NHS England and NHS Improvement Board meetings held in common

Paper Title:	Update on Innovation, Research and Life Sciences and the Accelerated Access Collaborative
Agenda item:	4 (Public session)
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Paper type:	For discussion

Organisation Objective:

NHS Mandate from Government	☒	Statutory item	☐
NHS Long Term Plan	☒	Governance	☐
NHS People Plan	☐		

Executive summary:

The Innovation, Research and Life Sciences (IRLS) team host the Accelerated Access Collaborative (AAC), and deliver an ambitious suite of programmes to ensure the NHS is in the best place to improve patient outcomes and reduce health inequalities through research and innovation. This paper provides an update on progress in the last year and outlines future plans.

Action required:

The NHS England and Improvement (NHSEI) Boards are asked to note progress and approve pursing further actions to ensure research and innovation meet the needs of the NHS; increase participation in research; and accelerate adoption and spread of proven[1] innovations to get the best treatments to patients faster.

Background

1. NHSEI's IRLS team hosts the AAC. The AAC brings together, health, government, regulatory, charity and industry partners to improve patient outcomes through innovation and research.

2. The IRLS team, which has 80 FTEs and an annual budget of £100m, works as part of the wider Transformation directorate, and leads work supporting the NHS to implement the Research and Innovation strategy in the NHS Long-Term Plan and support delivery of the AAC's priorities[2].

3. Research and innovation has played a key role helping manage the impact of Covid-19:

[1] To be proven an innovation must be approved by the relevant regulators and demonstrated to be clinically and cost-effective by a suitable Health Technology Assessment (HTA) body, such as the National Institute for Health and Care Excellence (NICE)
[2] See para 14 & 15 for priority summaries and Appendix 2 for more detail

i) research into Covid-19 diagnostics and therapeutics and vaccines within the NHS saved thousands of lives and changed clinical practice all over the world including the REACT programme (led by Imperial) and RECOVERY trial; and
ii) adoption of innovation grew, including the deployment of vaccines and the Covid-19 treatments identified through the RECOVERY trial, RAPID C-19 and others.

4. Since the update to the Boards last November, the Medicines and Healthcare Regulatory Authority launch its Innovative Licencing and Access Pathway (ILAP), which should make the process of getting innovative medicines through the regulatory process - more efficient.

5. We have also seen the publication of the Life Sciences Competitiveness Index, which shows that:
   i) the National Institute for Health and Care Excellent (NICE) is getting faster at undertaking health technology assessments; and
   ii) the NHS is getting faster at adopting them, with the uptake of NICE approved medicines after one year increasing from 51% to 56% (as versus the estimated uptake levels in comparator countries).

6. This trend of the rapid adoption of innovation is also reflected in the recent Logex & IVM report, showing NHS uptake of the medicines in the Five Areas of Highest Health Gain improving from 11th to 9th in severe asthma; from 6th to 1st in Cystic Fibrosis; from 8th to 7th on smoking cessations; and staying at 2nd place for Hepatitis C (as versus comparator countries).

7. A recent IQVIA report[3] highlighted increasing confidence over the last three years amongst pharmaceutical industry CEOs about the UK's coordinated approach to research and innovation:
   i) 76% of respondents confirm that the UK is the same, or more attractive as a clinical research destination post-Brexit (vs. just 3% in 2017 and 2018), and 79% believe the UK will remain a priority medicines launch country for their respective companies; and
   ii) 74% stated that the UK will be a first /early launch market in the next three years.

8. NHSEI has a strong track-record of supporting the adoption of proven disruptive innovations to increase capacity and improve patient outcomes in the NHS, such as:
   i) Placental growth factor testing: a lifesaving, world-first test for pregnant women, which can rule out pre-eclampsia reducing admissions for up to 65,000 women a year admitted to hospital for up to three days to be monitored for the condition. Our AAC-led programmes scaled this from just two NHS trusts in 2019 to over three-quarters of maternity units today.
   ii) Brainomix, an AI tool that speeds up the reading of brain scans, taking an hour off the patient pathway in the diagnosis and treatment of stroke - enabling

[3] Global pharma and biotech HQs vote to prioritise the UK as a go-to destination for clinical trials and medicines launch post-pandemic and Brexit - IQVIA

three-fold increase of patients being able to achieve independence post-stroke.

iii) A population health deal jointly developed with NHSEI's Cancer Team and the Commercial Medicines Directorate. The deal included a trial of GRAIL's Galleri cancer blood test which can detect over 50 types of cancer and is targeted at 160,000 patients in areas of the highest need, highlighting our strong commitment to reduce inequalities. This trial admitted its first patient within 35 days of the trial going live, taking lessons from the vaccine studies, and significantly faster than the UK average of 218 days.

