The AHSN Network

NIHR | National Institute for Health Research

NATIONAL SURVEY OF LOCAL INNOVATION AND RESEARCH NEEDS OF THE NHS

FULL REPORT

APRIL 2019

NHS England

FOREWORD: SUPPORTING AND APPLYING RESEARCH IN THE NHS – LOCAL NHS RESEARCH AND INNOVATION PRIORITIES

Since its inception, the NHS has worked at the leading edge of scientific development. Research activity is increasingly a core business for the NHS. Last year over 800,000 patients participated in research studies supported by the National Institute for Health Research (NIHR) infrastructure in the NHS – a record level of activity. Patients benefit from research and innovation, with breakthroughs enabling prevention of ill-health, earlier diagnosis, more effective treatments, better outcomes and faster recovery.

The NHS provides an excellent environment for research and innovation. NHS England and Improvement works as part of the health and social care research system to support this, working closely with the National Institute for Health Research (NIHR). The NHS Long Term Plan published earlier this year identifies specific commitments which will enhance support for research and innovation.

For research and innovation to have the best impact on patients, health and social care practitioners and the service, it needs to be focused on the most important questions and challenges. Different areas of the country have different population profiles and consequently different health needs and service delivery challenges. That's why in NHSE/NIHR's *Twelve actions to support and apply research in the NHS*, we committed to clearly articulating national and local research priorities. This has been welcomed by the research community, who want their work to be as useful as possible to NHS clinicians, managers and patients.

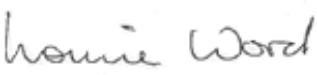
NHS England has coordinated work at the national level to outline its' research needs and priorities, and NIHR commissioned the *Future of Health* report to invite the research community to outline what they saw to be the health and care challenges and hence research priorities for the next 20 to 30 years. This report adds to this existing work by exploring the views of clinicians and managers within the NHS, and by focusing on the particular local research needs within each Academic Health Science Network (AHSN) region in the short to medium term.

The King's Fund report on the *Adoption and spread of innovation in the NHS* highlighted the importance of local leadership and tailoring of innovations to the specific local challenges and contexts to support the adoption and implementation of new ideas and research findings. Each AHSN will publish an initial statement of local research and innovation needs, and use this as the basis for further discussion with local stakeholders. Engagement will include local NIHR research infrastructure, particularly the Collaborations for Leadership in Applied Health Research and Care and Applied Research Collaborations, commissioners and clinicians, the local research community and, vitally, patients and the public. Discussion of the regional reports will help the research community and innovators better understand the local context and challenges, particularly the specific conditions and population groups in each area who could benefit most from research or innovation.

We are very grateful to interviewees and all those who responded to the survey for their insights and will consider carefully the role that NHS England and NHS Improvement and NIHR can play to address the key research priorities identified and consider how we can best support access to, and dissemination of, key research and innovation findings.

Professor Gary Ford
Chief Executive, Oxford AHSN

Dr Sam Roberts
Director of Innovation & Life Sciences, NHS England



Dr Louise Wood
Director, Science Research & Evidence Directorate, DHSC

ACKNOWLEDGEMENTS

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INTRODUCTION

Innovation and research is a key part of the work of the NHS, ensuring that patients in the UK continue to benefit from improved and modern services, and helping to deliver better outcomes for patients across the country. This report presents the findings from a project to identify local NHS innovation and research needs in England, helping the Academic Health Science Networks (AHSNs) and other research funders and practitioners to ensure their work is aligned with NHS needs.

In November 2017, NHS England and the National Institute for Health Research (NIHR) published the paper "Twelve actions to support and apply research in the NHS". The paper requested that, in order to articulate local NHS needs the 15 Academic Health Science Networks (AHSNs) working with their local NIHR infrastructure, each produce a statement of local NHS innovation and research needs on behalf of their local Sustainability and Transformation Partnership (STP). The AHSN Network commissioned an independent research consultancy, ComRes, to design, implement and deliver a survey that would provide a detailed understanding of the innovation and research needs at local level and across all AHSNs. A governance group was established to oversee the project, with representatives from NHS England, the AHSN network, and NIHR. The project gathered the views of local health stakeholders within each AHSN region between June and October 2018, with 61 qualitative telephone interviews conducted, followed by a quantitative survey of 257 stakeholders. Over a third (34%) of these stakeholders are clinical leaders, managers or directors.

This exercise focused on the views of clinicians and managers, rather than researchers, and on short to medium term priorities.

EXECUTIVE SUMMARY

We asked respondents about innovation and research needs across three main categories: system-level priorities[1], medical treatment areas, and needs related to specific patient groups. Stakeholders were also asked about their awareness, access and use of existing innovation and research.

- **Workforce issues** emerged as a top priority where stakeholders suggested that innovation and research is needed to understand the organisational models needed to meet demand and ensure a healthy, sustainable workforce exists.

- **Mental illness** was identified as a top priority as a medical treatment area, and people with mental health issue were identified as a top priority patient group for innovation and research. New models of care were seen as being key, often around community care, and a more holistic treatment of patients. Children and young people were often referenced in discussions of mental health issues.

- **Older people**, alongside socially isolated people, are also identified as top priority patient groups for innovation and research to help address specific challenges these groups face. Care in the home setting was seen as a valuable area for research and innovation, with the social needs of older people often linking to conversations around social isolation.

- **Frailty** is a medical treatment area that is seen as relatively important, but is also discussed in relation to groups of patients, such as those with multi-morbidities, or the older population. The prevention of the progression of frailty was seen as a particular challenge, and stakeholders mentioned community care and social prescribing models as being relevant research areas here.

[1] System-level priorities refer to any aspect of the processes, infrastructure and resources used in the delivery of public health services and care. By system level we did not mean specific conditions/ diseases, or the functionality of individual organisations and practices.

- **Multi-morbidities** are identified as a top priority medical treatment area, in addition to integrated care for those with multi-morbidity and/or complex social care needs being identified by stakeholders as one of the top priority system level challenges to address. In particular, understanding the barriers to implementing these models of care is seen to be important, and thinking about care that effectively wraps around patients who have multi-morbidities. The organisation of research, centred around the different specialisms that health professions have, was identified as a challenge, as it does not reflect the reality for many people who are living with multiple conditions.

- **Current innovation and research:** The majority of stakeholders said that current innovation and research only partially addresses the issues they consider a priority. Access to research is perceived to be easier than implementation of research. Stakeholders suggested various improvements that could be made in order to address access to and implementation of innovation and research; examples including making research accessible to staff at all levels of organisations, ensuring research has clear local relevancy and increasing time available within job roles for research to take place.

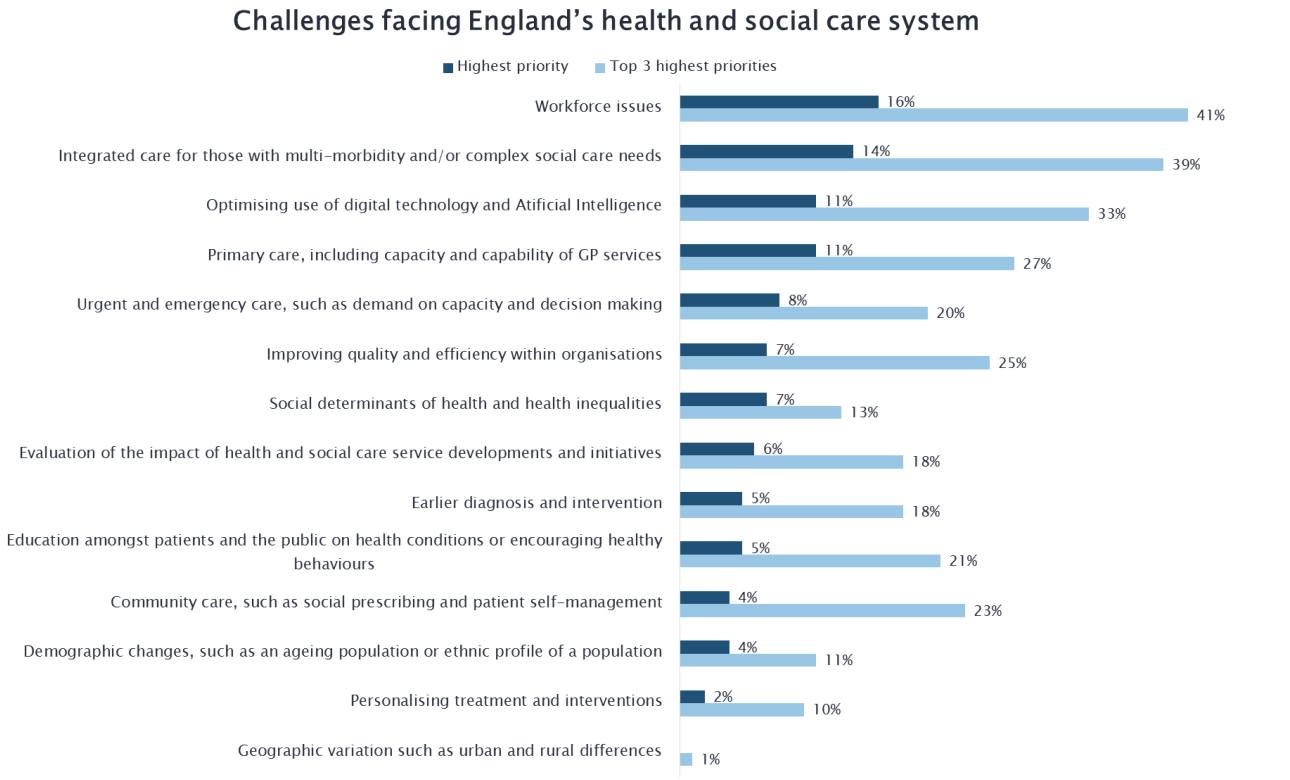
The below table summarises the innovation and research themes found from across the project, alongside specific priorities identified for research and innovation.

Innovation and Research Themes	Specific Priorities for Innovation and Research
Workforce	• Recruitment and retention of staff; • How staff perceive their roles and providing training and opportunities; • Use of alternative roles within the health service.
Mental Illness	• Mental health issues in children and young people; • Parity between mental and physical health; • Understanding and treating co-morbidities; • Diagnosis and treatment of dementia; • Community based support for those with mental illness.
Older People	• Care in the home and community support; • The social needs of the elderly population, and tackling social isolation; • Multi-morbidities within this demographic; • Frailty within this demographic.
Frailty	• Alternative integrated models of care; • Community care solutions; • Technology to support independent living.
Multi-morbidities	• Polypharmacy; • Parity between mental and physical health; • Integrated care pathways that promote holistic views of the patient.
Technology	• Patient self-management; • Understanding barriers to use of technology; • Transformation opportunities for delivery of care.

SECTION 1: SYSTEM LEVEL TOPICS

Stakeholders were asked to select what they viewed to be the health and social care system challenges[2] which should be treated as the top priorities for innovation and research.

Workforce issues such as recruitment, retention and skills; integrated care for those with multi-morbidity and/or complex social care needs; and optimising the use of digital technology and Artificial Intelligence (AI) emerged as the top system level priorities for innovation and research (selected by 41%, 39% and 33% of stakeholders respectively).



