King's Fund

and Southampton University Hospitals NHS Trust

Review of Intensive and High Care

Authors
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Final Report

November 1998

Executive Summary

Background

This Review of intensive and high dependency care (I&HC) for the Trust as a whole follows on from last year's Trust-wide Organisational Review. Terms of reference are given in Appendix 1.

There are many intensive and high care areas (see figure and Table 1 following section 1), developed at different times in response to growing pressures in different clinical directorates and specialties, and performing very different roles. Most of the funding and capacity growth has been for regional specialities based in SUHT, or as a result of national initiatives.

Although our terms of reference did not include making recommendations for overall capacity of intensive and high care, we found we could not ignore this issue as a widely acknowledged shortage of such capacity has substantial effects on the management and use of I&HC elsewhere in the organisation.

Main findings

Several issues have been resolved since this Review was first proposed - Cardiothoracic ICU is well established within the Critical Care Directorate; the future of Paediatric Intensive Care (PICU) has been agreed; the business case for redevelopment of Neuro ITA has been accepted; and the Respiratory Support Unit has been set up on D6 ward.

There should be substantial benefit from closer organisational co-ordination between intensive and high care units on four principal topics:

- Training
- Care pathway development for common conditions needing intensive or high care
- Common guidelines developed jointly, and used in different units
- Rationalisation of equipment purchase, maintenance and support, and staff training.

Few further short term changes in physical location look feasible or desirable in the short term, and any organisational changes should respect the distinctiveness of individual units.

Protecting elective capacity depends on having adequate total intensive and high care capacity. This is in prospect very soon for paediatric care, but not yet for adults. In its absence we found no ethical or practical way of resolving the tension between emergency admission and planned work.

Principal proposals

Organisational changes

Establish a cross-Trust Programme for intensive and high care, with a respected and impartial Programme Manager and a multidisciplinary group to support the programme. Principal tasks would include achieving benefits in the four areas identified above, developing plans for funding increases in adult intensive and high care capacity, and developing closer working relationships between the different units, and with the rest of the Trust.

Lead consultants should be identified in those units which do not already have them.

The consultant responsibility for patients in intensive care should be clarified more formally.

Agreed changes in where some children are treated should be implemented.

Opportunities to improve communications

Efforts should be made to improve communications in both directions between the general intensive care unit, and consultants from directorates whose patients have needed transfer into intensive care.

Exchange information more often about projected workload and staffing availability to enable staff to be shared more flexibly.

Improve NITA/ICU nursing links, but learn from previous difficulties.

Possible physical moves and expansion

No general case was made for additional changes in physical location of units, other than those already agreed in connection with paediatric and neuro changes.

We recommend that SITU move physically into the cluster of intensive care along the D level corridor in centre block, and to manage it within Critical Care in a similar manner to the Cardiothoracic Intensive Care Unit. For this to be successfully achieved, several important preconditions would have to be met.

Contents

1. Introduction

Terms of reference

1. This review is a follow up to last year's trust-wide Organisation Review, which recommended many organisational changes within the Trust, but left to a later date some more specific issues. One of these was the establishment of a Critical Care directorate, to include "Accident and Emergency Services, Anaesthetics, some Theatres, and some or all intensive care units." (Organisation Review Final Report, p9). That Directorate has now been established.

2. This Intensive and High Care (I&HC) Review was established during 1998 to recommend to the Chief Executive how intensive and high care on the SUHT site should be organised for both clinical and managerial purposes. Our terms of reference (Appendix 1) did not include making recommendations for the overall capacity of intensive and high care, although we found we could not ignore this, as a widely perceived shortage of such capacity has substantial effects on I&HC elsewhere in the organisation.

The context

3. SUHT has developed a large number of intensive and high care units in response to growing pressures in different clinical directorates and specialties. Some have grown through regional funding for specific regional services - e.g., cardiac intensive and post-operative high care. Paediatric and neuro intensive care are in the process of substantial expansion, in response to national pressures and additional funding to increase capacity. Others, particularly general adult and general surgical intensive care, have not received adequate funding through contracts with our purchasers. As a consequence, they find themselves under almost constant pressure to provide capacity for emergencies, and this can crowd out planned elective work. The latter is of course now also regarded as of very high priority - to meet national waiting list targets, and to secure regional funding on a volume or cost-per case basis.

4. Most beds used for intensive or high care are explicitly recognised and so designated and staffed, albeit at differing levels. The borderline between 'specialling' on a ward and high care can become blurred. Not all patients needing high levels of observation or single-organ-system life support are treated in specifically designated intensive or high care beds - for example, the medical ward may look after very sick patients with liver or renal disease, but has no equivalent of the respiratory high care unit on the other side of the medical ward (in D6).

5. While several of the intensive and high care units are located adjacent to or near the main adult and paediatric intensive care units along the same corridor in centre block, others are more widely dispersed in different parts of the site (see the diagram and Table 1 on following pages, which also shows the abbreviations commonly used). Co-ordination between them varies from very close (e.g., between both cardiac and general adult intensive care; and increasingly between the paediatric wards and paediatric high care units, and PICU) to extremely limited. Close physical proximity helps, but is not essential to, close co-ordination.

