Public Health England

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External review of quality assurance for NHS screening programmes
An independent report by
Professor Chris Bentley FRCP FFPH

January 2015

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Executive Summary

The process of screening to help protect and improve population health has a number of important and unique features. Programmes are only approved by the UK National Screening Committee (NSC) after meeting a set of very specific criteria. To achieve approval, the programmes need to be able to demonstrate the potential to deliver more good than harm at reasonable cost. However, in implementation, achieving this will be dependent on consistent achievement of agreed thresholds of sensitivity and specificity.

Because of these special programme characteristics, national screening programmes approved by UK NSC have from the outset been launched in conjunction with a process of external quality assurance (QA).

*"*Quality assurance has a focus on risk reduction and minimising harm to **very large populations**. There is an ethical issue within screening, different from routine health services, as we are **inviting people** into the system **who believe they are healthy**. This places an additional requirement on us to ensure screening programmes are not only of the highest quality (in terms of positive impact) but also minimise harm". (QA directors 2014)

Towards a consistent approach

This review, which visited all of the screening QA programmes, identified much variation in the working between teams. The origins of the observed differences are broadly threefold:

- differences between cancer and non-cancer screening QA
- differences between individual screening programmes
- differences between the same programme (mainly cancer), but delivered in different regions

It became clear in the early stages of the review that trying to capture more than a sample of variants in opinions, working relationships, organisational form, products and procedures would be a backward-looking exercise. Since the purpose of the review was to look at necessary function as the basis of moving forward, focus was placed on identifying common elements at the core of programmes on which to build a single service.

- organisational development, seeking to optimize effectiveness, efficiency and manageability of screening QA, might initially build a common language and culture, based on factors such as:
    - common understanding of unique selling points
    - common (generic) operational framework
    - common elements of an organisational model
    - common basis of working methods
    - addressing common concerns about governance issues
    - common barriers to best population impact

These issues are covered in the following sections of the report.

What is the screening QA function?

Interviews and surveys covering a large number of screening staff from all centres established that, while there were some variations at the margins, essentially there was a broad consensus on the characteristics of screening QA. Key features included:

- an unbiased, independent viewpoint
- 'critical friend' relationship with providers and commissioners
- comprehensive engagement across the whole screening pathway; breadth and depth
- leading reference point on screening issues, with credible, authoritative professional advice, and links to national authorities
- facilitating continuous quality improvement

These characteristics were largely endorsed by staff from other local organisations, particularly the screening and immunisation leads from NHS England although in some areas poor relationships were associated with more negative perspectives. In addition some recognised the QA work as an important detailed 'safety check' for commissioners, and that QA recommendations could provide important leverage for change with provider trusts.

However, it must be clear that the key role of screening QA is one of facilitatory improvement rather than regulation or performance management – these roles fall to others. This is critical as, where QA support and contribute to change, rather than just assess the need for change; they must not also be the sole official arbiters of its successful achievement.

A significant issue arose concerning who QA is for. Who is being 'assured'? Previously this was the population served, through the regional and district public health directors. However, this direct linkage now appears broken. Arrangements will need to be

clarified amongst DH, PHE and also NHS England, possibly together with the Local Government Association, so that the whole population view is maintained.

Core operational framework

Each screening programme is different owing to the fundamental nature of the testing and diagnostic procedures, as well as their developmental histories. However, the programmes do all consist of a series of components with common features. This is described here as a common operational framework, to form the basis of a common language and 'currency'. This enables identification of meaningful similarities and differences between programmes, and may become the basis of shared learning between them.

Such an operational framework, by defining core programme work, will distinguish this from additional activities, such as research, pilots and developmental work. This will help to focus on, and so safeguard core business capacity, and then help to ensure that additional activities are put on a proper business footing.

The common operational framework will also enable more objective assessment of core structures and processes, and support benchmarking effectiveness across QA programmes on a truly comparative basis, as part of the management of their own quality.

Common basis of an organisational model

Historically, the cancer QA reference centres (QARCs) have developed slightly different models depending on the area they cover, their leadership and resources. However, there is a common pattern to the models used. Non-cancer QA teams, with a more recent developmental history and a more common, nationally determined design, are similar to each other, but with some clear differences in structure and process to the QARCs.

However, when looking for possibilities to build bridges between the systems, there can be seen some commonality in the overall design of both variants. These are roughly captured in a simple model. Its four components are covered in sections 6–9.

Professional leadership and support

The knowledge, judgement and leadership of external professionals and technical experts are fundamental to the credibility and leverage of all external QA systems. For screening QA in England, two quite distinct systems are described, deployed in

different ways in cancer and non-cancer systems, and with differing specifications to their roles, although with some common elements.

The nature of the professional contribution is fundamental to the way the two models work, and it would not be possible to standardise to one approach in the short term, without dramatic disruptive change at local and national system levels.

However, by addressing the logical basis of the two systems, it may be possible to tailor approaches in the future in a mixed economy of solutions that cross the cancer/non-cancer divide.

Data and intelligence management

Data collation, analysis, and interpretation are critical for monitoring, risk management and achieving change. Some of the data required for quality assurance purposes can be distinct from, but inextricably linked to, the data systems needed to run screening programmes, and to performance manage them, eg, key performance indicators (KPIs). It is important to distinguish two distinct elements of data required for QA purposes:

- aggregated data to assure population-level indicators and outcomes
- linked person-level data to assure safe and effective systems

This review encountered widespread concerns about the barriers to efficient and effective data management for QA and performance management purposes. QA teams and others, particularly commissioners reliant on data/information handled by QA team, felt these concerns.

The fundamental nature of some of these problems to the safe and effective functioning of the QA process would merit use of a systems analysis approach to properly map out the necessary data flows across the systems. This would then provide the basis for supportive 'can do' approaches to planning within the regulations pertaining to data protection, sharing and information governance.

A range of 'bespoke' software systems across the QARCs provides solutions to particular components of QA work. Building on some of these will provide the opportunity to raise the specifications of systems more consistently on a national basis. At the same time, advancing technology should provide possibilities for processes such as patient data matching along pathways to be done more centrally and efficiently, freeing up local analysts for more interpretive work.

System engagement

All QA teams function within a complex environment of multiple providers, commissioners and regulators. In this context, they are largely independent while their influence relies mainly on forging strong relationships. Their place in the scheme of things is strengthened by inclusion within the 7a specifications covering commissioning of public health programmes by NHS England.

Local working arrangements, even for the same cancer programmes, have evolved with significant variation, and there has tended to be a blurring and confusion over some roles and responsibilities.

There is a strong appetite for clarification, and a case for nationally agreeing a generic working framework document (WFD) based on current specification, initially to cover joint working and interdependency between QA teams and NHS England screening teams. Using this generic document as the basis for local discussions and negotiations on practical ramifications should help to resolve uncertainties.

QA core team

At the centre of the components of the screening QA organisational model described lies a core team. This provides critical leadership, business and administrative management of complex multidisciplinary teams. Some of the constituent parts, eg, professional/technical membership and analytical capacity, are different in cancer and non-cancer teams. However, many of the core functions are essentially similar or the same (eg, cross-organisational relationship building/maintenance; logistics; reporting; connections into national programme structures).

It will be important to specify the key competencies needed in core QA teams. At present these are similar for cancer and non-cancer, but distributed differently across personnel, particularly the contribution of professional leads.

There is some concern from QA teams that QA structures and functions feel somewhat isolated from Public Health England (PHE) mainstream, and that QA may not be keeping up with developments in other parts of PHE.

The screening QA toolkit

In her interim report that preceded this review, Holdstock concluded that there was an "absence of a firm evidence base about the best methods of assuring quality in services" (Holdstock, November 2013). In this case it will be necessary for QA to use a range of approaches.

Interviews and surveys established that despite the differences in the screening programmes, QA teams use an established toolkit of methods. The components are broadly similar for cancer and non-cancer teams, but there is a different balance of use. Non-cancer teams put more emphasis on incident management and dissemination of learning, and on the multidisciplinary visits. For cancer, although visits are a significant feature, interpretation and use of data, and more day-to-day professional advice and support are a more substantial part of the workload.

Variations in the way teams use each of the tools have broadened the practical experience of their use, and provide learning about efficiency and effectiveness. However, in working towards the reality of a 'single service' for screening QA across the board, it will be important to develop more recognisable consistency in their use. For example, this has been an issue for some providers and commissioners, who have teams doing things differently with different programmes in the same provider trust.

There is significant scope for more standardisation, particularly in:

- risk assessment and management: using triangulation of a range of hard and soft data to risk assess programmes and, in aggregation, providers. This risk register can then be used to prioritise the way QA team resources are targeted to best overall effect. This system would run in parallel with formal NHS risk management systems, and they could work off each other
- multidisciplinary visits: generic guidance built on best practice could cover components such as desk reviews; organisation, preparation and conduct of visit; structure and quality of reports; recommendation protocol based on standards; quality of feedback; follow up on action plans. Some variation would be necessary by programme type, but within a recognisable 'branded' generic framework
- incident detection and management: during the review, a separate exercise was already under way, consulting on cross-programme guidance. In a single service it should be possible to pull together more common themes and lessons to learn if there is commonality of method. It was suggested during interviews that more energy should be devoted to 'designing out' problems, rather than having to repeatedly manage similar incidents
- networking, training and education: various forms of local network meetings, on a single or multidisciplinary basis are reportedly consistently well attended, and evaluate as very useful, particularly when there are links into national authorities. Some rationalisation on the basis of 'best value; best practice' may be possible

Links between programme development and QA

It became clear during this review the extent to which many core components of screening programmes have changed significantly on the basis of expanding evidence

base. This dynamic strategic and tactical improvement in the processes (and outcomes) over the years has involved substantial efforts to manage significant changes, rather than gently overseeing maturing delivery from a single initial blueprint. It is also clear what a substantial role cancer *and* non-cancer QA teams play in developing and supporting developmental changes, although the mechanism of that involvement is substantially different.

To some extent the developmental processes have not caught up with reorganisational changes, in particular, the separation of commissioning of public health programmes by NHS England on a mandate supported by the 7a specifications. It is realistic to expect that changes in standards or adjustments to methods, suggested by screening programmes/QA will need negotiation with the commissioning agency in case there will be resource consequences or opportunity costs. It will be important, in order to reduce current confusion and frustration amongst staff, that organisational forms and processes to achieve this are clarified (and possibly streamlined)... Organisational processes will most probably need to adjust to a clear 'commissioning cycle' applying to proposed changes.

Organisational governance

As moves are made to bring together cancer and non-cancer QA as a single service, teams continue to have concerns about perceived disparities in cancer/non-cancer systems in relation to:

- culture
- influence
- funding/resourcing

Bringing together (cancer) QA directors (QADs) and (non-cancer) regional QA leads (RQALs) as an integrated group with a national QA integration lead appears to be perceived by many QA staff to be an excellent move. It already appears to be having psychological and practical benefits for QA teams concerned to be clearer about future structures. There would now be benefit in producing a simple, conceptual organisational chart emphasising more balance between cancer and non-cancer systems.

The process towards achieving this would need to clarify some inter-relationships, particularly those involving national office (cancer prevention and screening) and the differential ongoing management of the operationalisation of non-cancer programmes by the NSC.

Stakeholder mapping would help to pinpoint internal teams with whom screening QA should have important links (eg, knowledge and intelligence teams (KITs);

communications) and raise awareness within QA teams, some of which currently feel isolated from the mainstream.

Population responsibilities

Although the screening QA programmes define their responsibilities as including the whole screening pathway, their focus is perceived to have become very NHS-focused, and to have lost some perspective on supporting communities to use services appropriately. This is necessary if screening is to function as a population health programme rather than a personal health programme for informed users. Otherwise, inequalities will tend to widen.

While the 7a specifications mention addressing problems of poor uptake and issues of equality in access and outcome, current structures and processes seem to have created barriers to links to other mechanisms, such as local needs assessment and community engagement. This has been accompanied by a relative decline in teams' knowledge of and skills in giving advice on possible actions – eg, to improve coverage among sections of the population.

PHE has the knowledge and resources to provide a focus for expertise in this area. There would appear to be no reason why the organisational basis of this focus should be different to professional co-ordination for other screening components, such as radiology and cytology. Drawing such a focal point together as an accessible 'front-end' to a range of organisational resources which might support improved uptake and coverage would appear potentially invaluable to engage and support QA practitioners. It would also be of value to other PHE staff such as those in PHE centres (PHE-C), and also to 'embedded' screening leads in NHS England local teams. PHE could also provide mechanisms to bring these staff together to establish how each could collaboratively contribute more consistently to help support improved population health outcomes.

1 Introduction

Purpose

1.1 From 1 April 2013, the cancer and non-cancer screening quality assurance teams became part of PHE. Historically they have worked independently. The transition into PHE provides an opportunity to reshape QA teams into a single strong and effective service and the health and wellbeing directorate's striding forward programme and the wider PHE strategic review provide the context for this review.

1.2 This report covers an external, independent review of the delivery of quality assurance services for all NHS screening programmes in England. The review contributes to part 1 of a three-phase programme, and ran in parallel with an internal component constituting a stocktake of services as part of a management review. The purpose of this external review was to examine the screening QA function, and is intended to provide the basis for consideration of future form, as part of phase 2. The short specification for the external review is given as Annexe 2.

1.3 Additional relevant rationale was provided in developing the case for the overall process of review (Holdstock, November 2013). This stated that taking a strategic approach to the consolidation and development of the QA process for all cancer and NHS screening programmes will:

- ensure the best use of resources within PHE
- promote a consistent approach to providers of all screening services
- enable an effective relationship with the changed commissioning landscape within the health service

Background and context

1.4 Historically cancer screening programmes have had a national QA function running alongside delivery of screening programmes, although the exact process for assuring quality has varied according to different arrangements within each of the NHS regions. The diabetes eye screening (DES) programme has had a single national QA function since 2008. QA functions for abdominal aortic aneurysm (AAA) and antenatal and newborn (ANNB) screening are under development within PHE.

1.5 From April 2013, the cancer and NHS screening programmes, regional coordinators and QA functions, moved into PHE. The UK National Screening

Secretariat is also hosted by PHE. As of April 2014, there are nine cancer QA organisational units for cancer screening, known as QA reference centres organised over 13 sites. There are four non-cancer QA organisational units organised at the PHE regional level and spread over nine sites. The teams for cancer and non-cancer QA in London are brought together under joint leadership.

1.6 Transition in the NHS has led to significant changes in roles and responsibilities in relation to maintaining and improving the quality of healthcare services. At the same time, there is a renewed focus on quality in the NHS, and combined with a period of significant change, this has added extra relevance at this time to the importance of defining what is meant by QA for screening, and how it is undertaken.

1.7 Other significant reorganisation has created PHE as a national public health service. It has been given the responsibility to operationalize public health policy, defined by the Department of Health (DH), on a national basis. In the case of public health programmes such as screening and immunisation, PHE works to support NHS England, who is responsible for implementing funded programmes as specified, through the commissioning processes.

1.8 The purpose of QA is to ensure that screening services operate within parameters defined by research that result in the best possible outcomes – maximising benefits and minimising harms. Screening is distinct from other healthcare services in that it is offered to people who are otherwise healthy, highlighting the ethical imperative to ensure as many people as possible benefit and as few people as possible are harmed by the test(s) to which they are exposed.

1.9 QA for screening services occupies a unique position compared with other organisations responsible for monitoring quality in healthcare, for three reasons (Holdstock, November 2013):

- it is dedicated to a specific set of services enabling significant expertise to be developed by QA staff, rather than relying on general quality managers assessing a whole range of services
- QA can deploy a larger variety of methods to maintain and improve quality ranging from inspection-style visits and requirements for information, to developmental approaches that encourage internal quality improvement initiatives, providing advice and support to services and commissioners
- the scope of QA activities extends beyond a single contract for services, involving multiple commissioners and providers for different parts of the screening pathway

Method

1.10   This review was able to build straight on to significant previous piece of review work published in November 2013, and which included "desktop research: collating and reviewing academic evidence base, publications from relevant organisations, and historically significant documents identified by UK NSC colleagues". It also included interviews with some key informants, and a staff engagement workshop (Holdstock, November 2013).

1.11   The review itself centred around visits to all of the screening QA teams, during which there was a combination of 1:1 interviews with directors/leaders and lead managers; focus groups, mainly on a programme to programme basis with representative mix of staff groups; and acquisition of example working materials illustrative of routine work and highlighted good practice.

1.12   1:1 interviews with other key informants included representatives of the following groupings, detail listed at Annexe 3.

- chairs of professional groups
- NHS England screening and immunisation leads
- external QA professional leads (EQALs)
- directors of public health
- stakeholder representatives on the QA review project board
- holders of other relevant key roles in PHE

1.13   Soundings questionnaire completed by 123 screening QA staff.

1.14   Soundings questionnaire completed by 25 NHS England screening and immunisation leads.

1.15   Interim findings were tested and discussed with the members of the QA executive group (QAEG) and with 115 staff from screening QA teams at a national workshop.

2 Towards a consistent approach

2.1 This review, which visited all of the screening QA programmes, identified much variation in the working between teams. The origins of the observed differences are broadly threefold:

- differences between cancer and non-cancer screening QA
- differences between individual screening programmes
- differences between the same programme (mainly cancer), but delivered in different regions

2.2 Current differences between cancer and non-cancer QA are systemic, with different organisational origins, professional engagement and levels of funding. It will not be feasible to recreate them in the same image in one giant leap.

2.3 Differences in QA requirements for different screening programmes can largely be attributed to factors such as the complexity of the pathways and necessary failsafe arrangements, the nature of the IT systems needed to run the programmes, the periodicity of the screen etc. It will be important to distinguish necessary differences 'designed in' to meet specific needs, and less dependent variations where improvements may be made by learning from different programmes.

2.4 There is variation, at the margins, between QA reference centres even with respect to the same cancer programmes. This is a feature of programmed 'localism', and a developmental history which had each region designing its own programme, although based on national guidance. In this case, it will be important to distinguish which variants matter, in terms of impact, and which are justified, eg, by geography; provider structures; resourcing.

2.5 Some considerable amount of variation is due to impact of personalities and relationships between key individuals within and across organisations. Such dependencies and flexibilities are not always positive, and might be moderated by better specification of roles and responsibilities.

2.6 As this quite wide range of organisational forms and processes is brought together under the management umbrella of PHE, there are new opportunities to address more consistent delivery based on evidence and best practice, while retaining necessary and validated variation. Learning from the best variants gives opportunity to 'specify up' (rather than 'dumb down'). Many staff are welcoming the chance to learn more from others so as to improve further. "We were looking to do that already, before the review".

2.7 It became clear in the early stages of the review that trying to capture more than a sample of variants in opinions, working relationships, organisational form, products and procedures would be rather a backward looking exercise. Since the purpose of the review was to look at necessary function as the basis of moving forward, focus was placed on identifying common elements at the core of programmes on which to build a single service.

Recommendations – definition of common elements to screening QA programmes

Recommendation 1

- **Organisational development, seeking to optimize effectiveness, efficiency and manageability of screening QA, might initially build a common language and culture, based on factors such as:**
  - **common understanding of unique selling points**
  - **common (generic) operational framework**
  - **common elements of an organisational model**
    - **professional leadership and support**
    - **data and intelligence management**
    - **system engagement (local relationships)**
    - **QA core team**
  - **common basis of working methods**
  - **addressing common concerns about governance issues**
  - **common barriers to best population impact**

3 What is the screening QA function? What does this mean in practice?

3.1 The process of screening to help protect and improve population health has a number of important features, as described by the UK national screening committee (UK NSC, 2014):

*"*Screening programmes are approved by UKNSC for agreed thresholds of sensitivity and specificity. If tests are not carried out safely, accurately and using agreed national standards and protocols, they may not reach the agreed thresholds.*"*

*"…*healthy people who may be at increased risk of a disease or condition…. can then be offered information, further tests and appropriate treatment to reduce their risk and/or any complications arising from the disease or condition.*"*

3.2 The QA programmes have developed in conjunction with each new approved programme, and each case has the same mission, as stated recently by the current leaders of the QA programmes:

*"*Quality assurance has a focus on risk reduction and minimising harm to **very large populations**. There is an ethical issue within screening, different from routine health services, as we are **inviting people** into the system **who believe they are healthy**. This places an additional requirement on us to ensure screening programmes are not only of the highest quality (in terms of positive impact) but also minimise harm*"*. (QA directors, 2014)

3.3 Over a 20-year period, screening quality assurance programmes have developed first for cancer and later non-cancer screening programmes. Each screening programme has had its unique characteristics, and the accompanying QA programme has accordingly adapted its work. They have also developed in an ever-changing context of delivery of healthcare. This context has produced a wide range of structures and processes for quality monitoring and control, including mechanisms for commissioning and performance management, inspection and regulation. The question then arises as to what are the unique selling points (USPs) of screening QA, and what added value does it bring? Are these USPs common to the range of current screening QA programmes, and are these still relevant in the current context?

3.4 The opportunity was taken to ask a large staff group from across the QA programmes and across the country what they believe the USPs of their programme are. There were some variations and range at the margins, but essentially there was a broad consensus on the characteristics. The main characteristics on which there was agreement are shown as Box 1. Of these, the four key overarching themes emerging were:

- support/advice/facilitation/sharing of good or best practice – the nature of QA described was fairly consistent across almost all respondents, often with a focus on the distinction from regulators or inspectors, and a greater emphasis on the role of enabling services to improve through support and advice, facilitating developments and sharing practice between services and regions
- specialist/expertise/knowledge/multi-disciplinary– three quarters of respondents highlighted the importance of knowledge and expertise, both from professional members of teams, eg, 'peer reviewers' (non-cancer) and 'QA team members' (cancer) and from PHE employees; for the latter group, respondents highlighted experience within QA, but also previous professional backgrounds (eg, as midwives)
- independence/objectivity/impartiality– almost 40% of responses highlighted that the position of QA outside of both provision and commissioning, without the associated financial responsibilities or other obligations, enabled advice to be delivered with an absolute focus on quality of the service
- relationship/critical friend– a fifth of responses highlighted the importance of building effective relationships with providers, commissioners and other stakeholders to enable QA to enable changes, particularly where this involved difficult messages that needed to be delivered sensitively and constructively

3.5 Respondents to the review had a good degree of consistency about 'What we do', but was there also clarity about how that differed from other contributors? Box 2 summarises some of the issues regarded as representing differences in the QA approach.

3.6 Cancer and non-cancer QA teams emphasised the significant part of their role, and the resource commitment, related to developments in the screening processes (eg, changes to age ranges of eligibility; bowel scope; HPV testing; AAA developments. See also section 11). Involvement included:

- awareness raising, preparatory local discussions
- assessment of pilot sites
- 'preparing the ground'; readiness of units to take roll-out
- reference centre for (access to) ongoing advice and support in implementation
- assurance of safety and effectiveness during implementation

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Box 1. QA screening programmes: 'What we do'

- an unbiased, independent viewpoint – 'critical friend'. An 'open relationship' with services and commissioners
- comprehensive engagement across the whole screening pathway
- Centres of reference. The leading place for information on screening/ clarification of standards/credible, authoritative professional advice
- (access to) in depth scrutiny and understanding of all relevant data
- agent for sharing learning and the uptake of good practice across regions
- day-to-day support to commissioners and providers during service development, reconfiguration, procurement/reprocurement etc.
- a constantly evolving and improving service
- facilitating continuous quality improvement
- adapting to the changes in the NHS as a whole
- supporting major changes in screening
- direct input into national groups - advice on the development of system guidelines, KPIs and national quality standards

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Box 2. QA screening programmes. How are we different?

