



EMERGENCY MEDICAL ADMISSIONS SCOPING GROUP

FINAL REPORT

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Summary

1. Unscheduled care¹ services should be delivered in the right place by the right professional at the right time. This is likely to mean fewer patients are admitted to an acute sector hospital bed with consequent beneficial impact on waiting times for those who do require hospital care. This will be achieved by development of alternative models of unscheduled and ambulatory care in community settings.
2. The Emergency Medical Admissions Scoping group brought together individuals with expertise in the management of patients presenting as medical emergencies. This included professionals from across health and social care and included patient representation. The spectrum of representation from health groups crossed most boundaries and included NHS 24, primary care including the “out-of-hours” services, the Scottish Ambulance Service, pharmacy, radiology and other diagnostic groups, as well as physicians managing acute medical admissions. The aim of the group was to understand the present system for patient management and to explore opportunities that could improve aspects of the journey of care for acute medical patients in Scotland.
3. The Scoping Group recognised that this work should be based on available validated data to allow for informed discussion and measurement of change, supplemented by relevant clinical evidence and experience from Scotland and other healthcare systems.
4. All clinicians in the group recognise that redesign of current emergency care pathways including acute hospital systems is essential. Change can be implemented so that waits and delays for patients are reduced, a simpler and more predictable patient journey is provided and clinical quality standards are met or exceeded.
5. Key aspects of unscheduled care were identified which could influence outcomes. The importance of the primary/secondary care interface, including ambulance and social care services, was an integral part of group discussions at all stages. Multi-disciplinary sub-groups were developed in early warning scoring systems, recurrent admissions and ambulatory care. Recommendations for future work in these areas have been identified.
6. Designed improvement in the delivery of unscheduled emergency care should lead to a defined and measurable improvement in quality of care.
7. If the recommendations are implemented then the development of integrated unscheduled care systems across Scotland will be advanced. Patients throughout Scotland could then expect similar standards of care before, during and after admission to hospital irrespective of the nature of the medical emergency.

¹ Members of the Scoping Group agreed to use the term ‘Unscheduled Care’ when referring to services for patients presenting as emergency medical admissions.

Recommendations

The recommendations listed here are shown in the order and under the headings in which they appear in the report. They are not shown in order of priority.

Data

1. The use of available data should be maximised and consideration should be given to extending and developing national datasets to reflect future clinical standards in this area and measure the simultaneous impact of change in unscheduled clinical care.
2. Pilot work initiated to assess the feasibility of using ISDs “System Watch” to identify recurrent admissions should be evaluated and extended.

NHS24

3. Local NHS 24 implementation should be integrated into unscheduled medical care services and the effects on all aspects of health care should be monitored.

Community Health Partnerships

4. Through Community Health Partnerships, partners should be encouraged to widen their Delayed Discharge Action Plan to become a Whole System Action Plan which includes actions to achieve a reduction in delayed discharges, emergency medical admissions and recurrent admissions. To do this, local partners would have to set relevant improvement targets.
5. In planning out of hours, emergency care and early intervention schemes, Community Care Partnerships should address the 4 key themes arising from this report, relating to recurrent admissions, illness severity assessment, ambulatory management of patients and development of an integrated emergency care system.

General Medical Services Contract

6. Advantage should be taken of the opportunities presented by the new GMS contract to further integrate primary and secondary healthcare services for unscheduled care.

Ambulance Service

7. An enhanced role for the ambulance service and paramedics is essential. Appropriate training programmes will need to be implemented to support this service redesign and delivery.
8. Recruitment of paramedics is less problematic than other professional groups within the health service. It is important that this opportunity is maximised.

Radiology and Other Diagnostic Services

9. Optimal use of diagnostic services, both laboratory and radiology, in and out of hours, is required to reduce waits and delays in unscheduled care. Expansion of teleradiology to support this aim should be explored.
10. Laboratory services should be available locally to support diagnosis, triage and safe discharge of patients. Access to all previous and current laboratory results should be available electronically at the point of care to prevent duplication and delay and optimise diagnosis and treatment. 'Point of care' testing should be considered where appropriate.

Pharmacy

11. The requirement for the safe, clinical and cost effective use of medicines through an integrated clinical pharmacy service should be recognised within NHS QIS standards.
12. The supply and use of medicines in hospital should be redesigned with the patient as the focus. Patients should be encouraged to bring in and safely use their own medicines whilst in-patients in hospital.
13. Independent prescribing by pharmacists within a framework of clinical governance must be developed to ensure efficient and safe patient care.
14. Paper and electronic records should incorporate standardised and agreed data for medication use.

Allied Health Professionals

15. AHP roles should be further developed and be supported by appropriate education and competency based training linked to local training opportunities.
16. The potential role of AHPs in delivering unscheduled care needs to be urgently explored through national and local workforce planning. At the local level there should be assessment of the relevant skills required within the clinical teams.

Nursing

17. The potential for further development of nursing roles in unscheduled care should be explored nationally with the development of recognised education and training programs. These posts should be developed within an appropriate national professional framework recognising local needs.
18. The competencies required for nurses to take responsibility for point of entry care should be identified and training programmes developed urgently.

Recurrent Admissions

19. NHS Boards should have a mechanism in place to identify recurrent admissions of patients aged over 80 years and to systematically evaluate the needs of these

patients. Following identification of these patients' needs, an action plan involving all relevant agencies and patients/carers should be developed to facilitate early discharge and prevent inappropriate re-admission.

Early Warning Scoring Systems

20. There should be wider implementation of the Scottish Early Warning System (SEWS) documentation with a view to establishing a standardised clinical early warning system for Scotland. The opportunity for implementation of this documentation in collaboration with the Scottish Ambulance Service should be explored.

Ambulatory Care

21. A comprehensive review of existing ambulatory care services in Scotland and their role in the management of unscheduled medical admissions should be undertaken.

Integrating Emergency Care

22. Scotland should create a system to facilitate the development of local unscheduled care networks integrating primary and secondary care and recognising the essential roles of the Scottish Ambulance Service and social services.
23. There should be a primary care physician/general practitioner as a member of the multi-professional team in every acute assessment unit. This should be a joint appointment by the primary care organisation and acute operating division.
24. Admission procedures should be streamlined so that any competent senior clinician can make the decision to admit. Robust protocols will have to be developed to support this initiative.
25. Unified patient documentation for all services incorporating standardised demographic data should be developed wherever possible.

SECTION 1 – Background

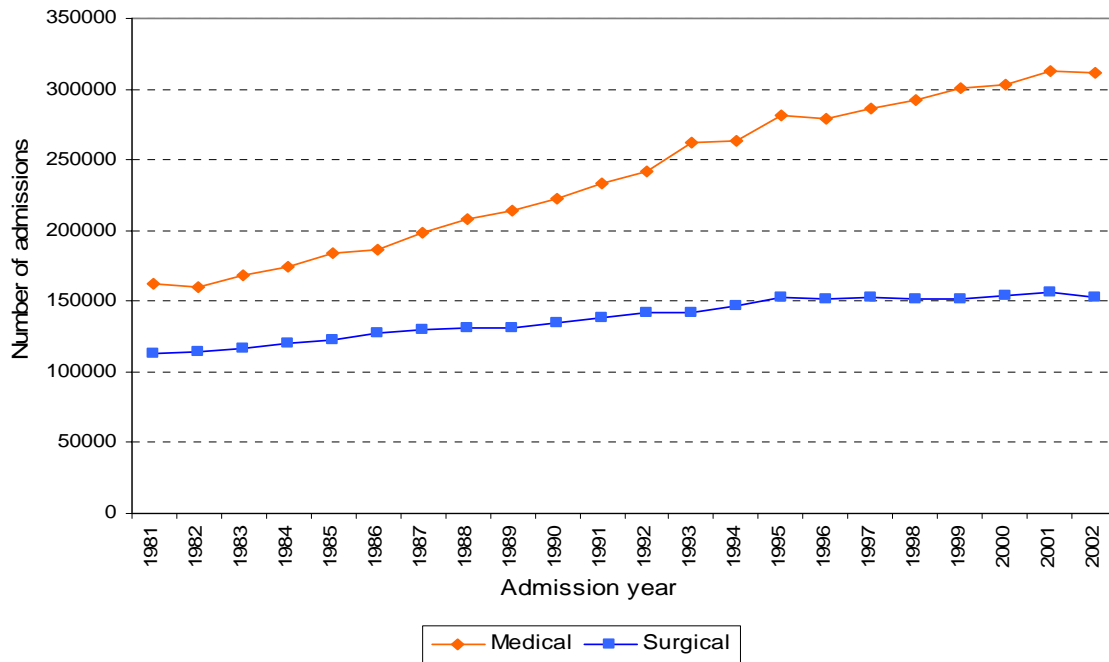
Introduction

1. Recent years have seen an increased emphasis and awareness of the need to improve patient care and develop standards for clinical practice. Two key approaches have developed: firstly, the development of disease specific evidence based guidelines¹ and secondly, publication of documents outlining concerns and promoting changes in the organisation and delivery of care^{2,3}. These approaches are complementary and have been associated with improvement in patients' health care. Implementation, however, can be patchy and has often been applied to specific patient groups with the potential to disadvantage other patients or services^{4,5,6}.
2. Until recently much emphasis has been placed on the delivery of effective elective care with reduced waiting times set as the performance target⁷. It is only relatively recently that a similar emphasis has been placed on emergency care⁸. Emergency care and elective patient care are inextricably linked in our health service and failure to effectively plan delivery of care in both sectors can be mutually detrimental.
3. In 1998, The Acute Services Review⁹ highlighted the continuing challenge that the rising numbers of acute medical admissions posed for the NHS in Scotland including the potential adverse “knock-on” effect on elective care. The Review identified a number of approaches to improving the management of medical emergencies that could be explored including:
 - the development of structured and integrated receiving systems
 - integrating medical receiving with A&E, geriatrics and primary care
 - exploring alternatives to admission such as community hospitals
 - multi-disciplinary team approaches to the admission, management and discharge of emergency patients
 - greater and earlier involvement of social work with emergency admissions
 - improved communications.

