



The Scottish
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Riaghaltas na h-Alba

**CONSULTATION ON PROPOSALS
FOR A HEALTHCARE SCIENCE
NATIONAL DELIVERY PLAN**
AN ANALYSIS OF RESPONSES

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1.0 ABOUT THIS REPORT

This report provides an analysis of responses to the Scottish Government's 'Consultation on proposals for a Healthcare Science National Delivery Plan'. The Healthcare Science (HCS) workforce and appropriate stakeholders were consulted between June-September 2014 around a series of proposals discussed in this report.

1.1 BACKGROUND TO THE CONSULTATION

Healthcare scientists (HCSs) are an integral part of the infrastructure essential to the delivery of high-quality, safe and modern healthcare. They are the fourth largest clinical workforce in the Scottish Healthcare Service and contribute to 80% of all diagnostic decisions by providing information that underpins sound clinical decision-making with individual patients and their families in the context of advancing technology and increasing complexity.

Collectively, healthcare scientists in Scotland undertook over 60 million laboratory tests per year, 730,000 physiological measurements, and managed medical equipment across NHS Scotland with a replacement value in excess of £940 million.

Healthcare scientists already make a vital contribution to core healthcare provision across all sectors of the system. But with limited resources and rising demand, healthcare scientists have a duty to ensure they are working at the top of their clinical capability.

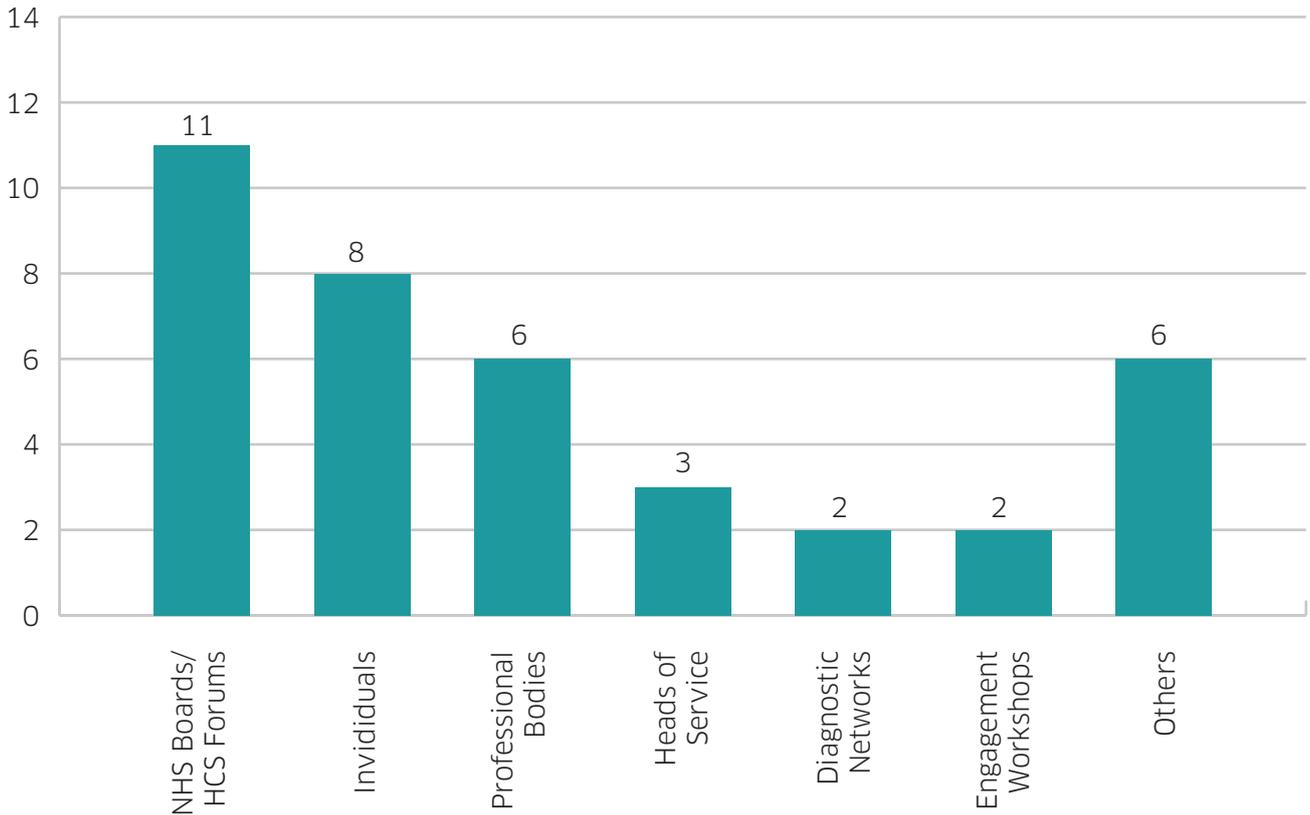
In a time of rapid change in the NHS, with ever-increasing demands on a finite resource, healthcare scientists are ideally placed to drive the innovation and improvement required to deliver more efficient and sustainable services for the future. NHS boards therefore need to fully harness untapped resources and include healthcare scientists in their planning and improvement work whenever possible.

The National Healthcare Science National Delivery Plan provides a unique opportunity to align the contribution of HCSs to the principles set out in the Healthcare Quality Strategy for NHS Scotland (Scottish Government, 2010), the 2020 Vision for Sustainable Quality in Scotland's Healthcare (Scottish Government, 2011) and the 2020 Route Map (2013). In particular, it seeks to maximise the contribution of HCS to a healthy organisational culture and help to create a sustainable, capable and integrated workforce with effective leadership and management.

1.2 OVERVIEW OF RESPONSES

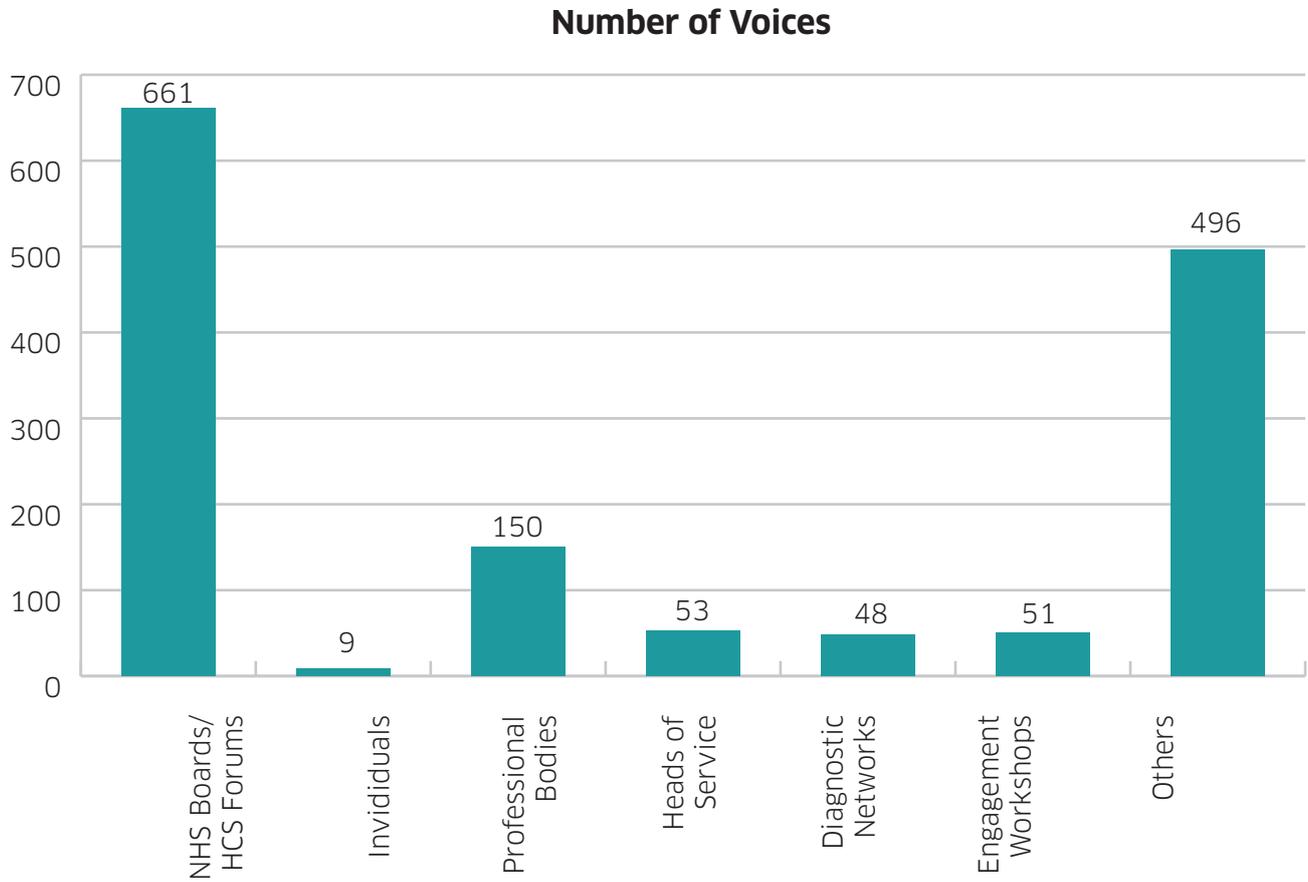
There were 36 response documents to the HCS National Delivery Plan (NDP) consultation, along with two engagement workshops. The graph below shows where these responses came from.