Q4. There are a number of challenges currently facing England's health and social care system. We are particularly interested in challenges that innovation and research could help to solve, rather than funding or resource pressures. With this in mind, of the following system level topics listed below, which three would you prioritise for innovation and/or research in the next 3 years to address challenges in your local health and social care system? Base: all respondents (n=257)

1.1 WORKFORCE

Amongst those who selected workforce as their top priority in the online survey, workforce and staffing challenges that could be the subject of innovation and research were often presented in the context of region or profession-specific issues. For example, as context, one stakeholder pointed to the challenge of retiring GPs and replacing them, whilst another pointed to the specific challenges within the city they live, where house prices are high and unemployment is low. Using innovation and research to modernise recruitment processes to attract key staff, and keeping a happy and healthy workforce to ensure staff retention were seen as key issues. Developing an understanding of how staff perceive their working lives and the ways in which people wish to progress and develop within their roles is also seen as a specific challenge; for example, understanding why junior doctors decide not to progress with their training, or thinking about the boundaries between job roles were mentioned as examples for research questions.

[2] System-level priorities refer to any aspect of the processes, infrastructure and resources used in the delivery of public health services and care. By system level we did not mean specific conditions/ diseases, or the functionality of individual organisations and practices.

Staff training and in particular, understanding the barriers to staff taking up training opportunities, was considered to be a valuable element of retention that deserved research attention, as well as understanding why staff may choose to leave their post or the profession.

The depth interviews with stakeholders provided further detail on the workforce issues, with many stakeholders from across different AHSNs recognising the workforce challenges experienced at both a national and local level, particularly in terms of meeting resource demand. Recruitment issues and a high turnover of staff were mentioned as key dimensions of this issue.

> *"We need to be evolving a different workforce for a different world and I think that requires a different approach and that needs to be, you know, backed by understanding and evaluation."*
>
> **CCG Clinical Chair (Commissioner)[3]**

One research need identified was the way in which jobs could be made more attractive, and identifying the drivers behind people choosing to leave or remain in the employment of the health system.

> *"How do we make jobs attractive and how do we better look after patients in the future with the workforce we're likely to have?"*
>
> **Acute Trust Director of Strategy (Acute)**

Another area mentioned by several stakeholders was how to utilise alternative members of staff in different ways across the system; for example pharmacists, nurse practitioners and physician associates being utilised to remove burdens elsewhere in the system, where appropriate. Part of this was about signposting services effectively, and understanding how to do this; another question was whether innovation around digitalisation had a role to play in addressing workforce challenges.

> *"A slightly different area but again it's about changes to the workforce and different skill mixes. Okay, it used to be done by this person over here but in future it'll be done by these people over here and in actual fact the outcomes may be improved. Again, if we're going to sell this to members of public, we need the evidence to explain that and to reassure people that this is not about the money, it's not providing the cheapest service. It's about providing a better-quality service."*
>
> **STP Clinical Lead (STP)**

> *"What would be the impact of different ways of working on the workforce, what would be the impact of skilling different people in different ways, managing different things, how much could digitalisation help us with our workforce issues? So, how productive or how much more productive could digitalisation make us, which I think is quite important and much neglected in the NHS, and then how effective will integration be at reducing waste and reducing duplication in the system?"*
>
> **STP Lead (STP)**

[3] Stakeholders fell into 11 broad categories based on the stakeholder's job title, organisation and specialisation: Acute, Clinical Commissioning Group (CCG), commissioner, community, Independent Clinical Services (ICS), mental health, NHSE, primary care, public health, social care and Sustainability and Transformation Partnerships (STP). Throughout the report, quotations are presented with the job title and role category of the stakeholder they belong to.

Often, workforce needs were not spoken about in isolation, but discussed in the context of specific patient groups, or illnesses; for example, elderly care consultants, or in areas of mental health treatment, and how other staff members could be utilised to help provide care.

> *"I imagine one of the real issues in this area is that this is where, probably, the workforce challenges are probably the greatest. So, nationally, it's 63% of consultant posts in care of the elderly are vacant. You know, this is a huge issue for everybody and therefore we'll need to find different ways of caring for that group that don't require a care of the Elderly Consultant to do part of their care, because there's just none out there. So, we need research that tells us other ways of caring for that group that don't involve a doctor, basically."*
>
> **Acute Trust Chief Executive Officer (Acute)**

1.2 INTEGRATED CARE

Of those who selected integrated care as a top priority, understanding the barriers to implementing models of care were seen as being as a specific challenge, alongside thinking more about how to achieve integrated care at an individual patient level. The additional challenges of treating patients with multi-morbidities emerged too, as many mentioned the need to focus on these patients to develop care models that effectively address the challenges they experience in the health and social care system. Evidence gaps related to integrated care point to the need for evaluated models of care and the lack of evidence of successful models. Self-care and voluntary or family support for patients were also mentioned as areas in which further evidence is needed.

Integrated care for those with multi-morbidity and/or complex social care needs also emerged as a key priority for innovation and research from the interviews and was most frequently spoken about with reference to frailty and the multi-morbidities frail people can contend with.

> *"Getting fully-integrated care personalised around the patient, and making sure that people are flagged to the system early enough, and that the system wraps around them, provides coordinated care, personalised care plans, medication reviews, effective medical care, effective social care, managing social isolation, managing safety in the home."*
>
> **STP Lead (STP)**

Stakeholders articulated the need for better evidence and innovation around care that caters effectively for the needs of patients with complex psychological conditions, given that physical and mental health needs can be closely related. Some of these challenges are outlined best in stakeholders' own words:

> *"There's something around that commissioning of integrated pathways rather than commissioning separate pathways that then create gaps and bottlenecks and delays and all those sorts of things that are just not helpful."*
>
> **Acute and Community Trust Director of Strategy (Acute)**

> *"If people are in a predominant physical care, medical care environment, their psychological needs and psychological care is often secondary, and secondary to the clinical and care plan decision-making."*
>
> **STP Programme Director (STP)**

Many discussions of integrated care referred to primary care, and the way in which this part of the system can work within and alongside communities in order to create a more joined-up model of care, whereby there are multiple levels of support for patients with complex needs, beyond traditional care pathways. Some suggested that a key area of innovation and research could be understanding the roles that communities can play in these pathways. Stakeholders highlighted the need to understand how to make the system more holistic across social care, healthcare and public health.

> *"So, I suppose that we're building very much our plans as an STP on the development and improvement of primary care and integrated services at a neighbourhood level. So, we are really clear that if we're going to make an impact on the population's health and their outcomes, we need to be doing that with local colleagues and broader communities at a local level, and looking differently at how we organise services."*
>
> **STP Director of Strategy (STP)**

> *"I think we're not very good at doing the evaluation on services. They're often quite anecdotal."*
>
> **CCG Medical Director (Commissioner)**

1.3 TECHNOLOGY

Specific challenges and opportunities associated with technology and Artificial Intelligence (AI) were seen to be related to the use of technology to improve patient self-management. Some stakeholders also highlighted limitations with the implementation and uptake of new methods in this sphere. Amongst those who placed optimising technology as their top priority, understanding the relevance and clinical effectiveness of the technology was seen as being a key evidence gap.

Technology and AI were also frequently discussed as a challenge that the health and social care system needs to rise to, by adapting new technologies that can help improve care outcomes. There were perceived to be barriers to the system utilising new technologies, particularly in a timely manner, and it was observed by several stakeholders that even relatively simple changes, for example around electronic prescribing, are adopted in a patchy and inconsistent way. Therefore, understanding the barriers to use of technology is important to facilitating its continued adoption.

> *"The use of artificial intelligence in diagnostics is going to change the world really quickly, but, actually, we don't want it to change the world in ten years' time. We could do with a change in the world now, thanks very much. We're not necessarily so great at bringing forward these things, and [the health service] is quite risk-adverse."*
>
> **ICS Director for Quality (STP)**

However, it was also clear that technology provides many opportunities to help innovate and transform the way care is delivered, both across a range of illnesses and on a system level. Artificial intelligence was also discussed, particularly in reference to diagnostics, and its ability to potentially alleviate some of the strain placed on the workforce. The latter was particularly relevant to primary care where interventions such as phone apps were mentioned as a disruptive technology that had the potential to change the way in which services operate.

> *"There are lots of discussions about Telehealth and the opportunities for Telehealth and Mobile Health applications, which get much speculation. The evidence base behind many of those solutions is extremely limited and they're very difficult to*

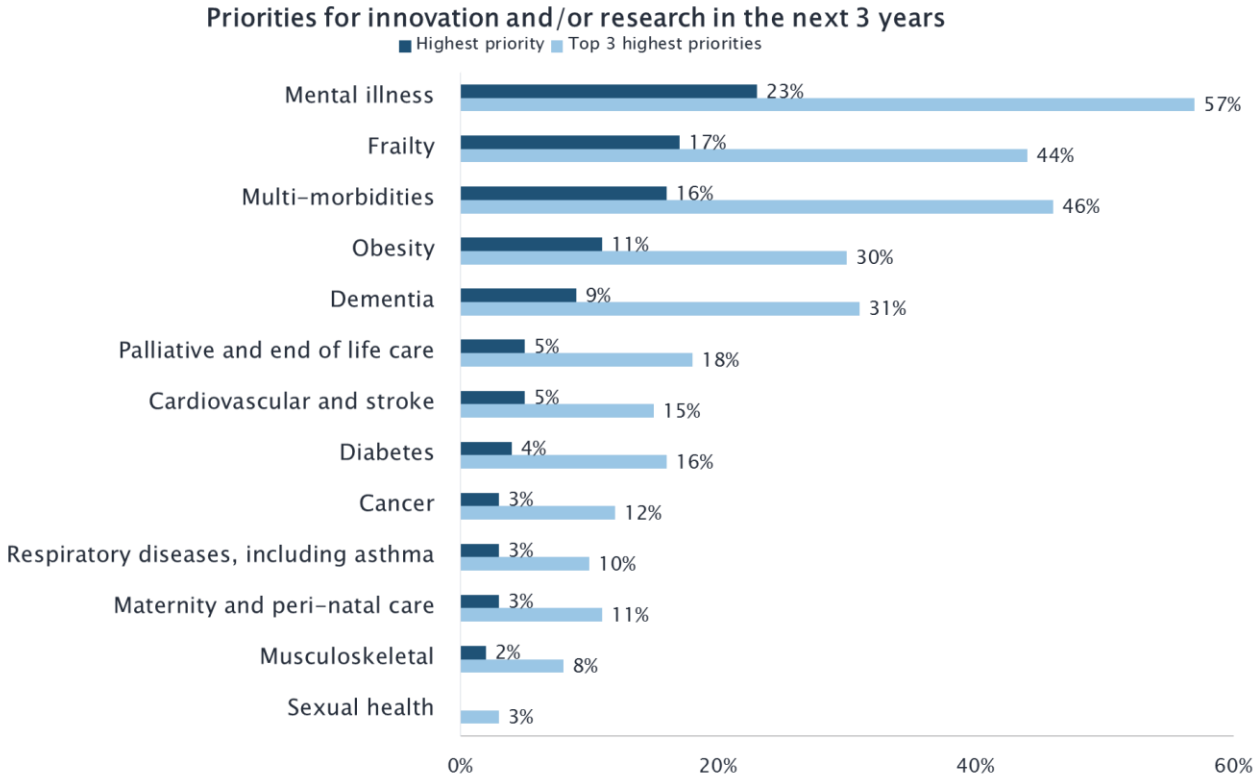
implement. So, there are some very niche apps which have been tried in primary care where there might be a particular impact on a cohort of diabetes patients who have self-monitoring or a cohort of COPD patients who are self-monitoring, but the opportunities to reach particular groups are quite limited."