The Review stated “...that the NHS in Scotland must give emergency care the priority that it deserves, not just in terms of hospital care but in respect of the whole system. Approaches must be systematic, collaborative and information-based.”

4. Medical patients comprise the greatest number of emergency admissions to acute hospitals and this figure has been increasing annually¹⁰ (Figure 1).

Figure 1 - Emergency admissions to medical and surgical specialties. Scotland 1981 to 2002



Source: ISD, Whole System Project

5. Management of this group of patients has been criticised¹¹ and is often ‘blamed’ for hospitals struggling to meet demand and patients having inappropriate delays in an Accident and Emergency Department or being managed in clinical areas inappropriate for the patients needs. Patients may also be offered different standards of care for similar clinical conditions influenced by the mode of presentation or postcode⁹.
6. In Scotland, waiting times in accident and emergency (A&E) are only monitored once a year. For trolley cases and the walking wounded, one of the measures reported is the percentage of patients seen by a doctor within 30 and 90 minutes of arrival, respectively^{12,13}.
7. In England, the primary care and acute trusts have an emergency target that no patient will wait longer than 4 hours in an Accident and Emergency Department⁸, and this is measured daily and reported weekly. It is recognised the delays in A&E departments reflect waits and delays throughout the whole health care system. To support delivery of this target, all Strategic Health Authorities in England have had to develop an emergency care network whose membership includes representation from all professionals, managers and specialties involved in the delivery of emergency care.
8. The Emergency Services Collaborative (ESC)¹⁴ has also been established and involves all Acute Trusts in England (>200 sites). The main goal is to decrease waiting times and delays while improving care for patients and carers. The plan is to achieve high standards of patient care by sharing good practice and simplifying

the patient journey by involving patients and the staff who deliver direct clinical care in redesign.

9. In view of the recent White Paper “Partnership for Care”¹⁵, which emphasises the importance of partnership between health care and social care, and the Joint Future Agenda¹⁶ for integrated working, NHSScotland is in a unique position to redesign emergency care in conjunction with other agencies. Other drivers for change in delivery of emergency care include the new contract for General Medical Services (the ‘GP contract’), the new consultant contract, the ‘New Deal’ for doctors in training and the European Working Time Directive.
10. Both the ESC and Partnership for Care emphasise the need to deliver a patient centred health service that should recognise the needs and preferences of patients. It has been demonstrated in patient surveys that waiting at any stage of the emergency care pathway is one of their main concerns¹⁷. Equally, patients recognise that alternatives to traditional hospital admission are available¹⁸.

Background to the EMA Scoping Group

11. Recognising the need to review and reform the patient journey in Emergency Medical Admissions, the former Clinical Resource and Audit Group (CRAG) of the Scottish Executive Health Department, set up a Scoping Group on Emergency Medical Admissions in 2002. The work of the Scoping Group continued under the auspices of NHS Quality Improvement Scotland from 1st January 2003.
12. The purpose of this multi-professional group was to explore the key quality improvement objectives for unscheduled medical admissions that have the potential to improve the quality of care and outcomes for these patients. It was agreed at the outset that the focus of this work would be the generic issues concerning the patient’s journey of care rather than specific issues relating to particular medical conditions. This approach supports the development of auditable standards of care.
13. Against the background of the Acute Services Review⁹, the important principles established by the Reforming Emergency Care¹⁹ strategy for England & Wales, published in October 2001, were considered equally relevant to Scotland. These state that:
 - All services should be designed from the point of view of the patient.
 - Patients should receive a consistent response, wherever, whenever and however they contact the service.
 - Patients’ needs should be met by the professional best able to deliver the service needed.
 - Information obtained at each stage of the patient’s journey should be available to other professionals the patient may be referred to (subject always to the patient giving their agreement and to the introduction of appropriate safeguards to preserve confidentiality).

- Assessment or treatment should not be delayed through the absence of diagnostic or specialist advice.
- Emergency care should be delivered to clear and measurable standards which cover each element of the service and the whole of the patient's journey.

Scoping Group Membership

14. The spectrum of emergency medical admissions is one that spans the primary/secondary care interface and involves many other agencies. Members were drawn from a wide range of disciplines, eg, nursing, medical, allied health professions, and from related areas such as the ambulance service, social work and the Information and Statistics Division of NHSScotland (ISD). Two patient representatives were also invited to join the group.
15. The core membership of the group remained constant. However, additional members from a wide variety of backgrounds and professions have participated in the work of the group. A full list of participants is given in Section 5.

Format of Meetings

16. The Scoping Group met 5 times between September 2002 and February 2004. Each meeting followed a similar format and consisted of formal presentations and workshops. The formal presentations were delivered by individuals with specific expertise related to unscheduled medical admissions within the UK. A list of contributors is given in Appendix A.
17. Recognition of the need to modernise acute care in order to bring about improvements in emergency care led to the identification of 4 key themes (see Section 3). These key themes were discussed in detail within a workshop format at each meeting. The workshops allowed members of the group to discuss specific issues and determine avenues to improve the delivery of patient care.

SECTION 2 - The Overall Picture

18. Emergency medical admissions have an impact on a wide range of services in the acute, primary care and community sectors^{9,15,16}. Improving the care and management of these patients therefore requires an integrated approach involving:

- acute care
- primary care and general practice
- ambulance service
- social work
- pharmacy
- radiological and other imaging services
- laboratory services

19. In addition, a number of recent developments, particularly NHS 24, the new GP contract and the new consultant contract, will require further modernisation of current patient services as all these developments are likely to change traditional working patterns and practice.

20. The Scoping Group considered a wide range of topics through presentations and discussion. Four key themes were identified and these are discussed in Section 3. Summaries of the key points from the other main areas of discussion are given below.

Data

21. The Group recognised the importance of the national data collected by ISD in assessing and developing emergency medical care. Data analysis carried out by staff from the Whole System Project at ISD and presented at the meetings provided key evidence of the scale and nature of the problem and underpinned several aspects of the work of the group.

22. ISD has a wealth of data to monitor trends in health care. Linked with clinical changes and developments this should allow us to predict health care needs and to focus clinical research and redesign. Furthermore, by continuous collection of simple and easily measurable data it is possible to assess the impact of service re-design more efficiently, both on a national and a local basis. These data include patient demographics, diagnosis, mortality, hospital lengths of stay and readmission rates and the impact of recurrent re-admissions.

‘System Watch’

23. A new and relevant innovation from ISD is the ‘System Watch’ project, developed as part of the Whole System project, and currently being piloted. ‘System Watch’ aims to monitor and predict pressure in the NHS using ‘real time’ data. It can, for

example, show how actual activity compares with expected seasonal activity for the time period in question, for example, the number of beds occupied by patients admitted as medical emergencies. Observed cases are plotted against the predicted number of cases for three weeks ahead, thus highlighting areas where problems might be developing, eg, bed occupancy rising above expected seasonal values. Data can be provided on a weekly or even a daily basis. More information on 'System Watch' is given in Appendix B.

24. The development of 'real time' software products such as 'System Watch' will increase the utility of the data available.

Recommendations

- The use of available data should be maximised and consideration should be given to extending and developing national datasets to reflect future clinical standards in this area and measure the simultaneous impact of change in unscheduled clinical care.
- Pilot work initiated to assess the feasibility of using ISD's "System Watch" to identify recurrent admissions should be evaluated and extended.

NHS 24

25. The group discussed NHS 24 in February 2003, at which point 2 of the 3 contact centres were in operation. The third centre in South Queensferry opened in September 2003. The first report of NHS 24 is due in 2004.
26. NHS 24 has electronic links to the Scottish Ambulance Service, A&E/Acute services and GP out-of-hours services.
27. NHS 24 is committed to working with partner organisations. These include GP practices, A&E departments, community pharmacies, LHCCs, acute trusts, Out of Hours services, and the Scottish Ambulance Service.
28. As at February 2003, only preliminary information was available on the types of calls being handled. The Grampian contact centre was receiving an average of 2,400 calls per week; the Glasgow centre 5,800 calls per week. Calls are triaged by a call handler to determine whether the caller requires a consultation with a nurse advisor or more general health information from a health information advisor. More than 95% of calls made to NHS 24 were classed as 'out-of-hours'; 95% of calls were answered within 30 seconds and more than 80% of calls were referred to a nurse advisor (as opposed to a health information advisor). The average length of a nurse advisor consultation was 8 minutes. A quarter of calls did not require referral to an NHS 24 partner (see above).

Recommendation

- Local NHS 24 implementation should be integrated into unscheduled medical care services and the effects on all aspects of health care should be monitored.

Community Health Partnerships and Joint Future

29. To date, work relating to the Joint Future agenda has concentrated on services for older people with local partners via 32 Local Partnership Agreements. A ‘whole system’ approach has been developed and component parts of a ‘whole system outcome indicator’ identified including:

- increase in the number of Single Shared Assessments
- improvement in time taken between referral and receiving care
- reduction of emergency hospital admissions
- reduction in delayed hospital discharges
- proportion of people in residential and long stay care
- increase in proportion of people supported at home.

From April 2004, local partnerships will be assessed against this indicator.

30. Community Health Partnerships (CHPs) will replace Local Health Care Co-operatives (LHCCs) and provide a great opportunity for reforming emergency care in Scotland. As such CHPs will have clear relevance for emergency care including leading the establishment of integrated local emergency care networks.

31. CHPs will also have to be organised in a way that will deliver the outcomes and benefits they will provide to patients and carers.

32. This will be achieved through partnership working to provide, among other things, *“...a wider range of services (preventative, assessment, diagnostic, treatment, etc) in community settings including appropriate alternatives to hospital admission such as rapid response teams and integrated out of hours arrangements.”*

33. Working closely with local authorities and other partners, CHPs will be expected to work towards reducing *“...the number of people admitted to hospital in an emergency by improving the level and quality of chronic disease management and increasing community based support...”*.