Where the Responses Came From



Graph 1 - Categories of respondents to the HCS consultation

It can be estimated that approximately 1500 'voices' contributed to the HCS NDP consultation. The graph below shows the number of voices who contributed from each area.



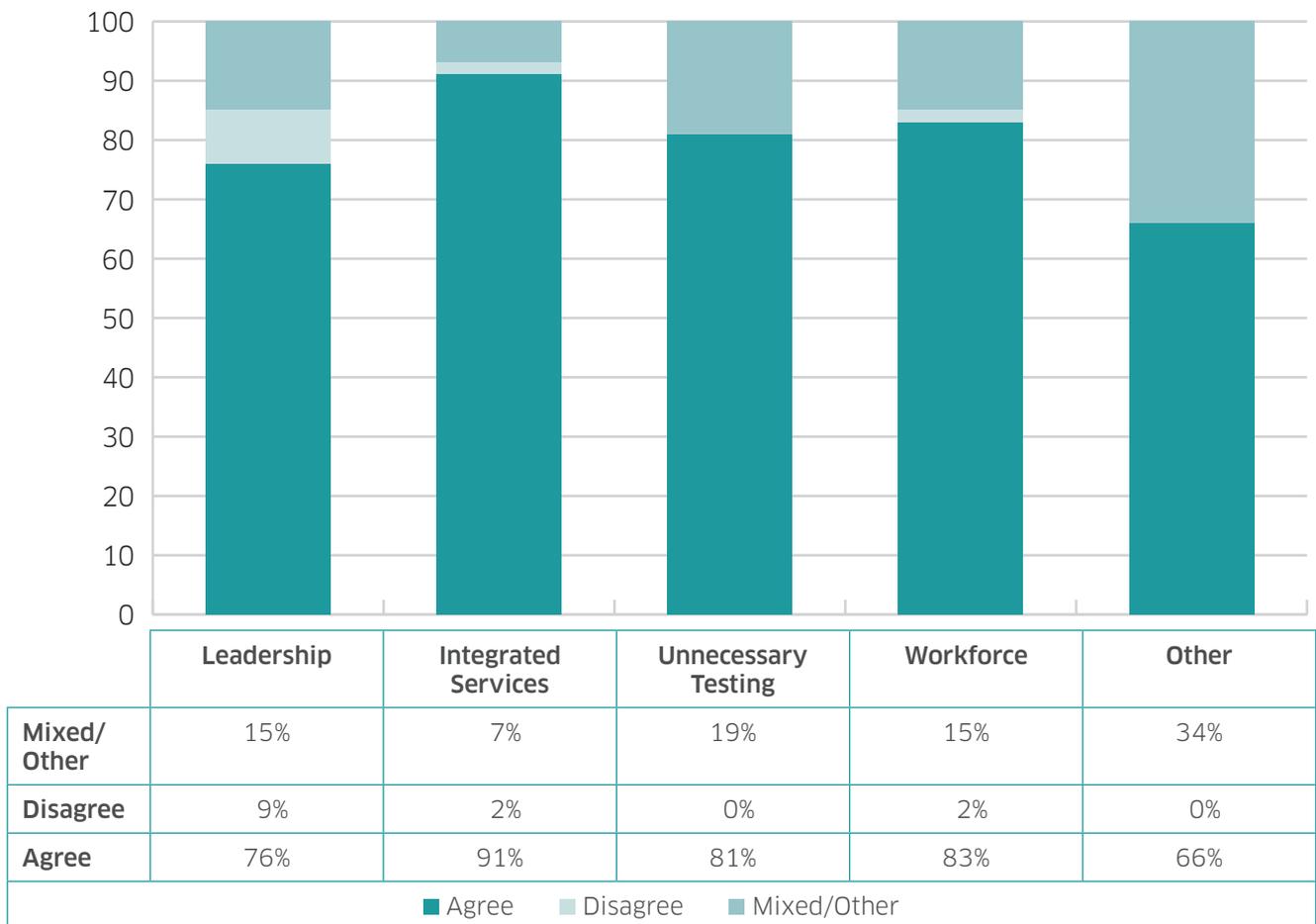
Graph 2 - Number of 'voices' within the categories of respondents

One individual paper did have the input from two persons.

Overall the consultation asked a series of questions and sets out a potential set of proposals. Graph 3 and 4 show the percentage and count (respectively), of respondents' replies where they stated an opinion. Opinion statement replies have been categorised as 'agree', 'disagree' and 'mixed'. Opinion statement replies can be with regard to any question and/or proposal set out in the consultation document. We have visualised this data further by splitting into specific work streams: Leadership, Integrated Services, Unnecessary Testing, Workforce, Other.

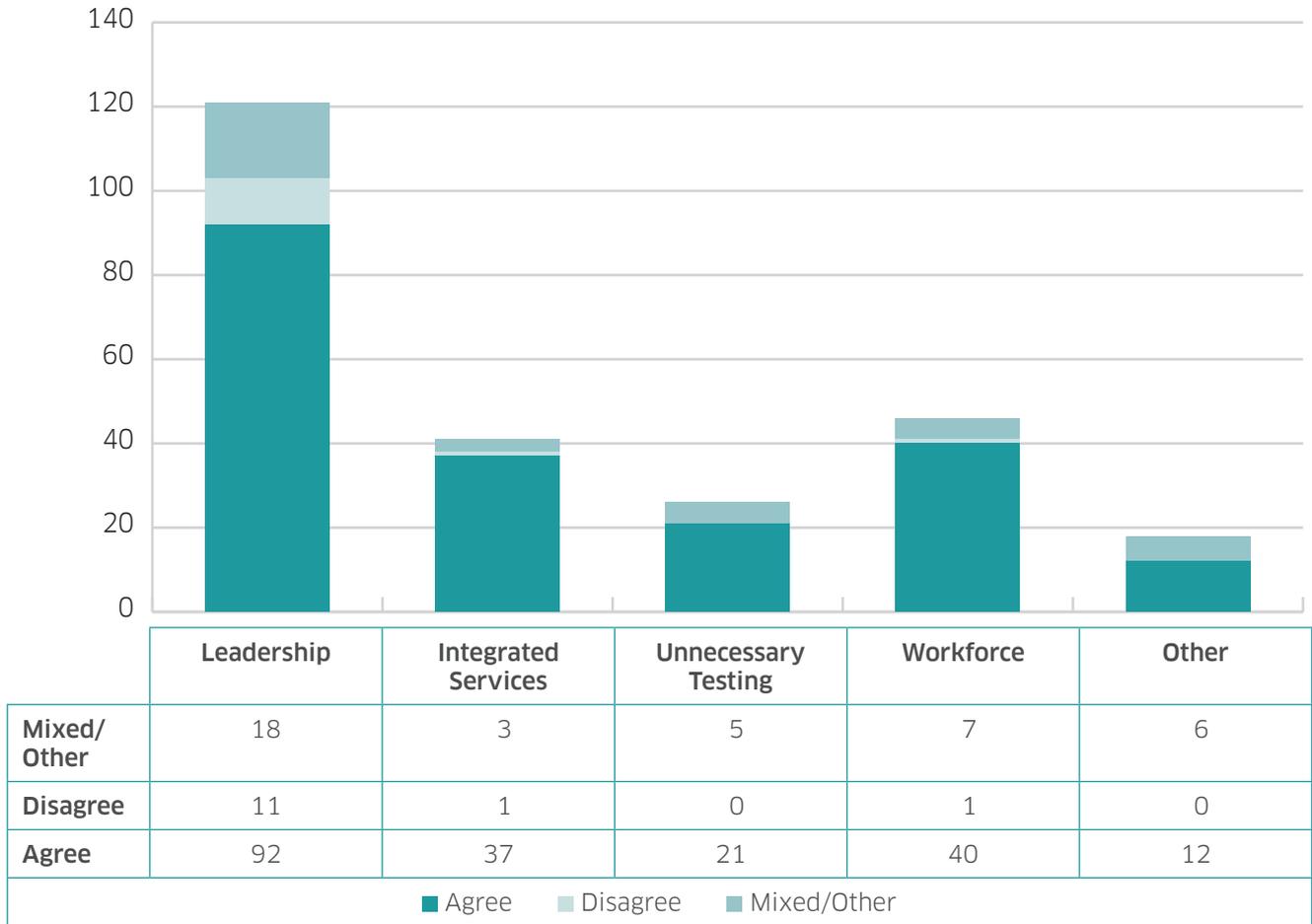
In general there was support for the overall theme of the consultation and the proposals being suggested.

