

NHS England Congenital Heart Disease Provider Impact Assessment



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1 Introduction

1. In July 2015, NHS England Board agreed the proposed CHD standards and service specifications relating to three levels of CHD service provision that had been collaboratively developed with and agreed by all stakeholders. A 'go-live' date for commissioning of the standards and the service specification was agreed for April 2016.
2. Starting in April 2015 NHS England supported an initial provider-led process to consider how they might work together in order to meet the standards. On 9 October 2015 submissions from networks were received by NHS England and assessed. Overall it was considered that this work had not produced an acceptable solution, in the best interests of patients, and nor was it likely to do so even if the providers were given more time. NHS England concluded that developing a nationally coherent delivery model would require it to provide significant support and direction¹.
3. Between January and April 2016 existing providers of CHD services were assessed against key selected standards by a national commissioner led panel with clinician and patient/public representation. The panel's role was to assess each hospital's ability to meet the selected standards, based on the evidence submitted by the Trust. The panel was not responsible for deciding what action to take as a result of that assessment. That responsibility sits with NHS England as the single national commissioner of CHD services.
4. This assessment² demonstrated that some providers met most of the standards and were likely to be able to meet the remainder by April 2017, and that others should be able to meet the requirements with further development of their plans. NHS England has since been working with those providers as they progress towards full compliance. Other hospitals were not meeting or likely to meet all of the relevant standards within the required timescales. Some presented a clinical and governance risk. Since then, we have been working with them to look for ways to bring them into full compliance. This has not (so far) been possible. The panel's assessment was considered by NHS England's Specialised Services Commissioning Committee (SSCC), at the end of June 2016. SSCC recognised that the status quo could not continue and that NHS England needed to ensure that patients, wherever they lived in the country, had access to safe, stable, high quality services. SSCC also recognised that achieving this within the current arrangement of services would be problematic.

¹ The full report of this work is available here: <https://www.england.nhs.uk/commissioning/spec-services/npc-crg/chd/quick-links/>

² The full report of this assessment is available here: <https://www.england.nhs.uk/commissioning/spec-services/npc-crg/chd/>

5. SSCC determined that, subject to appropriate public involvement and/or consultation, a change in service provision was appropriate. As a result it was proposed that in future NHS England would only commission CHD services from hospitals that are able to meet the standards within the required timeframes.
6. As a result proposals for service change were announced on 8 July 2016. Subject to public consultation, if implemented, our proposals would mean that in future CHD level 1 (surgical) services in England would be provided by the following hospitals:
 - **Alder Hey Children's Hospital NHS Foundation Trust** (children's services) and **Liverpool Heart and Chest Hospital NHS Foundation Trust** (adult service)
 - **Birmingham Children's Hospital NHS Foundation Trust** (children's services) and **University Hospitals Birmingham NHS Foundation Trust** (adult service)
 - **Great Ormond Street Hospital for Children NHS Foundation Trust** (children's services) and **Barts Health NHS Trust** (adult service)
 - **Guy's and St Thomas' NHS Foundation Trust** (children's and adult services)
 - **Leeds Teaching Hospitals NHS Trust** (children's and adult services)
 - **Newcastle Hospitals NHS Foundation Trust** (children's and adult services)
 - **University Hospitals Bristol NHS Foundation Trust** (children's and adult services)
 - **University Hospital Southampton NHS Foundation Trust** (children's and adult services)
7. If implemented, our proposals would result in the following changes at hospitals that currently provide level 1 (surgical) CHD services:
 - Surgery and interventional cardiology for adults should cease at **Central Manchester University Hospitals NHS Foundation Trust (CMFT)**. CMFT does not undertake surgery in children.
 - Surgery and interventional cardiology for children and adults should cease at **Royal Brompton & Harefield NHS Foundation Trust**.
 - Surgery and interventional cardiology for children and adults should cease at **University Hospitals of Leicester NHS Trust**.
8. Changes are also proposed to the provision of level 2 specialist medical CHD care. While not the subject of the forthcoming consultation they will be

described in our consultation materials and stakeholders invited to provide us with their views. We will also be conducting specific further engagement with patients and others who would be affected by implementation of the proposals

9. If implemented, our proposals would mean that in future level 2 (specialist medical) CHD services in England would be provided by the following hospitals:
 - **Brighton and Sussex University Hospitals NHS Trust** (adult service)
 - **Central Manchester University Hospitals NHS Foundation Trust** (children's services)
 - **Norfolk & Norwich University Hospitals NHS Foundation Trust** (adult service)
 - **Oxford University Hospitals NHS Foundation Trust** (children's and adult services)
10. NHS England is exploring the potential for the provision of level 2 medical services at hospitals where level 1 care would cease. We are interested in the degree of support for this approach and will test this as part of the consultation. This possibility relates to:
 - **Central Manchester University Hospitals NHS Foundation Trust** (adult service)
 - **Royal Brompton & Harefield NHS Foundation Trust** (adult service)
 - **University Hospitals of Leicester NHS Trust** (children's and adult services)
11. NHS England has also raised with the Royal Brompton the potential for it to continue to provide level 1 adult CHD services, including surgery, by partnering with another level 1 CHD centre in London that is able to provide care for children and young people with CHD that meets the required standards. . To date, the Royal Brompton Hospital has indicated that it does not support this approach, but it has not said that they would refuse to treat adults alone. NHS England believes that it has sufficient merits to be explored further. The Royal Brompton is also exploring with partners ways in which it could achieve compliance with the standard for paediatric co-location, but to date no plan and timetable for this to be achieved have been shared with NHS England.
12. If implemented, our proposals would result in the following changes at hospitals that currently provide level 2 specialist medical CHD care (subject to further local engagement as appropriate).
 - Specialist medical care and interventional cardiology would cease at **Blackpool Teaching Hospitals NHS Foundation Trust**
 - Specialist medical care and interventional cardiology would cease at **Imperial College Healthcare NHS Trust**

- Specialist medical care and interventional cardiology would cease at **Nottingham University Hospitals NHS Trust**
 - Specialist medical care and interventional cardiology would cease at **Papworth Hospital NHS Foundation Trust**
 - Specialist medical care and interventional cardiology would cease at **University Hospital of South Manchester NHS Foundation Trust**
13. NHS England is continuing discussions with Papworth Hospital NHS Foundation Trust about its plans to meet the requirements to continue to provide specialist medical care and interventional cardiology. If the Trust can demonstrate that it now either meets the standards or has a robust plan to do so, NHS England will review its proposal that L2 CHD services should cease to be provided.