34. In maximising the ability of CHPs to deliver the above outcomes and benefits, NHS Boards will be expected to include “emergency care” as one of the key issues to be addressed, working closely with the relevant stakeholders from the local emergency care network. Reducing the number of emergency admissions and recurrent admissions should be an equal priority with reducing delayed discharges.

Recommendations

- Through Community Health Partnerships, partners should be encouraged to widen their Delayed Discharge Action Plan to become a Whole System Action Plan which includes actions to achieve a reduction in delayed discharges, emergency medical admissions and recurrent admissions. To do this, local partners would have to set relevant improvement targets.
- In planning out of hours, emergency care and early intervention schemes, Community Care Partnerships should address the 4 key themes arising from this report relating to recurrent admissions, illness severity assessment, ambulatory management of patients and development of an integrated emergency care system.

New General Medical Services Contract

35. Partnership, integration and redesign are the concepts underpinning the planned GP service in Scotland. The new GMS contract includes a major revision of the way that out of hours services are provided.
36. The necessary legislation will transfer responsibility for out-of-hours (OOH) work to the Primary Care Organisation by 31 December 2004. Between £7.5 and £10 million has been set aside for the OOH development fund. Re-design will, however, be essential to enable OOH services to improve and develop patient care.
37. Remote and rural areas may require a slightly different approach but this is likely to be a modification of the national implementation.
38. The transfer of responsibility for OOH care can only happen if the Primary Care Organisation ensures that an accredited provider is in place. In England & Wales, accreditation standards and criteria are agreed²⁰ although it is not known yet whether these will also apply in Scotland.
39. The draft statutory guidance for CHPs provides that CHPs should directly manage and provide, or have a lead role in directing, the delivery of the full range of independent contractor services including primary medical services, general dental services, community pharmaceutical services and general ophthalmic services. It is recognised that OOH groups will work closely with other essential services at a local level, e.g. ambulance service, A&E, and social services.

Recommendation

- Advantage should be taken of the opportunities presented by the new GMS contract to further integrate primary and secondary healthcare services for unscheduled care.

Ambulance Service

40. Several pilot projects and developments currently underway within the Scottish Ambulance Service were discussed. These included the creation of a Unified Emergency and Unscheduled Care Service in West Grampian and the Clinical Care Pathways Programme Board.
41. The West Grampian Project is a managed care network for unscheduled care providing effective out-of-hours and emergency services in West Grampian. The project is a partnership between NHS Grampian, NHS 24 and the Scottish Ambulance Services to support a full range of acute, primary, ambulance and community services.
42. The service associated with the Clinical Care Pathways Programmes Board is currently in phase 1; phase 2 is still under development. One of the Board's main purposes is to provide a core set of clinical pathways to support the local delivery of clinical care throughout Scotland. A number of care pathways for a range of conditions suitable for a 'Treat and Refer' approach are being developed in conjunction with NHS 24.
43. In England, a proposal to reduce the number of patients arriving at A&E departments by 20-30% by 2005 is under discussion. The ambulance service, in conjunction with other partners, will be key in achieving this.

Recommendations

- An enhanced role for the ambulance service and paramedics is essential. Appropriate training programmes will need to be implemented to support this service redesign and delivery.
- Recruitment of paramedics is less problematic than other professional groups within the health service. It is important that this opportunity is maximised.

Radiology and Other Diagnostic Services

44. Delays in diagnostic services, including radiology, may adversely affect patient outcomes and unnecessarily prolong inpatient stays. Historically, clinical services have often been developed without a parallel expansion of diagnostic services.
45. Capacity in diagnostic services needs to be matched with the demand arising from the steady increase in examination numbers reflecting the increase in emergency workload. In part, this will require capital expenditure, but changes in working practice, eg, enhancement of the role of radiographers, to further reflect patient need will be necessary.
46. For example, in radiology, increased use of clinical protocols combined with an extended working day and 24 hour availability of CT scanning for emergency patients would provide a better clinical service for patients and relieve pressures within the system. For example, prompt use of outpatient non-invasive scanning

(eg, Magnetic Resonance Angiography and Doppler Ultrasound) can replace inpatient investigation thus freeing inpatient beds.

47. Teleradiology has a number of potential applications and should be employed routinely to allow image transfer from referring hospitals to specialist sites to improve clinical decision making. PACS (Picture Archiving and Communications Systems) facilitates multi-site viewing and will be mandatory to support ACAD (Ambulatory Care and Diagnostic) centres currently developing in England, or other ambulatory care systems.
48. Laboratories have an important role to play in diagnosis, triage and safe discharge of patients. Inability to access relevant laboratory services in a timely manner can compromise the efficiency of the emergency admission process, eg, chest pain patients should not be discharged before troponin result is available (NHS QIS Health Technology Assessment Report 4: The organisation of troponin testing services in acute coronary syndromes, July 2003). Inability to access previous laboratory results can lead to unnecessary duplication and corresponding delays.
49. Simple analytical tests can often be performed at the GP surgery or within another location close to, or in, the patient's home. This 'point of care' testing, however, should comply with "Near-Patient Testing: A Statement of Best Practice for Scotland (June 1996)".

Recommendations

- Optimal use of diagnostic services, both laboratory and radiology, in and out of hours, is required to reduce waits and delays in unscheduled care. Expansion of teleradiology to support this aim should be explored.
- Laboratory services should be available locally to support diagnosis, triage and safe discharge of patients. Access to all previous and current laboratory results should be available electronically at the point of care to prevent duplication and delay and optimise diagnosis and treatment. 'Point of care' testing should be considered where appropriate.

Pharmacy

50. Treatment with medicines is the most common healthcare intervention. Pharmacists have unique skills and knowledge in the use of medicines and there are many ways in which pharmacists and pharmacy staff can make the patient's journey through the healthcare system more efficient.
51. There are approximately 4000 pharmacists working across Scotland in both community and hospital practice. The SEHDs, "The Right Medicine, A Strategy for Pharmaceutical Care in Scotland", called for the NHS to make better use of pharmacists' expertise in planning and delivering services in relation to treatment with medicines and to integrate clinical pharmacists into the healthcare team.

52. It is estimated that 15% of admissions to hospitals are related to adverse effects from and compliance with medicines. Pharmacists could be more involved in active delivery of pharmaceutical care to their patients by:

- medication review
- improving patients' knowledge of their disease state and medicines
- improving compliance with medication regimes
- chronic disease management in primary care
- community pharmacy model schemes.

53. NHS QIS recognises the requirement and effectiveness of clinical pharmacy services in specific clinical areas, for example, Care of Older Patients in Acute Care. However, there is currently no requirement within broader generic standards for hospitals to provide evidence of robust ward-based clinical pharmacy services across all patient groups fully integrated within the multidisciplinary team.

54. Whilst in hospital, patients must be supported to learn about and take responsibility for their own medication so as to be better equipped to manage their own care once discharged back home. To support this, the way medicines are supplied and used in hospital must be redesigned to meet the needs of patients, eg, where appropriate, through the self-administration of their medicines whilst in hospital.

55. Communication across the interface, at both admission and discharge, must be improved. An accurate, comprehensive and current medication record must form a core part of existing and electronic patient records. Such records must be available in a secure manner to all those that need them, including community and hospital pharmacists.

Recommendations

- The requirement for the safe, clinical and cost effective use of medicines through an integrated clinical pharmacy service should be recognised within NHS QIS standards.
- The supply and use of medicines in hospital should be redesigned with the patient as the focus. Patients should be encouraged to bring in and safely use their own medicines whilst in-patients in hospital.
- Independent prescribing by pharmacists within a framework of clinical governance must be developed to ensure efficient and safe patient care.
- Paper and electronic records should incorporate standardised and agreed data for medication use.

Allied Health Professionals

56. There is huge potential to look at the role of AHPs in relation to a wide range of aspects of acute medical care including direct access, prevention of admission and supported discharge, rapid assessment and early intervention, chronic disease management and out-of-hours care. For example:

- *direct access* - there is the opportunity for AHP referral for investigations and consultant review, e.g. for musculoskeletal problems and diabetes
- *prevention of admission/supported discharge* – AHP-led teams in primary care, e.g. rapid intervention, review of elderly patients
- *rapid assessment/intervention* – eg, through involvement of occupational therapists and physiotherapists in medical assessment units and A&E or through proactive ward assessment and rehabilitation
- *chronic disease management* – through AHP clinics in, for example, diabetes (dietetics and podiatry) or rheumatology (physiotherapy, occupational therapy)
- *out-of-hours* – e.g. through extended roles for radiographers and rapid follow up with occupational therapists and physiotherapists.

57. There are a number of positive examples of where AHP involvement in these areas is bringing about benefits for patients. For example, physiotherapist working in nurse-led minor injuries clinic (62% of referrals to such clinics are for musculoskeletal disorders); independent reporting of CT scans by radiographers; AHP clinics for diabetes, rheumatology and dysphagia providing rapid access, reduced waiting times and improved attendance rates.

Recommendations

- AHP roles should be further developed and be supported by appropriate education and competency based training linked to local training opportunities.
- The potential role of AHPs in delivering unscheduled care needs to be urgently explored through national and local workforce planning. At the local level there should be assessment of the relevant skills required within the clinical teams.

Nursing

58. Discussion about the role of nursing staff was a continuous theme and highlighted the potential for development of roles based on agreed competencies. There are already examples throughout Scotland of enhanced nursing roles including the establishment of nurse consultant posts, emergency nurse practitioners and clinical nurse specialists both in chronic disease management and in the acute setting.

59. New roles are, however, being developed including the acute assessment of patients, supplementary and independent prescribing, discharge initiation and nurse led clinics.

Recommendations

- The potential for further development of the nursing role in unscheduled care should be explored nationally with the development of recognised education and training programmes. These posts should be developed within an appropriate national professional framework recognising local needs.
- The competencies required for nurses to take responsibility for point of entry care should be identified and training programmes developed urgently.

