Independent
Scrutiny Panels

Report by the Independent Scrutiny Panel on Revised Proposals by NHS Lanarkshire for Accident and Emergency Services

CONTENTS

SECTION 1
INTRODUCTION

Each NHS Board in Scotland undoubtedly faces a number of challenges. These challenges include: developing services that meet the changing health needs of its population; promoting health and wellbeing, prevention, and self-management; meeting expectations in terms of clinical standards and national policy; fulfilling its obligations as a major employer; ensuring that all of its activities are well-managed, underpinned by robust planning and are implemented within financial constraints. As the first Independent Scrutiny Panel to be established in Scotland, we were mindful of these challenges, although our focus was on emergency services.

We considered what standard of work we should expect from the Board, and what questions we should ask of it. Our remit required us to assess whether the Board's revised proposals met a number of agreed criteria, but how were we to judge that? We decided to set the standards by simply asking ourselves: "If any reasonable person were reading these proposals what would they expect?"

The Panel believes it is reasonable for an NHS Board to:

- Set out clearly, with evidence, why and how things need to change
- Communicate its case in documents that are transparent and accessible
- Base its plans on estimates of likely numbers of patients, now and in the future
- Take into account the views and concerns of local people
- Consider all the options and show impartiality between them
- Take account of national policy, good practice guidance and the relevant evidence and present it in a balanced and neutral way
- When a claim is made about a service being unsustainable, or that an alternative way of doing things would be better, to be able to show the evidence base for that claim
- Produce figures that are robust and reliable within reasonable limits.

In addition to this, we felt that the burden of proof clearly rested with the Board, and that if they made a claim, then it was their responsibility to substantiate that claim. We felt it was particularly important that the Board could justify its case when its proposals involve reducing emergency services, because of the inevitable questions about patient safety, and because of public sensitivity to any such change.

The most immediate concern for the Panel is that the health service that emerges from this review should meet the needs of local people. Our work has left us convinced of the following:

First, **the general health of the population will not be fundamentally improved through the acute hospital sector alone**. Primary care, community services, and health promotion have better prospects of tackling fundamental problems such as

obesity, drug and alcohol addiction, mild-moderate mental health problems, and so on. However, the acute hospital, especially the A&E department, is currently the 'safety net' when these services are not available or fail in some way. This suggests that **emergency care services should not be changed significantly while community services are being built up**.

Second, in commenting on the Board's proposals, the Panel is not arguing that the current service is perfect, or that it should never change. It is suggesting that there are considerable strengths to the current system, notably in the quality of care provided. **Given the criteria set out in its remit, the Panel's view is that the Board has not made a convincing case for significant changes to emergency services**. Rather, there is the potential to build on the strengths of the current service through developments such as clinical decision units and the extension of minor injuries provision into the community, notably to outlying population centres.

The Panel is grateful to a wide range of people for their assistance in helping it to complete its task. Further detail about who they are is provided in the acknowledgements section at the end of this report.

SECTION 2
EXECUTIVE SUMMARY

1. INTRODUCTION

Each NHS Board in Scotland undoubtedly faces a number of challenges. The Panel was mindful of all of these challenges, although our focus was specifically on emergency services.

In our scrutiny of the Board's revised proposals for Accident and Emergency (A&E) services, we felt that the burden of proof clearly rested with the Board to substantiate its claims. We felt that it was particularly important that the Board could justify its case, when its proposals involve reducing emergency services, because of the inevitable questions about patient safety, and because of public sensitivity to any such change.

Our work has convinced us that the general health of the population will not be fundamentally improved through the acute hospital sector alone. Primary care, community services, and health promotion are also important, but emergency care services should not be changed significantly while community services etc are being built up.

The Panel is not arguing that the current service is perfect, or that it should never change. It is suggesting that there are considerable strengths to the current system, notably in the quality of care provided. Given the criteria set out in its remit, the Panel's view is that the Board has not made a convincing case for significant changes to emergency services. Rather, there is the potential to build on the strengths of the current service through developments such as clinical decision units and the extension of minor injuries provision into the community, notably to outlying population centres.

2. REMIT OF THE PANEL

The task of the Panel was to bring to bear independent, expert, probing scrutiny on the revised service proposals from NHS Lanarkshire and NHS Ayrshire & Arran. The aim of this scrutiny was to provide assurance through commentary that the revised proposals:

- Are safe, sustainable, evidence-based and represent value for money
- Are robust, patient-centred and consistent with clinical best practice and national policy
- Take account of local circumstances and the views of individuals and communities affected
- And that all viable service options have been considered.

In order to carry out its task the Panel was required to:

- Take account of local circumstances and the views of individuals and communities affected by effectively engaging with local people, in liaison with the Scottish Health Council

- Provide a clear, comprehensive and accessible commentary on both sets of proposals in a form also suitable for publication
- And to complete this work by the turn of the year.

3. CASE FOR CHANGE

The Panel notes that several of the factors listed by the Board make the case for giving a higher priority to primary care, community services and health promotion. This includes pressures from demographic change, from epidemiology and from implementing national policy. However, giving a higher priority to these developments does not necessarily require a reduction in the level of emergency services (such as emergency surgery, intensive care and emergency medical services) currently provided at Monklands Hospital.

The Panel found nationally available data on the quality of care which shows outcomes for patients treated at Monklands, Wishaw and Hairmyres hospitals. The Panel notes that all three hospitals are providing good quality clinical care, which generally compares favourably with the national average and has shown no sign of deteriorating over time.

The Board quoted a number of documents to support its case. However, the Panel found recommendations from within these documents, and also found separate documents, that provided a different perspective, but were not quoted by the Board. It appears to the Panel that the Board selected quotes and papers that supported its case, without reflecting others that provided a differing view.

The Board made the case for a division of elective and emergency services, and argued that these services should, if possible, be provided from separate hospitals. However, this is only one way in which these services can be divided; other possibilities would include retaining elective and emergency services at all three hospitals in Lanarkshire.

Other elements of the Board's case for change were considered in the following sections under the relevant criteria.

4. SAFETY

The Board made a number of claims in its information pack for the scoring event which was held as part of the option appraisal process. Although these claims were all included under the heading of "Safety", it appeared to the Panel that it would have been more appropriate for some of them to have been dealt with under other headings. Rather than seeking to cover them under other headings, the Panel has reviewed them all under the "Safety" criterion, in order to maintain consistency with the Board's approach.

"*There is evidence to support a pre-hospital assessment service that will enable patients to be directed to appropriate services*." (booklet for Scenario B, page 5). The evidence presented by the Board did not support its claim. Substantial flaws in the

evidence presented were not highlighted, and other evidence to the contrary was not reflected in the booklet.

"If a seriously ill patient arrived at Monklands and required to be transferred to a hospital with an intensive care unit there is mixed evidence as to whether or not their transfer will make them worse." (booklet for Scenario B, page 7).
Quotes from the Board's own summary of the evidence are at odds with the claim made. The evidence seems to the Panel to support a considerably more cautious view.

There is a recommendation that a population of more than 300,000 is needed so that doctors can see enough patients to maintain their skills.
The Board claimed that trauma and vascular surgery should be provided from fewer hospital sites than at present. While there is some evidence that severe trauma cases may have better outcomes when managed by specialists, this is only a small minority of trauma work, so to centralise the whole service on this basis is not necessarily justified. The evidence cited to support the centralisation of vascular surgery was flawed and was not interpreted in the local context by the Board – Lanarkshire hospitals may already be "high volume" as defined in the research studies and hence there would be no case for further centralisation. The Board also says that a catchment population of 300,000 is needed for doctors to maintain their skills, but the Panel identified that this figure does not appear to be supported by a convincing evidence base.

Several claims were made for which the Board did not appear to have provided supporting evidence. These are summarised as follows:

- Sick patients transferred under options B and C could be moved more safely because they would have been assessed for 24 hours in a bed at Monklands first.
- The Emergency Referral Service would ensure a greater number of patients presenting via 999 would reach their definitive point of care more quickly.
- Newly-appointed hospital consultants have significantly less experience than their predecessors. If they also have to work in smaller teams, the impact of their inexperience on the quality of care and service will be greater.

The Panel believes that each of these statements is highly contentious.

5. SUSTAINABILITY

The Board's submission gives a detailed account of current staffing pressures facing NHS Lanarkshire.

In its Interim Report the Panel pointed out that the supply of hospital consultants was increasing markedly as more doctors completed their training; however, the Board still perceives that there is a significant risk that these numbers will be inadequate. The Board's second submission simply expanded on its analysis from its first submission, and was not sufficient to convince the Panel.

The Board has supplied the results from interviews with newly appointed hospital doctors in Lanarkshire and they confirm that NHS Lanarkshire offers an attractive working environment with many positive features. In contrast to the Board submission, which implies doctors are mainly concerned with on-call rotas (time off at weekends and evenings) and opportunities to become sub-specialists, the newly appointed doctors listed many factors that led them to take a job in Lanarkshire. They explicitly rejected sub-specialisation as a factor in their choice; some even said the extent of sub-specialisation in Glasgow had deterred them from taking a job there.

The newly appointed hospital consultants recognise that sub-specialisation may be a factor for more experienced staff but they believe if this is an issue it can be overcome by making other aspects of the job package more attractive such as educational opportunities and dialogue with managers.

In terms of the detailed estimates the Board made of additional staff required, the Panel had some problems following figures from one table to the next. However, the main issue was that the majority of the claimed increases in staffing required were not clearly explained. In many cases there was no explanation of the figure selected for additional staff and in some cases it was not apparent why more staff were needed. The Board argued the case for centralising emergency surgery but the detailed modelling suggests the status quo is sustainable with only 3 additional consultants.

The Board claims that accreditation for anaesthetics posts may be withdrawn by the Intensive Care Society (ICS) but it is not clear why the Board believes this, or how likely this would be.

The Panel was concerned that some scenarios included in the option appraisal could not be sustained over the medium to long-term. Options B, C and D in particular seem to fall foul of the recommendations of many professional bodies for the co-location of emergency services on the same site, including the British Association for Emergency Medicine, the Academy of Medical Royal Colleges and the Royal College of Surgeons. The Board quoted all of these bodies approvingly elsewhere in its submission but failed to include their advice on this point.

6. CONSISTENT WITH CLINICAL BEST PRACTICE

The most striking features of the Board's evidence were:

(i) Reliance on older studies – with the exception of a handful of studies, the evidence base is from the 1990s. This raises concerns because it relates to clinical practice from nearly a decade ago.

(ii) Reliance on American studies – with the exception of a handful of studies, the evidence base is from American hospitals. This means care should be taken in ensuring the studies are relevant to Scottish practice. It was not evident the Board had considered this.

In its first submission to the Panel, the Board stated that older studies from countries that were not relevant to Scotland would be excluded, but it is not obvious that this was applied in practice.

A key problem with the evidence presented was that while the research literature search relating to A&E services was systematic, other studies were identified from the research literature by the Panel (e.g. in trauma surgery) which question how comprehensive and balanced a view of the research literature was presented. For example, while the Board has cited studies relating to severe trauma as part of its case for centralising this service, there are other studies (e.g. Margulies[1], Sava[2]) that show no relationship between the number of operations a surgeon carries out and patient survival. Unless the Board has considered all of the available evidence it is unclear how it can reach an evidence-based view.

Emergency surgery – The Board claimed, "Data from the Lothian Surgical Audit … showed the restructuring of emergency surgical care, focused on subspecialisation appropriate to upper and lower abdominal conditions, has led to improved quality of care and outcome." In fact, the data referred to only relate to the management of perforated peptic ulcer – there may be less than 50 cases per year in Lanarkshire. The Board did not draw attention to this point, nor did it discuss the relevance of perforated peptic ulcers to the hundreds of emergency surgical admissions that are due to a variety of other conditions. The study design was also very weak.

The submission also made the case for centralisation of trauma surgery because this would lead to better outcomes. This may be the case for major trauma (Injury Severity Score >15) but this is only a small proportion of workload in this specialty and any change to the management of these cases could be achieved without significant change to existing services.

Critical care – The Board's second submission cited three studies suggesting benefits from intensive care being provided by specialists. However, closer scrutiny of the three studies revealed that they all appear to be comparisons of units with specialist staff versus units without specialist staff. The studies were carried out in America, some as long as 20 years ago. It is not obvious what relevance these studies have to Lanarkshire: local intensive care units are already staffed by specialists. None of the research studies claim that larger intensive care units have better outcomes so it is not obvious what concentrating intensive care units on fewer sites in Lanarkshire would achieve in terms of patient outcomes.

Stroke and Myocardial Infarction – No empirical studies of stroke care were offered to support claims that centralisation would offer better patient outcomes. In terms of cardiac conditions, the Board makes the case for angioplasty following a heart attack, evidence that is widely accepted and is being acted upon elsewhere in the west of Scotland.

Vascular surgery – Most of the evidence cited was very old. The only statistically significant relationship between number of operations and outcomes for patients was for

elective abdominal aortic aneurysm repairs. These make up less than 3% of vascular surgical workload and the Board did not explain why their management could be centralised without compromising the rest of the service.

Other services – The review cited was based on the same data as in the Kerr Report but when this was examined in more detail many treatments were not relevant to this review, while others were based on old data from America and other countries. Some relationships were found but these tended to be at quite a low level of operations and routine data suggest surgeons and hospitals in Lanarkshire are likely to be working at levels in excess of these thresholds: in other words the benefits seen in the literature already apply in Lanarkshire without any need for centralisation.

Therefore, the general case for change appears to be based on evidence that has little relevance to Lanarkshire in 2008. Data from practice 15-20 years ago in other countries is now being used to justify reorganising care in NHS hospitals in Scotland, with effects that could potentially last for decades. These studies are arguably not relevant to day-to-day clinical practice in the NHS of 2008 and should not be influential in policy-making.

In making these criticisms the Panel is following its remit to scrutinise the evidence presented by the Board. The Panel fully acknowledges:

(i) That for some services such as transplant surgery the case for specialisation has been made, and
(ii) There may be other evidence supporting specialisation in particular areas that has not been cited.

However, the Panel is mindful of the view of the Academy of Medical Royal Colleges: “Although there is evidence to suggest that the centralisation of services to deal with complex or specialised work provides better outcomes for patients, evidence for centralisation of non-complex and high volume cases does not exist.”

7. PATIENT-CENTRED

The Board presented very little evidence on the patient-centredness of the different scenarios. The only issue to receive any real attention was travel time. The Panel feels that more attention should have been devoted to this in light of the weights attached to it by both the public and professionals in the option appraisal.

This is of particular concern because under options B, C and D in particular thousands of people will have to travel across Lanarkshire for care they currently receive at their local hospital. At public meetings the Panel heard this causes anxiety, is inconvenient, expensive and can be unreliable. It is not clear what consideration has been given to these factors.

In addition, the Cabinet Secretary, in instructing NHS Lanarkshire to revise its plans for A&E services in June 2007, specifically mentioned the issue of diminished emergency

care provision in some of the most deprived areas of Scotland. The worsening of access under options B, C and D does not appear to have been taken into account by the Board when considering this criterion.

8. CONSISTENT WITH NATIONAL POLICY

The Panel acknowledges that a number of measures the Board is implementing, including workforce policies (European Working Time Directives, Modernising Medical Careers, etc.) and meeting waiting time targets are required in order to be consistent with national policy.

The policy of a presumption against centralisation has been explained in "Better Health, Better Care" in the following terms:

> [T]here will be a clear policy presumption against centralisation. That does not, of course, mean that there will never be an occasion when it makes sense to concentrate services. It does however mean that any such moves result in benefits for patients and be subject to meaningful consultation and independent scrutiny to ensure they are based on the best available evidence and give due weight to the views of local people. *(page 5)*

Given the comments the Panel has made on the quality of the evidence submitted under the criterion Consistent with Clinical Best Practice, there may be a case for centralisation for severe trauma injuries. In other areas the evidence is weaker.

9. LOCAL CIRCUMSTANCES

The Board provided an appendix on the influence of socio-economic deprivation on health, need for policy intervention and use of health services in Lanarkshire. Having established an increased need for access to emergency care in poorer areas, the report then tries to make the case that increased journey times associated with certain options would not make an appreciable difference in an emergency. This case was not proven to an adequate standard because flawed evidence was cited and important counter-evidence was excluded.

10. ROBUSTNESS OF THE OPTIONS

Safety – in the Panel's view the Board has not made a convincing case for the safety of options which would involve greater numbers of sick patients being transferred over longer distances. Safety arguments would therefore favour the options that minimise these elements, namely scenarios F and G.

Sustainability – the Panel's view is that the Board has not made a convincing case that existing services are unsustainable.

Consistency with clinical best practice – in the Panel's view, the Board has not made the case for improved outcomes from sub-specialisation. The quality of existing clinical

services provided from Lanarkshire's acute hospitals are similar (and generally very good), so this would not help to pick between the options.

Patient-centred – the Board offered so little evidence on this criterion it was not easy for the Panel to comment. In terms of accessibility, patients in North Lanarkshire with more serious emergencies would be likely to find services provided under scenarios F and G more accessible. People from South Lanarkshire requiring elective surgery would also be likely to find services provided under scenarios F and G the most accessible. In terms of public acceptability, the opposition to plans in 2006 may suggest scenarios B, C and D attract opposition.

Consistent with national policy – the Board has emphasised its desire to improve primary care and community services in line with the Kerr Report. To the extent this depends on avoiding spending more money on acute care this would favour B and F, the least expensive scenarios. However, the Cabinet Secretary's stated policy of a presumption against centralisation would favour scenario F.

11. FINANCE

Substantial financial information was presented to the Panel. It is the Panel's view that the Board has taken a consistent approach to developing the incremental cost associated with all models.

From a narrow A&E review perspective, in capital terms, the A&E unit at Monklands appears to be fit for purpose. However, the costs presented are for addressing a "historically inadequate level of expenditure on planned preventative maintenance on Monklands"[3] which has resulted in significant investment now being required to maintain its condition. The Board has advised the Panel that for several years, it was in financial deficit, and did not have the means to finance the backlog maintenance. Had the preventative maintenance been undertaken, the costs now being presented for Monklands would have looked quite different and it is the Panel's view that this would have had a direct bearing on the cost comparison of each of the models.

The PFI providers have not signed off on the impact on the unitary charge of the proposed capital works and therefore these costs could be either understated or overstated.

The optimism bias for Monklands has doubled from the first submission to the second submission. This could significantly influence the outcome of the option appraisal. The increase is based on the experience of Currie & Brown.

Staffing: Concentrating on the number of additional doctors needed for the different scenarios in the option appraisal the Panel found some inconsistencies between the staff numbers and costs quoted at different points in the two submissions. The Panel also found a general failure to explain clearly (i) why additional staff were needed in different scenarios and (ii) if additional staff were needed why the particular number had been chosen.

The latter point in particular is a serious concern as the differences in medical staffing between options is a major factor in explaining the cost differences between models. For example, in terms of work for anaesthetists scenarios F and G appear identical but G is said to require 8 more consultants than F.

Ambulance Costs: The Scottish Ambulance Service identified a number of non-recurring revenue costs and these do not appear to have been included in the total cost for all the scenarios. The costs are higher for scenarios A-C and significantly smaller for scenarios D-G.

12. OPTION APPRAISAL

In the latter stages of the option appraisal, the new acute mental health unit at Monklands was identified as being feasible under all of the options. The Panel welcomes this development, while noting that it was unfortunately too late for the scoring event of the option appraisal. At that time, people scoring the options were told that options D, F and G would not have a new unit of this type at Monklands. Had they known it would have been included some of them may well have given a higher score to these options, particularly members of the public attending who had an interest in mental health services.

The submissions made by the Board contained no explicit future projections of patient, staff and bed numbers. It seems difficult to plan emergency services without these data.

At the scoring event, the Board decided to separate the public from professionals (mainly managers and doctors) with the stated aim of avoiding any influence between groups. The Panel believes this left the public without access to advice that was independent of the Board. While an independent facilitator hosted the meeting the person was not an NHS expert. The information pack circulated in advance was prepared by the Board and has been criticised elsewhere in this section.

The information pack prepared by the Board for the scoring event suffered from a number of deficiencies. The information presented required health services research experience to interpret. Some studies were selected from the literature while others were not. Some quotes were selected from the reports while others were not. There was no discussion of whether studies from other countries applied in Lanarkshire. There were few data on the quality of current services at Lanarkshire hospitals.

A particular concern in the information pack was that for each option, the Board presented estimates of numbers of attendances at Monklands A&E department. However, for each model the booklets did not estimate:

- The number of people who currently go to Monklands Hospital who would now bypass it in an ambulance in an emergency situation
- The number of transfers from Monklands to other hospitals for people admitted to Monklands Hospital as an emergency and needing a service that is no longer provided there.

- The number of transfers of people admitted for elective surgery to Monklands Hospital who would need to be transferred to other hospitals for emergency surgery or level 3 intensive care.

This may have reduced the extent to which people involved in scoring considered bypassing and transferring patients in an emergency situation.

It is clear that the hospital doctors who scored the options took a different view to the public and to NHS managers. The Board made decisions about how the scores of different groups were to be combined. This gave most weight to the groups that favoured scenario B.

The Board has followed the Green Book in that they have excluded capital charges from the option appraisal and have used the recommended discount rate of 3.5%. Following discounting, scenario F now appears to be lowest cost option. The Panel has been unable to find an explanation for this.

In the course of scrutiny of the spreadsheets produced for the option appraisal two arithmetical errors came to light.

- In the first case, the weight for the “safety” criterion had been applied to the score for “safety” but it had also been applied to the scores for “sustainability”, “quality / consistent with clinical best practice”, “patient centred”, and “consistent with national policy”.
- In the second case, the weights for the five criteria had been taken from one spreadsheet and copied and pasted into another spreadsheet to be applied to the scores. Unfortunately the criteria were not in the same order in the two spreadsheets but the weights were multiplied by the scores nevertheless.

Neither error dramatically changed the results. The obvious question that arises is whether the numbers are now error-free. The Panel has undertaken such scrutiny of the spreadsheet as is possible but cannot guarantee there are no further mistakes included.

The results of the option appraisal were analysed to produce a single preferred option. This involved the Board making judgements about whether one model was preferred to another in terms of whether the added cost was justified by the added benefit. The Panel is extremely critical of the basis for these judgements.

The Board faces a choice from the option appraisal between scenarios B and F. The choice rests on the trade-off between costs and benefits, but key information is either difficult to find or to interpret. No attempt has been made to convert a “weighted benefit point” into a service or patient experience so it is unclear what practical benefit is being purchased for extra money. Choosing a more expensive option also involves reducing funding or delaying other services and the benefits these would have produced should also be considered. The submission did nothing to help with this task.

13. RISK ASSESSMENT

The Board provided an assessment of the risks of each of the scenarios. The Panel scrutinised this and found a lack of explanation of what evidence had been used to make the judgements and also a lack of definitions of key terms – for example, the difference between a moderate consequence and a severe consequence was unclear.

The Panel assessed four of the risks that had a bearing on patient safety and outcomes. In each case there was reason to question the assessment made by the Board. In each of the four cases considered the risks associated with scenario B seemed to have been understated and the risks associated with scenario F seemed to have been overstated.

Other relevant risks had not been considered such as the threat to the sustainability of emergency services when they are spread over several hospital sites, against the recommendations of professional bodies.

14. OPPORTUNITY COSTS

The Board explained the financial situation it faced and the uncertainties at the time the second submission was being prepared. Cost pressures in the acute services were described but these fall outside of the Panel's remit and hence no comment has been offered in this report.

The Panel welcomes the Board's recognition that any knock-on effects of the A&E review for other services in terms of funding will be about when these developments go ahead, not whether they go ahead. The Panel feel it is important that the Board explains this to its local population as some people have a perception that funding one service will mean another service development is lost forever.

The Panel also welcomes the Board's thinking around an option that reduces or spreads the capital spending needed, notably at Monklands Hospital. This seems likely to have the most impact on scenario F and G, which had previously incurred the greatest costs from decanting services between buildings. This could have important consequences for the final choice of options: for example, with only a modest reduction in revenue costs scenario F would cost the same as scenario B.

15. TAKING ACCOUNT OF PEOPLE'S VIEWS

Part of the Panel's remit was "to provide assurance through commentary that the revised proposals…take account of local circumstances and the views of individuals and communities affected." The Panel itself was also tasked with taking "account of local circumstances and the views of individuals and communities affected by effectively engaging with local people, in liaison with the Scottish Health Council".

Between January and April 2006, NHS Lanarkshire carried out a formal consultation on its Picture of Health proposals. In its Interim Comment in October 2007, the Panel indicated that it was unclear, at that stage, how the Board had taken account of public opinion expressed during its previous consultation process on Picture of Health, when

developing its revised proposals. The Board subsequently provided a paper to the Panel setting out how it believed that it had taken account of public views.

The Panel held public meetings in the three areas within Lanarkshire where Accident and Emergency services are currently provided, namely, Wishaw, East Kilbride and Airdrie. It also received 422 individual written submissions from local people. Views expressed at the meetings and in the submissions included the following themes:

- Unhappiness about arrangements for the public meetings
- Concern about the impact of A & E options on other planned services
- Transport issues – concern about public transport across Lanarkshire and about ambulance transfers to and between hospitals
- Strong support for maintaining the status quo or the 'status quo plus', with only a small minority in support of the Board's original proposals
- Questions about Private Finance Initiative (PFI) contracts for Hairmyres and Wishaw Hospitals and suspicion that PFI costs have been a factor in decision making in relation to Monklands
- Negative perceptions of the Board and the process it has followed
- Questions about the Panel's role and the process which will follow publication of the Panel's report.

The Panel has taken these views into account in preparing this report.

[1] *Margulies et al 'Patient volume per surgeon does not predict survival in adult level 1 trauma centres'. Journal of Trauma 2001; 50: 597-603*

[2] *Sara et al 'Does volume matter? The effect of trauma surgeons' caseload on mortality. Journal of Trauma 2003; 54: 829-834*

[3] *Capita Condition Survey 2003*

SECTION 3
THE INDEPENDENT SCRUTINY PANEL

3.1 TASK AND TERMS OF REFERENCE

The task of the Panel was to bring to bear independent, expert, probing scrutiny on the revised service proposals from NHS Lanarkshire and NHS Ayrshire & Arran. The aim of this scrutiny was to provide assurance through commentary that the revised proposals:

- Are safe, sustainable, evidence-based and represent value for money
- Are robust, patient-centred and consistent with clinical best practice and national policy
- Take account of local circumstances and the views of individuals and communities affected
- And that all viable service options have been considered.

In order to carry out its task the Panel required to:

- Take account of local circumstances and the views of individuals and communities affected by effectively engaging with local people, in liaison with the Scottish Health Council
- Provide a clear, comprehensive and accessible commentary on both sets of proposals in a form also suitable for publication
- And to complete this work by the turn of the year.

3.2 PROCESS

The Panel Chair was announced on 25th July 2007. During August he met representatives of NHS Lanarkshire to discuss the process which would follow. The remaining Panel members were appointed at the beginning of September.

It was estimated at the outset that Panel members would each spend a total of 15 days on work related to the revised service proposals from NHS Lanarkshire, and that this would include: all meetings, visits, public engagement activities, scrutiny of submissions and report writing.

The Panel met regularly, generally once each week, following its first meeting on 5th September 2007.

NHS Lanarkshire made three formal submissions to the Panel:

1. First submission containing its revised options, evidence and initial analysis – 28th September
2. Draft information pack for the Board's scoring events – 16th October. The Board subsequently sent the final version of the pack to the Panel at the same time it was sent to people attending the scoring event

3. Second submission including option appraisal report – 7th December.

These submissions were supplemented by regular communication between the Panel and the Board throughout the process. The Chair and Chief Executive of the Board attended a Panel meeting on 10th October.