- multidisciplinary, continuous approach to quality assurance across the full pathway
- broad and deep knowledge of services/ practices/ service models. - recognised as expert voice
- QA approach to data interrogation and validation based on clinical and IT expertise developed over years
- "of sufficient rigor to be regarded as a reliable guide to performance" Kennedy report (2013)
- independent from commissioners and service providers
- advice not dictated by direct financial concerns; quality and effectiveness of overriding importance
- quality assurance differs from regulatory organisations such as CQC because it focuses on continuing relationships with providers and commissioners and has continuous quality improvement at its heart
- screening QA is recognised locally, nationally and internationally and used to validate and improve quality standards

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3.7 As part of the review, soundings were also taken from the NHS England screening and immunisation leads (SILs), a group of staff working closely with QA, to provide an external perspective. A sample representative from each region was interviewed, and a 'soundings' questionnaire was sent to all leads, with a very high return rate. There was, as expected, a degree of variability in some of the responses, probably reflecting relationships in local areas. These tended to be

about issues such as timeliness and ownership of data requirements, some about patchiness of attention to different parts of the pathway, others about variability of what could be expected in relationships with different QA teams covering the same area. However, there was a surprising degree of unanimity on the perceived role of QA teams overall, with little negativity expressed.

3.8 On the whole there was agreement with the QA teams' own perceptions of their role, for example, using expressions such as:

- 'critical friend'
- entire pathway covered
- commissioners as well as providers accountable
- quality rather than cost
- recommendations for improvement, distinguishing essential from 'nice to have'
- very high level of expertise
- independence and respect
- work as advisors with advisors to improve

However, some also added a range of other valued contributions, such as those in Box 3.

Box 3. Sample of SILs perceptions of added value from screening QA

- work in partnership with commissioners
- safety check for S&I teams
- routing recommendations into contractual agreements
- failsafe – escalate serious safety concerns nationally
- share learning from other areas with commissioners
- detailed specialist knowledge, eg, of radiography or lab work
- provide comparators/thresholds/benchmarking
- as credible and external, programmes 'get the ear' of CEOs
- raises aspirations towards acceptable and achievable thresholds
- constructive feedback seen to raise morale

3.9 It would seem, therefore, that there is a good degree of unanimity, and shared understanding about the unique selling points of the QA process, even if there are some differences in the detail of delivery on a local basis.

3.10 A critical central point, which needs to be confirmed, is that the distinct role of QA is that of facilitatory improvement, rather than regulation or performance management. The depth of specialist expertise on screening brought to bear by screening QA teams is key to detailed assessment against standards, and the ongoing relationship with providers supports and enables change and improvement. It is then vital that, where QA teams become stakeholders in

facilitating change, that they are not also the sole final arbiters of achieved change. This confirmatory role sits with the regulators (care quality commission (CQC); Monitor) and commissioners (eg, NHS England). It will be useful to clearly formulate these roles, perhaps as part of a working framework document (see section 8).

3.11   It will also be important that QA teams are subject to scrutiny themselves, to ensure they remain objective. This might be achieved through organisational performance management and/or peer review (see section 4).

3.12   An area of some uncertainty which needs resolution is the answer to the question 'Who is being assured?' Initially, cancer screening QA teams developed under the auspices of the regional director of public health. The role was to assure the public through the regional and district 'independent' public health directors that the national screening programmes were being delivered safely and effectively, reaching the national specified standards. Structures and roles have changed since, and this has left some confusion in terms of roles. When asked, during this review, who teams thought they were 'assuring' through their work, many could not answer; some said national office (cancer) or NSC (non-cancer); others said commissioners. Representatives of the population were rarely mentioned.

3.13   Relationships with population representatives in local authorities, including the director of public health (DPH) and their team, were negligible. The main form of contact, if at all, was at programme board meetings, and in feedback sessions after QA programme visits. However, contact and involvement seems to have been rather incidental. Attendance was viewed as rather patchy and variable, depending largely on the continued interest of the PH rep in screening itself. Interview with some directors of public health (DsPH) confirmed this lack of relationship. It was agreed that the role of local authority public health (LA/PH) in screening programmes was one of scrutiny, rather than delivery. However, the level to which there was interest in this depended on the demands of an otherwise large agenda. Screening issues rarely were a priority for health and wellbeing boards (HWBs) or their health protection committees (HPCs) (rather less than immunisations). On this basis attendance at programme boards or QA Visits may not be prioritised. DsPH said that they were not even sure who, or where, they might contact QA team representatives if they wanted to.

3.14   The relationship with clinical commissioning groups (CCGs), as commissioners, is also very unsystematic at present, with many of the same issues about contact with QA exactly mirroring the LA/PH situation.

3.15   When asked, QA teams variously reported that they had been told that contact with LA/PHs had to go through the NHS England local area team, or in some cases

through PHE-centre staff, who were involved in HWBs/HPCs respectively. Even QA visit reports are 'supposed to' be distributed to local authorities through the local area team.

3.16   The barriers to QA engagement with the 'population served' do seem to have been assumed rather than designed in. Indeed the 7a specifications directly require QA teams to *"***Give formal feedback to NHS England and the population served***"* (NHS England, 2013). It is critical that pathways for this direct population assurance are re-established for what is a major population health initiative. However, it is also critical if population leadership, community engagement and infrastructures are to be involved in working with services to improve uptake, equity of access and outcomes, and user experience.

3.17   Any restated mechanisms for QA teams to more directly take Assurance on screening programmes to the population served should not be in isolation from, or in competition with NHS England or PHE-C. Rather the mechanisms should be covered as part of a WFD agreed between the agencies. The mechanisms should also be recognised by, worked through and facilitated within PHE policies on sharing information and documents.

Recommendations – shared understanding of QA

Recommendation 2

- **There is a fairly consistent idea of the nature and unique selling points of QA across a full range of staff working in cancer and non-cancer QA teams. This appears to be largely echoed by peers from NHS England working alongside them. This could be developed into a single statement of the role and purpose of QA, which would address one of the key concerns arising from respondents – the current perceived lack of clarity and direction about their role, responsibilities and interactions with other partners, such as area teams.**
- **This statement would need to emphasise the screening QA role in 'facilitatory improvement' as part of quality assurance, as opposed to a regulatory or performance management function.**

Recommendation 3

- **Screening QA, in recent reorganisations, appears to have lost its facility to directly 'assure' the population served about the uptake, access, safety, effectiveness and outcomes of population screening programmes, as it is required to do. Working with peer agencies, the mechanisms to restore these direct links, particularly to local authorities (and their public health)**

and CCGs, should be established and agreed on a national basis. These could be captured as part of a working framework document agreed with peer agencies. Local implementation of the necessary arrangements should then follow.

Recommendation 4

- **PHE policies on sharing of data and reports, relevant to these processes, should be reviewed where possible to enable such moves, and the practical consequences clearly communicated with the field teams.**

4 The structural basis of screening programmes and its quality assurance

4.1 Each screening programme has distinct differences, due to the fundamental nature of the testing and diagnostic procedures, as well as the developmental history. However, the programmes do all consist of a series of components with a number of common features. It would be useful to describe this common framework, and thereby establish a common language and 'currency'. This will enable identification of meaningful similarities and differences between programmes, and may become the basis of shared learning between them.

4.2 A screening QA cross programme group did previously examine these features (Cross Programme QA Group, 2008) and were able to identify a series of common components, identifiable in relation to all screening programmes. Using this framework they then established a set of quality assurance objectives for each screening component, and the start of a series of criteria against which success against these objectives could be tested.

4.3 Updated for the new context, this framework could form the basis of a generic operational framework for screening QA programmes. An updated version of the framework is shown as Figure 1.

4.4 Testing the relevance of the structure below to each programme, it would seem to be valid in each case, with just a few points of discrepancy:

- **Identify population.** Accurately identifying the population to whom screening is offered is critical to each. Population registers are the basis of this for most, with potential issues emerging as this information is accessed as part of call/recall systems. For antenatal screening, maternal 'booking' is the key step, and there is concern for this to be early enough to get best impact from some tests (by 10 weeks for maternal sickle cell and thalassaemia screen; checking for maternal diabetes and retinopathy). Diabetic eye screening depends on GP identification and registration of diabetic patients.
- **Inform.** Maximising the appropriate offer of screening and testing to the eligible population. This involves provision of timely, accessible and culturally sensitive information, which allows eligible people to make choices about screening uptake. This will involve explanatory 'literature', (eg, prompted by the call/recall system), as well as face-to-face discussion in some systems (eg, midwife to antenatal; GP to diabetic patient). There may be need for other forms of targeted discussion, education and support where there is evidence of consistently low

uptake, possibly on a community basis. 'Target' communities may be common across different screening programmes.

Figure 1. Generic whole system components of screening programmes (Bentley 2014)
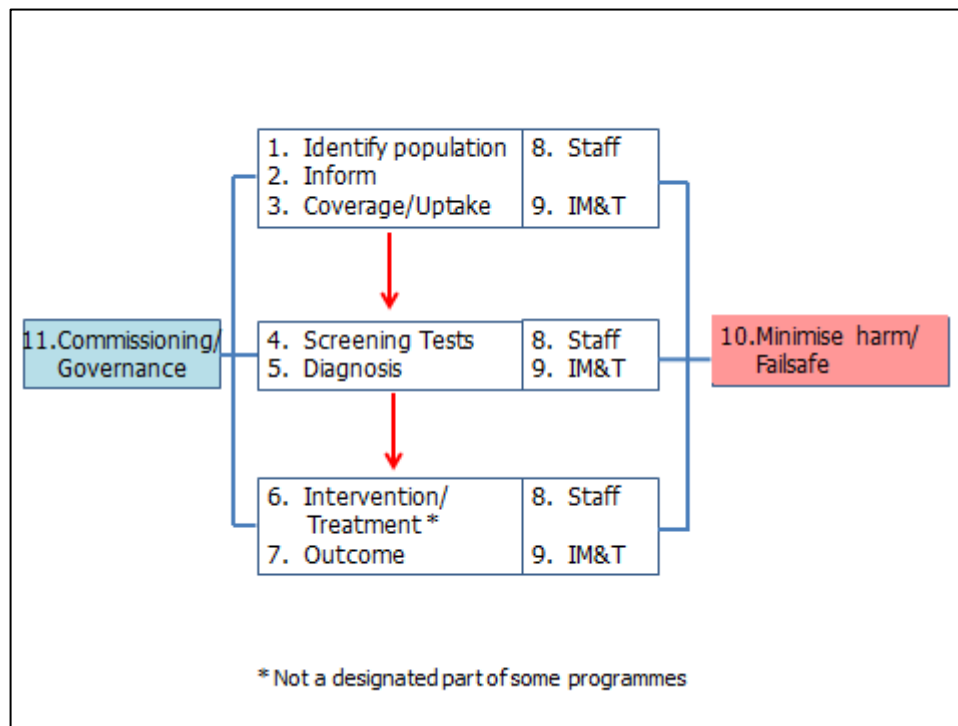
- **Uptake.** Maximising uptake in the eligible population who wish to participate and are appropriately informed. This theme addresses potential barriers to screening including multiple appointments or difficult timing or access to locations (applies to tests and diagnosis). Relevant to all programmes.
- **Test.** The core of all programmes. Includes the process from taking the sample/images to reporting the result. Need in all programmes to clearly distinguish screening from diagnosis, eg, repeat test; confirmatory test, etc. It is critical that all programmes maintain test detection rate, sensitivity and specificity and positive predictive value in ranges specified by the NSC.
- **Diagnosis.** This component relates to the accuracy of the diagnostic test. It includes the process from reporting the screening result to reporting the diagnostic result. For some screening programmes there is not a clear diagnostic test, and clinical judgement is used, eg, fetal ultrasound screening for structural anomaly. In such cases clear decision support materials and processes will need to be in place.
- **Intervention/treatment.** This is the least consistent component across the programmes. Programmes vary on how interventions are defined; for example some programmes have standards for treatment (eg, newborn sickle cell screening) while others do not (eg, fetal anomaly screening). Although some programmes do not consider intervention to be part of their remit, all

programmes need to ensure there is an adequate pathway of care for those identified through screening, and pay attention to issues such as timeliness of follow up.

- **Outcome.** Optimising population and individual health outcomes in the target population. Reducing mortality or the burden of disease is an appropriate measure for some programmes (cancers), but not for others where earlier intervention is the outcome (newborn hearing). Systems for following impact beyond the immediate pathway (eg, audits built on linkage to cancer registry) can be important to drive the cycle of improvement of screening systems, and informing health economic perspectives (eg, an aspiration for audit of interventions and blindness in the context of diabetic eye screening).

- **Staff.** Ensuring that the whole screening programme is provided by a trained and competent workforce. Relevant issues for most programmes include State registration of staff; the use of accredited training programmes; determination of minimum workloads and staffing to maintain competence/expertise; the need for leadership and clarity of roles and responsibilities.

- **Information management and technology.** Ensuring that information systems are fit for purpose, reliable and resilient. They will drive process along the whole pathway, and provide the means for many failsafe mechanisms within the system. They will need to efficiently work across organisational boundaries where necessary. They are at the heart of all programmes, but in a different state in each. The system is national and comprehensive for bowel and AAA screening; a national design, but modified to local systems for breast and diabetic eye screening (and newborn hearing); and fragmented along the pathways for cervical and (other) ANNB screening.

- **Minimise harm/failsafe.** Along the whole pathway, to minimise the harms of screening in those who are screened as well as those who are not. There are potential harms in each of the listed components of the programmes, as well as in the way the pathway comes together as a whole. Many of these have been identified nationally as programmes have been operationalized, and failsafe measures identified to mitigate these before harm can occur. Generally these have been incorporated into the appropriate Map of Medicine, eg, (NHS National Screening Committee, Oct 2011). There will be a need for effective risk management systems and incident reporting.

- **Commissioning/governance.** Ensuring that each screening programme is appropriately commissioned managed and works across organisational and professional boundaries. There is a commissioning specification for each programme, which should be consistently applied. For some programmes, and some geography, collaborative commissioning arrangements will be necessary. What are commissioners doing to address health inequalities and user experience within the screening programme? The definition of a screening unit and programme boundaries will vary across programmes. There is a need for

clear lines of accountability and reporting; clear clinical/technical leadership, and performance management within providers and by commissioners.

4.5 A survey carried out as part of this review invited contributions from 34 NHS England screening and immunisation team leads. Responses on this issue were obtained from 16 (47%). One question asked them to score the strength of the contribution of the local cancer and non-cancer QA teams to driving up quality in each of the components of the screening process. The results did vary to some extent, area to area, but the average scores are given in Figure 2.

Figure 2. NHS England SILs perception of contribution of local QA team to screening components. (0 = none; 1 = some; 2 = moderate; 3 = strong)
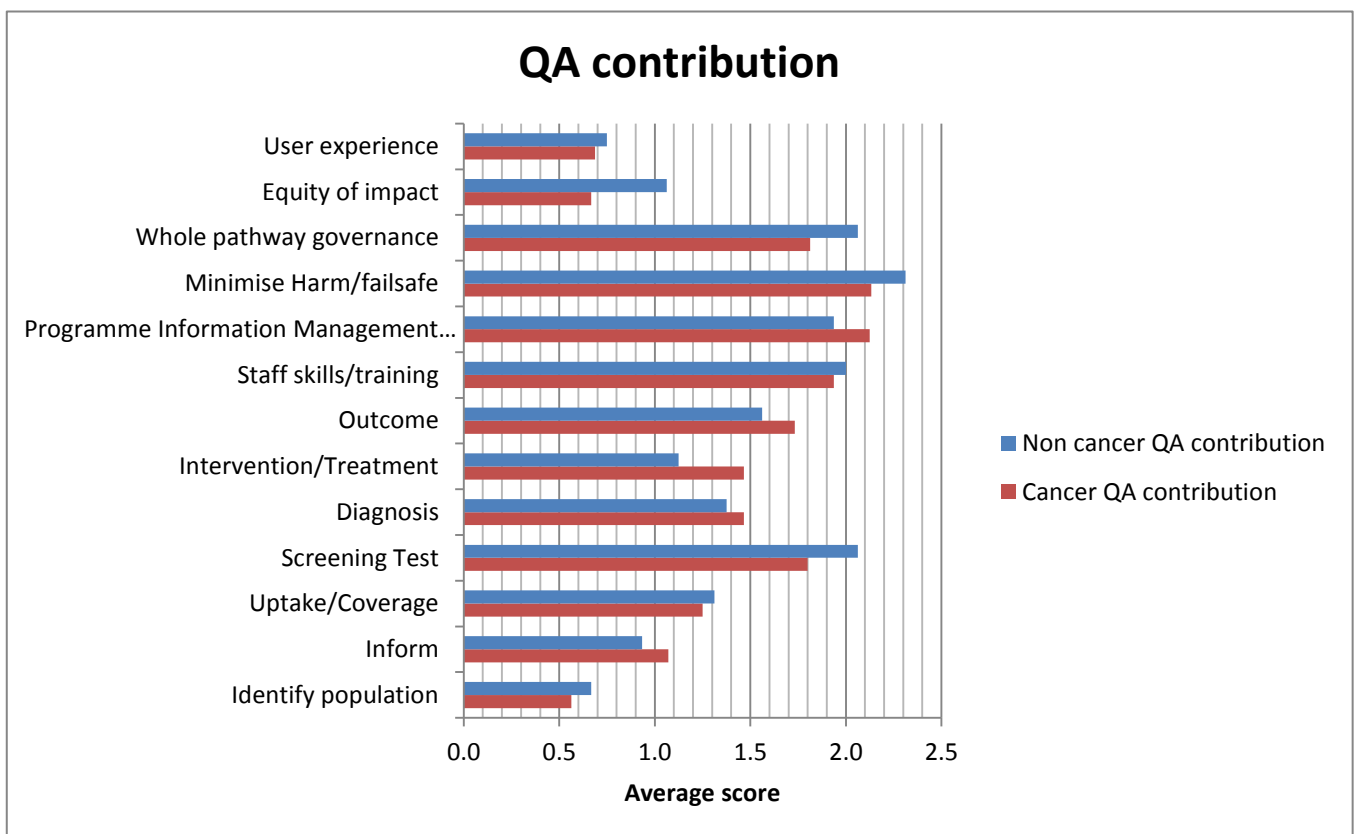
4.6 It can be seen that, overall, there is perceived to be involvement of both cancer and non-cancer teams in all components of the screening programmes. Minimising harm/failsafe got the highest average moderate/strong scores followed by attention to the screening test, programme information and governance across the whole pathway. It is also of interest that there was seen to be a strong moderate score given to staff skills and training. However, identifying and informing the population, equity issues and user experience were consistently seen to receive much less attention.

4.7 Particularly in the light of the investigation and reports into the events at Mid-Staffordshire hospital and the subsequent Keogh review into a series of hospital trusts in England, there has been a renewed focus on substantially improving the focus on patient/user experience. This focus has included rethinking the way user experience is captured, analysed and used to make improvements in services. During this review there was very little evidence found that this has brought about changes in the screening QA processes. Teams report gathering information on what evidence programmes can demonstrate in taking this into account. However, there was little mention of working to support a significant raising of standards in this area of work, in tune with other areas of the health service.

4.8 Going back to these fundamental components of all full screening programmes provides a common spine on which to build a generic operating framework. It will then be possible to identify a set of QA objectives for each component. Based on the discussions held during this review, and building on the earlier work (Cross Programme QA Group, 2008), a first draft of this objective set is included here (Annexe 4) for further discussion and development. The original discussions also began the process of identifying key criteria to define the work under each objective.

4.9 The process of agreeing this common operating framework should help to build cross-organisational understanding of the similar basis of programmes under the umbrella of PHE screening QA. As proposed later, this could be augmented by describing a common basis of an operating model to deliver the framework described, and a common basis to the working tools used by screening QA. Eventually, this would enable development of a common basis of joint initial induction programmes for new staff, and joint elements of ongoing training across programmes.

4.10 Each programme will, of course, flesh out the 'skeleton' of the generic operating framework with its own detailed specifics. These will be based on evidence based and experiential corporate knowledge, and the specific requirements of supporting delivery of the programme specific 7a specification, eg, (NHS England, 2013). However, cancer screening QA teams have historically developed local operating systems in ten separate regional forms for the same programmes. The process of going back to a common operating framework will enable agreement as to the (many) common components of each. However, it will also give the opportunity to consider and agree elements of best practice that have emerged from the ten 'natural experiments' of operational practice. These could then be adopted into the emerging programme specific operational framework. The principle would be, where possible, to 'spec up' to drive up quality working, rather than 'dumbing-down' to a lowest common denominator.

4.11   Part of the 'natural experimentation' taking place region-by-region has resulted in a range of extra activities departing from what might be defined as 'core business'. These are a mix of historically opportunistic initiatives; some commissioned at a national or regional level; some have followed personal professional/technical interests of team members. Use of a more standard operating framework can be used to identify 'add-ons', eg, research projects; pilots; developmental work by team. This is not to suppress innovation/good practice, but to ensure they are considered in a framework that safeguards business capacity, and put extra activity on an approved business footing.

4.12   As part of this review, all screening QA teams nationally have been visited. However, because of the variability one to another, it would not have been possible to benchmark the overall effectiveness or efficiency of one team even against those within the same programmes. There was ample evidence of good practice shared across teams in different elements of the workload, and apparent weaknesses similarly distributed. The survey of SILs, as noted above did show quite a range of perceptions of the balance of attention across the components of screening from different QA teams. It will be understood that perceptions do reflect the 'eye of the beholder' as well as the subject of assessment, so interpretation case by case requires caution. With more consistency in the operating framework, it will be possible to draw a more valid, objective comparison, like with like, in relation to the core business. It will also facilitate use of peer review processes as to assure the ongoing objectivity and effectiveness of teams.

4.13   As part of the benchmarking process, the operating framework should allow a logical set of more objective measures to be developed to enable teams to asses and be assessed alongside their peers. Each screening programme has its own set of standards (in some cases 'emerging') and KPIs with which to assess effectiveness, safety and patient experience. A sub-set of these might be adopted as indicators of QA impact/effectiveness. This 'dataset' would need to be screening programme specific, but drawn from similar points along the pathway:

  i.   coverage
  ii.   equity audit
  iii.   test positive predictive value
  iv.   user experience
  v.   review of incident log
  vi.   percentage of completed actions following formal visits
  vii.   outcomes in screen detected cases; interval presentations (where relevant); population outcomes overall

While not offering direct measures of effectiveness, they would provide focal points to discuss impact or otherwise across the components of screening. Outcome measures alone should not be used to assure QA quality.

4.14   Use of the screening 7a specifications as the basis of what to quality assure does place QA teams in some difficulties where there may be areas of ambiguity and uncertainty. Such concerns emerged during the review, for example, particularly in relation to:

i.   responsibility for training, registration and performance management of sample taking in the cervical screening programme

ii.   mechanisms to track morbidity outcomes from screening particularly in relation to diabetic eye screening and newborn hearing

It is critical that there are clear lines of escalation whereby concerns in relation to 'interpretation' are seen to be addressed within and beyond PHE and guidance on how QA teams should consistently manage agreed and disseminated.