Acute and Community Trust Chief Technology Officer (Acute)

SECTION 2: MEDICAL TREATMENT AREAS

Stakeholders were asked to identify medical treatment areas they would prioritise for innovation and research in the next three years and the specific evidence gaps they want to address.

Almost a quarter of stakeholders (23%) prioritised mental illness for innovation and/or research over the next three years with nearly three in five (57%) placing it in their top three. Frailty and multi-morbidities were also found to be key priorities for stakeholders, as around one in six ranked them as their top priority (17% and 16%, respectively). Significant proportions also placed obesity and dementia within their top three key priorities (30% and 31% respectively).



Q8. Of the following medical treatment areas listed below, which three would you prioritise for innovation and/or research in the next 3 years to address challenges associated with them in your local health and social care system? Base: all respondents (n=257)

2.1 MENTAL ILLNESS

When asked about the priorities within mental illness, a quarter of stakeholders selected children and young people's mental illness (25%) and the relationship between physical and mental health (24%). Amongst those who selected mental illness as their priority treatment area, stakeholders indicated a variety of evidence gaps, particularly around service models for specific mental illnesses, primary care and integrated care models.

In interviews with stakeholders, discussions about innovation and research needs in mental illness often referred to children and young people. Stakeholders identified a need to improve access to services for this group in order to intervene early and have measures in place to prevent crises. Young women were identified as a group in particular need of intervention. New models of care were mentioned as a key area for improvement, such as the need to use school nurses more or understand how to integrate mental health into the health and wellbeing agenda.

"With the exception of dementia, which clearly comes later, most other mental health antecedents are already in place by the time the person reaches the age of about 25. So, if we were taking a population prevention approach then actually really putting something into, 'How do we work with teenagers and young people?' would actually, in twenty years' time, mean we should, in theory, see fewer mental health issues coming forward at all across the board."

Mental Health and Community Trust Medical Director (Mental Health)

The lack of parity between mental and physical health was also discussed frequently, especially in terms of access to services, whether this is due to differences in funding or the length of referral times. In terms of innovation and research, for stakeholders much of this came down to developing an understanding of how to create integrated services that treat mental and physical health conditions equally.

"We almost scythe mental health out as something completely different from physical health when the two are inextricably linked. What would 'good' look like in a holistic integrated service that addressed both mental health needs and physical health needs?"

Director of Public Health (Social Care)

"I think some the evidence is very weak, what we use in a lot of our mental health services or treatment. So, if I had to put it into, sort of, a policy context, if we talk about parity between physical and mental health, you know, parity of service, parity of funding, then they should both be able to recall a parity of research or development of the various therapies and then treatments."

Mental Health and Community Trust Medical Director (Mental Health)

Co-morbidities were also discussed in terms of understanding how mental health can affect physical health, and vice-versa, with a need for more innovation around the way the health and social care system addresses this.

"As a society, when you talk about mental health it doesn't necessarily resonate with your physical health, but the two are so completely intertwined, and yet there is not a huge amount of glitz[4] in the system and perhaps innovating research that would help us implement that kind of thinking."

STP Implementation Lead (STP)

Dementia also emerged as a theme within mental health, and in the quantitative survey three in ten (31%) placed it within their top three priorities. Getting GPs to diagnose dementia was viewed as a challenge, particularly in the early stages. Furthermore, treatments for those who are diagnosed with dementia are also raised as an important issue, particularly in terms of the opportunity to use community-based care.

[4] Interpreted as "new, exciting or innovative action".

"We've got quite poor diagnostic rates lately of people with dementia. I was actually speaking to some GPs saying, 'Well, giving someone the diagnosis of dementia is good for the figures, but actually what does it do? It's not helpful to them."

Acute Trust Director of Strategy (Acute)

2.2 FRAILTY

Within frailty, three in ten (30%) selected the prevention of the progression of frailty as the specific innovation and research challenge to prioritise. When asked about the specific evidence gaps around frailty, stakeholders mention using alternative models of care, including more joined-up models of care in order to keep people out of hospital, as well as looking at prevention of frailty and developing a better understanding of the definition of frailty.

Frailty was most often described in terms of the elderly, and the challenges faced within older demographics. However, a minority of stakeholders also noted that it should be approached as an issue in its own right, and is not exclusive to older demographics. One stakeholder also placed this in the context of co-morbidity, highlighting the importance of this medical challenge for frail people.

"For me, frailty feels like the battlefield end of comorbidity. So, if we were to think about frailty, and how we support people who are frail, so, we see them as person, make them part of the team, address all of their issues as a whole person, you could start to think about, well, what lessons can we learn from everybody else? So, I'm interested in some research about what are the most effective ways of supporting people who are frail."

STP Chief Executive Officer (STP)

Community care and social prescribing models aimed at the prevention and progression of frailty were seen as key areas for which to develop an evidence base.

"You know, what is the evidence and value around some of the social prescribing models to support frailty at an earlier stage? Not when they're that severely in crisis and what did we call it, high level frailty, but more the mild to moderate, because that's where there's huge opportunity to impact around prevention."

CCG Long Term Conditions Commissioning Manager (Commissioner)

Technology was seen as an opportunity to improve care outcomes for patients affected by frailty through innovative ways to support living independently, rather than in hospital or care-home settings.

"So, there's quite a lot of innovation around relatively simple technologies, things like Alexa and those kinds of assistants. So, ways of setting up reminders to help people with their medication regimes, ways of using [Amazon's product] *Alexa to support people in their independent living by, for example, using automated shopping arrangements so stuff's delivered to their home."*

CCG Accountable Officer (Commissioner)

2.3 MULTI-MORBIDITIES

Amongst those who saw multi-morbidities as their top priority area for innovation and research within the quantitative survey, polypharmacy was mentioned by several stakeholders, while others brought up the connection between mental health and physical health and the impact one might have upon the other.

Throughout the depth interviews, multi-morbidity also emerged as one of the key priorities for stakeholders, and one of the most important areas for innovation and research to take place, although much discussion about it is covered in other priority areas. This is in terms of both clinical research, and care pathways and service models. Multi-morbidities were identified in reference to certain treatment areas or demographics such as the elderly or mental health patients. Often, innovation around holistic care, and the concept of looking at the whole patient rather than just individual diseases, were identified as being a priority.

The challenges of investigating multi-morbidities were also highlighted by stakeholders, for example having research focused very much on different single specialisms, despite the reality that many patients live with multiple conditions.

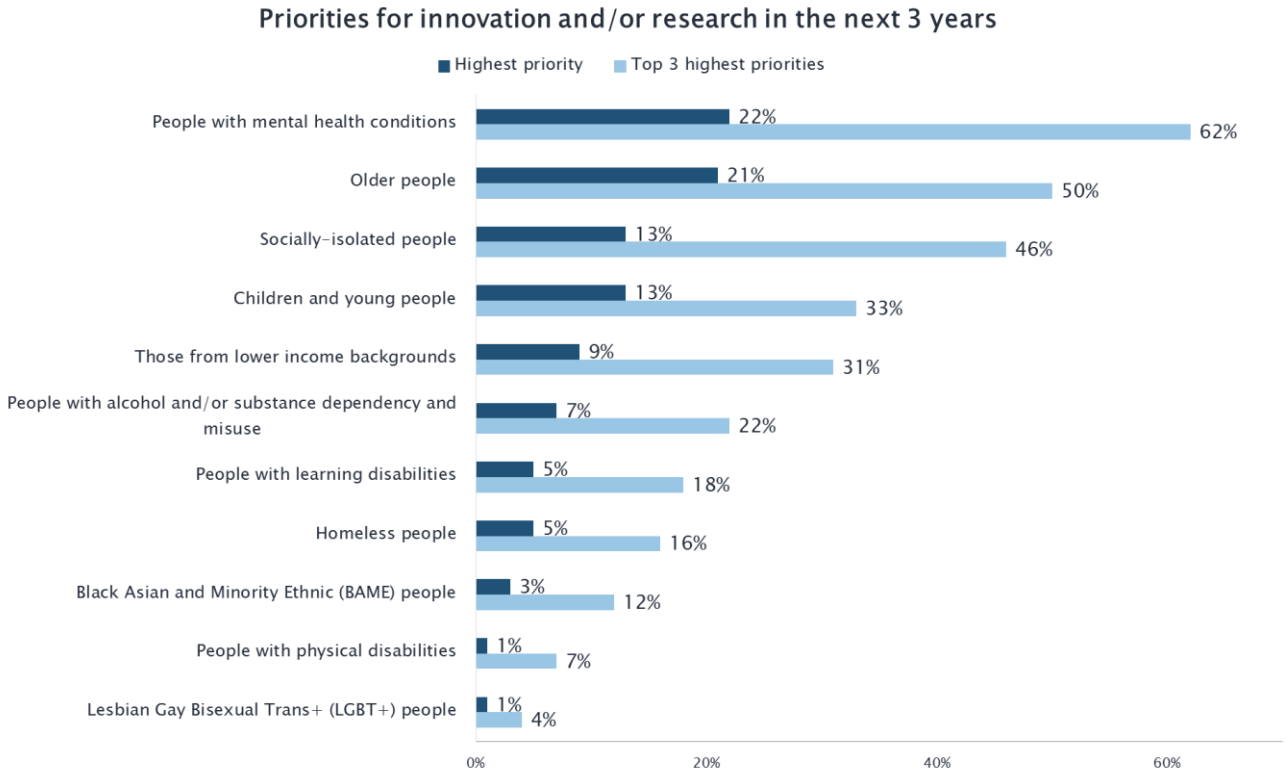
> *"The issue we face is multi-morbidity. People tend to have more than one thing wrong with them, and we've got a system designed to deal with body parts or one issue. As I said, that then flows through to the way people are trained, they're specialists in one symptom, or disease, or body part, and even where multi-morbidity is often discounted from randomised control trials."*
>
> **STP Chief Executive Officer (STP)**

> *"How do we better support an ageing population, increasingly living with multi-morbidity and frailty? That, in a nut shell, is the challenge of most Western healthcare systems, developed world healthcare systems, and that's both about quality outcomes, safety, but also about use of resources with systems that are fair."*
>
> **STP Lead (STP)**

SECTION 3: INNOVATION AND RESEARCH NEEDS FOR SPECIFIC PATIENT GROUPS

Stakeholders were also asked about specific challenges in providing health and social care for specific patient groups, and where innovation and research should address these challenges.

Three in five (62%) stakeholders placed people with mental health conditions in their top three patient groups for a focus from innovation and research, with one in five selecting this as a top priority (22%). Older people were selected as a top three priority group by half of stakeholders (50%), and very similar proportions of stakeholders selected older people as a *top* priority (21%) as those selecting people with mental health conditions. Socially-isolated people were also seen as an important patient group for innovation and research, with approaching half (46%) placing this in their top three, and one in seven (13%) placing it as their top priority. Children and young people were also seen as being a patient group in which there are challenges in providing health and social care, with one in seven (13%) placing this group as their top priority.