SECTION 3 – Key Themes

60. Four key themes were identified by the Scoping Group:

- Assessment of patients who have recurrent admissions within a 12 month period, to identify potential mechanisms to improve patient care. Patients with recurrent admissions contribute significantly to the continual rise in medical admissions²¹.
- The need for early warning scoring systems to improve recognition of the acutely unwell medical patient using simple physiological parameters to assess illness severity from point of entry to care^{11,22}.
- The need to develop and increase options for the ambulatory management of patients with emergency medical conditions. Examples of good practice exist (eg, Tayside, Grampian) but are not co-ordinated nationally.
- The need to prioritise the development of an integrated emergency care system that relies on delivery of care by competent professionals integrating primary care, secondary care, social care and the ambulance service.

61. The use of data from ISD to support and assess the impact of changes was also considered to be of key importance but, rather than being treated as a separate topic, this was felt to underpin all the other key themes.

62. Three sub-groups were established to consider recurrent admissions, illness severity and ambulatory management and updates from these sub-groups were given at each meeting. Discussions around the need to develop an integrated emergency care system were an integral part of the wider discussions of the Scoping Group but a small number of members met specifically to look at the role of the general practitioner in this context. Further information on the work of these sub-groups is given in Appendix C.

Recurrent Admissions

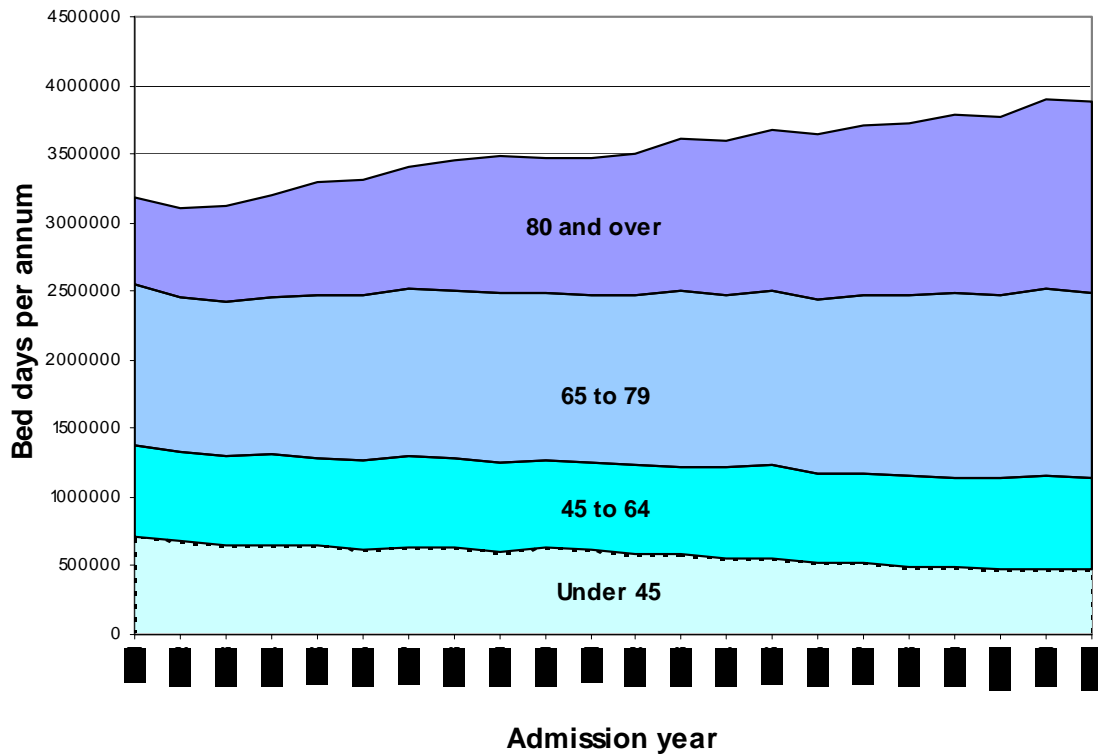
63. Increasing emergency inpatient admissions have been a major source of pressure for the NHS over the past twenty years and more.

64. Emergency admissions of older people have been a particular source of pressure because, in contrast to the younger age groups, lengths of stay are generally longer and average lengths of stay stopped falling several years ago.

65. The impact of these trends can be seen in Figure 2, which shows that patients aged 80 and over have accounted for almost the entire increase in bed days required by emergency inpatients.

Figure 2

Bed days required by emergency inpatients by broad age group. Scotland 1981 to 2002.



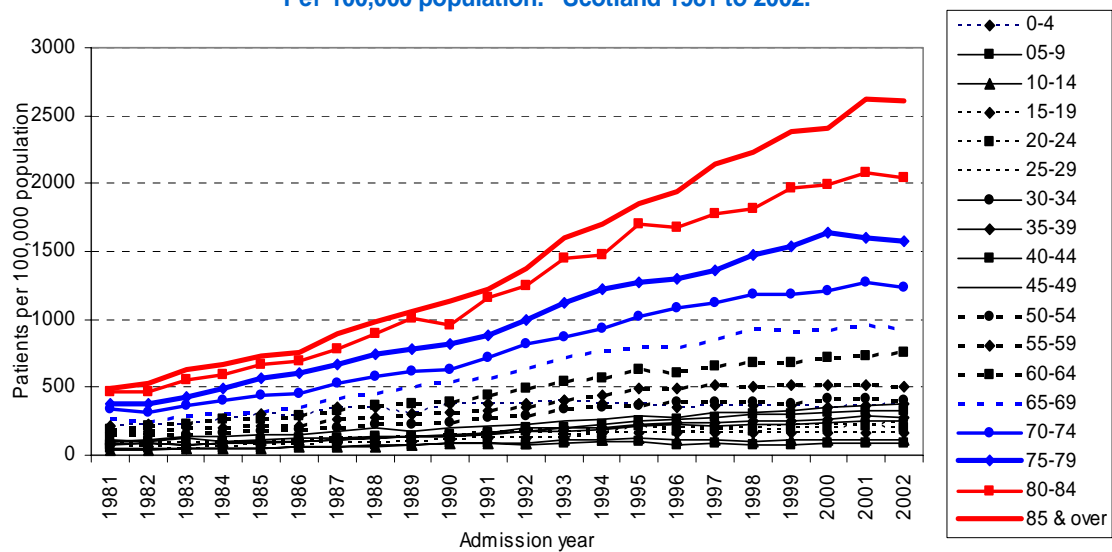
Source: ISD Whole System Project

66. The impact of this sub-group of patients is more than simply quantitative. There is increasing concern that unnecessary days spent in hospital may have deleterious consequences for older patients^{23, 24}. In addition, over 90% of delayed discharges occur after emergency admission²¹. This effect is compounded at periods of increased patient activity, especially winter.

67. Interest has begun to focus on a small sub-group of elderly patients with repeated emergency admissions within a calendar year. Their numbers have been rising rapidly in recent decades as shown in Figure 3. The length of stay involved for each admission is of the same order of magnitude as patients admitted less frequently. The relatively small number of older patients admitted three or more times in a year account for much of the increase in occupied bed days over recent years.

Figure 3

Patients with 3 or more emergency admissions within 1 year by age group. Per 100,000 population. Scotland 1981 to 2002.



Source: ISD Whole System Project

68. Although this increase in multiple emergency admissions is spread across diagnosis groups, the rise has been particularly marked in patients with a coded diagnosis of 'symptoms and signs'. In addition, among patients aged 65 to 79, multiple admissions included a higher proportion of patients with respiratory conditions than did single admissions.

Why the increase?

69. The ageing of the population has played a part. For example, the number of people aged 85 and over in Scotland almost doubled from 48,000 to 88,000 between 1981 and 2001²¹. In contrast, the size of the 65 to 79 age group has barely changed. However, in terms of morbidity, the evidence is that age for age, older people are becoming healthier²¹.

70. One conclusion from these data could be that the increase in emergency admissions (and multiple emergency admissions) among the elderly has been primarily a result of how the emergency care system has dealt with elderly patients' needs. Social factors may be relevant; in particular many older people are living alone without extended family support.

71. These factors may have increased the demand for formal care directed at the hard-pressed primary and social care sectors. Unable to satisfy these demands, provision of care is diverted towards the acute sector in the form of emergency inpatient admission. This may be particularly true of elderly people with chronic and often multiple conditions and by 'passive' admission policies whereby the default and often unexamined option is to admit an older person to inpatient care.

72. Recent decades have seen an increase in the needs of older people for care in the most general sense – social as well as medical. The care system has met this demand in the form of isolated episodes of acute emergency inpatient care rather than in the form of co-ordinated, integrated, patient-centred care.
73. Case management has developed in the United States of America as a response to similar issues of spiralling hospital admissions among the elderly²⁵. The philosophy has been to focus co-ordinated care on a small number of frequent users of care.
74. Further details of the work of the recurrent admissions sub-group can be found in Appendix C1.

Recommendation

- NHS Boards should have a mechanism in place to identify recurrent admissions of patients aged over 80 years and to systematically evaluate the needs of these patients. Following identification of these patients' needs, an action plan involving all relevant agencies and patients/carers should be developed to facilitate early discharge and prevent inappropriate re-admission.

Early Warning Scoring Systems

75. In identifying this topic as a key theme, the main objectives were to increase the number of patients who reach the right specialist and increase the number of patients who get the right level of care for the severity of their illness. The key priority identified was how to measure illness severity.
76. A sub-group was established to address these questions. The aim of this sub-group was to recommend an appropriate mechanism for enhancing the recognition of acutely ill patients and facilitate the initiation of appropriate management at and from the point of entry. The three key elements of their work were to:
- dovetail an adapted Temperature/Blood Pressure/Respiration (TPR) chart (adapted from chart used in Aberdeen) and admission scoring sheet
 - develop an audit tool the use of which would assist in minimising the number of patients whose score deteriorates and do not receive appropriate intervention
 - co-ordinate a multi-centred pilot
77. To date the sub-group has audited an assessment scoring sheet, called the Scottish Early Warning Scores (SEWS) sheet (see appendix C2) in the Medical

Assessment Unit at Edinburgh Royal Infirmary and have revised the adapted TPR chart, including amendments to physiological variables.