6. Existing arrangements for admission of adult emergencies requiring intensive care operate *almost* as if all adult intensive care beds were in the same pool - but at a high cost in personal stress on senior staff, and some increased risk to patients. Often, an admission can only be made by moving one or two other very sick patients - to another unit within the trust, or sometimes by ambulance transfer back to their district general hospital in other parts of the region - or by cancelling planned elective work at very short or no notice.

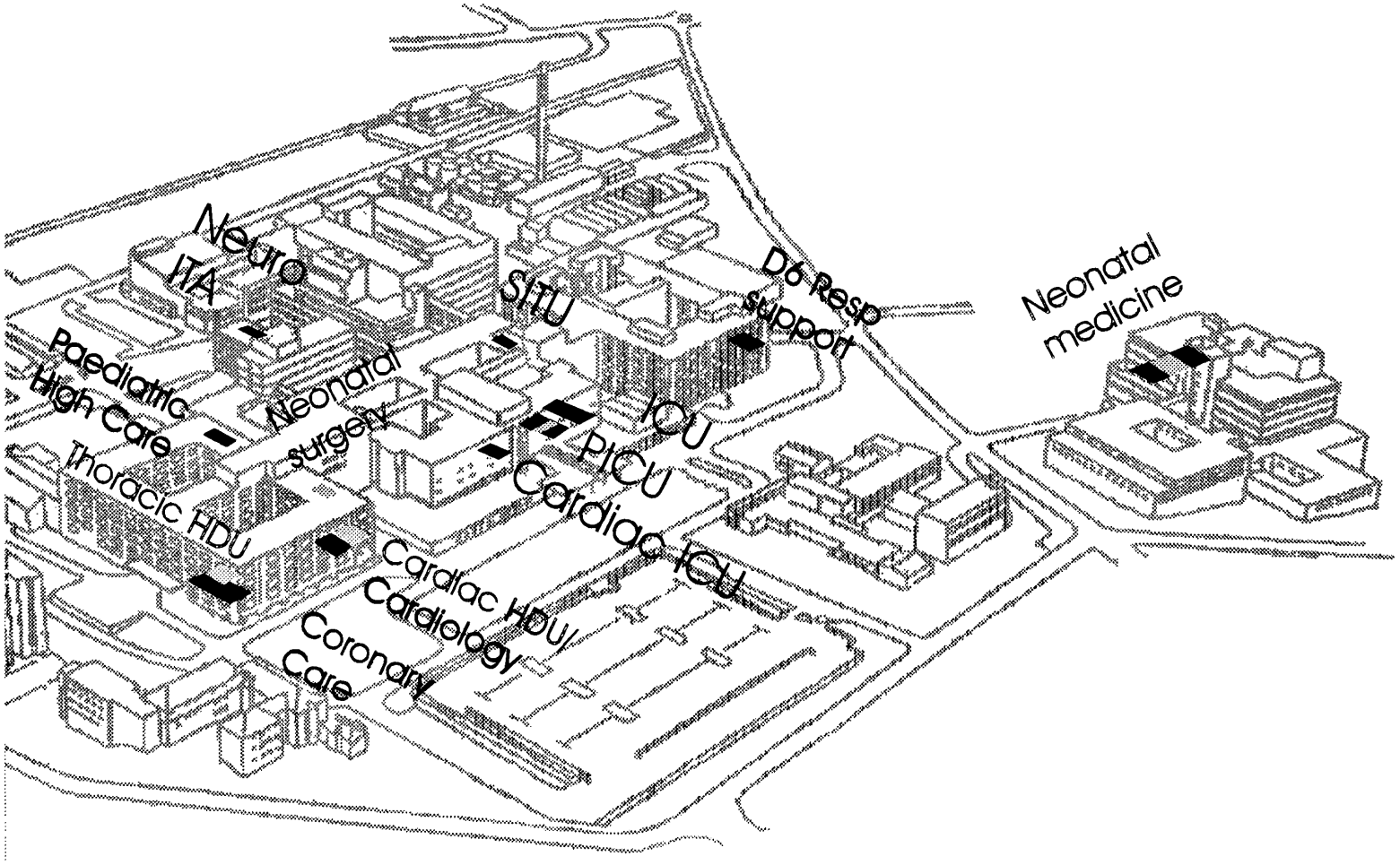
Method of working

7. Margaret Fahey took the initial lead in forming a review team acceptable to the Trust's intensive and high care lead clinicians and clinical managers. She also explored the 'benchmarking' possibilities suggested in the terms of reference, but found little available from other units to help. The Audit Commission were also consulted as they are due to do a Nationwide Study of Intensive Care Services. An initial meeting was held to establish how this could be 'dovetailed' with this review. Their initial impression was that SUHT appears to have a shortfall of high dependency beds. We agreed that their work would focus on this aspect rather than management arrangements.