Q13. There may be specific challenges in providing health and social care for the groups of people listed below. Where should innovation and or/research be focused in order to address the specific challenges associated with these groups in your region? Base: all respondents (n=257)

3.1 PEOPLE WITH MENTAL HEALTH CONDITIONS

Within the quantitative survey, amongst those who selected people with mental health conditions as their top priority for innovation and research, specific challenges that innovation and research could address include new ways of resourcing mental health services, often alongside mentions of system capacity and increasing demand for services. Identifying the need for support, and intervening early were also mentioned on several occasions, alongside community-based support. When asked about the evidence gaps they felt existed in reference to their priority area of people with mental health conditions stakeholders mentioned a variety, which often addressed the needs of different groups, including models of care and support, the link between mental and physical health and how to tackle the growing mental health crisis we face as a society.

Within the qualitative interviews, patient-specific challenges related to mental health that were identified were quite wide-ranging, as were the pieces of innovation and research needed to help address these key issues. Challenges were often identified in relation to young people's mental health, and the system's ability to provide for this not just in terms of care, but also in terms of prevention. Again, parity of mental health and physical health and the integration of the two were seen to be key to questions around co-morbidities.

> *"I think probably the biggest challenge is the overlap between mental health and physical health, and how we manage it in a person as opposed to how we manage it as a disease. So, we've got some good examples where we've made some changes in our system to put in front rooms[5], which are very friendly, community-based places that people can go to when they're in crisis."*
>
> **ICS Director of Transformation (STP)**

Many stakeholders suggested areas of innovation and research which could help address these challenges, identifying what may need to be done in order to overcome them, particularly around holistic models of care, and thinking beyond just acute treatment methods.

> *"I think in terms of young people's mental health there are alternatives to face-to-face therapy from mental health trained individuals. There are certainly some ideas, and I'm not up to date on the evidence base, around the idea of using more voluntary sector, social care, people who work with children in other capacities in schools and things like that."*
>
> **Acute Trust Director of Strategy (Acute)**

> *"I think there's probably quite a lot that could help with connectiveness and with, you know, personalised support. Well, it could almost be artificial intelligence, personalised support that people could get, but also help with signposting to appropriate, kind of, settings and alternatives to getting into crisis."*
>
> **ICS Director of Transformation (Acute)**

3.2 OLDER PEOPLE

For stakeholders who selected older people as a priority patient group, support within the home setting was frequently highlighted, alongside understanding more complex multi-morbidities and longer-term conditions which older people are more likely to have. The social needs of older people were also viewed as a challenge, linked to innovation and research needs around managing independent living and thinking of health and social care as an interlinked system rather than as separate entities. In reference to older people, evidence gaps are viewed to be related to those with multi-morbidities and the ways in which technology could support older people.

With regards to the elderly population, many made it clear that this is a key challenge that requires some innovative thinking, given that older people are quickly becoming a larger segment of society. Those who experience multi-morbidities and frailty were key sub-groups amongst this particular group of patients. The need for community care and supporting independent living was highlighted by several

[5] Community front rooms are an initiative set in rural communities within Dorset where access to services can be challenging, and are aimed at supporting people who suffer with mental health conditions. They are staffed by peer support workers and health professionals. See https://www.dorsetsvision.nhs.uk/mental-health/

stakeholders who emphasised the importance of keeping these groups of people away from more formal care institutions.

> *"I think the particular group is that older group with multiple comorbidities, high levels of frailty, multiple medications etc. How do you define which interventions are still worth doing, and which interventions are counterproductive? At the moment, if you have a patient like that, you will treat them in little slices."*
>
> **Chair Commissioning Board (CCG)**

3.3 SOCIALLY-ISOLATED PEOPLE

Those who selected socially-isolated people as their top priority patient group suggested there was a need for innovation and research that considered how to harness communities to help tackle isolation. These stakeholders often made reference to geographical differences between urban and rural areas, again demonstrating that specific groups of patients can belong to overlapping categories. When thinking about socially-isolated people, evidence gaps were seen to be related to intervention and working to reduce isolation, as well as demonstrating the impact of isolation on health outcomes.

Socially-isolated people were not frequently mentioned as a priority group in the qualitative interviews, and were often referenced in terms of those who are vulnerable, or the elderly. However, the quantitative survey highlighted this group as an important one where innovation and research might aid understanding of the interventions that would support the delivery of health and social care.

In particular, stakeholders highlighted that social isolation may impact on ill-health and innovation and research should consider this.

> *"You know, I'm living and working in Surrey, it's a pretty affluent part of the country, but lots of the elderly here are alone, because they are a global generation. They've brought up young stockbrokers and bankers and they're all in Hong Kong and Singapore. So, when you get to be 90 and you get a nasty chest infection and you're in hospital, you've got nobody, because they're the other side of the world. That's socially isolating, as well, and you wouldn't necessarily appreciate that."*
>
> **Acute Trust Chief Executive (Acute)**

> *"The crossover, in terms of that multi-morbidity issue, is because you will see the impact of loneliness, of social isolation, which often stems from issues around confidence and independence and motivation, then has on people's physical health and physical condition as well."*
>
> **STP Lead (STP)**

When considering these vulnerable populations in innovation and research, community was seen by stakeholders as having a role to play, as it does in reference to other challenges faced within the health and social care system. Sometimes this was discussed in reference to the difference between rural and urban areas.

> *"I think the other thing was… the role of the voluntary and community sector in building community resilience and capacity, good for people, and that may be address social isolation and these other things, and wellbeing elements. There's not a lot of really good high level, quality research that is in this area that I think can*

inform the development of that as an approach. I don't mean, big society, but I guess a more specific, sector capacity and their contribution."

Consultant in Public Health (Social Care)

3.4 CHILDREN AND YOUNG PEOPLE

Amongst stakeholders from the quantitative survey who prioritised children and young people as a patient group, several key areas for innovation and research emerged. Technology was a key area mentioned as a potential solution to improving healthcare outcomes for children and young people, with it often noted that because this patient group are most likely to have access to and a broad knowledge of technology, innovation and research around how best to use it here is important. However, other stakeholders indicate a need to understand the effect modern technology may have on young people, particularly around the use of social media.

Innovations into the use of school nursing staff were also mentioned, to facilitate easier access to information, as was the importance of education around healthy lifestyles, in order to ensure children have a good start to life, which is then carried through into adulthood.

"[I]f you look at the number of people who do have smartphones and can access that information online, is it in a format that people will find engaging, interesting, accessible or understandable? So, there's something about thinking about how we use technology in different ways. Certainly more access perhaps to things like telephone clinics or virtual clinics so that, you know, if people can get that support in different ways rather than having to trek to places that costs, then that might be something."

Acute and Community Trust Director of Strategy *(Acute)*

Two key areas for innovation and research identified were mental health and obesity, and the particular impact they can have on young people. Obesity was discussed often in the context of diabetes, and the need for innovation and research into childhood obesity in order to not only address the obesity itself, but the future health issues it may generate. Innovation and research into how to encourage healthy lifestyle choices from a young age was seen as being key here.

"We've singularly not been able to solve, not only the adult obesity crisis, but also the children obesity crisis. So, it is, what is the best model that enables outcomes? That model will not only be what the health service needs to do but what the whole system needs to do, from local authorities to schools to the health visiting service to, you know, you name it."

Director of Public Health (Social Care)

In terms of innovation and research around mental health in children and young people, understanding service models and care pathways were both seen as being valuable activities, in order to best understand how to help young people overcome these conditions, and also how to prevent them from occurring in the first place.

"Our research effort there is really about what really builds up children and young people's resilience. We're working very closely with the schools' community.

Obviously, children are in schools for a very long time, and we see that as not only a place where obviously you can do business in terms of building children's resilience, but actually a good place to do R&D as well. In terms of understanding what challenges to resilience children and young people are facing and what sort of interventions are most successful in terms of building up that protective layer."

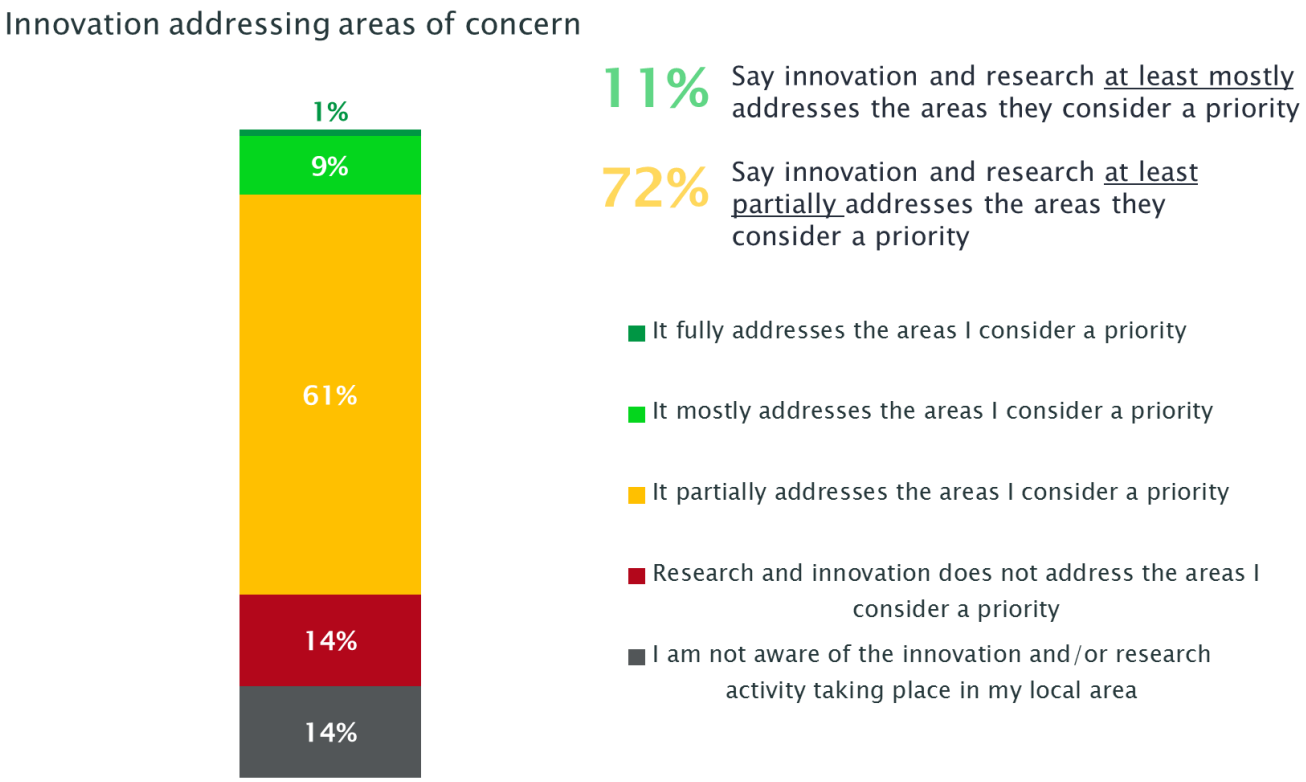
ICS Chief Operating Officer (STP)

SECTION 4: INNOVATION AND RESEARCH

Finally, stakeholders were asked about their ability to access and implement innovation and research, and improvements that can be made in order to better facilitate both.