Opinion Comments Per Theme - %



Graph 3 - Percentages of opinion comments received

Opinion Comments Per Theme - Count



Graph 4 - Number of opinion comments received

2.0 QUESTIONS AROUND LEADERSHIP, QUALITY AND INNOVATION

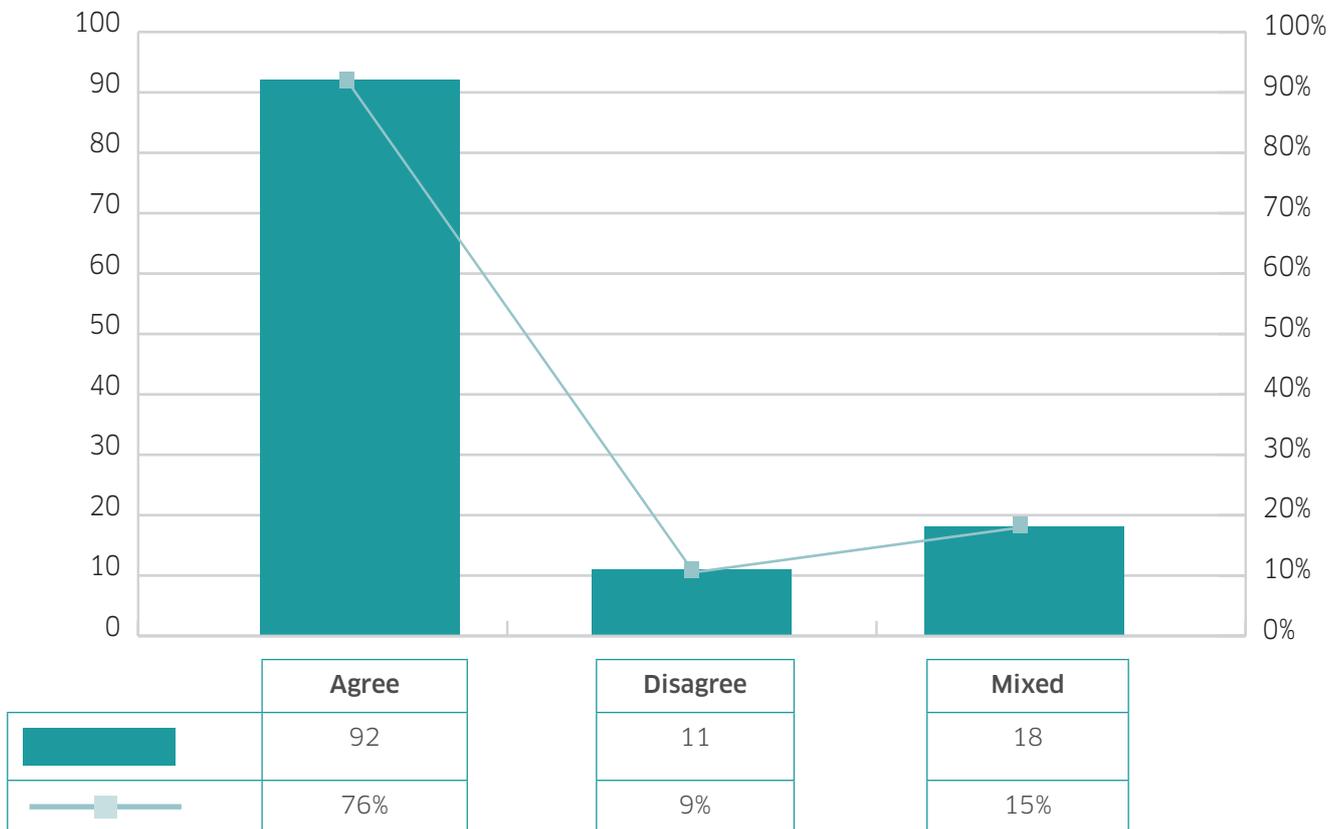
How can HCS best influence the improvement of patient care, utilising the quality tools at their disposal?

Are the right systems in place across HCS delivery?

If not, what can be done to improve the adoption of quality systems and reduce variation in their use throughout the patient pathway continuum?

How might we strengthen HCS leadership at strategic and operational levels to support innovation and promote the added value that HCS can bring to current challenges and priorities?

**Leadership, Quality and Innovation
Opinion Comments – Questions and Proposals**



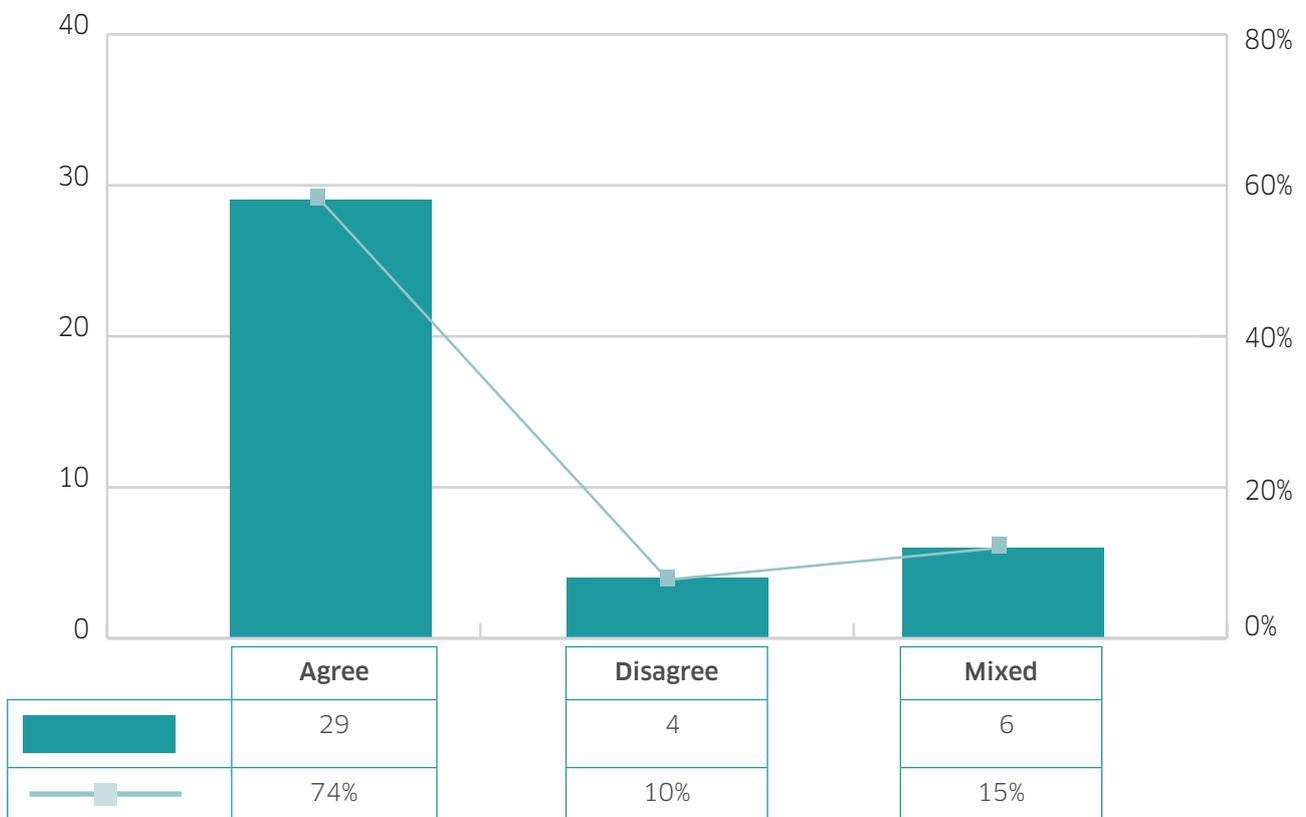
Graph 5 shows the percentage and count of respondents' replies on Leadership, Quality and Innovation on either questions and/or proposals. Opinion statement replies have been categorised as Agree, Disagree and Mixed.

