

ACCELERATED ACCESS COLLABORATIVE (AAC) BOARD

Meeting date: 20 March 2024

Paper Title: Approach to Data Harmonisation and a Single Innovation Pipeline

Agenda item: 6

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Paper type: For discussion

AAC Priority Area:

Research	<input type="checkbox"/>	Building innovation capacity	<input type="checkbox"/>
Demand signalling and horizon scanning	<input checked="" type="checkbox"/>	Innovator support	<input checked="" type="checkbox"/>
Uptake of proven innovation	<input type="checkbox"/>	Cross-cutting (Health Inequalities,	<input type="checkbox"/>
Other (statutory, governance)	<input type="checkbox"/>	Net Zero, Life Sciences Vision)	

Ask of the AAC Board:

The AAC Board is asked to:

- Discuss and confirm the aim of delivering improved data, that is better connected, and seamless across the ecosystem
- Note the progress made to date and discuss how this work could be utilised across AAC partners
- Approve a joint working approach, including any required task and finish groups, and the commitment to data sharing

Executive summary:

AAC Partners collect data and information about research, researchers, products, innovations, and innovators. Unlocking the power of the data that is held individually and collectively would provide value to the broader innovation ecosystem and underpins many of the AAC priorities.

Given the scale of the ambition the programme of work a ‘proof of concept’ has been initiated, which seeks to harmonise data across the fifteen Health Innovation Network organisations and the NHS Innovation Service. This aims to build the foundations and approaches for enhancing data development, storage and quality, and interoperability between partners, yielding important learnings and putting foundations in place. It is also clear that this will only tell a limited part of the overall data picture. There may be further benefit and opportunities from expanding this work. The AAC Board should consider whether a focused sub-group focused on data should be convened.

Background

1. The Accelerated Access Collaborative (AAC) Board has previously heard about the importance of reliable, sustainable data sources. For example, this was identified as an enabler for commercial approaches (presented in November 2023), and for successful delivery of adoption and spread efforts (presented in November 2023).
2. All AAC Partners collect data and information about research, researchers, products, innovations, and innovators. This is often subject to various data sharing agreements, non-disclosure agreements (NDAs) and information governance arrangements. Capturing and holding data is the subject of legislation, most notably the General Data Protection Regulation (GDPR).
3. Unlocking the power of the data that is held individually and collectively would provide value to the broader innovation ecosystem. Doing so will enable us to better horizon scan for emerging technologies, develop an amenable regulatory environment, prepare better for adoption and spread, and measure impact. Better data underpins many of the AAC priorities. Standardised, interoperable data would make it easier to work collaboratively with Healthcare UK to promote the UK healthcare sector internationally, matching homegrown innovations with international opportunities.

Considerations

4. Delivering the aim of improved data, that is better connected, and seamless across the ecosystem would entail a significant, collaborative programme of work. It is likely that, if delivered as one continuous programme of work, that it would span a period of several years. Many of the data sources that the AAC relies on are mature but have been developed organically or for other purposes. For example, data are collected about products included on the MedTech Funding Mandate (MTFM) from different sources, including companies and the Health Innovation Network organisations, but not linked to patient data.
5. There is an opportunity to better use our collective data for different purposes, that will be addressed throughout the paper. This includes:
 - a. Data for performance and oversight: which includes that used to track programme delivery (such as the adoption of innovation), or to test the effectiveness of an intervention. From an AAC perspective this would rarely refer to organisational performance.
 - b. Data for business intelligence: which includes the development of insights and analysis for the purpose of decision making, including the targeting of resources.
 - c. Data for horizon scanning and market review: which includes pipeline and other information that can be analysed both proactively and reactively.

6. Given the scale of the ambition the programme of work a ‘proof of concept’ has been initiated, which seeks to harmonise data across the fifteen Health Innovation Network organisations and the NHS Innovation Service. This seeks to: *create a single source of truth allows for joint assurance between commissioners and HINs. Creating a platform which enables standardised data, with APIs to drive efficiencies and reduce reporting burden. The future vision presents an opportunity for business intelligence which allows for evidence-based decision making, creating greater data insights.* This seeks to develop data sources that can be used for both performance and oversight and developing business intelligence.
7. This aims to build the foundations and approaches for enhancing data development, storage and quality, and interoperability between partners. To date this has been a ‘discovery’ piece of work, focused on understanding the data landscape, data maturity of programmes and organisations, and approaches to data interoperability. None of this is intended to shift the ultimate ‘owner’ or processor of data, rather the focus is on drawing greater insight and intelligence. The findings of this programme inform areas for further investigation and consideration when expanding to the wider ambition.
8. Note that these ambitions are distinct from other data focused programmes, such as the Data for Research and Development (Data for R&D) programme that is developing national and sub-national / regional secure data environments (SDEs) for research purposes. It is also distinct from NHS England’s Federated Data Platform (FDP) that is primarily aimed to connecting patient data to inform decision-making.
9. The pilot has been organised into three phases of work, each iterating on the previous as we ‘learn from doing’. This approach has allowed for more agile scoping of work, based on the outcomes of extended ‘sprints’:
 - a. Phase 1: Stakeholder research was undertaken to understand the current ‘as is’ landscape and how information is captured, stored, and utilised for decision-making. This included a data flow map, an assessment of the current landscape, ideation workshops to understand process challenges, and the desired future state/critical success factors, and options for a future state (see below, and Annex 1 [REDACTED]).
 - b. Phase 2: Started with a detailed analysis of data items collected across the health innovation network compared to the minimum dataset (MDS) and the development of metrics and logic models for assurance, reporting, and impact. Development of an updated minimum dataset and consideration of an approach to visualise the innovation pipeline.
 - c. Phase 3: Includes establishing the right change control governance to optimise the data environment. Core specifications and designs for a central collation tool and the required interoperability standards will be developed. This will be underpinned by common data definitions and standards. Finally, a more detailed data maturity assessment will be

completed that supports a gap analysis against the reporting and interoperability standards. This will also require the right data permissions to drive the greatest utility.

