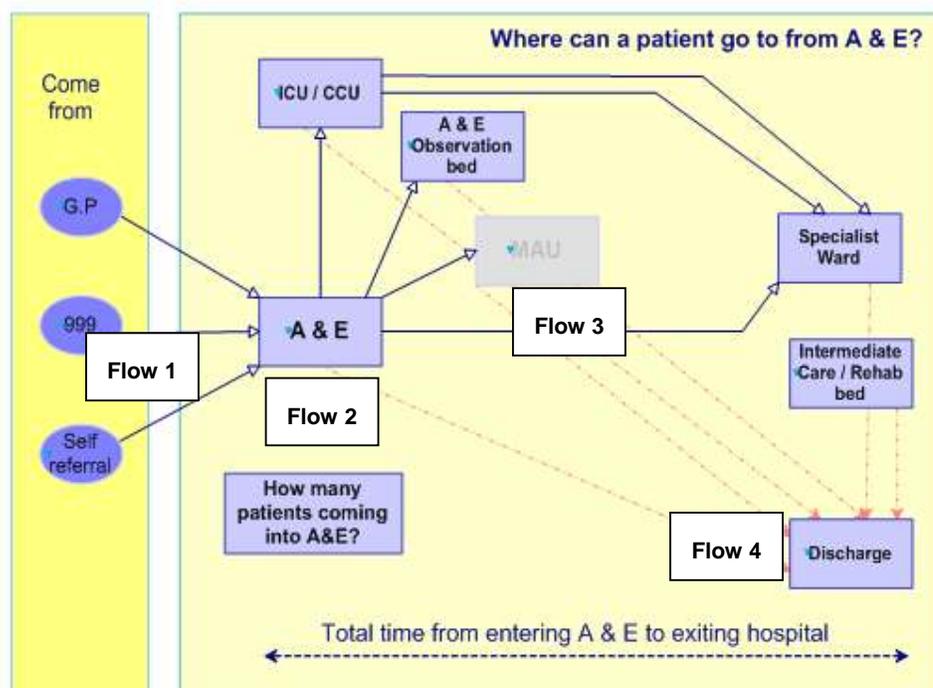


7 Management of Patient Flow

7.1 A Four Part Perspective

7.1.1 In examining the management of patient flow throughout the 10 organisations and scope for improvement we have taken a four-part perspective of the high level flow and management of the patient journey shown in Figure 4 below.

Figure 4 – A High Level Overview of Patient Flow



7.1.2 **Flow 1** looks at presentation to the emergency department from a variety of sources and the role of demand management initiatives, to reduce and/or influence the numbers of people presenting to the department in the first instance.

7.1.3 **Flow 2** looks at the organisation and flow of the emergency department itself and how the patient is progressed.

7.1.4 **Flow 3** looks at what happens to the emergency patient who requires in-patient admission and the management of patient flow through the hospital.

7.1.5 **Flow 4** then finally looks at the discharge process and transfer from the acute setting to home or other care facilities.

7.1.6 The tables presented under each of the four part perspective headings next are a synthesis of the common issues across the hospitals as a group and the areas where emergency patient management could be improved. They are not intended as exact representations of every organisation’s process. This description is provided in the individual reports provided to the 10 hospitals.