2.1 SUMMARY OF WHAT YOU TOLD US AROUND LEADERSHIP

A significant majority of health board and professional bodies' responses were supportive of Healthcare Science Leadership in each board and the requirement for HCS forums. There was some concern that one HCS professional lead per board would be insufficient in the larger boards, representing significant numbers of HCSs and different services, potentially this also requires to be a full-time position.

One Healthcare Science forum felt very strongly that a HCS Director is vital for the delivery of the NDP proposals in conjunction with a full-time HCS lead.

Leadership Opinion Comments - Proposal Only



Graph 6 shows the percentage and count of respondents' replies on leadership proposals within the consultation document. Opinion statement replies have been categorised as Agree, Disagree and Mixed.

Significant responses highlighted *“that in boards where there is no HCS Lead and/or forum there is real disconnect”* between service providers and the board.

There were significant respondents that highlighted the potential for all of Healthcare Science to sit within a Healthcare Science Directorate; this centralised delivery would enhance the delivery of the national plan.

There was very much the requirement to be involved in board decisions, at an early stage when any service that requires a HCS contribution is being designed.

However, concerns were expressed that leadership development generally has been neglected within this workforce, more engagement between HCS and their stakeholders is required, in order for the HCS workforce to understand the challenges the NHS is facing.

Numerous respondents called for more engagement between HCS NDP and the work of the National Diagnostic Networks, there is potential that the *“network steering groups and developing infrastructure can become key groups placed to identify and address major sources of waste, variation and harm in service delivery nationally”*.

Significant number of respondents highlighted the support for leadership around Health Technology Management, with the requirement for an integrated point-of-care-testing (POCT).

The Royal College of Pathology (RCPath) and Institute of Physics and Engineering in Medicine (IPEM) highlighted work with the Modernising Scientific Careers Team for Higher Specialist Scientific Training (HSST), in order to provide a structure of training for clinical scientists to prepare them for consultant positions, there is a strong dimension of leadership and quality within HSST.

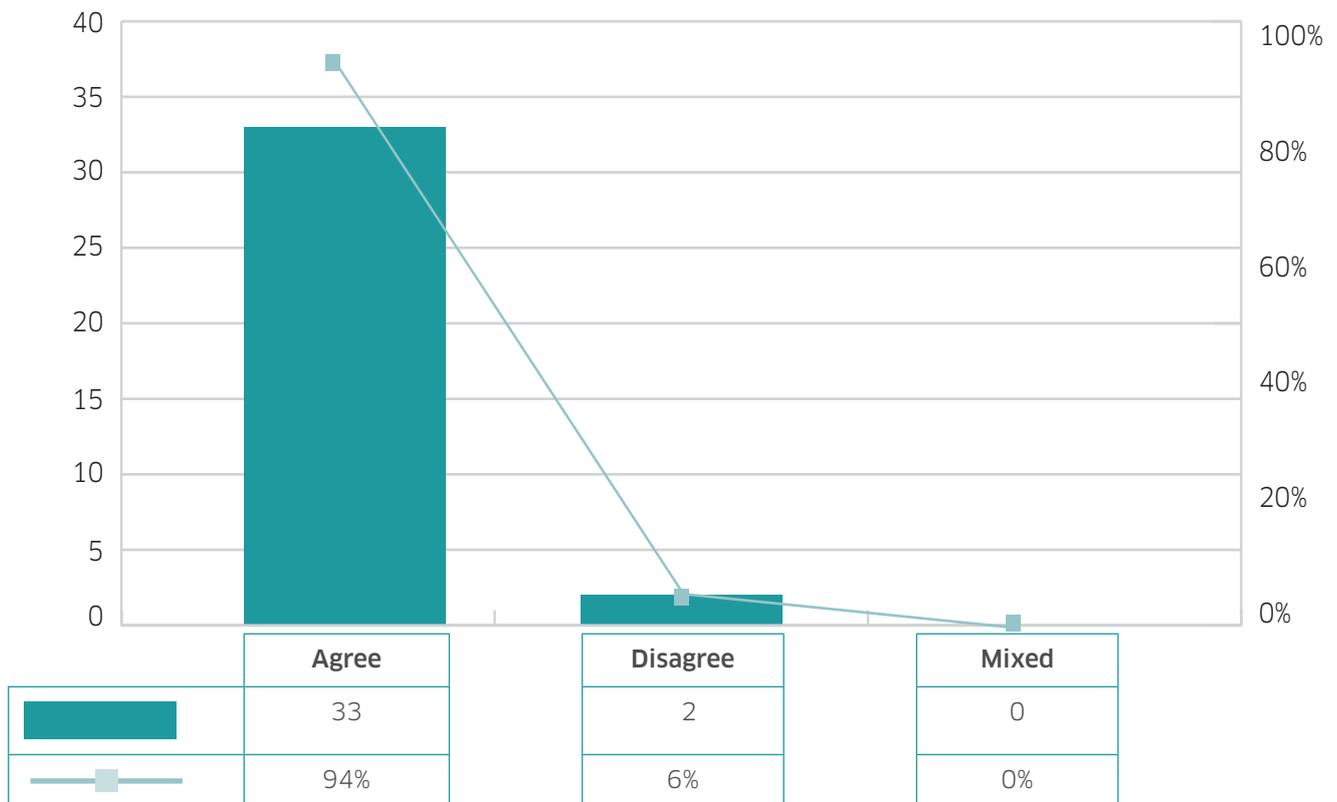
There was one individual response that does not agree with the approach of HCS professional and improvement leads and makes an alternative suggestion, that these responsibilities should be of the *“existing Heads of Healthcare Science Services”*, with one of the Head of Service acting as a spokesperson for HCS at NHS Board level. Also one ‘group’ response had mixed views about a HCS professional Lead and the local HCS forum model. It was suggested that one of the ‘Heads of Service’ could act as a spokesperson for HCS at NHS Board level and also the Heads of Service should be the forum. Feedback also stated lack of agreement with the title ‘HCS Professional Lead’.

2.2 SUMMARY OF WHAT YOU TOLD US AROUND QUALITY

There was recognition from respondents from the Life Science theme that laboratories “*are well served by the accreditation bodies*”. However concern was expressed with regards to the increasing demands to meet ISO 15189.

Many of the Clinical Physiology respondents did not feel that the right systems were in place around ‘Leadership and Quality’.

Quality Opinion Comments - Proposal Only



Graph 7 shows the percentage and count of respondents’ replies on quality proposals within the consultation document. Opinion statement replies have been categorised as Agree, Disagree and Mixed.

The Clinical Physiology and Physical Sciences noted that it is only the theme of Life Science that has the role of quality managers, but many responses from the Life Science stream highlighted the potential for laboratory quality managers to support other streams of HCS to develop their knowledge of Quality Management Systems.

There is a requirement for better data analysis, especially around ‘Keele’ benchmarking, and the potential for a Scottish national approach.

Service providers of Audiology, felt they are “*in a strong position to influence the improvement of patient care*”, very much through the Audiology Quality Standards, but have concerns around continuing to meet the 18-week waiting list target.

One health board response indicated that Improving Quality in Physiological Services (IQIPs) quality control process *“is cumbersome, time consuming and costly for small departments”* in that this voluntary Clinical Physiologist accreditation gives little direction in terms of quality and standards.

There was a theme coming out that the development of *“embedded culture in quality”* requires to take place, with more of an emphasis on quality improvement training. However there was concern that improvement methodology should not be dictated by the National Delivery Plan, and should be implemented by the health boards.

The Institute of Physics and Engineering in Medicine (IPEM), highlighted that healthcare professionals *“are very pro-active in leading the development of appropriate Quality Management Systems for the services they deliver”*. Currently the Improving Clinical Engineering and Physical Science Services (iCEPSS) accreditation standard is under development.

2.3 SUMMARY OF WHAT YOU TOLD US AROUND INNOVATION

Overall, there were fewer responses to the questions asked around research and innovation. However, numerous transformational examples were cited.

