

## CDS PATHOLOGY PROGRAMME BOARD REPORT

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## 1.0 INTRODUCTION

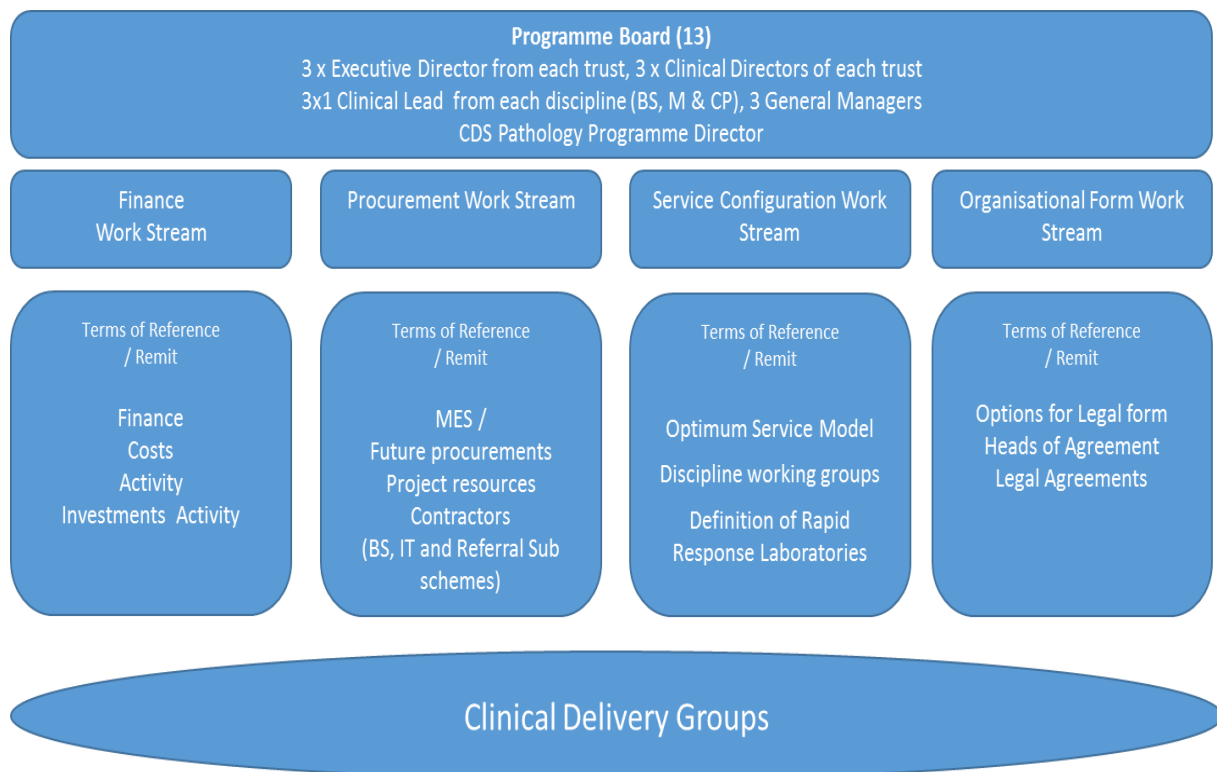
- In 2014 Sherwood Forest Hospitals NHS Foundation Trust, Derby Teaching Hospitals NHS Foundation Trust and Chesterfield Royal Hospitals NHS Foundation Trust signed a Memorandum of Understanding (MOU) to develop a provider collaboration which would accrue significant benefits to the three Trusts delivering a shared pathology service.
- The three organisations agreed that there were phases of the benefits that such an approach could bring:
  1. Ensuring we can deliver the most clinically and cost effective model for the current pathology provision, by harnessing the best approach to working across the three sites, and by leveraging their collective influence and market power with suppliers.
  2. Building a pathology service for the future, by ensuring that they have right scale to maximise both clinical and cost-effectiveness benefits, working alongside other partners in the East Midlands pathology community, to optimise the benefits from emergent technology, including improved pathology testing and improved clinical decision support.
  3. Increase resilience and flexibility in the provision of pathology services within the network.
- CDS Pathology planned to produce a position statement for November 2015 which is the subject of this paper.
- The programme is planning to produce a full options appraisal document to assess the options for the provision of pathology services for January 2016.
- It is the ambition of the programme to start developing operational implementation plans from January 2016.