78. It was agreed that it would be beneficial for the SEWS chart developed by the sub-group to be used by the ambulance service and possibly also within primary care, with the aim ultimately of having a standard document for all parts of the service. Pilot work has indicated that this chart is most effective when provided in colour.
79. A summary of the work of the sub-group, including the next steps that have been identified and a copy of the SEWS chart, is given in Appendix C2.

Recommendation

- There should be wider implementation of the Scottish Early Warning System (SEWS) documentation with a view to establishing a standardised clinical early warning system for Scotland. The opportunity for implementation of this documentation in collaboration with the Scottish Ambulance Service should be explored.

Ambulatory Management of Patients

80. The rationale behind this as a key theme is the recognition that an increasing proportion of emergency patients can be managed safely and effectively in an ambulatory setting. This reduces waiting times for those who do require hospital admission.

81. A number of key points were identified from the initial workshop on this topic including:

- the need for an agreed definition of ambulatory care
- the need for a single point of access for primary care team staff to related services
- recognition that different systems of care might be needed in urban and rural areas
- the role of telemedicine
- the changing roles of staff raising and/or changing competencies
- education of staff
- the need to take account of patient variation – one size unlikely to fit all
- the need for integrated records

82. A sub-group was established and tasked with identifying which conditions could be treated in an ambulatory setting and what the service needs might be to support this.

83. The remit of the sub-group was to:

- look at ways of taking forward the management of medical emergencies in an ambulatory setting
- identify what conditions could be treated in this way
- identify what such a service would or should look like
- identify what support/infrastructure is required

84. A summary of the work of the sub-group, including a list of topics considered suitable for treatment in an ambulatory care setting, is given in Appendix C3.

Recommendation

- A comprehensive review of existing ambulatory care services in Scotland and their role in the management of unscheduled medical admissions should be undertaken.

Development of an Integrated Emergency Care System

85. The need for an integrated approach to improving emergency care together with a blurring of the boundaries between primary, secondary and community care was considered essential and is a view endorsed by the Acute Services Review⁹, Joint Futures¹⁶ and Reforming Emergency Care¹⁹. This was a consistent theme in each of the workshops and within each of the sub-groups.

86. The evidence base suggests that collaborative methodology combined with the development of local unscheduled care networks would support the integration of primary and secondary care, recognise the essential roles of the ambulance and social services and support local NHS24 implementation. It is suggested that these developments may be expedited by the new Community Health Partnerships (see Section 2).

87. The working group involved primary care representatives with considerable experience in both primary and secondary care. The role of the general practitioner in secondary as well as primary care was highlighted as a mechanism to improve patient care and develop the interface between primary and secondary care.

88. There is a need to streamline admission procedures so that any competent senior clinician in primary or secondary care, including paramedics, can make the decision to admit. These clinicians will also have to have ready access to appropriate diagnostic facilities and out-patient appointments. Robust protocols involving GPs, senior nurses and A&E staff will have to be developed to ensure appropriate implementation and, hence, simplify the patient journey.

89. Improved communication across the primary/secondary care interface, including unified documentation, was thought to be essential.

90. Unified patient documentation for all services incorporating standardised demographic data was a recurrent theme within the Scoping Group, across the sub groups and within key presentations.

91. More information on the work of the primary care sub-group is given in Appendix C4.

Recommendations

- Scotland should create a system to facilitate the development of local unscheduled care networks integrating primary and secondary care and recognising the essential roles of the Scottish Ambulance Service and social services.
- There should be a primary care physician/general practitioner as a member of the multi-professional team in every acute assessment unit. This should be a joint appointment by the primary care organisation and acute operating division.
- Admission procedures should be streamlined so that any competent senior clinician can make the decision to admit. Robust protocols will have to be developed to support this initiative.
- Unified patient documentation for all services incorporating standardised demographic data should be developed wherever possible.

SECTION 4 - The Way Forward

92. It is clear from the work of this Scoping Group, and the approach used by both England and Wales, that an integrated approach to unscheduled care will help ensure improved services for patients and carers. A Scottish programme building on success and continuing a collaborative approach with the development of emergency care networks would seem to be the best approach. This would support previously published documents, including the Acute Services Review, and those derived from the Federation of Royal Medical Colleges.
93. The impact of the pilot work relating to the proposed SEWS scheme to establish a standardised clinical early warning system for Scotland, and the more integrated and managed approach to the care of older people with recurrent admissions should be monitored centrally. Both have the potential to improve patient care and patient outcomes and could, for example, lead to:
- reduced mortality after emergency medical admission
 - reductions in readmission rates for older people.
- If successful, the wider implementation of these approaches should be supported.
94. The proposed comprehensive review of existing ambulatory care services and their role in the management of unscheduled medical admissions should be undertaken promptly, and the results taken into account in any discussions regarding the future expansion of ambulatory care services. The scope for the development of national standards for emergency ambulatory care for generic issues or for disease specific conditions should also be addressed.
95. Consideration should be given by NHS QIS to the development of standards for unscheduled care and whether these should be generic or specific to certain aspects of care, such as an agreed time for relevant investigations and treatment linked to common conditions. This work would have to be supported by existing disease specific standards where these are available.
96. In order to inform clinical decision making and planning on both a national and local scale, maximum use should be made of the data collected by ISD and links with ISD should be strengthened. Without the adequate use of the data that is available to us all, planning may be blighted.
97. The development and use of integrated, standardised, documentation must support the development of Emergency Care Networks. This will help to overcome the confusion that can result from individual professionals having to cope with differing documentation from differing geographical areas or, occasionally, within some professional and geographical areas.
98. The success of any national programme and standard setting would be dependent on the true involvement of all partners. It is recognised that the CHPs should have a lead role in local implementation of a collaborative.

99. The need for training and education for evolving roles, whether for nurses, allied health professionals paramedics or ambulance staff, has to be supported by NES, the Royal Colleges and the higher education institutions in Scotland.

There are already a number of examples of where such staff have taken on an expanded role and where patient care has improved as a result. When considering the wider expansion of such initiatives, the lessons learned from these innovative developments must be taken into account.

100. This report contains a large number of recommendations which reflects the wide range of topics addressed by the Scoping Group and the breadth of issues that exist in relation to unscheduled medical care. The next challenge is to determine how best to take these recommendations forward in order to bring about the maximum benefit to patients.

SECTION 5 - References

1. Scottish Intercollegiate Guidelines Network
<http://www.sign.ac.uk/guidelines/published>
2. Royal College of Physicians, Acute Medical Admissions and the Future of General Medicine, Scottish Intercollegiate Working Party, Edinburgh and Glasgow, April 1998
<http://www.rcpe.ac.uk/publications/articles/acute.html>
3. Federation of Medical Royal Colleges. Acute Medicine: the physician's role, proposals for the future. A working party report, London: Federation of Medical Royal Colleges, June 2000.
http://www.rcplondon.ac.uk/pubs/wp_acute_summary.htm
4. Dorward A. Changes in Patterns of Acute Medical Receiving in Scotland: 1996 to 2001. *Scottish Medical Journal*, 2002; 47(5): 103-106.
5. Kelly B, Wales A, Wilson A, Jackson B, Leiberman DP, Lowe DGO. Getting Research Evidence into Practice. *Health Bulletin* (2001), 59(1).
6. Nuffield Institute for Health, Centre for Health Economics, NHS Centre for Reviews and Dissemination. Implementing Clinical Guidelines: Can Guidelines Be Used To Improve Clinical Practice? *Effective Health Care* 1984;8:1-12.
7. The National Waiting Times Centre Board (Scotland) Order, 2002.
8. Department of Health. Emergency Care Policy - Achieving timely admissions. November 2002.
www.doh.gov.uk/emergencycare/ward.htm
9. Acute Services Review Report. The Scottish Office, Department of Health, 1998
10. Information and Statistics Division (ISD), Common Services Agency for NHSScotland, Trinity Park House, Edinburgh, Scotland.
<http://www.isdscotland.org>
11. Royal College of Physicians. The interface between acute general medicine and critical care. A working party report. London: RCP, 2002
http://www.rcplondon.ac.uk/wp_ibagmacc_home.htm
12. Information and Statistics Division (ISD), Common Services Agency for NHSScotland, Trinity Park House, Edinburgh, Scotland. Accident and Emergency Waiting Times. <http://www.isdscotland.org>
13. Performance Assessment Framework 2003/04. Scottish Executive Health Department, Directorate of Performance Management & Finance. October 2003.
14. Emergency Services Collaborative. NHS Modernisation Agency.
www.modern.nhs.uk/emergency

15. Partnership for Care. Scotland's Health White Paper, 2003.
<http://www.show.scot.nhs.uk/sehd/publications/ExecutiveSummary.pdf>
16. Joint Future Group, 2000. Community Care: A Joint Future. Scottish Executive, Edinburgh. <http://www.scotland.gov.uk/health/jointfutureunit>
17. Mori. Poll for the Department of Health, November 2002. Patient survey.
18. Dr E Donaghey, Dr S Parker, Dr S Cunningham-Burley, Dr D Walker. Emergency Medical Admissions in Scotland: an investigation into factors associated with admission and attitudes to alternatives. Scottish Survey, 1998.
19. Department of Health. Reforming Emergency Care, 2001.
<http://www.doh.gov.uk/emergencycare/reform.htm>
20. Department of Health. Accreditation of Organised Providers of Out of Hours Services. September 2002. <http://www.doh.gov.uk/pricare/oohreview.htm>
21. Kendrick, S and Conway M. Increasing emergency admissions among older people in Scotland: a whole system account. Whole System Project Working Paper 1. Information and Statistics Division, November 2003.
<http://www.isdscotland.org/wholesystem>
22. Guidelines for the introduction of outreach services. Intensive Care Society Standards, 2002.
23. Walker, A. Hospital-acquired infection: what is the cost in Scotland? Robertson Centre for Biostatistics, September 2001.
24. Covinsky KE, Palmer RM, Fortinsky RH, Counsell SR, Stewart AL, Kresevic D, Burant CJ, Landefeld CS. Loss of independence in activities of daily living in older adults hospitalised with medical illnesses: increased vulnerability with age. *J Am Geriatr Soc*, 2003, 51(4):451-8.
25. American Case Management Association. Collaborative Case Management, 2003. <http://www.acmaweb.org/>