8. After a further series of preparatory meetings, background reading, and discussions, involving all four members of the I&HC Review team (but never all at the same time), and comment from lead clinicians and senior nurses working in or using the Trust's many intensive and high care units, the whole review team met for two intense days (16 and 17 September 1998). We visited, on the first day, all the intensive and high care units on the SGH and Princess Anne site, and spoke to a small selection of the staff there.

9. During both days, individuals and groups came to talk to us (almost 60 people in all). Between them they expressed the views of all of the I&HC units, and of the Critical Care Directorate management. Our agenda was loosely based around a previously circulated paper (Appendix 2), highlighting what seemed to be the key issues around which the answers to the organisational questions would revolve.

10. Following those two days, and a review team discussion which immediately followed, we presented our main findings and proposals on 5 October to about two dozen of the participants in the earlier hearings. A lively and constructive debate followed. The majority of our suggestions were well received, and a couple of additional important points, reflected in this report, were drawn out.



Southampton University Hospitals NHS Trust
Intensive Care, Post-Op and High Care units

Table 1. Intensive and High Care Units in SUHT - Present Function and Capacity

Area/Beds	Location	Function	Capacity
Cardiothoracic Intensive Care (CTICU)	D Level Centre block	Adults requiring Intensive Care post-cardiac and thoracic surgery	8 beds
General Intensive Care (ICU)	D Level Centre block	Adults requiring Intensive Care for wide range of medical and surgical conditions	7 beds
Paediatric Intensive Care (PICU)	D Level Centre block	Children under 16 requiring Intensive Care	6 beds (2 Genl, 4 Cardiac) (expanding)
Surgical Intensive Therapy Unit (SITU)	E level E8 West Wing	Surgical patients, requiring Intensive or High Dependency care following major surgery (especially vascular)	3 beds + 1 research funded bed (vascular)
Neonatal Surgery	G level G1 East wing	Neonatal surgery	3 ITU, 3 HDU & 2 cots (relocating to PICU)
G4 High Care	G level G4 East wing	Paediatric post op surgery	4 beds
Neuro Intensive Treatment Area (NITA)	C level Neuro Centre	Neuro-surgical and neurological patients requiring IC	6 beds (Relocation and expansion agreed, 1999)
Cardiac High Dependency Unit	D level D1 East Wing	Cardiology Post op Recovery	5 beds 3-4 beds (will be 8)
Thoracic High Care	E level E2 East Wing	Post op thoracic surgery	5 beds
Coronary Care Unit	D level D2 East Wing	Medical Directorate	16 beds
Respiratory Support Unit	D level D6 West Wing	High Care	4 beds
Neonatal Unit	Princess Anne	Intensive Care Special Care Nursery	6 cots 16 cots

2. Initial impressions

High energy and morale

11. We were impressed by the widespread energy and enthusiasm for their work expressed by all of those we met both on our site visits and in the hearings. We were also impressed by the mutual recognition by all of the units of the diversity of the work that they actually do, and the skills they have developed.

12. We also saw and heard that existing units are working well, and providing a generally good service to patients (within the -- sometimes severe -- constraints on their resources).

Capacity limitations in general adult intensive care make themselves widely felt

13. All of those involved in working in intensive and high care areas for adults stressed the impact on their work of the limitations on capacity for general adult intensive care. This is provided mainly from the general adult unit (variously abbreviated ICU or INCU), with overspills into surgical (SITU) and cardiothoracic units (CTICU) and the neuro area (NITA). Until this is addressed **by the Trust as a whole**, some of the high tensions and 'distance' between some groups of clinicians cannot be wholly resolved, and existing risks and personal stresses can only be palliated.

14. Although ICU clinicians have stressed this for some considerable time, it became very apparent to us, and we think to other participants in the review, that this is not just an issue for them, nor one that they alone are affected by. Some Trust-wide recognition of the importance of this issue, and more imaginative ways of securing funding, must be found to address this if the Trust is to avoid increasing risks of serious failures of care at some point in the future, despite the best efforts of very dedicated people.

Short term considerations mainly outweigh a longer term vision of IC and HC for the Trust

15. We found little evidence of a long term strategy in the non-specialist intensive care units. National policy for paediatric intensive care and the contracting arrangements for Regional specialties have enabled development and a more strategic vision. Coping with the shorter term pressures of the demanding work involved, and capacity limitations which frequently force 'crisis management' seem to have driven out much time for long term thinking in general intensive care.

16. Our own proposals are mostly in line with this preoccupation too, and do not propose radical change, as there would in our view be little support or spare energy to implement it.

What is done in IC and HC areas is in practice very different in different units

17. People's definitions of intensive and high care are in practice very different -- the formal definitions seem artificial. A wide spectrum of intensity is found all the way from multi-organ system failure requiring prolonged support, through short periods of high-care post-operative recovery or single-organ-system support or monitoring (sometimes with temporary ventilation), to limited 'specialling' for observation on the wards. The main separation in role and intent is between intensive and high care, principally defined by the need for tracheal intubation, and/or by the need for *multi*-organ-system support.