The Panel provided its Interim Comment to the Board on 19th October.

Panel members visited Monklands Hospital on 23rd October. This enabled them to see the Accident and Emergency department and related areas of the hospital in operation, and to speak to frontline staff.

The Panel sought advice from the Scottish Health Council with regard to how it might engage with local people. During November, it held public meetings in Wishaw, East Kilbride and Airdrie (see section 16 for more detail). Written submissions to the Panel were invited through press releases, information packs and the website www.independentscrutinypanels.org.uk

The Panel published its Interim Report on 9th November.

Detailed financial information was submitted to the Panel in November. The Panel's finance expert met with the Board's Director of Finance to discuss this.

Following the identification of a number of errors within the second submission, the Board submitted a revised submission, and a number of supporting papers, to the Panel at the end of December.

The Panel prepared its final report during December, and this was sent to the Board and the Cabinet Secretary on 11th January 2008.

The Board is expected to consider the Panel's report at its meeting on 30th January 2008, and thereafter to make its recommendation to the Cabinet Secretary for Health and Well-being.

3.3 CRITERIA AGAINST WHICH PROPOSALS HAVE BEEN ASSESSED

As part of an iterative process following the Panel's appointment, the following criteria definitions were agreed with the Board.

1. Safety

Any proposal should provide a safe service[1]. Any clinical risks associated with the proposal should be assessed, managed and minimised so that the provision of the service should do no harm and aim to avoid preventable adverse events.

2. Sustainability

The proposal should facilitate both retention and recruitment of high calibre staff both now and in the future. This should consider doctors' rotas, training and accreditation

alongside training issues for other staff groups e.g. Emergency Care Practitioners (ECPs).

The proposal should be able to accommodate changes in patterns of care and the changing needs of the population and should enable optimal and efficient deployment of all types of resources including staff, facilities and equipment.[2]

3. Quality / Consistent with Clinical Best Practice

Care and treatment of service users should be clinically effective in terms of quality of health outcome for the service user. The proposal should fulfil the recommendations provided by professional clinical bodies and Royal Colleges.

4. Patient Centeredness[3]

- Accessibility

The proposal should facilitate provision of A&E and unscheduled care services as close as possible to where services users are in need. Convenience of accessibility by public transport and the local road network for service users and their families should be considered.

- Acceptability

The proposal should also provide satisfaction and promote a positive experience for users of A&E and unscheduled care services.

- Availability

This should include patient satisfaction derived from the responsiveness of the service, for example taking account of waiting times[4]; treatment times; opening times; and the extent to which service is tailored to individual needs and preferences. The proposal should ensure appropriate pathways of care based on people's needs.

5. Consistent with National Policy

The proposals should be consistent with the principles of the Kerr report and developing national policy as described in 'Better Health, Better Care'. This includes the presumption against centralisation.

[1] *Safe is identified as one of six aims to address quality in health. It is defined by the committee as, "avoiding injuries to patients from the care that is intended to help them". "Crossing the Quality Chasm: A New Health System for the 21st Century" Committee of Quality of Health Care in America, Institute of Medicine. 2001*

[2] *Efficient is identified as one of six aims to address quality in health. It is defined as, "avoiding waste, including waste of equipment, supplies, ideas and energy". "Crossing the Quality Chasm: A New Health System for the 21st Century" Committee of Quality of Health Care in America, Institute of Medicine. 2001*

[3] *Patient-centred is identified as one of six aims to address quality in health. It is defined as, "providing care that is respectful of and responsive to individual patient preferences, needs and values and ensuring that patient values guide all clinical decisions". "Crossing the Quality Chasm: A New Health System for the 21st Century" Committee of Quality of Health Care in America, Institute of Medicine. 2001*

[4] *Timely is identified as one of six aims to address quality in health. It is defined as, "reducing waits and sometimes harmful delays for both those who receive and those who give care". "Crossing the Quality Chasm: A New Health System for the 21st Century" Committee of Quality of Health Care in America, Institute of Medicine. 2001*

SECTION 4
THE CASE FOR CHANGE

4.1 KEY POINTS

The Panel notes that several of the factors listed by the Board make the case for giving a higher priority to primary care, community services and health promotion. This includes pressures from demographic change, from epidemiology and from implementing national policy. However, giving a higher priority to these developments does not necessarily require a reduction in the level of emergency services (such as emergency surgery, intensive care and emergency medical services) currently provided at Monklands Hospital.

The Panel found nationally available data on the quality of care which shows outcomes for patients treated at Monklands, Wishaw and Hairmyres hospitals. The Panel notes that all three hospitals are providing good quality clinical care, which generally compares favourably with the national average and has shown no sign of deteriorating over time.

The Board quoted a number of documents to support its case. However, the Panel found recommendations from within these documents, and also found separate documents, that provided a different perspective, but were not quoted by the Board. It appears to the Panel that the Board selected quotes and papers that supported its case, without reflecting others that provided a differing view.

The Board made the case for a division of elective and emergency services, and argued that these services should, if possible, be provided from separate hospitals. However, this is only one way in which these services can be divided; other possibilities would include retaining elective and emergency services at all three hospitals in Lanarkshire.

Other elements of the Board's case for change were considered in the following sections under the relevant criteria.

4.2 EVIDENCE PRESENTED

The Board's second formal submission to the Panel made the case for change in terms of:

1. Population changes
2. Epidemiology
3. Pressures on workforce, notably medical staff
4. Benefits to patients from concentrating work on fewer sites
5. Need for capital spending at Monklands Hospital and for investment in other services such as mental health and primary care.

These factors all featured in the Board's first submission to the Panel, although it is noted that the Board has rewritten this section in the light of the Panel's comments in its Interim Report.

4.3 ASSESSMENT OF THE EVIDENCE

The Panel notes that several of the factors listed by the Board make the case for giving a higher priority to primary care, community services and health promotion. This includes demographic change, epidemiology and the need for capital investment in community services. The Panel recognises the health needs of people with long-term conditions and welcomes the development of services that address these needs. It acknowledges the Board has already made good progress in this direction, as the following data on spending per head of population show

Board	All NHS	Community	Family Health	Both
Scotland	£1,503	£152	£411	£562
Greater Glasgow & Clyde	£1,612	£147	£436	£583
Ayrshire & Arran	£1,622	£162	£419	£581
Lanarkshire	£1,457	£166	£405	£571
Tayside	£1,550	£143	£410	£553
Forth Valley	£1,446	£131	£417	£548
Fife	£1,445	£143	£394	£537
Lothian	£1,347	£158	£373	£531
Grampian	£1,313	£111	£381	£492

These figures are revenue costs and the Board's proposals would increase these as well as spending on capital refurbishment.

This shows that NHS Lanarkshire is already spending more than the national average for family health (such as GPs, community pharmacies, dentists, etc) and community services (such as nurses, health visitors etc). In this sample of eight NHS Boards (excluding the NHS Boards covering islands and rural areas) NHS Lanarkshire spent more on community services per head of population than any other Health Board, and came third in terms of spending on community and family health services combined.

However, giving a higher priority to these developments is not an argument for considering withdrawing emergency services (such as emergency surgery, intensive care and emergency medical services) from Monklands Hospital. The key issues appear to be workforce constraints, desire to concentrate services on a reduced number of hospital sites to improve outcomes for patients and efficiency of service, and problems being able to afford the refurbishment of Monklands Hospital. The evidence presented by the Board relating to these pressures is considered in more detail in section 6, Sustainability, section 7, Consistent with Clinical Best Practice, and section 12, Finance. The following is a discussion of some of the main issues.

In terms of workforce issues, the Panel has scrutinised the Board's evidence in some detail in section 6 on Sustainability. The Panel has pointed out that while pressures have increased, the supply of new hospital consultants has also increased. The Board claimed anaesthetics may lose its accreditation but provided little evidence to support this position. The Board also presented a series of estimates of the additional numbers of doctors required in different specialties but the case made was not always easy to follow and hence the numbers could not be verified.

Interviews with newly appointed hospital doctors paint a different picture to the one in the Board's second submission – they describe a series of advantages to working in NHS Lanarkshire and while they have views on the most appropriate configuration of acute services, it was certainly not a factor when accepting a job. They say the main deterrent is the on-going uncertainty around the configuration of acute services.

The Panel also noted that while the Board has concentrated heavily on the risks in terms of sustainability of medical staffing, it had not addressed the fact that scenarios B, C and D in particular propose arrangements of emergency services that go against recommendations about which emergency services should be co-located made by the Academy of Medical Royal Colleges, the British Association for Emergency Medicine and the Royal College of Surgeons. The threat from this non-compliance to recruitment of staff has not been considered.

While pressures on staff numbers and time undoubtedly exist, the Panel was not persuaded they were sufficient to reduce emergency services on the Monklands site.

The Board also advanced an argument that concentrating services on fewer sites will lead to better outcomes for patients. The Panel scrutinised the studies the Board cited in some detail, and found a number of problems with the case presented. (These problems are set out in detail in section 7 - Consistent with Best Clinical Practice). In summary the evidence was often old, came from another country (typically America) and applied to much lower volumes of work than are current in NHS Lanarkshire. For example, hospitals dealing with higher volumes of knee replacements have lower post-operative mortality – but NHS Lanarkshire carried out 456 operations of this type last year so all three hospitals will be above the threshold (and since it was based on clinical practice in America in the late 1980s the same relationship may not even exist in Scotland twenty years later). The evidence is stronger for severe trauma injuries, but this represents a small proportion of trauma work and if centralisation is necessary there is no stated reason why it renders the remaining trauma service unsustainable.

The interviews with newly appointed consultants showed that opportunities to specialise were not an important factor to them and indeed some had opted to work in Lanarkshire because services in Glasgow were becoming overly specialised. The new consultants recognised opportunities to specialise could be more important later in their careers but they suggested a number of ways in which the overall job package could be changed to make amends if these were not available. In stark contrast to the image sometimes given of the medical profession they did not expect more pay or time off – they hoped for more dialogue with management and educational opportunities to make their job more satisfying. This suggests staff retention may not be as much of a problem as the Board fears.

Another argument advanced in favour of change is the separation of emergency and elective care, and references from several professional bodies are advanced in support of this concept. However, the Board has taken one particular interpretation of such a split, namely separating services across hospital sites, and judged everything against that criterion. In fact, the very reports it has cited to support this policy set out a range of options; for example, the 2006 Royal College of Surgeons report "Delivering Surgical Services: Options for Maximising Resources" discusses surgical assessment units as a way to achieve some degree of separation without taking the majority of emergency services from one hospital site in an NHS Board area. The Panel notes that the 2006 Audit Scotland report 'Tackling Waiting Times in the NHS in Scotland' said NHS Boards should "develop ways of ensuring that emergency demand does not affect planned admissions" (page 37) but it did not say these services should be provided from separate hospital sites. In short, the separation could be achieved in a variety of ways but the Board has selected the most extreme of these (physical separation of services onto different sites) without adequate justification.

Overall, the Board has provided arguments for the importance of the development of health promotion, primary care and community services in Lanarkshire. It has not provided a convincing case for the more radical options considered in the option appraisal. The case for change that the Board presented portrays an acute service beset by problems. This is in stark contrast to the perceptions of the newly appointed hospital consultants interviewed who saw many positives and strengths they wanted to build upon. Part of the recruitment difficulties the Board is now facing seem to result from the on-going uncertainty about the configuration of hospital services. The newly appointed hospital consultants said they felt the service could have been "sold" to them more convincingly. Given the deficiencies the Panel has pointed to in the case for change, there is an opportunity to start building on the evident strengths of the current service.

4.4 CURRENT DATA ON QUALITY OF CARE AT NHS LANARKSHIRE ACUTE HOSPITALS

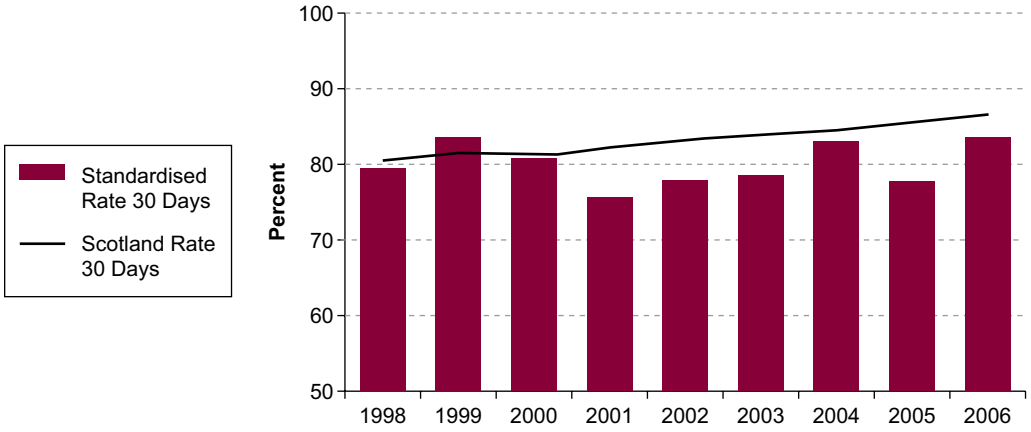
In its assessment of the evidence the Panel noted that the Board's "Case for Change" focused mainly on the problems with the existing hospital service. While recognising these are important, the Panel felt it was important to be reminded of the strengths of the existing service in terms of the quality of clinical care being delivered.

This section of the report assembles data on aspects of the quality of clinical care in Monklands, Hairmyres and Wishaw Hospitals with existing services. The aim of this section is not to show which of Lanarkshire's acute hospitals is "better", or to draw sweeping conclusions from one hospital or the other being slightly above or below the national average. Nor should it be read as implying that nothing should ever change in the acute sector. However, the Panel feels it is useful to be reminded that NHS Lanarkshire's acute hospitals generally provide excellent quality clinical care, which compares favourably with the national average and shows no sign of deteriorating over time as the pressures described by the Board increase.

1. Survival 30 days after an acute myocardial infarction

Source: Scottish Clinical Indicators on the Web July 2007
(http://www.indicators.scot.nhs.uk/Trends_July_2007/AMI.html)

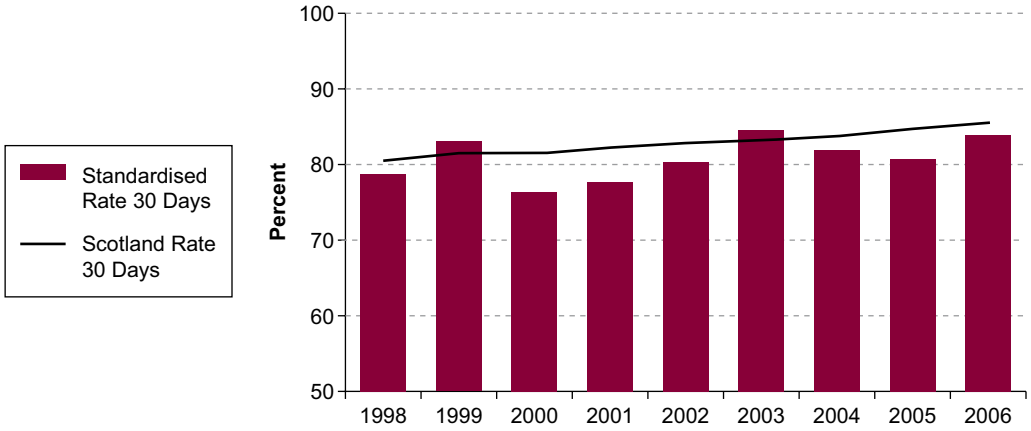
Acute Myocardial Infarction 30 days Survival in Monklands Hospital
Percentage of patients surviving for 30 days after an emergency admission for AMI
Standardised rates with Scotland comparison - Years ending 30th June 1998 to 2006



	Year ending 30th June:								
Monklands Hospital	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Patients	410	364	370	465	416	377	344	323	290
Survived 30 Days	334	308	302	365	325	301	286	254	246
Crude Rate 30 Days	81.5	84.6	81.6	78.5	78.1	79.8	83.1	78.6	84.8
Standardised Rate 30 Days	79.4	82.9	80.4	76.6	78.0	78.6	82.7	77.9	83.3

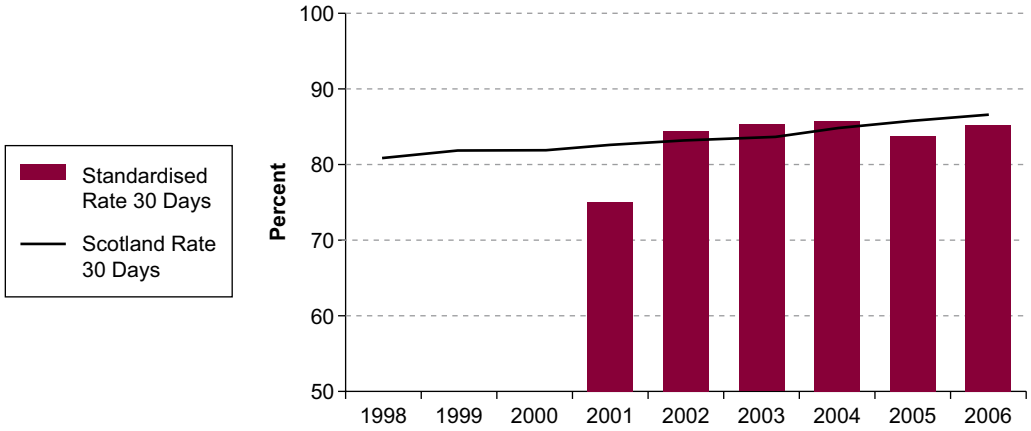
Acute Myocardial Infarction 30 days Survival in Hairmyres Hospital

Percentage of patients surviving for 30 days after an emergency admission for AMI
Standardised rates with Scotland comparison - Years ending 30th June 1998 to 2006



	Year ending 30th June:								
Hairmyres Hospital	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Patients	276	278	285	273	279	290	248	222	233
Survived 30 Days	225	237	224	214	227	249	201	182	200
Crude Rate 30 Days	81.5	85.3	78.6	78.4	81.4	85.9	81.0	82.0	85.8
Standardised Rate 30 Days	79.0	83.5	77.0	77.6	80.3	85.3	81.4	80.8	84.9

Acute Myocardial Infarction 30 days Survival in Wishaw General Hospital
Percentage of patients surviving for 30 days after an emergency admission for AMI
Standardised rates with Scotland comparison - Years ending 30th June 1998 to 2006



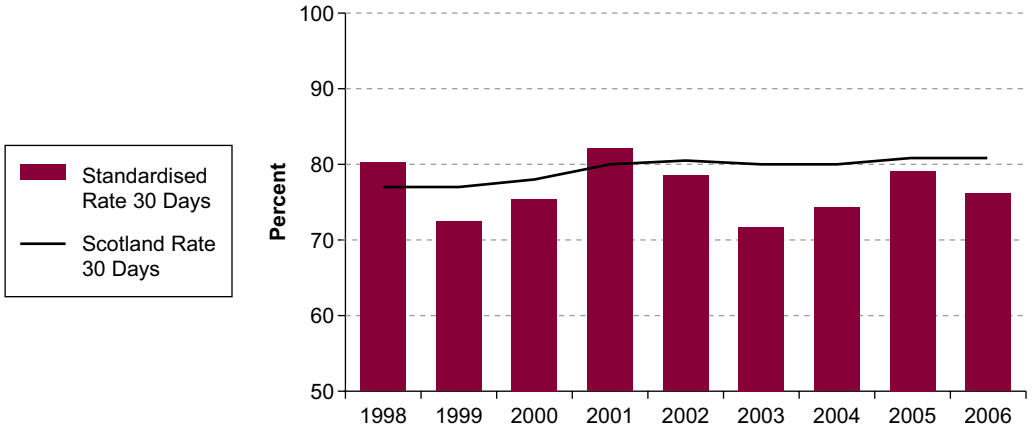
	Year ending 30th June:								
Wishaw General Hospital	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Patients	0	0	0	34	339	323	293	251	241
Survived 30 Days	0	0	0	25	287	275	250	209	202
Crude Rate 30 Days	0.0	0.0	0.0	73.5	84.7	85.1	85.3	83.3	83.8
Standardised Rate 30 Days	0.0	0.0	0.0	75.3	84.4	85.3	85.4	83.2	85.3

2. Survival 30 days after a stroke

Source: Scottish Clinical Indicators on the Web July 2007
(http://www.indicators.scot.nhs.uk/Trends_July_2007/Stroke.html)

Stroke 30 days Survival in Monklands Hospital

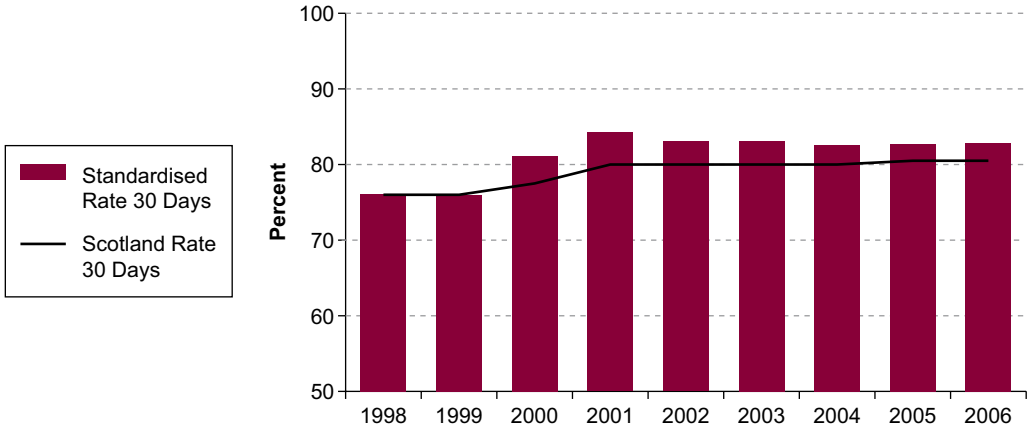
Percentage of patients surviving for 30 days after an emergency admission for Stroke
Standardised rates with Scotland comparison - Years ending 30th June 1998 to 2006



	Year ending 30th June:								
Monklands Hospital	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Patients	324	326	323	385	328	344	349	289	318
Survived 30 Days	263	237	246	316	260	250	261	230	246
Crude Rate 30 Days	81.2	72.7	76.2	82.1	79.3	72.7	74.8	79.6	77.4
Standardised Rate 30 Days	80.2	72.3	75.8	82.0	78.8	71.8	74.2	79.1	76.7

Stroke 30 days Survival in Hairmyres Hospital

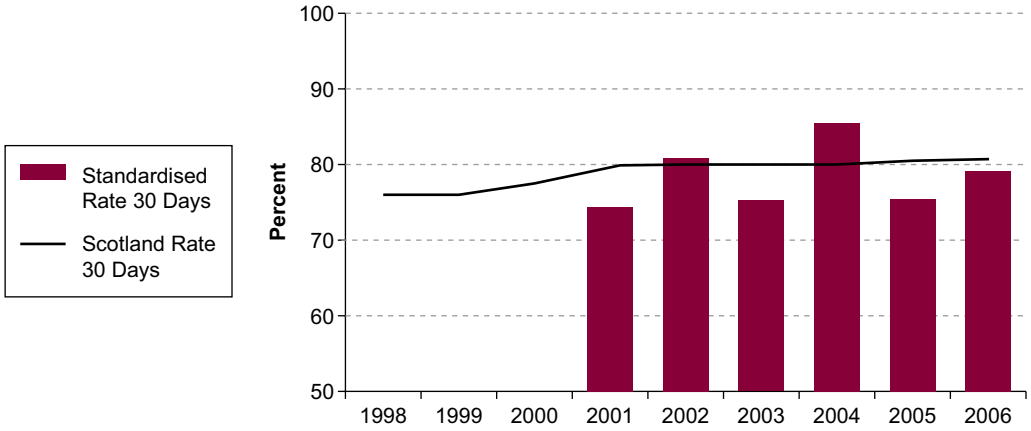
Percentage of patients surviving for 30 days after an emergency admission for Stroke
Standardised rates with Scotland comparison - Years ending 30th June 1998 to 2006



	Year ending 30th June:								
Hairmyres Hospital	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Patients	299	299	291	367	394	382	337	351	291
Survived 30 Days	230	230	239	309	332	321	282	290	239
Crude Rate 30 Days	76.9	76.9	82.1	84.2	84.3	84.0	83.7	82.6	82.1
Standardised Rate 30 Days	76.1	76.0	81.3	84.4	83.5	83.6	83.1	83.3	83.6

Stroke 30 days Survival in Wishaw General Hospital

Percentage of patients surviving for 30 days after an emergency admission for Stroke
Standardised rates with Scotland comparison - Years ending 30th June 1998 to 2006



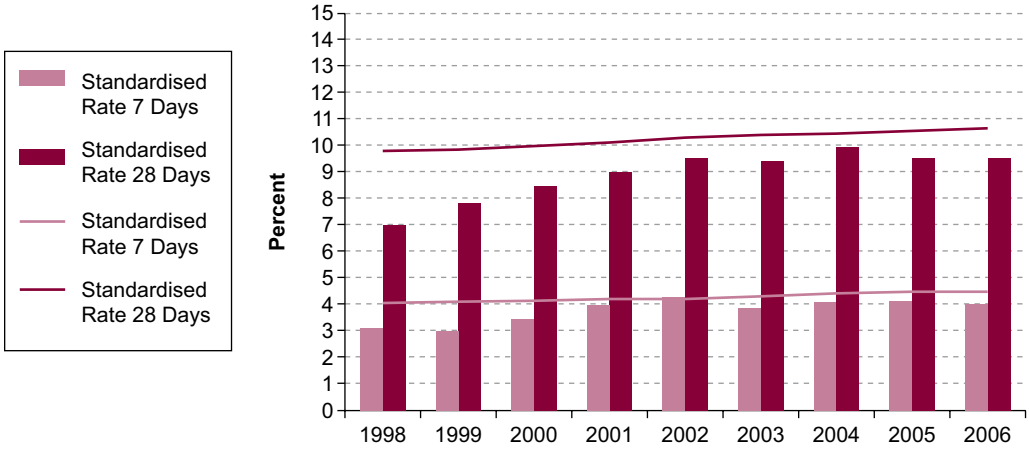
	Year ending 30th June:								
Wishaw General Hospital	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Patients	0	0	0	50	437	368	354	358	340
Survived 30 Days	0	0	0	38	359	281	305	272	270
Crude Rate 30 Days	0.0	0.0	0.0	76.0	82.2	76.4	86.2	76.0	79.4
Standardised Rate 30 Days	0.0	0.0	0.0	74.6	81.4	76.2	86.1	76.1	79.4

3. Emergency readmissions within 7 and 28 days of going home from a medical specialty

Source: Scottish Clinical Indicators on the Web July 2007
(http://www.indicators.scot.nhs.uk/Trends_July_2007/Medical.html)