MEMBERS OF THE BOARD ARE ASKED TO NOTE THE FACTS IN THIS REPORT AND:

- SUPPORT THE DIRECTION OF TRAVEL TOWARDS GREATER INTEGRATION OF PATHOLOGY SERVICES IN ORDER TO DELIVER CLINICAL AND COST-EFFECTIVENESS BENEFITS.
- APPROVE FOR THE PROGRAMME MANAGEMENT TO PROCEED TO DEVELOP AN OPTIONS APPRAISAL REPORT WITH IN DEPTH MODELLING OF FINAL OPTIONS FOR THE FUTURE PROVISION OF A SINGLE MANAGED PATHOLOGY SERVICES.

## 2.0 PROGRAMME STRUCTURE

The diagram below illustrates the CDS pathology programme governance and work breakdown structure.



- The finance workstream is focused on ensuring that the activity, income and costs are accounted for in a consistent manner between the three partners and that the modelling used is robust and enables different options to be assessed. Work is also underway to start considering repatriating work currently referred to outside the area (mainly Sheffield and Nottingham) to Derby.
- The procurement workstream is focussed on exploring the opportunities of progressively migrating and/or merging our approaches to procurement of consumables and equipment. There has also been the opportunity to align short term procurement efforts such as in joint procurement of a blood sciences platform (Chesterfield and Sherwood Forest) as well as the procurement of a joint LIMS (Lab Information Management System) for the three sites.
- The service configuration workstream is focussed on the engagement of clinicians in the discussions on the development of the clinical service model options. The programme has also developed with clinicians assessment criteria, weighting of the assessment criteria and scored service delivery model options for the non-financial appraisal element of the case for change.
- The organisation form workstream is focused on considering the organisational implications of the partnership.

### 3.0 SCOPE OF WORK

- The services included in the scope of the programme are:
  - Clinical blood sciences including blood transfusion
  - Microbiology, including virology, bacteriology, mycology
  - Community phlebotomy
  - Pathology transport Services / GP practice logistics
  - Cellular pathology
  
- The combined annual cost of the three laboratories is circa £44.3M (based on 2014-15) and is split between the three partners as follows,
  - Derby £21.9M
  - Sherwood Forest £11.5M
  - Chesterfield £10.9M
  
- The combined annual activity of the three laboratories is circa 19.1 million tests per year (based on 2014-15) and is split between the three partners as follows,
  - Derby 9.5 million tests per annum.
  - Sherwood Forest 5.0 million tests per annum.
  - Chesterfield 4.6 million tests per annum.
  
- The three main disciplines in pathology services are blood sciences, microbiology and cellular pathology. The combined spend for financial year 2014/15 for the three labs by discipline was:
  - Blood Sciences: £23.9M (Derby £10.4M, Sherwood £7.6M & Chesterfield £5.9M).
  - Microbiology: £8.9M (Derby £3.8M, Chesterfield £2.8M, and Sherwood Forest £2.3M).
  - Cellular pathology: £11.5M (Derby £7.7M, Chesterfield £2.2M, and Sherwood £1.6M).

### 4.0 NOT IN SCOPE

The services not included in the scope of the programme are:

- Infection control

- Bereavement services

It should also be noted that Cellular pathology services in Chesterfield are the subject of parallel discussions with Sheffield and Sherwood Forest cellular pathology services are the subject of parallel discussions with Nottingham with the view of exploring opportunities of working together.

## 5.0 SERVICE DELIVERY OPTIONS TO BE CONSIDERED

- **Option 1: Do Nothing.** Services in three labs remain as they are now.
- **Option 2: Distributed Hub model.** Each Trust maintains its own laboratory on site but agrees to redistribute work to reduce duplication of provision, utilise capacity and, through a greater economy or scale, procure the reagents and consumables to gain some efficiencies. In effect there are no staff benefits to be modelled because the re-distribution of activity will not result in any net change of staffing requirements.

### Central Services and Essential Services Laboratories (CSL and ESL) options

Central Services Laboratory (CSL) is a Laboratory that will receive and manage all non-urgent work from the other network locations. This will include all direct access work, and hospital based work that does not fall within the less than 4 hours clinical need. Essential Services Laboratory (ESL) is a Laboratory that will manage all site-based acute Blood Sciences activity that demands a turn-around time of less than 4 hours. This will be limited to In-patient and A&E activity, unless clinical need dictates otherwise.