18. There are of course many common nursing and medical processes and procedures undertaken widely in intensive and high care. In spite of this, we were strongly struck by the very different emphases and *particular* skills deployed in different areas. While this was most obvious in different areas of high care, it is also evident in aspects of intensive care - especially in post operative care requiring not only common skills of observation, airway management and ventilation, but different concentration on the organ systems most affected by the specialty, sub-specialty, or diagnostic condition of the patient. There are also very significant differences by age range - from neonates and very young children, through paediatrics, into adulthood and on into diseases of old age.

3. Main findings

Several issues have been resolved since the original Organisation Review group reported

19. Compared with a year ago when this I&HC review was first proposed, several issues affecting Critical Care have been resolved, by a combination of external events and internal debate and action.

- Cardiac ICU is working well as part of Critical Care Directorate
- PICU expansion is well underway as a separate area within the intensive corridor. It will embody G1 neonates as well as (in a year or so) all children from neuro directorate
- Neuro intensive care (NITA) has had its business case for re-provision and expansion accepted, and plans are well in hand for its development. Anaesthetists are closely involved in this planning
- D6 respiratory support unit has been established, funded by internal reorganisation and closure of 'ordinary' ward beds to allow staffing of four respiratory support high care beds.
- Cardiac HDU has been established on D1.

Improved co-ordination offers expected benefits

20. Even without structural organisational change or much physical relocation, we found wide agreement that there are substantial benefits possible from improved co-ordination between different units and professions.

21. In particular, four types of improvement emerged with high potential benefits:

- training of intensive and high care nurses, doctors, PAMs, and technical staff - through structured staff exchanges between different units and wards, and formal training programmes with external accreditation
- care pathway development for common conditions met in intensive and high care. This could start by mapping the principal patient pathways from Directorates and other hospitals, through intensive and high care, and where appropriate back to Directorates or referring hospitals (enlisting assistance of the clinical effectiveness group).

- common guidelines for intensive and high care units should be progressively developed. The work should start with relatively simple and frequently encountered procedures where there is believed to be significant diversity in practice and/or most potential for improvement. The evidence base from research, audit, and experienced clinical judgment should be used systematically in developing guidelines. Equal attention should be paid to the implementation of guidelines as to their development, and only a few should be attempted at any one time. Care should be taken to ensure a multi-disciplinary approach.

- greater standardisation, and where possible, bulk purchase, of monitoring and life support equipment, to allow easier sharing to match peaks and troughs in different units, simplify staff training, and allow for easier movement of staff between units with whose equipment they would be more familiar.

Few short term further physical moves look possible

22. Beyond the moves underway for children's intensive and high care (into PICU) and those planned as part of the neuro development, we found few opportunities or rationale for physical relocation in the short term. The exception to this is SITU.

Organisational changes should respect units' distinctiveness

23. Team spirit and morale are enhanced by the sense of distinctiveness and pride in what they do by the different units. Closer collaboration and workload sharing can work well where this distinctiveness is respected, as well as sharing the commonality in training and experience - as for example in Cardiac Surgery fast tracking and Cardiac intensive care.

Role and relationships between IC and HC - mixed views

24. In their own and ward staff's view, the work of High Care units is more closely linked to specialist ward nursing than to Intensive Care, for staffing preferences and skills links, and for clinical responsibility.This view was expressed by both medical and surgical specialties.

25. However the intensive care consultants and sisters believe there would be benefits in a much closer relationship with them. There could be more flexible use of an HDU facility adjacent to and managed by ICU. The observation and monitoring of patients would be undertaken by ICU trained staff.

26. Some Directorates outside Critical Care saw advantages in retaining management of their ICU/HDU within their own Directorates. However, those with direct experience of proximity to ICU or PICU saw great advantage in the close links they

have, provided the specialty areas retain a distinct team spirit and identity, as well as the willingness to cross-cover within centrally located units - "when you *do* make the jump [to closer proximity and working integration] it's worth the leap" was the way one consultant put it.

Protecting elective capacity depends on adequate total intensive care capacity

27. Ring-fencing to protect elective capacity is not needed *provided that*

- there is adequate capacity for *intensive* care
- there is mutual trust between clinicians involved in the decision-making process.

28. This statement is based on Michael Marsh's experience in other units, and has been accepted by other consultants in SUHT as feasible for paediatric intensive care when PICU is fully open.

29. The first condition does not at present hold for adult intensive care. Until it does, there will always be a high tension and an intractable problem in balancing the pressures of emergency admissions (and possibly forced premature discharges or transfers) and of elective work which depends on intensive post-operative support. No ethically acceptable and practically possible means of working around this dilemma emerged in our discussions.

30. The proposals for change which we make below may palliate the problem, but they will not resolve it in the absence of additional capacity.