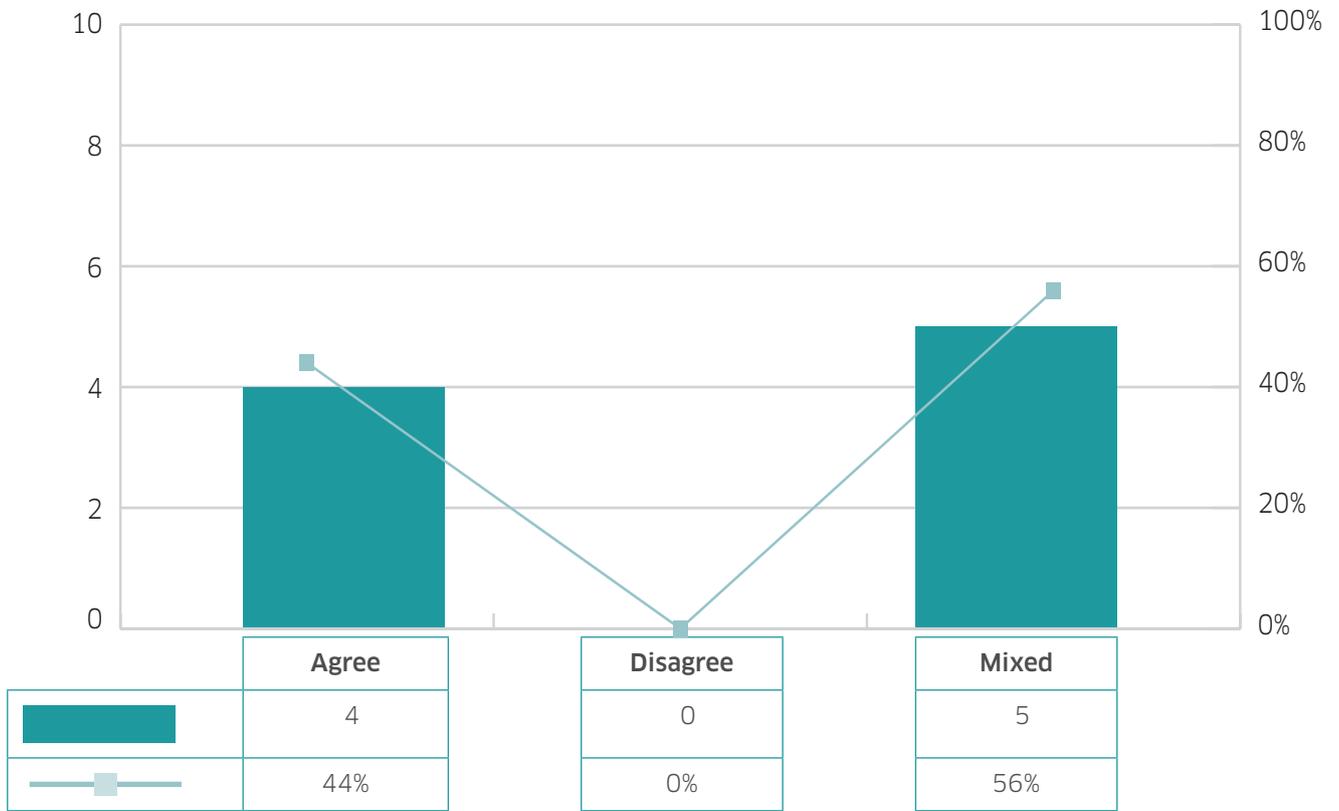
There was strong support for the sharing of best practice, some Life Science disciplines have professional networks, but not all areas of service provision have a network.

Concerns were raised that resource and support from management for service innovation and development projects require to be addressed. Concern was noted in the quote *“cutting costs by downward pressures on staffing, flattening of structures do not lead to the erosion of knowledge and skills required to deliver and support research and innovation”*.

One of the networks expressed that there should be ‘national guidance’ for NHS Boards and academic colleagues to engage with the HCS services.

One respondent group expressed that the action plan needs to address issues around the *“interrelationship with academic institutions and commercial organisations”*.

Innovation Opinion Comments - Proposals Only



Graph 8 shows the percentage and count of respondent's replies on innovation proposals within the consultation document. Opinion statement replies have been categorised as Agree, Disagree and Mixed.

3.0 INTEGRATION OF SERVICES IN THE COMMUNITY

How can HCSs’ involvement in delivering integrated services in the community be improved, thereby reducing costs and improving outcomes?

3.1 SUMMARY OF WHAT YOU TOLD US AROUND INTEGRATION

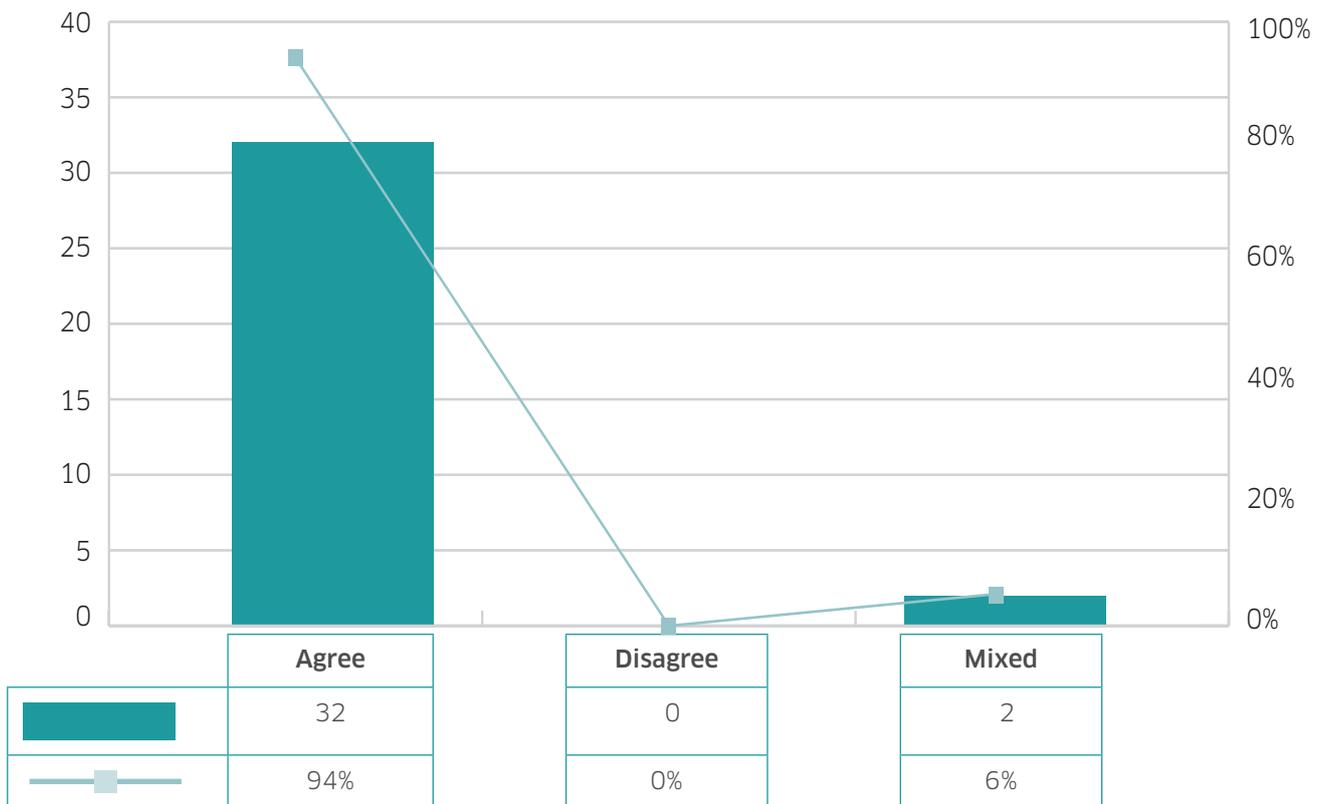
A significant majority of health boards were supportive of Healthcare Scientists involvement and expertise in delivering integrated services in the community, especially around the desire that ISO 22870 was made mandatory. Concerns were

raised in how HCSs could be released from their current service delivery to be able to develop this area, especially around Physiology.

One health board response felt that the language of “*reducing costs and improving outcomes*” could be improved, possibly use elimination/reduced waste and improved outcomes.

Agreement across the responses that equipment registers should be established/maintained, but that this task should not be for the HCS lead but for Medical Physics departments.

**Integrated Services
Opinion Comments - Proposals Only**



Graph 9 shows the percentage and count of respondent’s replies on all Integrated Services Proposals within the consultation document. Opinion statement replies have been categorised as Agree, Disagree and Mixed.

Many of the proposals in the NDP relate to equipment, the option of how we can impact on referrals to hospital clinics and reduce waiting times should be explored.

The Physical Science group felt that a board-based centralised replacement equipment programme overseen by the Physical Science workforce should be implemented in each NHS Board. However further comments were made that there is potential for a Scottish wide procurement approach that could achieve national standardisation.