Recommendations – A core operational framework

Recommendation 5
- **That a single clear core operational framework is developed and agreed across screening QA, based on a generic structure for the screening programmes themselves, but allowing for justifiable agreed variations by programme (see Annexe 4).**

Recommendation 6
- **That such a framework be used to identify 'add-ons', eg, research projects; pilots; developmental work by team. This is not to suppress innovation/good practice, but to safeguard business capacity.**

Recommendation 7
- **That the framework is used to develop a process to more objectively assess and benchmark the effectiveness of QA programmes as part of the management of their own quality.**

Recommendation 8
- **That screening QA as a single service considers how it should strengthen its mechanisms of assurance on how programmes systematically capture and analyse user experience to drive improvements in service. Resulting advice and support should capitalise on developments and best practice within the NHS as it seeks to 'raise the bar' on expectations in this area (see also recommendations 39-41).**

Recommendation 9

- **To date, the impact of the QA screening programmes has not been systematically measured or evaluated. This could be addressed by:**
  - a) **a retrospective assessment, with examples of the evidence of impact of the programmes (see Annexe 5)**
  - b) **a prospective programme of evaluation based on routine data and audit**

Recommendation 10

- **It is critical that there are clear lines of escalation whereby concerns arising across programme teams in relation to 'interpretation' of specifications and other guidance are seen to be addressed within and beyond PHE, and guidance on how QA teams should consistently manage agreed and disseminated.**

5 The common basis of an organisational model

5.1 As part of this review it has been possible to meet the leadership and a mixed range of staff members from all the cancer quality assurance reference centres (QARCs) and the non-cancer regional quality assurance teams.

5.2 It has been notable the extent to which screening QA teams contain a number of strong, skilled, knowledgeable and hard working professionals, technical experts and managers who are passionate about the service. Overall, the teams would appear to have provided a mechanism to keep an 'eye on the ball' during the major changes of transition, although they themselves have been challenged with much change on process and staff movements, and much credit is due for that. Their independent position has enabled them to provide expert advice and support to new commissioners as well as providers.

5.3 For the future, however, it will be important to strengthen systems in support, so as to reduce the extent of possible dependency on a few key individuals in key areas.

5.4 Delivery of an operational framework does, and will in the future, require an organisational model providing the requisite structure and processes. Historically, the cancer QARCs have developed slightly different models depending on geography covered, leadership and resources. However, there is clearly a common pattern to the models used. Non-cancer QA teams, with a more recent developmental history and a more common, nationally determined design, are similar to each other, but with some clear differences in structure and process to the QARCs.

5.5 However, when looking for possibilities to build bridges between the systems, there can be seen some commonality in the overall design of both variants. These are roughly captured in the simple model represented in figure 3.

5.6 Assurance around the three components of service (effectiveness; safety and patient experience) is sought through two main forms of evidence. First, collation analysis and interpretation of key indicators that can be measured, and second, judgements based on specialist knowledge and experience of professionals, technical experts and managers. These overlap, with judgement being required, for example, in the interpretation of the possible conclusions to be drawn from analysed data. In the real world, interpretation of resulting intelligence will need to accommodate contextual factors, which will include the quality of leadership and

relationships within and between organisations. Obtaining this knowledge, which itself will depend on leadership and relationship building, will also be critical if team inputs are to contribute to the management of change leading to quality improvement. Maintaining the necessary knowledge, skills and competencies as well as resources and processes will require a core team with the necessary generic leadership, business and administrative skills.

Figure 3. Common components of screening QA organisational models
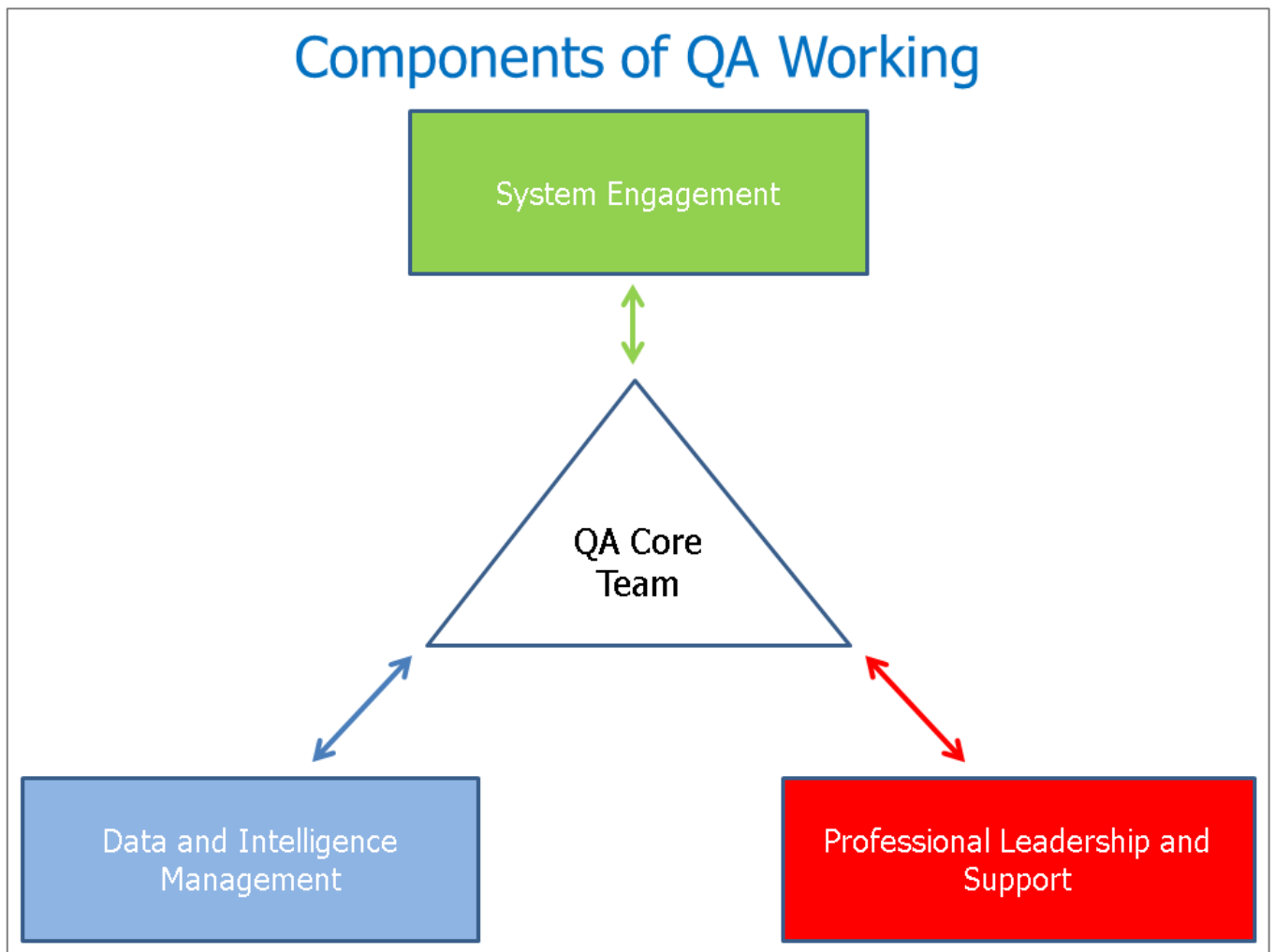
5.7 The four components of this operational model are considered in the next sections of the report.

6 Organisational model: professional leadership and support

6.1 This has been a real strength in the screening QA system, providing valued specialist professional leadership on a linked local and national basis. But cancer and non-cancer QA has been built around two distinct models each contributing differently and to a largely different extent. The professional workforce is drawn into the two differently configured teams in distinct ways, and to do jobs with a distinctly different profile. This is illustrated in Figure 4, which shows diagrammatically how it has emerged from interviews that the professional and technical leads contribute in the two systems.

Figure 4. Comparison of work profile of professional/technical leads in cancer/non-cancer
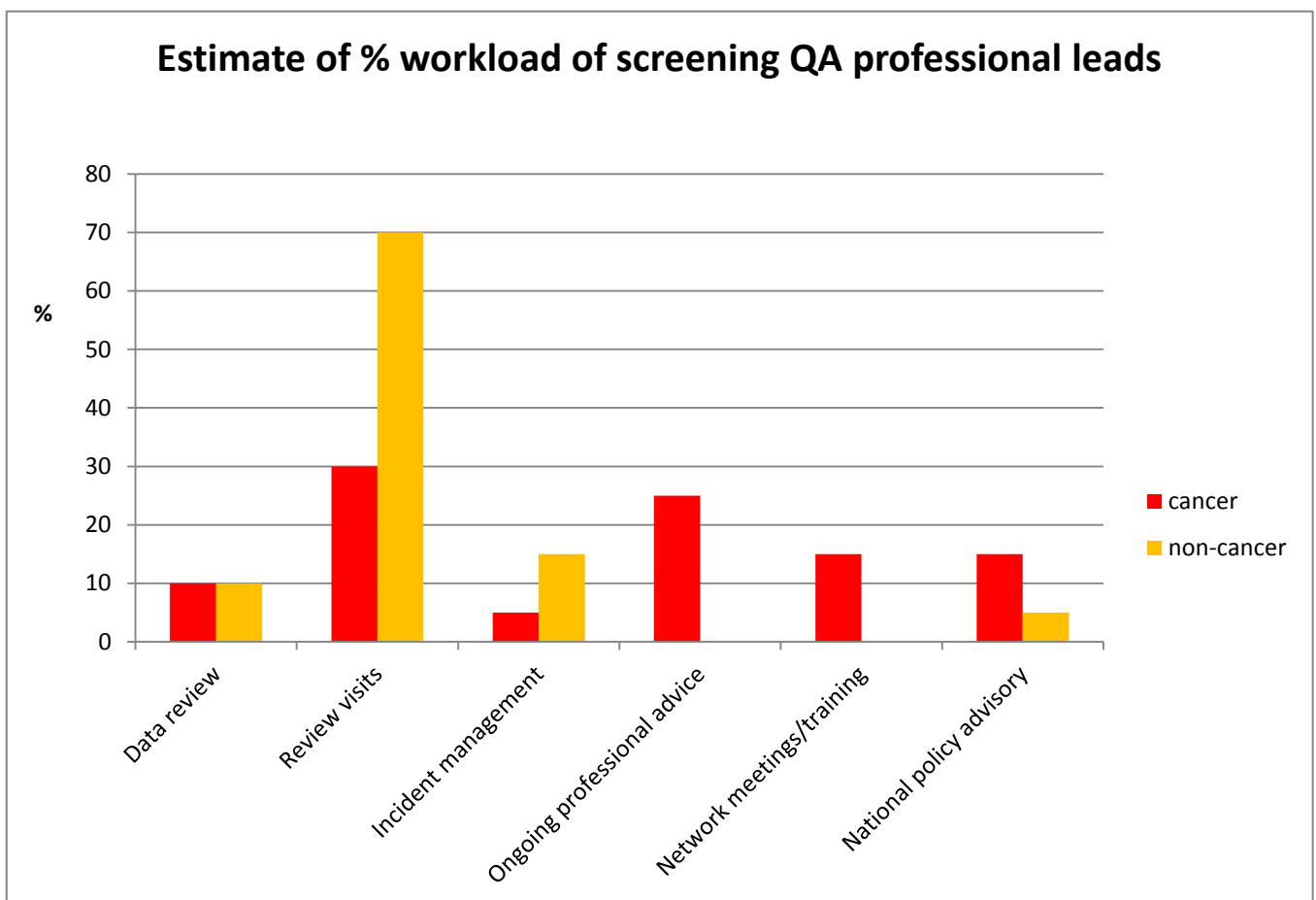
6.2 It is clear, as described below, that non-cancer QA teams draw in peer reviewers from a bank trained for the role. They are almost entirely brought in to play major roles in QA review visits, and usually have no further ongoing role with the

particular provider programme. For the cancer teams, various categories of professional are recruited to a sessional commitment that is ongoing. As illustrated by the figure they will participate in visits, but also have a day-to-day involvement as necessary and are centrally involved in other QA activities. Each approach is described in more detail below.

6.3 The professionals used in both roles have in common that they are:

- active in a screening programme, so credible
- have an in depth working knowledge of the programme
- have an appreciation of the constraints the screening teams work within

Professional/technical lead role on cancer screening QA teams

6.4 Local specialists are recruited from the active local screening workforce. They are formally appointed, and carry a flexible sessional contract commitment with the QA team. Where the engagement is more intense over the short term, eg, during visits, they may receive extra payments for the extra time. They are regarded as full team members, and are engaged in team meetings, information sharing and communications.

6.5 As a central part of the 'fabric' of the team, they have a range of local contributions:

- key role in QA visits as part of multidisciplinary team
- professional advice on incident management
- frequent contact 'on tap' for advice from providers, commissioners, rest of QA team
- interpretation of findings – data, audits, etc
- contribution to local guidance and reports
- chair regular regional specialist screening meetings
    - dissemination of messages from national meetings
    - consultation on emerging policy, standards, guidelines, KPIs, etc
    - report and debate local issues
    - review emerging data, audit findings, evaluations
    - disseminate good practice
- training and education
- other, eg lead EQA, audits
- support roll-out of new developments

6.6 Many of the lead professionals have had assessor and professional accrediting roles before. However, it was clear through interview that this role with screening QA is substantially different in a number of ways. Some of these are well stated by one of the leads in Figure 5.

6.7 In addition to their local role, professional/technical leads also represent the QARC at regular national professional co-ordination group meetings:

- national professional coordinating groups (NPCGs)
  - meet x4 annually
  - English regional leads; other UK reps; some international
  - professional associations and colleges represented
  - academic/research links engaged
- NPCG chairs meet at multidisciplinary programme advisory group; evaluation and KPI committees
- gather issues, experience and good practice from direct service contact
- develop and modify guidelines, standards, KPIs, etc. accordingly, ratified by colleges, NSC and PHE national office (cancer screening and prevention)
- contribute to development of policy and specifications
- communicate, disseminate, and help to support and oversee implementation of change directly in the regions

Figure 5. Unique selling points of cancer QA professional lead role (Ann Buxton: pathology QA lead BCSP NE)

Assessor	QA Lead
"one off" visits	Continuous monitoring
Catch "bad apples"	Examine/improve processes
Meet the minimal standards	Ongoing process/improvement
Asks "who?"	Asks "why?"
Optional level of input	Regular commitment
Minimal input to standards	Regular input to evolving standards
Observer only	Observer and advisor
Examiner	Tutor

Professional/technical peer reviewer role on non-cancer screening QA teams

6.8 A bank of specialists, active in key roles in local screening programmes, has been recruited to provide peer reviewer input to local QA multidisciplinary visits. They

receive training to equip them for the role. They commit to potentially being available for three to four visits annually.

6.9 In addition, a sub-group of these receive extra training to enable them as EQALs to lead visit teams. This role will involve:

- engagement with trust and programme leadership
- leading the multidisciplinary team while on site
- chairing team meetings to analyse and summarise findings, and establish recommendations for action
- feedback review findings at end of visit
- sign off written review visit report

6.10 In general, peer review engagement with a particular provider programme begins with receipt of the pre-visit report and data pack, and ends with the feedback at the visit end, and contributions to the written review report. In general, peer reviewers and EQALs are not engaged in follow-up or reviewing action plans.

6.11 There is no retention fee, and payment is on a reimbursement for time spent basis.

6.12 There is no formal commitment to other regional QA processes, such as training and incident management. However, it is clear that a number of peer reviewers, and particularly EQALs, being leaders in their fields, and with a particular interest in screening, may well be drawn in on an 'ad personam' basis to advise on programme developments, input on issues related to incident management, and input to training events. This is not systematic, however, or on a large scale.

Pros and cons of the two systems

6.13 The two systems of providing professional/technical support into the QA teams are not really comparable because they are not different models for delivering the same objective. Peer review is a solution aimed almost entirely at QA review visits. Professional lead appointments fulfil a much more comprehensive role within the fabric of QARCs.

6.14 **Cost, efficiency and cost effectiveness:** professional lead appointments are costly, particularly in the case of breast cancer, where there is a wide range of professional/technical inputs in the multidisciplinary team. If the main role were to support peer review visits peer review would be significantly cheaper. However, because the intended role is much more extensive, cost effectiveness will depend on the accrued value of the other professional inputs. This is difficult to assess in

terms of measurable cost and impact. The biggest time commitment is in many cases the day-to-day provision of advice and support, and this reportedly frequent use is a testament to the value placed upon it. Because of this the sessional contract is quite efficient, as it allows open access across the working week. The sessional cost also covers the commitments to running the regular regional specialist meetings, the national professional coordinator meetings, advice on incident management, and involvement in roll out of developments.

6.15 **Home grown versus visiting specialists:** there is potential concern that local specialists reviewing other local specialists may involve personal bias, in either positive or negative directions. It would be the responsibility of the QARC and visiting team 'neutral' leadership to identify and manage any such issues. Interviews described a common occurrence where, when there was an identified conflict of interest, professional lead from one QARC covered for another. This was seen as beneficial, as a way of sharing practice and learning, and something to be encouraged. For visits, peer reviewers have the advantage of bringing no 'baggage', but the EQAs interviewed broached the disadvantage of steep learning curves to get the feel for context, relationships and local politics. These are felt to be important in interpreting findings, and also in judging how to get best impact, eg, through feedback.

6.16 Away from visits, the advantages of ongoing local professional leads were said to include familiarity, easy accessibility and a reassuringly visible presence.

6.17 **Availability of specialists:** once professional/technical leads are appointed and under contract, they are to an extent 'on tap', and readily available for advice and support. Some QARCs have, however, had difficulty appointing to some particular specialisms. In such cases it might have been useful 'to have a national bank of experts to draw on'. However, each area has a number of programmes with each type of specialty working in them, and so through the regional networks it is generally possible to succession plan by spotting potential candidates.

6.18 **Different solutions for differing needs:** although the divide between the systems is described as cancer/non-cancer, and the two models have evolved separately, there may be a case for a 'mixed economy' of models, if the systems were being redesigned at this stage.

6.19 Cervical and breast: these programmes involve complex pathways with a number of stations along the pathway involving different professional specialties and technical supports, each of which requires its own 'failsafe' review. While all screening programmes have appropriate level of standards, 7a specifications for cervical and breast screening have an extra appendix with two pages of 'NHS-SP

guidance not otherwise specified' which are to be taken into account. Those for ANNB and young people and adults screening (YPA) have no such appendices.

6.20   The programmes are very high volume, with eligible populations requiring repeat screens at set intervals. There are large numbers of local practitioners, representing a significant workforce whose skills and tests need to be maintained at a high level to find small numbers of positive cases, while minimising harm to a population with no 'presenting' illness.

"We are examining 1,000 women in order to find seven (breast) cancers. The validity of our tests needs to be spot on to do that safely" QA professional lead.

6.21   Antenatal and newborn: although taken as a whole this is a complex pathway and the navigation along the pathway for mother and infant needs tight and failsafe protected management, the separate clusters of tests are a mixed group of varying complexity. Sickle cell/thalassemia, infectious disease screen and blood spot tests, the sample taking is straightforward, and the test complexity largely automated in a number of accredited laboratories.

6.22   Foetal anomaly screening has a range of components with multiple tests and a range of professional/technical skills involved. These components may benefit from closer ongoing engagement with professional/technical support than that offered by regular but infrequent visits.

6.23   Physical examination of newborn consists of a range of prescribed tests carried out by a range of different more generalist practitioners. Maintaining effective standards in this group is likely to need constant local attention and input.

6.24   Newborn hearing and diabetic eye screening: there are similarities in these testing regimes from a professional/technical perspective, with a single episode test, a regime of 'grading' checks, and referral on for professional 'diagnostics (not counted as part of the screening pathway) according to specific criteria.

6.25   Abdominal aortic aneurysm: QA still in a piloting phase. A single episode ultrasound test with grading checks. No repeats in negative cases and monitoring where defined 'marginal' results. Vascular surgeons heavily involved in all aspects of the process as it develops

6.26   Colon cancer: Faecal occult blood screening test management centralised to five regional hubs. QA visits to these already rationalised on a national basis, with a single nominated QAD. Complexity lies in the diagnostics with colonoscopists and laboratory and imaging support. This is developing now with the roll-out of

bowelscope, and close engagement of the joint advisory group with the royal college of surgeons in accreditation of centres.

6.27　It can be seen that, on a needs basis, a case can be made for a range of models of professional/technical support input. From a historical perspective these have been clustered on cancer/non-cancer lines. In the future, it would be appropriate to establish a set of criteria to establish the appropriate model of professional assurance to different parts of developing pathways, based on factors such as dependence on professional/technical competence and judgement, volume of programme throughput, and numbers of local practitioners involved in programmes. Cost would be a factor where options offered similar benefits through alternative approaches.

6.28　Currently, the professional leads model is a central component of cancer screening programme and quality assurance development. This aspect will be considered further in section 11.

Recommendations – Professional leadership and support

Recommendation 11
- **That the current models of provision of professional/technical expertise within screening QA provide a variety of solutions to a range of different problems. In the future these should be applied on the basis of need/ appropriateness rather than culture (cancer/non-cancer). This will result in a 'mixed economy' of solutions across screening QA practice.**

Recommendation 12
- **There would appear to be a strong case for carrying on using a model where there is continuous engagement of lead professionals in teams, with infrastructures for ongoing engagement of provider screening professionals, applied in particular circumstances. This would apply particularly where there are large numbers of local practitioners, relying particularly on professional/technical skills to make key judgements, and where there are complex arrays of developed standards to be assured.**

Recommendation 13
- **Currently, the professional lead arrangements in QARCs are fundamental parts of the 'fabric' of the multidisciplinary team model. They are also at the centre of local screening professional infrastructures providing day-to-day advice and support, valued networks for communication, education, debate, benchmarking and sharing good practice. Full consideration needs to be given to the value of these arrangements in any structural reorganisation.**

7 Organisational model: data and intelligence management

7.1 Data collation, analysis, and interpretation are critical for monitoring, risk management and achieving change. Some of the data required for quality assurance purposes can be distinct from, but inextricably linked to, the data systems needed to run screening programmes, and to performance manage them (KPIs). It is important to distinguish two distinct elements of data required for QA purposes:

- aggregated data to assure population level indicators and outcomes
- linked person level data to assure safe and effective systems

7.2 An example of this relates to data management in bowel cancer hubs. This is a 'comprehensive' national information system that handles all processes in the screening programme. However, currently, it will not allow the kind of analysis previously possible to establish the community-based profile of areas of poor coverage by segmentation group. Data could accommodate this, but is at present blocked.

7.3 The basis of IM&T can be distinctly different for each screening programme. The system is national and comprehensive for bowel and AAA screening; a national design, but modified to local systems for breast and diabetic eye screening (and newborn hearing); and fragmented along the pathways for cervical and (other) ANNB screening. Regional QA teams and QARCs therefore have different dependencies for drawing down the data to support assurance activities. In some cases they are dependent on access to reporting from the national systems. In others they are dependent on providers, and they may have different IT systems, even in the same region. In some, they have to pull information together from different providers and match it to be able to follow individual providers along a single pathway.

7.4 Analytical capacity is not included in non-cancer QA infrastructure, being shared with screening programme structures. It tends to be a strength of cancer QA teams. In this case there have been some excellent examples of innovative working, and some established 'bespoke' regional solutions to analytical challenges. There will now be the opportunity to build on the best results of these 'natural experiments' to 'specify up' to meeting the challenges on a more consistent national basis.

7.5 In the meantime, there is some vulnerability and reliance on a few technical experts and their personal expertise. It will be important to work with these individuals to strengthen the resilience of IM&T support to QA teams in QARCs. There is the potential with developing technology to automate menial tasks such as the linkage of datasets and matching of user data along pathways. This may be done efficiently at national level, freeing up local teams to focus on focal analysis and interpretation.