7.2 Flow 1: Emergency Presentation & Demand Management

Issue	Consequence	Improvement
Insufficient numbers of GPs and primary care teams available, particularly in areas of deprivation.	<ul style="list-style-type: none"> ○ ED used as a resource for all health care needs. ○ Increased waiting times 	Solutions need to be linked to the National Primary Care Strategy and the development of PCT coverage and extension.
Inability for GPs and PCCC to access acute services in the community (e.g. tests, observation facilities) – therefore referring patients to the ED as a first line care service, rather than an emergency service.	<ul style="list-style-type: none"> ○ Increased waits in ED ○ Increased workload ○ Patient perception of ED as a standard treatment service 	Better access within PCCC to diagnostic facilities and reporting
Perception/reality that ED presentation will be cheaper than attending the GP	<ul style="list-style-type: none"> ○ Increased waits in ED ○ Increased workload ○ Diffusion of ED focus 	Support to PCT model to provide one-stop services in the community (tests, diagnosis and treatment)
Lack of consistent cover arrangements in the community out of hours, increasing ED attendances which could be avoided with more care continuity between day and evening in the community.	<ul style="list-style-type: none"> ○ Increased waits in ED ○ Lack of consistency for patient, particularly if the presenting condition is more acute than emergency and there is little or no admission information. ○ Diffusion of ED focus 	Reviewing out of hours arrangements locally and with hospital networks.
Limited access for GPs for direct admission	Patient need to present to ED department, causing an unnecessary wait for an available bed and repeat	Improved PCCC access to observation beds and direct admission beds, via the proposed AMU model
Lack of systematic availability of disease management clinics within ED, such as COPD, Chest Pain etc. Some organisations throughout the review had a comprehensive range of disease management clinics, whilst others were developing them.	Repeat attendances at the ED of people with long term conditions, who may need admission, which could have been prevented.	Formalisation of those schemes which have good evidence of preventing admission, e.g. diabetes, chest pain, heart failure. Also the development of shared care schemes with patients managing long term conditions

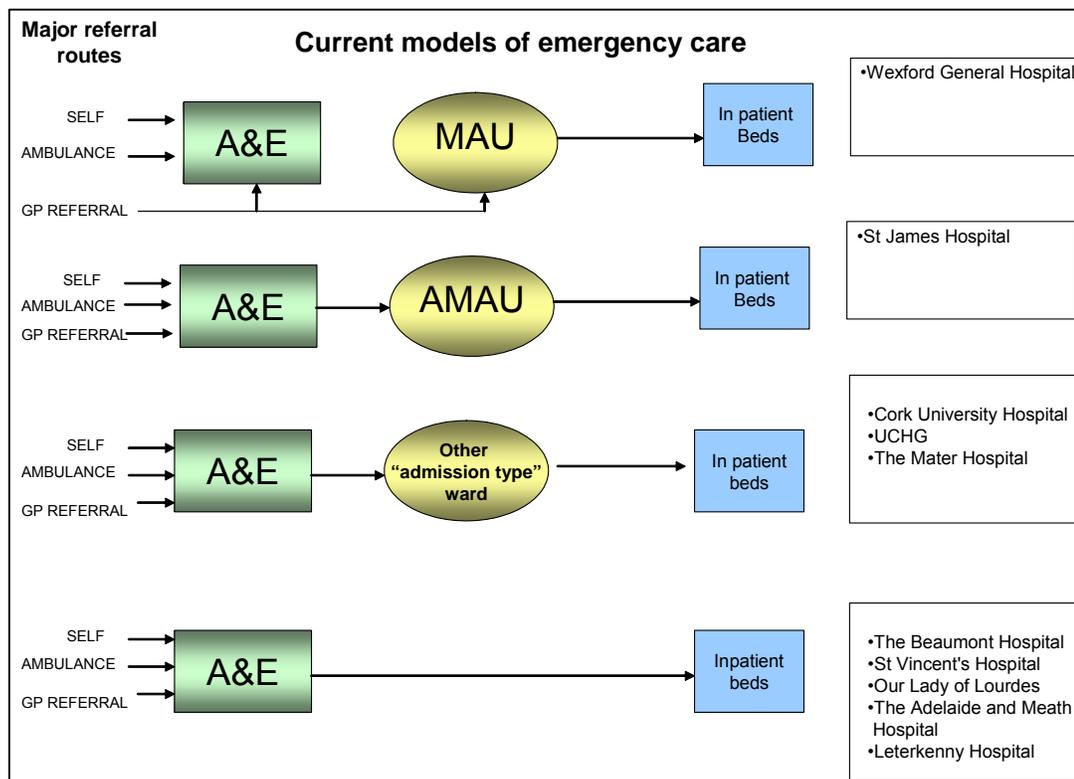
Issue	Consequence	Improvement
Lack of senior cover at busy times and/or out of hours. In the evenings and at the weekends, ED's can mainly be staffed by junior doctors, who may make more lateral referrals (inc tests) and admit more patients	Increased waiting within the ED. Increased pressure upon in-patient bed availability, cancellations of elective procedures, where newly admitted emergency patients are overflowing into day wards.	This is linked to the recommendations for moving to a more consultant-led service, outlined in the Hanly report. In addition, review of on-call arrangements and good admission and treatment protocols in place to support junior doctors and prevent defensive admissions.