4. Proposals

Organisational changes

Establish a cross-Trust Programme for intensive and high care

31. We propose the establishment of a cross-Trust Programme of the kind originally suggested in the Organisational Review. It would have

- a respected and credible Programme Manager, not drawn from any of the CSDs, lead clinicians or CSMs of the existing I&HC units or Critical Care Directorate

- a multidisciplinary group to support the Programme Manager, drawn from a cross section of intensive and high care units in different parts of the Trust, and having at least consultant medical, nursing, physio and technician disciplines included.

32. One possibility mentioned as being potentially feasible is to use the current opportunity for a new Chair in anaesthetics to offer the role of Programme Manager to a suitable new postholder. This would have significant advantage *if* the postholder has developmental, managerial and service interests, as well as more traditional academic aspirations. If this is not the case, an existing consultant or senior nurse who is widely credible might fit the bill.

33. The multidisciplinary group would bring their personal and professional experience from a range of backgrounds, to use for the benefit of patients of the trust as a whole. They would *not* be there as 'representatives' of their own unit or profession.

34. An early task of the programme manager and supporting multidisciplinary group would be to identify, pursue and support the achievement of the types of benefit suggested above in *Main findings* - i.e., professional development and training opportunities; carefully selected common I&HC conditions which would benefit from shared development and implementation of agreed care pathways and guidelines; and attention to forthcoming equipment purchase or replacement. There is a selection of existing examples of what has worked well, and also some examples of what has been tried before with little success, to suggest 'places to start looking' and lessons for how to make it work 'for real.'

35. The Programme Manager would also work with the CSDs and lead consultants for I&HC, to review sessional commitments of consultants with a special interest in intensive care Trust-wide.

Develop a longer term vision and Trust wide strategy for Intensive Care and High care

36. All clinicians we spoke to felt there is insufficient capacity for general intensive care and high dependency care in the Trust. We recommend that the Programme Manager work with the Critical Care Directorate and newly appointed deputy Chief Executive to develop a long term strategy for the Trust. This will require further review of capacity, based on audit and on judgement about the number and nature of such patients currently, and of likely future trends. The anticipated work of the Audit Commission may assist with this.

Identify lead consultants in areas which do not already have them

37. Each intensive care area would benefit from an identified lead consultant who has significant sessional commitment to the area. Several have them already, and we do not suggest any change there.

38. The current arrangements are

- **PICU** - Michael Marsh (7 sessions)
- **CTICU** - Consultant cardiac anaesthetists (Total of 10 fixed sessions)
- **SITU** - Andrew Sandsome (2 sessions)
- **ICU** - Mick Neilsen, Tom Woodcock, Kathy Nolan, Max Jonas (Total of 12 fixed sessions)
- **NITA** - Sue Hill (2½ sessions + 7 consultant sessions in the new business case)
- **Neonatal Surgical Unit** – Vaughan Thomas (1 session)

39. These are the fixed sessions identified on individual's job plans. In practice a good deal more time is spent in the units.

40. Individual units should confirm who their lead consultant is. This role may rotate.

41. The lead consultant within each specific area should act as a focal point for communication between units, and for linking to the Programme Manager and multidisciplinary group.

42. They should take the lead in clarifying the roles of their units in relation to other IC/HC units and to other Directorates using their Unit's services.

Implement some agreed short term changes in how and where some children are treated

43. Neurosurgical children under 4 years of age have been cared for in PICU since its opening. Those over 4 years of age will transfer to PICU when the last bed is opened (to take effect end-1999 on present plans)

Opportunities to improve communication

44. It is a commonplace of organisational life that "communication should be improved." We found a few particular suggestions worth recommending.

Work on the relationship between ICU and other consultants

45. Several respondents commented on the intimidating nature of the environment within ICU for visiting colleagues. Factors contributing to this feeling include the demanding nature of the work; the density of tubes, equipment and sometimes people around the patient; and the severity of their illness. In the other direction, ICU consultants would welcome more opportunities to talk to other consultants who have patients in ICU about the condition-specific concerns they share over the health of their patient.

46. Outreach in both directions - from ICU to other consultants; and in the other direction, a greater willingness by other consultants to visit ICU at times when discussion is possible - would help to reduce the sometimes 'distant' relationship which can exist at present to the detriment of both groups.

Exchange information more often about anticipated workload and staff availability

47. Those units who may receive an overflow of patients from other areas, or which have staff with generic skills, could benefit each other by improving communication. Particular subjects suggested are the short and medium term projections of planned non-emergency admissions, discharges and transfers, and of known availability of staff -- for example, planned leave, sickness, or recruitment difficulties.

Improve Neuro-ICU links, but learn from previous difficulties

48. Neuro-ICU communication should be improved, especially between nursing sisters (but the reasons for the failure of previous attempts should be explored and learned from). There are opportunities to review training, staff exchange for broader experience, and common guideline development.

Improve rotational training arrangements

49. We believe that substantial benefit could flow from a rotation of trainee medical staff between ICU, CTICU, PICU, NITA and SITU. Such rotations should be explored with all those responsible for training.