Medical Readmissions in Monklands Hospital

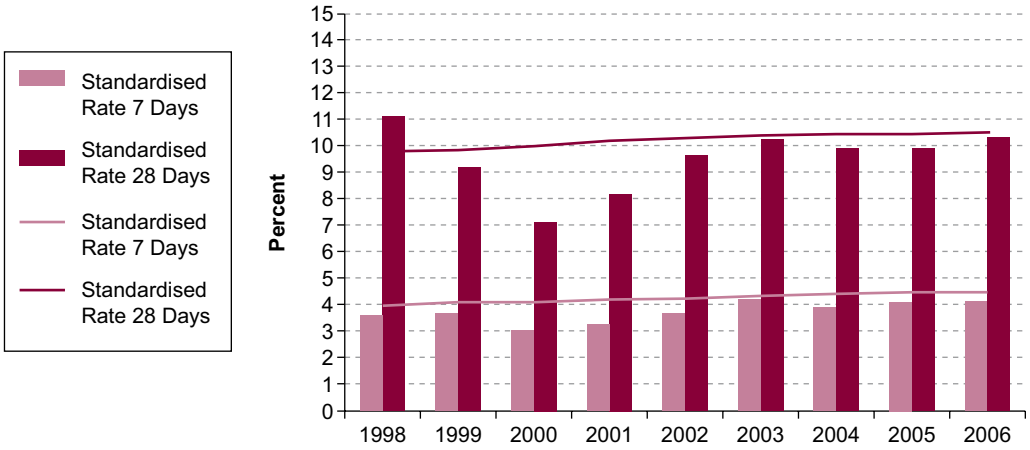
Emergency admission rates within 7 and 28 days of discharge from a medical specialty
Standardised rates with Scotland comparison - Years ending 30th June 1998 to 2006



	Year ending 30th June:								
Monklands Hospital	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Medical discharges (7 days)	16,943	17,270	18,892	19,619	19,184	18,347	19,739	19,936	18,365
Emergency readmissions within 7 days	527	508	638	776	760	715	792	787	727
Crude Rate 7 Days	3.1	2.9	3.4	4.0	4.0	3.9	4.0	3.9	4.0
Standardised Rate 7 Days	3.3	3.0	3.5	4.0	4.2	4.1	4.2	4.1	4.0
Medical discharges (28 days)	16,869	17,182	18,813	19,518	19,120	18,282	19,653	19,855	18,275
Emergency readmissions within 28 days	1,197	1,256	1,524	1,740	1,756	1,724	1,916	1,885	1,772
Crude Rate 28 Days	7.1	7.3	8.1	8.9	9.2	9.4	9.7	9.5	9.7
Standardised Rate 28 Days	7.1	7.7	8.5	9.1	9.5	9.6	9.9	9.5	9.5

Medical Readmissions in Hairmyres Hospital

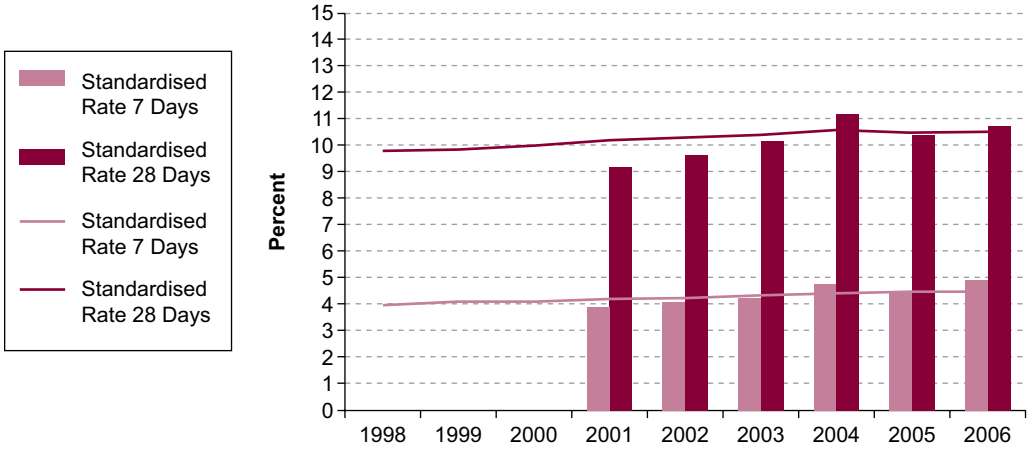
Emergency admission rates within 7 and 28 days of discharge from a medical specialty
Standardised rates with Scotland comparison - Years ending 30th June 1998 to 2006



	Year ending 30th June:								
Hairmyres Hospital	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Medical discharges (7 days)	6,418	8,509	10,690	10,564	12,998	13,478	13,654	13,364	12,598
Emergency readmissions within 7 days	268	313	291	345	468	557	498	507	499
Crude Rate 7 Days	4.2	3.7	2.7	3.3	3.6	4.1	3.6	3.8	4.0
Standardised Rate 7 Days	3.6	3.7	3.0	3.3	3.7	4.2	3.9	4.1	4.2
Medical discharges (28 days)	6,370	8,452	10,635	10,498	12,921	13,389	13,576	13,271	12,520
Emergency readmissions within 28 days	704	799	731	880	1,277	1,384	1,315	1,283	1,284
Crude Rate 28 Days	11.1	9.5	6.9	8.4	9.9	10.3	9.7	9.7	10.3
Standardised Rate 28 Days	11.1	9.2	7.2	8.1	9.7	10.2	9.9	9.9	10.3

Medical Readmissions in Wishaw General Hospital

Emergency admission rates within 7 and 28 days of discharge from a medical specialty
Standardised rates with Scotland comparison - Years ending 30th June 1998 to 2006



	Year ending 30th June:								
Wishaw General Hospital	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Medical discharges (7 days)	0	N/A	0	1,125	17,606	18,525	19,576	19,373	20,893
Emergency readmissions within 7 days	0	N/A	0	47	797	873	1,024	957	1,108
Crude Rate 7 Days	0.0	N/A	0.0	4.2	4.5	4.7	5.2	4.9	5.3
Standardised Rate 7 Days	0.0	N/A	0.0	3.9	4.1	4.3	4.8	4.5	4.9
Medical discharges (28 days)	0	N/A	0	1,121	17,518	18,453	19,490	19,262	20,803
Emergency readmissions within 28 days	0	N/A	0	110	1,777	1,937	2,203	2,010	2,248
Crude Rate 28 Days	0.0	N/A	0.0	9.8	10.1	10.5	11.3	10.4	10.8
Standardised Rate 28 Days	0.0	N/A	0.0	9.2	9.6	10.1	11.1	10.3	10.8

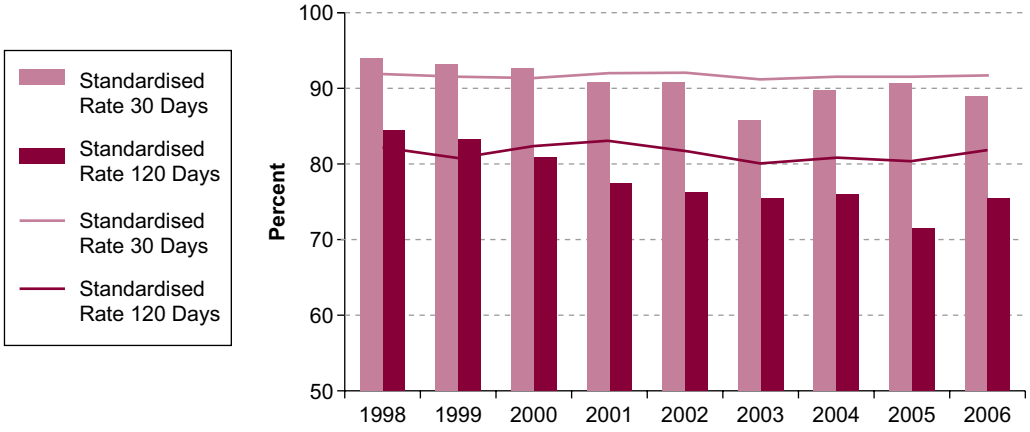
4. Survival 30 and 120 days after a hip fracture

Source: Scottish Clinical Indicators on the Web July 2007
(http://www.indicators.scot.nhs.uk/Trends_July_2007/Hip.html)

Hip Fracture 30 and 120 days Survival in Monklands Hospital

Percentage of patients surviving for 30/120 days after an emergency admission for Hip Fracture

Standardised rates with Scotland comparison - Years ending 30th June 1998 to 2006

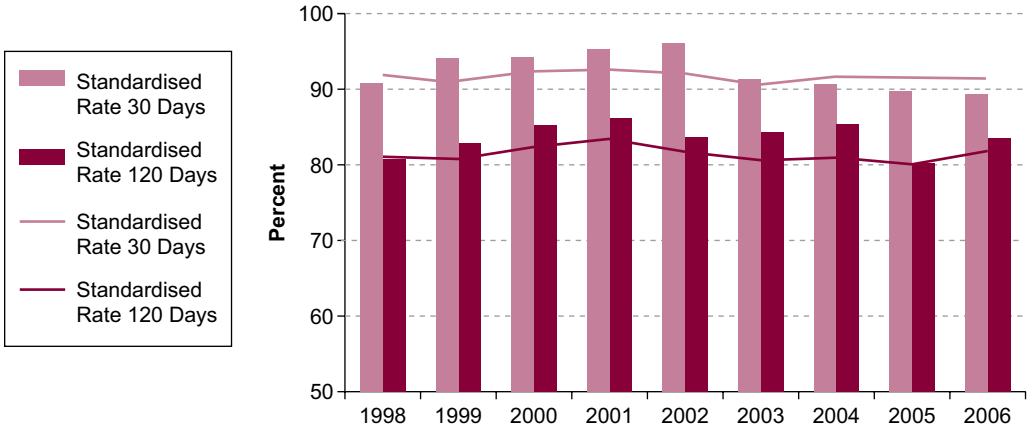


	Year ending 30th June:								
Monklands Hospital	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Patients	180	196	214	197	208	214	206	212	205
Survived 30 Days	170	185	201	181	188	187	186	193	182
Crude Rate 30 Days	94.4	94.4	93.9	91.9	90.4	87.4	90.3	91.0	88.8
Standardised Rate 30 Days	93.5	93.3	93.1	90.8	89.9	86.9	89.6	90.3	88.3
Survived 120 Days	155	167	178	158	163	163	159	159	158
Crude Rate 120 Days	86.1	85.2	83.2	80.2	78.4	76.2	77.2	75.0	77.1
Standardised Rate 120 Days	84.3	83.1	81.7	78.0	77.6	75.6	76.1	73.8	76.2

Hip Fracture 30 and 120 days Survival in Hairmyres Hospital

Percentage of patients surviving for 30/120 days after an emergency admission for Hip Fracture

Standardised rates with Scotland comparison - Years ending 30th June 1998 to 2006



	Year ending 30th June:								
Hairmyres Hospital	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Patients	179	185	176	169	178	185	170	214	191
Survived 30 Days	164	174	166	161	171	173	156	192	173
Crude Rate 30 Days	91.6	94.1	94.3	95.3	96.1	93.5	91.8	89.7	90.6
Standardised Rate 30 Days	90.9	94.2	93.6	94.8	95.8	92.8	92.7	89.8	89.9
Survived 120 Days	148	154	154	148	150	159	143	171	163
Crude Rate 120 Days	82.7	83.2	87.5	87.6	84.3	85.9	84.1	79.9	85.3
Standardised Rate 120 Days	81.2	83.4	85.9	86.5	83.8	84.4	85.6	80.1	83.9

Hip Fracture 30 and 120 days Survival in Wishaw General Hospital

Percentage of patients surviving for 30/120 days after an emergency admission for Hip Fracture

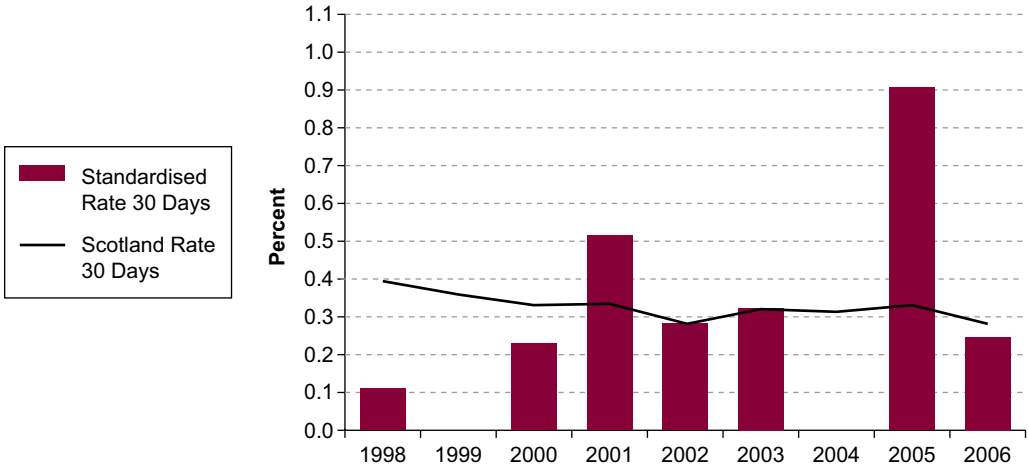
Standardised rates with Scotland comparison - Years ending 30th June 1998 to 2006

	Year ending 30th June:								
Monklands Hospital	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Patients	0	0	0	N/A	196	215	221	245	231
Survived 30 Days	0	0	0	N/A	184	199	204	223	210
Crude Rate 30 Days	0.0	0.0	0.0	N/A	93.9	92.6	92.3	91.0	90.9
Standardised Rate 30 Days	0.0	0.0	0.0	N/A	93.7	91.9	92.0	90.6	90.3
Survived 120 Days	0	0	0	N/A	156	183	179	183	190
Crude Rate 120 Days	0.0	0.0	0.0	N/A	79.6	85.1	81.0	74.7	82.3
Standardised Rate 120 Days	0.0	0.0	0.0	N/A	79.7	83.7	80.2	74.1	81.0

5. Mortality within 30 days of selected planned operations

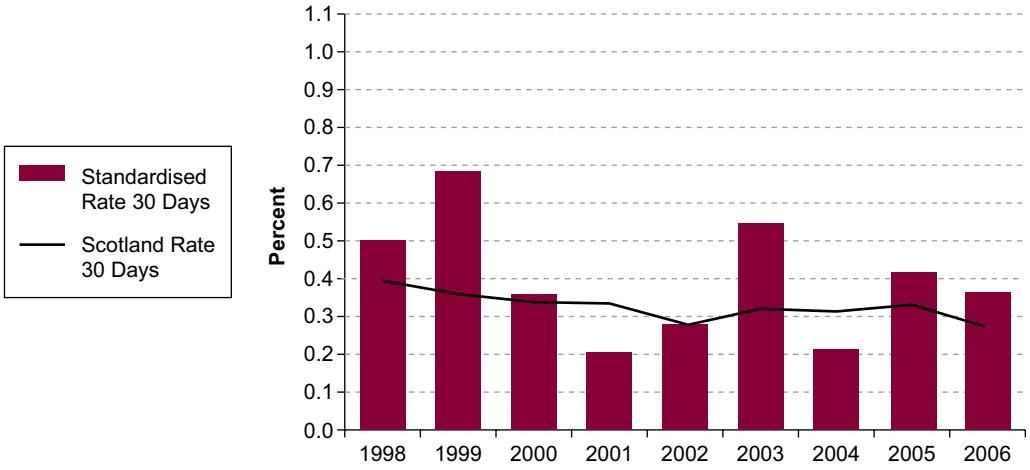
Source: Scottish Clinical Indicators on the Web July 2007
(http://www.indicators.scot.nhs.uk/Trends_July_2007/Planned.html)

Selected planned operations: Mortality within 30 days in Monklands Hospital
Percentage of deaths within 30 days of surgery for patients undergoing a group of 12 operations on an elective basis
Standardised rates with Scotland comparison - Years ending 30th June 1998 to 2006



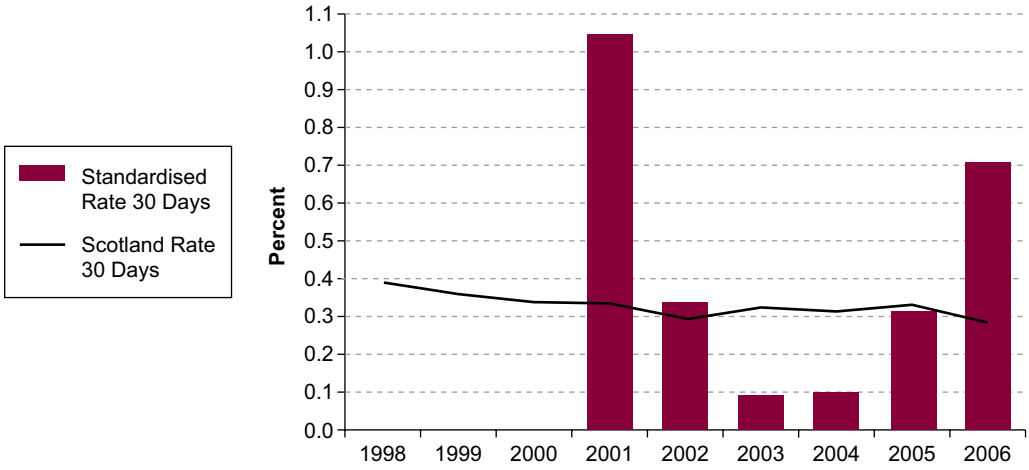
	Year ending 30th June:								
Monklands Hospital	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Operations	889	867	811	830	945	777	865	849	927
Deaths within 30 Days	1	0	2	3	2	3	0	7	2
Crude Rate 30 Days	0.11	0.00	0.25	0.36	0.21	0.39	0.00	0.82	0.22
Standardised Rate 30 Days	0.11	0.00	0.23	0.52	0.28	0.33	0.00	0.91	0.25

Selected planned operations: Mortality within 30 days in Hairmyres Hospital
Percentage of deaths within 30 days of surgery for patients undergoing a group of 12 operations on an elective basis
Standardised rates with Scotland comparison - Years ending 30th June 1998 to 2006



	Year ending 30th June:								
Hairmyres Hospital	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Operations	967	1116	948	1231	2379	2390	2627	2403	2399
Deaths within 30 Days	9	13	5	3	7	13	5	10	10
Crude Rate 30 Days	0.93	1.16	0.53	0.24	0.29	0.54	0.19	0.42	0.42
Standardised Rate 30 Days	0.50	0.68	0.36	0.19	0.28	0.55	0.21	0.43	0.36

Selected planned operations: Mortality within 30 days in Wishaw General Hospital
Percentage of deaths within 30 days of surgery for patients undergoing a group of 12 operations on an elective basis
Standardised rates with Scotland comparison - Years ending 30th June 1998 to 2006

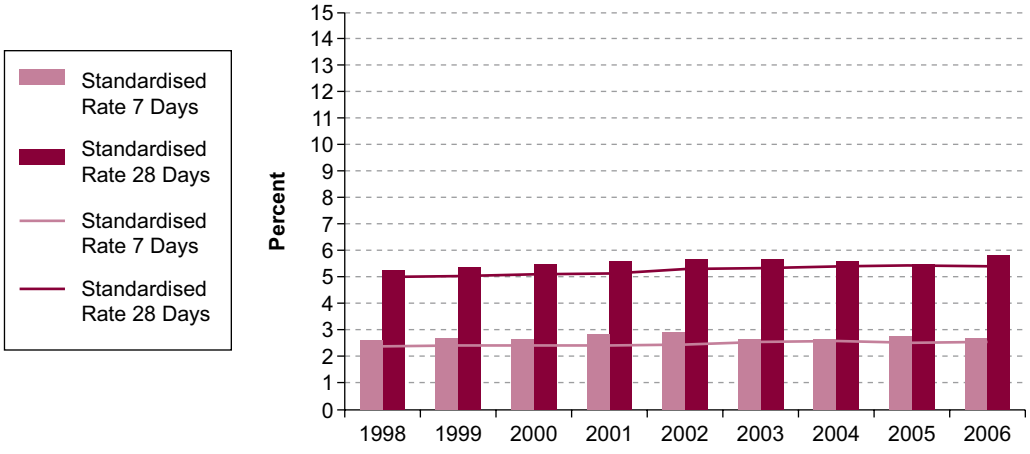


	Year ending 30th June:								
Wishaw General Hospital	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Operations	0	0	0	71	1045	1041	1000	972	783
Deaths within 30 Days	0	0	0	1	5	1	1	4	9
Crude Rate 30 Days	0.00	0.00	0.00	1.41	0.48	0.10	0.10	0.41	1.15
Standardised Rate 30 Days	0.00	0.00	0.00	1.05	0.34	0.09	0.09	0.31	0.71

6. Emergency readmissions within 7 and 28 days of discharge from a surgical specialty

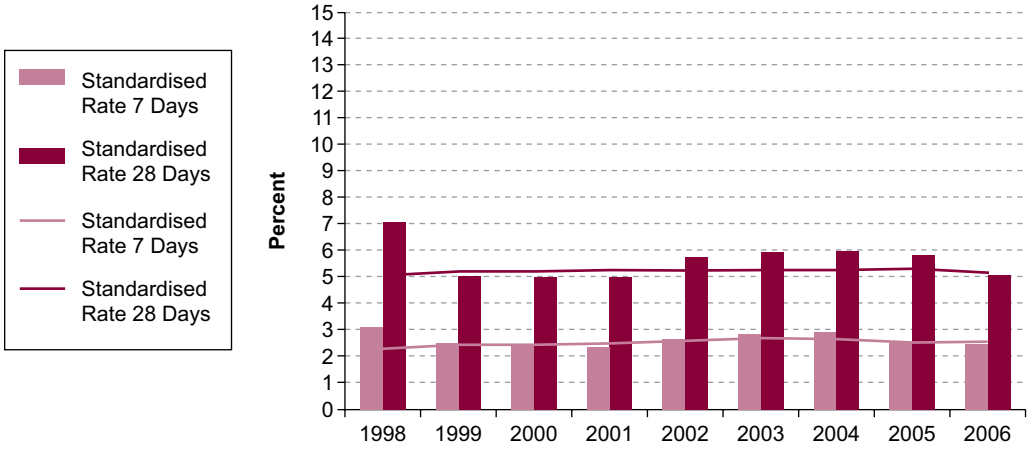
Source: Scottish Clinical Indicators on the Web July 2007
(http://www.indicators.scot.nhs.uk/Trends_July_2007/Surgical.html)

Surgical Readmissions in Monklands Hospital
Emergency admission rates within 7 and 28 days of discharge from a surgical specialty
Standardised rates with Scotland comparison - Years ending 30th June 1998 to 2006



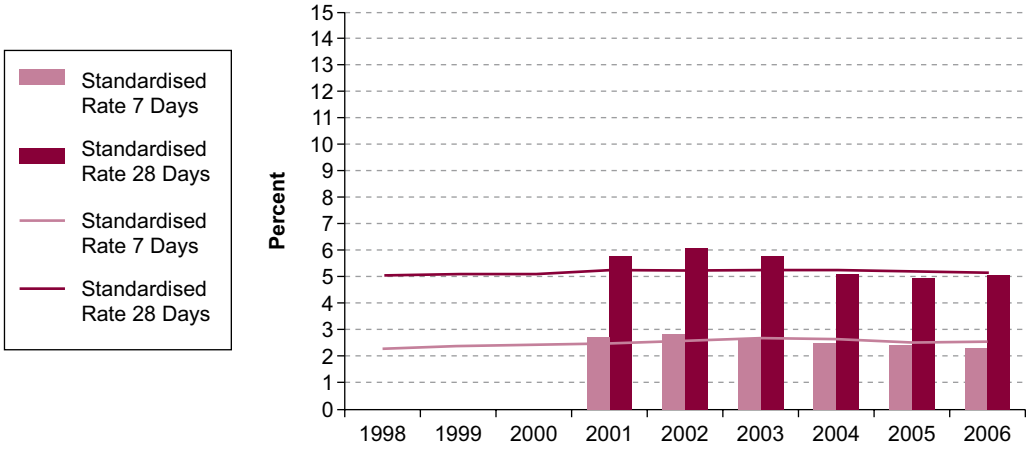
	Year ending 30th June:								
Monklands Hospital	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Surgical discharges (7days)	15,226	16,396	16,329	15,700	15,354	14,345	14,150	13,446	13,858
Emergency re-admissions within 7 days	414	452	460	480	480	423	404	398	413
Crude Rate 7 Days	2.7	2.8	2.8	3.1	3.1	2.9	2.9	3.0	3.0
Standardised Rate 7 Days	2.6	2.7	2.7	2.8	2.9	2.6	2.6	2.7	2.7
Surgical discharges (28days)	15,197	16,371	16,299	15,657	15,331	14,319	14,114	13,405	13,821
Emergency re-admissions within 28 days	805	887	899	909	937	908	862	811	876
Crude Rate 28 Days	5.3	5.4	5.5	5.8	6.1	6.3	6.1	6.0	6.3
Standardised Rate 28 Days	5.3	5.4	5.5	5.6	5.7	5.7	5.6	5.5	5.8

Surgical Readmissions in Hairmyres Hospital
Emergency admission rates within 7 and 28 days of discharge from a surgical specialty
Standardised rates with Scotland comparison - Years ending 30th June 1998 to 2006



	Year ending 30th June:								
Hairmyres Hospital	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Surgical discharges (7days)	15,751	14,778	13,098	14,284	17,339	16,902	16,603	15,929	14,711
Emergency re-admissions within 7 days	551	372	341	373	499	524	541	459	383
Crude Rate 7 Days	3.5	2.5	2.6	2.6	2.9	3.1	3.3	2.9	2.6
Standardised Rate 7 Days	3.2	2.4	2.3	2.3	2.6	2.8	2.9	2.6	2.3
Surgical discharges (28days)	15,705	14,722	13,054	14,247	17,288	16,865	16,566	15,897	14,676
Emergency re-admissions within 28 days	1,119	763	742	804	1,082	1,126	1,135	1,017	867
Crude Rate 28 Days	7.1	5.2	5.7	5.6	6.3	6.7	6.9	6.4	5.9
Standardised Rate 28 Days	7.1	4.9	5.0	5.0	5.7	5.9	5.9	5.6	5.2

Surgical Readmissions in Wishaw General Hospital
Emergency admission rates within 7 and 28 days of discharge from a surgical specialty
Standardised rates with Scotland comparison - Years ending 30th June 1998 to 2006

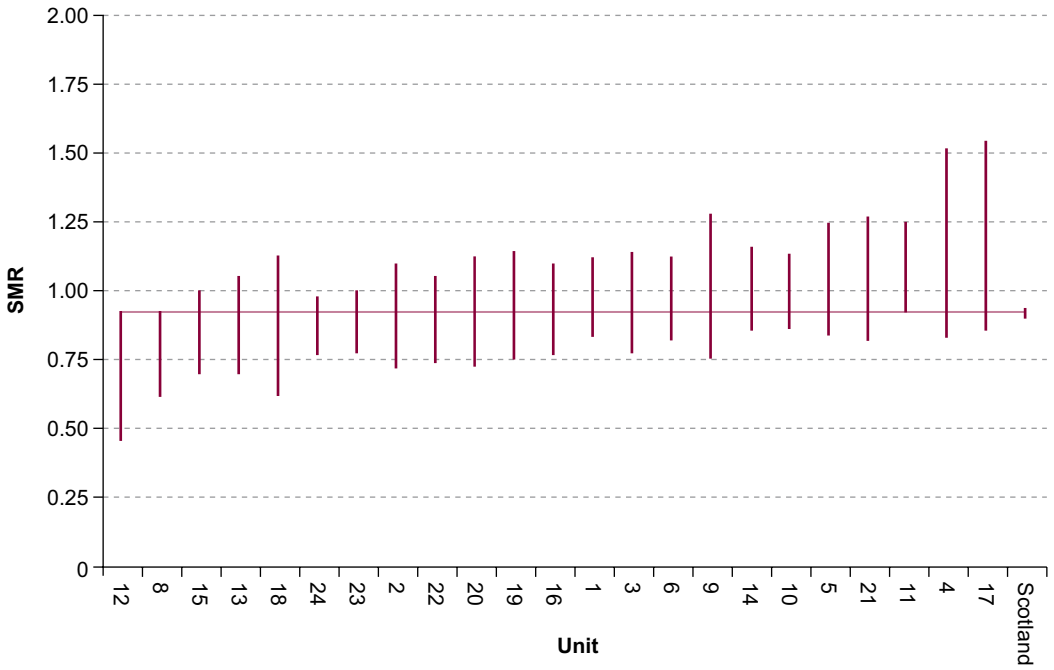


	Year ending 30th June:								
Wishaw General Hospital	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Surgical discharges (7days)	0	0	0	1,328	16,181	15,275	15,634	15,708	16,498
Emergency re-admissions within 7 days	0	0	0	40	504	417	384	411	387
Crude Rate 7 Days	0.0	0.0	0.0	3.0	3.1	2.7	2.5	2.6	2.3
Standardised Rate 7 Days	0.0	0.0	0.0	2.7	2.8	2.5	2.2	2.4	2.2
Surgical discharges (28days)	0	0	0	1,325	16,151	15,247	15,593	15,667	16,456
Emergency re-admissions within 28 days	0	0	0	83	1,085	946	872	857	920
Crude Rate 28 Days	0.0	0.0	0.0	6.3	6.7	6.2	5.6	5.5	5.6
Standardised Rate 28 Days	0.0	0.0	0.0	5.8	6.1	5.7	5.1	5.0	5.2