The theme of Physical Sciences' comment that the use of medical equipment libraries achieve a more efficient use of equipment, with the potential to reduce the overall level of equipment in circulation. In reference to the use of equipment tracking, one health board gave an example that approximately only 40% of infusion pumps are being used.

There are examples of HCSs training GP practice nurses in spirometry, along with some boards utilising HCSs to train staff in rural GPs to perform oximetry for 'Sleep Clinic' patients.

There appears to be differences across the boards with regards to established Point of Care Committees, however generally the responses strongly support the involvement of HCS staff in POCT delivery. However, there are numerous examples that primary and secondary care providers do not follow POCT committees direction, with gaps in the governance around POC equipment.

One individual response, highlighted that *"instead of management through POCT committees, the delivery plan should encourage the development of Medical Device Committees"* also described as Health Technology Management elsewhere in a board response.

A couple of health boards reported that they have a 'Community Diagnostic User Group' working across primary care, diagnostics, radiology and cardiac physiology.

One response commented that the consultation did not give recognition to the important role that rehabilitation engineering plays within the community. HCSs play an important role in ensuring appropriate Health Technology Assessments are undertaken.

There are numerous suggestions for a Health Technology Management Committee, for responsibility of medical equipment in the community.

One response commented that *"the delivery plan falls short on developing an NHS Scotland wide integrated equipment management network to reduce variability, standardise usage and reduce costs for bulk buy and repairs"*.

Some boards provide clinical portals to allow primary care access to images taken by a medical illustrator. The national use of Clinical Portals would allow more integrated services, potential for collaboration with eHealth technology.

The Scottish Ambulance Service have commented that they would require to be involved in the selection of training required for POCT in the community.

One individual response comments on the requirement for the introduction of Risk and Reliability Centred Maintenance (RCM) regimes at a national level that could be implemented locally, to reduce waste and maximise capacity around the management of medical equipment.

4.0 REDUCING UNNECESSARY TESTS AND INTERVENTIONS

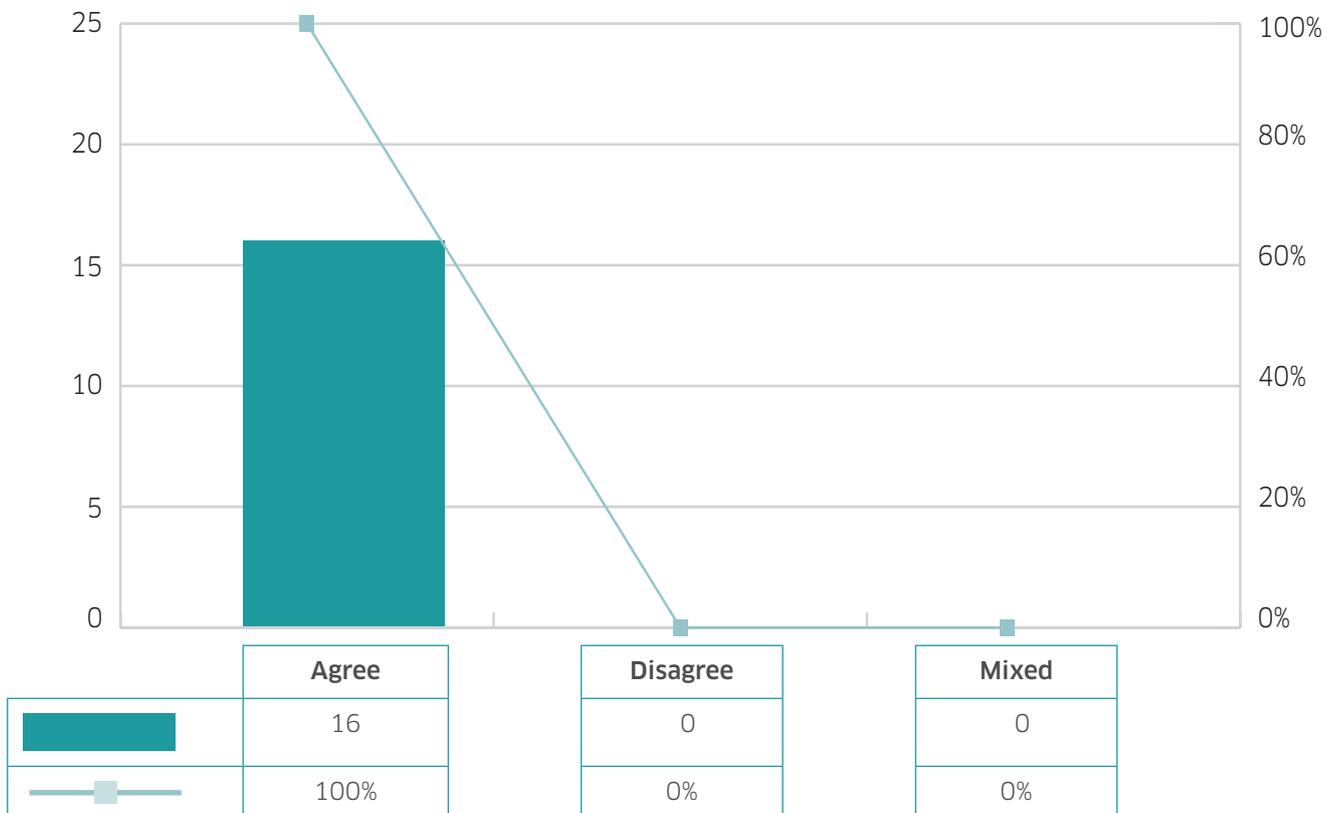
How might the involvement of HCS demand optimisation measures be improved to reduce unnecessary tests and interventions, while ensuring that the most appropriate tests are performed in all NHS boards?

4.1 SUMMARY OF WHAT YOU TOLD US AROUND INTERVENTIONS

There was overall support that this work stream requires recognition in the final National Delivery Plan. Within Life Sciences there are three focuses:

- One in that tests are for monitoring and diagnosis, this area requires a co-ordinated approach across all boards.
- Secondly, is the requirement for a health economic analysis Scottish wide to scope the impact of emerging tests that intervene on a patient’s pathway? One health board response felt that “*clinical champions nationally are nominated*” along with support for working groups assigned with performing a health economic analysis.
- Thirdly, there requires to be continuous quality improvement mechanisms, whereby the clinical impact of a test or image is monitored, with the potential to “*link information from the tests/image to the treatment/medicine provided/to the clinical outcome achieved*”.

**Unnecessary Testing and Interventions
Opinion Comments - Proposals Only**



Graph 10 shows the percentage and count of respondents’ replies on all unnecessary testing and intervention services proposals within the consultation document. Opinion statement replies have been categorised as Agree, Disagree and Mixed.

Examples, were given in Physical Sciences, where a *“significant proportion of medical equipment returned for repair is found to be working correctly”*, along with the fact that unnecessary testing should also include unnecessary procurement of equipment in Health Technology Management.

Responses from the Medical Illustrators highlighted that a standardised image database would reduce the need for inappropriate retesting, examples included inappropriate referrals for skin cancers (such as skin tags/warts) and duplication of testing for optical coherence tomography due to IT systems not connected.

There was emphasis that demand optimisation and test interventions were not just a HCS issue, there is a requirement for national stakeholder engagement, from the service users, primary and secondary, quoted as *“consultants, junior doctors, nurses, physician assistants, pharmacists, and community workers”*.

There were comments that this section of the NDP was just a Life Science issue, however examples were given of *“inappropriate requesting of CT scans”*, and *“ENT pre-admission clinics where individuals being pre-operatively assessed are also routinely re-tested (hearing assessment) as a matter of habit rather than need”*.

Mixed feelings in the responses whether a national appointment for a HCS National Lead for Service Demand and Optimisation would be of benefit, especially within Life Sciences. This should be an area for the local HCS leads working collaboratively via a distributed network of senior scientific leads and diagnostic networks, with accountability at board level. However, Physiology and professional bodies across all streams of HCS particularly welcomed this role.

The possibility of developing a Scottish version of the ‘Atlas of Variation’ and a similar document as the ‘National Laboratory Medicine Catalogue’ should be considered for Scotland.

The key to successful demand optimisation and intervention is the requirement for a sophisticated electronic ordering system. One of the networks raised concerns that ‘Track Care’ lacks the functionality required to support demand optimisation.

There were numerous comments that the proposal to halve inappropriate testing by 2016, is unachievable, as there are no specific tangible measurable targets set around this statement.

