National Institute for Health and Care Excellence

Science, Evidence and Analytics (SEA) progress report

1. This report provides an update on key issues and developments in the Science, Evidence and Analytics directorate in the period November and December 2020.

Summary of activity

A summary of the work of the teams is described below:

Information Resources

In addition to work on COVID-19, the information resources team provided information expertise and searches for the development of 75 NICE products, produced 26 current awareness bulletins, sourced 506 documents and provided information skills training to 33 NICE staff.

Science Policy and Research

The Science Policy and Research programme continues to deliver activity to 9 projects aligned to NICE’s research priorities funded by the European Union’s Innovative Medicines Initiative (IMI) and Horizon 2020 grants. A number of policy-related projects are progressing, including: Extending the QALY, Children’s Quality of Life, EQ 5D 5L Valuation Set for England and plans for ‘NICE Listens’, a new approach for deliberative public engagement. The team is also working closely with the MHRA to develop the joint Innovative Licensing and Access Pathway.

Data and Analytics

Data and analytics activities are, in the main, captured in the separate January Board paper 'Data and Analytics Methods and Standards Programme and Implementation Update'.

Notable issues and developments

Ongoing response to COVID-19

Supporting the COVID-19 response remains a central focus of our work.

The information services team continues to support the trial tracking, systematic literature searching activity, document supply and copyright advice that underpins development of NICE guidance on all COVID-19 topics across NICE and supports the surveillance and monitoring processes to ensure these guidelines are kept up to date. The team has completed the pilot topic for the new COVID-19 diagnostic medtech innovation briefing and is working with the diagnostics assessment team to refine the methods. As part of our collaborative activities we shared our search strategy for long COVID with Cochrane Australia.

The data & analytics team are continuing to support the COVID-19 team to identify suitable sources of evidence for their guidance on the management on the long-term effects of COVID-19, including close to real time data on patients' symptoms.

Science, Policy and Research continues to support NICE’s response to the COVID-19 pandemic through various activities, particularly in close liaison with the MHRA. This includes collaborating with NICE Scientific Advice to develop strategies to handle the impact of COVID-19 on clinical trials and technology appraisals.

Office for Digital Health

The SEA Directorate has begun work to set up a new Office for Digital Health within NICE, working across all NICE directorates and teams and with the communications team. This dedicated new team, which represents a key element of our emerging strategy, will be based within the SEA Directorate but working closely with others to coordinate all NICE’s activities on digital health, both internally and externally, across Government, ALBs and Industry. The aim is to launch the new office in February/March 2021 with an initial focus on developing joint working relationships with NHSX and the MHRA, navigating NICE’s relationship with key stakeholders nationally and internationally, improving the intelligence and collaborations that will inform the NICE topic selection programme and ensuring NICE’s outputs and methods align with a digital market.

Information Resources Developments

This has been a successful period for the information services team. In November an information specialist in the team attended the virtual EAHIL (European Association for Health Information and Libraries) conference and was awarded the conference prize for “Best oral presentation by a first time attendee” for presenting the team’s work on Collaborating to plan efficient public health guideline evidence reviews: can we search fewer sources and still find the evidence?

In December another information specialist in the team was awarded the CILIP Library and Information Research Group Researcher-Practitioner Award 2020 for work to develop and validate search filters. Search filters are important in improving the accuracy and efficiency of systematic searches.

The tender documents for suppliers to join NICE's national procurement framework for electronic and print content were launched in November 2020 as planned and the new framework will be in place from May 2021. The Framework incorporates England, Wales, Scotland and Northern Ireland supporting the purchasing of journals, databases and books at national, regional and local levels across the NHS and healthcare related organisations.

A key objective for the team is to articulate and promote the value propositions associated with the international reuse of NICE content. During November/December, 2 international content licences were signed and 1 syndication licence. The total income invoiced for November and December was £8,720.