7.3 Flow 2: Emergency Department & Flow

7.3.1 It has already been stated that the size and physical state of the ten emergency departments within the project differed greatly, from new to extremely old facilities. In many ways, the level of physical space available to an emergency department was a major factor in the organisation's ability to manage patient flow and demand within the department. For example, larger and more purposes built departments were more able to separate patient cohorts presenting to the department, for example, paediatrics and adults (where the department served both groups) major trauma from minor emergencies, providing both with separate entrances and flows around the department. The ability for the emergency department to provide some observation beds, for patients requiring a period of observation or input from emergency staff, to prevent a full inpatient admission also was more highly correlated with larger and more bespoke departments.

7.3.2 Given the difference in genesis and set up across the ten departments, it is perhaps not surprising that there were also a number of department models in place. The overview of the models picked up throughout the review is shown in Figure 5, showing the relationship of the ED to the community and also to the rest of the hospital. This is not intended as a description of all emergency models in operation across the country, but simply those at play within this review. A fuller exploration of models across the Country was contained in the national acute medical unit report.

Figure 5 - Emergency Models in Operation



7.3.3 The access of emergency departments within the review to observational/short stay wards was very variable. Observation/short stay wards have been proposed as a way of reducing the time spent in the main emergency department and providing the patient with more comfortable and appropriate surroundings during their early investigation and treatment phase. There is also evidence to suggest that the appropriate use of such facilities can reduce medical admissions to hospital and even cut down the length of stay of patients in hospital overall.¹⁵

7.3.4 However, to work efficiently, such units which have been variously described throughout the project and indeed, the literature as a whole as: clinical decision units (CDUs); medical assessment/admission units (MAUs), acute medical units (AMU); medical emergency department (MED); emergency admission units (EAU) need to provide a clear framework of operation.

7.3.5 Given the significant amount of work already undertaken by Comhairle na nOspidéal in their report on acute medical units (AMUs) (October 2004), it is suggested that this term is taken up universally. And that the key components described in the report for the functioning of an AMU is also adopted, namely that there is:

¹⁵ Cooke M. et al Reducing Attendances and Waits in Emergency Departments A systematic review of present innovations. NCCSDO January 2004

- strong management and clinical support to the AMU;
- clear and agreed protocols and guidelines for access to and discharge from the AMU;
- designated consultant leadership of the unit;
- consultant physicians with the appropriate training having a dedicated commitment to the AMU;
- all consultant physicians in the hospital being involved in providing designated services to the unit;
- evidence based protocols for the management, diagnosis and treatment of patients in the AMU which would be reviewed and updated on a regular basis;
- fast-track access to the full range of diagnostic services for AMU patients;
- provision of high level multidisciplinary services in AMUs,
- effective communication systems in place between the AMU, the emergency department, general practitioners, bed management and the hospital's outpatient department.

7.3.6 A great advantage of such observation/short stay facilities is that they can provide the GP with direct access for acute medical patients, who they feel need a period of observation and treatment, reducing the likelihood of a referral to the emergency department.

7.3.7 However, throughout the review, we found a lack of clarity in the role and use of what, for convenience here, we shall call acute medical units, in line with recent work across the State. Also, throughout the review, we only found one organisation who would take direct referrals from GPs in the community. Although at a time of extreme bed pressures for most organisations, it is understandable that organisations want to control as much as possible the number and flow of admissions to the organisation. However, it is our contention that the lack of direct access provision for GPs to deal with emergency medical patients is directly contributing to the waiting situation in many emergency departments across the country and importantly fragmenting the GP-Consultant relationship still further.

7.3.8 AMUs should not however be substitutes for admission to a specialty ward if assessed. A patient who arrives in the emergency department who is assessed as having an acute medical need (requiring longer intervention than approximately 72 hours) should be transferred to the appropriate medical ward. Likewise a surgical patient should be directly transferred to the appropriate surgical ward. Patients should not be left in the emergency department, who have no requirement of emergency services.