7. Mortality rates (SMRs) in intensive care unit

Source: Scottish Intensive Care Society Audit Group "Audit of Critical Care in Scotland 2005/2006", page 39 (http://www.sicsag.scot.nhs.uk/Publications/Main.htm)

Figure 45 Case mix adjusted SMRs (APACHE II) in ICU and Combined Units (2006)



Monklands, Hairmyres and Wishaw Hospitals are not separately identified in this graph but the Report comments, "The pattern of SMRs across Scotland is remarkably uniform. One unit has an SMR which is statistically lower than the Scottish mean. Another unit has been excluded from this table because of missing data. None of the units have an SMR which is statistically higher than the Scottish mean." (page 39)

8. Various indicators of surgical performance

Source: NHS QIS "Surgical Profile NHS Lanarkshire November 2006" (extracted from Executive Summary) http://www.indicators.scot.nhs.uk/SP_2006/Profiles.html

	Indicator	**Markedly different from national average?**	**Appeared to be high for …**
All surgical specialties	Deaths within 120 days of any elective admission to any surgical specialty	No	Hairmyres
	As above but where surgical procedure performed	No	Hairmyres
	Deaths within 120 days of any unscheduled admission to any surgical specialty	No	
	As above but where surgical procedure performed	No	
	Percentage of occasions where adverse event did NOT occur	No	Hairmyres – but given the indicator this is a good thing
	Percentage of occasions where adverse event contributed to death	No	Wishaw appeared to be low
General & Vascular Surgery	Deaths within 120 days of any elective admission to general surgery	No	Monklands in second half of 2004
	Deaths within 120 days of any unscheduled admissions to general surgery	No	Monklands
	Rate of deep vein thrombosis or pulmonary embolism within 90 days of admission	No	
	Rate of emergency readmission within 28 days of discharge from general surgery	No	Wishaw appeared to be low
	Mortality within 120 days of elective admission for cholecystectomy surgery	No	
	Mortality within 120 days of unscheduled admission for cholecystectomy surgery	No	
	Emergency readmission within 28 days of discharge following cholecystectomy	No	
	Mortality at 120 days following admission for abdominal aortic aneurysm surgery	No	
	Emergency readmission within 28 days of discharge following abdominal aortic aneurysm surgery	No	
	Percentage of invasive breast cancers <2cm diameter treated with breast-conserving surgery	Lower	
	Percentage of breast cancer patients who had a mastectomy given reconstructive surgery within a year	No	

Orthopaedic surgery	Deaths within 120 days of any elective admission to orthopaedic surgery	No	
	Deaths within 120 days of any unscheduled admission to orthopaedic surgery	No	
	Rate of deep vein thrombosis or pulmonary embolism within 90 days of admission	No	
	Rate of emergency readmission within 28 days of discharge from orthopaedic surgery	No	
	Mortality within 120 days of admission for hip fracture	No	
	Percentage of patients who returned home within 30 days of a hip fracture	No	
	Percentage of patients who went to theatre within 24 safe hours of a hip fracture		Higher for Monklands, lower for Wishaw
	Rate of deep vein thrombosis or pulmonary embolism within 90 days of admission for hip fracture	No	
	Rate of emergency readmission within 28 days of discharge following hip fracture	No	
	Mortality at 90 days following hip arthroplasty	No	
	Rate of (i) dislocation and (ii) infected prosthesis within 365 days of hip arthroplasty	No	
	Rate of deep vein thrombosis or pulmonary embolism within 90 days of admission for hip arthroplasty	No	
	Mortality at 90 days following knee arthroplasty	No	
	Rate of (i) dislocation and (ii) infected prosthesis within 365 days of knee arthroplasty	No	
	Rate of deep vein thrombosis or pulmonary embolism within 90 days of admission for knee arthroplasty	No	

9. Waiting times in accident and emergency department

Source: Information and Statistics Division
http://www.isdscotland.org/isd/servlet/FileBuffer?namedFile=A_and_E_Core_Non_Core_Nov07.xls&pContentDispositionType=inline

Accident and Emergency: Attendances and performance against the 4-hour target from arrival to admission, discharge or transfer

	Jul-07			Aug-07			Sep-07		
Hospital/ A&E Site	**Total**	**A&E stay ≤ 4 hrs**	**Percentage**	**Total**	**A&E stay ≤ 4 hrs**	**Percentage**	**Total**	**A&E stay ≤ 4 hrs**	**Percentage**
Monklands District General	5 662	5 443	96%	5 693	5 499	97%	5 495	5 384	98%
Hairmyres Hospital	4 545	4 270	94%	4 834	4 718	98%	4 752	4 530	95%
Wishaw District General	5 555	5 351	96%	5 614	5 531	99%	5 511	5 420	98%
	16 093	15 395	96%	16 455	16 062	98%	16 147	15 723	97%
All NHS Boards	132 651	128 193	97%	135 482	130 485	96%	130 947	126 642	97%

In summary, it should again be emphasised that in presenting these data the Panel is not inferring one hospital is better or worse than any other and it is not suggesting there are no pressures or case for change. The intention is simply to draw attention to the excellent work already being carried out in acute hospitals in the area, despite the pressures the Board describes.

[1] *ISD "Scottish Health Service Costs 2007" http://www.isdscotland.org/isd/costs-book.jsp?pContentID=3633&p_applic=CCC&p_service=Content.show&*

SECTION 5
CRITERIA 1: SAFETY

5.1 KEY POINTS

The Board made a number of claims in its information pack for the scoring event which was held as part of the option appraisal process. Although these claims were all included under the heading of "Safety", it appeared to the Panel that it would have been more appropriate for some of them to have been dealt with under other headings. Rather than seeking to cover them under other headings, the Panel has reviewed them all under the "Safety" criterion, in order to maintain consistency with the Board's approach.

"*There is evidence to support a pre-hospital assessment service that will enable patients to be directed to appropriate services.*" (booklet for Scenario B, page 5).
The evidence presented by the Board did not support its claim. Substantial flaws in the evidence presented were not highlighted, and other evidence to the contrary was not reflected in the booklet.

"*If a seriously ill patient arrived at Monklands and required to be transferred to a hospital with an intensive care unit there is mixed evidence as to whether or not their transfer will make them worse.*" (booklet for Scenario B, page 7).
Quotes from the Board's own summary of the evidence are at odds with the claim made. The evidence seems to the Panel to support a considerably more cautious view.

There is a recommendation that a population of more than 300,000 is needed so that doctors can see enough patients to maintain their skills.
The Board claimed that trauma and vascular surgery should be provided from fewer hospital sites than at present. While there is some evidence that severe trauma cases may have better outcomes when managed by specialists, this is only a small minority of trauma work, so to centralise the whole service on this basis is not necessarily justified. The evidence cited to support the centralisation of vascular surgery was flawed and was not interpreted in the local context by the Board – Lanarkshire hospitals may already be "high volume" as defined in the research studies and hence there would be no case for further centralisation. The Board also says that a catchment population of 300,000 is needed for doctors to maintain their skills, but the Panel identified that this figure does not appear to be supported by a convincing evidence base.

Several claims were made for which the Board did not appear to have provided supporting evidence. These are summarised as follows:

- Sick patients transferred under scenarios B and C could be moved more safely because they would have been assessed for 24 hours in a bed at Monklands first

- The Emergency Referral Service would ensure a greater number of patients presenting via 999 would reach their definitive point of care more quickly
- Newly-appointed hospital consultants have significantly less experience than their predecessors. If they also have to work in smaller teams, the impact of their inexperience on the quality of care and service will be greater.

The Panel believes that each of these statements is highly contentious.

5.2 AGREED DEFINITION

Any proposal should provide a safe service[1]. Any clinical risks associated with the proposal should be assessed, managed and minimised so that the provision of the service should do no harm and aim to avoid preventable adverse events.

5.3 EVIDENCE PRESENTED

The Board made a number of claims based in the booklets circulated for the scoring event. Following each set of claims a list of references (research studies, recommendations of professional groups, etc.) was included and briefly summarised. No attempt was made to link claims to references.

The claims and studies were presented under the following headings:

- Emergency Referral Service (assessment and triage)
- Travel time (getting to the right place as quickly and as safely as possible)
- Training
- Critical mass/volume
- Sub-specialisation
- Workforce Implications
- Implications for Scottish Ambulance Service

5.4 ASSESSMENT OF THE EVIDENCE

Some aspects of the way the Board presented its evidence in the information pack for the scoring event were unhelpful:

- It would have been helpful if the Board had made clear which research studies or reports related to each of the claims made.
- All the claims the Board made based on the evidence assembled were included under the heading of “Safety”, whether they were strictly related to “Safety” or to one of the other criteria. The Panel decided not to make its own judgements about which of the criteria each of the Board’s claims related to, and has reviewed all of them in this section.

- However, this means that the claims the Board made in the information pack were (i) detached from the evidence upon which they were based and (ii) not under the criterion to which they applied. This may have caused some confusion amongst the target audience for the document. It certainly made the Panel's scrutiny considerably more difficult.
- In general the basis for the allocation of research studies to particular criteria was unclear and appeared somewhat arbitrary. This is not merely a pedantic point: the study by Nicholl et al[2] that showed people with life-threatening conditions have a greater risk of dying as distance travelled in an ambulance increases was not included in the evidence on "Safety" at all. This may have resulted in people reading the booklet having an inappropriate assurance that longer ambulance journeys were safe.

Having scrutinised the evidence presented the Panel questions a number of the Board's claims as follows:

1 – "There is evidence to support a pre-hospital assessment service that will enable patients to be directed to appropriate services." (booklet for Scenario B, page 5).

The ability of staff to determine a patient's needs before they are assessed in hospital is not as clear-cut as this statement implies. The Panel's scrutiny of the evidence the Board provided that might support this claim identified four areas where there was evidence:

1. Trained nurses giving advice over the phone to people who had dialled 999 and who had been designated category C (the least serious) by an operator (Dale[3])
2. Trained nurses giving advice over the phone to people with eye injuries (Marsden[4])
3. Ambulances containing a paramedic can identify the 'majority' of patients needing critical care (Price[5]) – see below for a comment on this finding.
4. Triage of myocardial infarction / treatment with thrombolysis (Morrison[6], Pitt[7], van't Hof[8])

The evidence against the claim the Board made from the evidence cited is as follows:

- While Price et al did find paramedics could predict the majority of patients needing critical care, they found that paramedics did not predict the need for critical care in 22% of cases where it was needed – the consequences for these patients if the system had rested on paramedic judgement alone were not discussed. In Price's study while 411 cases were included, paramedics were allowed to pick which ones they included so they may well have only included the ones where they felt confident about their judgement – the true figure might be much lower. An additional concern is that the research was carried out in Jefferson County, Louisville, Kentucky, and the authors themselves say in their paper, "The generalizability of these results to all communities and EMS services may not be possible." Certainly the applicability of studies from Kentucky to Lanarkshire was not discussed by the Board.

- A systematic review of the research literature found there is “no evidence and support of paramedic’s judgement as a method for pre-hospital triage in trauma patients.” (Mulholland[9]; quote taken from booklet for Scenario B, page 6)
- Price et al reviewed other studies in the field and found, “Previous authors have examined the accuracy of paramedics in predicting those patients who do not require ED [Emergency Department] care. All of these studies have consistently shown that paramedics cannot accurately predict those patients who will not require emergency care. Failure to transport can lead to serious complications and even death. Cone et al found that emergency medical technicians (EMTs) were not good at predicting the need for advance life support (ALS)” (page 322). This would confirm the finding that ambulance staff cannot accurately assess less urgent cases from the study by Dunn et al[10] quoted in the information pack.

Summary: The potential for pre-hospital assessment requires constant assessment as it has the potential to improve outcomes for patients. However, the evidence presented did not support the Board’s claim and substantial flaws in the evidence and evidence to the contrary was not reflected in the claim made.

2 - “If a seriously ill patient arrived at Monklands and required to be transferred to a hospital with an intensive care unit there is mixed evidence as to whether or not their transfer will make them worse.” (booklet for Scenario B, page 7).

The evidence presented by the Board that appears to relate to this claim is as follows (emphasis added in all three quotes):

- “There are good data that transfer of seriously ill patients from one hospital to another is associated with a **worse clinical outcome**.” (Academy of Medical Royal Colleges[11]; quote is taken from booklet for Scenario B, page 11).
- “[T]ransfer of critically ill patients is associated with **significant risks**” (Ligtenberg et al[12]; quote is taken from booklet for Scenario B, page 8).
- “Patients who are critically ill and whose transfer to intensive care is delayed by more than 6 hours are **more likely to die**” (Chalfin et al[13]; quote taken from booklet for Scenario B, page 7).

The quotes from the Board’s own summary of the evidence are at odds with the claim made. The evidence seems to support a considerably more cautious view.

3 – “If you are not seeing enough patients with specific problems then the evidence suggests that the treatment received may be less good than if you were seen in a unit seeing more patients.
There is a recommendation that a population of more than 300,000 is needed so that doctors can see enough patients to maintain their skills.
For some problems the more you treat, the better the outcome, for example an aortic aneurysm (swelling of the main blood vessel). This can only be achieved by concentrating services on a limited number of sites. Similarly, the evidence supports having designated ‘trauma’ centres.” (booklet for Scenario B, page 9).

Of the research studies that might have supported this claim, three related to severe trauma. The Panel acknowledges the potential role for specialist management of these cases – however, this is a small minority of the total amount of trauma surgery cases and hence this evidence does not necessarily support restricting trauma surgery to 1-2 sites, as the Board claims.

The Board also makes the case for vascular surgery services to be concentrated on a limited number of hospital sites. Only Killeen et al's[14] research was cited in support but that study was deeply flawed. The researchers combined different studies irrespective of their quality e.g. in terms of their control of case-mix. It was also very unclear how many operations per year a surgeon has to do to become a specialist. Referring to the data they had used from other studies, Killeen et al said, "High-volume surgeons were defined as those performing anything from 10 up to 26 elective aneurysm repairs per year, and the classification of a low-volume practitioner extended from 1 to 26 cases per year. The designation of a low-volume hospital was one to 35 procedures, and a high-volume institution from >10 to >79." In other words, the definitions of high-volume and low-volume overlapped making it difficult to see how any meaningful conclusion could be drawn.

The Board claimed a catchment population of 300,000 was needed to maintain a doctor's skills. In fact this only referred to emergency surgery, not to elective surgery so the claim is misleading. The figure came from a 2007 Royal College of Surgeons of England report[15], but how was it arrived at? In 1998 the same Royal College said the minimum catchment population for emergency surgical services was 450,000 to 500,000 people[16] and the 2007 figure seems to have been proposed as a 'step in the right direction'. It is also unclear how the 1998 figure was arrived at – for example, did it take account of patient safety while being transported in an ambulance? Even if it was relevant in 1998, does it still apply in 2008 - the NHS has changed very considerably in the decade since and it seems unlikely the same figure would still apply. Unless this figure has substantial evidence to support it that has not yet been presented it is not a suitable evidence-base for policy-making as it would deny local access to emergency surgery seemingly based on little more than opinion.

Summary: The Board claimed trauma and vascular surgery should be provided from fewer hospital sites than at present. While there is some evidence that severe trauma cases may have better outcomes when managed by specialists, this is only a small minority of trauma work so to centralise the whole service on this basis is not necessarily justified. The evidence cited to support the centralisation of vascular surgery was flawed and was not interpreted in the local context by the Board – Lanarkshire hospitals may already be "high volume" as defined in the research studies and hence there would be no case for further centralisation. The Board also say a catchment population of 300,000 is needed for doctors to maintain their skills but scrutiny revealed there seems to be no evidence-base for this figure.

4 – "The evidence supports this scenario in recognising the need to split planned and emergency care." (booklet for Scenario B, page 10).

The Panel has addressed this issue under section 4, The Case for Change.

5 – The evidence "supports coordinating services in specialised centres with dedicated teams e.g. stroke, vascular, cardiac, trauma. However, there is a word of caution in that concentrating services may not necessarily improve skill acquisition and maintenance." (booklet for Scenario B, page 10).

The claims regarding trauma surgery and vascular surgery centralisation have been dealt with above. Further studies are cited to support the case for specialisation of trauma care but all of these studies are American – the nature of trauma injury (gunshot, homicide, etc) may be very different to Lanarkshire, distances travelled may be greater, existing care may be in hospitals that are smaller than those in Lanarkshire and so on. There may be benefits to severe cases being cared for in a level 1 trauma centre but there are unlikely to be sufficient cases in the Lanarkshire population alone to support such a centre. It is possible there is a regional solution, but this is beyond the remit of the Panel.

Stroke and cardiac care are already provided from the Monklands Hospital site and it is not clear why the Board feels these services are not safe at present. There may be a case for changing management of these patients but aside from highly specialised facilities such as angioplasty provision, no case has been made for withdrawing services from the Monklands Hospital site.

6 – "There is greater clarity now about the impact of the changes introduced by Modernising Medical Careers, with an anticipated change in the skill mix of doctors in future years. One feature of these changes is that newly-appointed Consultants may not only be younger, but will have significantly less experience than their predecessors. If they also have to work in smaller teams, the impact of their inexperience on the quality of care and service will be greater." (booklet for Scenario B, page 12).

This claim was not linked to any supporting references or to the recommendations of any professional body.

7 – "This scenario [options B and C] has an impact in terms of the inter hospital transfer activity it would generate, however, the risk is reduced due to the increase in numbers of patients being definitively managed at Monklands. Additionally those transfers still required could be better planned due to a more accurate clinical picture of their condition being gained during the 24 hour assessment period." (booklet for Scenario B, page 13).

It was not obvious that there was any evidence presented to support this claim.

8 – For options D, F and G: "The Emergency Referral Service would ensure a greater number of patients presenting via 999 would reach their definitive point of care more quickly. The development of patient pathways and protocols for emergency presentations would also ensure greater accuracy in identifying, at the earliest opportunity the most appropriate "site" for the patients needs." (booklet for Scenario G, page 11).

It was not obvious that there was any evidence presented to support this claim.

[1] *Safe is identified as one of six aims to address quality in health. It is defined by the committee as, "avoiding injuries to patients from the care that is intended to help them". "Crossing the Quality Chasm: A New Health System for the 21st Century" Committee of Quality of Health Care in America, Institute of Medicine. 2001*

[2] *Nicholl et al 'The relationship between distance to hospital and patient mortality in emergencies: an observational study' Emergency Medicine Journal 2007; 24: 665-668.*

[3] *Dale et al 'Safety of telephone consultation for "non-serious" emergency ambulance service patients' Quality and Safety in Health Care 2004; 13: 363-373.*

[4] *Marsden et al 'An evaluation of the safety and effectiveness of telephone triage as a method of patient prioritisation in an ophthalmic accident and emergency service' Journal of Advanced Nursing 2000; 31: 401-409.*

[5] *Price et al 'Prehospital provider prediction of emergency department disposition': implications for selective diversion' Prehospital Emergency Care 2005; 9: 322-325.*

[6] *Morrison et al 'Mortality and prehospital thrombolysis for acute myocardial infarction: a meta-analysis' JAMA 2000; 283: 2686-2692.*

[7] *Pitt 'Prehospital selection of patients for thrombolysis by paramedics' Emergency Medicine Journal 2002; 19: 260-263.*

[8] *van't Hof et al 'Feasibility and benefit of prehospital diagnosis, triage and therapy by paramedics only in patients who are candidates for primary angioplasty for acute myocardial infarction' American Heart Journal 2006; 151: 1225e1-1255e5.*

[9] *Mulholland et al 'Is paramedic judgement useful in prehospital trauma triage?' Injury 2005; 36: 1298-1305.*

[10] *Dunne et al 'Prehospital on-site triaging' Prehospital Emergency Care 2003; 7: 85-88.*

[11] *Academy of Medical Royal Colleges "Acute Health Care Services – Report of a Working Party" September 2007.*

[12] *Ligtenberg et al 'Quality of interhospital transport of critically ill patients: a prospective audit' Critical Care 2005; 9: R446-R451.*

[13] *Chalfin et al 'Impact of delayed transfer of critically ill patients from the emergency department to the intensive care unit' Critical Care Medicine 2007; 35: 1477-1483.*

[14] *Killeen et al 'Provider volume and outcomes for abdominal aortic aneurysm repair, carotid endarterectomy, and lower extremity revascularization procedures' Journal of Vascular Surgery 2007; 45: 615-626.*

[15] *Royal College of Surgeons of England "Delivering High-quality Surgical Services for the Future" (2006), page 28.*

[16] *Royal College of Surgeons of England "Provision of Acute General Hospital Services" (1998)*

SECTION 6
CRITERIA 2: SUSTAINABILITY

6.1 KEY POINTS

The Board's submission gives a detailed account of current staffing pressures facing NHS Lanarkshire.

In its Interim Report the Panel pointed out that the supply of hospital consultants was increasing markedly as more doctors completed their training; however, the Board still perceives that there is a significant risk that these numbers will be inadequate. The Board's second submission simply expanded on its analysis from its first submission, and was not sufficient to convince the Panel.

The Board has supplied the results from interviews with newly appointed hospital doctors in Lanarkshire and they confirm that NHS Lanarkshire offers an attractive working environment with many positive features. In contrast to the Board submission, which implies doctors are mainly concerned with on-call rotas (time off at weekends and evenings) and opportunities to become sub-specialists, the newly appointed doctors listed many factors that led them to take a job in Lanarkshire. They explicitly rejected sub-specialisation as a factor in their choice; some even said the extent of sub-specialisation in Glasgow had deterred them from taking a job there.

The newly appointed hospital consultants recognise that sub-specialisation may be a factor for more experienced staff but they believe if this is an issue it can be overcome by making other aspects of the job package more attractive such as educational opportunities and dialogue with managers.

In terms of the detailed estimates the Board made of additional staff required, the Panel had some problems following figures from one table to the next. However, the main issue was that the majority of the claimed increases in staffing required were not clearly explained. In many cases there was no explanation of the figure selected for additional staff and in some cases it was not apparent why more staff were needed. The Board argued the case for centralising emergency surgery but the detailed modelling suggests the status quo is sustainable with only 3 additional consultants.

The Board claims that accreditation for anaesthetics posts may be withdrawn by the Intensive Care Society (ICS) but it is not clear why the Board believes this, or how likely this would be.

The Panel was concerned that some scenarios included in the option appraisal could not be sustained over the medium to long-term. Scenarios B, C and D in particular seem to fall foul of the recommendations of many professional bodies for the co-location of emergency services on the same site, including the British Association for Emergency Medicine, the Academy of Medical Royal Colleges and the Royal College of Surgeons. The Board quoted all of these bodies approvingly elsewhere in its submission but failed to include their advice on this point.

6.2 AGREED DEFINITION

The proposal should facilitate both retention and recruitment of high calibre staff both now and in the future. This should consider doctors' rotas, training and accreditation alongside training issues for other staff groups e.g. Emergency Care Practitioners (ECPs).

The proposal should be able to accommodate changes in patterns of care and the changing needs of the population and should enable optimal and efficient deployment of all types of resources including staff, facilities and equipment[1].

6.3 EVIDENCE PRESENTED

The second submission made the case for change and argued that the main threat to the sustainability of emergency care services was from medical staffing pressures. There is also an issue about the sustainability of the Monklands Hospital building.

In terms of medical staffing, the Board listed the pressures on the medical workforce such as meeting the European Working Time Directive and addressing "arduous rotas". Specific local issues are:

- the need to manage the current reliance on fixed-term specialty training appointments (FTSTAs)
- the need to employ more doctors to address issues in the 2006 Picture of Health strategy – this was to provide acute care to safe modern standards, address high-intensity duty rotas, backfill for MMC [Modernising Medical Careers], as well as meeting the requirements of the EWTD [European Working Time Directive] and the government's elective waiting time targets
- the need to address doctors coming up to retirement age
- the need to recruit to current vacancies.

The Board claimed it would need 73 more doctors to replace the FTSTAs, and 45 more to address Picture of Health requirements. The scenarios for A&E, emergency services and sub-specialisation add between 15 and 50 more doctors so in the Board's view, a total of between 133 in scenario B up to 168 in scenario G will be required.

Within the second submission to the Panel, the Board identified 43 current consultant vacancies and described the problems it has faced with both recruitment and retention. In addition, within its existing staff complement, 33% of current consultants are aged 50-59, with high numbers of retirals expected in the future, as 10% of the consultant workforce is aged over 60.

In terms of the future of the Monklands Hospital building, the Currie & Brown Report (dated 19th September 2007) states the following: "It must be emphasised that, the existing buildings infrastructure (at Monklands) is in a fragile state with much of its main

elements, particularly mechanical and electrical services, beyond its normal life span. … [T]he option to 'do nothing' is not feasible as without investment in the infrastructure there is significant risk in services becoming unsafe, leading to significant interruption and actual loss of service. While precise dates cannot be provided for when such events will occur it is inevitable because many of the current services are beyond the usual life cycle after which interruption or loss will occur. The risk of occurrence increases significantly as time passes with investment."

The Condition Survey undertaken by Capita Property Consultancy in 2003 also records the variable state of the whole site.

6.4 ASSESSMENT OF THE EVIDENCE PRESENTED

1. Medical and nursing staffing

The Panel notes parallels between the Board's view and that expressed in the Kerr Report[2]: "workforce pressures will be the bottom line in determining how we are able to respond to these changes in demand" (page 34, paragraph 121).

The Panel repeats the view it expressed in its Interim Report that a considerable number of doctors will soon be completing their training and therefore in a position to apply for jobs as a consultant.

The Panel has obtained data from NHS Education for Scotland[3] showing the number of doctors who will complete their training in Scotland and will be eligible to apply for a consultant post during each year to 2012:

Specialty	2007	2008	2009	2010	2011	2012	Total
Emergency Medicine	4	11	21	19	28	19	102
Anaesthetics	55	33	40	69	28	73	298
Trauma & Orthopaedics	8	21	15	23	21	16	104
Clinical Radiology	32	19	18	21	27	37	154
General Surgery	12	22	16	21	13	16	100
Acute Medicine	0	0	0	9	7	0	16
Total each year	**112**	**114**	**116**	**165**	**130**	**161**	**774**

These figures need to be interpreted carefully. Just because a doctor completed their training in Scotland does not mean they will automatically apply for consultant jobs here. Other doctors will reach retirement age or leave the profession. However, the same applies in reverse and English doctors may be attracted to Scotland by a range of factors, including perceptions about the strengths of the NHS in Scotland relative to England.