50. A way of helping to build communication links between departments would be to rotate newly appointed intensive care nursing staff.

51. Nursing staff on the intensive care course should ideally be exposed to as many of the ICU units as possible. This would require consideration by all those responsible for curriculum development ie. the Trust, the School of Nursing and the ENB.

Clarify more formally 'whose patient' in IC areas

52. While existing and mostly informal arrangements work well most of the time, we were concerned that when things go wrong, as they will from time to time, difficulties may be caused. There is pressure for good clinical governance, and the likelihood of litigation is rising. We therefore recommend that there should be formal clarity about the consultant with ultimate responsibility for any patient at any time.

53. Leading intensive care units in other parts of the world such as Australia have moved towards a 'closed unit' philosophy, in which patients in intensive care are formally the clinical responsibility of the consultant intensivist. Advice and input from other specialty consultants is highly welcomed, as now in SUHT, but the ultimate responsibility is quite clear and quite formal.

54. We recommend that this important issue should be taken up by the Programme Manager and considered carefully by lead consultants and others involved.

Possible changes for management responsibility for IC and HC areas

Most high care should stay within directorates, not critical care

55. No case was established to persuade us to recommend any general change to the location or management arrangements for high care units. These should stay within the 'parent' directorate/specialty, except in those few cases where change has already been agreed, such as moves into the redeveloped PICU from G1. The view from all medical and surgical directorates, and of both medical and nursing staff, was that there were closer connections between wards and existing high care units than between high care and intensive care -- in the nature of the work, the flow of patients, staff training, skills, experience and temperament.

56. The department of neo-natal medicine comprises neo-natal intensive care and neo-natal high care. Neo-natal intensive care should stay close (physically and for clinical and management purposes) to neo-natal high care. However, it is worth emphasising that this is an *intensive* care unit. The neo-natal consultants and specialist registrars are part of the child health directorate, but the senior house officers, neo-natal nurse practitioners and nursing staff are managed by the obstetrics, gynaecology and neo-natal directorate. There is no present case for physical relocation or organisational change, although there may be merit in considering a closer relationship with PICU. There are opportunities for training experience 'exchanges' with PICU.

57. The option to change the management arrangements for vascular surgery from the Surgical Directorate to the Cardiothoraic Directorate was raised during this review. We decided it was outside the remit of this group to comment on the overall vascular service, but noted the similarities between the needs of the specialties for ICU/HD access.

Possible physical moves and expansion

58. No general case was made for change in physical location of units other than those already planned as part of the development of PICU and of the redevelopment and expansion of Neuro Intensive Care (NITA). We recommend that NITA continues to be managed by the Neurosciences Directorate.

59. The Cardiac ICU should continue to be managed within the Critical Care Directorate. PICU should be managed in a similar way within CCD, while retaining its strong links with the Child Health Directorate.

Potential to move SITU into Critical Care Directorate

60. We recommend that SITU move into the 'intensive care corridor' in Centre Block, and managerially into the Critical Care Directorate.

61. This could not be successfully achieved without several pre-conditions being met:

- SITU nursing staff would need initially (and for some time to come) to retain a similar team identity and degree of clinical and management autonomy as CTICU within CCD and the central 'intensive care corridor'
- elective vascular surgery would need to be protected in a similar manner to cardiothoracic surgery
- a surgical high care would need to be developed.

Post operative surgical High Care

62. A business case has been made for an additional facility to provide post-operative surgical high care. The facilities in the existing SITU should be included in the option appraisal for this development. We recommend that this high care be managed by the Surgical Directorate. It will require surgical and anaesthetic input and a designated lead consultant. Other surgical specialties, eg ENT will require access to this facility from time to time, and should be involved in its development.

63. The number of beds required should be based on audit, present experience, and judgement about future trends. The existing SITU facility could provide four beds in the first instance.

Opportunistically, consolidate intensive care in Centre Block

64. From time to time, opportunities to expand or relocate intensive or non-specialist high care will arise or could be created. If at all possible, it would be beneficial to locate these in or near existing facilities in the Centre Block 'intensive care corridor', as is being achieved now with PICU, and suggested above for SITU. Physical proximity is encouraging closer collaboration (as for example between CTICU and ICU) and will ease the possibilities of achieving economies of scale suggested from Canadian and US experience that *can* result from consolidating management of intensive and high care into groups of (very approximately) 20 or more beds.

65. Most of the benefit comes from the areas already mentioned (pooled training and staffing in its broadest sense; common care pathways and guidelines; and equipment rationalisation).

66. Some additional economies can come from reducing the number of independently managed and supported units, through reducing the number of 'external interfaces' between groups of staff and hence time required for meetings between units, and pooling part-time posts or pieces of work needing to be done in common.

Conclusion

67. We would like to thank all those who contributed to this review of management arrangement of intensive and high care. We have deliberately come up with recommendations that are achievable in the current environment within a reasonable timeframe and that also builds on the high morale that exists within all the areas that we reviewed.