5.0 WORKFORCE RE-PROFILING AND COMPETENCY FRAMEWORKS

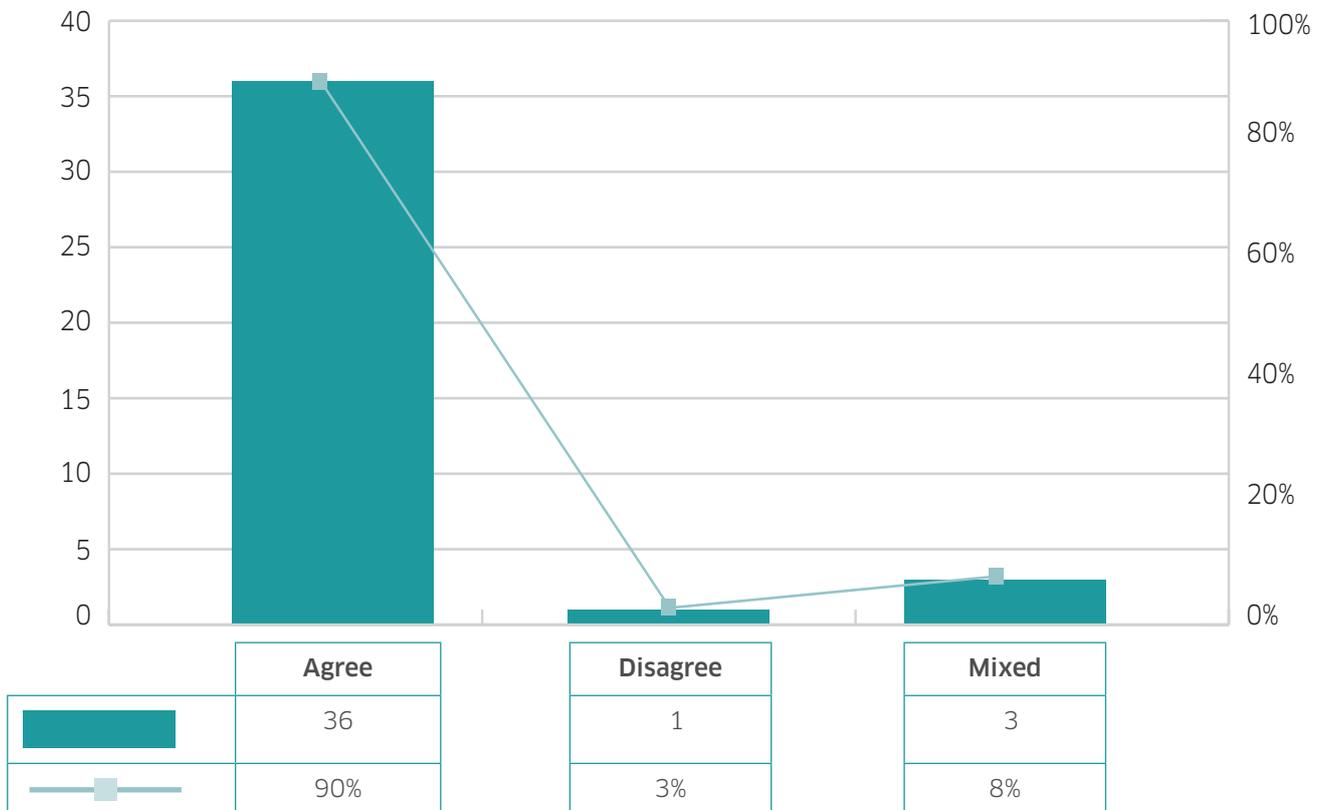
How might the knowledge and skills of the HCS workforce in existing roles be more effectively utilised, and how can roles be extended to work with medical colleagues?

5.1 SUMMARY OF WHAT YOU TOLD US AROUND WORKFORCE

There was overwhelming support for the proposals in the workforce section of the NDP, with a desire “to bridge the gap between the operational and strategic levels in HCS”.

In general terms national workforce planning for HCS is inadequate, with each health board developing a different approach, there requires to be mapping exercises of diagnostic services before skill matching to tasks can be performed. There is also a requirement for consideration to be given to the likely location of posts when workforce planning. A model based on that of specialist training for medical consultants may be more appropriate to ensure greater mobility.

**Workforce
Opinion Comments - Proposals Only**



Graph 11 shows the percentage and count of respondent’s replies on all Workforce Proposals within the consultation document. Opinion statement replies have been categorised as Agree, Disagree and Mixed.

One health board responded highlighting that there was nothing in the delivery plan about cross-disciplinary training, especially to support 24/7 services: *“Extended roles for HCS in blood science’s needs, in the first instance, to be around extending the range of disciplines that a HCSs can operate safely in to provide a core service.”*

The IBMS has established certificates of achievement for support staff which has the potential to be modified and introduced across other HCS roles.

There was concern within Physiology around medical workforce planning, that lacks to address the impact that new and developing services will have on HCS service provision, lack of a sustainable workforce plan for future Physiology services.

Concerns were raised around the actual capacity within the HCS workforce, to take the potential opportunity to work within their top quartile, due to the day-to-day operational routine workload.

One individual response raised concerns around the accreditation of professionals, in that it is very difficult to recruit from outwith the NHS. There is the requirement for a more flexible use of equivalence.

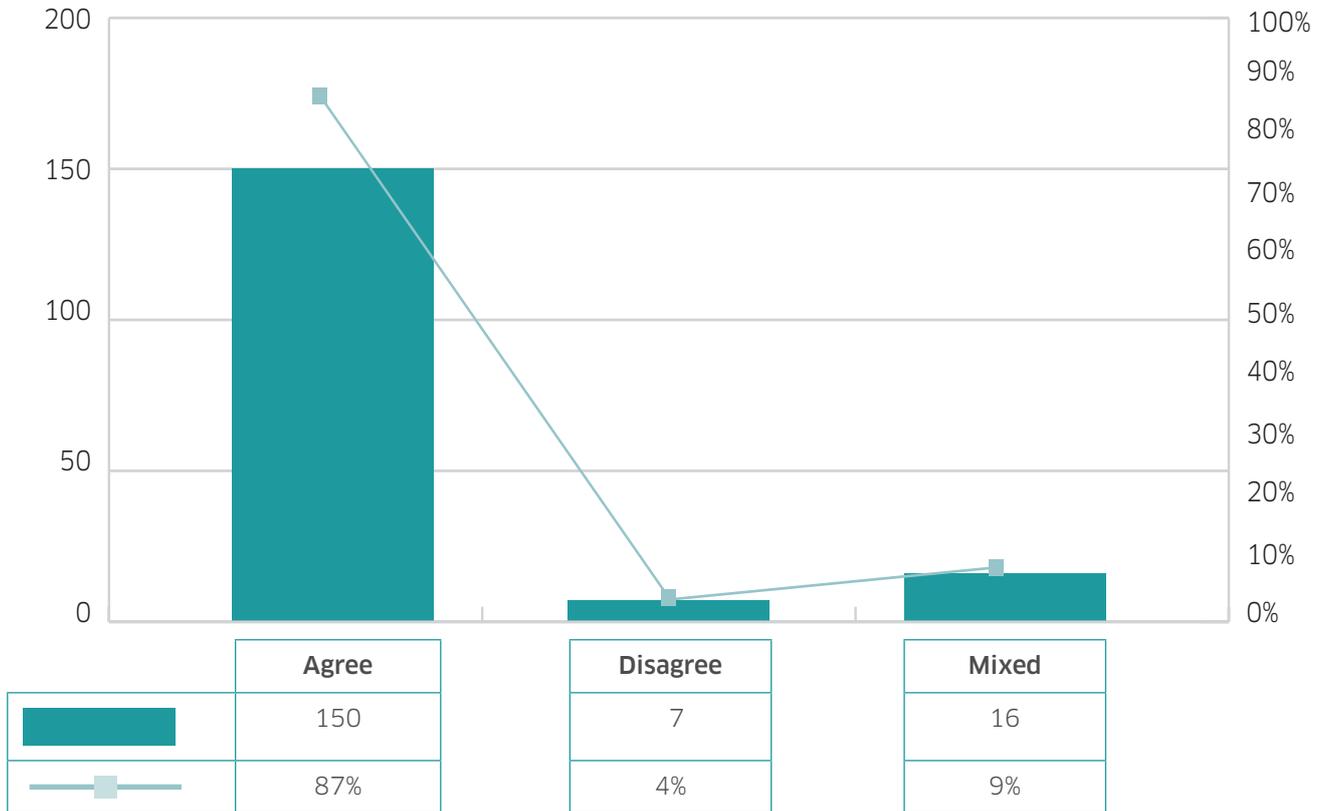
Responses from the Physical Sciences stream indicated the requirement for posts at Bands 3, 4 and 5.