2 Part One: The impact assessment

14. NHS England has undertaken a detailed impact assessment considering the impact on patients and their families, on CHD services and other clinical services, on provider organisations including financial implications. This paper reports NHS England's assessment of the impact on providers of CHD services as at January 2017.
15. All level 1 and level 2 CHD providers were asked to review their services in light of NHS England's proposals.
16. The data received was considered first by specialised commissioning teams from the relevant NHS England region during the period 10-15 November 2016. This allowed for a review of both sets of data and for consideration of any wider regional implications.
17. The impacts were then considered by a national panel drawn together to review the submissions, to moderate the regional assessments and to take a national overview. The national panel met on 18 November 2016. A separate report from the panel has been published alongside this NHS England report.
18. The panel's role was to assess the likely impact of NHS England's proposals on each hospital and its services. The panel was not responsible for deciding what action to take as a result of that assessment. That responsibility sits with NHS England as the single national commissioner of CHD services.
19. Since the panel completed its assessment, NHS England has continued to maintain a dialogue with the affected hospitals as a result of which new or revised information has been provided and further analyses undertaken.
20. This report takes account of the panel's assessment and recommendations as well as NHS England's subsequent work. It reports NHS England's pre-

consultation assessment of the impact of its proposals on provider organisations. It should be read in conjunction with the national panel report.

2.1 The impact at centres which, under the proposals, would not continue to be commissioned as Level 1 CHD centres

2.1.1 Royal Brompton

21. Under the proposals the Royal Brompton would no longer perform surgical or interventional cardiology on people with CHD. The panel considered that the scale of this change was especially significant to the Royal Brompton's provision of paediatric services but the impact on the organisation and on patients could be reduced if it provided adult only level 1 services.

2.1.1.1 Impact on other services: Paediatric Intensive Care and Extracorporeal Membrane Oxygenation (ECMO)

22. The Royal Brompton's PICU is largely dependent on their paediatric CHD service, because CHD accounts for 86% of the admissions. The Trust considers that its PICU would no longer be viable if the proposals are implemented, because paediatric cardiac patients are a large proportion of its work and it would not have enough other patients to stay open. The national panel accepted that this was an accurate assessment. If the PICU at the Royal Brompton were to close, this would be expected to have an effect on their paediatric respiratory services, the only other clinical service for children offered by the Trust. NHS England accepts the panel's view.
23. The Royal Brompton provides cardiac ECMO for children and cardiac and respiratory ECMO for adults. If our proposals were to be implemented, Royal Brompton would no longer be able to provide cardiac ECMO for children. This would affect around 15 children a year. It would no longer provide cardiac ECMO for adults with CHD. Adult respiratory ECMO provision at the Royal Brompton is the subject of a separate current procurement being undertaken by NHS England.
24. There are close links between paediatric cardiac services and PIC and children's ECMO services. As a result, our proposals will have an impact on both. The effects, both on paediatric cardiac patients, and any wider impact on PIC and ECMO services nationally, can be managed, as described below, and should not preclude NHS England proceeding to consult on its proposals.

2.1.1.2 Impact on other services: Specialist paediatric respiratory services

25. The particular circumstances at the Royal Brompton where paediatric cardiac and paediatric respiratory are the only children's services offered mean that our

proposals will have an impact on their paediatric respiratory service because of the effect on their PICU.

26. The national panel considered that there would be an impact on paediatric respiratory services, if paediatric cardiac services and PICU were no longer provided by the Royal Brompton. NHS England's work focusses on congenital heart disease and has not examined paediatric respiratory services. The membership of the panel reflected that focus. Given this, it would not have been appropriate for the panel to undertake detailed assessment of this impact.
27. If a decision is taken that results in PICU closure at the Royal Brompton, NHS England will work with the Trust to manage the impact on paediatric respiratory services. This could require a local service change process with further public engagement, potentially including full public consultation. There are alternative providers of specialist paediatric respiratory services in London. This should not preclude NHS England proceeding to consult on its proposals.

2.1.1.3 Impact on finances

28. The overall contract value for specialised services at Royal Brompton is approximately £226m. NHS England estimates that the financial effect of the proposed changes would be around £35m excluding the impact on paediatric respiratory services. The Trust's estimate of a £47m loss in income when paediatric respiratory services are taken into account appears to be broadly in line with NHS England's own estimate. The Trust estimates that the loss resulting from these proposals would be approximately 13% of the Trust's total income and 21% of its total specialised services income, which represents a significant financial and business challenge. The scale of loss reflects the impact on PICU and the potential impact on paediatric respiratory services.
29. The loss of income to the Trust would, to some extent, be offset by a reduction in costs. The Trust stated that owing to the stranded costs associated with this service they estimate an adverse impact of over £7m per year to the Trust's bottom line if these proposals are implemented. Data supplied by the Royal Brompton indicates that its provision of CHD services results in an overall net loss, and therefore although the loss of income is significant it may be that, depending on the stranded costs, in the long term no longer providing these services is in the best financial interest of the Trust.
30. The financial impact of the changes could be reduced if the Royal Brompton provided level 1 adult services.
31. We note that Royal Brompton is an active partner in the North West London Sustainability and Transformation Planning process and has identified a number of potential areas for partnership working which could potentially contribute to the mitigation of any financial losses if our proposals are implemented.

32. While there would be an impact on the income of The Royal Brompton, this could be partially offset by other forms of service provision. This should not preclude NHS England proceeding to consult on its proposals.

2.1.1.4 Impact on workforce

33. In further correspondence with NHS England following the panel's assessment, The Royal Brompton identified approximately 430 WTE staff that it considered would be affected by the proposals, including those working as part of their CHD service, paediatric respiratory, paediatric intensive care and other services which will be impacted to a lesser extent. The Trust has estimated the cost of redundancies to be approximately £13.5m.
34. The panel was not able to take a view on the likelihood of all the staff identified by the Royal Brompton being significantly impacted by the proposed changes. However, it was acknowledged that there would be a significant impact on the Royal Brompton's workforce, if the proposals were to be implemented. The panel noted that this impact would be reduced, were the Royal Brompton to continue providing adult only level 1 services.
35. NHS England has reviewed the Trust's assessment of the potential level of redundancy. Given that we expect that most patients using the Royal Brompton would transfer to alternative providers within 3 miles of the Royal Brompton with the scope for redeployment that would result, NHS England has a materially different view of possible redundancy costs. Internal redeployment is also likely to make a significant contribution to avoiding redundancy. We estimate that the costs could however be up to £1 – 1.5m. This estimate is highly sensitive to the degree to which staff can be redeployed.

Estimate of Redundancy at RBH - Redeployment at 90%		
Service	WTE	Estimate of Redundancy Costs
Adult CHD	3.86	£149,865
Long Term Ventilation (LTV)	0.00	£0
Morphology Unit	0.00	£0
Paediatric CHD	15.62	£461,919
Paediatric Intensive Care	12.24	£345,346
Paediatric Respiratory	0.00	£0
Primary Dyskinesia Ciliary (PCD)	0.00	£0
Grand Total	31.71	£957,130

Estimate of Redundancy at RBH - Redeployment at 85%

Service	WTE	Estimate of Redundancy Costs
Adult CHD	5.79	£224,797
Long Term Ventilation (LTV)	0.00	£0
Morphology Unit	0.00	£0
Paediatric CHD	23.43	£692,879
Paediatric Intensive Care	18.35	£518,019
Paediatric Respiratory	0.00	£0
Primary Dyskinesia Ciliary (PCD)	0.00	£0
Grand Total	47.57	£1,435,694

36. Experience from previous CHD service changes shows that a number of staff, perhaps most, would prefer to be re-deployed within their current Trust, though in some cases staff may transfer in accordance with TUPE regulations
37. However, we do not expect that it will be viable for the Royal Brompton to continue to provide PICU if our proposals are implemented so there would be little or no opportunity for internal redeployment of PICU specialist staff.
38. There is no experience of such changes within London but it is reasonable to suppose that more staff would consider transferring with the patients because the distances involved are so small and the impact on staff would therefore be lower. Additional PICU staff especially nurses will be needed by those Trusts delivering more activity if our proposals are implemented and we would expect TUPE to apply.
39. Previous experience suggests there will be relatively few redundancies but with such large numbers of staff potentially affected by the changes, some redundancies cannot be ruled out. NHS England will encourage providers to minimise redundancies by supporting staff to transfer with the patients or by redeploying them internally. This should not preclude NHS England proceeding to consult on its proposals.