7.3.9 Other factors in the management of flow around the emergency department are shown in the table shown next.

Flow 2 Emergency Department

Issue	Consequence	Improvement
<p>Lack of consistent see & treat schemes for minors to cover peak hours across EDs. The idea of such fast track systems for minor emergencies is to speed up treatment and discharge for patients, whose acuity is low and therefore treatment can be rapid. At busy periods, it is often this group who end up waiting excessive amounts of time in the department, as more acute patients are expedited in a single queue system, extending the waiting time for minors.</p>	<ul style="list-style-type: none"> ○ Long waiting times in ED ○ Overcrowding ○ Patient dissatisfaction and unrest 	<p>More consistent application of see and treat principles for minors</p>
<p>Waiting for treatment post triage. Although we found minor injury facilities in operation across the study, frequently triage was a nurse led service and patients often were required to wait for a doctor's assessment before starting treatment.</p>	<ul style="list-style-type: none"> ○ Additional waiting time ○ Overcrowding in the department at busy periods ○ Poor utilisation of professional time 	<p>Encouragement of consultant input to triage system, to rapidly discharge patients from the ED. Extension of Advanced Nurse Practitioner role to contribute to a see and treat model alongside triage, to reduce waiting and expedite treatment. It is recognised in this last point that this has to be linked to wider issues of workforce flexibility and willingness to embrace extended roles.</p>
<p>Lack of consistent near patient testing. Few departments within the review had dedicated facilities in the department contributing to delays in treatment times</p>	<ul style="list-style-type: none"> ○ Waiting in the ED ○ Overcrowding ○ Conflicting demands placed on central diagnostic support 	<p>Introduction of more near patient testing within EDs.</p>
<p>Variable access within the ED to tests, which may be deemed to be in the domain of other specialties, such as exercise stress tests being the provenance only of cardiology for example.</p>	<ul style="list-style-type: none"> ○ Waiting in the ED ○ Inability to safely discharge patients from the ED, resulting in either a prolonged stay or admission. 	<p>Clear categorisation of diagnostic and discharge facilities required by ED to manage patient flow and clear protocols with other departments to ensure access.</p>

Issue	Consequence	Improvement
Competing for priority in diagnostics with other departments. Some departments had negotiated clear protocols and emergency access out of hours, but this was not the case across all.	<ul style="list-style-type: none"> ○ Delays in ED ○ Delays in length of stay for other ward patients 	Priority slots given to ED for diagnostic support
Proliferation of outpatient clinics at hospitals, without clear attendance and review procedures. Often outpatient clinics and in particular, fracture and dressing clinics were situated close to EDs.	<ul style="list-style-type: none"> ○ Blocked referral routes for ED for patients who do not need ED services, but who cannot be offered alternative services. ○ Overcrowding at busy periods, particularly, Monday mornings 	Close review of all OPDs, to assess numbers, appropriateness of attendance and duration of attendance.
Inconsistencies in the members of the ED team. Some organisations within the review had good representation from a multidisciplinary team, including physiotherapists, occupational therapists, social workers, ANPs	<ul style="list-style-type: none"> ○ Waiting in ED ○ Significant delays between interventions within the dept ○ Inability to safely discharge from ED ○ Can result in extended lengths of stay where patient is admitted. 	Review the configuration and operation of multi-disciplinary team in ED, ensuring cover arrangements, as far as possible, serve the peak times of the department. Where there are a number of departments in an area shared cover should be explored. Also formal holiday cover procedure
Delays in accessing the relevant medical or surgical on call team to assess or admit patient to a specialist bed.	<ul style="list-style-type: none"> ○ Waiting in the ED ○ ED being used as an inappropriate holding facility for patients ○ Increased risks to patients being cared for on a trolley or other temporary facility. ○ Lack of appropriate privacy and dignity for patients 	<p>The use of an AMU would obviously support this situation, particularly where it is very rare for ED consultants to have direct admitting rights to other in-patient beds.</p> <p>Introducing a dedicated medical registrar for such purposes within the ED. If not possible, a member of on call teams should be freed from other competing duties, or attending the ED at regular and predictable time intervals throughout the day.</p>
Duplication of work-up between emergency and admitting teams	<ul style="list-style-type: none"> ○ Waiting in the ED ○ Inefficient use of clinical time ○ Inefficient use of resources 	Clear protocols between ED and medical and surgical teams to reduce duplication