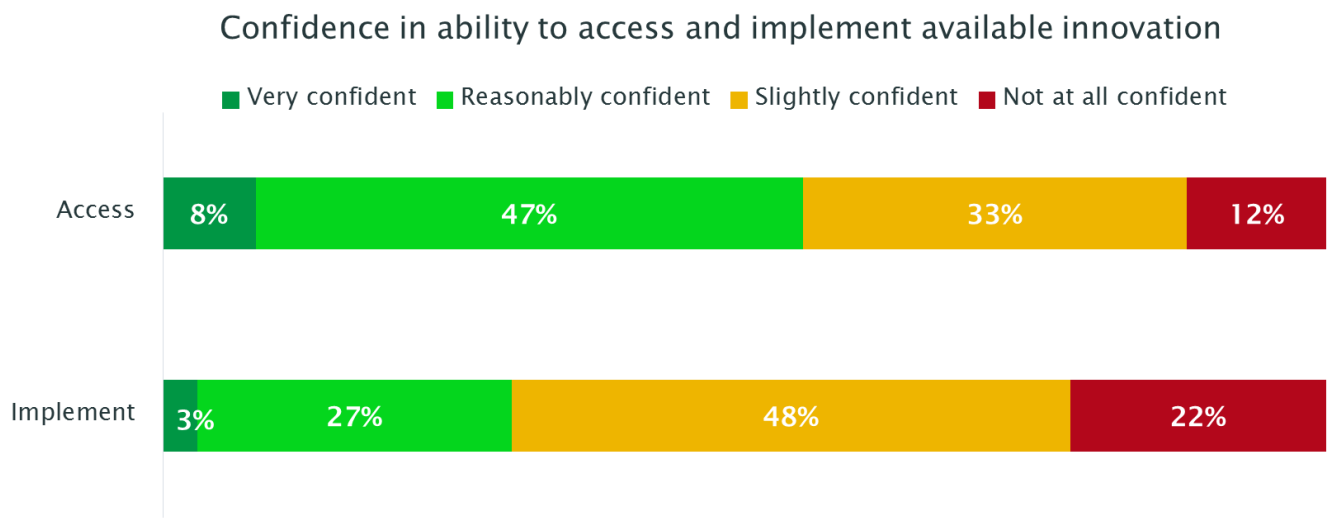
Whilst seven in ten (72%) said that innovation and research at least partially addresses the areas they consider a priority, only one in ten (11%) said innovation and research at least mostly addresses the areas they consider a priority. It is important to note here that minorities of stakeholders either were not aware of innovation and research taking place (14%) or felt it did not address the areas they considered a priority (14%).

Those who were confident about their access to innovation and research were significantly more likely than those who were not at all confident to say innovation and research at least partially addressed the areas they considered a priority (78% vs. 32%), and the same is true of those who said they were confident in the implementation of research (79% vs. 46% not at all confident).



Q18. To what extent does the innovation and research taking place in your region currently address the areas you consider a priority, as outlined in your answers so far? Base: all respondents (n=257)

Overall, stakeholders were more confident about their ability to access available innovation and research in their region than they were about the implementation of it. Just over half (55%) were at least reasonably confident in their ability to access this, compared to three in ten (30%) who were at least reasonably confident about implementation of this. A majority of stakeholders were at least slightly confident about access to innovation and research in their region (88%), with around one in ten (12%) saying they are not at all confident. However, when it comes to implementation, one in five (22%) said they were not at all confident in their ability to do so in their region, supporting findings from the qualitative study which frequently highlighted that whilst research existed in priority areas, utilising and implementing it was the key issue.



Q20. How confident are you that you can access and implement available innovation and research in your region? Base: all respondents (n=257)

Whilst there is a wide range of research taking place, the problem that many stakeholders identified was the implementation of this research. Engagement is inconsistent and patchy, often only accessed when it relates to specific interests, and can be too late after publication for it to be of use.

Stakeholders perceived there to be a hierarchy in the types of research conducted, and thought that what is being done may not be the most effective type of research.

> *"So, at one level there's never been more interest in research and innovation in the NHS than there is now. There's probably never been more funding for research and innovation, particularly for more research than there is now. So, in many ways it's a bit of a golden age. I think that the really big issue is the one that our response to the research that is undertaken and the evidence that is generated is just far too patchy, and that I think is increasingly the big innovation issue."*
>
> **Chief Executive Officer (Acute)**

> *"A lot of research that's done is not massively useful because it either doesn't choose the right questions or it chooses a good question but then spends five years to answer it."*
>
> **CCG Medical Director (Commissioner)**

Several stakeholders were clear in their suggestions that innovation and research is at its most useful when it is placed in a local context; although, that does not necessarily mean that evidence from elsewhere cannot be used to inform strategies in other localities. Stakeholders would like to see more showcasing of research from elsewhere in order to inform local strategy, but would also like the ability to understand their locality more through doing research on this level.

> *"You know, if you're trying to do stuff across a geographical area and you're not actually, kind of, immersed in local systems, the danger is that you end up doing something that's fairly generic and doesn't necessarily hit the spot, if you see what I mean."*
>
> **CCG Head of Primary Care development (Commissioner)**

"The other thing is and this is probably not unique to us in Devon, accessing other people's evidence base, that you don't have to create your local one. So, I'm sure you have this in other-, it's like, 'Well, yes, that works in Glasgow, but it couldn't possible work here.' Yes, it can because we have the same issues of rurality or deprivation."

CCG Director of Strategy (Commissioner)

"I think something that's a bit more locally focussed, that says, 'Well, if this is the national initiative, how do we learn from-, what would add value to us locally?' I think we've got a bit more to do around that."

STP Executive Chair (STP)

One further issue stakeholders continued to identify was the distinction between innovation and research, specifically concerning the need to ensure that exploratory research is translated into practical application. In addition, one stakeholder articulated their view that the language of innovation and research is an obstacle to its effectiveness.

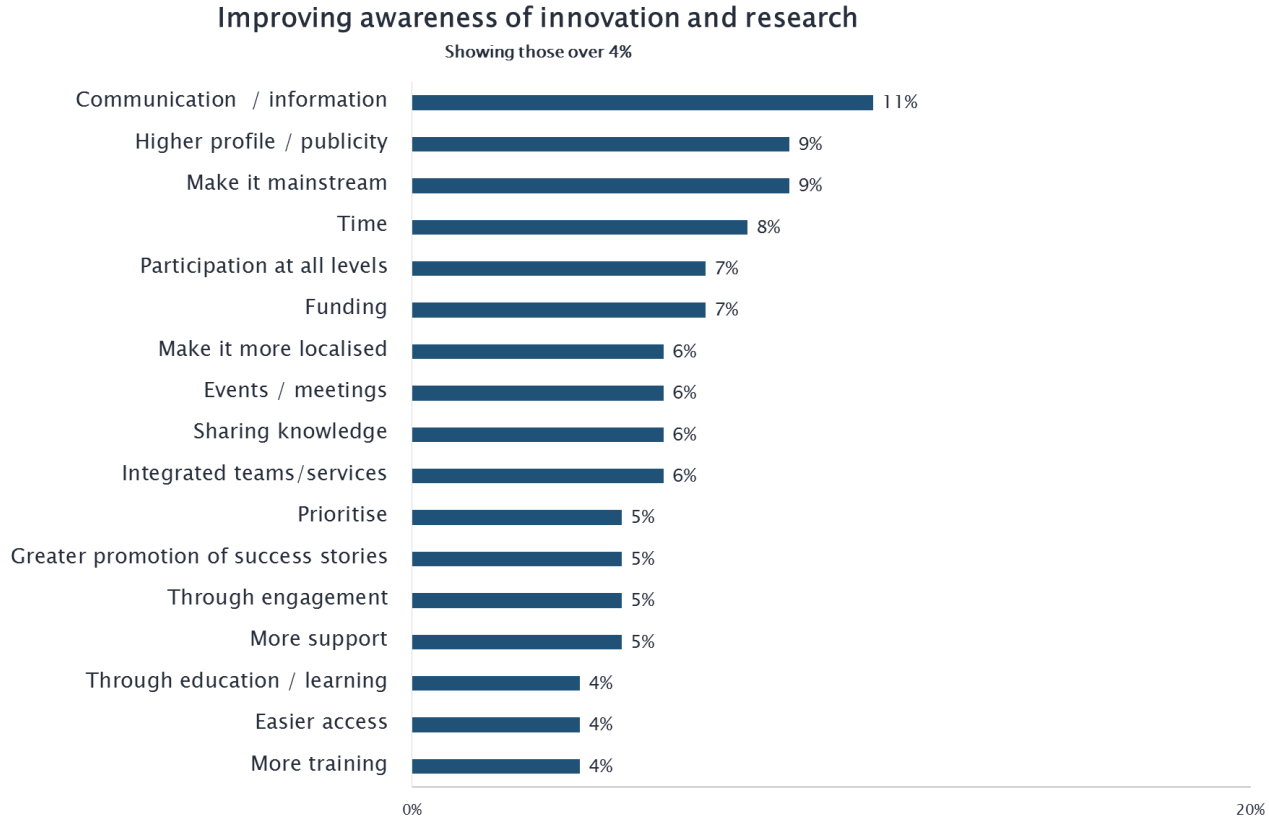
"It feels like we're not very good at turning that evidence base into real-life things. Making that happen, turning that into something you can implement as a plan and that you can really make that shift from some kind of more academic description of something into, of ok, how does this work in our local health care setting to do this and how would we make it happen and how would we implement it and what's the cost-benefit and how would you demonstrate that it's an improvement and what does this change? I can only imagine there is plenty of research going on. What I'm not seeing is a transferable amount of implementation of that happening."