To put these figures in context, the number of whole-time equivalent consultants[4] in Scotland in each of these specialties[5] as at 30th June 2007 was:

Specialty	WTEs
Emergency Medicine	79
Anaesthetics	561
Trauma & Orthopaedics	172
Clinical Radiology	226
General Surgery	231

While demand for trained doctors will continue to be high, supply is increasing as well and it is not obvious that the situation of a shortage of trained doctors over the last few years will continue indefinitely.

The Board makes the point that in future it will be the only Board area in Scotland maintaining three acute hospital sites. This is factually incorrect. NHS Greater Glasgow and Clyde currently maintains acute sites at the Royal Infirmary, Southern General, Western General, Royal Alexandra and Inverclyde, as well as facilities at the Victoria, Stobhill, Gartnavel and the Vale of Leven, and in future they will still have at least four acute hospitals. Even if it were true, it is unclear what this would prove.

Even if the Board's case is accepted, however, it is not clear why this is not then used as a constraint in designing the models of care to be considered in the option appraisal. None of the scenarios considered require less hospital doctors than at present and some, such as scenario G, need 50 more doctors.

In terms of the FTSTA posts, the Panel has two comments. First, the aim of this review is to plan emergency care services for the medium-term to long–term; FTSTAs were only ever intended to be a short-term solution and the Board has not proven they are relevant to long-term strategic decision-making. Second, the Board will be aware that the aim acknowledged in the Kerr Report is to move to services provided by trained doctors. It is unlikely 73 trained doctors would be required to do the work of 73 doctors-in-training, so the number required may be overstated.

Views of newly appointed consultants

The Board's first submission contained information gathered from focus groups and interviews with newly appointed hospital consultants in NHS Lanarkshire. The Panel commends the Board for commissioning and reporting this evidence; it is unfortunate the findings do not seem to have been reflected in the second submission.

Focusing on the views expressed that fall within its remit, the Panel notes the following points from the report:

1. The new hospital consultants do not see opportunities to sub-specialise as a factor in taking a job in NHS Lanarkshire – "For many of the consultants interviewed the ability

to sub specialise in larger clinical teams was not seen as a benefit and stated that they chose Lanarkshire because it offered opportunities to develop services and to generalise." (paragraph 5.2)

2. They perceive the on-going uncertainty about the configuration of acute services as being a far more important issue than the configuration of acute services. "The consultants interviewed at both the focus groups and over the telephone pointed to the current instability and lack of clear direction around acute service configuration as posing a greater risk to both consultant recruitment and retention than any one configuration option." (paragraph 5.1)

3. They see a variety of benefits to working in NHS Lanarkshire and these are worth emphasising (paragraphs 4.4 and 4.5):

- The existence of longstanding dialogue between clinicians and management
- No high turnover rates among nurse managers
- Low burn-out rates amongst junior doctors
- Stability within the system enabling consultants to plan and structure services accordingly
- The reputation of individuals in the various departments as perceived by new consultants
- The fabric of the buildings at Wishaw and Hairmyres
- The collegiate feeling in Lanarkshire
- The close proximity and communication with Glasgow
- The perception of the level of team work and the treatment of new consultants as equals

4. They say that opportunities to sub-specialise might be a factor later in their careers so it may affect retention. "The potential impact of the continuation of small teams and limitations on the ability to sub specialise was seen by most as affecting retention more than recruitment. It was felt that the impact of this could however be averted if other factors where emphasised, such as the collegiate nature of NHS Lanarkshire, selling the positives of generalisation and the potential of achieving better information technology links than NHS Glasgow within the next two years." (paragraph 4.3)

5. The ways in which medical jobs in NHS Lanarkshire could be made more attractive are worth quoting in full because they demonstrate the options that exist to retain staff (paragraph 4.5):

- Improvement in the perception of the level of dialogue between clinicians and management. This is needed to overcome the perception that the focus on the achievement of targets is jeopardising junior doctors training.
- Active representation on Post Graduate Committees to ensure that there is sufficient trainee throughput in Lanarkshire.
- Ensuring medical students have a positive experience of working in NHS Lanarkshire.

- The creation of attractive education pathways for consultants which could include funding for outside study and the attendance of conferences.
- Ensuring that job plans take into account the annual leave or study leave of colleagues.
- The improvement of childcare facilities.
- The ability to sell the benefits of either sub specialisation and or generalisation.
- Selling the benefits of meeting the unmet needs of the population e.g. ageing, deprivation etc.

From this document it seems clear that many doctors do want to work in NHS Lanarkshire, even with its existing configuration of services – some even see this as a positive – consultants in laboratory specialties said NHS Greater Glasgow & Clyde's strategy of sub-specialisation had actually put them off of taking a job there (paragraph 4.1). The configuration of services (on which all of the doctors had a view) was not the main factor in their choice of job. In the view of these doctors, opportunities to sub-specialise may be an issue later in their careers but their perception is that other aspects of the job can be improved to balance against this.

The document includes much that is positive about NHS Lanarkshire and reflects well on many staff across the system. These views do not seem to be reflected in the Board's submission.

The hospital consultants' comments on the impact of uncertainty are also interesting as they may help explain why NHS Lanarkshire has 43 consultant vacancies (second submission, page 4). It is notable that NHS Lanarkshire's peak consultant vacancy level was 49 in September 2005 when the uncertainty around acute hospital configuration was at its height. It is possible that the Board's attempts to address the pressures by reconfiguring services is actually prolonging the uncertainty and exacerbating the problem.

Sustainability of GP services

The second submission to the Panel indicated that there is limited number of general practice trainees in Lanarkshire – there are a limited number of recognised training practices (only 14). The submission states that "even more fundamental to recruitment and retention is that GP's in Lanarkshire can not increase their trainee numbers as they physically have no surgery space to offer the trainees". National policy is about shifting from acute admissions through A&E to patients being treated in the community. The aforementioned paragraph would appear to call into question the sustainability/viability of the primary care and community care proposals (capital proposals for community care/GPs are included on the opportunity cost list).

Evidence of demand for nurses

Within the submission, the Board identifies the challenges it faces in terms of demand and supply of consultants. There is however, very little discussion of the possible challenges it will face in terms of recruiting the additional nurses that it needs, particularly against a background of nurse staffing across NHS Lanarkshire starting from a low baseline compared to other Health Boards.

2. SUSTAINABILITY OF FUTURE EMERGENCY SERVICES UNDER DIFFERENT OPTIONS

The Panel was concerned that some options may not be sustainable because of the configuration of emergency services in general and at Monklands Hospital in particular. The following table is taken from page 45 of the Board's second submission:

Option Scenarios	B	C	D	F	G
Monklands Hospital					
A&E Department	√	√	√	√	√
A&E Consultant Cover	√	√	√	√	√
Emergency Medical Receiving		Partial	√	√	√
Emergency Surgical Receiving				√	√
Critical Care			√	√	√
Trauma and Orthopaedics				√	
Cancer Centre	√	√	√	√	√
Planned Care Centre	√	√	√		
New Acute Mental Health Unit	√	√			

In terms of emergency services, two options do not include critical care at Monklands, and only one option sees the continuation of trauma surgery at Monklands. Only two options have emergency surgical receiving and only three options have emergency medical receiving. This raises issues about whether the remaining emergency services at Monklands form a cohesive block that doctors would want to work in. From the option appraisal report, it is clear that "professional representatives" (mainly hospital doctors) from Monklands and Wishaw Hospitals gave low scores to options B and C, while those from Hairmyres also gave a low score to option C. This suggests that if either of these two options were selected there may be major retention issues amongst existing emergency services staff at Monklands Hospital at the very minimum.

There is ample back-up from professional groups for the hospital doctors' concerns.

Example 1 – British Association for Emergency Medicine (BAEM)
The 2005 BAEM Report "Way Ahead" said, "To provide safe, high quality Accident and Emergency services around the clock it is recommended that the following services should be available on site: intensive care, anaesthetics, acute medicine, general surgery, and orthopaedic trauma. In addition to this, there should be rapid and easy access to child health (preferably on-site), 24-hour access to imaging (including CT scanning) and laboratory services available on site."

Options B, C, D and G fail this test. The above quote is taken from the Board's second submission on page 24. The Board argue that the need for sub-specialisation undermines this. The Panel's scrutiny of the evidence presented suggests that, at best, this only applies to very small elements of the workload of trauma surgery, vascular

surgery and emergency surgery and even this evidence is open to challenge.

Example 2 – Academy of Medical Royal Colleges (AMRC)
The 2007 AMRC Report "Acute Health Care Services" said, "If acute surgery and/or obstetric services were to be withdrawn, maintaining an intensive care service will become a problem as anaesthetists with critical care expertise are likely to move with the acute surgery and obstetrics services." (page viii).

The report continues, "If units need to move to a selected 'medical take', this may result in a significant drop in numbers of emergency patients, affecting the clinical and/or financial viability of such units." (page viii)

General medicine "is an essential component of acute hospital care as the largest numbers of admissions to hospital from the A&E department are to acute medicine." (page A15)

Trauma and orthopaedics "is the second most common destination for admissions from the A&E department. It is clearly preferable to have such a high volume service on-site." (page A15)

"Removal of a supporting service means that as expertise is not available from outside the A&E department there must be an increase in the expertise available within the department." (page A16)

The services provided from Monklands under options B, C and D would not meet these recommendations on several different counts. Option G also proposes centralising trauma surgery so there will be at least one A&E in Lanarkshire with no trauma service on-site.

Example 3 – Royal College of Surgeons (RCSE)
Under the heading 'Emergency Provision', the 2006 RCSE report "Delivering High Quality Surgical Services" said, "Major supporting services normally accessible on the same hospital site:

- acute general medicine
- coronary care
- acute general surgery and major operating theatres
- orthopaedic trauma
- anaesthetics
- intensive care
- radiology including the following modalities: X-ray, CT and ultrasound
- laboratory services including haematology, clinical chemistry and transfusion; and
- paediatrics if children are treated in emergency department.

Unselected medical take in units that cannot provide the above services on the same site would be unsafe." (page 24). It continues: "While very few general surgical emergencies require an immediate operation, patients do require immediate expert assessment. A&E departments must be staffed by appropriately trained A&E specialists, supported by a trauma team and appropriate diagnostic and anaesthetic facilities." (page 25).

Options B, C and D fall foul of this recommendation and option G will also have at least one site with an A&E but no trauma surgery.

The Panel has not attempted a systematic search of the recommendations of professionals groups but the examples above include quotes taken from the Board's second submission or the Board's information pack for the scoring event. It is clear options B, C and D are not consistent with the recommendations of the BAEM, the AMRC or the RCSE. Option G also falls foul of recommendations for A&E and trauma to be on the same site. Professional medical bodies do not support the establishment of emergency services that are little more than a "front door".

In its second submission the Board has claimed that accreditation of posts may be withdrawn if intensive care continues to be provided from three sites. Having reviewed the standards to which the Board referred, the Panel notes the following summary of requirements[6]:

- All newly appointed consultants with programmed activities (PAs) in ICM should have acquired Step 1 competences, or an equivalent level of training.
- All newly appointed consultants with >50% commitment to ICM should have acquired Step 2 competences, a CCT in ICM, or an equivalent.
- All units must have a minimum of 15 PAs of consultant time totally committed to ICM each week per eight Level 3 beds.
- All consultants providing an 'on-call' service to the ICU must have PAs committed to ICM.
- Consultants should not have any other clinical commitment when covering the ICU during daytime hours.
- During working hours the consultant in charge of the ICU should spend the majority of his or her time on the ICU and must always be immediately available on the ICU.
- There must be twenty-four hour cover of the ICU by a named consultant with appropriate experience and competences.
- A consultant in ICM must see all admissions to the ICU within twelve hours.

It is not clear which of these standards NHS Lanarkshire is currently failing to meet, and when a standard is not met it is not clear what options are available. It seems reasonable to assume there are at least some options short of closing an intensive care unit that would address these. It is also unclear whether the Intensive Care Society would want to force the closure of a unit through the imposition of its standards – the Panel is unaware of any previous examples of this happening.

It is also plausible that training accreditation may be threatened when a service configuration, such as at Monklands Hospital under options B, C and D (and to a lesser extent under G) do not conform to the Royal Colleges own recommendations on the co-location of emergency care specialties.

3. SUSTAINABILITY OF THE MONKLANDS HOSPITAL BUILDING

The Panel comments on this issue in the section 12 of this report on Finance.

[1] *Efficient is identified as one of six aims to address quality in health. It is defined as, "avoiding waste, including waste of equipment, supplies, ideas and energy". "Crossing the Quality Chasm: A New Health System for the 21st Century" Committee of Quality of Health Care in America, Institute of Medicine. 2001*

[2] *Scottish Executive Health Department "Building a Health Service Fit for the Future" (2005)*

[3] *Supplied via the Chief Executive, NHS Education for Scotland.*

[4] *ISD Workforce Statistics http://www.isdscotland.org/isd/workforce-statistics.jsp?pContentID=1348&p_applic=CCC&p_service=Content.show&*

[5] *Acute medicine is not separately specified.*

[6] *Intensive Care Society Intercollegiate Board for Training in Intensive Care Medicine "Standards for Consultant Staffing of Intensive Care Units" (2006), page 3.*

SECTION 7
CRITERIA 3: CONSISTENT WITH CLINICAL BEST PRACTICE

7.1 KEY POINTS

The most striking features of the Board's evidence were:

(i) Reliance on older studies – with the exception of a handful of studies, the evidence base is from the 1990s. This raises concerns because it relates to clinical practice from nearly a decade ago.

(ii) Reliance on American studies – with the exception of a handful of studies, the evidence base is from American hospitals. This means care should be taken in ensuring the studies are relevant to Scottish practice. It was not evident the Board had considered this.

In its first submission to the Panel, the Board stated that older studies from countries that were not relevant to Scotland would be excluded, but it is not obvious that this was applied in practice.

A key problem with the evidence presented was that while the research literature search relating to A&E services was systematic, other studies were identified from the research literature by the Panel (e.g. in trauma surgery) which question how comprehensive and balanced a view of the research literature was presented. For example, while the Board has cited studies relating to severe trauma as part of its case for centralising this service, there are other studies (e.g. Margulies[1], Sava[2]) that show no relationship between the number of operations a surgeon carries out and patient survival. Unless the Board has considered all of the available evidence it is unclear how it can reach an evidence-based view.

Emergency surgery - The Board claimed, "Data from the Lothian Surgical Audit … showed the restructuring of emergency surgical care, focused on subspecialisation appropriate to upper and lower abdominal conditions, has led to improved quality of care and outcome." In fact, the data referred to only relate to the management of perforated peptic ulcer – there may be less than 50 cases per year in Lanarkshire. The Board did not draw attention to this point, nor did it discuss the relevance of perforated peptic ulcers to the hundreds of emergency surgical admissions that are due to a variety of other conditions. The study design was also very weak.

The submission also made the case for centralisation of trauma surgery because this would lead to better outcomes. This may be the case for major trauma (Injury Severity Score >15) but this is only a small proportion of workload in this specialty and any change to the management of these cases could be achieved without significant change to existing services.

Critical care – The Board's second submission cited three studies suggesting benefits from intensive care being provided by specialists. However, closer scrutiny of the three studies revealed that they all appear to be comparisons of units with specialist staff versus units without specialist staff. The studies were carried out in America, some as long as 20 years ago. It is not obvious what relevance these studies have to Lanarkshire: local intensive care units are already staffed by specialists. None of the research studies claim that larger intensive care units have better outcomes so it is not obvious what concentrating intensive care units on fewer sites in Lanarkshire would achieve in terms of patient outcomes.

Stroke and Myocardial Infarction – No empirical studies of stroke care were offered to support claims that centralisation would offer better patient outcomes. In terms of cardiac conditions, the Board makes the case for angioplasty following a heart attack, evidence that is widely accepted and is being acted upon elsewhere in the west of Scotland.

Vascular surgery – Most of the evidence cited was very old. The only statistically significant relationship between number of operations and outcomes for patients was for elective abdominal aortic aneurysm repairs. These make up less than 3% of vascular surgical workload and the Board did not explain why their management could be centralised without compromising the rest of the service.

Other services – The review cited was based on the same data as in the Kerr Report but when this was examined in more detail many treatments were not relevant to this review, while others were based on old data from America and other countries. Some relationships were found but these tended to be at quite a low level of operations and routine data suggest surgeons and hospitals in Lanarkshire are likely to be working at levels in excess of these thresholds: in other words the benefits seen in the literature already apply in Lanarkshire without any need for centralisation.

Therefore, the general case for change appears to be based on evidence that has little relevance to Lanarkshire in 2008. Data from practice 15-20 years ago in other countries is now being used to justify reorganising care in NHS hospitals in Scotland, with effects that could potentially last for decades. These studies are arguably not relevant to day-to-day clinical practice in the NHS of 2008 and should not be influential in policy-making.

In making these criticisms the Panel is following its remit to scrutinise the evidence presented by the Board. The Panel fully acknowledges:

(i) That for some services such as transplant surgery the case for specialisation has been made, and

(ii) There may be other evidence supporting specialisation in particular areas that has not been cited.

However, the Panel is mindful of the view of the Academy of Medical Royal Colleges: "Although there is evidence to suggest that the centralisation of services to deal with complex or specialised work provides better outcomes for patients, evidence for centralisation of non-complex and high volume cases does not exist."

7.2 AGREED DEFINITION

Care and treatment of service users should be clinically effective in terms of quality of health outcome for the service user. The proposal should fulfil the recommendations provided by professional clinical bodies and Royal Colleges.

7.3 EVIDENCE PRESENTED

While the Board presented a variety of research studies and findings from professional groups in the information pack for the scoring event there was no interpretation placed upon it in those documents. Therefore, the main interpretation of this feature presented to the Panel was in the second submission under the heading "Benefits to Patients" (section 2.5, page 23). A variety of studies and reports are quoted, making the case for providing services from fewer hospital sites in Lanarkshire under the following headings:

1. Emergency surgery
2. Trauma surgery
3. Critical care (intensive care)
4. Emergency cardiac and stroke
5. Vascular surgery
6. General benefits of concentrating services to exploit any relationship between volume of work and patient outcomes. Apart from services listed below, the second submission referred to various types of cancer surgery, hip and knee replacements.

These are considered in more detail under the Panel's assessment of the evidence below.

7.4 ASSESSMENT OF THE EVIDENCE

The most striking features of the Board's evidence were:

(i) Reliance on older studies – with the exception of a handful of studies, the evidence base is from the 1990s. This raises concerns because it relates to clinical practice from nearly a decade ago.

(ii) Reliance on American studies – with the exception of a handful of studies, the evidence base is from American hospitals. This means care should be taken in ensuring the studies are relevant to Scottish practice. It was not evident the Board had considered this.

In the first submission the Board stated that older studies from countries that were not relevant to Scotland would be excluded, but it is not obvious how this was applied in practice.

A key problem with the evidence presented was that while the research literature search relating to A&E services was systematic there was no equivalent systematic search for trauma surgery, intensive care, vascular surgery, stroke care, emergency surgery, MI, and so on. References were cited which were not identified through the systematic search and the danger is that these are not representative of all the evidence available. For example, while the Board has cited studies relating to severe trauma as part of its case for centralising this service, there are other studies (e.g. Margulies, Sava) that show no relationship between the number of operations a surgeon carries out and patient survival. Unless the Board has considered all the evidence it is unclear how it can reach an evidence-based view.

1. Emergency surgery

The Board cited two pieces of evidence:

(i) In a 2007 Royal College of Surgeons of England report[3] the minimum catchment population for emergency surgery services was said to be 300,000 people. The Board's submission says: "Given NHS Lanarkshire serves a population in the region of 560,000, it can logically be concluded that, based on the guidance from the Royal College of Surgeons, emergency surgical services should only be provided from two sites." (Second submission, page 24).

However, in 1998 professional opinion as expressed by the same Royal College of Surgeons of England was that the minimum catchment population for emergency surgical services was 450,000 to 500,000 people[4]. Had NHS Lanarkshire acted on this earlier estimate then emergency surgery would only have been provided at one local hospital nearly a decade ago.

It is not evident that these estimates have a sound basis, and it is questionable whether NHS Boards should simply accept them. For example, 300,000 appears to have been set on the basis that it was roughly halfway between existing NHS practice and the aspired level of 450,00. It was not clear what analysis had gone into this, especially whether the consequences for patient safety. Nicholl et al quantified the additional mortality from moving people in life-threatening circumstances over longer distances but it is not clear that this was considered in setting the recommended catchment population figure.

(ii) Centralisation may still be justified if there were evidence of benefits to patients. The analysis in the previous section has shown the evidence presented in the submission for such specialisation was weak. With respect to emergency surgery, the Board claimed, "Data from the Lothian Surgical Audit … showed the restructuring of emergency surgical care, focused on subspecialisation appropriate to upper and lower abdominal conditions, has led to improved quality of care and outcome." (page 26).

In fact, these data are from the abstract of a presentation at a medical conference. From inspection of the limited information it contained:

- It only related to the management of perforated peptic ulcer – there may be less than 50 cases per year in Lanarkshire. The Board did not draw attention to this point, nor did it discuss the relevance of perforated peptic ulcers to the hundreds of emergency surgical admissions that are due to a variety of other conditions.
- The study design was weak – it was an uncontrolled before-and-after study that did not attempt to exclude the influence of any other factor such as case selection for surgery. The abstract has never been written up for publication in a peer-reviewed journal.

2. Trauma surgery

The evidence for centralising trauma surgery to get better outcomes focuses exclusively on severe trauma. The second submission says: "Nathens et al[5] suggest that as a minimum, major trauma centres should admit more than 250 critically injured patients per year. The average acute hospital is not likely to be called to treat more than one severely injured patient each week. Such low numbers suggest that some acute hospitals may have too little experience to give these patients their best chance of optimum outcome." (page 24).

In fact, Nathens et al did not discuss a threshold of 250 cases; they actually refer to a threshold of 650 cases of major trauma per annum[6].

The Board's second submission estimates 25 severely injured patients are seen in NHS Lanarkshire per year. The National Confidential Enquiry into Perioperative Death (NCEPOD) report says, "The incidence of severe trauma, defined as an Injury Severity Score (ISS) of 16 or greater, is estimated to be four per million per week." (page 14). Given a population of 560,000, this would imply 2.2 cases per week or around 116 per year. In a similar calculation, when scrutinising the revised A & E proposals from NHS Ayrshire & Arran, the Panel estimated this represented around 2.5% of total trauma work. If NHS Lanarkshire's figure of 25 cases is right it is less than 1%. While there may be a strong case in these patients no evidence was presented to suggest outcomes would be improved in the other 97-99% of cases.

Apart from the self-criticisms of their work that Nathens et al offer in their research paper (not reported in the Board's submission), the Panel also has a concern about the generalisability of data from America, where distances from an incident to a trauma centre may be greater than in Lanarkshire, traffic conditions are likely to differ (e.g. greater use of air ambulances), different levels of violent crime lead to different types of trauma, and so on.

3. Critical care

The Board's second submission cited three studies suggesting benefits from intensive care being provided by specialists. However, closer scrutiny of the three studies all revealed that they all appear to be comparisons of units with specialist staff versus units without specialist staff. The studies were carried out in America, some as long as 20

years ago. It is simply not obvious what relevance these studies have to Lanarkshire: local intensive care units are already staffed by specialists. None of the research studies claim that larger intensive care units have better outcomes so it is not obvious what concentrating intensive care units on fewer sites in Lanarkshire would achieve in terms of patient outcomes.

4. Emergency cardiac and stroke

"There is now a recognition that for emergency cardiac conditions, vascular conditions and strokes, lives can be saved and disability reduced by Paramedics administering drugs at the scene and/or making the decision as to which hospital can best meet the needs of the patient, often bypassing the most local Accident and Emergency Service (Alberti, 2006; Boyle, 2006; IPPR, 2007)." (page 25)

However, the Alberti and Boyle references do not cite any supporting research evidence for the views expressed. The IPPR report does not offer new evidence - it is a review of existing studies. It does not say anything about evidence for stroke care. In terms of cardiac conditions it makes the case for angioplasty following a heart attack, evidence that is widely accepted and is being acted upon elsewhere in the west of Scotland.

5. Vascular surgery

The Board's main evidence seemed to be the IPPR report, which in turn refers to two existing reviews of the evidence on vascular surgery. The first is the York review which the Kerr Report described as "methodologically flawed and of little value in forming decisions about the planning of the delivery of health services". Kerr went on, "At the time of the York Review, methodological deficiencies in the evidence base meant that the studies had little if any relevance to health service planning."

The second review cited found a statistically significant relationship between number of operations carried out and patient outcome for only one type of vascular surgical operation i.e. elective repair of an abdominal aortic aneurysm (AAA)[7]. For emergency AAA repair, five out of seven studies did not find a statistically significant relationship between number of operations carried out and outcomes.

From data on admission rates in the review elective AAA repair is less than 3% of vascular surgery work. As with trauma surgery, the evidence for centralisation presented by the Board in the second submission is confined to a very small proportion of the work of the specialty. For the other 97% of patients centralisation could mean the risks of greater travel with no benefits.

6. General benefits of concentrating services to exploit any relationship between volume of work and patient outcomes

The second submission quotes a document prepared for the Kerr Report the "Report of the Volume/Outcome Sub Group to the Advisory Group on the National Framework for Service Change", as saying, "[T]here is now a core of studies of adequate methodological quality to establish striking volume/outcome associations in certain complex high risk surgical procedures and more modest but clinically relevant effects in a wide range of common procedures. The size of the effect is influenced by the index of outcome and the range of volume considered." (page 25).

The Sub-group based this on two articles reporting searches of the research literature, relying in particular on the review by Gandjour. It was reported this review:

- covered 34 diagnoses and interventions
- combined with the second review this gave a total of 76 studies - higher hospital volume was statistically significantly better in 51, non-significantly better in 21, non-significantly worse in 3 and significantly worse in only 1
- identified the single most reliable study (based on criteria such as the quality of case-mix adjustment) for each of a number of procedures. In 20 such 'best' studies, high volume was significantly better in 10, non-significantly better in 6, non-significantly worse in 3 and significantly worse in 1
- In fact, Gandjour et al[8] included a variety of treatments that would have little relevance to the current review such as liver transplants, heart transplants, management of HIV/AIDS, paediatric heart surgery, and neonatal intensive care.

Of the remaining treatments some, such as trauma surgery, are considered elsewhere in this section. Confining attention to the treatments that might be affected by sub-specialisation in Lanarkshire and Gandjour et al's 'best' study (referred to above) the findings are as follows:

Treatment	Whether a hospital sees more or less than	Whether a surgeon sees more or less than
Breast cancer	150 patients makes no difference to mortality	No evidence
Colorectal cancer	40 patients makes no difference to mortality	10 patients makes no difference to mortality
Rectal cancer	12 patients makes no difference to mortality	3 patients reduces mortality from X to Y
Knee replacement	107 patients reduced mortality by around 0.06%	No evidence
Hip replacement	108 patients makes no difference to mortality	28 patients makes no difference to mortality
Primary total hip and knee replacement	10 patients makes no difference to mortality	100 patients makes an unquantified difference
Revision total hip and knee replacement	10 patients makes no difference to mortality	10 patients makes an unquantified difference

Of the 14 possible relationships, only 4 were statistically significant. This does not tell the whole story, however. Of the four studies that did show a relationship their relevance to Lanarkshire must be in doubt because:

1. The studies were all based on practice in America or Canada twenty years ago:

(i) For example, the study that found a relationship for knee replacement surgery used data on American practice between 1985 and 2000.