Issue	Consequence	Improvement
<p>Duplication of work-up between emergency and admitting teams</p>	<ul style="list-style-type: none"> ○ Waiting in the ED ○ Inefficient use of clinical time ○ Inefficient use of resources 	<p>Clear protocols between ED and medical and surgical teams to reduce duplication</p>
<p>Toleration of trolleys within the ED. This is not to suggest that there was any deliberate policy in place, or that any organisation/clinician was happy with the situation. However, in the 10 organisations reviewed, we did find vastly different organisational responses to trolley waits – irrespective of size of the institution or in-patient bed challenges. Some had adopted a ‘zero tolerance’ policy for trolleys, whilst others had lengths of stay of 3-4 days</p>	<ul style="list-style-type: none"> ○ Waiting within the ED ○ Increased risks for patients, particularly where there are inadequate hygiene and treatment facilities ○ Lack of privacy and dignity for patients ○ Increased infection risk ○ Increased dissatisfaction and complaints ○ Low staff morale 	<p>Clear policy about maximum length of stay on trolleys for all organisations. There should also be protocols for overflow arrangements at times of bed pressure. The entire length of stay, including trolley waits should be introduced.</p> <p>Review bed allocation pools throughout the hospital, to ensure allocation for correct demand.</p>

7.4 Flow 3: Patient Throughput

7.4.1 The issues associated with the management of patient flow from in-patient admission, from the emergency department, to discharge are presented next. In many ways, the challenges facing the organisations are reflective of those which the high impact changes presented earlier in this report are designed to solve. This does not mean to imply that organisations within the A&E Mapping and Efficiency Review were not implementing areas of good practice. On the contrary, we saw a good deal of excellent practice and innovation across the participating hospitals. Rather the issue is one of continuity and consistency both within organisations and particularly across them, to more efficiently predict and manage demand.

Issue	Consequence	Improvement
Inconsistent patterns of on-take. Patients can therefore experience considerable delay before being seen by the consultant/team of required specialty from first admission.	<ul style="list-style-type: none"> ○ Extended length of stay ○ Significant wait from admission to treatment 	Review take arrangements to ensure that they are not contributing to significant delays in handover and thereby length of stay.
Traditional use of most junior member of the admitting team as first point of contact with patients. This can, particularly at weekends result in an increase in admissions to in-patient beds.	<ul style="list-style-type: none"> ○ Decision delays ○ Increase in possible avoidable admissions 	Ensure senior decision-making is available at every step in the patient pathway (changing the order of the accepted pattern). This requires staffing to match workload including known peaks and troughs. The use of admission/discharge protocols.
Inconsistent balancing of daily demand for beds (admissions) and the daily capacity for beds (discharges). Consistently throughout the review it was reported that the rise of emergency medical patients had negatively impacted upon the planned elective procedures within the organisation, causing frequent cancellations. However, analysis of admissions and discharges by day of the week illustrated a high degree of variability across demand and capacity.	<ul style="list-style-type: none"> ○ Trolley waits in ED ○ Admissions to hospital to 'secure' beds/ procedures ○ Patients inappropriately scattered throughout hospital ○ Cancellation of elective work ○ Patient and staff dissatisfaction 	Measure and analyse predicted demand for elective and emergency workloads. Review elective schedules and procedures. Consider extending scheduling of elective workload, keeping open 5 day wards into the weekend for patients receiving surgery later in the week. Consider separating, where possible hot and cold activity within organisations. Promote use of emergency clinics, emergency and trauma theatre lists (usually from 9 am to 9 pm) and same day investigations to ensure urgent patients are dealt with appropriately.