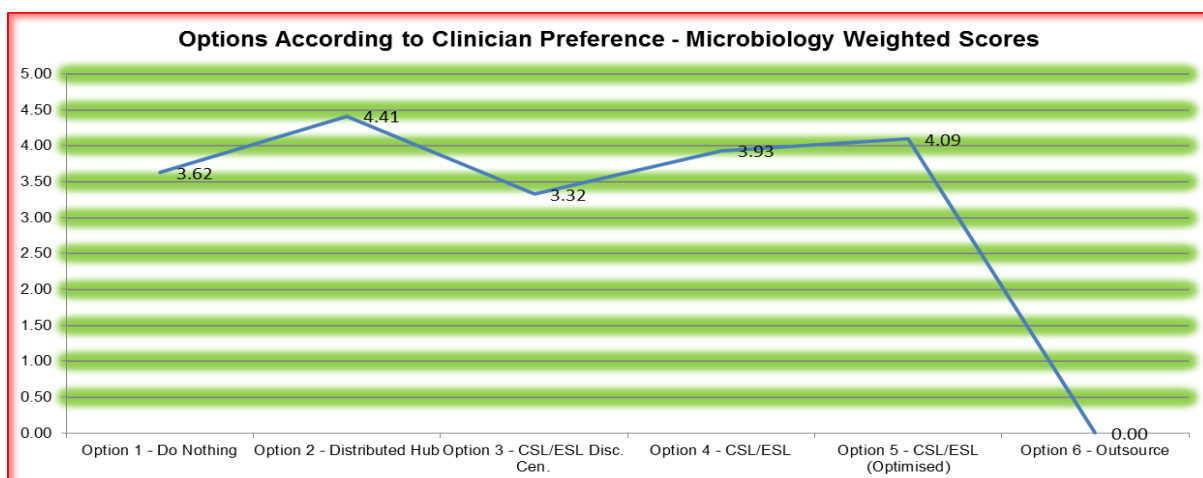
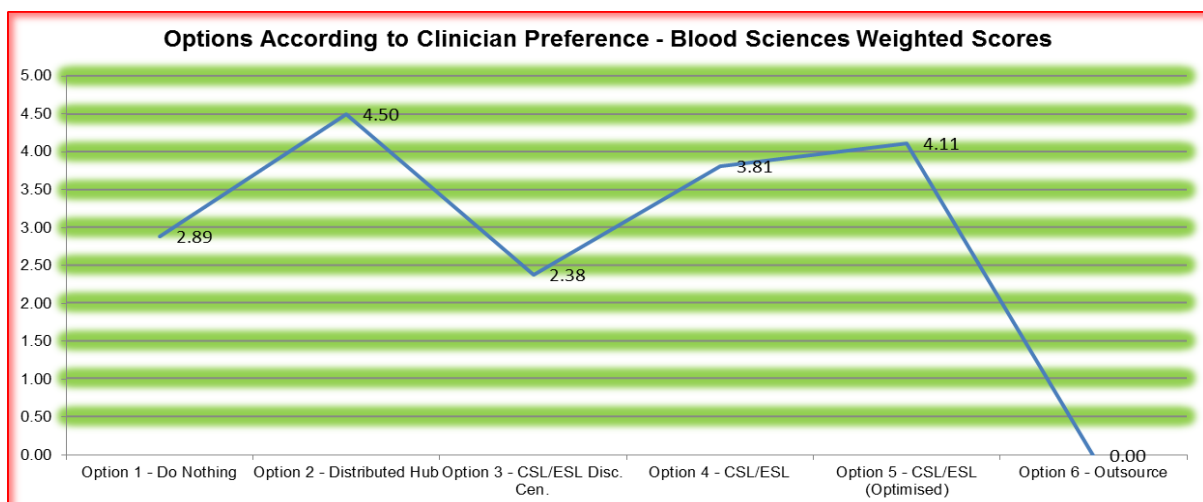
Options 3, 4 and 5 are in effect a CSL and ESL models with decreasing degrees of integration.