2.1.2 University Hospitals Leicester (UHL)

40. Under the proposals the UHL would no longer perform surgical or interventional cardiology on people with CHD. The panel considered that the scale of this change was not as significant as at the Royal Brompton due to the greater number of services which UHL provide. The panel also noted that the impact on the organisation and on patients could be reduced if it provided level 2 services.

2.1.2.1 Impact on other services: Paediatric Intensive Care and Extracorporeal Membrane Oxygenation (ECMO)

41. UHL has two paediatric intensive care units (PICUs), one at the Leicester Royal Infirmary and one at Glenfield (which supports CHD services).
42. The panel accepted that the proposals would make the PICU at the Glenfield Hospital unviable but did not accept that they would result in the cessation of PICU services at Leicester Royal Infirmary.
43. While we cannot pre-empt the decisions that NHS England will make on CHD services, or the findings and recommendations of its Paediatric Critical Care & Specialised Surgery for Children Service Review, at this point we expect Leicester would still provide PICU care for the East Midlands if our proposals are implemented, even if it no longer provides level 1 paediatric cardiac surgery. This would be through a single PICU at the Royal Infirmary.
44. If Leicester continues to provide level 1 paediatric cardiac surgery it plans to move this service from Glenfield to the Infirmary, so the future of the PICU at Glenfield is in question whether or not NHS England's proposals on CHD are agreed.
45. UHL provides cardiac and respiratory ECMO for children and is at the present the only provider commissioned to offer mobile ECMO (which allows children to be transferred between hospitals on ECMO). It also provides cardiac and respiratory ECMO for adults. If our proposals were to be implemented, Leicester would no longer be able to provide cardiac or respiratory ECMO for children or mobile ECMO for children. Taken together this would affect around 55 children a year. It would no longer provide cardiac ECMO for adults with CHD. We would expect that Leicester could continue to provide adult respiratory ECMO, in a similar way to other hospitals where services are supported by adult cardiac surgery services (not congenital cardiac).
46. There are close links between paediatric cardiac services and PIC and children's ECMO services. As a result our proposals will have an impact on both. The effects, both on paediatric cardiac patients, and on the wider national service, can be managed, as described below, and should not preclude NHS England proceeding to consult on its proposals.

2.1.2.2 Impact on finances

47. The overall contract value for specialised services at UHL is approximately £234m. NHS England estimates that the financial effect of the proposed changes would be a reduction of income around £14m (rather than the £19-20m estimate provided by the Trust). This is partly explained by a difference in view on the impact of the proposals on PICU. UHL's estimate is based on an assumption that it would no longer be able to provide PICU services. The panel

considered that there was no reason why PICU services could not continue at the Infirmary site even if the PICU currently located on the Glenfield site needed to close.

48. The loss of income to the Trust would therefore represent between 1.6% and 2.2% of the Trust's total income and between 6% and 8% of their total specialised services income.
49. The panel viewed the potential financial loss to UHL as less significant than that at the Royal Brompton due to the projected income which would be lost being smaller and the higher overall income of the Trust. Some of this loss of income could be reduced if UHL continued to provide Level 2 services. The loss of income to the Trust would also, to some extent, be offset by a reduction in costs.
50. While there would be an impact on the income of UHL, this could be partially offset by other forms of service provision. This should not preclude NHS England proceeding to consult on its proposals.

2.1.2.3 Impact on workforce

51. Leicester identified 153 WTE staff that would be directly affected by the proposals, including administrative and clerical staff, estates and ancillary, medical and dental and nursing and midwifery staff that work solely for East Midlands Congenital Cardiac Service. In addition to the staff directly affected, the Trust has also identified other roles, such as those working in theatres, imaging, outpatient care, catheter labs and intensive care that would be indirectly affected. Leicester considers it likely that many of its staff would prefer to take up posts elsewhere in the Trust if possible.
52. The panel was not able to take a view on the likelihood of all these staff being significantly impacted by the proposed changes; however, it was acknowledged that there would be a significant impact on the Leicester's workforce, if the proposals were to be implemented. The panel noted that this impact would be reduced, were Leicester to continue providing level 2 services.
53. NHS England considers it probable that most at risk staff will be redeployed and that therefore the costs of redundancy will be mitigated. We estimate that the costs could however be up to £1m. This estimate is highly sensitive to the degree to which staff can be redeployed.
54. Experience from previous CHD service changes shows that a number of staff, perhaps most, would prefer to be re-deployed within their current Trust, though in some cases staff may transfer in accordance with TUPE regulations
55. Previous experience suggests there will be relatively few redundancies but with such large numbers of staff potentially affected by the changes, some

redundancies cannot be ruled out. NHS England will encourage providers to minimise redundancies by supporting staff to transfer with the patients or by redeploying them internally. This should not preclude NHS England proceeding to consult on its proposals.

2.1.3 Central Manchester Foundation Trust (CMFT)

56. Under the proposals the CMFT would no longer perform surgical or interventional cardiology on adults with CHD. The panel considered that the scale of this change was considerably less than at the other Level 1 centres no longer being commissioned due to the significantly lower number of surgical or interventional procedures which are undertaken at CMFT. The panel also noted that this impact will be reduced if CMFT continue to provide level 2 services as part of the overall CHD service provision in the North West.

2.1.3.1 Impact on other services: Paediatric Intensive Care and Extracorporeal Membrane Oxygenation (ECMO)

57. The proposals would have no effect on PICU provision in Manchester as CMFT does not provide level 1 CHD services.
58. CMFT provides cardiac ECMO for adults with CHD. If our proposals were to be implemented, Central Manchester would no longer be able to provide cardiac ECMO for adults with CHD. It does not provide paediatric ECMO.
59. These proposals would have no significant impact on any other services within the Trust.

2.1.3.2 Impact on finances

60. The Trust did not respond to the request to provide information on the potential impact of the proposals.
61. The overall contract value for specialised services at Central Manchester is approximately £348m. NHS England estimates that the financial effect of the proposed changes would be around £1m.
62. The loss of income to the Trust would therefore represent approximately 0.1% of the Trust's total income and approximately 0.3% of their total specialised services income.
63. The panel viewed the potential financial loss to CMFT as much less significant due to the overall income they currently receive for level 1 CHD services being much lower than other centres which would lose activity as a result of these proposals. The panel considered that the financial impact of the changes will be offset by the establishment of a new model for the delivery of CHD services in the North West. The impact on CMFT as a Trust would be very limited, as it has only been undertaking a relatively low volume of CHD surgical activity.