10. During Phase 1 an options appraisal was undertaken on the proposals for the future central reporting system, that would be hosted by the Innovation, Research, Life Sciences and Transformation Strategy (IRLSS) sub-directorate within NHS England (NHS) on behalf of the AAC. This is consistent with both the secretariat of the AAC, and the commissioning relationship with the Health Innovation Network organisations. A parallel options appraisal was also undertaken for requirements for local systems, at the Health Innovation Network organisation level. These determined that the preferred options were:
 - a. Centrally: A Central Reporting System with a standardised and agreed data requirements statement not only presents the opportunity for the AAC to have easy access and visualisation of data to assure HIN activity, but also provides a mechanism for Health Innovation Network organisations to ‘connect’ into, to track their activity innovation status.
 - b. Locally: Establishing local systems which support national reporting requirements allows Health Innovation Network organisations to maintain local flexibility whilst providing information which contributes to the national perspective. It provides opportunity for Health Innovation Network organisations to build data around horizon scanning and demand signalling as well as insights to feed into evidence-based business planning and collaboration.
11. It is anticipated that a further phase of work will be commissioned that will provide more direct support to the Health Innovation Network organisations and the IRLSS team to prepare to implement the recommendations of earlier phases. Again, the intention will be to ‘learn by doing’ – making system improvements and implementing the foundations for future successes concurrently. This will also build on earlier work completed within IRLSS to transform data and insight capabilities.

Recommendation

12. As set out above, the data harmonisation work to date has yielded important learnings and puts some foundations in place for future building. It will provide more accurate and timely insight into the innovations, innovators and products that are collectively supported. It is also clear that this will only tell a limited part of the overall data picture. In turn, this means that there may be further benefit and opportunities from expanding this work to meet the original ambition.
13. There is additionally an opportunity to increase efficiency across the whole innovation ecosystem, with data created and collected once but shared and utilised widely. It also supports greater alignment of performance and oversight management, as well as generating business intelligence that can inform data-driven decision-making.

14. There are several areas that could be explored next. Firstly, there is an immediate opportunity to ensure that there is better data sharing between the National Institute for Health and Care Research Innovation Observatory (NIHR IO) and the NHS Innovation Service. This could take the form of a bi-directional data flow to support horizon scanning and demand signalling (AAC Priority 1). This may require an amendment to the NHS Innovation Service terms of use to enable data sharing.
15. There are also opportunities to better integrate the data that are held by research organisations and funders with broader innovation pipeline data¹. Progress has been made in this area already, but there is still limited or no capability to track research through to product (innovation) and commercialisation.
16. There are opportunities to better understand the innovation and commercialisation that is going on in NHS Trusts. This capability was referenced in the recent updates to the AAC Board on the broader commercial approach (presented November 2022 and November 2023). Too often non-NHS commercial approaches are taken, meaning that value and intellectual property is not maximised.
17. Ultimately, implementing a unique ID for each innovation, assigned at the point of invention, and tracked through to adoption, spread and patient outcomes would provide a step-change in the ability to derive insight from data. In turn, this could make England a more attractive place to undertake research and innovation, creating a virtuous loop of feedback from existing post-market surveillance capabilities into research and innovation.

Next steps

18. Delivering the ambition set out above will require a commitment of resources, a collaborative approach and effort from across AAC Partners. At the outset a roadmap will need to be developed and agreed, that prioritises further foundational work. Some of this may include delivering cultural and regulation changes, whereas some will focus on the development of tools and products. It will require a sustained commitment.
19. The AAC Board should consider whether a focused sub-group focused on data should be convened. This could be modelled on the successful approach taken during the current phases of the Health Innovation organisations Network data harmonisation project.

¹ Potential data sources include: NIHR pipeline, NICE pipeline (monthly resource planner that informs the MedTech Funding mandate), MHRA pipeline, SBRI awards, NIA, Clinical Entrepreneurs Programme, AI award, DTAC register, Commercial and supply chain.

20. This sub-group could also be used to refine the overall data ambition, and ensure alignment with other significant programmes of work including the FDP, NICE strategy, and others. This ambition should be overseen and agreed by the AAC Board, with confirmation from industry, patient and academic partners of suitability.

Board members are asked to:

21. **Discuss** and confirm the aim of delivering improved data, that is better connected, and seamless across the ecosystem
22. **Note** the progress made to date and **discuss** how this work could be utilised across AAC partners
23. **Approve** a joint working approach, including any required task and finish groups, and the commitment to data sharing



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Annex 1 – As-Is Current State Mapping of Health Innovation Network and NHS England data [REDACTED]