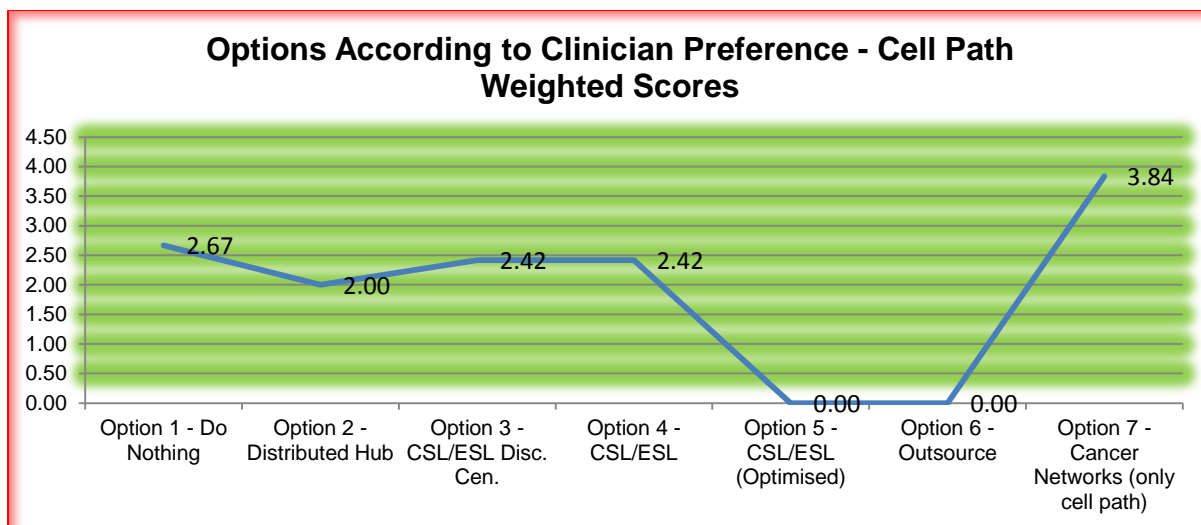
- **Option 3: Central Services Laboratory and Essential Services Laboratory (CSL and ESL) - Discipline Centralisation.** Option 3 includes in ESLs only blood sciences services for inpatients and emergency work. In this option the CSL will have blood sciences and microbiology completely consolidated in one site. This option represents the maximum degree of integration.
- **Option 4: Central Services and Essential Services Laboratories.** Similar to option 3 above but in this alternative the ESLs, include also certain additional blood sciences, cell path and microbiology activities as defined by the Clinical Delivery Groups (CDGs). This option represents the intermediate level of integration of a CSL and ESL model.
- **Option 5: CSL and ESL – Optimised ESL Platforms.** Similar to option 4 above but maximising the use of platforms in each ESL rather than sticking to the less than 4 hour turnaround rule as a criterion for sending to CSL. This option represents the minimum degree of integration within the CSL and ESL models.
- **Option 6: Outsource.** We seek alternative providers to all pathology services requirements.

## 6.0 CLINICAL PREFERENCES

- The CDS pathology programme has engaged in sessions with clinicians (divided in Clinical Delivery Groups (CDGs) by pathology subspecialty (blood sciences, microbiology and cellular pathology)).
- The objectives of these sessions were to develop criteria for a non-financial options appraisal (as the financial model was not available to be included in discussions), weighting of the criteria and assessment of the service delivery models. The groups also engaged in discussions about defining in more detail what different service delivery models would mean for the provision of services.

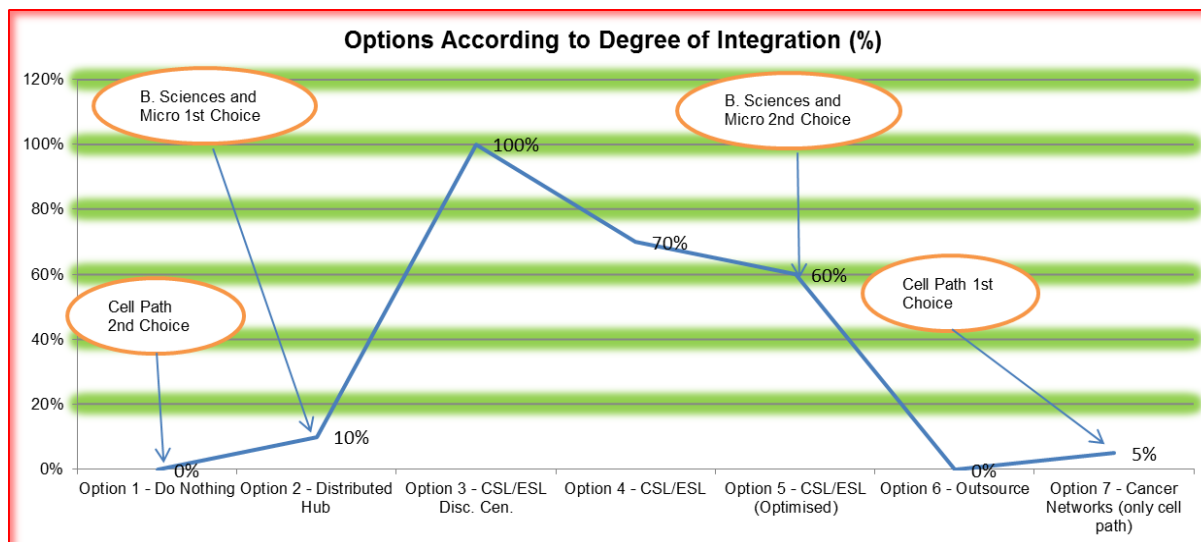
The outcome of those discussions and the clinical delivery groups preferences are summarised below:





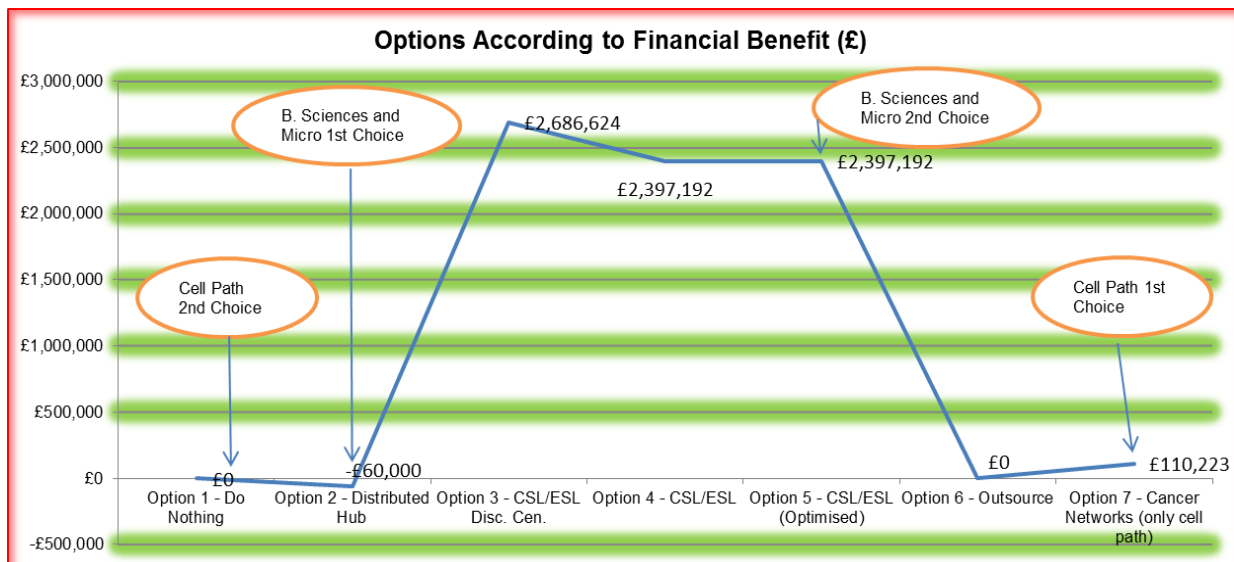
- Blood sciences and microbiology CDGs coincide in their preferences for a distributed hub model as first choice and the Optimised Essential Services Laboratory (ESL) and Central Services Laboratory (CSL) as second choice (option 5).
- For cellular pathology, their preferences lie in the “cancer networks” option with the “do nothing” coming out second. Their third preference is equal between the ESL and CSL (option 4) and a discipline centralisation (option 3).

The graph below summarises the clinician’s preferences against the degrees of consolidation (stated in % of consolidation) implied by each option:





The clinician’s preferences are not aligned to the greatest savings opportunity which are summarised in the following diagram. It is intended that the financial modelling work, which was not available at the time of the initial discussions, is to be made available for consideration.



## 7.0 OPPORTUNITY

The CDS pathology programme has developed a finance model that allows for each of the options to be assessed in terms of the potential savings. The table below summarises the potential savings of the service delivery model options:

### CDS Pathology Programme - Summary of Options

Option	Description	End State Revenue Savings (£)
1	Do Nothing	0
2	Distributed Hub	-60,000
3	CSL/ESL Discipline Centralisation	2,686,624
4	CSL/ESL	2,397,192
5	CSL/ESL (Optimised)	2,397,192
6	Outsource	NA

NA = Not applicable

- Option 3 provides the greatest cost saving opportunity and it is the option that implies the higher degree of integration of blood sciences, microbiology and cell path services from the three labs.
- The costs associated with implementing these solutions has still to be determined as part of the development of the full business case.