(ii)The rectal cancer study was based on Canadian practice between 1983 and 1990.

The study of primary and revision joint replacement was based on practice in Florida in 1992.

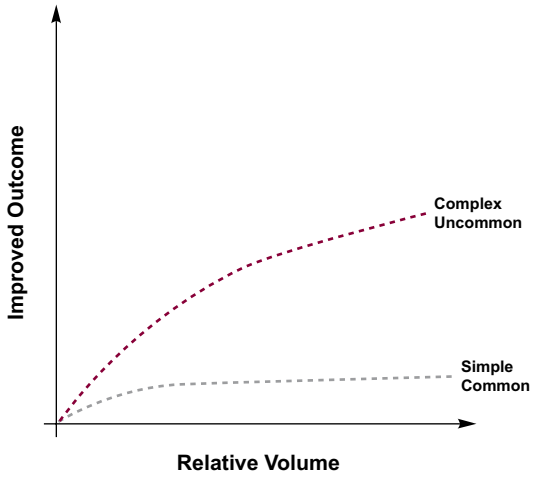
2. The number of operations at which they suggest there is any benefit from specialisation are irrelevant to Lanarkshire:

(i) The threshold for knee replacements is 107 operations per hospital but data from the ISD website show that in 2006-07, 456 knee replacements were performed in Lanarkshire hospitals, suggesting the thresholds in this study are not relevant to current care.

(ii) The threshold for rectal cancer surgery was 3 operations per surgeon but data from the ISD website show that in 2004 there were 119 new cases of rectal cancer[9] and while not all of these will undergo surgery, there should be enough work to ensure surgeons can safely see more than 3 per year.

(iii) The threshold for joint replacement was 100 operations but data from the ISD website show that in 2006-07, 456 knee replacements and 454 hip replacements were performed in Lanarkshire hospitals, making 910 in total. This suggests the thresholds in this study are not relevant to current care.

In other words, any improvement in outcomes takes place at low levels of workload. The following diagram from the Kerr Report[10] illustrates this:



The data presented suggest Lanarkshire hospitals are likely to be working on the horizontal part of the curve for simple common procedures.

Therefore, the general case for change appears to be based on evidence that has little relevance to Lanarkshire in 2008. Data from practice 15-20 years ago in other countries is now being used to justify reorganising care in NHS hospitals in Scotland, with effects that will last for decades into the future. These studies are arguably not relevant to day-to-day clinical practice in the NHS of 2008 and should not be the basis of policy-making.

In making these criticisms the Panel is following its remit to scrutinise the evidence submitted. The Panel fully acknowledges:

(i) That for some services such as transplant surgery the case for specialisation has been made, and

(ii) There may be other evidence supporting specialisation in particular areas that has not been cited.

However, the Panel is mindful of the view of the Academy of Medical Royal Colleges: "Although there is evidence to suggest that the centralisation of services to deal with complex or specialised work provides better outcomes for patients, evidence for centralisation of non-complex and high volume cases does not exist."

[1] *Margulies et al 'Patient volume per surgeon does not predict survival in adult level I trauma centres' Journal of Trauma 2001; 50: 597-603.*

[2] *Sava et al 'Does volume matter? The effect of trauma surgeons' caseload on mortality' Journal of Trauma 2003; 54: 829-834.*

[3] *Royal College of Surgeons of England "Delivering High-quality Surgical Services for the Future" (2006), page 28.*

[4] *Royal College of Surgeons of England "Provision of Acute General Hospital Services" (1998)*

[5] *Nathens et al 'Relationship between trauma centre volume and outcomes' JAMA 2001; 285: 1164-1171.*

[6] *"After adjusting for differences in injury severity, centers with total major trauma volume (ISS >15) in excess of 650 cases per year demonstrated measurable improvements in mortality and LOS."*

[7] *The most recent study is ten years old and may represent clinical practice in America that is even older so there are concerns about generalisability.*

[8] *Gandjour*

[9] *http://www.isdscotland.org/isd/files/cancer_rectum_inc.xls*

[10] *Scottish Executive Health Department "Building a Health Service Fit for the Future" page 35.*

SECTION 8
CRITERIA 4: PATIENT-CENTRED

8.1 KEY POINTS

The Board presented very little evidence on the patient-centredness of the different scenarios. The only issue to receive any real attention was travel time. The Panel feels that more attention should have been devoted to this in light of the weights attached to it by both the public and professionals in the option appraisal.

This is of particular concern because under options B, C and D in particular thousands of people will have to travel across Lanarkshire for care they currently receive at their local hospital. At public meetings the Panel heard this causes anxiety, is inconvenient, expensive and can be unreliable. It is not clear what consideration has been given to these factors.

In addition, the Cabinet Secretary, in instructing NHS Lanarkshire to revise its plans for A&E services in June 2007, specifically mentioned the issue of diminished emergency care provision in some of the most deprived areas of Scotland. The worsening of access under options B, C and D does not appear to have been taken into account by the Board when considering this criterion.

8.2 AGREED DEFINITION

- Accessibility

The proposal should facilitate provision of A&E and unscheduled care services as close as possible to where services users are in need. Convenience of accessibility by public transport and the local road network for service users and their families should be considered.

- Acceptability

The proposal should also provide satisfaction and promote a positive experience for users of A&E and unscheduled care services.

- Availability

This should include patient satisfaction derived from the responsiveness of the service, for example taking account of waiting times[1]; treatment times; opening times; and the extent to which service is tailored to individual needs and preferences. The proposal should ensure appropriate pathways of care based on people's needs.

8.3 EVIDENCE PRESENTED

The second submission had very little to say about the criterion of patient-centeredness. In the comparison of options B, F and G on page 9 a brief comment is made on the accessibility of A&E services for people in Monklands and in terms of travel for other people in Lanarkshire for planned surgery.

It also said, “A balance needs to be struck between:

- Clinical outcomes that can be improved by maintaining and/or consolidating services into more specialised units with the development of sub-specialty rotas, and
- An assessment of the level of activity required to maintain skills and expertise and meet the training requirements of more generic services, and
- Public acceptance of any proposals.

Although surveys show that patients want a comprehensive surgical service delivered as locally as possible for common problems, they are happy to travel for highly specialised treatment (The Royal College of Surgeons of England, 2006).” (pages 27-28).

The information pack for the scoring event contained around 20 different references but the Board’s interpretation was limited to a brief summary of the perceived key message.

8.4 ASSESSMENT OF THE EVIDENCE

The evidence above is extremely thin, certainly when compared to the time and effort devoted to showing the problems in medical staffing and trying to make a case for sub-specialisation. The Panel reviewed the evidence presented in the information pack but found it to be quite confusing and very difficult to draw any conclusions from.

The Panel is disappointed the Board did not engage more fully with this criterion. The weighting exercise for the option appraisal[4] showed that both the public and professionals attach considerable importance to this criterion:

	Safe	Quality/Best Practice	Sustainability	Patient Centredness	National Policy
Professionals	14	10	12	9	5
Public	11	13	10	12	5

The public regard this criterion as even more important than safety and the professionals see it as only slightly less important than “quality / consistent with best clinical practice”. In light of this the Panel feels the amount of emphasis the Board placed on this aspect was disproportionately small.

This is serious because some options such as B, C and D would involve many people travelling across Lanarkshire each year, either in an emergency or to receive elective care. The Panel has heard concerns from the public regarding the availability and reliability of transport links between different areas. The Royal College of Surgeons may believe people are happy to travel for specialised services but the Panel heard from local people that it was also expensive and inconvenient.

The Panel is also concerned that the Board has taken no obvious account of the fact that the biggest reduction in access to emergency services in options B and C would be felt by those in the most socio-economically deprived areas of Lanarkshire. The

Cabinet Secretary made quite clear on June 6th that this was important[3]: "There were concerns that the boards' proposals would inhibit access to A and E services; concerns, particularly in Ayrshire, that insufficient consideration was given to geographical, local transport and ambulance infrastructure issues; and concerns, most notably in Lanarkshire, that the proposals would have meant diminished emergency care provision in some of the most deprived areas of Scotland, where people need it most." (column 391). The Board's analysis and summary does not take this into account.

[1] *Timely is identified as one of six aims to address quality in health. It is defined as, "reducing waits and sometimes harmful delays for both those who receive and those who give care". "Crossing the Quality Chasm: A New Health System for the 21st Century" Committee of Quality of Health Care in America, Institute of Medicine. 2001*

[2] *Weights from tables on page 60 of the Second submission.*

[3] *http://www.scottish.parliament.uk/business/officialReports/meetingsParliament/or-07/sor0606-02.htm#Col390*

SECTION 9
CRITERIA 5: CONSISTENT WITH NATIONAL POLICY

9.1 KEY POINTS

The Panel acknowledges that a number of measures the Board is implementing, including workforce policies (European Working Time Directives, Modernising Medical Careers, etc.) and meeting waiting time targets are required in order to be consistent with national policy.

The policy of a presumption against centralisation has been explained in "Better Health, Better Care" in the following terms:

[T]here will be a clear policy presumption against centralisation. That does not, of course, mean that there will never be an occasion when it makes sense to concentrate services. It does however mean that any such moves result in benefits for patients and be subject to meaningful consultation and independent scrutiny to ensure they are based on the best available evidence and give due weight to the views of local people. (page 5).

Given the comments the Panel has made on the quality of the evidence submitted under the criterion Consistent with Clinical Best Practice, there may be a case for centralisation for severe trauma injuries. In other areas the evidence is weaker.

9.2 AGREED DEFINITION

The proposals should be consistent with the principles of the Kerr report and developing national policy as described in 'Better Health, Better Care'. This includes the presumption against centralisation.

9.3 EVIDENCE PRESENTED

The second submission said, "Clearly this approach to delivering safe, effective healthcare must be set alongside the Cabinet Secretary's 'presumption against centralisation' and the most appropriate balance struck. This was indeed acknowledged by the Cabinet Secretary for Health and Wellbeing in her statement to the Scottish Parliament on 6 June, where she stated:

"We see the logic of separating where possible the delivery of planned and unscheduled care. Such a move helps to improve efficiency and minimise waiting times for patients. Moreover, we appreciate that in certain instances – for example, in specialist cancer care, neurosurgery or heart treatment – a concentration of skills on a specialist site really benefits patients. This Government will adhere to those important principles in its stewardship of the health service." (The Scottish Parliament Official Report, 6 June 2007, Column 393).

9.4 ASSESSMENT OF THE EVIDENCE

The Panel acknowledges that a number of measures the Board is implementing, including workforce policies (European Working Time Directives, Modernising Medical Careers, etc.) and meeting waiting time targets are in order to be consistent with national policy.

The policy of a presumption against centralisation has been explained in “Better Health, Better Care” in the following terms:

> [T]here will be a clear policy presumption against centralisation. That does not, of course, mean that there will never be an occasion when it makes sense to concentrate services. It does however mean that any such moves result in benefits for patients and be subject to meaningful consultation and independent scrutiny to ensure they are based on the best available evidence and give due weight to the views of local people. (page 5).

Given the comments the Panel has made on the quality of the evidence submitted under the criterion Consistent with Clinical Best Practice, there may be a case for severe trauma injuries. In other areas the evidence is weaker.

SECTION 10
LOCAL CIRCUMSTANCES

10.1 KEY POINTS

The Board provided an appendix on the influence of socio-economic deprivation on health, need for policy intervention and use of health services in Lanarkshire. Having established an increased need for access to emergency care in poorer areas, the report then tries to make the case that increased journey times associated with certain options would not make an appreciable difference in an emergency. This case was not proven to an adequate standard because flawed evidence was cited and important counter-evidence was excluded.

10.2 EVIDENCE PRESENTED

The first submission included evidence on the impact of deprivation on A&E service use in Appendix 1. Amongst other subjects this provided statistics on socio-economic deprivation in Lanarkshire, discussed health promotion and community regeneration initiatives, discussed the higher incidence and prevalence of disease in deprived populations, and made the case for improved access to primary care services. The Appendix then focused on trauma care to show (i) the increased incidence of injury requiring trauma admissions in the most socio-economically deprived populations of Lanarkshire and (ii) cited studies to show trauma cases can be safely transferred, bypassing the nearest hospital if necessary. It is concluded that to tackle deprivation it is important to increase investment in primary care and community planning as well as health promotion, health protection and primary care. The Appendix finishes, "Consideration of issues of access for emergency care for deprived communities have shown that journey times in themselves do not appear to affect the outcome of emergency hospital care and health outcomes are not materially affected by the location of the emergency hospitals."

10.3 ASSESSMENT OF THE EVIDENCE

The Panel found it confusing that the Appendix states that one hospital in Lanarkshire will be losing its A&E service: "Given the decision that current services cannot be maintained on all 3 hospital sites on account of quality of care and workforce considerations, level 3 provision comprising emergency inpatient care, consultant-led accident and emergency care, coronary care and intensive care will in due course be available on two hospital sites." (page 14). This seems to go against the Cabinet Secretary's statement of 6th June and the statements by NHS Lanarkshire in paragraph 1.1 of the first submission to the Panel.

With regard to the evidence in the Appendix, the Panel notes:

Deprivation is linked to a higher rate of the types of illness and injury that require access to accident and emergency services. As the Appendix says, "Deprived populations have greater levels of illness, therefore it makes sense to locate emergency hospital

facilities within a reasonable travelling distance for deprived communities. Levels of car ownership are also lower in deprived areas making the population less mobile." (page 14).

Socio-economic deprivation affects several areas of Lanarkshire but appears to be concentrated in the catchment areas of Monklands and Wishaw Hospitals. The A&E and emergency services in these hospitals thus seem especially important to maintain, in addition to developing primary care and community services.

The Appendix makes a case for doing more to prevent these illnesses and injuries from occurring – the Panel notes that no evidence is cited on the likely effectiveness or cost-effectiveness of such measures. There is also no evidence presented that one consultant-led A&E service should close to fund the injury prevention.

The Appendix concluded, "… journey times in themselves do not appear to affect the outcome of emergency hospital care and health outcomes are not materially affected by the location of the emergency hospitals." (page 15). Two studies were cited in evidence:

Wyatt et al[1] reviewed 138 deaths among children as a result of injury in south-east Scotland over an 11-year period. It was found 99 children died within an hour of their injury or were dead when they were found, and 92 showed no sign of life when the ambulance arrived. The researchers concluded gains from earlier medical attention are limited. It is not clear how relevant this conclusion is to the management of adult patients in a non-trauma emergency situation in Lanarkshire.

McGuffie et al[2] carried out a prospective review of 4,636 patients with moderate or severe injuries between 1998 and 2000 in west or south-west Scotland. The group was divided into categories of "urban and "rural" and the two groups were compared in terms of length of stay in hospital, time in intensive care and mortality. There were significant differences between the two groups at baseline in terms of the age and sex, as well as rate of penetrating trauma. The researchers said, "In essence, urban patients had an excess of assaults and low falls, whereas rural patients were the victims of road traffic accidents, sports injuries, and other injuries (including industrial and farming injuries)." (page 634). No patients died during pre-hospital transfer, and the researchers reported that there were no significant differences in hospital stay or mortality. It was unclear why the researchers had adopted the urban/rural division – this appeared to equate patients injured 100 yards from a town boundary with people injured 50 miles from a town. It seems reasonable to suppose that the response time for these two cases would be totally different. This makes the policy implications unclear. The Panel also noted that:

- It was unclear how the sample size was derived or whether the study was big enough to detect a difference even if one existed.
- While attempts were made to control for differences the imbalance in age, sex and penetrating injury at baseline suggests the two groups were not well matched. This may explain why the statistical analysis carried out (logistic regression) had so little explanatory power.

The Panel notes that the research by Nicholl et al[3] (which showed an impact of distance travelled in an ambulance with a life-threatening condition has a measurable impact on mortality) was dismissed because the data came from 1997 to 2001 and practice may have changed; the McGuffie et al study used data from 1998 to 2000 but this was judged to be acceptable.

Given the concerns about the studies cited and the fact that Nicholl's study was dismissed for no valid reason the Panel did not accept the conclusion that journey times in an emergency do not affect outcomes.

[1] *Wyatt et al 'Timing of paediatric deaths after trauma' BMJ 1997; 314: 868*

[2] *McGuffie et al 'Scottish urban versus rural trauma outcome study' Journal of Trauma 2005; 59: 632-638.*

[3] *Nicholl et al 'The relationship between distance to hospital and patient mortality in emergencies: an observational study' Emergency Medicine Journal 2007; 24: 665-668.*

SECTION 11
ROBUSTNESS OF THE OPTIONS

11.1 ROBUSTNESS OF THE OPTIONS

In the light of the Panel's comments on each of the criteria, it is possible to offer some broad views on the strengths and weaknesses of different groups of options. In offering these comments the Panel is mindful that in its remit it was not asked to select its preferred option.

For this purpose, the options were grouped as follows:

- Scenarios B, C and D – these options are characterised by the loss at the Monklands Hospital site of emergency surgery and trauma surgery, as well as emergency medical beds and intensive care under some options.
- Scenarios F and G – these options represent the existing service (Scenario F) or the status quo with more sub-specialisation (Scenario G).

Safety – in the Panel's view the Board has not made a convincing case for the safety of moving sick patients over longer distances. Safety arguments would therefore favour the options that minimised these elements, namely scenarios F and G.

Sustainability – the Panel's view is that the Board has not made a convincing case that existing services are unsustainable.

Consistency with Clinical Best Practice – in the Panel's view, the Board has not made the case for improved outcomes from sub-specialisation. The quality of existing clinical services provided from Lanarkshire's acute hospitals are similar (and generally very good), so this would not help to pick between the options.

Patient-centred – the Board offered so little evidence on this criterion it was not easy for the Panel to comment. In terms of accessibility, patients in North Lanarkshire with more serious emergencies would find scenarios F and G more accessible. People from South Lanarkshire requiring elective surgery would also find scenarios F and G the most accessible. In terms of public acceptability, the opposition to plans in 2006 may suggest scenarios B, C and D attract opposition.

National policy – the Board has emphasised its desire to improve primary care and community services in line with the Kerr Report. To the extent this depends on avoiding spending more money on acute care this would favour B and F, the least expensive scenarios. However, the Cabinet Secretary's stated policy of a presumption against centralisation would favour scenario F.

The Board's initial assessment of the options

The Board made its assessment of three of the scenarios in its second submission (pages 7-8). Some of the Board's comments are reproduced below interspersed with the Panel's commentary in italics.

Scenario B

The Board claim: “It achieves improvements in clinical services and capacity due to sub specialisation, development of greater specialist team expertise as well as separation of planned and emergency care.”

The Panel has scrutinised the evidence submitted on likely benefits to patients and found it to be very weak and lacking applicability to the situation Lanarkshire faces in 2008. The separation of elective and emergency care is important but the Board has chosen to interpret this as the physical separation of services across hospital sites and this is only one possibility with other options that would preserve emergency services at all three sites available.

The Board claim: “It will also be a more sustainable model with larger clinical teams and more sustainable, less intense rotas.”

The Panel has scrutinised the evidence submitted and has not been convinced by the case the Board presented.

The Board claim: “It will provide a more up-to-date capital estate and will be more sustainable for the recruitment and retention of clinical staff, as the model will be similar to other areas in Scotland.”

The Board has presented no evidence to back up this claim - the Panel notes the Monklands building is only thirty years old.

The Board claim: “The Scenario does however reduce access for patients in the Monklands area for emergency care and this is likely to be less favoured by the public.”

The Panel heard evidence at its public meetings that confirms this assessment.

The Board claim: “It will also incur an increased risk relating to patient transfers, although the Emergency Referral Service should minimise this.”

The increased risk referred to is in terms of patient safety as seriously ill people are transferred in ambulances over longer distances than at present. Research has quantified the likely impact of longer journeys on mortality rates in life-threatening situations but this was not considered in the Board’s evidence on safety. The reassurance the Board offers regarding the Emergency Referral Service should be contrasted with the Scottish Ambulance Service’s view, as expressed in Appendix 8 of the Board’s first submission, “While the SAS recognises and supports the concept of the Emergency Referral Centre (ERC) it must be noted that the scale of integration and co-ordination proposed is not currently practiced anywhere in the UK. The assumptions of benefits gained from this model to patients and the system as a whole would be unsurpassed however given the pivotal role of the Centre, the complexity of integrating a variety of systems and the absence of evidence from any similar models an element of caution and recognition of some level of risk must be considered when factoring the impact of the ERC.”

Summary: The Board's comments do not mention that a number of medical professional bodies argue for the co-location of the full range of emergency services – these include the British Association for Emergency Medicine, the Academy of Medical Royal Colleges, and the Royal College of Surgeons, amongst others. Scenario B separates consultant-led A&E services from critical care, surgical, medical and trauma surgery support. The impact of this configuration on staff recruitment and the inherent sustainability of the scenario have not been considered by the Board.

Scenario F

The Board claim: "It does not achieve any of the improvements in clinical services and capacity, as it will not enable further sub specialisation nor does it allow the separation of planned and emergency care."

The Board has not provided evidence to support the case for these benefits. It is not clear why scenario F could not support the very limited areas where the case is stronger.

The Board claim: "The scenario will mean that it will be more difficult to achieve waiting time target for treatment including cancer treatment."

The Board has supplied no specific evidence to support this claim. The Panel assumes this is a reference to the separation of emergency and elective care, but this can be achieved without changing the existing configuration of services.

The Board claim: "The Accident and Emergency Services will be compromised as a consequence of an inability to ensure that the consultant with the right sub-specialty skills is available for the initial assessment and treatment of patients."

The Board has provided no evidence to demonstrate that patient outcomes will be any worse as a result of lack of access to sub-specialty advice in A&E.

The Board claim: "The model will be less sustainable due to the continuation of smaller teams, which will be vulnerable to vacancies, leave and sickness."

There will certainly be short-term issues with smaller teams but the Board has provided no evidence that these will be so serious as to justify considering the withdrawal of emergency services (other than A&E) from the Monklands site.

The Board claim: "It will also be less attractive for recruitment and retention of medical staff because it will be out of step with other areas in Scotland and will require more intensive rotas."

The evidence from the interviews with newly appointed hospital consultants contradicts this claim. The size of teams and rotas were not a factor for these doctors. It is unclear why the Board has failed to take account of the evidence it gathered. As the supply of new consultants increases, they are likely to become even less important.

The Board claim: “The capital upgrade at Monklands will be more complex and will take longer (at least 10 years). This will lead to risks of service failure and disruption. This will provide a less modern capital estate.”

It is unclear what this is being compared to, and what the significance of this is.

Summary: It is disappointing that the Board has chosen to make a number of claims about the deficiencies of the status quo that were not supported by any evidence in its own submission. The Board conducted interviews with newly appointed hospital consultants in preparing its first submission and the doctors provided a list of positives and strengths about the existing service. It is unfortunate these have not been mentioned here.

Scenario G

Detailed comments on this option have not been included, as they would simply repeat the points made above. The main attraction of scenario G is the increased sub-specialisation but the benefits of this have not been established. As specialisation of services means they will be withdrawn from some hospital sites this may begin to threaten the viability of remaining services at the hospital site affected. Given that the Board has itself described the upgrade of Monklands as complex and taking a decade, it seems Monklands may be at a disadvantage when decisions are made about where to centralise services – this may mean emergency services at Monklands are not viable as elements of trauma surgery, general surgery and general medicine are moved to Hairmyres and Wishaw. The Board’s critics are likely to see this as “scenario B through the back door”.

Summary

The Panel has not been asked to select an option that it recommends to the Board and to the Cabinet Secretary. In the second submission the Board has made a start on identifying the strengths and weaknesses of three of the scenarios. The Panel has assisted in this task by pointing out some of the problems with scenarios B and F, and some of the advantages of scenario F.

SECTION 12
FINANCE

12.1 KEY POINTS

Substantial financial information was presented to the Panel. It is the Panel's view that the Board has taken a consistent approach to developing the incremental cost associated with all models.

From a narrow A&E review perspective, in capital terms, the A&E unit at Monklands appears to be fit for purpose. However, the costs presented are for addressing a "historically inadequate level of expenditure on planned preventative maintenance on Monklands"[1] which has resulted in significant investment now being required to maintain its condition. The Board has advised the Panel that for several years, it was in financial deficit, and did not have the means to finance the backlog maintenance. Had the preventative maintenance been undertaken, the costs now being presented for Monklands would have looked quite different and it is the Panel's view that this would have had a direct bearing on the cost comparison of each of the models.

The PFI providers have not signed off on the impact on the unitary charge of the proposed capital works and therefore these costs could be either understated or overstated.

The optimism bias for Monklands has doubled from the first submission to the second submission. This could significantly influence the outcome of the option appraisal. The increase is based on the experience of Currie & Brown.

Staffing: Concentrating on the number of additional doctors needed for the different scenarios in the option appraisal the Panel found some inconsistencies between the staff numbers and costs quoted at different points in the two submissions. The Panel also found a general failure to explain clearly (i) why additional staff were needed in different scenarios and (ii) if additional staff were needed why the particular number had been chosen.

The latter point in particular is a serious concern as the differences in medical staffing between options is a major factor in explaining the cost differences between models. For example, in terms of work for anaesthetists scenarios F and G appear identical but G is said to require 8 more consultants than F.

Ambulance Costs: The Scottish Ambulance Service identified a number of non-recurring revenue costs and these do not appear to have been included in the total cost for all the scenarios. The costs are higher for scenarios A-C and significantly smaller for Scenarios D-G.

12.2 EVIDENCE PRESENTED

Substantial financial information was presented to the Panel in a timely fashion. It is the Panel's view that the Board has taken a consistent approach to developing the incremental cost associated with all models.

A substantial amount of financial information was included within the first submission to the Panel. The Board subsequently provided the Panel with further evidence to provide context to the proposed investment at Monklands.

For each of the scenarios, additional clinical staffing costs have been identified by the Board from those envisaged as being required to support the clinical modelling under a Picture of Health. This revised staffing profile combined with the ambulance costs provided by the Ambulance Service gives a differential revenue costs for each scenario. Some scenarios require a different profile of capital investment and this has an associated revenue cost.

Given the costing approach taken by the Board, the Panel has not been in a position, nor would time have permitted, an extensive examination of the baseline and therefore can give no assurance that there are no double counts between the baseline and the additional incremental cost associated with each model. We understand that the Board's external auditors have been tasked with providing assurance on the robustness of the financial analysis. It is however the view of the Panel that the Board has been consistent in calculating the additional incremental cost associated with each scenario.

The Panel regarded the need to increase medical staffing irrespective of which scenario was selected as being outside of their remit and hence the figures have not been scrutinised and hence the Panel cannot give a comment on their robustness.

12.3 ASSESSMENT OF THE EVIDENCE

CAPITAL

From a narrow A&E review perspective, in capital terms, the A&E unit at Monklands appears to be fit for purpose. However, the costings presented are for addressing a more general "historically inadequate level of expenditure on planned preventative maintenance on Monklands"[2] which has resulted in significant investment now being required to maintain its condition. The Board has advised the Panel that for several years, it was in financial deficit, and did not have the means to finance the backlog maintenance. Had the preventative maintenance been undertaken, the costings now being presented for Monklands would have looked quite different and it is the Panel's view that this would have had a direct bearing on the cost comparison of each of the models.

