
ENP and medical staff. The legal considera-
tions have now been sorted out. Any drugs
used would all be in the protocol and there-
fore would count as standing orders signed by
the medical director. Informal discussion
with solicitors to the trust must take place.

In the first instance the A&E depart-
ment will continue to use the A&E record and
computer system. There is already a long
standing process of clinical audit for doctors,
ENPs and nurses. The X-ray interpretation of
the ENPs, their clinical and note keeping and
patient satisfaction questionnaires would be
collected. The issue of the impact on doctors’
training has been considered. A&E depart-
ments should not decrease the number of se-
nior house officers in the department because
they will be a good source of advice and su-
pervision together with the registrars, senior
registrars and the consultants. Secondly, edu-
cation is a dynamic process; there will much
for the residents to learn about the need to
change and the method of change. It is un-
likely that the experience of the junior doc-
tors will be significantly diluted.

A staged implementation is envisaged
STAGE 1: Train existing ENPs to triage and
investigate major cases. In the first instance
these will be the type of cases for which the
new A&E redevelopment group sets perfor-
ance standards. Also train five replacement
recruits to perform the traditional ENP role of
managing the walking wounded.

STAGE 2: Over the next few months, let the
ENPs manage major cases under the
active supervision of A&E consult-
tants.

STAGE 3: Enable the ENPs to manage
major cases on their own but with the
proviso of rigid audit.

STAGE 4: Extend the concept of
ENPs managing major cases to other
facilities eg minor injuries units etc.

There is the need to pump-prime
£40,000 for initial training and
£150,000 per annum for three years
after which the scheme can be expected to
show savings.

Evaluation
A process of continuous evaluation will be
required. To ensure and confirm safe prac-
tice the initial part of the audit process
would aim to answer two questions: a) was
the ENP’s assessment and treatment cor-
rect? And b) was the patient satisfied.
The initial standard of comparison will be to se-
nior house officers. A system of monthly
audit already exists in the department for
the senior house officers and ENPs (minor
cases). This would be supplemented by pa-
tient questionnaires to assess standards of
care that have been established by inter-
viewing a few patients (eg greeting, wait-
ing times, confidence in the examining
ENP’s ability, quality of explanation given
e.tc). We would look into the type of cases
seen, number of X-rays and pathology tests
requested.