64. The financial impact of this change is therefore not likely to have a significant impact on the Trust. Some of this loss of income could be reduced if Central Manchester continued to provide level 2 adult CHD services. The loss of income to the Trust would also, to some extent, be offset by a reduction in costs.
65. While there would be an impact on the income of Central Manchester, this could be partially offset by other forms of service provision. This should not preclude NHS England proceeding to consult on its proposals.

2.1.3.3 Impact on workforce

66. The Trust did not respond to the request to provide information on the potential impact of the proposals.
67. The panel considered it likely that the impact on staff at CMFT would be considerably less than the other two centres as the scale of service reduction would be much smaller. Where staff are affected, close working between CMFT, Alder Hey Children's Hospital and Liverpool Heart and Chest should enable CMFT to ensure that staff are appropriately supported and that clear plans are made to enable staff who wish to transfer to a Level 1 centre to do so.
68. Previous experience suggests there will be relatively few redundancies and because of the small scale of the services that are affected, the number of staff affected is expected to be commensurately small. NHS England will encourage providers to minimise redundancies by supporting staff to transfer with the patients or by redeploying them internally. This should not preclude NHS England proceeding to consult on its proposals.

2.1.4 Paediatric Intensive Care: wider implications

69. In order to ensure that there is still sufficient PICU capacity for CHD patients, NHS England will work with the other hospitals where increased paediatric cardiac surgery would be expected if our proposals are implemented (Birmingham Children's Hospital, Great Ormond Street, Leeds General Infirmary, St Thomas' - Evelina Hospital) to undertake the necessary planning and preparation to manage any increase in PICU capacity that would be needed for CHD patients.
70. If our proposals are implemented, there may also be an effect on the wider regional and national PIC system. NHS England has accelerated its review of Paediatric Critical Care & Specialised Surgery in Children, which will consider paediatric intensive care provision and paediatric transport. The critical care review aims to carry out initial work looking at where paediatric critical care capacity is likely to be needed in future, with the first outputs coming through early in 2017. When the Board takes its decisions on the CHD proposals, it should therefore have greater clarity around the impact on PIC for CHD patients

in the wider regional and national context. The Paediatric Critical Care & Specialised Surgery in Children Service Review will then be able to pick up and deal with any wider implications for changes in PIC consequent upon the proposed CHD changes, as it considers the required capacity and distribution of PICU across the country as a whole.

2.1.5 Paediatric ECMO: wider implications

71. NHS England will work with the other hospitals, where increased paediatric cardiac and adult congenital surgery would be expected, if our proposals are implemented, (Birmingham Children's Hospital, Great Ormond Street, Leeds General Infirmary and St Thomas' - Evelina Hospital) to undertake the necessary planning and preparation to manage any increase in paediatric cardiac ECMO capacity that would be needed for CHD patients.
72. If our proposals are implemented, there may also be a wider regional and national effect on ECMO services. NHS England has accelerated its Paediatric Critical Care & Specialised Surgery for Children Service Review, which will consider paediatric ECMO. When the Board takes its decisions on the CHD proposals, it should therefore have greater clarity around emerging thinking from the national review, which is likely to be ongoing at the time of the Board's decision. The Paediatric Critical Care & Specialised Surgery for Children Service Review will then be able to pick up and deal with any wider implications for changes in children's ECMO consequent upon the proposed CHD changes, as it considers the required capacity and distribution of children's ECMO across the country as a whole.

2.1.6 Summary

73. There would be a significant impact at each of the Trusts where it was proposed that current level 1 services should cease, if our proposals are implemented. The scale of these is not considered such that it should prevent NHS England from proceeding to consult on its proposals.
74. The proposals can be implemented and that the risks identified can be reduced or mitigated through ongoing work with Trusts.
75. Whilst the financial impact of these proposals is likely to be material for the Royal Brompton and UHL they are not considered sufficient to threaten the viability of the Trusts or their ability to continue to provide a wide range of services.
76. Detailed planning of the changes and an appropriate implementation timetable will be important for effective management of the changes needed.

2.2 The impact at centres which, under the proposals, would continue to be commissioned as Level 1 CHD centres

2.2.1 Confirmation that revenue costs of implementing standards should be covered by increasing income for increasing activity

77. Trusts are paid for CHD services through tariff, which ensures that the money received is linked to patient activity.
78. It is likely that there will be some economies of scale for providers linked with providing a higher volume of activity. As such the trusts which would gain activity under these proposals are confident of being able to fund this expansion through the income which would be associated with this extra activity.
79. The financial assessment undertaken in 2015 at the time the Board agreed the standards showed that additional income to Trusts resulting from growth in activity would be sufficient to fund the implementation of the standards.
80. Growth predictions have been refreshed and continue to provide assurance that implementation of the standards will be affordable for providers.

2.2.2 Assessment of capital requirements at hospitals that would take additional patients under the proposals and the sources of this capital

81. NHS England asked providers whether there would be any capital implications if they were required to take additional patients if our proposals are implemented. NHS England has confirmed that no specific central funds will be made available.
82. Two providers indicated that they would need to source capital funds to accommodate additional activity: University Hospitals Birmingham (£4M) and Great Ormond Street (£6M). In both of these cases it is expected that the provider would be able to source the capital funding from existing allocations and/or charitable funds. This is being confirmed with NHS Improvement.
83. No other provider indicated any requirement for capital funding.
84. The risk around capital funding requirement is minimal.

2.2.3 Provider organisations where level 1 services would be provided under the proposals: workforce impact

85. The panel considered that centres that would gain more patients if the proposals were to be implemented were well placed to be able to expand their capacity to be able to provide that care. The recruitment of the necessary workforce for this increased activity was seen as potentially challenging for a number of these centres. Specifically, the recruitment of the PICU nurses necessary for the additional beds which would be required. The centres gaining significant activity believed that although challenging they had a good record of

recruiting staff and would be able to recruit the necessary staff as long as they were given sufficient time prior to these proposals being implemented.

2.2.4 The impact at centres which, under the proposals, would continue to be commissioned as Level 1 CHD centres

2.2.4.1 Alder Hey Children's Hospital

86. No significant increase in surgical activity is expected at Alder Hey as a result of the proposals. The direct impact on Alder Hey will therefore be minimal.
87. However, under the proposals Alder Hey will form a joint level 1 centre with Liverpool Heart and Chest Hospital (which does not currently offer a level 1 adult CHD service) with a single surgical team. NHS England accepts the panel's recommendations that Alder Hey would therefore need to act as the senior partner in the transition of Level 1 services from CMFT to Liverpool Heart and Chest in order to provide assurance for the continuation of the service at CMFT and support LHCH in the development of its service.