Other relevant documents

ECL toolkit www.nelh-ec.warwick.ac.uk/ecl.toolkit contains links to a variety of information about the admission process and other aspects of emergency care modernisation. Society for Acute Medicine (UK) guidelines <http://www.acutemedicine.org.uk/maguidelines.htm>

Royal College of Physicians. The Interface of Accident and Emergency and Acute Medicine. A working party report. London: RCP, 2002. http://www.rcplondon.ac.uk/wp_interface_ae.htm

Royal College of Physicians. Isolated Acute Medical Services. A working party report. London: RCP, 2002. http://www.rcplondon.ac.uk/pubs/wp_isolatedacute_summary.htm

Ideal Design of Emergency Access (IDEA) Programme. National Report – Warwick Report Summary. <http://www.modern.nhs.uk/idea/6268/Warwick>

Scoping Group Members

Dr Derek Bell (Chair)	Clinical Director	LUHT
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Ms Helen Brown	Principal Statistician (System Watch co-ordinator)	ISD
Mrs Catherine Buchanan	Service Redesign Team	SEHD
Dr Paul Cawood	Principal Clinical Scientist	RIE
Ms Mag Conway	Senior Analyst	ISD
Mr Mark Cotton	Consultant Physician	Glasgow Royal Infirmary
Dr Alastair Crosswaite	General Practitioner	Morningside Medical Group
Dr Martin Dennis	Consultant Physician, Stroke Medicine	LUHT
Ms Joan Donnelly		Lothian PCT
Ms Karen Downie	Clinical Pharmacist	Inverclyde Royal Hospital
Mr James Ferguson	Consultant, A&E Medicine	Aberdeen Royal Infirmary
Ms Theresa Fyffe	Nursing Officer	SEHD
Ms Christine Gilmour	Trust Chief Pharmacist	Lanarkshire Acute Hospitals
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Ms Jacqui Lunday	AHP Officer	SEHD
Dr Andrew Marsden	Consultant Medical Director	Scottish Ambulance Service
Mr Douglas McCarter	Consultant Radiologist	Glasgow Royal Infirmary
Mr Hamish McLaren	Consultant Physician	Admission Project Team, Greater Glasgow NHS Board
Dr Robert Monie	Consultant Physician, Respiratory Medicine	Southern General Hospital, Glasgow
Mr Tim Montgomery		Joint Future Unit, SEHD
Ms Eunice Muir	Deputy Director of Nursing	NHS 24
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Mr Neil Pettinger	Waiting Times Unit	ISD
Ms Sue Plummer	Centre for Change and Innovation	SEHD
Ms Mairi Pollock	Directorate Nurse Manager	Queen Margaret Hospital

Mr Tom Reilly Mr George Rhind	Patient Representative Consultant Geriatrician	Cumbernauld Dumfries & Galloway Royal Infirmary
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Mr David Sorensen Ms Elizabeth Taylor	Information Analyst Social Work Services Inspectorate	RIE, Edinburgh SEHD, Joint Future Unit
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Ms June Wylie	Professional Practice Development Officer, Allied Health Professions. Previously Assistant Directorate Manager	NHS QIS. Previously Acute Medicine, WGH
Secretariat Beatrice Cant	Senior Programme Manager	NHS QIS

Key to abbreviations

LUHT	Lothian University Hospitals Trust
RIE	Royal Infirmary Edinburgh
ISD	Information and Statistics Division, Common Services Agency, NHSScotland
SEHD	Scottish Executive Health Department
PCT	Primary Care Trust
WGH	Western General Hospital, Edinburgh
NHS QIS	NHS Quality Improvement Scotland

APPENDIX A

Emergency Medical Admissions Scoping Group Meetings

List of Presenters and Topics

Presenter	Topic
Alison Bramley <i>Former Head, CRAG</i>	Introduction
David Dawson <i>Medical Director of the Winter & Emergency Services Team, Department of Health</i>	Overview of work in England
Steve Kendrick & Neil Pettinger <i>Information & Statistics Division</i>	Can we use the data to target key areas?
David Steel & Jan Warner <i>Chief Executive NHS QIS, Interim Director, Standards and Reviews, NHS QIS</i>	Introduction to NHS Quality Improvement Scotland (Sep 03) The Way Forward (David Steel, Feb 04)
Karen Castille <i>NHS Modernisation Agency</i>	Developments in Emergency Care in England
Eunice Muir <i>Director, NHS 24</i>	NHS24
David Carson <i>Emergency Care Strategy</i>	Emergency Care in the English Community
Hugh Whyte <i>Senior Medical Officer, SEHD</i>	New GP (?) Contract
Douglas McCarter <i>Consultant Radiologist, Glasgow Royal Infirmary</i>	Radiology – The Answer To All Your Problems?
Derek Bell <i>Clinical Director, Lothian University Hospitals Trust</i>	Update on NHS Collaborative
David Bolton <i>Director of Operations, Lothian Primary Care Trust</i>	The New GMS Contract and ‘Better Acute Care in Lothian’ – A Personal View
Andrew Marsden <i>Medical Director, Scottish Ambulance Service</i>	Role of Scottish Ambulance Service in systems redesign
Jim Ferguson <i>Consultant A&E Medicine, Aberdeen Royal Infirmary</i>	Accident and Emergency – the Role of Telemedicine

Christine Gilmour
*Trust Chief Pharmacist, Lanarkshire Acute
Hospitals*

Role of Pharmacy in Relation to
Emergency Medical Admissions

Tim Montgomery
Joint Future Unit, SEHD

Maximising the Potential of Community
Health Partnerships and Joint Future
Arrangements

June Wylie
*AHP Director, NHS Quality Improvement
Scotland*

The Role of AHPs in Acute Care

Workshop Topics

- Targeting recurrent admissions
- Emergency admissions process
- Illness severity assessment
- Developing ambulatory care
- Common medical emergencies – can we standardise the process?
- Primary and secondary care involvement in emergency services

APPENDIX B

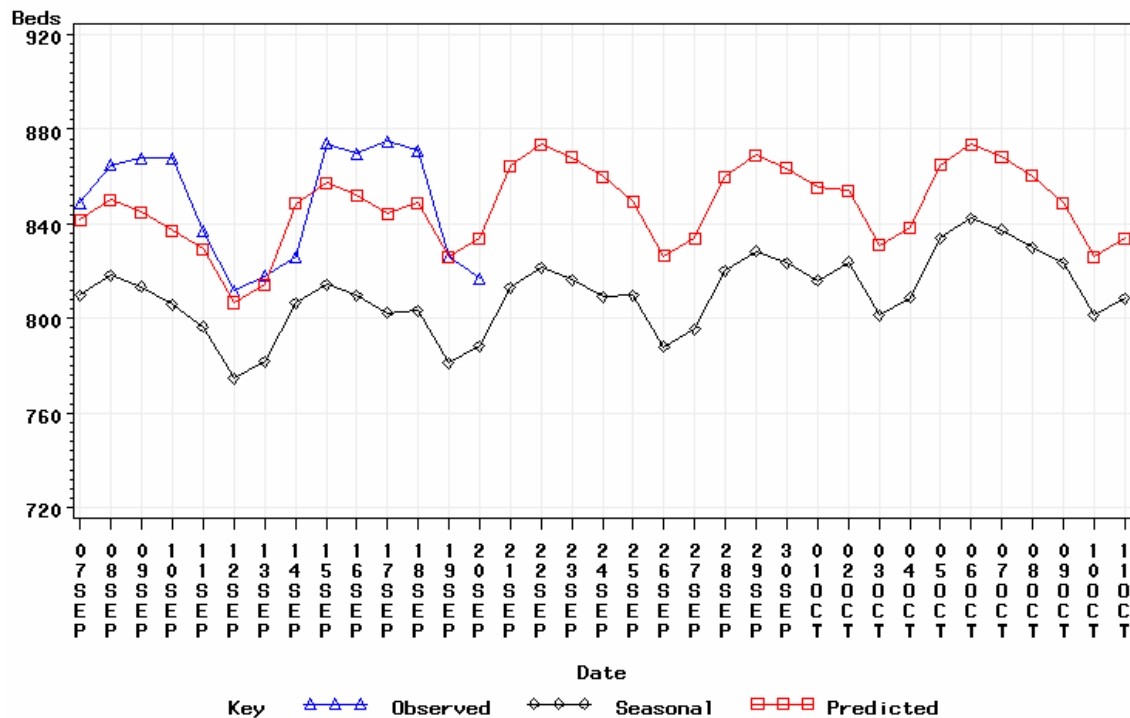
ISD 'SYSTEM WATCH' PROJECT

System Watch has been developed at the Information and Statistics Division (ISD) to monitor and predict activity across the Scottish Health Service. It provides a planning aid to managers (in hospitals, health boards and the SEHD), bed managers and to other healthcare workers. It is of particular value during the busy winter period when pressures are most likely to occur. Periods of reduced activity can also be anticipated allowing more elective surgery to be planned.

It is a web-based system available on NHSNet. Numbers of emergency admissions and beds occupied by emergencies are displayed in 'real time' for each trust. Predictions are given three weeks ahead for bed numbers and one week ahead for admission numbers. These are based on emergency activity in the last week, seasonal and weekly trends, and additionally SCIEH flu spotter rates during the winter period. Frequencies and predictions are broken down into medical and surgical specialties, and by hospital. An example web page is shown below.

Beds Occupied by Patients Admitted as Emergencies (per day)

Lothian University Trust (WGH and ERI only)



Other indicators of pressure are also monitored. Daily NHS24 call frequencies are shown for key symptoms and for some Trusts local sitrep and GP out-of-hours activity data are shown. A link to current weather predictions is provided.

Data are received regularly from hospitals, NHS24, SCIEH and the Scottish Ambulance Service, and the website updates immediately in response to new data. Updates can be carried at any time in response to new data and the frequency decided by participating Trust, the norm is between daily and weekly. It is anticipated that during a crisis period updates will be carried out more frequently.