The capital costs presented were significantly higher for Monklands than for Wishaw and Hairmyres. Within the first submission, there was no evidence provided to support the case for the scale of investment proposed at Monklands. Following the publication of the Panel's interim report and request for further information, the Board submitted to the Panel an Asbestos Survey undertaken by Modus (Scotland) Ltd in 2003 and a

Condition Survey undertaken by Capita Property Consultancy in 2003. Both reports did evidence the extent of work required to bring Monklands to an acceptable modern standard. The Panel visited Monklands Hospital and during the visit, the staff explained that the A&E department had been significantly refurbished.

From a review of A&E services perspective only, it would appear that no significant capital investment is required to the A&E department. However, the Currie & Brown report (Sept 2007) states that: “without investment in the infrastructure (at Monklands) there is significant risk in services becoming unsafe, leading to significant interruption and actual loss of service.” The condition survey clearly attributes the current state of the main hospital building to “historically inadequate expenditure on planned preventative maintenance”.

Given the extent of the capital refurbishment required at Monklands, the Panel invited the Board to demonstrate that from receipt of both the asbestos and condition survey, it had been actively dealing with the infrastructure issues at Monklands. Limited information was presented. The Board has advised the Panel that the scale of the investment required to address the issues arising from the condition survey and asbestos report was out-with the Board’s delegated authority. In order to advance the investment, a business case was required to be submitted to the then Scottish Executive. The business case required a clear clinical strategy for Acute Services, which was the role of the Picture of Health review.

The PFI providers have not signed off on the impact on the unitary charge of the proposed capital works and therefore these costs could be under-stated.

The first submission to the Panel indicated that the Board’s estimates of capital costs for Wishaw and Hairmyres were shared with respective PFI funders to facilitate their input on the capital costs and to identify future revenue costs. Neither the first or second submissions provided any evidence of the PFI provider’s contentment with the proposed costs and how these capital costs would then be expressed through the unitary charge. This would particularly affect the cost of options B, C and D as these require the most new capacity at Wishaw and Hairmyres.

The Panel understands, from discussion with the Director of Finance, that the PFI providers reviewed the initial Picture of Health costings and that they were happy in principal with these. Subsequently The Tribal Group acting on behalf of the Board, have uplifted the unitary charge by 13% based on their professional view. This 13% uplift could be either an underestimate or an overestimate. Discussions are required with the PFI provider.

The optimism bias for Monklands has doubled from the first submission to the second submission. This could significantly influence the outcome of the option appraisal. The increase is based on the experience of Currie & Brown.

As per the Treasury Green Book, the capital figures put forward by the Board allow for optimism bias, which is intended to redress the tendency on the part of appraisers

to overstate benefits and understate timings and costs, both capital and operational. Optimism bias of 20% has been applied to Wishaw and Hairmyres and was initially set at 24% for Monklands. In the later version of the Currie & Brown report, optimism bias on Monklands had been increased from 24% to 43%. This has most impact on the costs of options F and G, which require most work at the Monklands site. The optimism bias for Wishaw and Hairmyres was also subsequently increased from 20% to 23% for Hairmyres, and from 20% to 39% for Wishaw.

It is very difficult to challenge the merits of the increase in optimism bias as the whole nature of optimism bias is about making adjustments based on experience and the unique character of the project in hand. However, it is an adjustment that has had a significant effect on the capital cost profile of the different scenarios.

REVENUE

The Scottish Ambulance Service identified a number of non-recurring revenue costs and these do not appear to have been included in the total cost for all the scenarios. The costs are higher for scenarios A-C and significantly smaller for scenarios D-G.

The Panel was pleased to see a report within the Board's first submission, produced by the West Central Division of the Scottish Ambulance Service which identified the recurring costs associated with each of the models. The recurring costs were highest for scenarios A-C and significantly less for scenarios D-G.

The SAS report also identified non-recurring costs associated with each scenario and the Panel was surprised that the non-recurring costs have not been included in the total revenue impact of each scenario.

MEDICAL STAFFING NUMBERS

Concentrating on the number of additional doctors needed for the different scenarios in the option appraisal the Panel found some inconsistencies between the staff numbers and costs quoted at different points in the two submissions. The Panel also found a general failure to explain clearly (i) why additional staff were needed in different scenarios and (ii) if additional staff were needed why the particular number had been chosen.

The latter point in particular is a serious concern as the differences in medical staffing between options is a major factor in explaining the cost differences between models. For example, in terms of work for anaesthetists scenarios F and G appear identical but G is said to require 8 more consultants than F.

The Panel's scrutiny of the figures relating to medical staffing was under two headings:

- Whether there was consistency in the projections between different submissions to the Panel as well as with other aspects of the submissions
- Whether there was adequate justification of the need for additional posts.

The Panel has focused on consultant medical staff in the first instance as these are the most expensive element and hence the numbers are most likely to influence total costs.

Consistency within the different submissions

The first submission included information on staffing numbers and costs in at least four different places:

i) A summary table with numbers of additional medical staff on page 25
ii) Table of revenue impact of each option on page 43
iii) Appendix 6 with details of medical staffing assumptions
iv) Appendix 9a with details of how financial costs were calculated

While there is a fair degree of consistency across the different tables and on into the table on page 22 of the second submission, there are also differences. The most notable is the change in numbers of anaesthetics staff required in between the first and second submissions.

Some factors considered by one specialty in the modelling of future numbers were not evidently considered by other specialties. For example, in the anaesthetics section one factor considered was the need to treat hip fractures within 24 hours, requiring an increase in access to trauma theatres – it was not evident this had been considered in the section on trauma and orthopaedics.

In other areas, the Board's arguments for specialisation and the need to concentrate services on fewer sites set out in its second submission were not really reflected in the detailed sections on medical staffing assumptions (Appendix 6, First submission). For example:

(i) In the second submission the Board's argument in the need for change was that specialisation was vital for critical care but in Appendix 6 of the first submission it is stated anaesthetists want balance in their job plans: for example, on page 24 there is reference to the need for "balance within daytime duties to ensure maintenance of all core clinical skills". On the face of it this does not seem like a call for specialisation. Later on it is explained there is a desire for a separate out-of-hours rota for anaesthetists with a special interest in intensive care but that is not what the evidence the Board presented for specialisation was based on. The research studies reflected intensive care units staffed by non-specialists versus specialists, whereas the issue seems to be whether having a specialist on-call offers better outcomes than a generalist on-call working to protocols prepared by a specialist.
(ii) Similarly, in Appendix 6 of the first submission the increase in consultant general surgeon numbers is only 3 for the status quo. This does not seem to square with the seeming urgency of the case argued in second submission for a reduction in the number of sites from which emergency surgery should be provided.

Adequate justification for the additional staff required

1. Emergency Medicine

There are currently 12 A&E consultants across the 3 hospitals. Scenario A (which is no longer being considered) would have required 2 more – this is based on an extended working day, but on page 20 of the first submission it was stated that the A&E consultants would be on site 09.00 – 17.00 Monday to Friday.

Scenarios B and C would have required 16 – this is based on cover for the short-stay beds included in this scenario. However, on page 21 of the first submission it was stated that the beds would be staffed by general medical doctors, not by A&E consultants.

Scenarios D, E, F and G would require 18 – the reason given is "to provide the APoH [A Picture of Health] cover which we feel is needed for patients etc. we will need six consultants on each site" (page 9, Appendix 6, First submission). Given that the number of A&E attendances is the same under each scenario, it is far from clear why this should be the case. The difference between scenario C (total of 16 consultants) and scenario D (18 consultants) is that just over 4000 attendances per year go to Monklands rather than to Hairmyres or to Wishaw (just over 10 per day).

The calculations for emergency medicine did not set out the need for any additional middle grade or junior staff.

2. General Medicine

Scenario B would require no additional general medical consultants. Scenarios C, D, E, F and G require 3 additional consultants, but the reasons why more staff are required and why the number of additional staff should be three was not clearly explained. The discussion included focused on on-call rotas but it was said scenario C would pose the most challenges yet the staffing for C was the same as for D, E, F and G.

3. General Surgery

The general surgery section was a model of clarity and brevity. In scenarios D, E, F and G three additional consultants are required to maintain a minimum 1-in-8 rota, although it was not explained why the number of additional staff should be three.

4. Trauma and orthopaedics

Under scenario F, 6 additional consultants would be required, but none would be needed under any other scenario. This appears to be because F is the only scenario with trauma over three sites as opposed to 2, with the latter allowing existing resources to be concentrated at fewer hospitals. However, there was no explanation for why the additional number of staff should be 6, although there is a note in the table on page 22 of Appendix 6 of the first submission that says "2 * 3 sites".

5. Anaesthetics

The additional number of anaesthetists is a major cost driver and an important source of the difference in cost between scenarios B & C on the one hand and F & G on the other. An account was given of the factors that had been considered but how they feed into the calculations is quite opaque. For example, in the table on page 27 of Appendix 6 in the first submission, scenarios F and G are identical in terms of theatre cover, ITU cover and obstetric cover, yet G requires 8 more consultants than F. No explanation was given.

[1] *Capita Condition Survey 2003*

[2] *Capita Condition Survey 2003*

SECTION 13
OPTION APPRAISAL

13.1 KEY POINTS

In the latter stages of the option appraisal, the new acute mental health unit at Monklands was identified as being feasible under all of the options. The Panel welcomes this development, while noting that it was unfortunately too late for the scoring event of the option appraisal. At that time, people scoring the options were told that options D, F and G would not have a new unit of this type at Monklands. Had they known it would have been included some of them may well have given a higher score to these options, particularly members of the public attending who had an interest in mental health services.

The submissions made by the Board contained no explicit future projections of patient, staff and bed numbers. It seems difficult to plan emergency services without these data.

At the scoring event, the Board decided to separate the public from professionals (mainly managers and doctors) with the stated aim of avoiding any influence between groups. The Panel believes this left the public without access to advice that was independent of the Board. While an independent facilitator hosted the meeting the person was not an NHS expert. The information pack circulated in advance was prepared by the Board and has been criticised elsewhere in this section.

The information pack prepared by the Board for the scoring event suffered from a number of deficiencies. The information presented required health services research experience to interpret. Some studies were selected from the literature while others were not. Some quotes were selected from the reports while others were not. There was no discussion of whether studies from other countries applied in Lanarkshire. There were few data on the quality of current services at Lanarkshire hospitals.

A particular concern in the information pack was that for each option, the Board presented estimates of numbers of attendances at Monklands A&E department. However, for each model the booklets did not estimate:

- The number of people who currently go to Monklands Hospital who would now bypass it in an ambulance in an emergency situation.
- The number of transfers from Monklands to other hospitals for people admitted to Monklands Hospital as an emergency and needing a service that is no longer provided there.
- The number of transfers of people admitted for elective surgery to Monklands Hospital who would need to be transferred to other hospitals for emergency surgery or level 3 intensive care.

This may have reduced the extent to which people involved in scoring considered bypassing and transferring patients in an emergency situation.

It is clear that the hospital doctors who scored the options took a different view to the public and to NHS managers. The Board made decisions about how the scores of different groups were to be combined. This gave most weight to the groups that favoured option B.

The Board has followed the Green Book in that they have excluded capital charges from the option appraisal and have used the recommended discount rate of 3.5%. Following discounting, Scenario F now appears to be lowest cost option. The Panel has been unable to find an explanation for this.

In the course of scrutiny of the spreadsheets produced for the option appraisal two arithmetical errors came to light.

- In the first case, the weight for the "safety" criterion had been applied to the score for "safety" but it had also been applied to the scores for "sustainability", "quality / consistent with clinical best practice", "patient centred", and "consistent with national policy".
- In the second case, the weights for the five criteria had been taken from one spreadsheet and copied and pasted into another spreadsheet to be applied to the scores. Unfortunately the criteria were not in the same order in the two spreadsheets but the weights were multiplied by the scores nevertheless.

Neither error dramatically changed the results. The obvious question that arises is whether the numbers are now error-free. The Panel has undertaken such scrutiny of the spreadsheet as is possible but cannot guarantee there are no further mistakes included.

The results of the option appraisal were analysed to produce a single preferred option. This involved the Board making judgements about whether one model was preferred to another in terms of whether the added cost was justified by the added benefit. The Panel is extremely critical of the basis for these judgements.

The Board faces a choice from the option appraisal between scenarios B and F. The choice rests on the trade-off between costs and benefits, but key information is either difficult to find or to interpret. No attempt has been made to convert a "weighted benefit point" into a service or patient experience so it is unclear what practical benefit is being purchased for extra money. Choosing a more expensive option also involves reducing funding or delaying other services and the benefits these would have produced should also be considered. The submission did nothing to help with this task.

13.2 THE APPROACH TAKEN

The approach used by the Board was to select a group of members of the public, clinicians and managers to weight and score the options. Separate events were held for

the weighting and scoring, and within each of these stages, separate events were held for the public and for 'professionals' (managers and doctors).

The Board prepared an information pack for those attending the scoring event, which included definitions of criteria, descriptions of the models, summaries of research studies and recommendations from professional bodies (such as medical Royal Colleges). Some local data were provided in terms of transport. The Board then analysed the data from the events to produce weighted scores for each option to be compared to the cost in each case. Comparing options in terms of costs and weighted scores resulted in one option being selected as the "preferred option".

13.3 COMMENTS ON THE APPROACH TAKEN

The Panel's scrutiny of the option appraisal process has been divided into three sub-headings:

- The basic design of the appraisal
- The weighting and scoring events
- The analysis of the data

The Basic Design of the Option Appraisal

Options Selected
The Panel scrutinised the options the Board had submitted. The Panel felt the Board could have done more to ensure scenario F (or a variants on scenario F) represented a "do minimum" option. The Board pointed to the deficiencies of scenario F at several points (e.g. lacking division between elective and emergency care but did not consider any solution to this with the existing service configuration).

The other issue was that the content of three of the five scenarios considered in detail changed at a late stage of the exercise when it was realised that under a 'capital-light' approach a new acute mental health unit could be built at the Monklands Hospital site after all. The Panel would in no way wish to rule out this very welcome development but it is unsatisfactory that the option appraisal scoring had been carried out based on an assumption that no such development would be possible under scenarios D, F and G. This was stated very clearly under the descriptions of each option in the descriptions provided. As the people scoring the event included people with an interest in mental health care, both amongst the members of the public and the professionals, this could have affected the way they scored these options.

Short-term, medium-term, long-term
The submissions made by the Board did not make explicit projections of patient, staff and bed numbers into the future. When forward projections were required in order to estimate future costs the assumptions appears to have been that once a model was established patient numbers, staff numbers and bed numbers do not change for the next 60 years.

The Panel appreciates that projecting patient numbers forward into the future is an inexact science. For example, it would be difficult to say what detailed model of emergency care will be like in 30 years. In general, however, the numbers lacked any time dimension at all. The Panel believes it would have been reasonable to expect short-term extrapolation of time trends combined with explicit assumptions about trends beyond this coupled with sensitivity analysis.

The Weighting and Scoring Events

The content and 'rules' for the scoring event
The Board has presented an account of the methods used but it was not reported whether people were scoring the models from their personal point-of-view, from the point-of-view of the community they were drawn from or from the point-of-view of the whole Lanarkshire population.

The decision to separate public and professionals at the scoring event
The rationale for separating the public and professionals for the scoring event was unclear. In the second submission it was stated, "Separate events were held for the staff and the public to avoid any influence between the stakeholder groups." (page 39). It was unclear what "influence" the Board was concerned about or why this would have been a bad thing. It is surprising the Board felt informed discussion would result from separating the public from doctors, managers and others.

The members of the public who attended were left dependent on three sources of information: (i) the Information Pack prepared by the Board, (ii) an invitation to contact the Board's project team to ask questions and (iii) presentations at the Event from Board officers. On the day, an independent facilitator was available, but that person was not an expert on the NHS.

The evidence presented in the information pack
In preparation for the scoring event, participants were sent an information pack summarising what the Board judged to be the relevant evidence. The Panel has commented on the evidence this pack contained elsewhere in this report.

The Panel has a number of concerns about the information pack including the following:

(i) The volume & complexity of information presented to non-specialists – to interpret the evidence the reader would require an understanding of case-control studies, confidence intervals, the generalisability of health services research evidence from America, hazard ratios, causality in non-randomised study designs, sensitivity and specificity, knowledge of how clinical practice has changed since studies were carried out in the 1980s and 1990s, the possibility of type II errors, the relative merits of randomised and naturalistic study designs, and so on.

(ii) While some topics covered by the booklet were subject to a systematic search of the research literature other areas were not e.g. trauma surgery, intensive care. There is no guarantee the studies cited give a balanced view across the literature in these areas.

(iii) For each model, the Board presented estimates of numbers of attendances at Monklands A&E department under each option. However, for each model the booklets did not estimate:

- The number of people who currently go to Monklands Hospital who would now bypass it in an ambulance in an emergency situation.
- The number of transfers from Monklands to other hospitals for people admitted to Monklands Hospital as an emergency and needing a service that is no longer provided there.
- The number of transfers of people admitted for elective surgery to Monklands Hospital who would need to be transferred to other hospitals for emergency surgery or level 3 intensive care.

This may have reduced the extent to which people involved in scoring considered bypassing and transferring patients in an emergency situation.

(iv) As the Panel have described elsewhere in this report, the Board's selection of studies and interpretation placed on them is, at best, contentious. Evidence from professional bodies (such as medical Royal Colleges) was cited but it was not made clear how these were selected.

(v) The information pack cites studies carried out in Israel, Hong Kong, America, Australia, Sweden, Canada and the Netherlands without either making this clear when the study was presented or discussing the relevance of these studies to Lanarkshire.

(vi) The data in the pack that relate to Lanarkshire Hospitals were for things like:

- Patient numbers attending A&E under each model
- Medical staffing estimates.

The remainder requires extrapolation from research studies carried out in other settings for other purposes. No attempt was made to include opinions of the hospital doctors who would have to make each model work. No attempt was made to gather evidence from working examples of the models elsewhere in Scotland or the UK.

The Analysis of the Data

The way in which scores were combined
The second submission said, "The mean weights from the professional and public groups were given an equal contribution to the weighting for the base case analysis." (page 46). The submission also said, "The scores were then multiplied by the relevant criteria weight and the weighted benefit scores (WBS) from each group (public and professional) were aggregated with adjustment to ensure that the scores from each group were given equal influence." (page 47).

It appears that the two groups were given equal weight. The numbers of people who scored the options is shown in the second column of the following table, and the final column shows the effect of giving each group an equal say in the final decision:

	People	Percentage of final say
Members of the public	40	50%
Professionals	47	50%
consisting of		
NHS managers	7	7%
From 'partner organisations'	8	9%
Clinician managers	22	23%
Doctors from Monklands Hospital, no management role	3	3%
Doctors from other acute hospitals, no management role	4	4%
Other clinicians	3	3%

It is notable that:

- Doctors (other than clinician managers) working in Monklands Hospital, which is most seriously affected by the changes, got 3% of the final say on how each model scored.
- Acute hospital doctors including clinician managers (who would have to make the selected model work) got 21% of the final say on how each model was scored.
- As 8 of the professionals were also NHS Board members, they had 9% of the say on the scores. Of the 10 executive directors of the NHS Board, 8 took part in the scoring.

As the analysis of the scores from the event showed, different groups took very different views of the scenarios[1]:

Public	Pan Lanarkshire	Hairmyres Hospital	Wishaw Hospital	Monklands Hospital	Other professionals
B	B	B	D	G	F
C	G	G	G	F	D
D	C	F	C	B	G
F	F	C	F	D	C
G	D	D	B	C	B

The Pan Lanarkshire group (including NHS managers and clinician managers) and doctors from Hairmyres, saw scenario B in positive terms. Doctors from Monklands and Wishaw, as well as the other professionals (seemingly those from partner organisations) saw it in much less positive terms. These divisions mean that the way the views of each group were weighted in the combined analysis had an important effect on the final

result; as the analysis above makes clear, the groups who favoured option B had been given the lion's share of the say in the final scores.

The Board has followed the Green Book in that they have excluded capital charges from the option appraisal and have used the recommended discount rate of 3.5%. Following discounting, Scenario F now appears to be lowest option. The Panel has been unable to find an explanation for this.

The discounting of costs changed the order of the options
Capital charges reflect the opportunity cost of funds tied up in capital assets. The Green Book is clear that they should not be included in the decision whether or not to purchase the asset in the first place. The Board has rightly excluded the cost of capital prior to applying the discounting.

The Green Book does state that: "for projects with very long term impacts, over thirty years, a declining schedule of discount rates should be used rather than the standard discount rate". The Board has applied the standard 3.5% over the 60 years rather than applying a declining schedule.

Following the application of the discounting, scenario F has become the lowest cost whereas prior to the discounting, scenario B was the lowest cost. The explanation for this appears to be the inclusion of capital Net Present Values from Picture of Health analysis. The Panel has been unable to trace these figures back to received submissions.

	ADDITIONAL REVENUE COST	DISCOUNTED
SCENARIO B	5,121,000	5,218,990,946
C	5,609,000	5,232,505,378
D	8,315,000	5,256,565,391
F	5,264,000	5,197,253,693
G	6,752,000	5,234,371,458
Lowest cost	B	F
	F	B
	C	C
	G	G
Highest cost	D	D

Arithmetical errors
In the course of scrutiny of the spreadsheets produced for the option appraisal two arithmetical errors came to light.

- In the first case, the weight for the "safety" criterion had been applied to the score for "safety" but it had also been applied to the scores for "sustainability", "quality / consistent with best clinical practice", "patient centered", and "consistent with national policy" as well.
- In the second case, the weights for the five criteria had been taken from one spreadsheet and copied and pasted into another spreadsheet to be applied to the scores. Unfortunately the criteria were not in the same order in the two spreadsheets but the weights were multiplied by the scores nevertheless.

Neither error dramatically changed the results. The obvious question that arises is whether the numbers are now error-free. The Panel has undertaken such scrutiny of the spreadsheet as is possible but cannot guarantee there are no further mistakes included.

The identification of a preferred option
At the time this analysis was prepared the Board had not been able to supply a final version of the decision analysis because several arithmetical errors had occurred. This section takes account of the Board's amended figures sent to the Panel on 4th January 2008. As the Board says, given the weighted scores and costs used, scenarios C, D and G drop out of the analysis at this stage, leaving scenarios B and F. Scenario B costs £21,737,252 more than scenario F and gives 43 more weighted benefit points.

The Board's analysis was based on the presumption that the existing status quo, represented by scenario F, gives 281 weighted benefit points for a cost of £5,197,253,694, at an average of £18,495,565 per point. Since funding is already available for this level of benefit, the Board claims, "[I]t can be presumed that the maximum willingness-to-pay for a benefit point is less than this level." (Second submission, page 49).

This is incorrect on several levels:

- First, the Board was never faced with a conscious decision to "purchase" 281 weighted benefit points for £5,197,253,694, and hence very little can be deduced about their willingness-to-pay for a point from the level of costs and benefits judged in 2007 for a service that has evolved incrementally over time.
- Second, even if the Board had made a conscious decision to pay this amount of money for this number of points, the fact they had decided to fund it would imply £18,495,565 per point could be argued to be the *minimum* willingness-to-pay, not the *maximum* as the Board claims. In this hypothetical situation the Board would be willing to pay the £18,495,565 per point and may have been willing to pay more but options may not have been available at the time that would yield more benefit. It would only be the maximum willingness-to-pay if they had consciously faced another option that gave more points for more money at a higher average cost per point and rejected that option.

- Third, even if the Board had taken an explicit decision of this type and it were accepted that this represented the maximum willingness-to-pay for a point, the average willingness-to-pay for the first 283 weighted benefit points is no guide to marginal willingness-to-pay for one more point. The laws of diminishing marginal utility are basic economics, yet have not been recognised as applicable in this situation by the Board.

In fact, the Board has no guide to its marginal willingness-to-pay for an additional weighted benefit point and hence the Board project team who prepared the submission cannot decide which model is preferred without using their personal value judgments – there is no "technical way" to decide. To make a considered choice, decision-makers would arguably need two key pieces of information:

- They would need to know what an additional weighted benefit point actually means in terms of service improvement and patient experiences. Is an additional weighted benefit point equivalent to 1,000 lives saved, 1 life saved or comfier seats in the A&E waiting area? No information is presented on this point. Unless the decision-maker knows that, they don't know what they are buying. All that was presented in the second submission was a table of marginal discounted lifetime net costs per weighted benefit point with no explanation or context.
- They would need to know what is being foregone in terms of benefits to the service and to patients from other services that might have their funding reduced or delayed if a particular option were chosen – no information was contained in the second submission.

As currently presented, the option appraisal gives the impression the only possibility is to select scenario B, but this is not the case. However, the option appraisal does not present the information in a way that assists with making the decision.

[1] *Information taken from Tables 5 and 6, page 49, Second submission*

SECTION 14
RISK ASSESSMENT

14.1 KEY POINTS

The Board provided an assessment of the risks of each of the scenarios. The Panel scrutinised this and found a lack of explanation of what evidence had been used to make the judgements and also a lack of definitions of key terms – for example, the difference between a moderate consequence and a severe consequence was unclear.

The Panel assessed four of the risks that had a bearing on patient safety and outcomes. In each case there was reason to question the assessment made by the Board. In each of the four cases considered the risks associated with scenario B seemed to have been understated and the risks associated with scenario F seemed to have been overstated.

Other relevant risks had not been considered such as the threat to the sustainability of emergency services when they are spread over several hospital sites, against the recommendations of professional bodies.

14.2 EVIDENCE PRESENTED

The information pack for the option appraisal scoring event also included an assessment of risks attached to the different options. Thirty different risks were assessed "based on the subjective views of members of the Corporate Management Team, drawing largely on information on research and best practice as well as their professional judgement and experience". Each risk was assessed in terms of its likelihood (classed as unlikely, possible, likely and almost certain) and consequence (classed as minor, moderate or major). From this an overall assessment was made for each risk (classed as low, medium, high and very high).

14.3 ASSESSMENT OF THE EVIDENCE

An assessment of risk inevitably involves some element of subjectivity. However:

- No explanation was given of what evidence the Corporate Management Team had used in reaching each judgement.
- No definition was given of the terms used – when does a moderate consequence become a major consequence, for example? And what is the difference between 'possible' and 'likely'?

A detailed critique of the risk assessment would be possible but there would be overlap with comments already made elsewhere in this report. The assessment in this section confines itself to some of the risks with the most direct bearing on outcomes for patients in terms of safety or effectiveness.

The first risk the Board considered was as follows:

That scenarios do not support sub-specialisation necessary to facilitate better survival and other health outcomes of benefit to patients (Quality/Consistent with Clinical Best Practice)

Assessed Risk		B	C	D	F	G
		Medium	Medium	High	Very High	High
Calculation = Consequence and Likelihood	Likelihood	Unlikely	Unlikely	Likely	Almost Certain	Possible
	Consequence	Moderate	Moderate	Major	Major	Major

The Panel's scrutiny of the evidence the Board had assembled on sub-specialisation suggests the benefits are far more limited than the Board had claimed – this suggests the consequence has been overstated. In addition it is not clear why the consequences of not sub-specialising should vary across the options: why is it worse not to sub-specialise under F than under B, for example?

The information pack also stated: "It was felt that no mitigation was possible without an unattainable number of additional medical staff." No evidence was provided to support this.