2.2.4.2 Barts Health

88. The proposals are likely to result in increased activity at Barts. While the number of patients involved is relatively small this still represents a doubling of activity for Barts. The panel considered this scale of increase to be a significant challenge for Barts. Other factors noted by the panel as contributing to the risk posed by this change were:
 - Barts only took on responsibility for delivering Level 1 CHD services for adults at the new Barts Heart Centre in 2015, following comprehensive reorganisation of cardiac services across North Central and North Central London between UCLH and Barts.
 - Barts is currently in financial special measures.
 - Barts had not clearly demonstrated that it had quantified the additional staff it would require.
89. As such the panel considered there to be a moderate risk associated with its ability to provide Level 1 CHD services for the increased number of patients envisaged under these proposals. The panel considered the most significant risk associated with Barts increasing its capacity to be in relation to the additional workforce they would require.
90. Barts is part of a joint level 1 centre with Great Ormond Street Hospital with a single surgical team. NHS England accepts the panel's recommendations that Great Ormond Street should act as the senior partner in the scaling up of Level 1 services at Barts in order to provide assurance of the development of its service.

91. NHS England recognises that it will have an important role to play in supporting implementation if the proposals are agreed. This is described in more detail in section 3.7 below.
92. We note that Barts Health NHS Trust is in Special Measures. Some adult CHD activity is expected to transfer to Barts Health from Royal Brompton if our proposals are implemented. The proposed expansion of CHD activity at Barts will bring a positive contribution to the Trust bottom line by increasing income by greater use of an existing facility.
93. There is available capacity in the PFI-financed Cardiac Centre on the St Bartholomew's site. Further development of cardiac services is in line with the Trust's strategic aims.

2.2.4.3 Birmingham Children's Hospital

94. The proposals are likely to result in significantly increased activity at Birmingham Children's Hospital. While the number of patients involved is relatively large this represents a more modest proportional increase in activity for Birmingham Children's of 36%.
95. Birmingham Children's Hospital is confident of its ability to increase its capacity sufficiently to provide the extra activity required under these proposals. The panel considered that it had provided very good evidence of having understood the scale of what would be required and of plans to increase capacity.
96. Birmingham Children's Hospital identified that in order to provide the extra activity required by these proposals it would need additional PICU and ward beds. It has identified a number of options for providing this additional capacity and is currently in the process of appraising these options. It is confident it would have this additional capacity in place by early 2018 but notes the significant challenge there will be in recruiting the necessary PICU nurses for this expansion.
97. The panel did not consider there to be any significant risks associated with Birmingham Children's Hospital increasing their capacity to meet the activity required by the proposals but did note the challenges associated with the recruitment of staff, most notably PICU nurses, and the need for sufficient lead in time.

2.2.4.4 Great Ormond Street Hospital

98. The proposals are likely to result in significantly increased activity at Great Ormond Street Hospital. While the number of patients involved is relatively large this represents a more modest proportional increase in activity for Great Ormond Street of 31%.

99. Great Ormond Street Hospital is confident of its ability to increase capacity sufficiently to provide the extra activity required under these proposals. The panel considered that they had provided good evidence of having understood the scale of what would be required of them and of their plans to increase capacity.
100. Great Ormond Street identified that in order to provide the extra activity required by these proposals they would need additional PICU beds. It plans on providing this additional capacity through its new “Premier Inn Clinical Building” which will be completed in September 2017. If Great Ormond Street is required to provide extra capacity prior to this, it stated it would be able to utilise vacant capacity on its current PICU and NICU in the short term.
101. The panel did not consider there to be any significant risks associated with Great Ormond Street increasing their capacity to meet the activity required by the proposals, but did note the challenges associated with the recruitment of staff, most notably PICU nurses, and the need for sufficient lead in time.
102. Great Ormond Street is part of a joint level 1 centre with Barts. NHS England accepts the panel’s recommendations that Great Ormond Street would need to act as the senior partner in the scaling up of Level 1 services at Barts in order to provide assurance of the development of its service.

2.2.4.5 Guy’s and St Thomas’ Hospitals NHS Foundation Trust

103. The proposals are likely to result in significantly increased activity at Guy’s and St Thomas’. While the number of patients involved is relatively large this represents a more modest proportional increase in activity for Guy’s and St Thomas’ of 40%.
104. Guy’s and St Thomas’ is confident of its ability to increase its capacity sufficiently to provide the extra activity required under these proposals. The panel considered that it had provided good evidence of having understood the scale of what would be required of it and of their plans to increase capacity.
105. Guy’s and St Thomas’ identified a need for both additional ward and PICU capacity in order to provide the additional activity modelled under these procedures. It has not identified the number of additional PICU and ward beds required because it is confident that the extra capacity to be provided under its planned expansion scheme will be sufficient. This will provide up to eleven ward beds and up to ten PICU beds by December 2017.
106. The panel noted that as the surgical work undertaken by Guy’s and St Thomas’ on behalf of Northern Ireland moves to Dublin (currently expected to happen at the end of 2017) this would free up capacity.

107. The panel did not consider there to be any significant risks associated with Guy's and St Thomas' absorbing the activity required by NHS England's proposals. However, the panel did note that the most significant risk related to the workforce implications of the proposals on Guy's and St Thomas' and its ability to recruit the appropriate staff, most notably PICU nurses.

2.2.4.6 Leeds Teaching Hospitals

108. The proposals are likely to result in increased activity at Leeds Teaching Hospitals. The number of patients involved is relatively modest and represents a small proportional increase in activity for Leeds of 10%.
109. Leeds Teaching Hospitals is confident of their ability to increase its capacity sufficiently to provide the extra activity required under these proposals. The panel considered that it had provided good evidence of having understood the scale of what would be required of it and of their plans to increase capacity.
110. Whilst the panel had some concerns relating to its ability to increase capacity in their cardiac ward, PICU and theatre they did not consider that these posed a significant risk to their ability to provide services for these additional patients.

2.2.4.7 Liverpool Heart and Chest Hospital

111. Liverpool Heart and Chest Hospital (LHCH) currently provides level 2 CHD services. Liverpool Heart and Chest does not currently have a level 1 adult CHD service. Under the proposals LHCH would begin performing Level 1 services including surgery and interventional cardiology on adults for the first time³. This will mean a significant change in the cohort of patients and activity levels.
112. The panel considered the scale and nature of this change to be a significant challenge for LHCH and the most significant risk amongst hospitals gaining activity as a result of the proposals.
113. Liverpool Heart and Chest Hospital would be providing adult Level 1 CHD services for the first time having previously been a level 2 centre. As a result of this it will not simply be doing more of the activity it has already been undertaking (as is the case with other centres gaining activity) but rather starting to undertake a type of activity it has not previously done. This increases the risks.
114. In addition, the panel was concerned that Liverpool Heart and Chest Hospital had not clearly quantified the additional capacity and workforce it would require to provide this additional activity in its submission. Therefore it could not provide

³ Although Liverpool Heart and Chest has reported CHD surgical procedures to NICOR, most of the procedures concerned were either aortic surgery (patients referred to an aortic specialist surgeon including referrals from CHD surgeons) or cases that do not require a CHD surgeon (based on the definitions of adult CHD surgery established before NHS England's work in this area).

convincing assurances about how and when this would be provided. These risks were seen as more significant due to Liverpool Heart and Chest Hospital's current breaching of referral to treatment waiting times (RTT) specifically in relation to cardiac surgery.