9. These innovations are just three of over 3,500 we supported through a range of programmes. In February 2021, we published comprehensive analysis of these in the AAC review, which also provided a strengthened commitment from AAC partners to ensure the best new innovations reach patients faster than ever.

10. In July 2021, the Life Sciences Vision was also published. This further highlighted the NHS's key role in adopting innovation and outlining a government-wide approach to tackling health challenges through research in seven disease areas. We also recognise the importance of this ambition to the UK's Life Sciences sector, as an important pillar of the UK economy, and are committed to delivering the components outlined for the NHS as an innovation partner outlined in the vision, with the additional investment outline in the 2021 Comprehensive Spending Review.

11. This context sets out how the last 18 months has allowed us to speed up the delivery of research and innovation. Our work has also continued to have a strong global impact through REACT and the RECOVERY trial. The real game-changer has been pace and speed at which innovation is adopted and this has set a new bar from how innovations can move through the life cycle if we work in harmony with our partners across health and social care. The need for the NHS to adopt innovation is also clear, in the context of increasing demand and complexity. The paper outlines how our team will support evaluation and adoption of therapeutic, diagnostic, and care pathway innovation.

Impact of our work

12. Over 1.4 million patients have benefited from our programmes to date, and we are supporting research and the faster adoption of innovation using lessons learn from these programmes. Over the last year, we have:
    i) helped patients spend **over 140,000 fewer days in hospital**;
    ii) supported over **3,700 innovations**, across 742 sites;
    iii) helped over **3,470 innovators**, including over **700 NHS staff** as part of the NHS Clinical Entrepreneurs Programme; and
    iv) **saved the NHS over £119 million**.

13. We have supported delivery of specific 'NHS Long-Term Plan' commitments and focussed our innovation programmes on priority clinical areas, including prevention and treatment of cardiovascular disease and diabetes; addressing health inequalities; and moving towards 'net zero'. In addition, we delivered specific commitments around innovation, including:

i) **launching the MedTech Funding Mandate** to support the adoption of proven medical devices, diagnostics, and digital products;
ii) the **beta launch of the NHS Innovation Service**, providing a single point of access for the support they need from AAC partner organisations to develop and launch innovations; and
iii) delivering the AAC **Rapid Uptake Product** programme which has supported the accelerated uptake of several areas of innovation, that, despite NICE approval, have had lower-than-expected uptake in the NHS. The programme identifies what the specific barriers are to their uptake and identifies the solutions to remove them to form bespoke packages of support for each innovative product.

14. Two examples to further illustrate the breadth of the team's work are provided at Appendix 1.

Our vision for the next year

15. The focus of our work is to improve patient outcomes and reduce health inequalities through research and innovation.
    i) **For patients**, this means improved outcomes through faster access to proven innovations and greater opportunity to participate in research to support the evidence base for the next generation of innovations;
    ii) **For NHS staff**, this means support to develop and have faster access to, proven innovations, implementation support to embed these in local care pathways to provide the best care for their patients. It also means a greater opportunity to build on the lessons from Covid-19 and embed research as part of excellent clinical care; and
    iii) **For AAC partners**, this means the opportunity and continued commitment to collaborate to use research and innovation to address our most challenging problems.

16. To deliver this the AAC Board have identified the following priority areas[4] over the next two years:
    i) providing a clearer articulation of NHS needs (demand signalling) and matching this to a systematic search for solutions (horizon scanning), so that the NHS can plan and prepare for the next generation of innovations and stimulate innovation in the highest-priority areas;
    ii) increasing the diversity, scale, and speed of research, so that the NHS can have clinical evidence that better reflects our population and makes it easier to adopt innovations that will improve outcomes and address health inequalities;
    iii) ensuring we have programmes to support the uptake of NICE-approved, proven innovation in the NHS. This supports work to improve the innovation pathway from ideation to adoption across medicines, diagnostics, medical devices, and digital products;
    iv) supporting the NHS workforce to champion innovation on the front line, so

[4] See Appendix 2 for further details

that they are better able to both develop and rapidly evaluate[5] solutions (such as remote home monitoring[6]) and to drive local implementation of new innovations; and

v) continuing our collaborative approach to transforming patient care with our AAC partners, through transparent and at-scale commercial deals that link to our demand signalling and horizon scanning, and supporting innovators to navigate the NHS, through the launch of the NHS Innovation Service and working locally with Academic Health Science Networks (AHSNs).

