

## OP64 Risk-Based Prioritization In Patients Referred For Transcatheter Aortic Valve Implantation: A Simulation Study

Rafael Miranda ([rafanm@gmail.com](mailto:rafanm@gmail.com)), Peter Austin, David Naimark and Harindra Wijesundera

**Introduction:** Demand for transcatheter aortic valve implantation (TAVI) has increased in the last decade and has outpaced system capacity, impacting wait times and bringing undesirable health outcomes such as waitlist mortality and number of urgent procedures. Risk-based prioritization can improve equitable access to patients. In this study, we assess the impacts of different classifications and wait times for each risk group on health outcomes.

**Methods:** We developed decision-analytic models that simulate the patient trajectory from referral to completion of TAVI. Using prediction models that can classify patients based on their risk of adverse events on the waitlist, we assessed the impacts of (i) the number of risk groups, (ii) size of the risk groups, and (iii) recommended wait times for each risk group, on waitlist mortality, hospitalization, and the proportion of urgent TAVIs. All scenarios were modeled under the same resource constraints, allowing us to explore the trade-offs between faster access to prioritized patients and deferred access to nonprioritized groups.

**Results:** Increasing the number of risk groups from two to three, increasing the sizes of the higher-risk groups from five percent to 30 percent of the cohort each, and providing faster access to the higher-risk groups (five to three weeks for high-risk and 11 to five weeks for medium-risk) achieved the greatest reductions in mortality, hospitalizations, and urgent TAVIs (relative reductions of up to 29%, 23%, and 38%, respectively). However, this occurs at the expense of excessive wait times in the nonprioritized group (up to 25 weeks). The reduction in adverse events was lower when the nonprioritized group had more reasonable wait times.

**Conclusions:** When developing and implementing waitlist prioritization strategies, it is important to consider the resource constraints of the system and the patient profile, as the benefits of providing faster access to prioritized patients can lead to unreasonable wait times for nonprioritized ones. In settings with long wait times, prioritization initiatives must be followed by expansion of supply to achieve optimal improvements in health outcomes.

## OP65 Focusing On What Matters Most: A Public Dialogue On How NICE Should Prioritize Topics In Health Technology Assessment

Alice Murray ([alice.murray@nice.org.uk](mailto:alice.murray@nice.org.uk)) and Koona Shah

**Introduction:** To meet the needs of an evolving health and care system, the National Institute of Health and Care Excellence (NICE) is changing its approach to topic prioritization so it can focus on what matters most. To support this, NICE ran a public dialogue to gather informed opinion on how it should select topics for guidance, including for some technology evaluation programs.

**Methods:** Fifty-five general public participants from across England took part in two face-to-face and three online deliberative workshops (each lasting two or three hours, held over four weeks in 2023). Participants were asked to consider the following criteria in the context of prioritization: health and care need, evidence availability, system impact, budget impact, health inequalities, and environmental sustainability. The workshops were designed to understand whether any aspects were more important than others and explore the reasons why. They used deliberative engagement methods and included trade-off exercises, role-play, group discussion, ranking tasks, and interactions with specialists.

**Results:** Emerging findings show that the participants think NICE should consider several aspects when prioritizing topics for guidance. Health and care need was of primary importance for people, followed by evidence availability, budget impact, and system impact. Health inequalities and environmental sustainability were generally considered to be less important, though participants still felt these were areas that should inform NICE's prioritization decisions. Participants identified relevant interactions between the criteria, suggesting that each criterion cannot be considered in isolation. Full results will be available to present at HTAi 2024.

**Conclusions:** Deliberative public engagement is a meaningful way to involve the public in complex policy decisions with a social value element. Broad public agreement was found with the criteria NICE has proposed to consider when prioritizing topics for guidance, and some criteria are more important to people than others. The findings will feed into NICE's new approach to topic prioritization.

## OP67 “Black Box Bottleneck” Paradigm And Transparency Issues On Artificial-Intelligence-Based Tools In Health Technology Assessment: A Scoping Review

Denis Satoshi Komoda ([deniskomoda@gmail.com](mailto:deniskomoda@gmail.com)), Marília Mastrocolla de Almeida Cardoso, Ana Renata Lima, Marília Berlofa Visacri, Carlos Roberto Silveira Correa and Brígida Dias Fernandes

**Introduction:** One of the pillars of health technology assessment (HTA) is transparency, which guarantees reproducibility and accountability. Due to the “black-boxness” of artificial intelligence (AI) models, the use of AI-based tools adds new layers of complexity for transparency issues. The aim of this scoping review is to map