115. Under the proposals LHCH will form a joint level 1 centre with Alder Hey. NHS England accepts the panel's recommendations that Alder Hey would therefore need to act as the senior partner in the transition of Level 1 services from CMFT to Liverpool Heart and Chest in order to provide assurance for the continuation of the service at CMFT and support LHCH in the development of its service.
116. Managing the risk of this change will require close working between CMFT, Alder Hey Children's Hospital and Liverpool Heart and Chest Hospital to ensure that they have a clear understanding of the activity LHCH will be required to undertake and the systems, facilities, staffing and capacity needed to manage this activity.
117. NHS England recognises that it will have an important role to play in supporting implementation if the proposals are agreed. This is described in more detail in section 3.7 below.

2.2.4.8 Newcastle Hospitals

118. No significant increase in surgical activity is expected at Newcastle as a result of the proposals. The impact on Newcastle will therefore be minimal.
119. While noting that this meant that proposals posed a minimal risk at Newcastle, the panel considered that real risks did arise because Newcastle does not meet the 2016 activity requirement and is unlikely to be able to meet the 2021 activity requirement. It also does not meet the 2019 paediatric co-location requirements or have a realistic plan to do so by April 2019.
120. The panel considered that if Newcastle could not meet the standards, a clear plan would be needed either to move the advanced heart failure service, or deliver it under a different model. A phased, planned transition supported by the Newcastle team would be required if the service needed to move. This would minimise the risks.
121. The panel also considered that succession planning would be an issue for the service in Newcastle.
122. NHS England notes the panel's concerns. However Newcastle has a unique role in delivering care for CHD patients with advanced heart failure including heart transplant and bridge to transplant and that this could not be replaced in the short term without a negative effect on patients. On balance therefore our present view is that it is better to continue to commission level 1 CHD services from Newcastle.

123. This does not mean that change at Newcastle Hospitals NHS Foundation Trust will not happen in the longer-term. The hospital trust is required to meet the standards in the same way as all of the other Level 1 surgical centres. Timeframes for doing this may differ, but we will be working closely with the hospital to ensure that patients receiving CHD care at Newcastle Hospitals NHS Foundation Trust are not compromised in any way.
124. NHS England notes the panel's recommendation that these shortfalls could not be ignored and that if there was to be derogation, the issues needed to be resolved by the end of the period of derogation. If this proposal is implemented we will work with Newcastle to ensure progress is made towards meeting the standards and to ensure the service is sustainable and resilient. We will take expert advice on the best possible development plans; and mitigations in the circumstances and support their implementation. These arrangements will be time limited and subject to further review by 2021.
125. The panel recommended that NHS England would need to undertake specific work on the future of advanced heart failure services in England, to ensure their ongoing provision and resilience. If this were to result in the development of an alternative model for advanced heart failure services for CHD patients then a review of the long term future of Level 1 CHD services in Newcastle would also be enabled.
126. NHS England notes the panel's recommendation that there should be a review of the future of advanced heart failure services in England. If our proposals are agreed, this recommendation will be further considered.
127. NHS England recognises that it will have an important role to play in supporting implementation if the proposals are agreed. This is described in more detail in section 3.7 below.

2.2.4.9 University Hospitals Birmingham

128. The proposals are likely to result in increased activity at University Hospitals Birmingham (UHB). The number of patients involved is relatively modest although this represents a 40% increase in activity for UHB.
129. University Hospitals Birmingham (UHB) is confident of their ability to increase their capacity sufficiently to provide the extra activity required under these proposals. The panel considered that UHB had provided good evidence of having understood the scale of what would be required of them and of their plans to increase capacity.
130. The panel did not consider that there was any significant risk associated with UHB absorbing this additional activity.

131. Due to the size of its overall adult cardiac service including ITU provision the level of activity it would absorb as a result of the proposed changes is not considered to be significant, and the panel was therefore confident that any transition of activity would be able to be undertaken in a timely manner.

2.2.4.10 University Hospitals Bristol

132. No significant increase in surgical activity is expected at Bristol as a result of the proposals. The impact on Bristol will therefore be minimal.

2.2.4.11 University Hospital Southampton

133. The modelling of patient flows which NHS England produced did not envisage significant activity flowing to Southampton as a result of these proposals.
134. The proposals are likely to result in increased activity at Southampton. The number of patients involved is relatively modest and represents a small proportional increase in activity for Southampton of 5%.
135. Southampton is confident of their ability to increase its capacity sufficiently to provide the extra activity required by the standards.
136. The panel did not consider that there was any significant risk associated with Southampton absorbing this additional activity.
137. The panel considered that it had provided good evidence of having understood the scale of what would be required and of its plans to increase capacity. Work is already underway to expand PICU.

2.2.5 Conclusion

138. The panel considered that centres that would gain more patients if the proposals were to be implemented were well placed to be able to expand their capacity to be able to provide that care.
139. All the centres which would gain additional activity under the proposals indicated that they were able to increase capacity in order to meet this increased demand.
140. Detailed planning of the changes and an appropriate implementation timetable were considered important for effective management of the changes needed.
141. The recruitment of the necessary workforce for this increased activity was seen as potentially challenging for a number of these centres. Specifically, the recruitment of the PICU nurses necessary for the additional beds which would be required. The centres gaining significant activity believed that although challenging they had a good record of recruiting staff and would be able to recruit the necessary staff as long as they were given sufficient time prior to these proposals being implemented.

142. All centres are confident of their ability to provide high quality CHD services to these additional patients and the risks which remain largely relate to ensuring that sufficient lead in time is given to any changes and that the detailed work of understanding the precise nature of any changes and thus the specific requirements on these centres has been undertaken prior to these proposals being implemented.
143. A higher level of support will be needed for the changes proposed at Liverpool Heart and Chest, Barts and for Newcastle as it works towards meeting the standards.
144. NHS England recognises that it will have an important role to play in supporting implementation if the proposals are agreed. This is described in more detail in section 3.7 below.

3 Response to National Panel recommendations

145. The national panel made a number of recommendations to NHS England. Most relate to the planning and preparation for change if a decision is taken to implement the proposals.

3.1 Workforce

146. NHS England recognises the importance of employing Trusts supporting current staff during a period of uncertainty.
147. Sufficient experienced staff within the service is vital key to good patient outcomes across the care pathway and therefore were these proposals to be implemented significant work would be required to ensure every effort was made to retain experienced staff, and ensure that every Level 1 centre maintained a highly skilled and experienced workforce.
148. NHS England would support TUPE and/or COSOP arrangements to enable staff affected by change to transfer their employment to other Level 1 centres requiring their skills.
149. A priority will be the development of a framework across organisations to ensure the best possible outcome for staff. The national panel advised that all units are resourceful and where there is a shortfall in the staff available they were confident they will continue to find ways to recruit the necessary staff, including international recruitment where necessary.

