calculated, enabling an approximate cost benefit presented as the number of patients needed to reduce expenditure by AUD1 million (USD0.7 million).
Results: In 2021, it was calculated that 34,554 patients live with ESRD in Australia, of which 28,542 patients are on KRT. The number of new patients on KRT increases linearly by an average of 943 patients per year and provided a model with a strong goodness-of-fit (R^2 = 0.99); predicting that the prevalence of patients on KRT is estimated to increase to 33,417 patients by 2026. Dialysis accounts for the highest cost associated with ESRD management, estimated to be AUD87,975/year/patient (USD58,253), and accounts for over AUD1.3 billion (USD0.9 billion) in annual expenditure. When considering the proportion of patients receiving KRT undergoing dialysis (52.6%), first-year renal transplant (3.4%), and post-kidney transplantation (43.9%), in 2022, the average annual cost per patient receiving KRT is estimated to be AUD57,565 (USD38,109). The prevention of KRT in 17.4 patients in 2022, decreasing to 15.4 patients in 2026, has the potential to save AUD1 million/year (USD0.7 million).
Conclusions: The prevalence of ESRD in Australia increases linearly and contributes to a significant cost to the Australian healthcare system. In 2022, preventing KRT in 17.4 patients (0.06%) can equate to a saving of AUD1 million/year (USD0.7 million), further decreasing to 15.4 patients (0.05%) in 2026.

PP90 Artificial Intelligence To Detect Ischemic Heart Disease In Non-traumatic Chest Pain At The Emergency Department – SmartHeart Study

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Introduction: An estimated 17.9 million people died from cardiovascular diseases (CVDs) in 2019, which is 32 percent of all global deaths and 85 percent were due to heart attack and stroke. Chest pain is one of the most common reasons for presenting to the emergency department (ED). It is increasingly recognized that artificial intelligence (AI) will have a significant impact on the practice of medicine in the near future and may help with diagnosis and risk stratification. We aim to estimate a diagnostic prediction of acute myocardial infarction by the development and validation of an AI model.
Methods: Data on 134 variables of 3,986 consecutive patients who presented to the ED with non-traumatic chest pain were included in the analysis. Using AI tools, a neural network model was developed to establish the risk of acute myocardial infarction (AMI) to achieve n=150 patients over 18 years of age attending the ED.
Results: The mean age was 65.5 (±13.7) years and 63.6 percent were male. Most (60.1%) patients were admitted to hospital, with only 20.3 percent diagnosed at hospital discharge with ischemic heart disease (IHD). All patients were followed up for two months, and 6.3 percent were readmitted to the ED, but none presented with an episode of IHD. In the data analysis of the entire sample we obtained a probability of diagnosing IHD by the SmartHeart model (S=93.1%, E=47.3%, PPV=31.0%, and NPV=96.4%). When we analyzed the sample of patients with no history of IHD (n=104), the diagnosis accuracy was as follows (S=100%, E=77.5%, PPV=42.8%, and NPV=100%).
Conclusions: Our AI model provides information to predict patients who are suffering from acute IHD. AI has been reported to outperform emergency physicians and current risk stratification tools to diagnose IHD, but has rarely been integrated into practice. This study highlights the diagnostic applicability and accuracy of this type of tool and that is why studies should be implemented to see its effectiveness in routine practice in EDs.

PP93 Health Technology Assessments For Rare Diseases In Australia: A Case Study On Cystic Fibrosis

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Introduction: Currently, no cure exists for the 1 in 2,500 Australian babies born with potentially fatal cystic fibrosis (CF). The authors conducted a health technology assessment (HTA) case study analysis of all regulatory approved CF treatments in Australia from January 1994 to July 2022. Submissions were also made under the Therapeutics Goods Administration and Pharmaceutical Benefits Advisory Committee (TGA-PBAC) parallel process.
Methods: Public summary and source materials were researched to understand relevant clinical and health economic evidence requirements, and access decisions from Australia's lead HTA body, PBAC.
Results: The review found that there are more than seven approved products in Australia. Of those, all four novel CF transmembrane conductance regulator (CFTR) modulating medications, which treat the underlying disease, received an orphan drug designation and were eventually listed. However, initial HTA decisions were mixed, with one recommended (25%), one not recommended (25%), and two deferred (50%). Clinical efficacy, cost-effectiveness, clinical need, as well as patient/carer-centric perspectives were most influential in HTA recommendations. Like other rare disease treatments, price, high incremental cost-effectiveness ratios (ICERs), uncertainty around cost-effectiveness and/or efficacy were key barriers to positive decisions. Notably, Australian stakeholders did not recommend CF medicines when their ICERs significantly exceeded a threshold of AUD200,000 (USD134,700) per quality-adjusted life year (QALY) gained. Administratively, Australia addresses risks associated with poor cost-effectiveness and high costs through managed access programs, risk-sharing agreements (RSA) and special pricing arrangements.
Recently approved elexacaftor-tezacaftor-ivacaftor would be inaccessible to many Australian patients without inclusion in the

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