Science Policy and Research Developments

SP&R is supporting NICE’s business objectives relating to maintaining NICE’s global leadership role in HTA and guidelines development through active participation in research. This includes the Electronic Health Data & Evidence Network (EHDEN), which aims to build Europe’s largest network of federated data sources that use a common data model and standardised analytics in clinical research and pharmaceutical development. NICE co-leads work on outcomes standardisation, helping to ensure that the data collected will be suitable for both regulatory and HTA purposes.

We have initiated several activities that explore how common data models can be used to generate real world evidence relevant to HTA agencies. These included a paper accepted for publication in the journal PharmacoEconomics and a virtual, half-day workshop titled ‘Federated data networks and health technology assessment’.

Following agreement at the November Board to progress NICE Listens, we are now creating a shortlist of potential topics and will begin prioritising these.

EUnetHTA and International Relationships

NICE have prepared a draft paper for EUnetHTA compiling the lessons learned from network activities and making recommendations for the scientific and technical elements of a future model of HTA cooperation. This paper represents our final activity for EUnetHTA. As part of the NICE commitment to EUnetHTA the Managed Access team led on the development of a tool to assess the quality of registries. The team is now user testing an online version of the tool to improve the sustainability of the tool for the future, which will help us develop our use of real-world data from these registries.

Innovative models for the evaluation and purchase of antimicrobials project

NICE is working with NHS England and NHS Improvement and DHSC to develop and test innovative models that pay companies for antimicrobials based primarily on a health technology assessment of their value to the NHS, as opposed to the volumes used. Such purchasing models, if developed and adopted internationally, will lead to more predictable payments to companies based on value and have the potential to achieve much-needed pull incentives for increased investment in antimicrobial product development and reduce the development of resistance.

The procurement exercise for selecting 2 antimicrobials for the project has been completed with the products for evaluation announced on 18 December 2020. Draft scopes for the evaluations have been developed and published and scoping workshops have been scheduled for January 2021.

MHRA and NICE Core Strategic Group

Building on the long-standing Partnership Agreement between NICE and MHRA, the Core Strategic Group was launched in Spring 2020 to support even closer collaboration. A paper on NICE and MHRA partnership working with a focus on a new Innovative Licensing and Access Pathway (ILAP) was presented at the November 2020 Board meeting. Since then, NICE has actively contributed to the launch communications and ILAP was formally launched on 1 January. Current work is focused on the development of operational SOPs including arrangements for the award of the new Innovation Passport designation. NICE will be a full decision-making partner in the award of the designation. To our knowledge, this will be first time internationally that such a designation has been co-awarded by regulatory and HTA agencies.

Data and Analytics Developments

The team has worked with our external assessment centres to explore how to classify artificial intelligence technologies at the lowest levels of granularity to enable an accurate initial triage for health technology assessment. This will build on our work in the Digital Health Technology Evidence Standards Framework and consider the implication for evidence requirements and evaluation methods for clinical effectiveness and economic evaluations for the different technology groups.

Work has commenced a Data Function Deep Dive project to inform future strategy and delivery models, from a process perspective.

Key Risks

Core risks for SEA include ensuring sufficient resourcing and expertise for rapid delivery of our work on data and analytics. We will mitigate this by prioritizing resource to support this work internally within NICE, by developing partnerships with academia and across government, and through the creation of the data standards and methods programme, setting out clear work packages and deliverables. A further risk is that we are unable to meet the needs of the digital health ecosystem to support access to effective, innovative technologies. We will mitigate this through the creation of the new Office for Digital Health - working closely with colleagues CHTE and across NICE, and through the development and delivery of shared objectives with MHRA and NHSX across the health system.

Overall Direction

The SEA directorate continues to develop momentum and joined up working, both within its own teams, across the organization and with our government and academic partners. We look forward to taking forward an ambitious agenda to strengthen and transform our scientific methods, our use of data and our assessment of the evidence to ensure effective delivery of care and drive innovation across the health system.

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