Acute and Community Trust Director of Strategy (Acute)

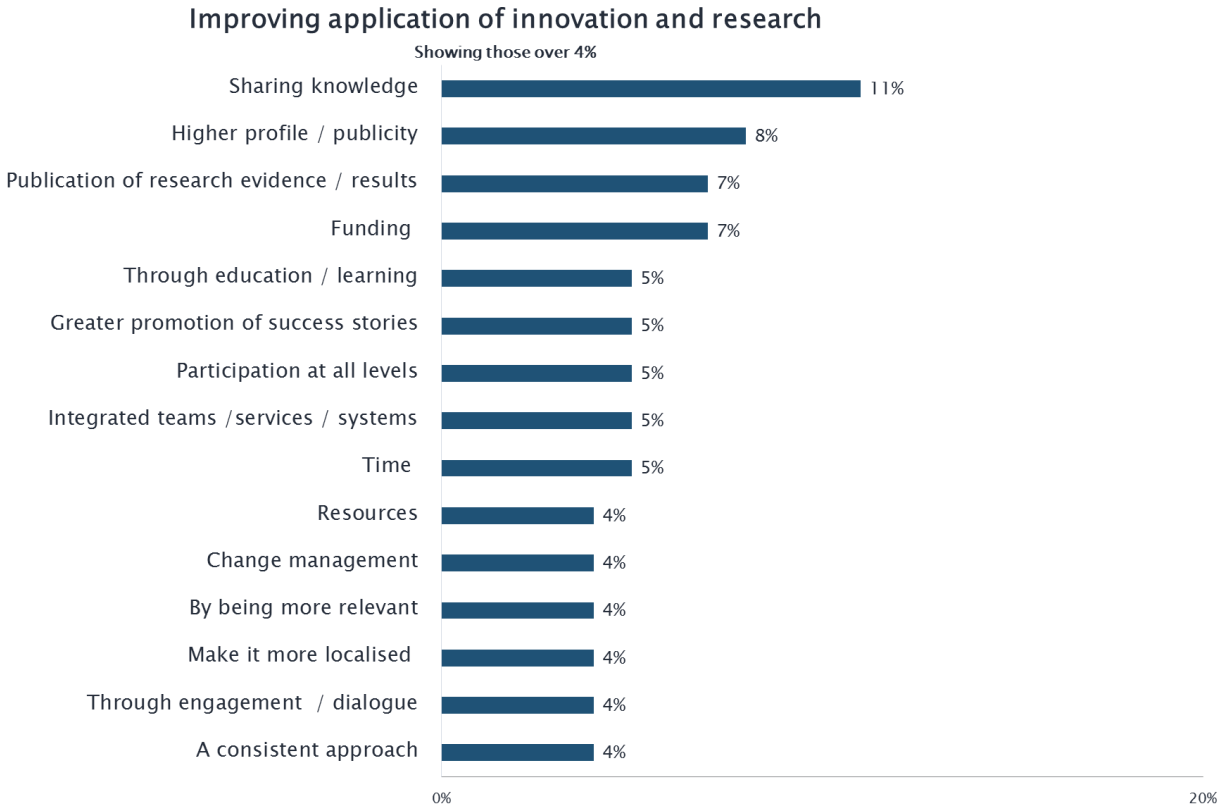
"I think the research and innovation, the way that it's described doesn't help. I try and speak to people about what's the exam question we're trying to answer. Where is the evidence to support that? How can we use new models and new ways of working? That sort of terminology would be much more effective. When people hear 'research' they think hundreds of thousands of pounds and universities and four or five years before you know the answer."

Acute Trust Director of Strategy (Acute)

When asked about the improvements that can be made in terms of awareness of research and availability of innovation, improvements around communication and dissemination of information were one of the top mentions, along with generally improving the profile of innovation and research and making it part of everyday culture. Other less frequently mentioned areas of improvement included making innovation and research more inclusive, increasing funding for it and increasing the time available for people to dedicate to it.



Q21. How do you think awareness of research and the availability of innovation for practitioners can be improved? Base: all respondents (n=257)



Q22. How do you do you think application of evidence and adoption of innovation can be improved? Base: all respondents (n=257)

In terms of improving application of evidence and adoption of innovation, sharing knowledge and increasing the profile of innovation were seen as being some of the ways in which improvements could occur, along with publication of research and increasing funding.

Inadequate time to conduct research was also a theme which emerged in the qualitative research, often linked in to it not being a part of health system professionals' day-to-day working life. Some suggested the need for more dedicated time in order to improve this, which may also be connected to the workforce issues discussed earlier and making clinical practice a more attractive place to work.

> *"I think we are so busy maintaining the status quo that it is hard to make the time and the headroom to do that longer-term thinking and planning and even time, for lots of people, to be reading research papers or taking those things forward."*
>
> **Acute and Community Trust Director of Strategy (Acute)**

> *'"I think we've got a lot of problems with capacity, generally, to free people up to do anything with research and innovation. It's like, you know, if you look at the research of any organisation, whether it's in the private sector or in the public, if you haven't got that capacity for a little bit of slack in the system to, sort of, be reflective of where we're going, it's sometimes difficult to get things up and running."*
>
> **Community Trust Director of Nursing (Community)**

Involvement and working with the people who the research aims to benefit was also seen as being key, in order to get people invested in the outcomes of the research.

> *"Where I've seen research and innovation happen that actually genuinely involves the end-users and the frontline staff right from the start, it gets implemented.*

Somehow, it actually goes like wildfire. It just happens. It's learning by doing. So, people are, actually involved. The more people are involved right from the beginning, in driving, in dictating what the remit of the research is, they have a vested interest in making it actually reflect their daily life, the more likely it is to be implemented and spread."

ICS Head of Systems Change (STP)

Changing the way in which people access innovation and research was also seen as important, and, as seen in the quantitative element of the study, stakeholders thought that ways of disseminating information and sharing knowledge gained are important. This point was also mentioned in reference to research projects which do not yield positive outcomes, and a need to understand the reasons for failure.

"So, many times we, as a whole system, as a country, start projects and they fail, and we don't learn from those failures. We often go and brush them under the carpet because we're embarrassed, and we don't want our name against that because we've got a, you know, we've got, our next career move is in sight for us and I think we can learn so much more from failures than we can from successes."

CCG Long Term Conditions Commissioning Manager (Commissioner)

"We thought we were going to come up with a really all-singing, all-dancing outcome-based pricing model for medicines that would basically incentivise the pharma company to be paid in part by the level of recovery that the individual experienced. We couldn't get there. We couldn't get to a pricing model that the pharma company were comfortable with in terms of the level risk that would allow them to commit to a true outcome-based approach. We're going to publish anyway because actually it's important that people understand that journey and that actually it doesn't always lead to success."

ICS Chief Operating Officer (STP)- in reference to schizophrenia study

Some indicated that a change to the system by which research is accessed on an individual level is needed, in order to make it easier to find relevant research and to enable people to read and engage with it. The amount of information available was seen as being relatively high, but the way in which it is displayed and disseminated was seen as being problematic.

"So, short and snappy research papers or think pieces, I think, are most likely to be read by people in senior jobs who've got a lot to do. The truth is, those much longer documents are very unlikely to get an airing, aren't they, when you've got 200 other things to think about?"

STP Local Authority Lead CEO (Social Care)

"So, for me, it's more about accessibility and ways in which you can find things when you need them, rather than newsletters and those sorts of things…. So, being able to mine that information from a database or whatever is more important to me than having a regular newsletter, because I'm never going to be able to retain what came out."

Social Enterprise Community Service Chief Executive Officer (Social Care)

The use of technology to improve access to innovation and research was also mentioned, in terms of being able to collate information and give easier access to it.

> *"We don't have clever systems in place that would flag something, much the way Amazon would flag 'you might also be interested in this'. I think that's our opportunity, to do that. So, I think there's a disconnect between how people work and how much time they've got to look for things, their specialist area, and then the overwhelming amount of information available. In a way, it becomes a barrier to accessing any of it."*
>
> **ICS Director of Transformation (STP)**

> *"There's a lot of work, for example, in the States on something called learning systems, where you create electronic communities where people can share. They can share knowledge, they can share good practice, and that's a stream of research which is possibly not very active, I think, in the UK. Whether that might encourage more engagement and more input of resources into electronic systems and how we actually use them, and what motivates people to use them."*
>
> **Consultant Gastroenterologist (Acute)**

Alongside this, many stakeholders were positive about the way in which the application of innovation and research can be helpful in both clinical and system settings, provided the right research is done in the right context.

> *"Innovation has got a massive role to play in helping us improve and make care sustainable going forward. I'm absolutely convinced on that, and I'm also convinced that there's an enormous energy around this. Nothing gets people as excited, in my experience, as new ideas and the opportunities to improve things, generally, if we can unleash it. It's also true, having said that, and slightly paradoxically, that we're often very slow to adopt the innovations."*
>
> **CCG Accountable Officer (Commissioner)**

> *"But when we can show it's born out of national, local, international research, where there's a focus on how this will bring new and better practice into play, then some of the resistance or reluctance to engage in that is pushed away. "*
>
> **STP Director of Strategy (STP)**

4.1 EXAMPLES OF INNOVATION AND RESEARCH

When asked to highlight how their health and social care system uses innovation and research, stakeholders across AHSNs discussed many examples of studies or research projects that were being undertaken, ranging from studies on population health, to discussing new medical technologies that are being implemented and projects on developing human resource capabilities. Below are a few selected examples from across different AHSNs.

Example 1: Sexual Health Services in South London AHSN

One stakeholder discussed some work done in their local area around sexual health, identifying this as a good example of where barriers between commissioners, academics and providers had been broken down to facilitate a more collaborative relationship.

"What we've done in sexual services here in Lambeth and Southwark, where we've worked very closely with our clinical partners, the commissioners, and patients, is to identify novel ways of promoting online screening for sexually transmitted infections. We've done lots of research on digital approaches to supporting HIV testing and digital approaches to creating e-services for these to do this. That saves us money, it's made our services far more accessible, and we're doing sexual health at scale because we're able to shift a lot of our services online, and our patients do self-screening using a digital platform and getting that result."

Director of Health and Wellbeing (Social Care)

Example 2: Salford Lung Study in Health Innovation Manchester [6]

Another stakeholder discussed a study in the Health Innovation Manchester AHSN, highlighting how this gave those leading it the opportunity come up with practical improvements for a population within a research setting, that stretched across community care pathways, medicine usage and population health.

"Because that work demonstrated that what was really important was not the efficacy of the medicine, it was actually the behaviours of the individuals in terms of their lifestyles and what they were doing, including taking the medicine or not as the case may be. What that's taken us into is a complete rewrite of our framework for how we manage chronic obstructive pulmonary disease in the community. What's been great is actually the pharma companies have worked with us on that. Rather than just worrying about how much drug they're going to sell, they've actually joined with us in terms of redefining the whole pathway of care, including where the medicines fit into that. That has now been adopted and is being rolled out across the whole of Greater Manchester."

ICS Chief Operating Officer (STP)

Example 3: Diabetes Centre of Excellence in East Midlands AHSN[7]

The Diabetes Centre of Excellence in Leicester was identified as a good example of a successful, practical application of innovation and research. Described as a grounded piece of research, combining innovation, energy and enthusiasm to do better for patients, it is a partnership between providers and academia.

"We have a diabetes centre of excellence locally which is a partnership between some of our local academic institutions, some universities as well as Leicester Hospital and a number of other primary community services. That's something that's been up and running a number of years now, four or five years I would guess, maybe a little bit longer. What that's really done is to bring up, and particularly relevant in a city like Leicester City which, because of the ethnic profile of the city, has huge incidents of diabetes, has brought a real focus of expertise, of best practice, of searching for new ways and approaches and treatments. Also, it's attracted external funding in to support some of that research activity which has allowed research to take place with things like our primary care research network, with practices across the city looking

[6] See: https://www.manchester.ac.uk/discover/news/pioneering-salford-lung-study-achieves-world-first/

[7] See: http://www.leicesterdiabetescentre.org.uk/Who-we-are

at more longitudinal studies over time and how patients' conditions evolve and change through their lives. So, things like that are doing really well, you know, great examples of connected practice between practitioners from a medical and a social care perspective and research and innovation."

STP Lead (STP)

Example 4: Integrated Care Exeter[8]

One stakeholder outlined an example of initiative to enable integrated care. This project focused on integrating health and social care services to help deliver better outcomes for patients, with a particular focus on frailty in older people.