7.6 Some NHS England screening and immunisation teams (SITs) have poor access to analysts, or variably negotiated access through commissioning support units. Because of this there is some dependency on quality assurance team products and this has been the cause of significant dispute in some areas. There has been much uncertainty about rights and responsibilities over data ownership and sharing. In some cases QA teams have claimed that screening and immunisation teams (SITs) are duplicating analysis that is QA responsibility, and so confusing recipients with different versions. In others, SITs are saying QA data is not timely enough for performance management purposes, and in some cases is being reported along boundary lines not relevant to their needs.

7.7 Since the organisational changes from April 2013, there has been widespread confusion over the rules covering data sharing, publication and dissemination of reports and information governance. Over time some of these issues are being resolved, but more definitive guidance is still desired. There remain areas of work where some of the bureaucratic rules are seen as unintended 'collateral damage' resulting from resolution of issues in other parts of the system. It is also a frequent observation that data management, rather than being a support function to key operations in the 'field', can instead place unnecessary barriers into the effective functioning of important population/patient/user facing systems.

7.8 The review sought the perspectives of NHS England screening and immunisation leads on issues related to data management around screening programme quality assurance. The use of data between QA teams and SITs had emerged as an important and contentious issue in many review interviews, and with most QA teams. Box 4 brings together the main thematic responses on the issue from responses of 25 NHS England SILs. There were differences from across the country, but all the responses listed echo/triangulate with other respondents during the interview process.

Box 4. Responses from NHS England SILs to review survey question: "Screening data is important to both SI and QA Teams. What would you say are your (three) biggest worries about management of data as an asset between you?"

- timely data returns at fixed interval needed
- different QAs provide different data to different timescales
- unable to share unpublished data with NHS E- leading to lack of timeliness for reporting
- QA feedback to providers on annual reports not shared with commissioners
- visits include interview with commissioners yet commissioners receive copy of reports via providers not directly
- non cancer screening data is not of good quality; cancer screening data tends to be to too old to be of value in management of contracts (one respondent)
- (in-) ability to produce data at a level useful to other stakeholders (eg, DPH and local authorities)
- (lack of) availability of data for DES and AAA at a population CCG level
- most of the valuable products are based on goodwill and are not part of any routine signing off/reporting cycle
- data overload – need simpler data intelligence tools
- transparency and data ownership – need to share data with public, CCGs, DPH, etc, unless very good reason not to
- we (NHS England SITs) have no reliable access to PH analysts
- NHS England staff not allowed to process any patient identifiable data
- unclear purpose of some data collection exercises
- local ownership of data and analysis very important, and concerns if this is ever lost

Recommendations – Data and intelligence management

Recommendation 14

- **That a professional systems analysis approach is taken to map out the necessary data flows to properly support quality control, assurance and improvement in screening programmes. With a QA team focus, the flows to within PHE should be mapped, but also those to commissioners and the population served.**

Recommendation 15

- **Drawing in this analysis, work within PHE to ensure that advice and support is provided to assist, rather than impede, the safe and effective use of data to protect user and population health. This should encompass data protection, data sharing and publication and information governance, but with a 'can do' approach.**

Recommendation 16

- **Principles of data asset ownership and data flows should be established and clearly stated and communicated to relevant stakeholders at national and local levels. They could also be captured within the generic operating framework, working framework documents, etc.**

Recommendation 17

- **The differences between data needs to serve distinct purposes should be acknowledged in solutions:**
  - **aggregated data to assure population and organisational level indicators and outcomes**
  - **linked person level data to assure safe and effective systems**

  Both will be necessary for effective QA programmes.

Recommendation 18

- **Opportunities should be explored to automate menial tasks such as the linkage of datasets and matching of user data along pathways. This may be done efficiently at national level, freeing up skills of local teams to focus on focal analysis and interpretation.**

8 Organisational model: system engagement

8.1 The context of local system engagement is largely common to cancer and non-cancer screening QA teams. The local service environment in which they function 'independently' is very complex, with an array of service commissioners and providers and a cluster of associated support arrangements (Figure 6). Many of these organisations are relatively newly formed, and have just come through a major transitional period. There have been many staff changes over the two-year period, and many parts of the system are carrying numbers of vacancies for various reasons.

Figure 6. Diagrammatic representation of local structures relevant to screening programmes
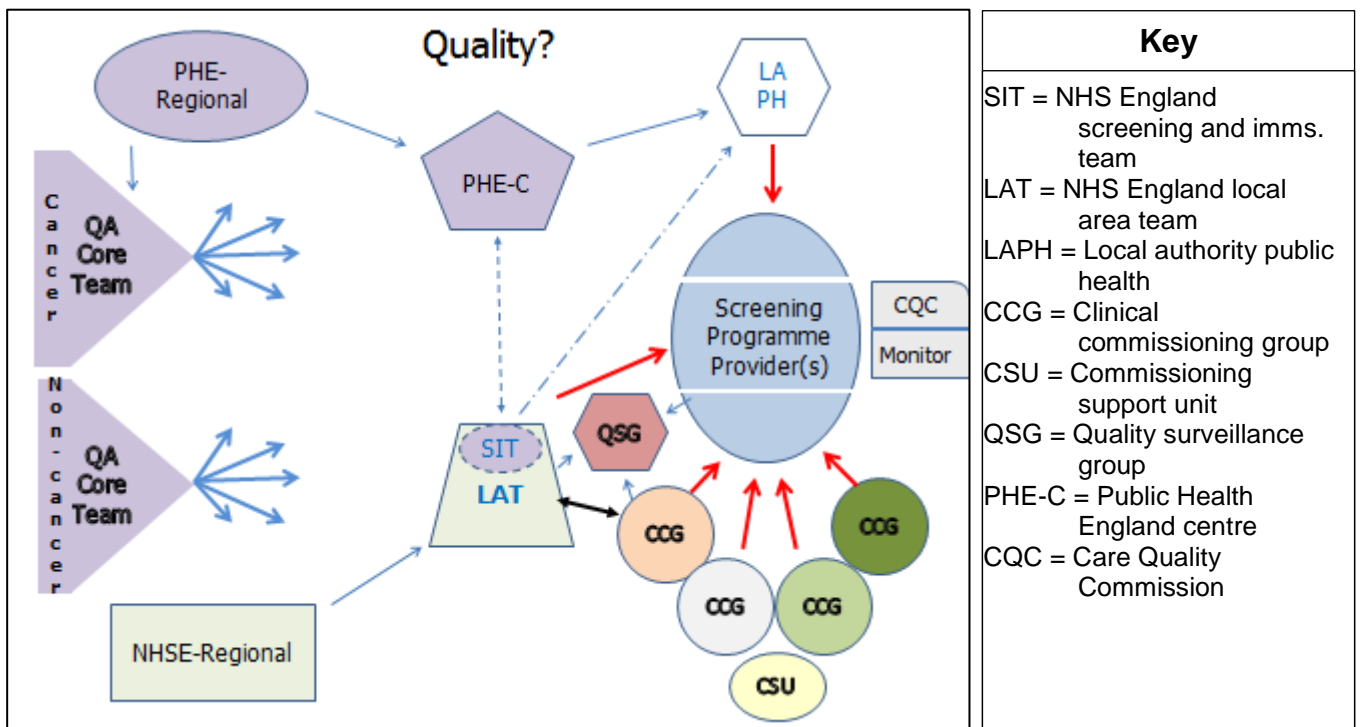
8.2 During this period there has been a reallocation of functions across organisations. Some 'corporate memory' about how various functions have worked in the past (eg, under primary care trusts) is retained through reallocated staff, but this is patchy. Some specifications of functions and guidelines are still evolving.

8.3 **Relationships:** in this environment, where there has been some uncertainty of roles, and variability in capacity and capability as new organisations have settled down, there has also been great variability in interactions among stakeholders. There has been dependency on relationships and personalities rather than systems. Interviews and survey work as part of this review have illustrated a wide spectrum of resulting working arrangements from collaborative and supportive to antagonistic and combative. In this environment, there has overall been a strong desire for clarified roles and responsibilities.

8.4 **Roles and responsibilities:** although there is the perception that roles are unclear, in fact significant components of responsibility are laid out, for example in the 7a specifications that direct the commissioning of public health services by NHS England (NHS England, 2013). This can form the basis of a map of key functional responsibilities, which can be augmented by practical working knowledge. One example of such a 'map' is given as Figure 7. This was kindly modified from a previous version (NHS Cancer Screening Programmes, Oct 2008) by a current QA director as a contribution to this review (Pearmain, October 2014).

8.5 In conjunction with this overarching map of responsibilities, it will be possible to develop a WFD to determine the division of responsibilities between particular teams with overlapping responsibilities. The most important of these in the context under review would be clarification of the roles and responsibilities between the screening QA teams and the NHS England screening and immunisation teams.

8.6 The starting point for such a document will need to be the 7a specifications, which lay out the key specified roles for delivery. Examination of the specification for cervical cancer screening, for example, (NHS England, November 2013) shows a distribution of responsibilities between the two sets of organisations captured as Figure 8. Although there will be some variations screening programme to programme, the 7a specifications have been built on a common template, and there are mainly consistencies between them. Working from such a basis, it would be possible, at national level to augment the specification in discussion between screening programme staff in PHE and NHS England, and develop it into a working framework document for use at a local level. In this augmented form a WFD would need to cover information and data sharing; risk assessment and mitigation; follow up of action plans from QA visits; management of incidents and communications. **The intention would be to move from independent to interdependent working.**

Figure 7: Organisational links in the cervical screening programme

NHS England
- implement agreed national contract specification
- agree local contracts for screening with providers (hospital and primary care)
- local contract management

General practice and community clinics
Primary care sample takers
- identify practice/clinic screening lead
- increase coverage/encourage attendance
- update PNL to confirm women for screening
- ensure all staff are suitably trained
- inform and counsel women and take samples
- counsel women on their results and implications; ensure result letter production is delegated to call/recall
- initiate referral or ensure delegation (via direct referral)
- undertake failsafe procedures

Screening and immunisation team
(PHE staff embedded in NHS England area teams)
- oversee performance of local programme against national service specification
- ensure appropriate arrangements in place for training and performance monitoring of primary care sample takers
- monitor coverage rates and take action to improve access to screening, in collaboration with relevant partners, eg local authorities
- convene and chair local screening programme boards
- agree local operating arrangements/operational policy
- advise local NHS England public health commissioning team
- link with relevant local NHS England area team departments, eg primary care, medical/nursing teams as required
- communicate clearly with all providers

Regional QA teams
- lead on quality assurance and act as expert advisors on screening programme quality
- collect, validate and distribute information on the performance of services against national standards
- undertake peer review QA visits to all programmes and follow up recommendations made
- audit cases of invasive cervical cancer in the region and provide data for national audits
- evaluate progress of programme in region and identify QA initiatives to address gaps, eg audits
- maintain regional professional networks and provide educational events for screening staff
- support roll out of new programmes/developments
- assess and advise on screening incidents

Call/recall service
- invite women to be screened and issue results
- update screening register
- receive and process information from GPs, laboratories and colposcopy clinics
- provide population-based information
- failsafe procedures

Cytopathology/Virology
- cervical sample analysis (plus HPV testing)
- participate in multi-disciplinary meetings
- EQA
- failsafe procedures
- link results to screening histories
- national KC61 and QA data reports
- audit

National cancer registration service (PHE)
- collects cervical cancer information from hospitals and other sources

Histology
- biopsy analysis
- participate in multi-disciplinary meetings
- link results to screening histories
- audit and data
- EQA

Acute trust
Hospital based programme co-ordinator (HBPC)
- implement national service specification
- advise trust management
- support GPs and hospital services in improving quality
- prepare annual monitoring summary as a basis for contracting
- co-ordination of cytology, histology and colposcopy services
- ensure effective failsafe policy
- link with regional initiatives on clinical quality
- undertake audit of new cases of invasive cervical cancer, ensure their registration and audit disclosure
- liaise with HPV pathway manager, if not HBPC

Colposcopy
- provision of diagnostic colposcopies and treatment
- counsel women
- participate in multi-disciplinary meetings
- failsafe procedures
- communicate date of next screen to call/recall
- link result into screening histories
- prepare national KC65, QA and other activity/data reports
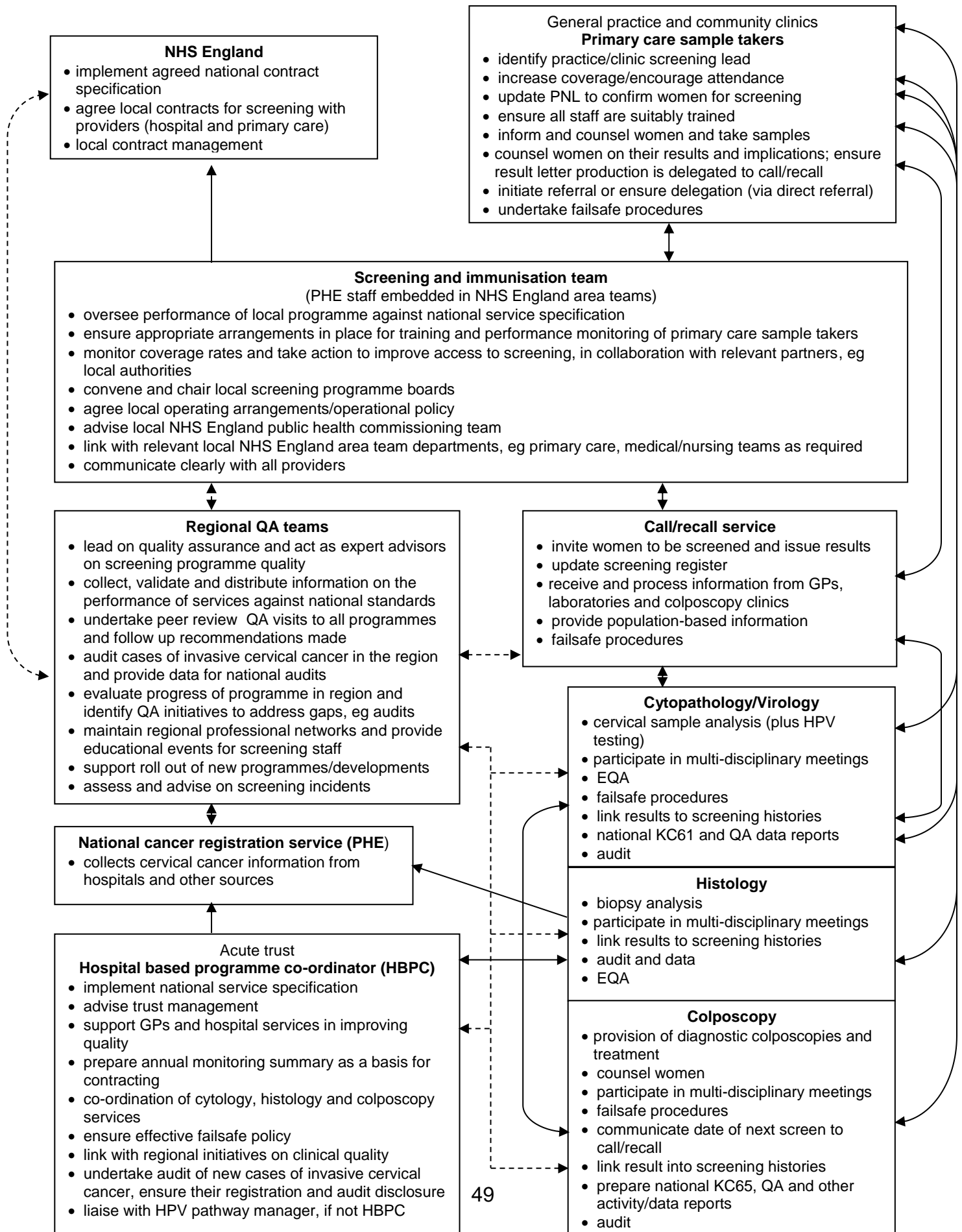- audit

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Figure 8. Summary of QA and NHS England SIT roles from 7a (NHS England, November

Roles in Cervical Screening from 7a Specification

Activity	Screening QA Team	NHS-E SIT
Commission services, including minimum data requirements		√
Continual Service Improvement Plan (CSIP) agreed with provider		√
Work collaboratively with providers to monitor, collect and report data, used to promote continuous improvement	√	
Give formal feedback to NHS-E and the population served	√	
Provide key information on models of good practice/innovation	√	
Organise multidisciplinary QA visits at least once every 3 years	√	
Receive quarterly and annual mandatory return from labs and colposcopy clinics and discuss at (programme boards)	√	√
Receive data from participation in EQA	√	√
Work with labs as they maintain a sample taker register and provide comprehensive feedback to sample taker and GP practice/clinic		√
Work with colposcopy clinics on NHSCSP guidance and audits	√	
Receive reports on all invasive cervical cancers	√	
Work with providers on public satisfaction surveys	√	
Providers report user satisfaction results		√
Work with providers to develop, implement and maintain risk register and reduction measures; review in contracting and peer review	√	√
Agree early warning systems and triggers with providers	√	
Receive reports on high scoring risks, mitigation plans and critical incidents		√
Ensure population registers and GP lists are clean, accurate and complete; optimize coverage/uptake; analyse to identify groups with poor uptake		√
Agreed emergency service and resilience plan with providers	√	√

2013)

8.7 **Levers for change**: one of the common issues emerging from review interviews was the need for clarification of what levers were available to drive actions following recommendations from QA teams. This arose particularly from QA teams where there was little progress resulting from visit action plans, sometimes after a number of follow-up visits. It is generally accepted that levers particularly lie with the commissioning NHS England screening leads who, as in the specifications, require providers to have a continual service improvement plan. However, although this varies team to team, some QA teams felt their plans were not supported by the commissioners. In interviews and survey with NHS England screening leads, possible reasons given for this in some cases included:

- having not been engaged by QA teams in the visit, there was a lack of ownership and understanding of the importance of some of the recommendations

- some action plans were seen to be unmanageably large, detailed and inaccessible, with too many, unprioritised, recommendations
- some QA teams were seen to have "gone native" with the provider screening staff, backing their aspirations, not necessarily strictly requirements based on standards, for developments (staff; funding; accommodation; equipment) against resistance from trust senior management and commissioners
- recommendations were not always traceable back to specified standards, and therefore appeared to be "QA team preferences" rather than statute
- sometimes QA teams had "unreal" expectations that screening programmes should receive "preferential treatment" for attention and resources against the whole agenda of other trust priorities

8.8 At the other end of the spectrum, many teams were able to report very good and measurable progress against action plans. Some NHS England screening leads claimed that well run QA visits provided them with excellent leverage to achieve change. Many had been included in the visit itself, and 'always' in the feedback. All visit recommendations were reviewed at subsequent programme board meetings, and actions agreed. It was emphasised that it helped to have a clear basis in specified standards, but that clearly identified practical barriers to achieving those standards (such as equipment; staffing levels; accommodation) had often changed when 'required' after visits. The main 'authority' for QA teams was seen to emanate from the 7a specifications. However, the drivers to act on team recommendations were seen to derive mainly from screening QA team characteristics, particularly drawn from:

- credibility
- professional authority, connected to national expertise
- breadth and depth of understanding
- external and independent
- bring and interpret data and information
- benchmarking
- oversight – the full pathway

8.9 In the absence of managerial, commissioning or regulatory levers (other than the power to suspend unsafe service), QA teams working in their role of facilitatory improvement, will need to capitalise on strengths such as those listed above. However, effective action can be supported by building on the principles of change management. These can provide guidance on how to optimise the impact of stages in processes such as engagement, feedback, and follow up so as to achieve best impact. These principles were found to be effective, for example, in developing the work of the health inequalities national support team (personal experience 2007 – 11).

8.10   **Programme infrastructure:** in addition to a documented working framework, a meeting structure can facilitate joint and interdependent working. The basis of this structure is laid out in the 7a specifications, requiring NHS England local teams to pull together a programme board for each screening programme. This should bring together providers (from across the full pathway) and commissioners, and include QA teams and relevant CCG and local authority representation. They provide QA teams with a forum for presenting and interpreting data/intelligence; reporting and following up on visits, and disseminating learning, eg from incidents. Above this level, NHS England have a number of others structures to manage commissioning of public health programmes covered by the 7a specifications. Most levels have sub-group focus on screening. Structure and functioning of these meetings is outside QA team control, but will have an impact on their working relationships.

8.11   Across the levels there is substantial variation, and this impacts on the ongoing working relationships QA teams have with providers and all relevant commissioners.

8.12   **Programme boards**: these are a specified requirement for each screening programme. However, context such as number, geographical spread and NHS England local team capacity have led to variations in configuration and frequency of meetings. Some boards for the same type of programme have been merged, eg, across a whole local area team geography or county. Some cover fragmented pathways, eg, one laboratory with multiple colposcopy providers. Some run trust focussed programme boards covering a number of different screening programmes. Maintaining a presence at each board can be challenging for some QA teams (eg, RQAT North covers 44 ANNB programmes, representing 264 topic 'pathways', across a wide geography). Most QA teams "give full priority" to attendance at meetings, but their usefulness can vary, depending on how they are chaired and run.

8.13   **Strategic oversight groups (screening)**: these are established at NHS England local area team (LAT) level. The membership is variable, but a typical example includes: one LAT screening team; six local authorities/public health; eight CCGs; one commissioning support unit; cancer QAD; non-cancer RQAL. The agenda will cover commissioning issues, performance management and quality improvement across all screening programmes in the area. Interviewing within NHS England identified aspirations of the great potential of such groups. The remit would be to work together with a can-do attitude to achieve best possible working solutions around organisational constraints and change. The meetings would be infrequent but regular. Participation would be strengthened if empowered in principle by organisational leadership.

8.14 **NHS England regional and national PH commissioning assurance groups:** screening assurance sub-groups. These are mainly internal NHS England meetings, with leadership and oversight of the other levels.

8.15 **(London:** organisational arrangements for NHS England within London are distinctly different. There is a screening lead for the capital, and the leads of three geographical divisions, who each take lead responsibility for topics, eg, uptake and coverage.)

Recommendations – system engagement

Recommendation 19

- **It would be useful to establish structural maps for each of the PH screening programmes (such as that in Figure 7), based on the 7a specification, and augmented and agreed in consultation with representatives of the major players. Responsibility for this could be shared by topic across the regional QA teams.**

Recommendation 20

- **Based on the generic QA operational framework, establish a generic working framework document to be agreed between QA teams and NHS England screening and immunisations teams, encompassing unique contributions of each; interdependencies; rights and responsibilities. This would emphasise the different roles of regulation, performance management and facilitatory improvement.**
  - **Sections within a WFD would need to cover information and data sharing; risk assessment and mitigation; follow-up of action plans from QA visits; management of incidents and communications**
  - **Generic WFDs might be augmented to reflect needs of specific screening programmes (fixed and variable sections)**
  - **In due course, similar WFDs may be developed with other relevant commissioners (CCGs, local authorities)**

Recommendation 21

- **It would be useful to initiate some joint organisational development and learning on core practice across cancer and non-cancer teams. With much discussion about 'levers', refresh on the practical principles of change management might be a useful starting point**

Recommendation 22

- **Screening QA, as it goes forward as a 'single service' should actively explore lessons from other parts of healthcare that might appropriately be adapted to QA practice, eg, total quality management, focus on care bundles.**

9 Organisational model: QA core team

9.1 At the centre of the components of the 'de facto' screening QA operational model described above lies a core team. This provides critical leadership, business and administrative management of complex multidisciplinary teams. Some of the constituent parts, eg, professional/technical membership; analytical capacity, are different in cancer and non-cancer teams. However, many of the core functions are essentially similar or the same (eg, cross-organisational relationship building/maintenance; logistics; reporting; connections into national programme structures).

