National Institute for Health and Care Excellence

Science, Evidence and Analytics (SEA) progress report

This report provides an update on key issues and developments in the Science, Evidence and Analytics directorate in the period March and April 2021.

Summary of activity

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

The Information Resources team provided information expertise and searches for the development of 71 NICE products, produced 26 current awareness bulletins, sourced 579 documents and answered 8 ad hoc enquiries.

We contributed to the launch of the Office for Digital Health in April, establishing a dedicated new team to help coordinate all of NICE's activities in Digital Health, working closely with the Centre for Health, Technology and Evaluation (CHTE) and the Communications team.

We undertook a feasibility assessment and options appraisal for surfacing citeable publications produced during NICE guidance development, with a clear path for how to take this work forward.

We are working with NHS England and NHS Improvement and the Department for Health and Social Care to develop and test innovative models for the evaluation and purchase of antimicrobials. We are also working closely with the Medicines and Healthcare products Regulatory Authority (MHRA) and Scottish Medicines Consortium (SMC) to develop the joint Innovative Licensing and Access Pathway.

Notable issues and developments

Ongoing response to COVID-19

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.

With NICE starting the appraisal of COVID-19 treatments, a number of methodological challenges are emerging. Technical challenges such as the nature of evidence, prioritisation of outcomes, the economic analysis approach, and model specifications have been highlighted as major concerns relating to the appropriateness of currently used methods. As part of the Horizon 2020-funded Next Generation Health Technology Assessment (HTx) research project, we are engaging with international partners with respect to Health Technology Assessment (HTA) of COVID-19 technologies.

Work has started on developing a best practice assessment framework for diagnostics and treatments for COVID-19. The work will include mapping the COVID-19 disease pathway, reviewing currently available methodological guidance for assessing these technologies from regulators, HTA agencies and payers. While the work is done under the HTx label, internal NICE partners including CHTE, Centre for Guidelines, NICE Scientific Advice, Data and Analytics and Information Resources are integrated into this work.

NICE continue to contribute as co-investigators to the UK Research and Innovation (UKRI) / National Institute for Health Research (NIHR) funded CONALSENCE study into Long Covid, to identify risk factors, outcomes and to inform and drive uptake of guideline on the long-term effects of COVID-19.

Other developments

Office for Digital Health

The Office was launched in April 2021 supported by the communications and marketing team. This dedicated new team, which represents a key element of our emerging strategy, is based within the SEA Directorate, working jointly with CHTE and other directorates to coordinate all NICE’s activities on digital health, both internally and externally, across Government, Arms Length Bodies and industry. The initial focus will be on developing joint working relationships with NHSX and the MHRA, establishing the workplans and staff structures to deliver the two NHSX commissioned digital projects on scoping an innovative licensing and access pathway for data driven technologies to address a critical need and developing NICE's evidence standards framework for digital health technologies to fully incorporate artificial intelligence technologies that incorporate adaptive algorithms. On the latter project, work has been initiated to develop an appropriate academic partnership to contribute to this work.

Citeable publications

We completed a feasibility assessment and options appraisal for surfacing citeable publications produced during NICE guidance development. The publications in scope of this include the hundreds of evidence reviews and economic analyses that are produced annually that are used to underpin NICE guidance recommendations. This project was to ensure that these publications are made as accessible as possible, including exploring whether they can be indexed and made available in major databases.

The work concluded with the recommendation that NICE builds on its relationship with the US National Library for Medicines (National Center for Biotechnology Information Bookshelf) where many of our outputs are already published in HTML formats and made available to Google, Google Scholar, PubMed Central and European PubMedCentral. Work is being progressed with the National Center for Biotechnology Information (NCBI) to develop this relationship and further improve and expand on the discoverability of NICE evidence reviews.

NICE Listens

We continue to work on our new deliberative public engagement workstream, ‘NICE Listens’, following board approval of the concept last November. We have now completed the initial liaison with teams across NICE on how a NICE Listens output for health inequalities can inform the work of NICE. We have a paper going to the Executive Team (ET) in May to sign off on the topic before starting the procurement process. We aim to then start the procurement process in June before entering a detailed design phase once a contractor is appointed. Once this procurement has been started, we will work up potential options for further topics, including consultation with the board.

Supporting Innovation in Life Sciences

NICE, Scottish Medicines Consortium and MHRA have been collaborating closely on the new Innovative Licensing and Access Pathway (ILAP) that was formally launched on 1 January. Current work is focused on finalising the operational arrangements for ILAP across the partners. Within NICE, strong progress has been made in integrating ILAP within CHTE processes. A key current focus area is ensuring the efficient and timely exchange of operational information such that regulatory and NICE evaluation timelines can be aligned to the extent possible. There remains very high interest in ILAP with life sciences companies submitting many applications for the Innovation Passport designation.

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.  The project is progressing well with two antimicrobials, Cefiderocol (Shianogi) and Ceftazidime with avibactam (Pfizer), at the NICE evaluation stage. Detailed study protocols have been published and evaluation by the DHSC Economic Evaluation Policy Research continues. The project team has also been working with DHSC colleagues on plans for taking forward international work on antimicrobial market pull incentives through the upcoming UK hosted G7 summit.

International HTA collaboration

We are working with UK, Australian and Canadian HTA colleagues on a programme of collaborative activities in digital health. We are actively discussing other potential areas for collaboration such as environmental sustainability, real world evidence, horizon scanning and work sharing.

Environmental Impact

In line with our new strategy, we are developing plans on how environmental impact should be reflected in our advice. In a paper agreed in April at NICE ET, we agreed to start 1) scoping work to establish an agreed set of definitions and domains of sustainability and associated quantification techniques and data sources; and 2) the development of a practical framework for quantifying and presenting environmental impacts in NICE products. We will also restart the cross NICE Sustainability Steering Group and develop further joint working with the NHS Net Zero programme.

Key Risks

SEA's main risk remains ensuring sufficient expert capacity to drive forward a number of challenging strategic projects simultaneously, requiring extensive technical input. We are mitigating this by recruitment of skilled new staff, creating development opportunities for existing team members, and working with our procurement team to explore options for tendering expert technical work and building new academic collaborations.

Overall Direction

The SEA directorate continues to develop momentum in the delivery of its programmes of work, working closely with the other directorates to drive innovation. The challenge for the next phase will be to increase our own capacity, strengthen the joint working model across NICE, and to create deeper partnerships with academia and across government.

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