"So, we're doing a lot of work on frailty, especially with our AHSN. As I said, linking all our data sets across health, social care, the Mosaic data, GP practice information, to be able to, sort of, analyse and identify frailty and intervene. We had the work that was called the ICE project, Integrated Care Exeter, we've done a lot on that, and have identified a cohort of people who then, through social prescribing and others, have been able to have other interventions which has kept them out of hospital."

CCG Director of Strategy (Commissioner)

[8] See: https://www.colabexeter.org.uk/projectfocus/Integrated%20Care%20Exeter%20(ICE)/3

NEXT STEPS

AHSNs will facilitate further discussions at regional level to refine the priorities identified through the project. These discussions will include the research community, health and social care partners, health care practitioners, as well as patients and the public NHS England and NIHR will consider these findings and each AHSN's final list of research priorities.

METHODOLOGY

The project was designed with the intention of capturing the views of senior health and social care stakeholders who work in a range of roles and practice areas, allowing for the variation in views to be observed while also arriving at an overview of the top priority innovation and research needs of a robust sample of regional stakeholders. The project consisted of two stages, a programme of qualitative telephone interviews with senior health and social care stakeholders followed by an online quantitative survey amongst a broader range of local health and social care stakeholders.

The project was conducted with senior health and social care stakeholders from all 15 AHSN regions. Where 'national' findings are referred to in this report and in the individual AHSN statements this refers to the results of the survey of 14 sets[9] of AHSN regions' stakeholders and evidence from interviews for all 15 AHSNs.

The project was overseen by a Governance Group who provided advice throughout the project and reviewed project outputs. The Governance Group was chaired by Professor Gary Ford, CEO Oxford AHSN and supported by the following members:

- Dr Sam Roberts, Director of Innovation and Life Sciences at NHS England
- Dr Louise Wood, Director of Science, Research and Evidence at Department of Health and Social Care
- Professor Stuart Logan, Director NIHR CLAHRC South West
- Professor Richard Hobbs, Director NIHR CLAHRC Oxford
- Dr Séamus O'Neill, CEO AHSN North East and North Cumbria
- Martin Leaver, Oxford AHSN

STAGE 1: QUALITATIVE TELEPHONE INTERVIEWS

61 regional healthcare and social care stakeholders were recruited to take part in semi-structured audio-recorded interviews. Each in-depth interview lasted 45 minutes and was conducted over the telephone. Stakeholders were identified by individual AHSNs based on a set of criteria determined by the project governance group. All stakeholders were required to be key systems leaders who could provide insight into local innovation and research needs, but without responsibility for research in their role, and with a range of knowledge to reflect the diversity of the medical practices areas covered by the NHS. All stakeholders submitted by the individual AHSN regions were reviewed and approved by the governance group before being formally invited for interview.

Stakeholders held a range of job titles, including Chief Executives, Directors of Strategy, Medical Directors and other senior stakeholders across health and social care systems. Stakeholders fell into 11 broad categories based on the stakeholder's job title, organisation and specialisation: Acute, Clinical Commissioning Group (CCG), commissioner, community, Independent Clinical Services (ICS), mental health, NHSE, primary care, public health, social care and Sustainability and Transformation Partnerships (STP).

[9] For the quantitative survey, only 14 AHSN have data available, as Imperial College AHSN did not provide enough respondents to provide enough completed quantitative surveys meaning their report is based on only the qualitative data.

Role category	Stakeholders taking part in the interview
Sustainability and Transformation Partnerships (STP)	20 (33%)
Acute	15 (25%)
Social Care	7 (11%)
Primary Care	1 (2%)
NHS England	1 (2%)
Mental Health	7 (11%)
Clinical Commissioning Group (CCG)	1 (2%)
Public Health	2 (3%)
Commissioner	6 (10%)
Community	1 (2%)
Independent Care Services (ICS)	1 (2%)

Table 1: Role category of stakeholders taking part in interviews

All interviews were conducted by members of the core project team, and before each interview consultants ensured they were familiar with the context of the interview and the stakeholder being interviewed, and were aware of the most relevant parts of the interview to the project objectives. The interviews followed a discussion guide which was developed in collaboration with the governance group and had an open format to allow for stakeholders to answer priority questions while also having the opportunity to express unprompted views on local NHS innovations and research needs. The interviews covered three key topic areas:

- Uncertainties and challenges in health and social care at a local level, including around national priorities, clinical practice, commissioning and organisation of services;
- What innovation and research is required to address these challenges;
- Opportunities and ideas for approaches to innovation and research in the future.

In terms of the analysis of data, each interview was transcribed, with the permission of the stakeholder, and were then reviewed by a member of the project team, other than the moderator. Members of the project team then met to discuss the research findings, analysis and direction of the report, identifying themes within regions and across them. All qualitative reports were proofed and checked by a ComRes consultant not involved in the project to provide a fresh perspective and objective point of view.

ComRes used the data from the qualitative interviews to develop an online survey for stakeholders. Throughout this report, quotations and key points from the interviews have also been used alongside the evidence from the online survey to illustrate or contextualise commonly-held opinions.

STAGE 2: ONLINE SURVEY

Using the emerging findings from the telephone interviews, a survey was designed to understand the views of a wider set of stakeholders from across AHSNs, but within similar roles within the NHS. This survey was conducted throughout September and October 2018. 1240 stakeholders were approached to complete the survey and 257 completed it, resulting in a response rate of 21%. The survey consisted of 22 questions in total, and a copy of the questionnaire can be found in the appendix.

As with the telephone interviews, stakeholders for the survey were identified by individual AHSNs, based on the same set of criteria provided by the project governance group, but allowing for a wider range of seniority of role to capture a broader set of views from local NHS staff. A breakdown of the job roles can be found in Table 1.

Role title	All AHSNs
Clinical practitioner in the NHS	43 (17%)
Clinical leader/manager/director	87 (34%)
Non-clinical leader/manager/director	63 (25%)
Director	40 (16%)
Social care practitioner	0 (0%)
Other	24 (9%)

Table 2: Role titles of stakeholders responding to online survey

ComRes are specialists in conducting stakeholder surveys and followed a process designed to maximise response rates while guarding these stakeholder relationships and complying with ethical and GDPR survey requirements. Survey stakeholders were notified by their respective AHSN regions in advance of the survey invitations being sent. All those identified as appropriate to participate were then invited by ComRes to participate in the research, with subsequent follow-ups by individual AHSN regions, in order to encourage stakeholder support for the project. Each stakeholder was sent unique link in order for ComRes to track completes across the different AHSN regions.

AHSN Region	Sample approached	Number of survey responses	Response rate
East Midlands	105	20	19%
Eastern	97	20	21%
Health Innovation Manchester	84	11	13%
Kent Surrey and Sussex	78	16	21%

Imperial College Health Partners	N/A	N/A	N/A
Innovation Agency (North West Coast)	76	29	38%
North East and North Cumbria	46	17	37%
Oxford	102	29	28%
Health Innovation Network (South London)	76	15	20%
South West	85	13	15%
UCLPartners	106	11	10%
West Midlands	99	20	20%
West of England	96	20	20%
Wessex	99	21	21%
Yorkshire and Humber	91	15	16%
All regions	1240*	257	21%

Table 3: Sample numbers, responses and response rates for the online survey

*As the sample list was added to or edited in the course of fieldwork, the number is an estimate of the total number of stakeholders approached.

PROJECT DESIGN LIMITATIONS

As with any project, a few limitations in the project design and/or process were encountered which are useful to document.

- There are relatively small sample sizes across the different regions for the quantitative survey, meaning that little regional analysis could be done, as it would not be statistically robust.
- North East and North Cumbria had fieldwork dates that were two weeks shorter than all other regions; however their response rate is still comparable to other regions.
- Some AHSNs achieved fewer interviews than others. This meant that different levels of qualitative data were available to triangulate the quantitative findings at individual AHSN-level, making detailed analysis more challenging.
- The sample was a purposive one, identified by the AHSNs themselves; therefore, in terms of interpretation, it is possible that some viewpoints may have been excluded from this research, and that some other perspectives on innovation and research may be missing.
- Whilst social care practitioners were included in the sample, none responded to the survey, resulting in their specific views not being represented across both elements of this project.

- For the quantitative survey, only 14 AHSNs have data available, as Imperial College AHSN did not have enough respondents to provide a survey list, meaning their report is based on only the qualitative data.
- Several questions on the survey were closed-answer, which may have influenced the way in which respondents answered the questions; however, an 'other' option, which asked them to specify any other priority area they had, would have helped in minimising the impact of this.
- At an overall national level, the quantitative survey findings are robust enough to be considered alone, and the qualitative survey offers an overall picture of stakeholders needs across different AHSN regions. However, deeper analysis based on crossbreaks of the data has been limited by the low sample sizes that are observed when looking in detail on this level.

Tables per region are available in the appendix of the regional reports produced for each AHSN, or on request.

APPENDIX ONE: ONLINE SURVEY

1. **Which of the following organisations best describes the organisation you are currently employed by?** ***Please select one only.***
    a) NHS England (local and regional)
    b) Sustainability and Transformation Partnership
    c) Health Education England
    d) Strategic Clinical Network
    e) A Clinical Commissioning Group
    f) An acute care trust
    g) A mental health trust
    h) A community care trust
    i) Local primary care service
    j) Local authority
    k) Social care
    l) Voluntary sector
    m) University [SCREEN OUT]
    n) Other

2. **Which of the following best describes your current role?** ***Please select one only.***

    a) Social care practitioner
    b) Clinical practitioner in the NHS
    c) Clinical leader/ manager / director
    d) Non- clinical leader/ Manager / Director
    e) Director
    f) Other, please specify

3. **In which AHSN region do you work?**
    a) East Midlands
    b) Eastern
    c) Health Innovation Manchester
    d) Health Innovation Network (South London)
    e) Imperial College Health Partners (North West London)
    f) Kent, Surrey and Sussex
    g) North East and North Cumbria
    h) Innovation Agency: Academic Health Science Network for the North West Coast
    i) Oxford
    j) South West
    k) UCLPartners (north east and north central London, south and west Hertfordshire, south Bedfordshire and south west and mid Essex)
    l) Wessex
    m) West Midlands
    n) West of England
    o) Yorkshire & Humber
    p) Don't know / Not sure

4. **There are a number of challenges currently facing England's health and social care system. We are particularly interested in challenges that innovation and research could help to solve, rather than funding or resource pressures.**

   With this in mind, of the following system level topics listed below, which three would you prioritise for innovation and/or research in the next 3 years to address challenges in your local health and social care system?

   By system level we do not mean specific conditions/ diseases, or the functionality of individual organisations and practices.
   There will be a later question focusing on specific health conditions or diseases.