68. This report has been submitted to the Chief Executive for consideration. We recommend that it be presented to the operational management group, clinical management group and trust management group.

Appendix 1.
Terms of Reference

SOUTHAMPTON UNIVERSITY HOSPITALS NHS TRUST

REVIEW OF MANAGEMENT ARRANGEMENTS IN INTENSIVE AND HIGH CARE

TERMS OF REFERENCE

INTRODUCTION

Southampton University Hospitals Trust completed an Organisation Review in 1997 which recommended that a working group, including 2 external advisors, should review the management arrangements of the Trust's intensive and high care facilities. After further consideration a decision has been made to invite the Kings Fund to assist with this work. The Trust will, at the same time, work with the Audit Commission as one of their pilot sites prior to the Nationwide review of Intensive Care Services planned for 1999.

OBJECTIVES

To answer the questions:-

- Should we manage all intensive care and high care beds in the Critical Care Directorate or should they be managed by their principal user?
- Is there any other acceptable combination of management arrangements?

The Group will:-

- assess the appropriateness of the existing management arrangements.
- decide the relationship between specialist intensive and high care areas and all directorates.
- explore the use of programme management across the Trust.
- make recommendations to the Chief Executive.

SCOPE

- The Working group will review the management arrangements in all intensive and high care areas on the Southampton General Hospital site including general, and regional specialties for adults and children.
- Areas to be included
  - General Intensive Care (INCU)
  - Cardiac Intensive Care (CT ITU)
  - Paediatric Intensive Care (PICU)
  - Neurosciences Intensive Treatment Area (NITA)
  - Neonatal Surgery
  - Surgical Intensive Therapy Unit (SITU)
  - High Care (Medical Directorate)
  - Cardiac High Care
  - Coronary Care

METHODOLOGY

A small working group will undertake the review with support from Personnel.

A fellow of the Kings Fund will be invited to work with the group.
(John McClenahan)

The methodology may include

- Review work of the CMB sub-group on Intensive and High Dependency Care.
- Review evidence submitted to the Organisation Review Group.
- Visits to all intensive care and high care areas.
- Benchmark with other Trusts.
- Interviews with key people, including representatives from Clinical Directorates, Medical Director and Director of Nursing and Patient Services.

TIMESCALE. *(As proposed)*

To report to the Chief Executive July 1998.

WORKING GROUP

John Miller	Associate Medical Director
Nick Davies	Consultant Anaesthetist
Margaret Fahey	Project Manager, Personnel

SOUTHAMPTON UNIVERSITY HOSPITALS TRUST

PERSONNEL DEPARTMENT

MEMORANDUM

Ref: MF

To: All Clinical Service Directors and Managers
Directorate representatives as listed in the programme

c.c. John Miller, Nick Davies, John McClenahan

From: Margaret Fahey, Project Manager, Personnel

Ext. 6056
Mailpoint 18

Date: 03/09/98

Re: **Intensive and High Care Management Arrangements**

I am pleased to send you the paper from John McClenahan summarising the issues raised in the original submissions to the Organisation Review Group. I have also included a copy of the terms of reference for the working group. We plan to use the paper as a basis for discussion when we meet with Directorate representatives on 16th/17th September (Outline programme below). We will use the Board Room in the Trust Management Offices as previously advised. I have attempted to give Directorates time to discuss the issues with the group but have had to work with the usual constraints of busy diaries. There is still some room for flexibility so please contact me if you have a problem.

Directorates or individuals who are not listed are invited to contribute by responding in writing to Margaret Fahey, Mailpoint 18, Trust Management Offices. Please contact me on ext 6056 if you would like to discuss any aspect of this review.

Wednesday 16th September

9.30am	Walk around SGH	
11am	Child Health	Denise Foster CSM, Mike Hall Consultant Neonatal Medicine
12.15pm	Medicine	David Burge Consultant Paediatric Surgeon Liz Slinn CSM, Rod Dathan,CSD Karen Cubbon SCN
2pm	Neurosciences	Anita Smith Sister, Derek Waller Consultant Physician Owen Sparrow CSD , Phillip Kennedy Consultant Neurologist Dorothy Lang, Consultant Neurosurgeon, Jane Harrison Senior Sister Nick Lawton, Consultant Neurologist, Sue Hill, Consultant Anaesthetist

Thursday 17th September

9.30am	Critical Care	Belinda Atkinson CSM, David Sutton CSD
10.15	PICU	Michael Marsh Director, Carole Purcell Senior Sister
11.00	Cardiac	Beverly Webster CSM, Keith Dawkins CSD, Steve Livesey Consultant Cardiac Surgeon, Tony Salmon Consultant Cardiologist, Gareth Charlton Consultant Anaesthetist
12.00	Surgery	Cliff Shearman Consultant Vascular Surgeon
12.30	Nursing & Patient Services	Julie Pearce Nurse Development Manager
2.15pm	General Intensive Care	Consultants, Sisters/Managers
3.30 pm	Surgery	Andrew Sansome Consultant Anaesthetist,