The system can also be used to flag 'at risk' patients. Identifying and providing interventions for such patients (eg, the elderly experiencing multiple emergency admissions) could lessen pressure on the health system during crisis periods. This approach is being piloted in Tayside, Dumfries and Galloway and Lothian (see Appendix C1: Recurrent Admissions Sub-Group).

More information can be found on the System Watch website at www.show.scot.nhs.uk/systemwatch (login:system, password:watch), or from Helen Brown (helen.brown@isd.csa.scot.nhs.uk, tel: 0131 551 8304).

Helen Brown
Principal Statistician, 'System Watch' Co-ordinator

October 2003

APPENDIX C1

RECURRENT ADMISSIONS SUB-GROUP

Membership

Liz Myers (Chair)	Nurse Consultant, Tayside University Hospitals
George Rhind	Consultant Geriatrician, Dumfries & Galloway
Sue Plummer	Scottish Executive Health Department
Helen Brown	Information and Statistics Division
Steve Kendrick	Information and Statistics Division
Mags Conway	Information and Statistics Division
Claire Gordon	Registrar, Royal Infirmary of Edinburgh

Remit

The sub group has met on 2 occasions and a further meeting is planned. The original remit of the sub group was to consider audit of re-admissions to Medical Assessment Units. Several categories of patients were identified. At the initial meeting it was decided to focus on patients aged over 80 years admitted 3 or more times in one year (ie, recurrent admissions rather than re-admissions). This target group was chosen as ISD statistics show that admissions in this group are continuing to rise and therefore present a significant problem for the future. Effective action in this area has the potential to improve the patient journey across primary and secondary care and is clearly linked to the prevention of delayed discharge, which is a national priority.

Progress So Far

A pilot system was set up using the ISD System Watch Project in Dumfries & Galloway and Tayside to identify patients in the target group within 3 days of the third re-admission. There were some initial difficulties in obtaining the information from the Health Boards but the transfer of information is now working well with patients identified weekly to the clinical leads in each area. These patients are then systematically assessed with a view to identifying medical and social needs and developing appropriate action plans to expedite discharge and prevent inappropriate re-admission in the future. A further pilot is currently being explored in the Royal Infirmary of Edinburgh. Analysis of outcomes will be possible at a later stage.

Future Plans

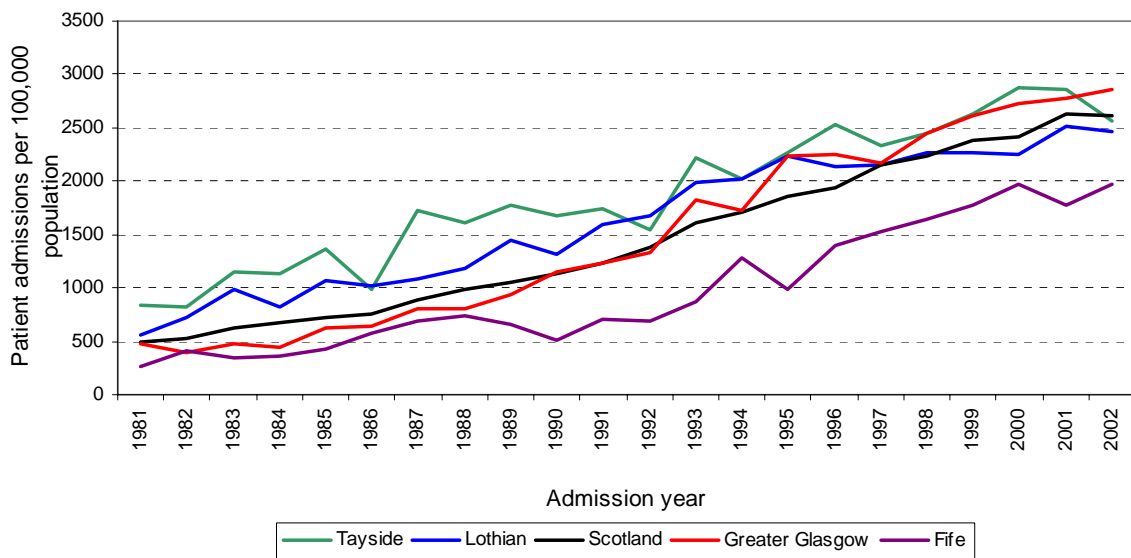
Due to the enthusiasm of the members for this project and the potential for impact at a national level, the group have decided to continue to meet to share progress and stimulate new ideas.

Recommendations

- NHS Boards should have a mechanism in place to identify recurrent admissions aged over 80 years and to systematically evaluate patients' needs.
- Following identification of patients' needs an action plan involving all relevant agencies and patients/carers should be developed to facilitate early discharge and prevent inappropriate re-admission.

Figure 2

Selected Health Boards. Patients aged 85+ admitted as an emergency 3 or more times in a single year. 1981-2002



Source: ISD Whole System Project

APPENDIX C2

EARLY WARNING SCORING SYSTEMS SUB-GROUP

Membership

Dr Cameron Howie	Consultant Anaesthetist, ICU, Victoria Infirmary, Glasgow
Dr Mike Jones	Consultant Physician & Associate Medical Director, Ninewells Hospital
Dr David Thetford	SpR Acute Medicine, Lothian University Hospitals NHS Trust
Dr Donald McLeod	Consultant Cardiologist, Fife Acute Hospitals NHS Trust
Mairi Pollock	Clinical Nurse\Manager, Queen Margaret Hospital
Alison Bramley	Project Manager, Lothian University Hospitals NHS Trust
Sonya Lam	Therapy Services Director, Lothian University Hospitals NHS Trust

Purpose

To summarise progress made by the Scottish Short-Life Working Group on Early Warning Scoring Systems and make recommendations as to further work required including an indication of future standards.

Background

Failure of clinical staff to identify and respond appropriately to deterioration in cardiopulmonary or cerebral function can lead to increased morbidity and mortality. As adverse change in physiological parameters is known to occur prior to deterioration, measurement, monitoring and evaluation are essential to determining appropriate clinical management.

Extensive work has been carried out on the development of bedside evaluation based on physiological measurement, such as the Early Warning Score (EWS) and the modified Early Warning Score (MEWS).

National drivers to improve the recognition and treatment of acutely ill medical inpatients include:

- The Royal College of Physicians Working Party Report : The Interface between Acute General Medicine & Critical Care
- Intensive Care Society Guidelines on the Introduction of Outreach Services

Both recommend the introduction of Early Warning Scoring Systems appropriate to severely ill medical patients, together with relevant training and audit.

Sub-Group Remit

‘To recommend an appropriate mechanism for enhancing the recognition of acutely unwell patients and facilitate the initiation of appropriate management at and from the point of entry’.

Progress of the Sub-Group

- A scoping exercise was completed to ascertain both validated scoring systems and examples in current use.
- The format from two existing examples (an adapted TPR chart from Aberdeen and a draft admissions scoring sheet from Lothian) were combined into one document and modified for the pilot phase. This has been named the Scottish Early Warning Scores (SEWS) as it has been modified from both the Early Warning Scores (EWS) and the Modified Early Warning Scores (MEWS). The SEWS chart defines action required according to protocol (see attachment).
- An audit process has been developed with the aim of *‘minimising the number of patients whose score deteriorates and do not receive appropriate intervention’*. The outcome measures include:
 - Length of stay
 - Re-admission (Time to and LOS during)
 - Death
 - Admission to Critical Care Areas
 - Need for critical care intervention
 - Frequency of monitoring
- A training package for healthcare professionals was developed and delivered for pilot site 1.
- The SEWS has been piloted in Pilot Site 1 with evaluation in progress. There has been continued use of the scoring system.
- Implementation in Pilot Site 2 has commenced.
- Draft standards to include:
 - All patients admitted as a medical emergency should have an early warning score undertaken at the point of entry.
 - All patients should have an early warning score undertaken in the event of a worsening trend or in the event of a worrying change.
 - All relevant healthcare professionals must be trained in the use of early warning scoring systems to enhance their recognition of acutely unwell patients and to develop their ability to initiate appropriate and timely management.
 - Recognition and management of acutely unwell patients should begin at undergraduate level.

Future work programme

- Modify implementation in Pilot sites 2, 3 and 4 using the evaluation results from Pilot site 1.
- Engage with the Scottish Ambulance Service with a view to consistency of documentation prior to the point of entry.
- Define and reach consensus on the most appropriate standards for the identification and management of acutely unwell medical inpatients.

APPENDIX C3

AMBULATORY CARE SUB-GROUP

Membership

Dr J Black	GP, Inverurie Medical Group, Aberdeen
Dr E H McLaren	Consultant Physician, Admission Project Team, Greater Glasgow NHS Board
Dr M Cotton	Consultant Physician, Glasgow Royal Infirmary
Linda Stark	Lead Nurse Practitioner, Minor Injuries Clinician, WGH, LUHT
June Wylie	Professional Practice Development Officer, Allied Health Professions. Previously, Assistant Directorate Manager, Acute Medicine WGH, LUHT

Purpose

To summarise the views of the emergency ambulatory care sub-group and make recommendations as to the further work required to facilitate the development of emergency ambulatory care services within Scotland.

Background - Emergency Ambulatory Care

Health care systems today are often constrained by historical buildings and processes that are no longer an acceptable way to delivery patient focussed care in the 21st century. The rising number of emergency admissions along with the impact of an ageing population and changing workforce continues to add pressures to existing systems.

The need to redesign NHS services to meet the needs of patients and deliver high quality, high tech, modern health care is well recognised by health care staff and planners. Redesign of emergency service across Scotland is a key component in modernising the NHS to raise standards and improve the care and experience for patients. The challenge however is what to do and how to deliver it.

There is increasing recognition that health care services can be delivered more effectively allowing areas such as emergency ambulatory care to be explored as a viable alternative to traditional inpatient emergency care.

What is Emergency Ambulatory Care?

