Introduction. The National Institute for Health Research (NIHR) Innovation Observatory (NIHRIO) is the national Horizon Scanning (HS) organization in England, and the National Institute for Health and Care Excellence (NICE) is its key health technology assessment (HTA) stakeholder. NIHRIO has a remit to notify NICE of innovative technologies with a time horizon of three years prior to regulatory approval in the European Union (EU)/United Kingdom (UK). The notification process produces an initial 'filtration form' followed by a 'technology briefing' produced 17–20 months prior to licence for those technologies that NICE will consider for appraisal. Since April 2017, NIHRIO has produced ~400 technology briefings. We present an analysis of how this has fed into the NICE HTA process so far.

Methods. The analysis mapped NIHRIO's technology briefings (April 2017 – June 2020) with relevant NICE technology appraisal/highly specialized technologies (TA/HST) guidance during the time period. The analysis followed the timeline of technologies from identification during the horizon scanning process to filtration to briefing submission to NICE and entering the TA/HST process to outcome/recommendation given by NICE.

Results. Until June 2020, 496 technology briefings entered the NICE TA/HST scoping process. Forty per cent are in progress, four per cent have had a TA/HST recommendation and three per cent that entered the NICE TA/HST scoping process did not complete it. On average it took less time from briefing submission to NICE recommendation for cancer indications. The time from discovery to NICE recommendation ranged from 115 months to 22 months.

Conclusions. HS for TA/HST is a lengthy process from identification to final recommendation and there is considerable variation in time duration from identification to briefing submission to NICE recommendation. Average time taken from briefing submission to NICE recommendation is shorter for cancer indications and repurposed medicines. A full TA/HST may not be recommended for all technology briefings, rather they may update existing guidance or find different routes of evaluation. Technologies that enter the TA/HST scoping process might be terminated, suspended or discontinued for several reasons which may include lack of company engagement, change in development or regulatory plans by the company. Timely notification is key in achieving TA/HST recommendation at the time of market authorization but not the only influencing factor.

OP491 Beyond Horizon-Scanning And Early Identification Of Innovative Technologies – Development Of An Active Monitoring Framework

Patricia Aluko, Fernando Zanghelini (fernando.zanghelini@io.nihr.ac.uk) and Oladapo Ogunbayo

Introduction. While horizon-scanning systems aim to identify innovative and potentially disruptive health technologies in development, a key challenge is variation in information collation and tracking of the pace of change prior to regulatory approval. An active and efficient monitoring process is crucial for timely notification of health technology assessment (HTA) stakeholders to enhance faster market and patient access. The National Institute for Health Research Innovation Observatory (NIHRIO) identifies and notifies its key HTA stakeholders in England of technologies that are within three to five-year timeframe to regulatory approval. Regular review of each technology is required to meet this remit.

Methods. A standardized monitoring framework was developed based on the knowledge and experience of the evidence synthesis specialists in NIHRIO, supplemented by literature to ensure consistency of setting review periods. This framework used predefined criteria that integrated the technology innovation (advanced therapies, orphan status, regulatory awards), trial data (phase, status, completion date, preliminary results) and estimated approval timelines obtained from the company or other sources (for example, press releases).

Results. The framework has been piloted and early findings showed improved consistency in the monitoring process between different analysts. It ensures that each technology is reviewed at least once a year; review timelines are set at three, six, nine or twelve months based on the predefined criteria. Estimated timeframes obtained from the companies are used to triangulate and streamline review periods, improving efficiency of the monitoring process.

Conclusions. Findings from the pilot work with the framework demonstrated improved consistency and efficiency of the technology monitoring process, which can be easily implemented to provide early awareness in an accurate and timely manner for HTA. This framework was designed using a systematic and transparent approach that integrated different data sources to set review periods. While most of the data used in defining the criteria are publicly available, commercially sensitive information provided by companies were also used which may not always be readily available. Implications for horizon-scanning organizations will be discussed.

OP509 Do They Care? Debates About Nursing And Health Technology Assessment In The German Bundestag

Markus Wübbeler (Markus.Wuebbeler@hs-gesundheit.de) and Sebastian Geis

Introduction. Opposition parties in Germany are allowed to send formal requests to the government to control actions and pass important political debates to the parliament. These formal requests include a comprehensive analysis report issued by the scientific service of the German parliament. A systematic overview of these reports would support a deeper understanding about healthcare topics and assessments discussed by parties in the highest German decision body, particularly in the field of nursing.

Methods. We conducted a review using the German parliament "Bundestag" database for all formal requests since 1949. To systemize the formal requests we performed a quantitative category analysis using descriptive statistics.

Results. We identified 26,197 formal requests with 146 reports related to nursing issued between 1978 and 2019. The 146 reports

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related to nursing accounted for 0.54 percent of all requests. Almost 30 percent of these requests were related to recruitment and qualification. The second major topic, with 15 percent, was financing of the nursing sector. Of all 146 formal requests in the history of the Bundestag, 55 percent (n = 81) were issued in the last 10 years.