Margaret Fahey

Appendix 2.
Discussion paper

Circulated on 3 September 1998

Southampton Intensive and High Dependency Care Review
Initial reflections from John McClenahan, King's Fund, 2 September 1998

Main issues, and principles for resolving them (suggestions)

I have attempted to distil specific issues relating to particular aspects of Critical Care and Intensive/HD Care apparent at the time of responses to the Draft Final Report of the Organisation Review Group. Underlying all of the particular aspirations seem to me to be a few more general issues, whose resolution may help with the more specific issues:

1. Protecting ICU and HDU capacity for elective services

Elective services tend to be crowded out by emergencies requiring intensive or high care beds. Many of the concerns expressed by other directorates or specialities boil down to protecting their elective service capacity. The main present mechanism for doing that seems to be to have them physically and/or organisationally separate from the main ICU, and managing them within or partly within the directorate. For closer links to be acceptable, we would need answers to the question "how *else* can we say no, legitimately, to an emergency admission (a) when we are not full up; or more particularly (b) to a bed designated for use tomorrow (or next week) by a planned elective episode?" Subsidiary questions include:

- under what circumstances? What risks are acceptable, and when and for how long can they be run beyond the 'normal' safe level?
- who makes the decision? And whom should they consult? What happens in the middle of the night and other 'out-of-hours' times?
- who might challenge the decision, and how would that challenge be resolved?

2. Ensuring that levels of risk are acceptable on a sustainable *basis*

Principal areas of continuing risk are:

- on the wards for very sick patients or those whose deterioration may not have been spotted in time
- in HDU care when there is pressure to deal with cases that really need ICU levels of staffing
- in ICU when a bed is available but staff in 'normal' numbers or skill levels are not?

What is already done about acknowledging and managing these risks, and what more needs to be? How far will the provision of more high care facilities relieve pressure on intensive care beds, and how will the high care beds be protected from creeping pressures to use them for intensive care?

3. Understanding the balance of advantage of departmental linkages or even amalgamation of ICU/HDU facilities vs. continuing separation

Principles suggested by Schumacher may help here. These principles suggest that we consider the strengths of association in management and clinical skills between ICU/HDU and those 'user' directorates which need to use intensive or high care modes, in respect of:

- similarity of activity (general intensivist/intensive nursing skills vs. particular specialty skills)
- need for joint planning and organisation of staff, training, supplies and equipment etc.

- cause and effect relationships (one department causing effects in another department which has to deal with the consequences, rather than in its own department)
- exclusivity (two departments dealing only with each other, vs. needing to deal with many others as well)

The case for joint management and staffing, up to and sometimes including co-location, is strongest where different departments are very similar, strongly need joint planning and management, have strong cause/effect links, and exclusive relationships. Often, only *some* aspects really benefit from joint management, and these could be separated out in hybrid solutions (as suggested in David Weeden's response "nursing and medical staff training and co-ordination for ICUs [and theatres] to be managed Trust-wide; day to day patient care in some areas to be managed within directorates").

4. Understanding the costs and benefits of change

We need to understand the perceived benefits of organisational and physical changes from the present situation to another, in comparison to the effort and costs required to achieve them. If the benefits are not agreed to be substantial, the case for change may fall at the first hurdle. If they are, we need a good initial idea of the costs of change before reaching a decision.

Possible principles to help reach decisions

Interests of the whole population of patients served by the Trust should be given highest consideration, where necessary over the interests of a specific subgroup of patients.

If in significant doubt of improvement, leave it alone.

All individuals' interests and concerns are worthy of consideration and respect, and if overruled, should have an explanation offered. Anyone wishing to put their points directly to the Review Group should be offered the chance to do so, preferably via their CSM or CSD or lead clinician, but if necessary direct.

The Review Group will decide substantive issues where possible, and propose a process for resolving remaining issues which will balance the need to reach decisions quickly with the desire to take a wide range of views into account.

We should respect the strongly felt aspirations of as many parties as possible, in the absence of robust evidence to the contrary.

Canadian and US experience is said to suggest that significant economies of scale and benefits from joint management start to become apparent from having intensive/high care units comprising more than about 20 beds. The smaller the unit of management (if not physical co-location) the harder it is to match fluctuations in demand to staffing, skills and equipment needed to provide safe and effective service. This is *not* to say that nothing smaller than 20 beds in one place makes sense - there are other potential advantages, including not incurring the costs and disruption of change. Hybrid solutions where aspects most needing joint planning and management (e.g., nurse staffing and intensivist cover, training of all kinds of staff, audit, research) are dealt with jointly, and other aspects remain separate, may work almost as well with much less effort.

- cause and effect relationships
- evaluation of [illegible]

which [illegible]

The case [illegible]
strong [illegible]
management [illegible]
aspects [illegible]
solutions [illegible]
conception [illegible]
[illegible]

[illegible]

[illegible]