9.2 Review of the resourcing and disposition of the QA teams (staffing; estates; budgets) was not part of the remit of this review, and is being assessed separately. However, through the interviewing process, a number of key concerns were commonly raised:

- the impacts of some recent transitional changes still require clarification: these include guidance on responsibilities devolved from PCTs, eg, human resources issues; some discussion of the consequences of loss of subsidiarity in some areas, eg, budgets; clarification and formalisation of decision making pathways
- teams have been under pressure to maintain vigilance, due to 'held' vacancies and some loss of corporate/professional knowledge/experience during transition
- if establishing and maintaining good working relationships is a key part of triangulation for assessment, and change management, then there is concern, particularly for non-cancer teams, that this can be done effectively. Three of the four teams cover wide geography, and large numbers of ANNB programmes. Attendance at all programme boards, and other forms of follow up and communication will be very demanding of time and resource, and may be difficult to do effectively with stretched resources

9.3 In addition, more clarity is requested of links from structures containing QA teams to other organisational components within PHE. There is concern from a proportion of team members that quality assurance as structure and function works in isolation from mainstream. Reassurance is sought that 'battles are being fought on behalf of QA' in the wider organisation and health system. There is also concern that QA may not be keeping up with developments seen in other parts of PHE, eg, databases and toolkits developed in relationship to other public health outcome framework indicators.

Recommendations – QA core team

Recommendation 23

- **It would be useful to agree and specify the key competencies of leadership in screening QA teams. These are essentially similar in cancer and non-cancer, but distributed differently across non-cancer regional QA leads and cancer QA directors; non-cancer external QA leads and cancer professional leads.**

Recommendation 24

- **Business planning support and administration are critical in both systems, although demands are different and changed through transition. It will be important to tailor sufficient support to emerging team, operational frameworks based on best practice, and realistic workload assumptions.**
- **It will be important to model use of RQAL and QA lead time to ensure that adequate and effective ongoing input and support is possible across the geography. (See also section 10 – risk management approaches).**

10 The screening QA toolkit

10.1   In her interim report on the study that preceded this review, Holdstock concluded:

"The scope of QA for screening will need to be agreed including considering the join-up across different programmes and between cancer and non-cancer, and identifying the range of methods that could be deployed under a QA banner." (Holdstock, November 2013)

10.2   Importantly, as a critical part of her work, she carried out a literature review to establish the evidence base for the tools on which quality assurance in screening were based. In essence, the findings were inconclusive. A summary of her conclusions on this issue at the end of her analysis are given in Box 5.

Box 5. QA should encompass a range of activities (Holdstock, November 2013)

In the absence of a firm evidence base about the best methods of assuring quality in services, and in recognition of the need to respond flexibly to services with different needs, QA will need to use a range of approaches. This could include:

- designing in quality from the outset: development and review of standards, and providing quality improvement tools for providers to use
- addressing systemic issues once at the national level: displaying leadership for quality to provide a focus for, and to drive activity across, the country
- incorporation of patient experience: QA will need to understand how best to capture and use information about the experience of those undergoing screening
- peer review: this approach is likely to remain a core component of QA for screening services, though the precise approach to 'visitation' and the mechanism for triggering a review visit may need to be reviewed
- use of data and information: this will be a major area of development for QA to ensure appropriate data is collected, and use of that data (including complex statistical surveillance) maximised to measure quality and to inform action
- creation of a learning environment: this includes supporting quality improvement initiatives within screening services, as the best method to guard against failures in the system, and ensuring the approach to managing and learning from incidents is evaluated and improved over time

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10.3   To capture existing practice, as part of this review, soundings were taken from 120 screening QA staff attending a staff engagement event. As part of the invitation to describe the USPs of screening QA many chose to list the 'tools of the trade' used by the teams. The resulting list was then augmented and refined through interviews held with a variety of staff across all of the QARCs and regional QA

teams. The list in Box 6 captures what was mainly a consensus drawn from these inputs. It broadly applied across cancer and non-cancer teams, with just differences of emphasis.
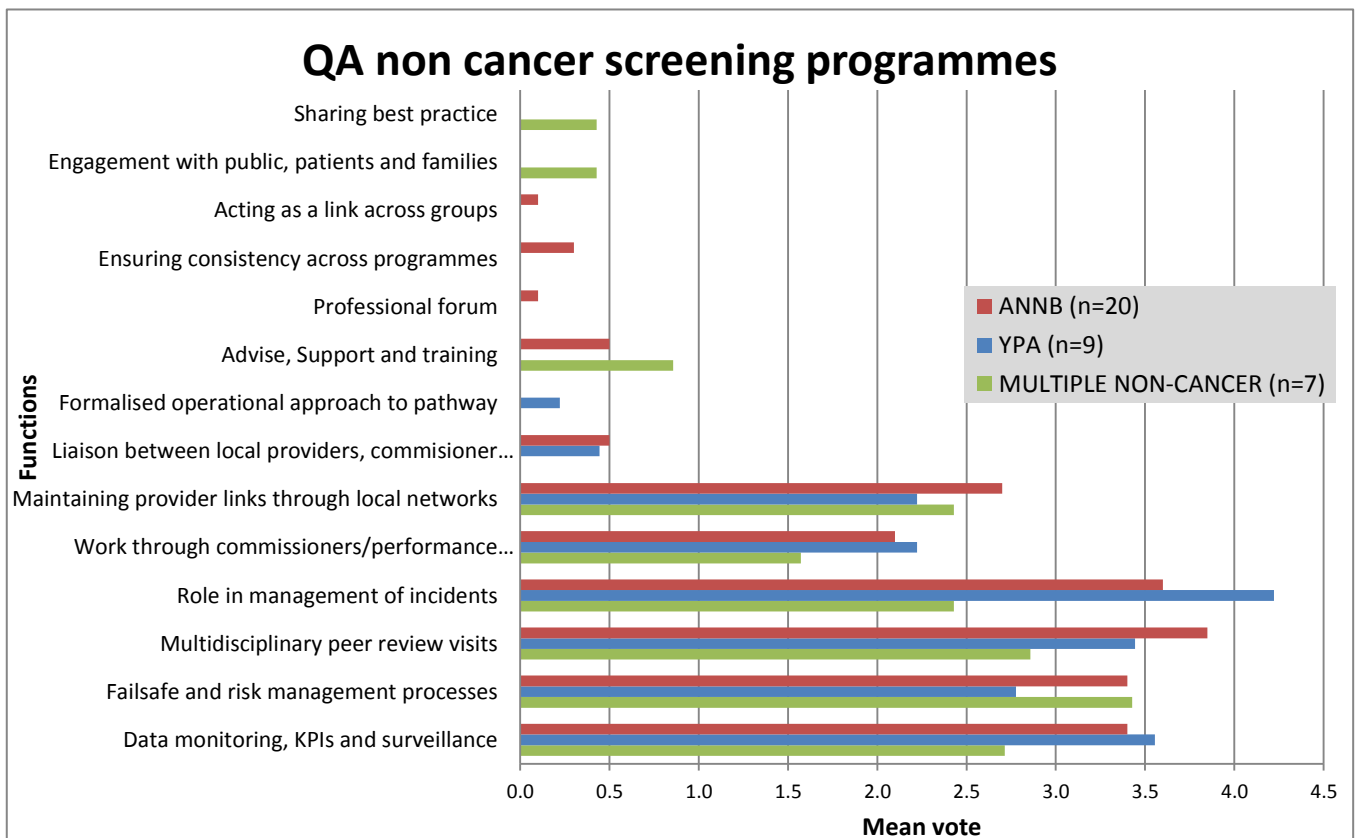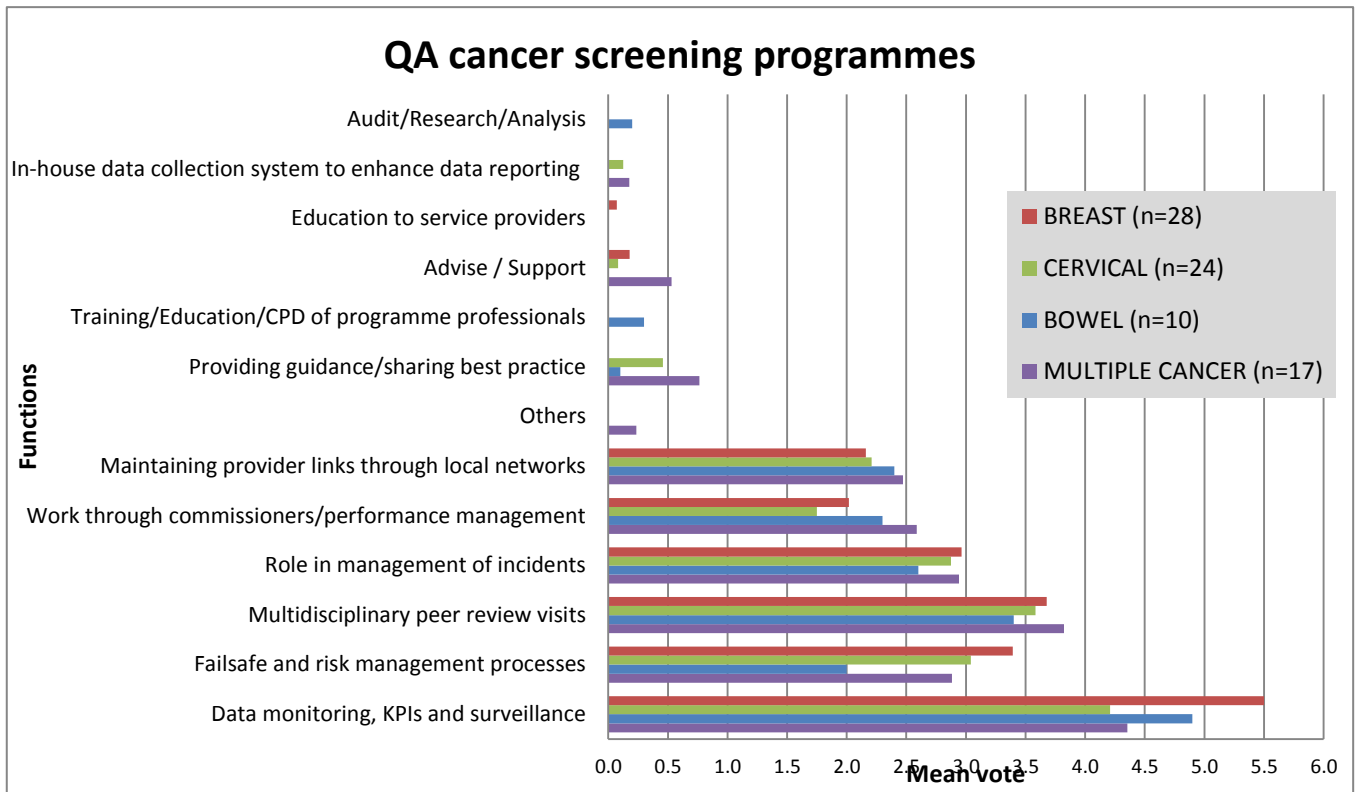

Box 6. "QA's offer – How we do it"

- expert knowledge of programmes within central QA teams + (access to) specialist advice of respected peers = credible, independent, practical advice and support
- triangulation of intelligence for ongoing risk assessment (see also paragraph 10.7):
  - longstanding, day-to-day relationships with providers and commissioners
  - Collation, analysis and feedback of service, team and individual performance data. Benchmarking. Audits. EQA
  - attendance and intervention at programme boards
- QA multidisciplinary visits covering all aspects of service and commissioning. Interim mini-visits to check action plan progress
- Facilitation/support for services facing difficulty. Pre-empting problems
- (early) incident identification and advice/support on management
- organise systems, processes, materials and events for:
  - sharing and debating learning from incidents/problems and good practice
  - dissemination/training: tools; guidelines; standard operating procedures
- quality assessment of fitness for roll out of new national developments/initiatives (while safeguarding quality of existing services)
- quality assurance has evidence at its centre and has strong links to the research community

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10.4 At the event, staff were also each asked, on the basis of their own practice, to allocate 'votes' out of 20 in total, to indicate the relative importance of various tools and approaches to their work. The results are shown as Figure 9. While confirming that all the main components of the toolkit are being used by cancer and non-cancer teams alike, there are distinct differences in emphasis.

10.5 Thus, for cancer services the main importance is placed on data monitoring and surveillance, while for non-cancer incident management assumes most importance. Peer review visits are next most important to both, and failsafe/risk management also very significant to both.

10.6 This survey did not include professional/technical leads. For them Figure 4 (p36) should also be reviewed. This emphasises the importance of ongoing work with providers for this major part of the cancer team.

Figure 9. Relative importance of functions to performance of local screening QA (staff allocate 'votes' out of a total of 20)

QA cancer screening programmes

BREAST (n=28)
CERVICAL (n=24)
BOWEL (n=10)
MULTIPLE CANCER (n=17)

QA non cancer screening programmes

ANNB (n=20)
YPA (n=9)
MULTIPLE NON-CANCER (n=7)

Risk management and triangulation

10.7   Prioritising attention and QA team resources should be on an intelligence based risk assessment basis. Teams draw in ongoing appraisal from a range of sources, including those highlighted in Box 6. In particular they will triangulate key information such as:

- longstanding, day-to-day relationships with providers and commissioners
- collation, analysis and feedback of service, team and individual performance data
- benchmarking, audits, EQA
- attendance and intervention at programme boards

This information will be augmented with periodic team visits and information from incidents.

10.8   Currently the intelligence derived from triangulation forms the basis of team discussions, but does not seem to be formally recorded, or systematically applied.

10.9   An example of how such risk assessment might be built into business processes is shown as Figure 10. This example of potential good practice emanated from London (Jan Yates, 2014) and shows how softer intelligence can be scored, and turned into a risk rating. Figure 11 then illustrates how this may be used to prioritise business plans.

10.10 Such a system of risk management would not be intended to 'compete' with formal systems of risk management required of providers within their trusts, or with NHS England, who are required to monitor and escalate provider risk within their usual NHS systems. However, both parallel systems could be used to augment each other.

10.11 In relation to internal governance within PHE it would be necessary and important to clarify rules for escalation of risks emanating from these appraisals higher up the organisation.

Figure 10. Risk rating – Indicative to aid in determining global risk level

	Description	Excellent	Acceptable	Early concerns	In recovery
ENGAGEMENT	History of incident reporting, engagement with regional teams/events	Culture of reporting, good visibility across all staff levels	Culture of reporting, reasonable visibility of staff	Trust less open to reporting, other governance concerns, staff low visibility, staff capacity becoming an issue	Poor reporting culture, major governance/safety concerns, longer term staff capacity issues
LEADERSHIP	Level of senior leadership engagement and ownership	Effective programme boards, engaged commissioners, exec leadership clear, addressing clearly identified risk areas	Programme board operational with clear action plans	Some indications of one or more stakeholders disengaging, reducing attendance at programme boards, problems escalating issues	Lack of senior engagement, no or dysfunctional programme boards, commissioners disengaged
INCIDENTS	History of incidents, serious or near misses History of no or limited reporting incidents	Few incidents, well managed, evidence of learning	Some incidents, well managed, some learning, willing to learn	Increasing number of incidents, slow progress in resolving incidents, recurring issues	Ongoing, recurrent incident themes, lack of learning, unresolved incidents
PERFORMANCE	KPIs and QA standards	Meeting most achievable standards	Meeting most acceptable standards	Downward trend in performance	Ongoing performance below acceptable standards
INNOVATION	Innovative practice, developing new models, demonstrating leadership	Trust/programme /commissioners support innovation and lead local or wider system improvement			

High priority	mostly red, some amber	**Medium priority**	mixture of yellow and amber	**Low priority**	mostly at least yellow, some green

Figure 11. Risk-based prioritising of ANNB screening QA activity

Priority	QA activity
High	- Visit in year 1 or year 2 - SQAM or RQAL attends as many programme board meetings as possible, ideally all - Direct contact between RQAL and HoM - Regular informal contact between SQAM and LCO and/or other screening staff - Raised as concern with NHSE - Attendance at fora chased up to promote learning opportunities - SQAM – focused scrutiny of KPIs, incidents, annual report, meeting notes and action plans
Medium	- Visit in year 2 or 3 - Consider desk top review - RQAM attends as many programmes boards as possible (ideally all) - Regular informal contact between RQAM and LCO and/or other screening staff - Routine scrutiny of KPIs, incidents, annual report, meeting notes and action plans
Low	- Visit in year 4 - Consider desk top review - S or RQAM attends programme board at least once per year - Informal contact between RQAM and LCO and/or other screening staff by exception - Routine scrutiny of KPIs, incidents, annual report, meeting notes and action plans

Recommendations – risk management

Recommendation 25

- **Screening QA should have its own formalised risk assessment and management protocol(s):**
    - **a broadly standardised assessment process agreed across the programmes would link to a generic operational framework**
    - **this would be built on the triangulation of multiple inputs, including hard and soft intelligence**
    - **QA risk assessments would be shared with NHS England, and shared intelligence would form part of the triangulation**
    - **team work plans would demonstrably be connected to risk assessments**

Multidisciplinary/peer review visits

10.12 Multi-disciplinary/peer review visits are a key part of all QA team activities.

10.13 Overall perception is that a well-run visit can provide the intelligence, platform and levers for improvement for an extended period, for QA and SITs.

10.14 Visits importantly combine use of hard evidence and intelligence based on professional judgements. Assessments on leadership, relationships and politics within trusts; along pathways and between commissioners/providers can be critical.

10.15 Desk reviews and self-assessments based on data and documents are unlikely to tell the full story. "They often provide questions rather than answers".

10.16 The resources committed require attention to achieving maximum cost effectiveness. This will involve:

- targeting their use within a risk management strategy
- standardising the quality of the visit, building on change management principle

10.17 The perceptions of the way visits are conducted and their impact vary considerably team by team, as seen in Box 7.

10.18 This variability in the way visits are perceived to be conducted can seriously threaten the credibility of the process. Some trusts may host up to 6 different screening programmes. If issues such as engagement process, paperwork, format and reporting of each are substantially different, to the extent that they are not sure what to expect, it is likely to affect the credibility and reputation of the QA process.

Box 7. Variability of perceptions of screening QA visits

- very mixed perceptions of value:
  - "circus coming to town"; "chance for QA to strut their stuff"
  - "our biggest lever for change; gets full attention of provider senior management team" (SIL)
- very mixed outputs:
  - "report like war and peace; 150 recommendations; completely switches off senior management"
  - "tight executive summary, with all actions linked to standards"; "credible, external review leads to serious action planning"
- very mixed results:
  - "we have no levers; no progress on action plans time after time"
  - "we have seen 95% actions completed at our follow up review"

Recommendations – multidisciplinary visits

Recommendation 26

- **Agree standard guidance on management of visits, with fixed and (programme) variable components:**
  - **model desk review for visit preparation**
  - **organisation, preparation and conduct**
  - **standards for content and quality of the report and recommendations**
  - **all recommendations to be based on statutory guidance and standards**
  - **quality of feedback, based on change management principles**
  - **formal follow up on action plan, agreed with local SIL and programme board (who and how)**

For each programme type, there is the potential for 'variable' sections to 'spec up' based on best practice.

Incident detection and management

10.19 Each screening programme has a defined pathway, which is made up of a series of interlinked responsibilities and functions. Incidents are particularly likely to happen at the points of transition between practitioners, departments and organisations (and commissioners). The level of risk to an individual may be low, but because of the large numbers involved in screening, the population (and corporate) level of risk may be high.

10.20 The failsafe process looks to identify in advance where in the overall system there may be potential points of risk, and to put into place mechanisms and routine checks to provide mitigating 'safety nets' in order to reduce the chances of systems failures occurring at these points. Accountabilities and responsibilities must be

made clear particularly at such points identified in the pathways. Failsafe points in programme design are identified at national level, and included in guidance (NHS National Screening Committee, Oct 2011). However, additional failsafe points in local programmes also need to be identified and documented. Systems for doing this were apparent during the review, for example with teams reporting 'right result' walkthrough exercises, tracking the flow of information along whole pathways, to ensure systems would ensure patients received full, timely and appropriate information.

10.21 The failsafe/risk management processes need to cover points along the whole pathway, eg:

- systems to check accuracy and completeness of eligibility data, especially when supplied by a third party
- systems should be in place to track 'hard to reach' groups and individuals who are geographically mobile
- systems for test sample and reporting where programme boundaries management do not align with organisation boundaries
- assurance that screening tests achieve agreed national standards of sensitivity and specificity
- systems not just check training has occurred, but that training has worked
- measures in place to ensure there is a clear relationship between the screening programme and health outcomes

10.22 During this review, it was the perception that good attention was given in general to failsafe processes, but that there was some patchiness in the balance of attention across the pathway. This was particularly with regards to the beginning and end of the pathway (see also SILs assessment of QA contribution at Figure 2).

10.23 Risks or incidents identified in one programme can exist in other programmes, so it is critical that learning points are identified and shared. QA teams need to be in a position to have an overview of all incidents, near misses and identified errors so they can pick up trends and negative events that may be indicative of further problems. QA teams are well placed to help interpret and advise on such issues, having an overall knowledge of pathways with some depth, and access to or knowledge of who professionally to draw on for more detail. QA team supported systems of professional support networks and multi-disciplinary training are important structures for disseminated learning directly to relevant staff.

10.24 Provider's own risk management and failsafe processes will be at the frontline of most incident management, and there are protocols to help identify where issues need to be escalated to involve commissioners. NHS England, in turn, has its own guidance as when to escalate risk and incident management in screening from

programme board level up the management chain. QA teams are given a role, through 7a specifications to support providers and commissioners, and particularly to have a role in systems for early warning and establishing triggers for action (NHS England, 2013).

10.25 The routes by which screening incidents are most commonly identified include:

- a specific event giving cause for concern
- routine internal QA processes, eg, collation of KPI data
- outcomes of periodic audit
- equipment or IT software problems
- external quality assurance processes (EQA)
- staff concerns
- complaints and user feedback
- adverse media interest

10.26 Consistent identification of such issues is more likely to be identified through ongoing connections with programmes, rather than through periodic visits (UK NSC QA, 2012).

10.27 Being proactive in systematically reviewing potential problems is an important role, therefore, for QA teams. The good practice observed being used by east midlands breast cancer QARC might be rolled out further. Here, a quarterly questionnaire asks all programmes to report all noted errors, near misses and incidents. These are followed up where not previously noted by the team, to ensure no further action is merited. The log then allows themes and trends to be identified and discussed (Figure 12).

Figure 12. Risk and incident management log by programme. (East Midlands breast cancer QARC)

Unit	No. of Reports	Categories
1	9	Equipment, Marker (2), Failed Assessment, Correct Results, Waiting Time Breach, Pathology grading, patient complaint, failure in mailing screening appointments (outsourcing company)
2	18	Incorrect Area Assessed, Incorrect Views, Marker (3), Radiology misinterpretation, Surgical Excision, False Positive, Correct Results (4), Incorrect Referral, specimen resections with no tumour/lesion (3) complex lesion with additional procedures
3	8	Population Fluctuation/failsafe, (2) Equipment, correct results (2), PACS, information governance breach, laboratory processing error
4	82	Staffing (8), Equipment/general (14), Lesion e.g. incorrect area assessed/treated, multifocality (6), Missed markers (6), failed/incomplete assessments (3), missed clinical signs(2), surgical e.g. surgical excision (5), correct results (6), data error (1), waiting time breaches (5), patient issues/co-morbidity(1), removal of lesion at biopsy(1), symptomatic service pressures (ongoing), radiation incident, radiologist low assessment workload/screen reading, MDT issues (5), PACS (4), SRL
5	22	Equipment (2), Lesion: incorrect area assessed/treated (2), markers (wire placement and surgery) (7 inc 1 sympto), patient complaint, 3 correct results, PACs, staffing – reduced screening
6	6	Pathology, Data Error, call/recall, error in invitation letters mailing (outsourcing company), MDT
7	18	Correct results(3), call/recall, 2 admin errors, staffing, 3 equipment (general), 4 mobile unit, radiography, failed/incomplete assessment, 2 attendances for mammography, mailing incident (synertec), incorrect cease
8	18	Equipment general (5), correct results (5), 1 incorrect referral, false negative screening assessment, missed lesion, PACS

10.28 Incident management makes up a significant amount of QA team time and resources, particularly for non-cancer QA. However, there appears to be significant variation in the criteria for, and level of, engagement and the point at which the incident is 'signed off' as closed. To some extent this is determined by provider and commissioner processes. However, there appear to be significant differences in the way incidents are managed locally or escalated up through PHE management, and this may be distorting perceptions of risk within the organisation. Standardising these processes across screening QA has been prioritised by the organisation, and draft guidance was being consulted upon in the timeframe of this review.