Definitions:

“Emergency care without admission”

“A purpose designed setting to allow a wide range of treatment and diagnostic tests to be undertaken in a one stop experience”

“Integration of primary care and secondary care into a seamless service”

“Emergency care delivered in an appropriate setting without requiring hospital admission”

Medical Emergencies – Moving Towards Best Practice

There was consensus from within the subgroup that a variety of conditions currently routinely admitted to hospital could be safely treated using an emergency ambulatory care model. Robust evidence in terms of safety and efficiency would be required to support any major change in service delivery at the primary/secondary care interface. There is evidence that a number of the conditions identified are already being successfully treated on an ambulatory basis. Examples of good practice and references are included for information.

Opportunities to pilot or redesign services would be required in order to build an evidence base that would support any major change in service delivery at the primary/secondary care interface.

Conditions which could be treated in an emergency ambulatory setting

DVT	Asthma (Acute)	Renal Colic
Acute Chest Pain	COPD	Cellulitis
Minor Haematemesis (selected patients only)	Pulmonary Embolus (selected patients only)	Epileptic Fit
Collapse? Cause	Nursing Home Deterioration	Failure to cope

Examples of Good Practice

Condition	Area	Contact Details
DVT	Southampton	Dr Chris Roseveare, Southampton University Hospitals Trust
	Grampian GP Led service	Dr Jim Black, General Practitioner, Inverurie james.black@inverurie.grampian.scot.nhs.uk Sister Cecilia Chapman Ward 8 Aberdeen
COPD	Glasgow	Dr Mark Cotton mark.cotton@northglasgow.scot.nhs.uk
Telemedicine	Grampian Community Hospital Links	Dr Jim Black, as above Mr James Ferguson, A&E Consultant Aberdeen Royal Infirmary

Cellulitis	Tayside	<p>Dr D Nathwani, Consultant Physician Infectious Diseases, Ninewells Hospital, Tayside</p> <p>John Morrison, Nurse Practitioner Ninewells Hospital, Ward 42 john.morrison@tuht.scot.nhs.uk</p>
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Service Infrastructure

Any ambulatory care service for emergency medical conditions should be at least as high quality as that already provided in a traditional secondary care inpatient service. Access to the correct range of services and expertise as outlined will therefore be required.

Setting

The provision and staffing of separate emergency ambulatory care services is unlikely to be cost effective. In urban settings these would be best provided as part of the emergency admissions system. In rural settings some emergency ambulatory care could be provided in the patient's home or local community hospital.

Diagnostic Support

The diagnostic support needed in a local area will vary according to the agreed protocols in the service remit. Delays in diagnostic services, including radiology, may adversely affect patient outcome and unnecessarily prolong patient stay. There is a need to ensure that expansion of diagnostic services is linked to service redesign which needs to encompass changes in working practice as well as increased use of protocols. Teleradiology needs to be employed routinely to allow image transfer from referring hospitals to specialist sites and would be a mandatory requirement for any service providing emergency ambulatory care.

Staffing

The staffing support required will vary with the conditions and protocols agreed in a local area. This would include access to specialist medical advice and facilities provided by specialist nurses and allied health profession as well as rapid access social support. Redesign of clinical processes as well as innovation in expansion of roles would be required.

Access to expert advice

Access to expert opinion would be required from a variety of specialist services. For example, this may be a specialist nurse advisor or senior medical advice, eg, cardiology, ENT.

IT Links

IT links with secondary care services and expert advice would be required to facilitate the diagnostic ability and immediate treatment available. Telemedicine links to A&E and medical assessment units along with access to urgent outpatient clinics and imaging services along with rapid access social care would all be key components to a successful centre.

Impact on traditional secondary/primary care services

An attempt has been made to quantify the number of episodes of care for conditions which could potentially be managed in an ambulatory setting. The table demonstrates that 7 of the conditions identified by the group account for 20% of the total emergency medical inpatient episodes in Scotland. Further evaluation work on the impact of service redesign for these conditions would be beneficial.

Number of episodes and bed days for emergency medical inpatients by principal diagnosis. 2001/02.

Diagnosis description	Bed Days	Number of Episodes(SMR01)
DVT	11,555	2,660
COPD	57,989	11,246
Asthma	11,509	4,883
Cellulitis	12,654	2,677
Chest pain	40,180	23,431
Syncope And Collapse	22,807	7,152
Other And Unspecified Convulsions	7,489	3,308
Total for 7 diagnostic codes identified	164,183	55,357
All Principal Diagnoses for Emergency Medical Inpatients in Scotland	1,126,333	274,228

Source: ISD Scotland

Patients' views

It has not been possible within the remit of this group to canvass the views of patients specifically about emergency ambulatory care services. However, patient representatives were active participants in group sessions in the early stages of the scoping work. Examples of work undertaken in Lothian as part of the Better Acute Care project have identified a number of key themes arising from focus groups with patients. These are:

- Local care is important although patients will travel for specialist care
- Access issues in terms of geography and waiting are important
- Patients are happy to see experts other than consultants
- Positive feedback for nurse practitioners.

The Benefits

The main benefits of an organised emergency ambulatory care service would be in ensuring that patients receive the investigation and treatment appropriate to their condition without the need for admission and where possible close to home.

Redesigning care to make more efficient use of NHS resources in acute and primary care will ensure that services can meet the demands while providing high quality care to consistent standards.

Recommendations

There was consensus from within the subgroup that a variety of conditions currently routinely admitted to hospital could be treated safely on an emergency ambulatory care basis. Further work is required, however, to agree a mechanism for taking forward this work in a planned and systematic way.

Delivering this kind of care in Scotland to the same or higher standard than traditional methods remains the challenge.

Recommendations on how this agenda may be taken forward are:

1. Review of emergency care services in Scotland to identify opportunities for redesign of services on a regional basis delivered to agreed standards.
2. Development of national standards for emergency ambulatory care on generic issues or disease specific conditions.
3. Further evaluation of potential impact on secondary care of service redesign in ambulatory care.

References

Cellulitis

Nathwani.D, Conlon, C, (1998). Outpatient and home parenteral antibiotic therapy (OHPAT) in the UK: a consensus statement by a working party. *Clin Microbiol Infect* 1998; 4:537-551

Nathwani.D, (1998). Skin and soft tissue infections: development of a collaborative management plan between community and hospital care. *IJCP* Oct 1998 ;52:7, 456-460

DVT

Koopman.M, (1996). Treatment of venous thrombosis with intravenous unfractionated heparin administered in hospital as compared with subcutaneous low molecular weight heparin administered at home. *The New England Journal of Medicine*: 334;11: 682-687

Levine.M, (1996). A comparison of low molecular weight heparin administered primarily at home with unfractionated heparin administered in the hospital for proximal deep vein thrombosis. *The New England Journal of Medicine*, 334: 11; 677-681

O'Shaughnessy D, et al. (2000). UK Patients with deep-vein thrombosis can be safely treated as outpatients. *QJ Med*;93:663-667

Kovacs MJ, et al, (2000). Outpatient treatment of pulmonary embolism with dalteparin. *Thrombosis Haemostasis* 83(2) 209-11

COPD

Gravil JH, Al Rawas OA, Cotton MM, Flanigan U, Irwin A, Stevenson RD. (1998) Home treatment of exacerbations of chronic obstructive pulmonary disease by an acute respiratory assessment service. *Lancet*, 351:1853-5.

Skwarska E, Cohen G, Skwarski KM, Lamb C, Bushell D, Parker S *et al.* (2000). Randomised controlled trial of supported discharge in patients with exacerbations of chronic obstructive pulmonary disease. *Thorax*; 55:907-12.

Killen J, Ellis H, (2000). Assisted discharge for patients with exacerbations of chronic obstructive pulmonary disease: safe and effective. *Thorax*; 55:885.

APPENDIX C4

DEVELOPMENT OF AN INTEGRATED EMERGENCY CARE SYSTEM – THE ROLE OF THE GENERAL PRACTITIONER

The working group involved primary care representation with considerable experience in both primary and secondary care. The new GMS contract was discussed and was felt to offer an opportunity to improve the service. This will however require further work.

We would envisage the development of links with secondary care emergency services with the emphasis on a streamlined patient flow across the primary/secondary care interface to improve the patient's experience. This would help provide a high quality patient-centred service within a multi-professional framework.

Communication

To improve communication across the primary/secondary care interface, the following were considered important:

- Dedicated phone/fax/secure IT link
- Single number access to acute services 'menu'
- Dedicated nurse/bed management staff
- Access to medical staff as appropriate
- Access to alternative assessment venues e.g. MOPD
- Unified patient record with demographic data set
- Standard admission document

Primary care link

There should be a named primary care physician/general practitioner linked with each medical assessment unit, ideally with clinical/non-clinical sessional commitment. The primary care physician/general practitioner should be a member of the senior medical team. The individual post holder may already have a special interest in the specialty and may already have sessions in secondary care, which could be utilised.

Key to this will be the continued development and integration of multi-professional team working within an out-of-hours setting with defined links to the broad range of services available within the Primary Care Organisation/Community Health Partnership.

Key Features:

- To develop optimal use of emergency services in partnership with secondary care.
- To facilitate patient centred care in the right place, at the right time, by the right health care professional.

- a primary care physician/general practitioner should be a member of the multi-professional team in every acute assessment unit. This should be a joint appointment by the primary care organisation and acute operating division.
- To develop links with the whole primary care community, with particular emphasis on NHS 24 and the ambulance service including paramedics.
- Emphasis on developing ambulatory care models with secondary and primary care.
- To develop and promote emergency care networks across the primary/secondary interface to embrace the wider healthcare and social community.

These posts would allow general practitioners to maintain and develop skills in emergency care. Such posts would add to the portfolio career options. They would be ideally placed to deliver enhanced primary care services.

This would be a proactive way of protecting against loss of skills when fewer general practitioners are involved in OOH emergency care, and would encourage recruitment of a motivated GP workforce to a multi-professional team.

Recommendations

1. There should be a primary care physician/general practitioner as a member of the multi-professional team in every acute assessment unit. This should be a joint appointment by the primary care organization and acute operating division.
2. Unified admission documentation incorporating standardised demographic data (carenap) should be developed.
3. Emergency care networks should be developed across the system.