Issue	Consequence	Improvement
<p>Inconsistent clinical involvement in bed management. All organisations had a bed manager(s) responsible for looking at the balance between demand and capacity. However, some roles were run as an administrative function, often in isolation from consistent input from clinical staff. Although central organisation of bed function can support effective management, this is only as long as it is systematically linked to operational routine.</p>	<ul style="list-style-type: none"> ○ Disassociation from clinical action and accountability in bed management at the organisation ○ Inefficiencies in bed overview 	<p>Consistency in clinical involvement in bed management</p> <p>Consistent roles and grades in bed management across all organisations.</p>
<p>Lack of real-time bed management information.</p>	<ul style="list-style-type: none"> ○ Delays in flagging bed availability ○ Admission delays 	<p>Development of real-time bed status procedures and mechanisms</p>
<p>Inconsistent utilisation of care pathways for common areas of admission and treatment. The case note tracking exercise highlighted uncertainty as to whether care pathways were routinely being to 'plan' diagnostic interventions.</p>	<ul style="list-style-type: none"> ○ Variation in length of stay ○ Variability in available capacity ○ Inefficiency in the use of diagnostic capacity. 	<p>Utilisation and review of care pathways and procedures for common areas of care to improve inpatient flow.</p> <p>Ensure a care bundle approach is used for diagnostics</p>
<p>Wards competing for diagnostic and results availability. In addition, real time order communications and reporting was not often available to wards</p>	<ul style="list-style-type: none"> ○ Extended length of stay ○ Inefficiencies in waiting for tests and/or results of tests ○ Inefficiencies in use of clinical time 'chasing paper' for ward patients. 	<p>Review efficiencies in order communications to the wards.</p> <p>Scheduling tests around a care pathway approach</p> <p>Audit bottlenecks and address</p>
<p>Variable and inconsistent performance on the use of day case surgery</p>	<ul style="list-style-type: none"> ○ Longer waiting lists and cancellations ○ Greater pressure on theatre time ○ More people requiring scarce beds ○ Inefficiency in use of clinical time and resources 	<p>Increase the routine use of day surgery as an alternative to elective inpatient surgery</p>

Issue	Consequence	Improvement
Variable utilisation of pre-admission clinics and same day admission for surgery	<ul style="list-style-type: none"> ○ Competing pressure for beds ○ Cancellation of elective procedures 	<p>Improve pre-admission and same day admission</p> <p>Exploit B&B options</p> <p>Separating hot and cold activity</p>
Lack of formalisation of discharge planning (including predicted discharge date) early in the admission process and notes	<ul style="list-style-type: none"> ○ Contributory factor to extended lengths of stay ○ Poor communication and handover for ward and consultant staff 	<p>Institution and review of predicted discharge date in the patient's notes.¹⁶</p>
Lack of consistent audit within organisations on known, or perceived process bottlenecks	<ul style="list-style-type: none"> ○ Contributory factor to extended lengths of stay ○ Lack of quantifiable data ○ Failure to learn and improve 	<p>If not in place, programme of clinical audit which includes process bottlenecks to support clinical and support staff improve patient flow locally.</p>
Inconsistent use of Diagnosis Related Groups and Length of Stay data within organisations	<ul style="list-style-type: none"> ○ Poor understanding and comparison within and between clinical groups on general (or benchmarked) length of stay ○ Potential inefficient use of overall bed capacity 	<p>Notwithstanding data improvement across the hospital system as a whole, individual organisations should make better utilisation of clinical and activity data and provide regular updates to clinical teams and groups.</p>
Lack of formal clinical governance and/or and peer review structures within organisations. Only one organisation within the review seemed to have in place a model for clear clinical decision making and accountability across the hospital.	<ul style="list-style-type: none"> ○ Weak mechanisms to review and address clinical interface issues, such as admission, care pathways, discharge. ○ Delays ○ Poor length of stay management. 	<p>Instigation of clinical governance and accountability model</p>

¹⁶ It was reported during the review that one possible disincentive for clinicians to formally record predicted discharge date (PDD) in the notes was to do with third party insurers requiring notification of the PDD.