10.29 NHS England SILs were generally positive about the work together with QA teams on incident management. However, one interviewee did state that in his experience, many of the incidents were repetitively investigating similar issues. More time should be spent "designing out" problems.

Recommendations – incident/risk management and failsafe

Recommendation 27

- **Standard guidelines for incident management are already in development, and consulted upon. While capturing useful commonality between guidance to QA and NHS England screening teams, the guidance should not discourage systematic recognition of potential/near miss incidents by QA teams.**
- **Guidance on upward reporting/escalation/sign-off and communications should be standardised, however, to allow oversight on a like-for-like basis**

Recommendation 28

- **Attention to failsafe issues should extend consistently across the full pathway, starting with eligibility and inequality of uptake, and extending to verification of health outcomes, and user experience**

Recommendation 29

- **More unanimity and sharing of experience on incident management across screening QA programmes could be used to improve the potential to identify ways of 'designing out' recurring problems**

Networking, training and education

10.30 A substantial amount of time and effort is put in by QA team staff to bringing together screening programme staff across 'regions' creating a learning environment for the purposes of education, training; dissemination of guidance, and good practice, and sharing problems for resolution.

10.31 QARCS have a greater resource commitment to this because of the professional leads model, (see also section 6). It is usual for each profession/technical lead to run regular peer group meetings throughout the year. Several times a year these may be combined to include a half-day multidisciplinary meeting with an agenda of joint issues. The extent of the commitment is illustrated in Figure 13, which shows the range of meetings for breast cancer screening in north east. The programmes are generally well attended. Records of attendance are usually kept and any persistent non-attenders contacted by the lead to discuss reasons.

10.32 QADs and RQALs both organise multidisciplinary meetings for their different programmes, and these often draw in all stakeholders, in particular NHS England screening teams. These will concentrate on changes to guidance and standards, issues arising as a common theme across programmes, and in relation to new programme developments.

Figure 13. Breast cancer screening network meetings (north east QARC)

Standard	Additional Meetings
Breast Admin	Call/Recall
Breast Care Nurses	Breast Admin / Call/Recall
Joint Breast Admin/Radiographers	Imaging (PACS)
Medical Physics	Ultrasound
Pathology	
Radiographers	
Radiology	
Surgery	
Technical (Medical Physicists & Radiographers)	

Each QA group has two QA meetings per year   =   24
(with the exception of Radiography & Admin who have 4 meetings per year)
Extra meetings linked to QA Groups   =   8

Recommendations – networks and education

Recommendation 30

- **It is important that all QA programmes are funded appropriately to continue their professional networking and multidisciplinary educational programmes**

Recommendation 31

- **In particular, the value and impact of regular joint meetings run by each of the professional leads in cancer screening QA teams seems clear. These aim to support consistency in safe and effective delivery by ensuring that everyone is kept informed of developments and learning at the same time, and that there is the opportunity for benchmarking and sharing concerns and experience. They also provide an iterative direct link with national structures. These appear to be a strength of the current system, and it is recommended that they are continued, accepting that there may be some resource efficiencies in their conduct in some areas.**

Recommendation 32

- **Attempting to dismantle this system on the grounds of cost is likely to be damaging to the levels of engagement and performance of**

professional/technical groups, who have come to appreciate the level of support and professional leadership it provides. However, it may be possible to use experience across the regions to rationalise the frequency and organisation of meetings to best balance cost and effect.

11 Links between programme development and QA

11.1   It became clear during this review the extent to which all the screening programmes are dynamic, moving on substantially over the years, rather than maturing in delivery from a single initial blueprint. It is also clear what a substantial role both cancer and non-cancer QA teams play in the development. This developmental history is recorded as Annexe 6.

11.2   The development of programmes occurs in two main ways:

- the adjustment to programme standards, guidelines, toolkits and KPIs based on evidence and experience of practice
- changes to programme scope, eligibilities, components, and technologies

11.3   **Cancer programme development**: capitalises on the extensive local professional and technical networks of screening specialists brought together by the cancer professional leads at regional level. The shared experience is pulled together as a series of professional coordinating groups for each cancer screening programme reflecting the key specialties. These groups are often augmented by representation also from the other UK countries, and in some cases (eg, colon cancer) by representatives from Europe. The professional colleges and faculties are represented together with representatives from the cancer national office, and policy. The individual co-ordination group chairs also come together in multi-disciplinary advisory; evaluation and research committees.

11.4   Proposed changes emerging from these groups will already have been through discussion with the main policy advisory mechanisms, and so, historically, have had a good record of becoming nationally approved. There is then the advantage that local professional leads have full knowledge of the developmental history, and so are able to advise and support implementation of change through their local professional networks.

11.5   **Non-cancer programme development**: although recently based in different parts of the structure, there are still very close working relationships between programmes and regional QA leads. At the centre of this arrangement is a joint action meeting (JAM), at which representative RQALs meet programme leads. This is seen as a "pivotal" relationship, where there is a steady feed in of information based on data, incident management and visits can be triangulated and good practice identified, all as the basis for possible modified practice. Developing policy can be tried out with RQALs as a "sanity check". Other specialist professional

inputs are drawn from a programme advisory group with experts drawn from technical and academic bodies. Outputs from JAMs are taken to a senior management group for non-cancer programmes for approval. These structures and processes are seen to lack complexity and to work well. "Clear blue water" is maintained between programmes, operationalizing the changes and QA teams, providing 'independent' assurance of their appropriate, effective and safe implementation.

11.6   The spectrum of programme developments from evolving standards, indicators, technologies and programme components is constantly emerging, and the mechanisms described enable the development of programme consensus in formulating advice. However, those mechanisms have not completely adapted to the new organisational structures described earlier with DH responsible for policy, PHE for operationalisation and NHS England for implementation. In this structure NHS England receives funding to commission a service as specified (for PH programmes, by 7a specifications). It can be seen that emerging new standards or proposed changes to systems may well come at a cost. Commissioners will not wish to see 'creeping developments' occur without cost, and opportunity cost (against other potential priorities) being taken into account, and negotiated over.

11.7   It is therefore important that mechanisms are in place for any developmental proposals to be brought to commissioners for consideration, before being waved through. For substantial changes, this may require changes to the 7a specification itself. There will be a significant lead time for getting all necessary approvals through. There will, therefore, be a need to acknowledge a realistic timeframe or specification 'cycle' if changes are to be approved. A pilot of working through such a process has been under way for one of the non-cancer specifications, and important lessons have been learnt from this. It has also reportedly substantially improved relationships across the organisational divide, having an open process for discussion.

11.8   It will be important that the need for such 'extra' steps in the development process is made clear and transparent. It has recently been believed that proposals are disappearing into a 'black hole', constituting unacceptable delays, holding back desired change and improvement. There may indeed be inefficiencies that need ironing out, and more transparency should help to clear the way for improvement.

Recommendations – QA and programme development

Recommendation 33

- **That the different national mechanisms whereby cancer and non-cancer screening works with programmes to generate new developments, and changes to standards, guidelines and KPIs, is clarified and made transparent:**
  - **that a final common decision making pathway for both systems is established whereby significant proposed changes, eg, to standards, KPIs, technology and techniques are approved through NSC/NO/PHE**
  - **that where necessary the process to negotiate changes and their resourcing with NHS England is also clarified**
  - **this may involve clarification of a negotiating annual cycle revolving around the 7a specification 'refresh', which teams may regard as helpful**

Recommendation 34

- **That within this process (see recommendation 33) there is a clear scheme of delegation, common to all screening programmes, indicating the level of proposed change not requiring the above level of sanction.**

12 Organisational governance

12.1   All screening programmes, and the screening QA programmes that accompany them, have been accredited through the same fastidious process by the UK national screening committee, which provides advice through the national chief medical officers. As the advice was accepted, DH developed it as policy, established a line of funding and devised the appropriate programmes that were then implemented by the NHS. Programme development was carried out in two distinct parts of DH, with those for cancer developed under a particular national office for cancer screening.

12.2   Following the reorganisations resulting from the health and social care act 2012, the responsibilities for screening changed, so that:

- DH – responsibility for screening policy
- PHE – responsible for screening operationalisation
- NHS England – responsible for screening implementation.

Key representatives of the three bodies meet as a tri-partite group to oversee the process, which includes quality assurance.

12.3   Under the new arrangements, the distinct processes for operationalising cancer and non-cancer screening programmes, and managing the processes for quality assurance, both lay in the health and wellbeing directorate of PHE. This, ultimately, will facilitate the processes for developing more consistency across QA programmes and for driving up quality of QA itself based on evidence and experiential best practice. However, currently, with different governance arrangements still in place for cancer and non-cancer programme development and QA, there is an evident nervousness, concern and confusion in QA teams about the situation. Particular concerns include:

12.4   Culture and influence: the strength of leadership from the national office over many years, and a tremendous record of success in driving developments and solving problems, is strongly acknowledged across the system. However, some perceive that the national office has become somewhat isolated during the recent reorganisations. Meanwhile, non-cancer services, which have emerged more recently, and reorganised even more recently, have done so as part of more mainstream realignments. In so doing they have been able to adjust to current context along the way. Different sources have referred to non-cancer screening and QA as feeling more "modern", or in tune with current NHS thinking and practice.

12.5   In addition, organisational structures are currently differentially branded, with cancer charts looking distinctly different in style to non-cancer, which seems more in tune with the overall PHE style, and seemingly more mainstream. Within those structures, there are strong and direct leadership links between non-cancer programmes/QA and UK NSC, and perhaps a bias in the QA integration project leadership towards those with a non-cancer QA background. In cancer QA circles there is a concern that they will be disadvantaged by this moving forward, if the developing leadership is unbalanced, with less understanding of the reasons cancer screening QA has developed the way it has.

12.6   Some members of cancer QA teams also feel disadvantaged by the variability of some of their structures and processes, arising from their development under ten different regional organisations. They are concerned that this is seen as a fault, and an awkward problem to be corrected, rather than a natural result of historical development, with opportunities to bring together a wide range of good practice. In contrast, the four non-cancer regions developed together with a more common model, and are seen as more streamlined and consistent, and as a result, more 'in favour'.

12.7   Finance/resourcing: some non-cancer team members suggested that they thought cancer teams were better resourced, with larger teams and smaller geographies to cover. In turn, cancer teams were worried that this perception would lead to a differential stripping out of resource from their teams, either to make necessary savings for the whole of QA or to trim them down to a leaner model, which might be inappropriate for their 'more complex' screening programmes.

12.8   It will be important to recognise the concerns and perceptions such as those captured above as important issues to manage in the future. The stated aim for screening QA staff to now regard themselves as part of one system will need to deal with these and other issues transparently. There needs to be a unified strategy and system of internal communications to ensure that information is received evenly across the organisation.

12.9   Structural organisational charts are seen to emphasise differences between the 'worlds' of cancer and non-cancer screening. While there are, as described earlier, significant differences between the way screening QA for cancer and non-cancer relate to their respective programmes structures, all do fall under the umbrella of PHE. All national screening programmes, commonly, have required approval from the UK NSC. Currently the difference between the UK NSC and the non-cancer screening office does cause confusion. The opportunity does arise, with the development of the QAEG to place this at the heart of the new structure, of drawing together the cancer and non-cancer components, so that although, still with their

substantial differences, there is more symmetry about their places in the organisation, eg, Figure 14.

Figure 14. Stylised screening QA organisational chart: balance and symmetry
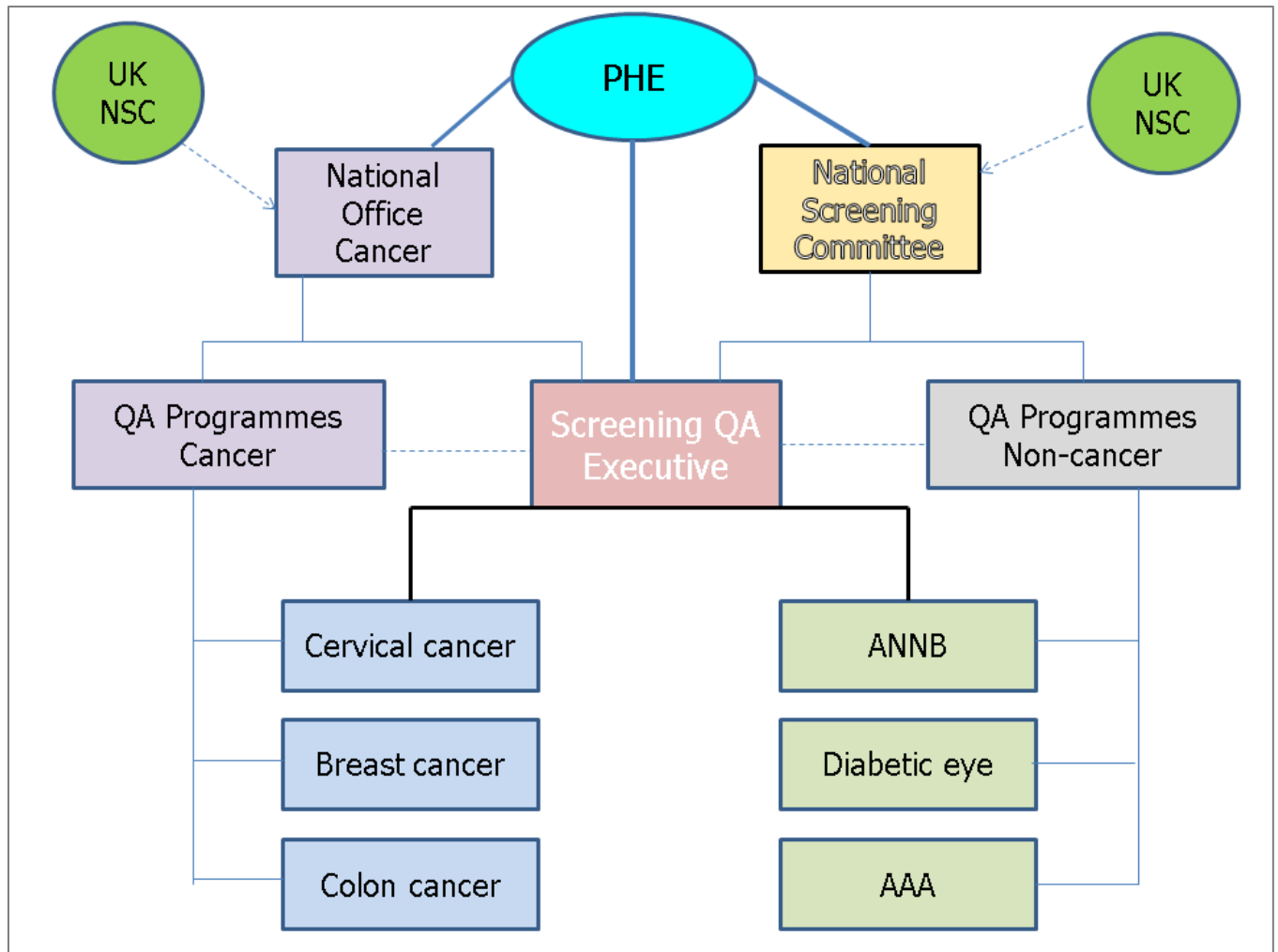
Recommendations – organisational governance

Recommendation 35

- **The bringing together of QADs and RQALs as an integration group with a national QA integration lead is perceived to be an excellent move, and already appears to be having psychological and practical benefits. There would be benefit in capitalising on this by producing a simple, conceptual organisational chart, emphasising more balance between cancer and non-cancer systems. Without too much detail, with a common style, branding and logo (within PHE guidelines), this could show:**

- **balance under the umbrella of national screening committee and PHE leadership**
- **through this, linkage with tripartite arrangements with DH and NHS England**
- **team relationships with their relevant programme development**
- **system linkage through QA executive group**

Recommendation 36

- **The process towards achieving this would need to clarify some inter-relationships, particularly those involving national office (cancer screening and prevention) and the differential ongoing management of the operationalisation of non-cancer programmes by the national screening committee.**

Recommendation 37

- **There needs to be a unified strategy and system of internal and external communications to ensure that information is received evenly across the components of screening QA organisation.**

Recommendation 38

- **Stakeholder mapping is needed, to pinpoint internal teams with whom screening QA has important links, eg KIT; communications, and raise awareness within QA teams.**

13 Population responsibilities

13.1   Screening programmes are population health initiatives. It is important, therefore, that operationalizing them, and the screening QA programmes that accompany them, has been made the responsibility of PHE. Population health programmes are not just about running services. Concentrating on service effectiveness, safety and experience can produce excellent service outcomes. However, unless there is also a focus on how the population uses the services, and is supported to do so, then there will not be good population level outcomes, and there will be inequity in the benefits and outcomes of the programmes (Bentley, 2011).

"Screening programmes need to focus on population outcomes, rather than a high quality service for the minority." (SIL) (38% uptake on bowel screening in parts of London)

"Further significant gains in (cervical screening) outcome won't come from tightening up screening delivery. They will come from improved uptake, and we can't do that." (QA colposcopy lead)

13.2   Focus on poor uptake/coverage seems to be a particular and consistent weakness in QA screening work. Poor uptake is also probably mirrored by significant dropout from screening pathways by members of some 'hard to reach' population segments. While registering data on uptake and coverage, QA teams advice and support on the issue is patchy and variable.

"We look at uptake in our assessments, but if it is poor we don't know what to advise." (QAM)

13.3   Addressing problems of identifying and informing eligible populations, improving coverage/uptake figures, and addressing inequalities in uptake are stated requirements placed on commissioners and providers in the 7a specifications. It should therefore fall to QA teams to identify, advise and support where there are deficiencies, and lack of progress. This would be necessary if screening QA 'addresses the whole pathway' and 'makes commissioners and providers accountable' as claimed in section 2 of this report.

13.4   There are examples of good practice in different organisations, some involving a range of PHE employed staff, such as:

- screening sector in NHS England London convenes a screening uptake and coverage board to work with local teams
- PHE-C in south central has commissioned work with the academic sector on evidence based process for improving uptake
- north west bowel cancer QARC produced a detailed analysis of which mosaic segment groups were not taking up invitations to screening. Segment insight work then provided the basis of health promotion programmes across Greater Manchester.

13.5   Much work can and should be done to improve uptake from a programme service perspective. This will include validating registers of the eligible population, accommodating 'churn', making sure information pamphlets and invitations are written with target populations in mind, and ensuring access issues such as venues and opening hours are suitable. However, the component of 'informing' populations about programmes is much more than about leaflets.

"Some people won't tend to come without persuasion however good the flipping leaflets are".

13.6   Reducing inequalities in appropriate service use is likely to require multifaceted strategies that are locally owned. Poor uptake from a given segment group may well apply to a range of (screening and other) programmes:

- where in local systems would such strategic planning take place?
- in the current context, who would bring what to the table? Who has the knowledge, resources and the levers?

13.7   In relation to poor uptake in some segment groups such as those with poor socio-economic background and certain ethnic minority groups, low levels of engagement will be common in relation to a range of health and social services. Local authorities, and now particularly their public health staff, will be working on targeted community engagement, infrastructure and leadership projects. These might be harnessed to support issues such as poor screening and immunisation uptake.

13.8   However, currently, concerned DsPH claim that they are not being provided with necessary information to allow them to identify groups with poor uptake (health equity audits), and not being engaged in programmes to allow them to provide softer local intelligence to improve performance.

"We know our population, but no longer get to contribute. They sent the breast screening unit to a rural area during lambing season. We know that many women won't do anything else then." (DPH)

There is major crossover with other public health programmes, and work may already be under way on these, but screening programmes are not tied in:

- antenatal booking before ten weeks poor in some groups
- poor uptake by older men for healthchecks (and bowel screening)
- detection and registration of diabetes with GP
- young women with high risk behaviours poor uptake of HPV vaccine (and cervical screening)

13.9   A significant part of the uptake/coverage component of screening does not directly sit with healthcare, but rather with those having population responsibilities. 7a specifications give NHS England a role to improve coverage and equity of uptake. Screening QA programmes might be expected to provide depth of expertise to offer advice and support in this area as with other elements of the pathway. However, most do not feel well equipped in this area. Unlike other areas of the screening pathway, local services do not have connections into any form of professional co-ordination or advisory group. This is surprising, since PHE, as the national public health service, should be ideally placed to provide such a mechanism.

Recommendations – population responsibilities

Recommendation 39
- **There would appear to be a need to strengthen screening QA focus on uptake/coverage, equity of uptake and outcome and distribution of benefit/harm.**

Recommendation 40
- **PHE 'owns' screening operationalisation, as a population health measure. It should be well placed to provide a focus for evidence collation, appraisal and guidance on addressing uptake. This could then provide the basis of practical constructive support and advice for QA teams (and SITs) as well as to other, relevant population health programmes.**

Recommendation 41
- **In conjunction with Recommendation 40, there would then be benefit in creating, as an outlet for the collated expertise, a professional co-ordinating group for improving uptake and pathway completion, alongside other screening professional co-ordinating/programme advisory groups developed for different components of the pathways. In similar ways, this would provide a strong link between national leadership/policy and local implementation.**

Recommendation 42

- **The possible roles and responsibilities of key players for screening programme elements that are not directly commissioned as NHS (eg LA/PH; HWB; HPC), and so not covered by the 7a specifications, need to be clarified in principle. This might be issued as complementary guidance to the 7a specification enabling screening. Among other benefits, this would help clarify the role of screening QA outside the parameters of the current specification.**
- **PHE could facilitate 'internal' discussions involving its employed screening QA, PHE-Cs and public health staff in (NHS England embedded) screening and immunisation teams to:**
    - **identify and strengthen appropriate roles and relationships. (see also Recommendation 19)**
    - **provide equal access to appropriate evidential and guidance materials**
- **This would enable more coherent joint-working, and a greater consistency of communications in support of local inputs, to increase local benefits from screening programmes.**

14 Summary of recommendations

Definition of common elements to screening QA programmes

Recommendation 1

- Organisational development, seeking to optimise effectiveness, efficiency and manageability of screening QA, might initially build a common language and culture, based on factors such as:
    - common understanding of unique selling points
    - common (generic) operational framework
    - common elements of an organisational model:
        - professional leadership and support
        - data and intelligence management
        - system engagement (local relationships)
        - QA core team
    - common basis of working methods
    - addressing common concerns about governance issues
    - common barriers to best population impact

Shared understanding of QA

Recommendation 2

- There is a fairly consistent idea of the nature and unique selling points of QA across a full range of staff working in cancer and non-cancer QA teams. This appears to be largely echoed by peers from NHS England working alongside them. This could be developed into a single statement of the role and purpose of QA, which would address one of the key concerns arising from respondents – the current perceived lack of clarity and direction about their role, responsibilities and interactions with other partners, such as area teams.
- This statement would need to emphasise the screening QA role in 'facilitatory improvement' as part of quality assurance, as opposed to a regulatory or performance management function.