3.2 The resilience of surgical teams

150. NHS England accepts the panel's recommendation that if the proposals are implemented, each centre's implementation planning must ensure that appropriately robust surgical teams are in place with clear succession plans.

3.3 Managing patient flows

151. We have modelled the way in which patient flows may change if the proposals are implemented. The modelling assumes that a patient will go to their next nearest centre, calculated as car journey time. The results of this modelling are intended as a guide rather than an exact representation of what will happen.
152. During planning and preparation for implementation, NHS England recognises that further modelling may be required to explore different assumptions, for example if CHD referrals align with referrals for other specialised paediatric services.

3.4 Communication

153. NHS England will continue to offer open communication on its work on CHD services, seeking to support patients in understanding the proposals, the staged approach to meeting the standards and the timetable for implementation if the proposals are agreed.

3.5 PICU and ECMO

154. NHS England notes the panel's support for the national paediatric critical care and children's surgery review. This review will consider the overall requirement for PICU beds in future across the country and for all patient groups, the appropriate model of children's ECMO provision and the appropriate number of providers, the case for minimum activity levels and the appropriate number of mobile ECMO providers.

3.6 Advanced heart failure

155. NHS England acknowledges the panel's recommendation that NHS England should undertake specific work on the future of advanced heart failure services in England.
156. If our proposals are agreed, this recommendation will be further considered.

3.7 Support

157. NHS England accepts the panel's recommendation that, if our proposals are implemented, centres will need to collaborate to ensure close working between centres to support the safe transition of services. The changes proposed will take some time to implement.
158. NHS England remains committed to promoting collaborative working and will continue to work with providers to facilitate these conversations, including the development of network protocols.
159. In addition to this, once final decisions have been made, NHS England will make money available to pump prime the formation of networks, in line with the approach to other Operational Delivery Networks for specialised services.
160. If a decision to move services is made, work would begin to turn those 'agreements in principle' into firm plans. Clinicians at all the affected centres will be involved in developing plans for how the service would work in the future.
161. NHS England recognises that it will have an important role to play in supporting implementation if the proposals are agreed.
162. The current CHD Implementation and Commissioning Programme Board will oversee implementation. Membership of the group will be reviewed and refreshed to reflect the different nature of the implementation challenge. This would allow the inclusion of representatives from affected provider organisations if appropriate. The programme board reports to the national Specialised Commissioning Oversight Group (SCOG) which in turn reports to the Specialised Services Commissioning Committee, a sub-committee of the NHS England Board.
163. The work will continue to be supported by a national programme team with programme management, communications and engagement, information and analytical capabilities. The programme will continue to receive dedicated resources, as part of the national specialised commissioning programme budget.
164. The programme board will continue to identify and manage risks and escalate these to SCOG in line with organisational policy.
165. The programme board will oversee the implementation process to make sure that:
 - the process is carried out carefully and thoroughly;

- there is a strong link between the plans of those hospitals that would cease to provide level 1 services and those hospitals that would expand their provision;
 - that no change happens until there is enough capacity at the new hospital, including overnight accommodation and other facilities for families;
 - that staff and patient representatives from the hospitals concerned are included in the planning process;
 - there is frequent and clear communication so that everyone knows what to expect and how it will affect them; and
 - service quality and waiting times are closely monitored and managed.
166. NHS England's regional teams are represented on the programme board either by the Regional Director for Specialised Commissioning or the Regional Clinical Director for Specialised Commissioning.
167. Regional teams will continue to manage NHS England's relationships with the affected hospitals. This will include working closely with providers to support the development of:
- Locally appropriate care model including consideration of the role of level 2 care
 - Capacity planning and development
 - Transition planning
 - Implementation of 'staff affected by change' policies across affected organisations including action to minimise redundancies; there will be no reduction in the number of specialist staff required to deliver services
 - Workforce planning and development
 - Staff communication plans
 - Patient communication plans
 - Local media management
168. Patients and their families have told us that changes to where their care is provided and to the staff providing their care can be unsettling, so we will ask the hospitals involved to look carefully at how this process is managed if our proposals are implemented. We think the pattern set out in the standards for transition from children's to adult services may be helpful as this offers an opportunity to visit the new centre and meet the new staff in advance of the change happening. We will also ask them to maximise continuity in care so that as much as possible can remain familiar. If level 2 care continues to be provided at hospitals that no longer provide level 1 services many aspects of patient care will continue as before and patients would experience a high degree of continuity.

169. We will ask for special attention to be paid to people with learning disabilities and their families because we know that change can be particularly difficult for this group.
170. All providers of CHD care are contractually required to meet NHS England's service standards by the CHD service specifications (Paediatric Cardiac E05/S/a and Adult CHD E05/S/b). Where a provider did not meet one or more of the standards, but we considered that they would be able to in future, we have agreed with them an improvement plan with an agreed timetable, and this plan has been made binding through a contract variation. Delivery against these plans will be monitored by commissioners in regular performance management meetings. The NHS England CHD Programme Board will receive regular reports of delivery against plan in order to ensure that there is a national understanding of progress.

3.8 Level 2 services and the impact of the end of Commissioning through Evaluation for Patent Foramen Ovale (PFO)

171. Following the end of Commissioning through Evaluation for PFO closures we will monitor interventional activity at Brighton and Oxford to determine whether these centres are able to continue performing these procedures.
172. If these centres are not able to perform ASD catheter closures they may still choose to provide level 2 CHD services in the same way as Norfolk and Norwich Hospital.

4 Part Two: Further assessment against the standards

4.1 Introduction

173. NHS England's initial assessment of compliance against the specifications and standards focussed on the standards that came into effect in April 2016.
174. Where the panel considered that the evidence did not show that providers met the 2016 standards their assessment also took account whether providers were likely to be able to meet the elements of the interdependency/co-location requirements that come into effect in 2019 or the surgical standards that come into effect in 2021.
175. NHS England has always been clear that the implementation date specified by the standard does not indicate that NHS England will not consider whether the standard has been met until this time. On the contrary, NHS England will require hospitals either to show that they meet the required standards at the go-live date or that they have robust plans in place to do so, where necessary supported by appropriate mitigations to deal with the shortfall in the interim.⁴ In addition, our letters to providers at the start of the self-assessment process clearly stated that if a provider does not meet the specification and is unlikely to be able to do so, we would need to discuss future service provisions.
176. However, as we had not explicitly asked providers about their plans to comply with these future standards we wrote to the Royal Brompton and UHL and offered them the opportunity to submit additional information to the National Panel on their ability to meet these requirements.
177. Assessment of the additional information submitted by UHL and the Royal Brompton in respect of standards with a future implementation date was undertaken by the national panel at the same time as the Impact Assessment.