7.5 Flow 4: Discharge

- 7.5.1 Although discharge is the final area of examination, it is by no means less important than other areas. On the contrary, the effective management of patient discharge is one of the single most important aspects of controlling the variability between capacity and demand in the hospital environment.
- 7.5.2 The national challenge of 'delayed discharge', both for the elderly and the younger patient with chronic conditions has already been discussed at length in the preceding section of this report. It is again acknowledged that without significant improvement in alternatives to acute hospital care for both these groups at a national and regional level, the management of acute capacity will continue to be a significant operational problem for many institutions within existing bed capacity levels.
- 7.5.3 However that said there were also a number of areas of good practice within the effective management of discharge, which could be implemented across the country. These are shown next in the final table.

Issue	Consequence	Improvement
<p>Inconsistent formalisation of discharge planning from admission. Planning for discharge should begin at admission, to ensure that the patient only remains in hospital for the time necessary for treatment and recovery. Without planning, even if this has to be changed, the various parts of the pathway can be delayed.</p>	<ul style="list-style-type: none"> ○ Extended lengths of stay ○ Confusion for ward staff, patient and relatives about the planned process and importantly, discharge date 	<p>Formalisation of discharge planning from, or close to, day of admission. This should be the responsibility of every clinician and member of the treating team. It should not be the responsibility of discharge planners</p>
<p>Inconsistent pattern of ward rounds within and across specialities.</p>	<ul style="list-style-type: none"> ○ Delay in confirmation of discharge decision. If this occurs late in the afternoon, this can mean an unnecessary and extended stay. 	<p>Consistency in frequency and coherence in decision-making ward rounds across the organisation. Ward rounds should occur earlier in the day, by midday, to ensure the optimum numbers of completed discharges by mid afternoon.</p>

Issue	Consequence	Improvement
<p>Patients spread in all available wards across the organisation, requiring time consuming and inefficient 'safari wards'</p>	<ul style="list-style-type: none"> ○ Inefficient use of clinical time ○ Patients may get missed, if other priorities delay teams, or the patient gets 'lost' – i.e. is not appropriately tracked throughout the hospital ○ Inefficient review process, impacting upon length of stay 	<p>Grouping specialty patients as much as possible throughout the hospital. This may require review of traditional bed pools and allocations, to ensure that they are fit for current purpose, rather than historical usage.</p> <p>Given that many of these patients are the elderly, there is a case for a more developed care of the elderly service in hospitals. It is clearly preferable that such patients are managed together in ward settings with the ethos of multidisciplinary care – the hallmark of geriatric medicine. Such initiatives may also require the creation of discharge and intermediate care wards.</p>
<p>Unevenness of discharge profile. In most of the organisations reviewed, there was a peak in Friday discharges, often disproportionate to the rest of the week and certainly to the weekend. Such peaks, place unnecessary strain on the organisation.</p>	<ul style="list-style-type: none"> ○ Chaotic discharge process 	<p>Spacing out discharge process to earlier in the week and making more use of seven-day discharges.</p>
<p>Only the consultant can make the decision to discharge</p>	<ul style="list-style-type: none"> ○ When unavailable, or tied in other duties, discharge can be blocked 	<p>This issue is obviously tied to national agreements. However, all organisations should ensure that there is a clear practice of 'criterion discharge' – i.e. all members of the ward team know what has to happen for a patient to be able to be fit for discharge (e.g. results, prescriptions etc, so that the decision is the final step.</p>

Issue	Consequence	Improvement
Delays in processes supporting discharge – discharge documentation, prescriptions, transport, family communication	<ul style="list-style-type: none"> ○ Discharge delay ○ Extended lengths of stay 	Criterion discharge process should be in place, whereby all facilitating elements of discharge can be clearly organised.
Inconsistent use of discharge lounge.	<ul style="list-style-type: none"> ○ Patient occupying bed for extended lengths of time ○ Bed is blocked for new patients 	Where discharge lounges are available, they should be staffed appropriately and used to support early discharge from wards.
Management of long term care/ application process. This is not adequately co-ordinated across the acute and community sector	<ul style="list-style-type: none"> ○ Duplication of effort ○ Discharge Delay ○ Development of secondary morbidity or condition whilst in hospital 	Single assessment and application process.