Recommendation 3

- Screening QA, in recent reorganisations, appears to have lost its facility to directly 'assure' the population served about the uptake, access, safety, effectiveness and outcomes of population screening programmes, as it is required to do. Working with peer agencies, the mechanisms to restore these direct links, particularly to local authorities (and their public health) and CCGs, should be established and agreed on a national basis. These could be captured

as part of a working framework document agreed with peer agencies. Local implementation of the necessary arrangements should then follow.

Recommendation 4

- PHE policies on sharing of data and reports, relevant to these processes, should be reviewed where possible to enable such moves, and the practical consequences clearly communicated with the field teams.

A core operational framework

Recommendation 5

- That a single clear core operational framework is developed and agreed across screening QA, based on a generic structure for the screening programmes themselves, but allowing for justifiable agreed variations by programme (see Annexe 4).

Recommendation 6

- That such a framework be used to identify 'add-ons', eg, research projects; pilots; developmental work by team. This is not to suppress innovation/good practice, but to safeguard business capacity.

Recommendation 7

- That the framework is used to develop a process to more objectively assess and benchmark the effectiveness of QA programmes as part of the management of their own quality.

Recommendation 8

- That screening QA as a single service considers how it should strengthen its mechanisms of assurance on how programmes systematically capture and analyse user experience to drive improvements in service. Resulting advice and support should capitalise on developments and best practice within the NHS as it seeks to 'raise the bar' on expectations in this area (see also recommendations 39-41).

Recommendation 9

- To date, the impact of the QA screening programmes has not been systematically measured or evaluated. This could be addressed by:
  a) a retrospective assessment, with examples of the evidence of impact of the programmes (see Annexe 5)
  b) a prospective programme of evaluation based on routine data and audit

Recommendation 10

- It is critical that there are clear lines of escalation whereby concerns arising across programme teams in relation to 'interpretation' of specifications and other guidance are seen to be addressed within and beyond PHE, and guidance on how QA teams should consistently manage agreed and disseminated.

Professional leadership and support

Recommendation 11

- That the current models of provision of professional/technical expertise within screening QA provide a variety of solutions to a range of different problems. In the future these should be applied on the basis of need/ appropriateness rather than culture (cancer/non-cancer). This will result in a 'mixed economy' of solutions across screening QA practice.

Recommendation 12

- There would appear to be a strong case for carrying on using a model where there is continuous engagement of lead professionals in teams, with infrastructures for ongoing engagement of provider screening professionals, applied in particular circumstances. This would apply particularly where there are large numbers of local practitioners, relying particularly on professional/technical skills to make key judgements, and where there are complex arrays of developed standards to be assured.

Recommendation 13

- Currently, the professional lead arrangements in QARCs are fundamental parts of the 'fabric' of the multidisciplinary team model. They are also at the centre of local screening professional infrastructures providing day-to-day advice and support, valued networks for communication, education, debate, benchmarking and sharing good practice. Full consideration needs to be given to the value of these arrangements in any structural reorganisation.

Data and Intelligence Management

Recommendation 14

- That a professional systems analysis approach is taken to map out the necessary data flows to properly support quality control, assurance and improvement in screening programmes. With a QA team focus, the flows to within PHE should be mapped, but also those to commissioners and the population served.

Recommendation 15

- Drawing in this analysis, work within PHE to ensure that advice and support is provided to assist, rather than impede, the safe and effective use of data to protect user and population health. This should encompass data protection, data sharing and publication and information governance, but with a 'can do' approach.

Recommendation 16

- Principles of data asset ownership and data flows should be established and clearly stated and communicated to relevant stakeholders at national and local levels. They could also be captured within the generic operating framework, working framework documents, etc.

Recommendation 17

- The differences between data needs to serve distinct purposes should be acknowledged in solutions:
  - aggregated data to assure population and organisational level indicators and outcomes
  - linked person level data to assure safe and effective systems

Both will be necessary for effective QA programmes.

Recommendation 18

- Opportunities should be explored to automate menial tasks such as the linkage of datasets and matching of user data along pathways. This may be done efficiently at national level, freeing up skills of local teams to focus on focal analysis and interpretation.

System engagement

Recommendation 19

- It would be useful to establish structural maps for each of the PH screening programmes (such as that in Figure 7), based on the 7a specification, and augmented and agreed in consultation with representatives of the major players. Responsibility for this could be shared by topic across the regional QA teams.

Recommendation 20

- Based on the generic QA operational framework, establish a generic working framework document to be agreed between QA teams and NHS England screening and immunisations teams, encompassing unique contributions of each; interdependencies; rights and responsibilities. This would emphasise the different roles of regulation, performance management and facilitatory improvement:
  - sections within a WFD would need to cover information and data sharing; risk assessment and mitigation; follow-up of action plans from QA visits; management of incidents and communications.
  - generic WFDs might be augmented to reflect needs of specific screening programmes (fixed and variable sections)
  - in due course, similar WFDs may be developed with other relevant commissioners (CCGs, local authorities)

Recommendation 21

- It would be useful to initiate some joint organisational development and learning on core practice across cancer and non-cancer teams. With much discussion about 'levers', refresh on the practical principles of change management might be a useful starting point.

Recommendation 22

- Screening QA, as it goes forward as a 'single service' should actively explore lessons from other parts of healthcare that might appropriately be adapted to QA practice, eg, total quality management, focus on care bundles.

QA core team

Recommendation 23

- It would be useful to agree and specify the key competencies of leadership in screening QA teams. These are essentially similar in cancer and non-cancer, but distributed differently across non-cancer regional QA leads and cancer QA directors; non-cancer external QA leads and cancer professional leads.

Recommendation 24

- Business planning support and administration are critical in both systems, although demands are different and changed through transition. It will be important to tailor sufficient support to emerging team, operational frameworks based on best practice, and realistic workload assumptions.
- It will be important to model use of RQAL and QA lead time to ensure that adequate and effective ongoing input and support is possible across the geography. (See also section 10 – risk management approaches).

Risk management

Recommendation 25

- Screening QA should have its own formalised risk assessment and management protocol(s):
  - a broadly standardised assessment process agreed across the programmes would link to a generic operational framework
  - this would be built on the triangulation of multiple inputs, including hard and soft intelligence
  - QA risk assessments would be shared with NHS England, and shared intelligence would form part of the triangulation
  - team work plans would demonstrably be connected to risk assessments

Multidisciplinary visits

Recommendation 26

- Agree standard guidance on management of visits, with fixed and (programme) variable components:
  - model desk review for visit preparation
  - organisation, preparation and conduct
  - standards for content and quality of the report and recommendations
  - all recommendations to be based on statutory guidance and standards
  - quality of feedback, based on change management principles
  - formal follow up on action plan, agreed with local SIL and programme board (who and how)

For each programme type, there is the potential for 'variable' sections to 'spec up' based on best practice.

Incident/risk management and failsafe

Recommendation 27

- Standard guidelines for incident management are already in development, and consulted upon. While capturing useful commonality between guidance to QA and NHS England screening teams, the guidance should not discourage systematic recognition of potential/near miss incidents by QA teams.
- Guidance on upward reporting/escalation/sign-off and communications should be standardised, however, to allow oversight on a like-for-like basis.

Recommendation 28

- Attention to failsafe issues should extend consistently across the full pathway, starting with eligibility and inequality of uptake, and extending to verification of health outcomes, and user experience.

Recommendation 29

- More unanimity and sharing of experience on incident management across screening QA programmes could be used to improve the potential to identify ways of 'designing out' recurring problems.

Networks and education

Recommendation 30

- It is important that all QA programmes are funded appropriately to continue their professional networking and multidisciplinary educational programmes.

Recommendation 31

- In particular, the value and impact of regular joint meetings run by each of the professional leads in cancer screening QA teams seems clear. These aim to support consistency in safe and effective delivery by ensuring that everyone is kept informed of developments and learning at the same time, and that there is the opportunity for benchmarking and sharing concerns and experience. They also provide an iterative direct link with national structures. These appear to be a strength of the current system, and it is recommended that they are continued, accepting that there may be some resource efficiencies in their conduct in some areas.

Recommendation 32

- Attempting to dismantle this system on the grounds of cost is likely to be damaging to the levels of engagement and performance of professional/technical groups, who have come to appreciate the level of support and professional leadership it provides. However, it may be possible to use experience across the regions to rationalise the frequency and organisation of meetings to best balance cost and effect.

QA and programme development

Recommendation 33

- That the different national mechanisms whereby cancer and non-cancer screening works with programmes to generate new developments, and changes to standards, guidelines and KPIs, is clarified and made transparent:
  - that a final common decision making pathway for both systems is established whereby significant proposed changes, eg, to standards, KPIs, technology and techniques are approved through NSC/NO/PHE
  - that where necessary the process to negotiate changes and their resourcing with NHS England is also clarified
  - this may involve clarification of a negotiating annual cycle revolving around the 7a specification 'refresh', which teams may regard as helpful

Recommendation 34

- That within this process (see recommendation 33) there is a clear scheme of delegation, common to all screening programmes, indicating the level of proposed change not requiring the above level of sanction.

Organisational governance

Recommendation 35

- The bringing together of QADs and RQALs as an integration group with a national QA integration lead is perceived to be an excellent move, and already appears to be having psychological and practical benefits. There would be

benefit in capitalising on this by producing a simple, conceptual organisational chart, emphasising more balance between cancer and non-cancer systems. Without too much detail, with a common style, branding and logo (within PHE guidelines), this could show:

– balance under the umbrella of national screening committee and PHE leadership
– through this, linkage with tripartite arrangements with DH and NHS England
– team relationships with their relevant programme development
– system linkage through QA executive group

Recommendation 36

- The process towards achieving this would need to clarify some inter-relationships, particularly those involving national office (cancer screening and prevention) and the differential ongoing management of the operationalisation of non-cancer programmes by the national screening committee.

Recommendation 37

- There needs to be a unified strategy and system of internal and external communications to ensure that information is received evenly across the components of screening QA organisation.

Recommendation 38

- Stakeholder mapping is needed, to pinpoint internal teams with whom screening QA has important links, eg, KIT, communications, and raise awareness within QA teams.

Population responsibilities

Recommendation 39

- There would appear to be a need to strengthen screening QA focus on uptake/coverage, equity of uptake and outcome and distribution of benefit/harm.

Recommendation 40

- PHE 'owns' screening operationalisation, as a population health measure. It should be well placed to provide a focus for evidence collation, appraisal and guidance on addressing uptake. This could then provide the basis of practical constructive support and advice for QA teams (and SITs) as well as to other, relevant population health programmes.

Recommendation 41

- In conjunction with Recommendation 40, there would then be benefit in creating, as an outlet for the collated expertise, a professional co-ordinating group for improving uptake and pathway completion, alongside other screening professional co-ordinating/programme advisory groups developed for different

components of the pathways. In similar ways, this would provide a strong link between national leadership/policy and local implementation.

Recommendation 42

- The possible roles and responsibilities of key players for screening programme elements that are not directly commissioned as NHS (eg, LA/PH; HWB; HPC), and so not covered by the 7a specifications, need to be clarified in principle. This might be issued as complementary guidance to the 7a specification enabling screening. Among other benefits, this would help clarify the role of screening QA outside the parameters of the current specification.
- PHE could facilitate 'internal' discussions involving its employed screening QA, PHE-Cs and public health staff in (NHS England embedded) screening and immunisation teams to:
  - identify and strengthen appropriate roles and relationships (see also Recommendation 19)
  - provide equal access to appropriate evidential and guidance materials
- This would enable more coherent joint-working, and a greater consistency of communications in support of local inputs, to increase local benefits from screening programmes.

Annexe 1 – independent reviewer biography

Professor Chris Bentley FRCP; FFPH

As a London qualified doctor, Chris Bentley migrated into population health via practice in East Africa (with save the children fund and UNICEF), London, Sussex and Sheffield/South Yorkshire, where he was director of public health. He lead the health inequalities national support team, which worked with the 70 most deprived areas of England with the poorest health (spearhead areas), and based on this work, provided ongoing policy advice to the DH on population health issues. He now works as an independent consultant, with contracts at local, regional and national level, and with the World Health Organization in Europe. He has been appointed by the secretary of State for Health as chair of the technical advisory group to the advisory committee on resource allocation. He is a non-executive of Derbyshire community healthcare NHS foundation trust, and a visiting Professor at Sheffield Hallam University.

Annexe 2 – independent review specification

Review of quality assurance service for NHS screening programmes

Early engagement project

Purpose

This paper outlines the project specification for an external, independent view of the delivery of quality assurance services for all NHS screening programmes in England. The project is an important element of an overall review which aims to create a QA service fit for purpose for the new NHS commissioning landscape, building on existing good practice.

Background

From 1 April 2013, the cancer and non-cancer screening quality assurance (QA) teams became part of Public Health England (PHE). Historically they have worked independently. The transition into PHE provides an opportunity to reshape QA teams into a single strong and effective service and the health and wellbeing directorate's striding forward programme provides the context for this review. Our review will rely upon the contribution and advice of our partners within and outside PHE crucially including colleagues working in NHS England, clinical commissioners, professional and academic experts, users, patients and their representatives.

The project

Early engagement with the wide range of stakeholders is key to understanding current delivery, best practice, potential for the future, and possibly varying expectations of the quality assurance function. This project aims, through engaging directly with stakeholders, to identify:

- desirable outcomes of the quality assurance function
- current good practice which could be more widely applied
- analysis of the strengths and weaknesses of current delivery models

Methodology

The independent reviewer will design a methodology that ensures accurate representation from the wide range of organisations and individuals with an interest in the quality assurance of screening programmes. Suggested stakeholders include:

- national and regional commissioners of screening programmes
- public health leads
- QA regional leads
- QA co-ordinators
- QA data managers
- staff and organisation management of screening programme providers, including laboratories
- user/patient representative groups

Deliverables

- identification of the most desirable outcomes of the quality assurance function for NHS screening programmes in England
- identification of current good practice which could be used across the QA function
- identification of strengths and weakness across current QA function
- provision of independent expert advice to the QA review project board

Annexe 3 – interviews

The following people were engaged in the review, either through 1:1 or small group interviews, or as part of centre-based focus group discussions.

QA reference centres (cancer)

East of England

#	Name	Job title
1	Dr Christine Hill	Acting QA director
2	Jullien Brady	Acting QA director (cervical)
3	Jo Slater	Deputy QA director
4	Simon Wrathall	IM&T technical engineering specialist
5	Sarah Flower	QA co-ordinator, cervical screening QA
6	Bev Collins	Data audit officer, breast screening QA
7	Graham Phillips	Senior applications engineer

West Midlands cancer and East Midlands bowel and cervical

#	Name	Job title
1	Philippa Pearmain	Cancer screening QA director (West Midlands bowel screening and East and West Midlands cervical screening)
2	Olive Kearins	Cancer screening QA director (West Midlands breast screening and East Midlands bowel screening)
3	Emma O'Sullivan	QA co-ordinator (breast screening QA West Midlands)
4	Sarah Askew	QA co-ordinator (cervical screening QA East and West Midlands)
5	Beverley Campbell	QA co-ordinator (bowel screening QA West Midlands)

Professional QA leads – West Midlands cancer and East Midlands bowel and cervical

#	Name	Job title
1	Dr Steve Smith	Bowel cancer screening hub director
2	Dr Steve Ferryman	Cervical screening QA pathology lead
3	Jill Walker	Cervical screening QA call and recall co-ordinator
4	Margaret Casey	QA co-ordinator for breast care nursing (West Midlands)
5	Dr Alison Duncan	Joint breast screening QA co-ordinator for radiology (West Midlands)
6	Dr Sally Bradley	Joint breast screening QA co-ordinator for radiology

#	Name	Job title
		(West Midlands)
7	Dr Esther Paisley	Breast screening QA co-ordinator for medical physics (West Midlands)
8	Dr Dave Rowlands	Breast screening QA co-ordinator for pathology (West Midlands)
9	Dr Zoe Vegnuti	Breast screening QA co-ordinator for radiography (West Midlands)
10	Sheila Roath	Breast screening QA co-ordinator for screening office management (West Midlands)

East Midlands breast

#	Name	Job title
1	Mark Sibbering	QA director
2	Jacquie Jenkins	Deputy QA director
3	Rebecca Whittingham	Deputy QA director
4	Dr Rahul Deb	Pathology co-ordinator East Midlands
5	Gill Baxter	Radiology co-ordinator East Midlands

London

#	Name	Job title
1	Jan Yates	QA director
2	Theresa Freeman-Wang	Interim QA director
3	Sonya Narine	QA co-ordinator
4	Tony Robson	QA co-ordinator
5	Paola Beresh	Deputy QA co-ordinator
6	Roisin Moloney	Deputy QA co-ordinator
7	Jorge Marin	Data audit officer
8	Tom Duggan	Data audit officer
9	Sarah Javaid	Data audit officer
10	David Jeansoule	Data audit officer
11	Reena Patel	Data audit officer

South East Coast

#	Name	Job title
1	Linda Garvican	QA director
2	Mike Ryan	Breast screening QA programme manager
3	Carol Barber	Cervical screening QA programme manager
4	Cathy Bate	Bowel screening QA information manager

North West

#	Name	Job title
1	Billie Moores	QA director
2	Tony Maxwell	QA director (breast)
3	David Holt	QA co-ordinator (bowel)
4	Pam Cumming	QA co-ordinator (breast)
5	Ruth Stubbs	QA co-ordinator (cervical)
6	Natalie Hill	Deputy QA co-ordinator (bowel)
7	Yvonne Browne	Senior project manager (cervical)
8	Kathryn Green	Senior information officer (breast)
9	Mike Wall	IM&T technical engineer (cervical)
10	Liz Heaton	QA facilitator (bowel)
11	Jayne Williams	Quality manager (cervical)

North East, Yorkshire and the Humber

#	Name	Job title
1	Keith Faulkner	QA director
2	Julie Bradman	Bowel Yorkshire and the Humber admin and data QA Lead
3	Ann Buxton	Bowel pathology QA lead
4	Pauline Carder	Breast deputy pathology QA lead
5	Anne Graney	QA co-ordinator (breast)
6	Pauline Martin	QA co-ordinator (breast)
7	Laura Micklefield	Audit officer
8	Mary Murphy	QA co-ordinator (bowel)
9	Andrea Ormond	Office manager
10	Mary Ritchie	Bowel North East SSP QA lead
11	Sarah Whitley-Ainsworth	QA co-ordinator (cervical)
12	Michelle Wilson	Budget manager
13	Mandy Winterbottom	Senior audit officer/quality manager
14	Allison Wise	Breast administrator QA lead

South West/South Central

#	Name	Job title
1	Karin Denton	QA director
2	Mike Rowell	QA manager
3	Carole Davis	Deputy QA manager (cervical)
4	Alison Mayer	Information and development manager (breast)
5	Kim Lea	Breast QA facilitator
6	Louise Groth	Bowel QA facilitator

#	Name	Job title
7	Maxine Pitman	Business lead
8	Steve Gore	Endoscopist (bowel)
9	Liz Pitcher	Medical physicist (breast)

QA regions (non-cancer)

Midlands and East

#	Name	Job title
1	Jane Woodland	Regional QA lead
2	Annette Pilkington	Senior QA manager antenatal and newborn screening
3	Julie Till-Wylie	Regional QA manager young person and adult screening
4	Suzanne Jefford	Regional business officer

London

#	Name	Job title
1	Jan Yates	Regional QA lead
2	Shahjalal Ahmed	Senior QA manager (adult)
3	Denise Dixon	Office manager/senior administrator
4	Modupe Omonijo	Regional QA manager (adult)
5	Angela Dietrich	Senior QA manager (ANNB)
6	Allison Thompson	Regional QA manager (ANNB)

North East, Yorkshire and the Humber

#	Name	Job title
1	Amanda Grange	Senior QA manager
2	Kristin Bash	Senior QA manager
3	Hannah Bruntnell	Regional QA manager
4	Rebecca Al-Ausi	ANNB screening QA manager
5	Jane Scattergood	QA manager
6	Sheila Miller	Regional screening QA manager
7	Kim Moonlight	Senior QA manager

South

#	Name	Job title
1	Morag Armer	Regional QA lead
2	Robin Davis	Senior QA manager
3	Nina Cook	Regional QA co-ordinator
4	Deborah Seago	Regional QA manager

#	Name	Job title
5	Siobhan O'Callaghan	Senior QA manager

Chairs of professional groups/professional QA leads

#	Name	Job title
1	Prof Philip Quirke	NHS breast cancer screening programme pathology committee – Leeds
2	Mark Sibbering	QA director East Midlands (breast) QARC
3	Dr Julie Cooke	QA radiologist and chair of the national co-ordinating committee for QA radiologists (breast)
4	Derek Cruikshank	Colposcopy QA chair North East, Yorkshire and the Humber
5	Trevor Hair	Joint QA chair for pathology North East, Yorkshire and the Humber

Screening and immunisation leads

#	Name	Job title
1	Sally Floyd	Screening and immunisation manager, North East, Yorkshire and the Humber area team, NHS England
2	Dr Adrian Brown	Principle screening and immunisation lead, London area team, NHS England
3	Shyla Thomas	Screening and immunisation lead, East Anglia area team, NHS England
4	Paula Jackson	Screening and immunisation lead, Thames Valley area team, NHS England

Peer reviewers/external QA leads

#	Name	Job title
1	Tim Lee	Consultant vascular surgeon
2	Gillian Vafidis	Consultant ophthalmic surgeon and clinical lead Brent diabetic eye screening programme

Directors of public health

| #	Name	Job title
1	Dr Judith Hooper	Director of public health, Kirklees Council
2	Dr Mercy Vergis	Consultant in public health (medicines), Kirklees Council
3	Professor Rod Thomson	Director of public health, Shropshire Council

QA review project board

#	Name	Job title
1	Kevin Fenton	National director, health and wellbeing
2	Julietta Patnick	Director, NHS cancer screening
3	Jenifer Smith	Centre director South Midlands and Hertfordshire, PHE
4	Kate Davies	Head of public health, armed forces and their families and health and justice commissioning, NHS England
5	Anne Mackie	Director, UK National Screening Committee
6	Dorian Kennedy	Deputy director, sexual health, screening and sponsorship, DH
7	Jane Halpin	Chair, NHS England screening assurance group / area director, Hertfordshire and South Midlands, NHS England

Others

#	Name	Job title
1	Mathew Jordan	IT strategy and operations manager (cancer screening IT specialist)
2	Mary Kean	Senior quality improvement manger, national screening committee national QA
3	Sue Cohen	National QA integration lead
4	Valerie Armstrong	Deputy QA lead national
5	Di Harker	Head Of quality assurance national cancer screening programmes
6	Giri Rajaratnam	Deputy regional director, Midlands and East of England, PHE
7	Dr Jem Rashbass	IT governance/national director disease registration
8	Imogen Stephens	Consultant in public health strategy
9	Trisha Hymas	Clinical governance coordinator/public health strategy
10	Chris Carrigan	Director of the national cancer intelligence network and information services
11	Anne Stevenson	National programmes lead screening, YPA (AAA and DES)