4.1.1 Paediatric interdependency requirements

178. The standards state that by 2019 the following specialties or facilities must be located on the same hospital site as Specialist Children's Surgical Centres. They must function as part of the multidisciplinary team. In addition, consultants from the following services must be able to provide emergency bedside care (call to bedside within 30 minutes).
- Paediatric Cardiology;
 - Paediatric Airway Team capable of complex airway management (composition of the team will vary between institutions);

⁴ <https://www.england.nhs.uk/wp-content/uploads/2015/07/Item-4-CHD-Report.pdf>

- Paediatric Intensive Care Unit (PICU);
- High Dependency beds;
- Specialised paediatric cardiac anaesthesia;
- Perioperative extracorporeal life support (Non-nationally designated extracorporeal membrane oxygenation (ECMO));
- Paediatric Surgery;
- Paediatric Nephrology/Renal Replacement Therapy;
- Paediatric Gastroenterology.

4.1.2 Surgeon minimum activity levels and surgical team size

179. The standards state that congenital cardiac surgeons must be the primary operator in a minimum of 125 congenital heart operations per year (in adults and/or paediatrics), averaged over a three-year period. Only auditable cases may be counted, as defined by submission to the National Institute for Cardiovascular Outcomes (NICOR). They must work in teams of three by April 2016 and teams of four by April 2021.

4.2 University Hospitals Leicester (UHL)

4.2.1 Paediatric interdependency requirements

180. UHL stated that all paediatric specialist services, including paediatric cardiac services, will be co-located at Leicester Royal Infirmary by 2019 and they will therefore be fully compliant with the co-location requirements. This plan no longer depends on the building of a new children's hospital.
181. The panel considered that UHL's proposal to move paediatric cardiac Level 1 services to the Infirmary site would allow it to achieve full compliance with the requirements. However, the panel considered that UHL needed to set out their plans in more detail to be fully reassuring that this move could and would be achieved by the required deadline.
182. UHL provided assurances that the project will not require external capital funding, as it will be funded using a combination of the Trust's Capital Resource Limit and charitable donations. It will be designed as part of (but is not dependent upon) the wider Children's Hospital Project, to ensure the integration of paediatric services to create a defined Children's Hospital in Leicester.

4.2.2 Surgeon minimum activity levels and surgical team size

183. UHL's surgical activity in 15/16 was 326 procedures. 16/17 activity data was not available to the panel.

184. UHL submitted a surgical growth plan which they consider would result in them achieving the minimum level of activity required to ensure four surgeons are each able to perform a minimum of 125 procedures per year by 2021.
185. The projected increase in activity depends on population growth, technical advances, and changes to patient flows. NHS England has repeatedly stated that it has no intention of mandating patient flows and as such the panel remained unconvinced that the changes to patient flow required to achieve the necessary growth are likely to occur.
186. UHL reported that they have successfully established a complete lifetime referral pathway with Kettering General Hospital and had positive discussions with two other network hospitals to establish lifetime referral pathways. UHL suggested additional surgical cases from these partners as demonstrated in the table below:

Table 4: UHL estimated additional future referrals

Year	Partner 1	Partner 2	Partner 3
2016/17	0	0	0
2017/18	4	6	4
2018/19	8	11	7
2019/20	11	17	11
2020/21	15	22	14

187. To date these arrangements have not been established and as such UHL do not expect to see any additional activity from these until 2017/18.
188. UHL did not provide any evidence of formal agreements having been established or any basis for its assertions over the amount of additional activity they would receive from these networks.
189. The changes to referral pathways described by UHL were not considered sufficient to bring about the level of growth required for them to meet the 2021 requirements. In order for these requirements to be met their activity would need to increase by 53% from 2015/16 levels in five years, when the previous five years have only resulted in a total growth of 24%.
190. Applying national predicted growth rates to UHL surgical activity, and factoring in the additional referrals cited above (though evidence for these has not been provided) NHS England has estimated that UHL's surgical activity in 2020/21 will be more than 20% below the minimum requirement of 500 operations and 4 surgeons. As a result, some if not all surgeons would be undertaking fewer than the minimum of 125 cases per surgeon per year.
191. UHL's growth estimate assumes growth will continue at the rate seen at UHL between 2014 and 2016 as well as technical advances and changes in its

network. The basis for these assumptions and their impact within UHL's modelling is not well explained

192. The panel considered it likely that UHL would reach activity levels sufficient to support a team of three surgeons each undertaking 125 operations per year but that it was not clear when this would happen. The Trust's own most recent estimate was that this would be achieved by 2017/18.
193. The panel considered that UHL had not provided sufficient evidence to provide confidence that it would achieve the minimum surgical activity requirements by 2021.

4.2.3 Summary

194. Following the Trust's latest submission the panel considered that:
- UHL had demonstrated that it could meet the April 2019 co-location requirement though more detailed plans were required to be fully reassuring;
 - UHL had not demonstrated that it met the April 2016 requirement of three surgeons each performing a minimum of 125 procedures per year;
 - While UHL had not provided sufficient information to know when the April 2016 requirement would be met, it was likely that this requirement would be met; and
 - UHL had not set out a convincing plan as to how they will meet the April 2021 requirements of four surgeons each performing a minimum of 125 procedures per year.
195. NHS England accepted this assessment.

4.3 Royal Brompton Hospital (RBH)

4.3.1 Paediatric interdependency requirements

196. RBH has previously demonstrated that it meets all of the co-location requirements with the exception of paediatric surgery and gastroenterology.
197. RBH did not provide any additional information or evidence as to how they plan to meet the 2019 requirements to co-locate their paediatric CHD service with other key specialties.
198. They stated that although they do not have paediatric surgery or paediatric gastroenterology co-located on site they provide these services through their partnership with Chelsea and Westminster who participate in MDTs and ward rounds and provide out of hours cover as required.

199. RBH stated that it did not consider that 2019 requirements should be a part of this assessment process or that decisions should be made on the basis of these.

4.3.2 Summary

200. Following the Trust's latest submission the panel considered that:

- RBH had not demonstrated that it could meet the April 2019 co-location requirement for paediatric gastroenterology or paediatric surgery

201. NHS England accepted this assessment.

5 Conclusion

202. The panel did not consider that any of the potential impacts or risks identified through this process was sufficient to require the proposals to be altered.

203. The panel was confident that those centres required to provide additional Level 1 services were these proposals to be implemented would be able to provide sufficient capacity for this.

204. The panel concluded that the additional evidence submitted did not alter their original assessment of the three trusts (CMFT – Red; UHL – Red/Amber; RBH – Red/Amber).

205. The panel considered that while the proposals would have a material impact on the trusts no longer providing Level 1 services, especially the Royal Brompton and Leicester, it did not consider it to be likely that these would be sufficient to threaten either their continued viability or their continued ability to provide a wide range of specialised services.

6 Next steps

206. This is a high level impact assessment intended to identify the risks associated with the proposals as they currently are and test the plausibility of the proposals, to inform NHS England's assurance processes prior to the launch of public consultation. Whilst there remain a number of unknowns relating to the implementation of these proposals as well as a number of risks which will require managing, there is nothing highlighted within this document which seems likely to make the proposals unviable.

207. No commissioning decisions have yet been made, as the public consultation is pending and therefore it is not appropriate to produce a detailed implementation plan at this stage. This will be produced once decisions have been taken by the

Board of NHS England, following the completion of public consultation. Throughout the consultation period and beyond we will continue to work with providers to understand the impact of the changes which are being proposed and refine the impact assessment we have completed to date.