with chronic conditions more control over their health, safety and wellbeing. Involving patients early on in the design of these technologies facilitates the development of person-centered products. It may increase the potential uptake of (and adherence to) any intervention they are designed to deliver. This research aims to elicit chronic kidney disease (CKD) patients' preferences for WDHTs that may help patients manage their conditions.

Methods. We used discrete choice experiments (DCE) to elicit preferences for WDHTs characterized by their generalizable characteristics. The study design was informed by a multi-stage mixed-method approach (MSMMA). This included a review of the published literature, focus group interviews and one-to-one interactions with CKD patients to identify relevant characteristics (that is, attributes and levels) associated with wearable DHTs. We collected the data from 113 patients (age ≥18 years) with stage 3 or above CKD. The analysis started with a conventional multinomial logit model and was extended by investigating heterogeneity in preferences via latent class models.

Results. Our MSMMA yielded ten potential attributes for consideration in a choice task. The final list included five attributes, cross-checked and validated by the research team, and patient representatives. The most preferred attributes of WDHTs were device appearance, format and type of information provided, and mode of engagement with patients. Respondents preferred a discreet device, which offered options that individuals could choose from and provided medical information.

Conclusions. We show how to use MSMMA to elicit user preferences in (and to inform the) early stages of the development of WDHTs. Individuals with CKD preferred specific characteristics that would make them more likely to engage with the self-management support WDHT. Our results provide valuable insights that can be used to inform the development of different WDHTs for different segments of the CKD patients population, moving away from a one-size-fits-all provision and resulting in population health gains.

OP345 Evaluation Of An Artificial Intelligence-assisted Service For Cardiac Monitoring As Part Of A National Institute For Health And Care Excellence (NICE) Digital Health Technology Pilot

Jamie Erskine (jamie.erskine@kcl.ac.uk), Kate Goddard and Anastasia Chalkidou

Introduction. Zio XT Service was one of five Digital Health Technologies (DHTs) to be assessed by the National Institute for Health and Care Excellence (NICE) as part of their evaluation pilot. The King's Technology Evaluation Centre (KiTEC) act as an External Assessment Centre for NICE and worked on this pilot evaluation. The service comprises a I-Lead ECG patch, an inbuilt software that makes use of artificial intelligence (AI) algorithms to record, store and analyze ECG traces, and a team of cardiac physiologists.

Methods. Although the methods were based on NICE's existing Medical Technologies Guidance Process, they were modified to suit the assessment of DHTs. The process was split into two sections, with the option to discontinue the assessment if it was considered that insufficient evidence was available for the technology. Clinical experts and patients were consulted through the process and clinical, economic and technical evidence was considered. Costs for three care pathways were modelled.

Results. A total of thirty relevant clinical studies were identified, with a further study being reviewed as part of a separate technical assessment, focusing on the AI component of the technology. Four of the studies were considered to be pivotal to the decision problem, one of which was a Randomized Controlled Trial. The technology was found to have a greater diagnostic yield than a standard ambulatory monitor, however diagnostic accuracy measures were absent in the literature. Three economic models were developed to represent three care pathways: patients with syncope, patients who have had a stroke or transient ischaemic attack and a third model assessing downstream costs associated with stroke treatment.

Conclusions. Digital Health Technologies and Artificial Intelligence Technologies pose novel and unique challenges to health technology assessment (HTA) bodies. Zio XT Service is a diagnostic tool, with both human and AI input, making it a particularly complex technology to assess. This work serves as a case-study in the evaluation of DHTs and AI and the lessons learned may contribute to the development of guidelines for such technologies.

OP348 Assessing The Potential Value Of Wearable Digital Health Technologies In Chronic Kidney Disease Using Early Health Technology Assessment Methods

Vijay S. Gc (vijay.gc@york.ac.uk), Andrea Manca, Alexander J. Casson, Steven Antrobus and Cynthia Iglesias

Introduction. Wearable digital health technologies (WDHTs) offer several solutions in terms of disease monitoring, management and delivery of specific interventions. In chronic conditions, WDHTs can be used to support individuals' self-management efforts, potentially improving adherence to (and outcomes resulting from) interventions. Early health technology assessment (HTA) methods can inform considerations about the potential clinical and economic benefits of technology in the initial phases of the product's lifecycle, facilitating identification of those Research & Development (R&D) investments with the greatest potential stakeholders' payoff. We report our experience of using early HTA methods to support R&D decisions relating to novel WDHT being designed to support self-management of chronic kidney disease (CKD).

Methods. We performed a literature review, focus-group interviews with patients, and qualitative interviews with the prototype development team to understand the relevant characteristics of WDHTs, quantify relevant clinical indications and existing technological constraints. An early economic evaluation was used to identify the key drivers of value for money, and a discrete choice experiment shed light onto patient preferences towards what key features the WDHT should have for the users to adopt it. Then a model-based cost-effectiveness analysis was undertaken

https://doi.org/10.1017/S0266462321001021 Published online by Cambridge University Press