Annexe 4 – generic framework of key objectives for screening QA programmes
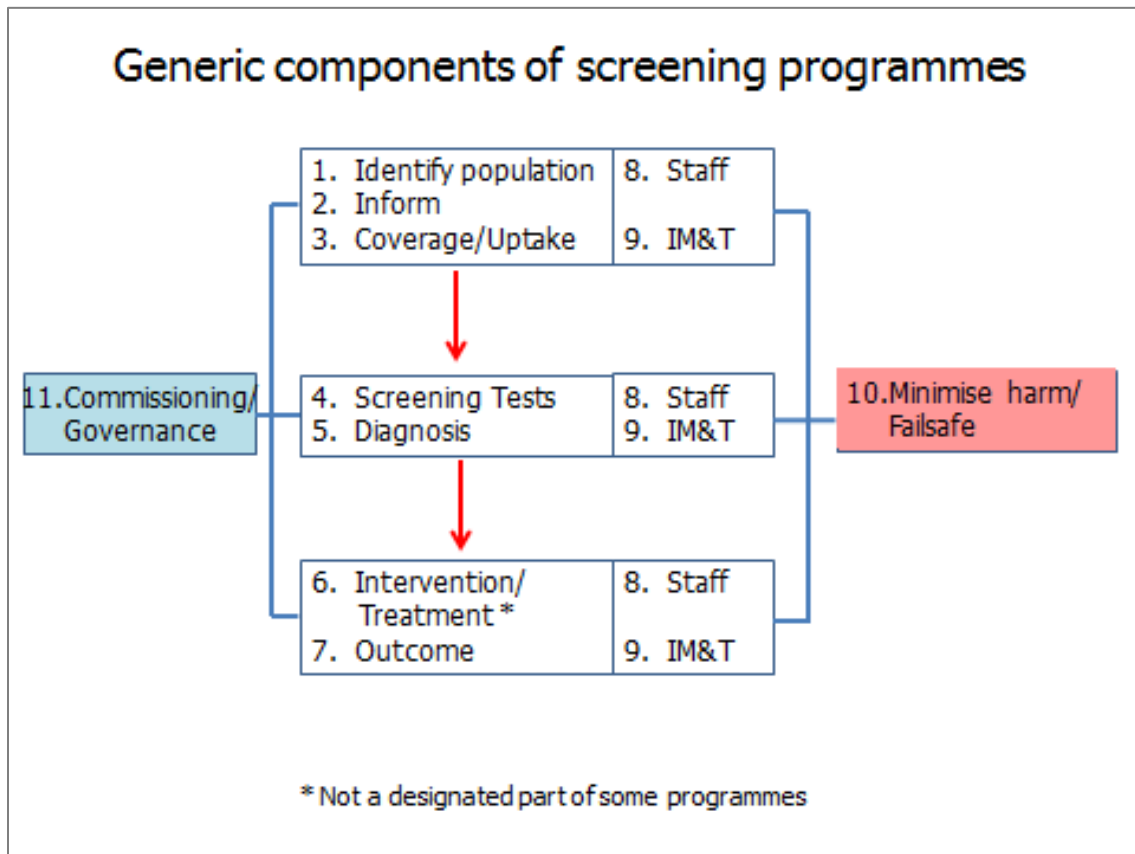
Generic screening objectives – block 1

1. Identify population
    a. Local policies/procedures/systems clearly document criteria for eligibility, exclusions and transfers in
    b. There are auditable systems in place to accurately identify and record the eligible population

2. Inform
    a. All eligible population are given UK NSC developed literature, in an accessible format:
        • before screening
        • for screen positive results
        • where there is a confirmed diagnosis
    b. The offer consent or decline is obtained and documented
    c. That systems of analysis and equity audit are used to identify elements of the population with consistently low levels of uptake

    d. That forms of inquiry are initiated to identify barriers to uptake

    e. That supplementary programmes of education and support are provided to enable properly informed choice in target groups

3. Coverage/uptake
    a. The eligible population for screening who are tested. Coverage KPIs are collected and recorded for all programmes
    b. The population who are offered and accept screening are tested
    c. Ensure failsafe systems are in place to demonstrate those eligible and accepting screening have had the test in a timely manner and those not screened have chosen to decline the offer of screening

4. Screening tests
    a. Screening tests are performed as defined by the UK NSC.
    Each screening programme to specify relevant KPIs to be collected and recorded
    b. Documented procedures specify the required quality and failsafe processes (sampling, identification and tracking through the pathway, investigation, analysis, internal and external quality control, interpretation, reporting and release of data)

5. Diagnose
    a. Documented procedures specify the required quality and failsafe processes (sampling, identification and tracking through the pathway, investigation, analysis, internal and external quality control, interpretation, reporting and release of data)

6. Intervention/treatment
    a. Clinical referral is initiated and confirmed in line with UK NSC guidelines, eg, in a time frame which facilitates an effective intervention and optimises choice
    b. Relevant KPIs are collected and recorded

7. Outcome
    a. There is a system in place to record in an auditable manner the outcome for each individual with a screen positive result
    b. Participants are informed of results
    c. Provision of outcome data on each phase of the pathway which supports evaluation of screening programmes:
        – proportion of the eligible population choosing to uptake on offer
        – proportion of those choosing to uptake offer completing the screening test and receiving a result
        – objective follow-up on screen positives and false negatives

- population level outcomes, screened and non-screened
    d. Equity impact assessments of outcomes by protected equity group

8. Staff: education and training
    a. Named individual(s) (specified in job description) coordinate and oversee the delivery of a local training and development programme
    b. Training needs are assessed, delivered, recorded and audited annually
    c. Staff are appropriately trained and supported by UKNSC continuing professional development and skills frameworks, enabling them to develop their skills, competencies, and potential. Only approved/accredited training courses should be used

9. IM&T
    a. IT systems are able to support the programme and to supply data for the purposes of national standards and KPIs in a timely manner
    b. IT systems are able to perform failsafe checks
    c. Responsive systems are in place to support audits or data relating to locally or nationally agreed internal quality assurance processes
    d. Information can be made available in a timely manner in the event of a serious incident, investigation of a complaint, or for a quality assurance exercise. This should be capable of tracking individual patients along the whole screening pathway
    e. Results of appropriate external quality assurance exercises are shared by providers with commissioners and quality assurance teams

10. Minimising harm/failsafe
    a. Failsafe: there are mechanisms in place, in addition to usual care, that identify errors in the screening pathway and ensure action is taken before they cause harm
    b. Providers and commissioners should manage screening incidents in accordance with UK NSC and PHE guidance
    c. Lessons from screening incidents are shared and used to improve the screening pathway by 'designing out' flaws in the systems
    d. User experience and feedback is systematically sought and appraised, and influences service delivery and programme improvement

11. Commissioning/governance
    a. **Compliance with screening programme specification:** Commissioner-led screening programme boards and provider screening coordination / oversight groups are responsible for ensuring all screening programmes are commissioned and delivered according to national service specifications

b. An understanding of the population served. Uptake and coverage, successful completion of testing and diagnosis as well as appropriate outcomes should be used to inform service planning/commissioning

c. Evidence that commissioners and providers have reviewed service provision in accordance with NHS equality delivery system, in order to ensure equitable access to, and outcomes from, screening

d. **Governance across screening pathway** especially where this crosses organisational boundaries – evidence of having a clear policy that demonstrates the accountability at each part of the screening pathway

e. **Commissioning level** – existence of commissioning led screening programme board with senior level membership to oversee the commissioning, governance, performance and quality of programmes across all screening pathways

f. Screening programme board can demonstrate effective reporting arrangement with boards of constituent organisations such as provider trusts, commissioners and public health oversight arrangements such as health and wellbeing boards

g. **Service/provider level** – trust arrangements to oversee the effective performance and quality of all UK NSC/DH recommended screening programme pathways delivered in whole or part by the trust. There should be evidence of senior leadership including clear lines of accountability and responsibility with reporting arrangements to the trust board via governance structures. There should be clear reporting links to the commissioning led screening board programme pathways delivered in whole or part by the trust

Annexe 5 – charting impact of QA screening programmes

The following are examples being pulled together of the likely impact of screening QA programmes on screening outputs and outcomes. (Source: QA executive August 2014)

1. Breast screening programme: reducing unnecessary interventions

NHSBSP – breast screening programme – offers women aged 47 to 73 years old a breast screening test (mammogram) every three years

Using nationally set standards combined with regular local monitoring, QA teams have improved the quality of BSP services by reducing the number of unnecessary interventions, and the associated harm. A comparison of the UK and US breast screening services in 2003 found that QA had:

- reduced recall rates in the UK to about half that of the US
- decreased the proportion of open biopsy compared with percutaneous biopsy (and less invasive test) in the UK, leading to far fewer false positives associated with biopsy intervention than in the US
- maintained detection rates for breast cancer in the UK at the same level as in the US

Since that paper was published, further evidence has demonstrated an improvement in detection rates from just 5.5 per 1,000 women in 1995 to 8.4 in 2012-13, facilitated by QA monitoring and support.

2. Cervical screening programme: improving the accuracy of the test

NHSCSP – cervical screening programme – offers women between the ages of 25 and 64 a screening test (liquid-based cytology) every three to five years

Since 1996, QA has supported education programmes and regional cytology training schools approach for laboratory analysis – this ensures tests are precise and the correct women are identified for further tests.

By setting standards, monitoring compliance, and supporting training and professional development of staff, QA ensures that colposcopy identifies the women who need treatment, and thereby:

- reduces the incidence and prevalence of cancer
- minimises the burden of unnecessary treatment
- removes the lifelong morbidity and associated financial burden of preventable cancer

3. Bowel cancer screening programme: improving staff accuracy

NHSBCSP – bowel cancer screening programme – provides people aged 60 to 69 years old with a screening kit every two years

QA works with laboratories to monitor the consistency and stability of the positivity rate for faecal occult blood (FOB) test, avoiding unnecessary workload for screening centres – an increase in screen positive rates from 2% to 3% increases screening centre work by 50%.

Using detailed routine data, QA provides comparative performance monitoring for individual endoscopists (screeners looking for changes following a positive FOB test result) on colonoscopies and bowelscope flexible sigmoidoscopies, including:
- adenoma detection rates, which are crucial for disease detection
- withdrawal times and other factors likely to impact on patient satisfaction

QA builds on staff successes and strengthens skills further by facilitating learning through regional professional meetings.

4. Foetal anomaly screening programme (FASP): reducing miscarriages

FASP offers tests to pregnant women for Down's syndrome and physical anomalies in their unborn baby

Taking a QA approach to FASP has avoided 147 miscarriages of healthy pregnancies per year associated with prenatal diagnosis for Down's syndrome?[1] This was achieved by the FASP programme reviewing the quality of tests in the screening programme to minimise variability in the parameters used to estimate risk, leading to:
- increased detection rate of down's syndrome from 75% to over 80%
- decreased screen positive rate from over 5% to below 3%

5. Newborn blood spot screening programme (NBSP): reducing repeat tests

NBSP offers babies tests for a range of rare but life-threatening disorders

Using QA in NBS means 1,388 fewer families had their baby retested in 2011/12 compared with the previous year. This was achieved by the NBSP collecting data to identify the issues associated with, and provide education and training for staff in, avoidable repeat sampling – a rate of 3.1% in 2010/11 – leading to:
- fewer babies undergoing a re-bleeding test, and reduced associated costs
- faster entry to care through reduced delays in providing results

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[1] Estimate based on 70% of pregnant women opting for screening and 70% of screen-positive women opting for prenatal diagnosis (PND), with a 1% miscarriage rate following PND

- fewer families experiencing anxiety associated with repeat sampling

Taking this approach in the North West, working with services, commissioners and laboratories, 1,190 fewer babies were retested in 2012-13 compared with 2010-11, saving £60K.

6. Diabetic eye screening programme (DES): improving disease detection

DES offers diabetics aged over 12, an annual check to enable prevention/reduction of sight loss due to diabetes
QA has prevented sight loss in more diabetic patients by improving detection of retinopathy in all programmes.

It has been demonstrated that there are wide variations in sensitivity and specificity between local programmes and identified achievable improvements:
- a 5% improvement in sensitivity overall in the programme is equivalent to 6,500 extra cases of sight threatening disease detected
- a 5% improvement in specificity overall in the programme would save 6,500 unnecessary referrals to hospital eye services

Measures have been introduced to improve both sensitivity and specificity of grading and provide more accurate performance management tools to target poor grading.

7. Abdominal aortic aneurysm screening programme (AAA) – improving time to referral and treatment

AAA reduces mortality in the population of men aged 65 and over by ensuring timely specialist intervention and treatment.
Concerted action during 2013-4 by the AAA screening programme team and regional QA teams working with local programmes has led to a significant reduction in avoidable hospital delays and in breaches from all causes. Two weeks from positive screen to specialist appointment.

Two weeks from positive screen to specialist appointment
Q1 – 30 breaches with 26 due to avoidable hospital factors
Q4 – 15 breaches with seven due to avoidable hospital factors

Eight weeks from positive screen to operation
Q1 – 86 breaches with 43 due to avoidable hospital factors
Q4 – 70 breaches with 24 due to avoidable hospital factors

Deaths associated with waits for surgery should be reduced as a result of this initiative.

Annexe 6 – QA role in development of screening programmes

Developed for the external review by the QA executive group (RQALs and QADs)

Start year	Change/intervention	Period of roll out/change	Brief description of QA role
Bowel			
2006	Introduction of bowel cancer screening to first wave sites (following pilots)	Five years	QA function not in place until later years, so role in initial roll out limited
2010	Age extension starts (70-74 year olds)	Four years	QA to assess centres have met criteria for age extension. Provide advice to providers and commissioners on steps they need to take to be compliant
2013	Bowelscope first wave sites	Three years?	QA actively engaged and supported centres to develop plans. QA actively monitor and assess readiness for starting. QA report monthly to national office on status of screening centres in their area. Support sharing of lessons across centres
2014	Introduction of FIT pilot (hub)		Limited, as only two QARCs affected. Monitoring impact on screening centres
Breast			
2002	Introduction of two view mammography	Two years	Introduced as part of the NHS cancer plan. QARC approved additional equipment requirements and revenue funding through treasury monies. Supported services in programme redesigning to meet the significant impact of these initiatives
	Breast screening age expansion (50-64 to 50-70)	Four years	
2003	Introduction of skills mix		Supported services in the development of this new ways of working through acting as a link to

Start year	Change/intervention	Period of roll out/change	Brief description of QA role
			external bodies such as workforce development confederations. Ran workshops and provided direct support through QA team members
	NBSS redevelopment	One year	Inputted into the development and roll-out of NBSS. Liaised as required with local IT departments. For some regions, this involved supporting services through a full change of IT systems, eg, Trent to NBSS
2006	Introduction of direct entry	Nine months	Represented a significant change in practice in most services. QA supported centres through the provision of training
2008	Breast screening programme age extension	Seven years	Introduced as a result of the cancer reform strategy. QA assess whether centres meet national standards for roll out. Provide advice to providers and commissioners on steps they need to take to be compliant. QA provide final sign off to service's application to expand
	Introduction of digital screening	Seven years	Introduced as a result of the cancer reform strategy. QA monitored performance through transition to ensure quality standards maintained. Also role in providing advice on equipment and its acceptability to the programme: eg, computerised radiography versus full field digital
	Incorporation of screening referrals into 62-day wait	One year	Introduced as a result of the cancer reform strategy. Supported services to develop a mechanism for ensuring that screening referrals were included into the 62-day wait measure.

Start year	Change/intervention	Period of roll out/change	Brief description of QA role
	Inclusion of surveillance for high risk women into the NHSBSP	Seven years	Introduced as a result of the cancer reform strategy. QA required to do eligibility reviews of services wishing to offer the service.
Cervical			
2001	Pilot of liquid-based cytology (LBC) started	2001-04	QA support to pilot sites and development of national guidance on implementation
2004	Decision to implement LBC and change to single national age range for England	LBC: 2004-08 Up to five years for full role out of age change, depending on previous local intervals	Involved fundamental laboratory change and reconfigurations. QA input varied across the country, eg, expert support to SHAs and providers with development of business cases, assessment of bids and input into service reconfigurations, facilitation of events/meetings through to direct project management of roll out and co-ordination of associated laboratory reconfigurations. Involvement in reprocurement, where applicable. QA networks used to communicate to all parties EQA scheme changed to LBC slides as laboratories converted.
2007	Start of national invasive cervical cancer audit	2007 onwards	QARCs collate extensive cancer and screening data for validation and onward transmission to cancer research UK (CRUK) for analysis. QA input involved setting up systems to collect the data, running workshops with stakeholders to roll out national guidance and systems. QA involvement in the national evaluation and audit management groups overseeing the audit and in dealing with queries and reviewing drafts from the CRUK team.

Start year	Change/intervention	Period of roll out/change	Brief description of QA role
2008	Achieving 14-day turnaround time for cervical screening specimens; led to further cytology laboratory reconfiguration	2008-10	QA support to pilot sites. QA input for commissioners and providers on meeting national requirements/local plans; support to share good practice via QA-led meetings and events for all professional groups and QA data analysis, eg, skyline plots. QA support to laboratory implementation of LEAN working practices, reconfiguration projects and reprocurement, where applicable
2008	Pilot of HPV triage and test of cure implementation started	2008-12	QA support to pilot sites and development of national guidance on implementation
2008	Cytology EQA scheme increased to two rounds each year (from one) and requirement for CPA accreditation of scheme	2008-ongoing	Each QARC developed detailed SOPs for all stages of EQA process next stage is transition to new UKAS accreditation scheme.
2009	HPV vaccination data linkage between CHIS and call and recall	2009 onwards	QARCs worked with PCTs and CHIS staff to ensure systems in place to transfer HPV vaccination data onto the cervical screening call and recall system. QA work involved running workshops, identifying networks and contacts and facilitating meetings and development of systems. Ongoing QA involvement in monitoring
2011	HPV triage and test of cure to be implemented by March 2012	2012-13; further update of protocol April 2014	Involved fundamental laboratory change and major reconfigurations. QA input for commissioners and providers on meeting national requirements. QA developed single national bid template and assessed bids before national sign off

Start year	Change/intervention	Period of roll out/change	Brief description of QA role
			QA support to laboratory reconfiguration projects and reprocurement, where applicable. Ongoing advice and support to both laboratories and colposcopists as unforeseen issues arise
2012	New terminology for cervical cytology started	2012	QA involvement in development of new guidance EQA marking scheme and test slides converted to new terminology
2013	Pilot of HPV primary screening started	Ongoing	QA support to pilot and expected involvement in development of national guidance on implementation should it be approved
2014 on-going	Reconfigurations continue: result is smaller numbers of much larger laboratories, some processing >100,000 tests each year	Ongoing	QA support to providers and commissioners as laboratories may now have to relate to eight or more colposcopy clinics.
Antenatal and Newborn			
2014	**Infectious diseases – new standards**	2014-15	National QA team providing framework for development and implementation of new standards
	Newborn bloodspot – reducing avoidable repeats	2014-15	National QA team leading development – regional QA will roll out
	Newborn bloodspot – introduction of newborn blood spot IT failsafe solution	2014-15	Regional QA hosting implementation events and providing local support to providers commissioners/updates at programme board and at QA-led network meetings

Start year	Change/intervention	Period of roll out/change	Brief description of QA role
	Newborn bloodspot – pilot extension of screening	Two years – preparation for pilot, pilot ran for one year Extension of screening starts in 2015	Regional ante-natal/newborn screening co-ordinators (preceded regional QA teams) developed the training resources for clinical staff in the pilot areas. Provide local support to providers/ commissioners/updates at programme board and at QA lead network meetings. National screening committee has approved the extension of screening to four more conditions following evaluation of the pilot. Regional QA will support this extension during 2014-15.
Pre 2014	**Fetal anomaly** – implementation of combined screening for Down's syndrome		Regional teams supported Implementation of combined screening for Down's syndrome.
2013-4	**Newborn hearing** – resources for neonatal units		Babies who spend over 48 hours in neonatal units are at significantly greater risk of being identified with hearing deficiency. This is a priority group for screening but its importance is not always appreciated due to the severity of other health problems. The national QA manager worked with NSC Information and education for the pubic and professionals (IEPP) team to produce resource for neonatal units to improve quality and reduce risks.
2013 - 2014	**Newborn infant physical exam** – supporting roll out of programme	QA teams will continue to support until all trusts are able to fully implement	Regional QA teams are supporting the roll out of this programme. This involves hosting regional events with the national programme team to promote the preferred IT system, contributing to development/pilot work re pulse oximetry, providing encouragement/support at QA-led network events.

Start year	Change/intervention	Period of roll out/change	Brief description of QA role
		NIPE	
DES			
2007	Roll out of programme	Two years	National QA team created. Supported service development. Provided input to programme on failsafe, training and creation of first programme workbook
2008	Test and training system launch	Ongoing	Introduced a system to provide online monthly self-testing and training for grading workforce as it increased from approximately 120 to 950 graders
2011	Introduction of common pathway	Four years	Project to improve the quality of performance data from programmes to properly inform standards development. Removing inherent data differences due to differences in patient pathway. Major project involving large software, reporting and operational change in local programmes, roll out supported by QA
2010	Ensuring all graders trained and accredited.	Seven years	Major initiative to ensure that all graders properly trained and accredited. QA team engaged in close monitoring to ensure all working graders had achieved examination pass in units seven and eight of city and guilds
2012	Revised test set for measurement of grader performance	Three years	National QA team developed and introduced reliable test for 1200 graders monthly. Statistical basis for size and content of test established. Reporting, performance flagging system and training support system to be rolled out in next year
AAA			

Start year	Change/intervention	Period of roll out/change	Brief description of QA role
2010	Providing support to programme roll out	Four years	Bespoke QA system used to support roll out of AAA

Annexe 7 – glossary of acronyms

AAA	Abdominal aortic aneurysm screening programme
ANNB	Antenatal and new born screening programmes (FASP, IDPS, NHSP, NIPE, NBSP, SCT)
BCSP	Bowel cancer screening programme
BSP	Breast screening programme/NHS breast screening programme
CCG	Clinical commissioning group
CQC	Care quality commission
CSP	Cervical screening programme
CSU	Commissioning support unit
DES	Diabetic eye screening programme
DH	Department of Health
DPH	Director of public health
DsPH	Directors of public health
EQAL	External QA lead
FASP	Foetal anomaly screening programme
GP	General practitioner
HPC	Health protection committee
HPV	Human papilloma virus
HWB	Health and wellbeing board
IDPS	Infectious diseases in pregnancy screening programme
IM&T	Information management and technology
JAM	Joint action meeting
KIT	Knowledge and intelligence team
KPI	Key performance indicator
LA/PH	Local authority public health
LAT	Local area team (NHS England)
LBC	Liquid-based cytology
NBSP	Newborn blood spot screening programme

NHS	National Health Service
NHSBCSP	NHS bowel cancer screening programme
NHSBSP	NHS breast screening programme
NHSCSP	NHS cervical screening programme
NHSP	National hearing screening programme
NIPE	Newborn and infant physical examination screening programme
NO	National office
NPCG	National professional coordinating group
NSC	National screening committee / UK national screening committee
PH	Public health
PHE	Public Health England
PHE-C	Public Health England centre
QA	Quality assurance
QAD	Quality assurance director
QAEG	Quality assurance executive group
QAM	Quality assurance manager
QARC	Quality assurance reference centre
QSG	Quality surveillance group
RQAL	Regional quality assurance lead
RQAT	Regional quality assurance team
SCT	Sickle cell and thalassemia screening programme
SIL	Screening and immunisation lead (NHS England)
SIT	Screening and immunisation team (NHS England)
UKAS	United Kingdom accreditation service
UK NSC	UK National Screening Committee
USP	Unique selling point
WFD	Working framework document
YPA	Young person and adult screening programmes (AAA, DES)

Annexe 8 – references

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