“At postgraduate scientist level there are unhelpful variations across Scotland in terms of the buy-in by medical colleagues to ‘allowing’ Healthcare Science staff undertake certain duties. Some boards appear more relaxed about pathology dissection by advanced-practitioner biomedical scientists, scientific-clinical reporting in haematology, microbiology and neurophysiology. The promotion of current good practice must be a priority. Fundamentally this is about releasing capacity in all sectors of the clinical workforce. Representation and an advocacy of the merits of this shift will be enhanced by senior scientific representation in NHS Boards’ decision-making.”

6.0 SUMMARY OF RESPONSES

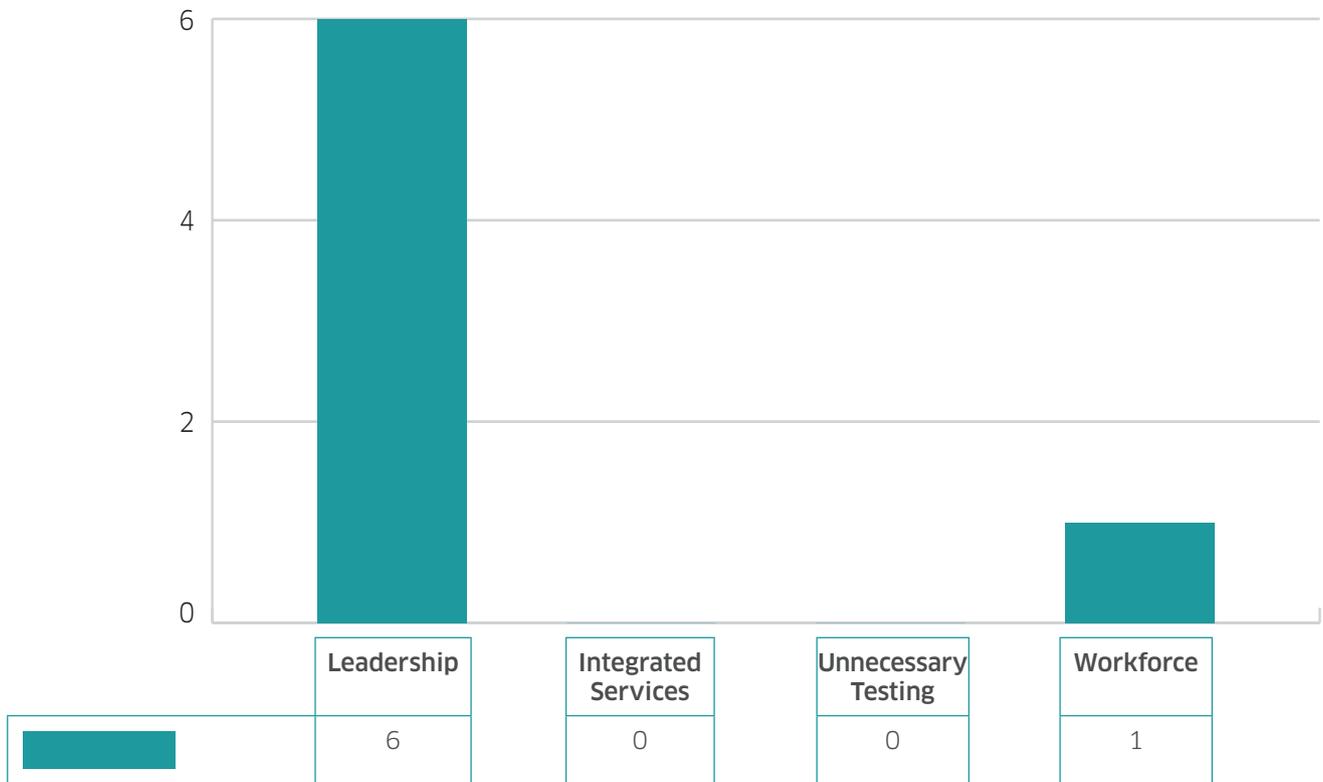
87% of all responses were supportive of the Healthcare Science consultation proposals.

Opinion Comments on All Proposals with Consultation Document



Graph 12 shows the percentage and count of respondents' replies where they stated an opinion for a proposal within the consultation document. Opinion statement replies have been categorised as Agree, Disagree and Mixed.

Disagree - Proposals Only



Graph 13 shows the count of respondent replies where they disagreed with a proposal within the consultation document.

Table 1 gives additional information around the 4% of the responses that disagreed with the proposals list below.

Table 1 – The Proposals with Disagreements and the Number of ‘Disagree’ Comments.

Work stream	Proposal	# Disagree
Leadership	Each NHS board shall appoint a HCS professional lead and establish a reporting structure to an executive board member, who should encourage HCS leads to adopt corporate leadership roles in clinical engagement, inter-professional working and local planning processes.	2
Leadership	HCS leads (and the national lead) will work collaboratively with senior management to develop integrated models of service provision in physical sciences and engineering, covering areas such as medical equipment management. The full potential of the clinical technology workforce will be scoped and utilised to improve the quality and coherence of services.	2
Leadership	Each NHS board should seek to strengthen and support the ongoing work of local HCS forums. These will work with the HCS lead to improve service visibility and cohesion, ensure inclusion in board-level decision-making and develop HCS services to meet local users’ needs.	1
Leadership	HCS leads will consider how to strengthen HCS leadership within and across agencies; identifying HCS line managers’ development, training and support needs and promoting the values and behaviours expected in relation to the Staff Governance Standard and quality ambitions.	1
Workforce	NES will explore education solutions to support HCS staff that may be required to supervise HCS assistants.	1

7.0 NEXT STEP

Development and publication of a Healthcare Science National Delivery Plan 2015-2020.

8.0 APPENDIX ONE – CONSULTATION RESPONDENTS

The following organisations and individuals responded to the consultation.

Individuals – eight individuals submitted a response. (one individual response, with input from two persons).

NHS BOARDS/HEALTHCARE SCIENCE FORUM RESPONSES

NHS Ayrshire and Arran, University Hospital, Dalmellington Road, Ayr

NHS Dumfries and Galloway, Royal Infirmary, Bankend Road, Dumfries

NHS Fife, Victoria Hospital, Kirkcaldy

NHS Forth Valley, Carseview House, Castle Business Park, Stirling

NHS Golden Jubilee National Hospital, Agamemnon Street, Clydebank

NHS Grampian, Aberdeen Royal Infirmary, Aberdeen

NHS Greater Glasgow and Clyde, Gartnavel Royal Hospital, 1055 Great Western Road, Glasgow

NHS Lothian, Royal Infirmary, 51 Little France Crescent, Edinburgh

NHS Highland, Healthcare Science Forum, Raigmore Hospital, Inverness

NHS National Services Scotland, 1 South Gyle Crescent, Edinburgh

NHS Tayside, Healthcare Science Forum, Ninewells Hospital, Dundee

PROFESSIONAL BODIES

British Academy of Audiology, Fitwise Management, Blackburn House, Redhouse Road, Seafield, Bathgate

British Association for Cytopathology, Monklands Hospital, Monkscourt Avenue, Airdrie

Institute of Biomedical Science, 12 Coldbath Square, London

Institute of Physics and Engineering in Medicine, Fairmount House, 230 Tadcaster Road, York

Royal College of Pathologists, 2 Carlton House Terrace, London

Society for Cardiological Science and Technology Scottish Branch, Cardiology Department, Forth Valley Royal Hospital, Larbert

HEADS OF SERVICE

Medical Illustrators Heads of Service, 12 Coldbath Square, London

Scottish Audiology Heads of Service, Dalmellington Road, Ayr,

WestMARC, Southern General Hospital, Govan Road, Glasgow

DIAGNOSTIC NETWORKS

Scottish Clinical Biochemistry Managed Diagnostics Network, Ninewells Hospital and Medical School, Dundee

Scottish Pathology Network (SPAN), Monklands Hospital, Airdrie

OTHERS

Academy for Healthcare Science,
130-132 Tooley Street, London

NHS Education for Scotland, Wesport 102,
Edinburgh

Healthcare Improvement Scotland, Delta
House, 50 Nile Street, Glasgow

Perth and Kinross Council, Pullar House,
Kinnoull Street, Perth

Registration Council for Clinical
Physiologists, 222 Southbank House,
London

Scottish Ambulance Service, Gyle Square,
1 South Gyle Crescent, Edinburgh



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