The second risk the Board considered was as follows:

That the emergency referral service does not proceed, or fails to direct patients to the right place at the right time (Safety)

Assessed Risk		B	C	D	F	G
		Medium	Medium	Medium	Medium	Medium
Calculation = Consequence and Likelihood	Likelihood	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Consequence	Minor	Minor	Minor	Minor	Minor

The Scottish Ambulance Service's view, as expressed in Appendix 8 of the Board's first Submission, was as follows: "While the SAS recognises and supports the concept of the Emergency Referral Centre (ERC) it must be noted that the scale of integration and co-ordination proposed is not currently practiced anywhere in the UK. The assumptions of benefits gained from this model to patients and the system as a whole would be unsurpassed however given the pivotal role of the Centre, the complexity of integrating a variety of systems and the absence of evidence from any similar models an element of caution and recognition of some level of risk must be considered when factoring the impact of the ERC."

It was not clear how the Board had taken this evidence into account when deciding the risk was unlikely and the consequences would be minor. Under scenarios B, C and D more ambulances carrying patients will bypass their nearest hospital under the direction of the emergency referral service than under scenario F. The consequences of the ERS system failing would therefore be higher under B, C and D than under F. The Board has not explained why it believes they will be the same.

There was also no mention of other research evidence which suggests when the patient is in a life-threatening condition, longer ambulance journeys lead to increased risk the patient will die.

The third of the Board's risks that the Panel scrutinised was:

That the public information and communication is so complex as to cause confusion to patients about the best location for their service needs (Safety)

Assessed Risk		B	C	D	F	G
		Medium	Medium	Medium	Medium	Medium
Calculation = Consequence and Likelihood	Likelihood	Possible	Possible	Unlikely	Unlikely	Unlikely
	Consequence	Minor	Minor	Minor	Minor	Minor

The Board claims the public won't be confused about where to go as a publicity campaign will provide the information. No evidence on the effectiveness of such campaigns was offered.

All scenarios are assessed as medium risk here. It seems extraordinary that the Board claims there is a medium level risk the public will be confused about where to go for care under the status quo option.

Later in the paper a further risk considered was:

That the Board is less likely to be able to invest to the necessary extent in 'upstream' service development, e.g. anticipatory care, primary and community care and long-term conditions management, to improve the health status of the people of Lanarkshire (Consistent with National Policy)

Assessed Risk		B	C	D	F	G
		Medium	Medium	Very High	Very High	Very High
Calculation = Consequence and Likelihood	Likelihood	Likely	Likely	Almost Certain	Almost Certain	Almost Certain
	Consequence	Minor	Minor	Major	Major	Major

In fact from page 48 of the Board's second submission, the rank order of the options in terms of cost (net present value over 60 years) is as follows: F, B, C, G, D. As these relate to acute hospital costs the logical corollary is the scenario that will make most resources available for the 'upstream' service developments will also be F, then B, C, G and D. The Board has failed to explain why its assessment is to put B and C first, followed by D, F and G. The assessed risk of scenario F contradicts the Board's own figures.

In summary, this assessment has picked out four of the risks assessed by the Board that have a particular bearing on patient outcomes. There was a failure to explain what evidence was considered or how terms were defined. The Panel's scrutiny has identified that in each of the four cases, the risks associated with scenario B seem to have been understated and the risks of scenario F seem to have been overstated.

Other potential risks have not been considered. For example, in its scrutiny of the evidence on sustainability, the Panel identified a number of recommendations of professional groups that refer to the need to provide emergency services from the same site. Options B, C and D all fail to address these recommendations and there may be consequences for the recruitment of staff and the sustainability of the service.

SECTION 15
OPPORTUNITY COSTS

15.1 KEY POINTS

The Board explained the financial situation it faced and the uncertainties at the time the second submission was being prepared. Cost pressures in the acute services were described but these fall outside of the Panel's remit and hence no comment has been offered in this report.

The Panel welcomes the Board's recognition that any knock-on effects of the A&E review for other services in terms of funding will be about when these developments go ahead, not whether they go ahead. The Panel feel it is important that the Board explains this to its local population as some people have a perception that funding one service will mean another service development is lost forever.

The Panel also welcomes the Board's thinking around an option that reduces or spreads the capital spending needed, notably at Monklands Hospital. This seems likely to have the most impact on options F and G, which had previously incurred the greatest costs from decanting services between buildings. This could have important consequences for the final choice of options: for example, with only a modest reduction in revenue costs option F would cost the same as option B.

15.2 DEFINITION

The Panel and Board have used the term "opportunity cost" to refer to the other services the Board would like to develop but which are affected by the cost pressures in acute services. In economics, when money can be spent on either A or B and the decision is made to spend it on A, then B is called the opportunity cost.

The opportunity cost of the acute services work discussed so far in this report has been a subject of concern to the public of Lanarkshire, who see the need for the development of community-based services.

15.3 EVIDENCE PRESENTED

The Board's second submission described the financial situation faced, including an account of the acute sector cost increases faced even before the results of the A&E review were considered. It was also explained that cost inflation had meant some costs had increased since decisions had been made to commit to some projects.

The submission goes on to describe the process for prioritising developments in community services, primary care and mental health. However, the submission did not include a list of all services with costs and weighted benefit scores.

15.4 ASSESSMENT OF THE EVIDENCE

The assessment of the costs agreed as part of A Picture of Health that are unaffected by the A&E review are outside of the Panel's remit and they have not been scrutinised; as such the Panel cannot verify their accuracy.

In its Interim Report on NHS Lanarkshire's first submission, the Panel made the following comments on the opportunity cost process:

"The Panel's expectations of the opportunity cost exercise are as follows:

- The over-riding principle is that the opportunity cost exercise should seek to minimise the impact on "frontline" services that are valued by patients.
- The Panel will want to be satisfied that the Board has reviewed all of its spending plans and taken every possible opportunity to make efficiency savings on every aspect of its budget.
- Once all such efficiencies have been exhausted, the Panel will look for evidence that the Board has identified and selected the service developments that have the minimum impact on patients recognised as being the most vulnerable.
- The Panel will expect to receive a prompt, full and transparent report of the Board's method for reaching its conclusions."

In part because of the timing of the Board's budget for next year it has not been possible for the Board to address all of these expectations and the Panel recognises the difficulties involved.

The Panel welcomes the Board's comment in the second submission, "[C]areful consideration is required over how we might realistically scale down the cost of our aspirations and/or spread the timescale of investment." (page 54, Second submission). While care needs to be taken over scaling down important services, the idea of spreading developments over time seems potentially attractive. The major capital costs are at Monklands Hospital, and from the description the Board presents of decant facilities it seems most likely that the costs of options F and G can be reduced. This is important because with an annual saving of £143,000 option F would have the same cost as option B; this would only represent a 6% reduction in the revenue consequences of the capital cost of option F. (This assumes all other costs are accepted and in other sections of this report some of these have been questioned.)

The so-called 'capital light' approach would also have the benefit of seeing the new acute mental health unit built at Monklands Hospital. While the Panel obviously welcomes this, it is a matter of concern that the option appraisal scoring exercise was carried out on the basis that it would not be included in options D, F and G. Indeed, the Board's description of the options in the second submission still assumes these would not include the new acute mental health unit as the following table shows:

Option Scenarios	B	C	D	F	G
Monklands Hospital					
A&E Department	√	√	√	√	√
A&E Consultant Cover	√	√	√	√	√
Emergency Medical Receiving		Partial	√	√	√
Emergency Surgical Receiving				√	√
Critical Care			√	√	√
Trauma and Orthopaedics				√	
Cancer Centre	√	√	√	√	√
Planned Care Centre	√	√	√		
New Acute Mental Health Unit	√	√			

(from page 45)

The Panel's concern is that options D, F and G would have received a higher score if they had included the new acute mental health unit. From information supplied by the Board, the Panel is aware that a number of members of the public attending the scoring event were representing groups with an interest in mental health services. The presence or absence of the new unit at Monklands could have made a crucial difference to their perceptions of quality and patient-centeredness in particular but also of the safety, sustainability and consistency with national policy of these options.

Overall, this emphasises that the situation is one of when these services developments will be delivered. During public meetings we have encountered the view that if funding is not made available for some services this year then they will never happen. The Panel believes the public would welcome an indication of the timing of each of these decisions rather than a yes or no decision on funding in the coming financial year.

The Panel notes with some concern the Board's statement "The NHS Lanarkshire Board remains of the view that investment in primary and community care is of a higher order of priority than further investment in acute hospitals." (page 50). One interpretation of this is that the Board will want to maximise spending on primary and community care, which would logically lead it to selecting the cheapest of the scenarios in the present option appraisal, irrespective of the benefits of other scenarios.

SECTION 16
TAKING ACCOUNT OF PEOPLE'S VIEWS

16.1 INTRODUCTION

Part of the Panel's remit was "to provide assurance through commentary that the revised proposals…take account of local circumstances and the views of individuals and communities affected." The Panel itself was also tasked with taking "account of local circumstances and the views of individuals and communities affected by effectively engaging with local people, in liaison with the Scottish Health Council".

16.2 PUBLIC CONSULTATION CARRIED OUT PREVIOUSLY BY NHS LANARKSHIRE

Like other Health Boards, NHS Lanarkshire has a statutory duty to ensure that patients and the public are involved in the planning and development of health services, as well as decisions that will affect the operation of those services[1]. A range of guidance exists about how Health Boards should consult with patients and the public on significant service change.

Between January and April 2006, NHS Lanarkshire carried out a formal consultation on its Picture of Health proposals. A range of methods were used, including: dissemination of information about the proposals; public and staff meetings; online consultation facilities on its website. The outcome of the consultation, which was independently evaluated, was considered by the Board at its meeting in May 2006.

The Scottish Health Council, in its report published in August 2006, found that the Board had taken "sufficient steps to involve patients and the public, as well as staff…and that the consultation process used is in accordance with the guidance.[2]"

In its Interim Comment in October 2007, the Panel indicated that it was unclear, at that stage, how the Board had taken account of public opinion expressed during its previous consultation process on Picture of Health, when developing its revised proposals. The Board subsequently provided a paper to the Panel setting out how it believed that it had taken account of public views.

The Board stated that it felt that most of the concerns raised during the previous consultation had been responded to, in light of the fact that:

"All of the scenarios being considered include a consultant-run 24 hour Accident and Emergency department at all three acute hospitals in Lanarkshire. The medical and nursing staffing for the Accident and Emergency departments has been considered under each scenario. An increase in staffing is planned, which meets both rota requirement and reflects the predicted levels of demand and intensity."

The Board also outlined a number of specific concerns on particular issues, and set out how it had responded to each of these. For example, in relation to concerns about the

demand made on the Scottish Ambulance Service (SAS), the Board had "committed to invest in Ambulance services to support any additional transfer activity due to the scenarios" and further work had been carried out with the SAS. A further example, in relation to public transport concerns, was that the Board indicated: "Work is underway with West of Scotland Transport Partnership to improve access to hospitals…Under some of the scenarios, more patients will be admitted to hospitals other than their local hospital. To respond to this, NHS Lanarkshire is committed to providing an inter-hospital transport service…".

Many of the concerns expressed during the Board's Picture of Health consultation were restated at the public meetings held by the Panel in November 2007 (see 15.4 below). Whichever option is chosen by the Board, it is clear that further work will require to be carried out to address, insofar as possible, these concerns, and to increase public confidence.

16.3 LIAISON WITH THE SCOTTISH HEALTH COUNCIL

The Panel was aware from the outset that any public engagement that it carried out would require to be limited in light of the very limited timescale for completion of its work. Advice was sought from the Scottish Health Council about the approach that the Panel might take in this regard.

The Scottish Health Council acknowledged that the Panel's engagement with the public would require to be limited, but made a number of helpful suggestions about what might be achievable and realistic within the timescale. The Director of the Scottish Health Council attended a Panel meeting to discuss these suggestions, which were broadly accepted by the Panel. Suggestions included:

- Establishing a website to disseminate information on the work of the Panel
- Writing to local newspapers to raise awareness of the Panel's work and to invite written submissions from interested members of the public
- Writing to the local Public Partnership Forums to raise awareness of the Panel's work and invite comments
- Making the Panel's interim reports widely available
- Organising public meetings and advertising these in local media.

16.4 PUBLIC MEETINGS AND WRITTEN SUBMISSIONS

Public Meetings

In light of the advice that it had received from the Scottish Health Council, the Panel decided to hold public meetings in the three areas within Lanarkshire where Accident and Emergency services are currently provided, namely, Wishaw, East Kilbride and Airdrie. The purpose of these meetings was to hear the views of local people and community groups on the Board's revised proposals.

The meetings were advertised through a combination of public notices in local newspapers and press releases to local media. Information was also circulated by

email to local groups, through, amongst others, the local Public Partnership Forums. This information included an invitation to community groups to get in touch with the Panel if they were interested in having a short speaking slot at the meeting.

Some people at the public meetings felt that advertising and communication about the public meetings could have been better, and that more people might have attended if there had been more notice given that the meetings were taking place.

Elected representatives (constituency and regional Members of the Scottish Parliament (MSPs) and Council leaders) were invited to attend a round-table discussion with the Panel held shortly before each of the public meetings.

The format for the public meetings was:

1. A short presentation by Dr Andrew Walker, Chair of the Panel, outlining the Panel's role and introducing a summary paper, which had been provided by NHS Lanarkshire, on the options for service change
2. Presentations by community groups
3. Open discussion session.

Meetings lasted for at least two-and-a-half hours and longer if those present required. A briefing paper about the Panel's role, and NHS Lanarkshire's summary paper, was sent to people who had registered for the events in advance, and copies were also made available at the events. A supplementary paper from NHS Lanarkshire on the opportunity costs associated with the options was made available at the East Kilbride and Airdrie meetings. This paper was published after the Wishaw meeting had taken place.

Copies of the Panel's Interim Report were made available for people to collect on leaving the events.

The Scottish Health Service Centre provided event management and administration services on behalf of the Panel.

The BIG Partnership provided media support to the Panel.

Written Submissions

The Panel received 422 written submissions regarding the Board's proposals. These included:

- 405 submissions from individuals. 383 of these individual submissions were similar letters from residents of Croy (46), Cumbernauld and Kilsyth (33), Kilsyth (266) and Queenzieburn (38) supporting maintaining the status quo at Monklands; highlighting transport concerns; and also asking for continued access to health services in Glasgow and Larbert Hospital; as well as the development of local facilities
- 4 submissions from community and other representative groups and
- 13 submissions from elected representatives (MSPs, MPs and local councillors).

Views Expressed at the Public Meetings and in the Written Submissions

The Panel heard a number of recurring issues both at the public meetings, and in the written submissions. The most common themes are summarised as follows. A more detailed summary of views expressed at each of the public meetings is included at Appendix 2.

- Arrangements for the public meetings
  - Unhappiness about the number and location of Panel meetings e.g. some people argued that further meetings should have been arranged in Cumbernauld and Kilsyth
  - *"Once again, despite being the largest town in North Lanarkshire, Cumbernauld has been ignored, with no meeting concerning the future of Monklands Hospital being held in the town"*
  - View that advertising and communication about the meetings should have been better
  - Some praise for how the meetings were conducted: *"I enjoyed the discussion and your openness with the hall"*

- Concern about the impact of A & E options on other planned services
  - Worry that some services might not go ahead depending on which option is chosen
  - Concern about potential impact on planned mental health services, primary care developments and community casualty facilities
  - *"Better primary care services are needed if we are ever to break the cycle of poor health in Lanarkshire"*

- Transport issues
  - Not enough attention has been given to this by the Board
  - Public transport, and traffic congestion, is a problem for people who need to travel across Lanarkshire e.g. *"Public transport between Kilsyth and Villages areas, to Wishaw and Hairmyres are to all practicality non existing, so there are serious travelling issues that must be considered, as the percentage of car ownership in the area is low"*
  - Concern about ambulance transfers between hospitals e.g. *"Any scenario which puts greater strain on ambulance services is not acceptable. Unhindered "cross-county" ambulance journeys cannot be guaranteed – thus risking lives"*

- Maintaining the status quo
  - Strong support for maintaining the status quo or the status quo plus, with only a small minority in support of the Board's original proposals
  - *"…Monklands must remain as a level 3 General Hospital with full accident and emergency provision on site"*
  - Some questions over whether that will be possible given issues such as staffing

- Questions about Private Finance Initiative (PFI) contracts for Hairmyres and Wishaw Hospitals
  - Lack of clarity about costs of PFI contracts
  - Suspicion that PFI costs have been a factor in decision making in relation to Monklands
  - *"Many of us believe that there was never a genuine option appraisal as it was not possible to interfere with the legally binding PFI contracts"*

- Negative perceptions of the Board and the process it has followed
  - Concern that public views are not represented on the Board
  - Previous review process has resulted in a loss of confidence in the Board
  - *"…very concerned that the Board overstated the reasons for change and tailored their arguments and supporting evidence to underpin a determined course of action"*

- Questions about the Panel's role and the process which will follow publication of the Panel's report
  - *"If this were a truly independent process, then the ISP would have been given the right to review the original decision of NHS Lanarkshire to move from three A & E units to two"*
  - Who makes the decision – the Panel, the Health Board or the Cabinet Secretary?

The Panel has taken these views into account in preparing this report.

[1] *National Health Service Reform (Scotland) Act 2004, section 7*

[2] *NHS Lanarkshire's 'A Picture of Health' Consultation. Review August 2006. Scottish Health Council*

APPENDICES

APPENDIX 1
PANEL MEMBERS AND SECRETARIAT

PANEL MEMBERS

Dr Andrew Walker	Senior Lecturer in Health Economics, University of Glasgow (Chair)
Mr Ian Anderson	Consultant in A & E Medicine, Victoria Infirmary, Glasgow
Mr Martyn Evans	Director, Scottish Consumer Council
Mrs Angela Scott	Head of the Chartered Institute of Public Finance and Accountancy in Scotland

PANEL SECRETARIAT

Ms Sandra McDougall	Secretariat Manager
Ms Elizabeth Taylor	Panel Facilitator
Ms Rachel Howe	Secretariat Officer

APPENDIX 2
PUBLIC MEETINGS

DATE	LOCATION	VENUE	TIME	NUMBER OF ATTENDEES
12.11.07	Wishaw	Wishaw Sports Centre	19.30 – 21.00	40
19.11.07	East Kilbride	Holiday Inn, East Kilbride	19.30 – 21.00	26
21.11.07	Airdrie	Sir John Wilson Town Hall, Airdrie	19.30 – 21.00	66

WISHAW

Two community groups made presentations:

1. HAVOC – Views included: major concerns about the impact of the proposals on rural communities such as Clydesdale; concern that the option appraisal process followed by NHS Lanarkshire had focussed on Accident and Emergency (A & E) services without looking at the knock-on effects of different options of the service plans from the Picture of Health review, and that staff groups had been separated from patient groups during the process; concern that the planned acute mental health unit would only proceed under some options but not others; concern that much needed community care services might not be put in place, despite provisions in the Mental Health (Care and Treatment) (Scotland) Act 2003; view that A & E services should be streamlined and better use made of technology.
2. Voices of Experience (Older People) – Emphasised that the views of the public must carry the same weight as the views of other groups and must not simply be ignored. Expressed concern that the public meeting was not as well publicised as it could have been and that there was no information about it in local outlets.

The following themes and points emerged during the open session:

Transport Services

- Not enough attention has been given to transport issues – there are real difficulties for people travelling across Lanarkshire
- Worries about hospital car parking
- Problems highlighted for elderly people in Biggar – public transport services are appalling

Impact of Different Service Options for A & E on Other Services that were planned under Picture of Health

- *"There's a hint of blackmail – if you don't do what we want, you won't get your mental health unit"*
- Concern that a promised X ray unit in Biggar won't be provided if the status quo is maintained
- Danger that reaching a good solution for Monklands will mean losing other services
- People need to know about the opportunity costs – there are hard decisions to be made
- Primary care initiatives should go ahead

Impact of Private Finance Initiative (PFI) Contracts

- Questions about the impact of PFI contracts for Hairmyres and Wishaw Hospitals on decision making

Maintaining the Status Quo

- Belief that maintaining the status quo is not an option due to the European Working Time Directive (EWTD) and that there is difficulty recruiting doctors who feel there are no career prospects
- EWTD has been known about for years – issues should have been dealt with long ago
- Keeping three A & E departments means there won't be two 'centres of excellence'
- Some options which are less than the status quo mean that services will be diluted at Monklands
- If A & E services are lost patients will suffer – there may be opportunity costs but we need to focus on the life-or-death situations

Ambulance Services

- Concern about ambulance journeys across Lanarkshire
- Personal experience – in May 07, person was transferred from Monklands to Wishaw – there were three patients sharing the ambulance – all experienced discomfort during the journey
- *"The M8 can't cope with the existing traffic"*

State of Monklands Hospital

- Heard about asbestos and wiring problems at Monklands – is it really safe?

Services provide at Monklands Hospital

- Staff at Monklands are "second to none"

Links with other Health Board areas

- Has an assessment been made regarding whether the A & E department could attract business from Glasgow?

The Review Process

- Concern about the democracy of the process – view that there is a lack of a genuine public voice on the Health Board
- Concern that language used by some people has been misleading e.g. references to 'closure' of A & E departments
- Concern that debate about these issues in the past has been "stage-managed"

Communication about the Panel's Public Meetings

- Some people only just found out about the meeting – communication could have been better

EAST KILBRIDE

Community group Lanarkshire Links made a presentation on issues affecting mental health service users. Views expressed included: concern that aspects of national policy *(Delivering for Mental Health and the Mental Health Act)* will not be progressed if certain options are chosen; stand still position will mean limits on people's lives and liberties; Lanarkshire Links was involved in Picture of Health and were convinced of necessity for some of the changes; the case for closure of Hartwood has been made – the site is unacceptable; a therapeutic environment should be designed to allow certain freedoms.

The following themes and points emerged during the open session:

Financial Issues

- VAT is not chargeable on new builds – the Panel need to check that VAT has not been incorrectly included on new build costs, as this has happened previously
- Query re money received by NHS Lanarkshire under the Arbuthnott formula, and whether this impacts on staffing

Implications for Hairmyres and Wishaw

- Disappointed that although there is a lot of detail in the Board's submission to the Panel regarding Monklands, there is little information regarding implications for Hairmyres and Wishaw

Recruitment and Staffing Issues

- All of the proposals will require more medical staff and there are recruitment issues in Lanarkshire. There are currently 43 consultant vacancies
- There is a debate about what constitutes specialism and what constitutes generalism
- People won't apply for posts whilst there is instability and uncertainty
- Staffing issues are not impossible to solve
- Heard during Picture of Health about particular problems recruiting anaesthetists
- Concern that main Scottish cities are more attractive for staff because they have teaching hospitals
- Suggestion that there should be national staffing standards in health

Ambulance Services

- Concern about the Scottish Ambulance Service's ability to provide and sustain an effective service
- It is probable that there will be an increase in traffic on the roads. How will this impact on transfer of patients?
- Are there any plans for palliative care ambulance services for people who are terminally ill? Focus is on people going into hospital – what about ambulances for people returning home from hospital?

Impact on Service Options for A & E on other Planned Services

- A number of mental health services and projects (including Beckford Lodge) are in limbo – this is unsettling for staff and patients
- What about primary care services given Lanarkshire's bad record? Need to prevent people presenting at hospital acute services

Transport Issues

- There are traffic problems in Lanarkshire e.g. at the Raith Interchange

Sustainability

- Services might not be sustainable on three sites e.g. interventional radiology, cardiology, vascular surgery

Hospital Service Issues

- Waiting times at A & E are difficult for patients
- There should be a system to ensure patients can be admitted to longer stay wards without having to go through A & E and first be admitted to a 24 hour ward

Questions about the Panel's Role

- Will the Panel be looking at service issues across Health Board boundaries?
- Will it be possible for the Panel to decide that there should be two A & E departments rather than three?

AIRDRIE

Community group Lanarkshire Links made a presentation on issues affecting mental health service users. Points made included that: the group has been involved throughout the Picture of Health consultation process, and taken part in the Board's mental health services scoring event; the group wishes to see mental health proposals in a Picture of Health implemented to ensure that mental health services in Lanarkshire are "fit for purpose"; at NHS Lanarkshire's recent annual review, the Cabinet Secretary indicated that mental health services are high on her list of priorities.

Impact of A & E Service Options on Other Planned Services

- Concern that the planned casualty unit for Cumbernauld might not happen
- We want A & E, but also want the other service investments that the people of Lanarkshire deserve
- Concern about impact on proposed mental health unit
- People shouldn't be fighting amongst themselves putting one service against another – this sends the wrong message to the Board

NHS Lanarkshire

- The Board is going down a discredited road by dividing the people of Lanarkshire – is it the people of Cumbernauld versus the people of Coatbridge?
- Why is the Health Board offering options that are totally unacceptable?
- Why is a new corporate HQ for the Board on the planned services list?
- Board has previously reneged on its promise for a bus transfer service when it moved the paediatric services to Wishaw
- People of Airdrie have no confidence in the Board
- Health Board is not accountable

Support for the Status Quo or Status Quo Plus Options

- *"We want the status quo plus – nothing less will do"*
- Option F is the minimum we need, option G is better
- Figures for Monklands A & E show it gets people through the door quicker than Hairmyres or Wishaw
- If it's not F or G, we will need to rely too heavily on the Scottish Ambulance Service
- Anything less will be a betrayal of the people of Lanarkshire

Transport in Lanarkshire

- If you're from Cumbernauld, then Hairmyres and Wishaw are further away than Glasgow – you have to get two buses and a train to get to Wishaw
- *"If you don't have a car, then you've had it"*
- Transport plans haven't been explained properly – if options other than F or G are picked, there will be transport issues

Emergency Referral Service

- Questions about how this will work – is it like NHS 24?
- What if Hairmyres closes its doors because there are no beds left?

Questions about the Options

- If we get option G, who decides where major trauma goes?
- Concerned about safety of transfers between hospitals

Deprivation in Airdrie

- This is the poorest part of Scotland second to areas of Glasgow and more deprived than the two other hospital areas
- If we are supposed to be reducing the health inequalities gap, then why isn't Lanarkshire getting more of the budget

Questions about Finance

- How big is the pie that's to be divided?
- How much money will the PFIs get? Historically the PFI built hospitals always get more than the state built hospitals. Monklands is dilapidated compared to them. No-one knows where the PFI money goes
- Question about an annual charge on the value of land and property under PFI
- What is the cost for the new corporate HQ?
- Cumbernauld is the biggest town in Lanarkshire – shouldn't it get a bigger slice of the cake?

Confusion over Media Reporting

- People had assumed that Nicola Sturgeon's statement meant that we would get at least the status quo – shocked that we've only just now learned that it might not happen – the media reporting has been misleading

Questions about the Panel

- Will your report be made public?
- Is this just another PR exercise? We are cynical because of what's happened before
- Do you or Nicola Sturgeon have the power to override the Board's decision?

ACKNOWLEDGEMENTS

The Panel wishes to express its gratitude to the following people, all of whom contributed, in different ways, to its work:

1. The members of the public, and others, who wrote to the Panel and who attended our public meetings
2. The Panel Secretariat, for its support and assistance throughout this process
3. Ms Corinne O'Dowd, Researcher, University of Glasgow (Assistant to Dr Walker) for assistance in scrutinising the submissions to the Panel
4. The Scottish Health Service Centre Convention Management Service – for administration relating to the Panel's public meetings
5. Our media advisors, Gavin Cameron and Pamela Dodds, from the BIG Partnership
6. The Scottish Health Council for use of its office space
7. The Scottish Consumer Council for use of its meeting facilities and support from staff
8. The staff at Monklands Hospital who assisted in organising the Panel's visit and who shared their views with the Panel
9. The MSPs and local councillors who took part in our round-table discussions
10. NHS Education for Scotland for responding to our requests for workforce data
11. The Information and Statistics Division (ISD) of NHS Scotland for supplying data
12. Mr Alistair Brown and Mr Dan House for procedural advice