17. In June, the AAC Board also agreed a patient and public involvement strategy to:
    i) ensure that a diverse range of patients and the public, especially people with lived experience are involved in influencing the direction and delivery of the AAC work programmes;
    ii) proactively address equality and inclusion in our work;
    iii) work collaboratively across the AAC partnership and wider system partners to embed a culture of patient involvement across AAC programmes;
    iv) support patients and public partners who work with us to have meaningful involvement opportunities and a positive experience of their involvement;
    v) measure our impact and outcomes; and
    vi) communicate our impact

Delivering this ambitious programme will require collaboration with patients and AAC partners

18. It is important to have a delivery mechanism that can identify and scale local innovation and efficiently support the adoption and spread of national innovation programmes. To do this, the AAC Board will continue to work with Integrated Care Systems, NHSEI Regional Teams and policy teams to provide support through:
    i) The Pathway Transformation Fund – funding for NHS organisations to enable them to make the pathways changes required to adopt innovations selected through our AAC programmes;
    ii) The AHSN Network, a network of 15 organisations covering the whole of England who provide adoption and spread capacity and capability to local systems and innovators to identify, also providing evidence for at-scale innovations and spreading nationally identified innovation programmes;
    iii) Embedding research and innovation into Integrated Care Systems and learning from and highlighting best practice such as our joint report with the Care Quality Commission on enabling innovation;
    iv) Working closely with NHS England's national programmes, including the work of NHSX and Improvement including on Artificial Intelligence and Diagnostics;
    v) To remain accountable to the public and the AAC Board, the team will continue to regularly monitor their performance through a series of metrics outlined in our AAC Scorecard. Programmes of work will be adapted to ensure they consistently meet the needs identified through the evidence generated by this work and reviewed in our annual report. The next update is

[5] Including the rapid evaluation of the innovations identified by the Improvement Directorate's 20/21 Beneficial Changes Programme in partnership with the National institute for Health Research (NIHR), Applied Research Collaboratives (ARCs) and AHSNs

[6] Remote home monitoring (virtual wards) for confirmed or suspected COVID-19 patients: a rapid systematic review - ScienceDirect

due for publication in June 2022; and

vi) We ask the board to recognise importance of this work and provide its support to the team in embedding the actions outlined above into NHS England's core programmes of work, ensuring that the NHS, patients and the public continue to contribute to and benefit from the latest proven innovative treatments and diagnostics.

APPENDIX 1

To further illustrate the breadth of our work, in collaboration with the AAC partners, we outline two examples below:

i) Cardiovascular disease prevention is the biggest single area where the NHS can save lives over the next decade and has been identified as a key area of focus in the health inequalities programme, Government's Life Science Vision and NHS Long-Term Plan. Therefore, it is one of the key disease areas for the team. We have embedded support through:
   - a national lipid management programme being delivered in partnership with Heart UK and the Academic Health Science Networks (AHSNs), providing implementation support and training for NHS staff for all NICE-approved lipid management therapies and a patient education programme on cholesterol management
   - a population health deal for a new, NICE approved lipid-lowering medicine (Inclisiran), delivered by the AAC in partnership with the Commercial Medicines Directorate highlighting the joint work of AAC partners including:
     - NICE independently assessing the medicine through their Technology Appraisal process and working with NHS England to endorse a lipid management pathway, highlighting the appropriate place in the clinical pathway for each of the NICE approved treatments; and
     - NHS Digital developing an algorithm to support general practice to quickly identify patients in their remits who meet the NICE criteria to potentially benefit from treatment

ii) Hospitals which are 'research active' help to develop clinicians and provide better health outcomes[7]. COVID-19 research undertaken in the NHS has changed practice all over the world. The RECOVERY trial was estimated to have saved a million lives over the first 12 months. In addition, taking part in research has been shown to improve patient outcomes and workforce retention. We have been working to speed up the set-up of trials in the NHS and increase the ability for the NHS's workforce and patients to participate in research. This has happened through the following programmes:
   - participation in the Research Resilience and Growth Programme, which with a range of partners works to deliver the National Vision for Clinical Research;
   - supporting the GRAIL programme to design and set-up a two-part real-world research study, including clinical data capture with NHS Digital and NIHR, and coordinating partners to prepare for recruitment[8]. This shows us that high numbers of patients can be recruited quickly into trials following regulatory approval, without the impetus of a global pandemic.
   - the launch of the Chief Nursing Officer's (CNO) Strategic Plan for Research set out a policy framework for developing and investing in

[7] Recognising research: how research improves patient care | RCP London

[8] This resulted in the first participant being enrolled onto the asymptomatic study 35 days following approval (much faster than the average 218 days for UK studies)

research activity across the NHS, and for broadening the involvement of nurses in research, so that research led and delivered by nurses becomes business as usual in all health and care settings; and

- the National Contract Value Review is changing how commercial clinical research is contracted and costed, so that rather than individual sites negotiating with commercial sponsors, a single negotiation will take place informed by site-specific cost variances, thus speeding trial set up times.