   Please rank your top three, with 1 being the highest priority.

   a) Education amongst patients and the public on health conditions or encouraging healthy behaviours
   b) Community care, such as social prescribing and patient self- management
   c) Demographic changes, such as an ageing population or ethnic profile of a population
   d) Geographic variation such as urban and rural differences
   e) Improving quality and efficiency within organisations
   f) Integrated care for those with multi-morbidity and/or complex social care needs
   g) Evaluation of the impact of health and social care service developments and initiatives
   h) Earlier diagnosis and intervention
   i) Primary care, including capacity and capability of GP services
   j) Personalising treatment and interventions
   k) Social determinants of health and health inequalities
   l) Optimising use of digital technology and Artificial Intelligence
   m) Urgent and emergency care, such as demand on capacity and decision making
   n) Workforce issues, such as recruitment, retention and skills

5. **Are there any system level topics that you would have liked to see as options on the list which were not included? If so, please briefly outline which ones and why. There is a limit of 100 words.**

6. **You chose [CHOICE 1] as the most important system level topic where innovation and research could address challenges in your local health and social care system. In regard to your region, what are the specific challenges you think should be addressed? There is a limit of 100 words.**

7. **And where do you think are the evidence gaps in relation to [CHOICE 1]? There is a limit of 100 words.**
8. **Of the following medical treatment areas listed below, which three would you prioritise for innovation and/or research in the next 3 years to address challenges associated with them in your local health and social care system?**

Please rank your top three, with 1 being your highest priority.

   a) Respiratory diseases, including asthma

b) Cancer
c) Cardiovascular and stroke
d) Dementia
e) Diabetes
f) Frailty
g) Mental ill health
h) Obesity
i) Sexual health
j) Palliative and end of life care
k) Maternity and peri-natal care
l) Musculoskeletal
m) Multi-morbidities

9. **Are there any medical treatment areas that you would have liked to see as options on the list which were not included? If so, please briefly outline which ones and why. There is a limit of 100 words.**

10. **You chose [CHOICE 2] as the primary medical treatment area where innovation and research could address challenges in your local health and social care system. In regard to your region, which one, if any, of these specific challenges would you choose to prioritise?**

a) Respiratory diseases, including asthma
    i. Reducing unplanned hospitalisation
    ii. Tracking effectiveness of inhaler usage
    iii. Prevention through healthy behaviours
    iv. Supporting self-management
    v. Co-morbidity
    vi. Other (please specify)
b) Cancer
    i. Earlier diagnosis by GPs
    ii. Take-up of screening programmes
    iii. Living with and beyond cancer
    iv. Genetics and personalised care
    v. Home-based surveillance and self-management
    vi. Optimising patients for cancer surgery
    vii. Prevention through promoting healthy lifestyles
    viii. Raising public awareness about cancers and their symptoms
    ix. Waiting times for treatment
    x. Co-morbidity
    xi. Other (please specify)
c) Cardiovascular and stroke
    i. Public education around risk factors
    ii. Prevention through promoting health lifestyles
    iii. Self-management
    iv. Co-morbidity
    v. Genetics and personalised care

vi. Other (please specify)

d) Dementia
   i. Diagnosis
   ii. Self- Management
   iii. Social care
   iv. Co-morbidity
   v. Other (please specify)

e) Diabetes
   i. Co-morbidity
   ii. Developing a consistent approach to diabetes at regional / national level
   iii. Increasing uptake of support
   iv. Prevention and public education
   v. Rising numbers of those with Type 2
   vi. Self-management
   vii. Technology solutions, for example to support independence
   viii. Other (please specify)

f) Frailty
   i. Self-monitoring
   ii. Clinician monitoring
   iii. Social care
   iv. Technology, for example to support independence
   v. Co-morbidity
   vi. Prevention of the progression of frailty
   vii. Poly-pharmacy
   viii. Other (please specify)

g) Mental illness
   i. Acute care
   ii. Children and young people's mental illness
   iii. Older people's mental illness
   iv. Common and lower level illness (e.g. day to day stress management)
   v. Community care
   vi. Community engagement and resilience
   vii. Dementia – diagnosis and management
   viii. Parity of esteem
   ix. Severe or enduring mental illness
   x. Circumstantial triggers of mental illness
   xi. Stigma
   xii. Suicide prevention
   xiii. The relationship between physical and mental health
   xiv. Co-morbidity
   xv. Other (please specify)

h) Obesity
   i. Prevention, for example through encouraging healthier diets or exercise
   ii. Impact of obesity on likelihood of developing degenerative bone disease
   iii. Impact of obesity on likelihood of developing diabetes
   iv. Impact of obesity on likelihood of developing cancer
   v. Childhood obesity
   vi. Other co-morbidities

vii. Other (please specify)

i) Sexual health
   i. STIs in older people
   ii. STIs in younger people
   iii. Awareness raising and public communications about sexual health
   iv. Co-morbidity
   v. Other (please specify)

j) Musculoskeletal
   i. Co-morbidity
   ii. Self-management
   iii. Prevention
   iv. Pharma/ Genetic solutions
   v. Rehabilitation
   vi. Other

k) Maternity and Peri-natal care
   i. Early life illness and childhood conditions
   ii. Support for the whole family
   iii. Encouraging healthy lifestyles to support pregnancy
   iv. Mental illness (e.g. post-natal depression)
   v. Other (please specify)

l) Palliative and end of life care
   i. Community based care
   ii. Identification and referral
   iii. Supporting patient choice
   iv. Continuity of care
   v. Medicines management and polypharmacy
   vi. Co-morbidity
   vii. Other (please specify)

m) Multi-morbidities
   i. Frailty and elderly people
   ii. Lack of specialist knowledge of multi-morbidities
   iii. Polypharmacy
   iv. The crossover between physical and mental health
   v. Long-term health conditions
   vi. Person-centred care
   vii. Other (please specify)

11. Are there any other challenges in relation to [CHOICE 2] that you think should be addressed as priorities? There is a limit of 100 words.

12. And where do you think are the evidence gaps in relation to [CHOICE 2]? There is a limit of 100 words.

13. **There may be specific challenges in providing health and social care for the groups of people listed below. Where should innovation and/or research be focused in order to address the specific challenges associated with these groups of people in your region?**

    Please rank your top three, with 1 being the highest priority.

    a) Black Asian and Minority Ethnic (BAME) people
    b) Children and young people
    c) People with physical disabilities
    d) People with learning disabilities
    e) People with mental health conditions
    f) Those from lower income backgrounds
    g) Homeless people
    h) Lesbian Gay Bisexual Trans+ (LGBT+) people
    i) Older people
    j) People with alcohol and/or substance dependency and misuse
    k) Socially-isolated people

14. **Are there any other groups of people that present specific challenges for delivering health and social care that were not included on the list? If so, please briefly outline which ones and why. There is a limit of 100 words.**

15. **You chose [CHOICE 3] as the group of people for whom innovation and research would be a priority to help address challenges in your local health and social care system. In regard to your region, what are the specific challenges you think should be addressed? There is a limit of 100 words.**

16. **And where do you think are the evidence gaps in relation to [CHOICE 3]? There is a limit of 100 words.**

17. **Would you like to tell us about any <u>additional challenges</u> in need of further innovation and research in your local health and social care system? If so, please write them in the box below, making clear which you think are the most <u>urgent.</u>**

18. **To what extent does the innovation and research taking place in your region currently address the areas you consider a priority, as outlined in your answers so far?**

    a) It fully addresses the areas I consider a priority
    b) It mostly addresses the areas I consider a priority
    c) It partially addresses the areas I consider a priority
    d) Research and innovation does not address the areas I consider a priority
    e) I am not aware of the innovation and/or research activity taking place in my local area

19. **Are there areas of innovation and research in your region that you think could be curtailed in order to prioritise resource into other areas of innovation and research? If so, please explain what they are and why in the box below. There is a limit of 100 words.**

20. **How confident are you that you can access and implement available innovation and research in your region?**

Access/ Implement

a) Very confident
b) Reasonably confident
c) Slightly confident
d) Not at all confident

21. **How do you think awareness of research and the availability of innovation for practitioners can be improved?**

22. **How do you do you think application of evidence and adoption of innovation can be improved?**

23. **This research may become part of a wider programme of work, for which the AHSN Network may wish to contact you with regards to. Would you be happy to be re-contacted for this purpose?**

a) Yes
b) No

APPENDIX TWO: INTERVIEW DISCUSSION GUIDE

SECTION 1 – INTRODUCTION AND context – (2 mins)

Interviewer to provide brief summary of the project background, research objectives, request to record the interview, and answer any questions interviewees may have.

1. **For context, please could you provide a brief summary of your role and remit?**

SECTION 2 – INTRODUCTION AND GENERAL QUESTIONS – (20 mins)

In this conversation would like to learn about the innovation and research needs in your local health and social care system. We're interested in the evidence gaps that research might address and system needs that innovation might meet, rather than challenges you face in terms of funding or resource pressures.

2. **What are the challenges you feel your local health and social care system is currently facing?**
   - Why do you mention these specifically?
   - Do you feel that any are specific to your region? Why is this?
   - Which of these challenges do you feel is the most urgent?
   - Which would you prioritise? Why?

3. **You've mentioned several challenges that your local health and social care system is currently facing. How do you think that innovation and research could help you to address these?**

- What are the uncertainties or lack of knowledge that need addressing?

4. **Are there specific areas where you believe that there are key evidence gaps?**

5. **Have you had difficulties or uncertainties with groups of patients or particular circumstances where innovation and research might help you to make better decisions or to solve challenges?**

- Can you describe what these difficulties were?
- What research or innovation is needed to address these difficulties?

6. **What are the areas in need of <u>further or new innovation or research</u> at the moment in your local health and social care system?**

- What do you think are the short-term innovation or research needs?
- What do you think are the long-term innovation or research needs?
- Which are most urgent?
- Do you feel these are similar or different from areas in need of innovation or research at a <u>national</u> level?

SECTION 3 – priority areas (15 mins)

Thank you very much for your answers so far. I'd now like to move on discuss 8 priority areas, and your thoughts on these in your AHSN region. These are mental health, primary care, cancer, urgent and emergency care, diabetes, frailty, cardiovascular health and children and young people.

7. Do you currently work specifically on any of these priority areas?

8. Given that mental health is currently a national priority, what do you think are the challenges in this area of your local health care system?

- How might innovation and research help to address these?

9. Given that primary care is currently a national priority, what do you think are the challenges in this area of your local health care system?

- How might innovation and research help to address these?

10. Given that cancer is currently a national priority, what do you think are the challenges in this area of your local health care system?

- How might innovation and research help to address these?

11. Given that urgent and emergency care is currently a national priority, what do you think are the challenges in this area of your local health care system?

- How might innovation and research help to address these?

12. Given that diabetes is currently a national priority, what do you think are the challenges in this area of your local health care system?

- How might innovation and research help to address these?

13. In relation to children and young people, what do you think are the challenges in this area of your local health care system?

- How might innovation and research help to address these?

14. In relation to frailty, what do you think are the challenges in this area of your local health care system?

- How might innovation and research help to address these?

15. In relation to cardiovascular health, what do you think are the challenges in this area of your local health care system?

- How might innovation and research help to address these?

SECTION 4 – how health and social care services use innovation and research (10 mins)

Finally, I would also to get your thoughts on how health and social care services use innovation and research at the moment.

16. **Currently, how does your health and social care system use innovation and research?**

- Can you think of any examples of successful innovation and research?
- What worked well with them? What worked less well?
- How do you currently access innovation and research?

17. **Currently, how does your health and social care system use innovation and research in planning service change and organisation?**

- How do you currently access innovation and research?

CONCLUSION (5 mins)

Finally, given our research objective of identifying local innovation and research needs in your AHSN area, are there any further comments you would like to add, which we haven't covered today?

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