Conclusions. Nursing is an emerging topic in the German parliament, highlighting the demographic shift in Germany and the growing pressure in the nursing care sector. Health Technology Assessment bodies should be informed and work together with the scientific services of parliamentary bodies. This would support a more transparent and evidence based healthcare system, aside from lobbyism.

OP513 Disparities In Cancer Premature Mortality In Brazil: Predictions Up To 2030 And Sustainable Development Goals

Marianna De Camargo Cancela (marianna.cancela@inca.gov.br), Arthur Correa Schilithz, Leonardo Borges de Souza, Luís Felipe Martins, Dyego Bezerra de Souza, Paul Hanly, Anton Barchuk, Isabelle Soerjomataram, Linda Sharp and Alison Pearce

Introduction. Premature mortality affects the economy directly due to the loss of productivity of individuals who die, thus ceasing to contribute economically to the country. The one-third reduction in premature mortality (30–69 years) from chronic noncommunicable diseases is goal 3.4 of the United Nations Sustainable Development Goals (UN SDG). Although cancer is a chronic disease, it comprises more than 100 different conditions, with different risk factors and prognosis. This study aimed to calculate current and predicted premature mortality by 2030 for Brazil and regions, compared with the SDG 3.4 target and identify regional progress and future needs.

Methods. Mortality data were extracted from the National Mortality Information System of Brazil (SIM) and subsequently corrected for ill-defined causes. Crude and age-standardized mortality rates per 100,000 inhabitants were calculated. NordPred package by software R was used to calculate predictions up to 2030 and compared with the goal of one-third reduction of premature deaths.

Results. Comparison of observed (2011–2015) and predicted (2026–2030) mortality rates show a 12.0% reduction in the likelihood of death among men and 4.6 percent among women nationally. Although predicted rates for 2026–2030 are lower than those observed in 2011–2015, the predicted number of deaths increases by 75,341 for men and 90,513 for women. Lung cancer mortality rates are predicted to decrease more among men than women, while colorectal cancer mortality will increase for both sexes.

Conclusions. The profile of cancer premature mortality is diverse in Brazil. Nationally, only male lung cancer will be close to reaching the SDG 3.4 target, endorsing the government's long-term efforts to reduce tobacco consumption. Colorectal cancer mortality increases in most regions, reflecting the epidemiological transition. Despite progress in cervical cancer control, it will continue to be a major challenge, especially in the North and Northeast. Our results provide a baseline for public policies for both prevention and access to treatment to reduce premature mortality in Brazil. Differences in cancer patterns show the need to plan and to adapt regionally for each reality.

OP520 Evaluating Long-Term Survival From Clinical Trials: Does Real-World Evidence Change the Paradigm?

Xiaoliang Wang (wendy.wang@flatiron.com), Blythe J. Adamson, Katherine Tan, Shrujal Baxi, Andrew Briggs and Scott D. Ramsay

Introduction. Both patient composition and medical care received in clinical trials may not be representative of clinical practice, yet health technology assessments (HTAs) commonly use extrapolation results from trials to estimate incremental benefit. Due to data limitations, external validation of trial extrapolations are uncommon. With the goal of better estimating the benefit of new therapies in practice, we compared long-term survival estimated from real-world patients who received therapy similar to the comparator arm of the OAK trial, a phase III study of patients with advanced non-small cell lung cancer (aNSCLC) who progressed following initial chemotherapy, to standard estimation approaches.

Methods. We estimated long-term survival from: (i) direct extrapolation of trial survival curves; and (ii) aNSCLC patients from the United States Flatiron Health Electronic Health Record ()-derived de-identified database diagnosed between January 2011 and August 2019 who received docetaxel monotherapy after platinum-doublet and had adequate organ function as well as functional status. Patients with unknown organ function and functional status were also included. Standard parametric extrapolations were applied and selected based on visual inspection and goodness-of-fit tests for each cohort.

Results. Using a log-logistic model to extrapolate the trial comparator arm (N = 425), estimated lifetime mean overall survival was 19.2 months (95% confidence interval [95% CI]: 16.5–22.6), and 14.4 months (95% CI: 12.4–17.0) for the real-world cohort (N = 415). Estimated 5-year overall survival rates were 5.4 percent (95% CI: 3.9–7.3) for the trial patients, compared to 3.7 percent (95% CI: 2.6–5.0) among real-world cohort patients.

Conclusions. Our results suggest that directly extrapolating observed survival for trial patients may overestimate the long-term survival compared to the experience of patients treated in routine practice. Our findings have implications for those wishing to estimate the incremental benefit for novel versus established treatments. We plan to compare our results to a generic patient cohort from national cancer registry. Further EHR-based studies utilizing real world data are needed to confirm our findings and to extend beyond this use case for other cancer types and antineoplastic therapies.

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