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- The modelling has assessed impact on potential cost reductions. It does not assess the potential increase in income derived from a consolidated network, bidding for additional work.
- Options 4 and 5 have a similar financial savings impact as the model is not sensitive enough to pick up small differences in alternatives, especially when the difference in the degree of integration between the 2 options is very little.
- The figures show the financial impact of options for blood sciences and microbiology services only.
- The model assumes:  
Option 3:
  - 50% split of activity between CSL and ESL for blood sciences
  - 100% centralisation of microbiology activity in hub (Option 3 only)
  - 40% CSL activity and 60% ESL activity of microbiology (Option 4 and 5).
  - CSL based on productivity at South West London
  - ESL based on current productivity
  - 5% efficiencies in pathology general non discipline specific staff
  - 10% efficiencies Non pay
- The inclusion of Cellular Pathology would impact on current arrangements and discussions between Chesterfield and Sheffield and Sherwood Forest and Nottingham.
- These options are in line with Lord Carter of Coles Review (2008). Carter argues there are financial and non-financial benefits to be gained through consolidating pathology services into networks. Quality and efficiency in the delivery of services are positively correlated to the degree of integration.
- Even with the assumption that quality should be a constant throughout the different options and their implied different degrees of integration, there is still the question as to how sustainable is this constant level of quality in the provision of services if the trusts choose the “do nothing” option.
- The modelling exercise undertaken showed that significant savings (upwards of £2.6M) could be achieved through the reconfiguration and consolidation of pathology services.
- All figures in the table above are indicative and will change as we change and refine assumptions. For the purpose of this paper these figures are initially saying that we have potentially a case to produce efficiencies while making quality sustainable if we move to a more integrated model of provision of pathology services. The figures included in the table are conservative.
- There is a higher risk of cell path benefits not materialising given the fact that most of cytology work for the network is already centralised in Derby. Because of this and to take a

conservative approach, the figures of potential savings in the table above include only the effects of consolidating blood sciences and microbiology.

## 8.0 CONCLUSIONS

- The options outlined in this paper are in line with the recommendations of the Lord Carter of Coles Review (2008).
- The case for consolidation is based on the activity and cost data the CDS pathology programme collected from the three partnering trusts.
- The modelling exercise undertaken showed that significant savings (upwards of £2.6M) could be achieved through the reconfiguration and consolidation of pathology services.
- There are benefits (financial and non-financial) considerable enough to merit further in depth modelling of options for future consolidation of a single managed pathology service provision among the three partner organisations.
- Further work is required with the clinical groups to develop their understanding of the financial consequences of their respective choices. There is an opportunity to explore further option 5 as it is the option that offers not only a degree of clinician backing but also meaningful financial rewards.

## 9.0 ADDITIONAL OPPORTUNITIES

There are additional opportunities for short term efficiencies derived from:

- It is estimated that diverting existing referred work to Derby could benefit partners financially in the very short term. Further work is needed to determine additional potential savings of jointly procuring the work that cannot be brought in area.
- Joint procurement of laboratory information management system for the three sites (LIMS).
- Joint procurement of blood sciences platform (Sherwood Forest and Chesterfield).
- The joint procurement exercises will not only bring efficiencies in relation to what the three trusts are currently spending but also are a very good initial step to working together with the view of a consolidated single managed pathology services in the future

## 10.0 RECOMMENDATIONS

- There is an opportunity to explore further in depth option 5 as it offers not only clinician backing but also considerable financial rewards.
- With this vision in mind it is possible to adopt an incremental approach to integration.
- Possibly a higher degree of integration could be deemed convenient if initial steps are successful (options 3, 4).

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- A unified management approach will support joint working.
- There are enough elements that support the development of an options appraisal report with in depth modelling of final options that will back a transformational journey of improving the future provision of a single managed pathology services.
- There are many benefits of establishing a collaborative network. Pathology services face a rapidly changing technology (especially blood sciences and microbiology). The investments required might not be afforded by labs operating at a smaller scale. A joint approach to afford the investments required seems the most sensible way forward.
- The sustainability of current level of services and quality is at the centre of this joint approach.
- The partners see the formation of this network as the beginning of a process of progressively more integrated and joint working that will deliver resilience, sustainability and an increasing level of quality of service.
- The partners expect to put in place a service delivery model flexible enough to be able to cope with changes that the future will bring.

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