Methods: Budget impact analysis was conducted for hospitals providing arthroplasty surgery over the years 2023 to 2030. Population-based sample projections obtained from clinical registry and administrative datasets of individuals receiving hip or knee arthroplasty for osteoarthritis were applied. The ESS-MOC assigned 30 percent of eligible patients to a shortened acute-ward-stay pathway and outpatient rehabilitation. The remaining 70 percent received a current practice pathway. The primary outcome was total healthcare cost savings post-implementation of the ESS-MOC, with return on investment (ROI) ratio and hospital bed-days utilized also estimated. Costs are presented in Australian dollars (AUD) and United States dollars (USD), at 2023 prices.
Results: Estimated hospital cost savings for the years 2023 to 2030 from implementing the ESS-MOC were AUD641 million (USD427 million) (95% CI: AUD99 million [USD66 million] to AUD1,250 million) [USD834 million]). This corresponds to a ROI ratio of 8.88 (1.3 to 17.9) dollars returned for each dollar invested in implementing the care model. For the period 2023 to 2030, an estimated 337,000 (261,000 to 412,000) acute surgical ward bed-days, and 721,000 (471,000 to 1,028,000) rehabilitation bed-days could be saved. Total implementation costs for the ESS-MOC were estimated at AUD72 million (USD46 million) over eight years.
Conclusions: Implementation of an ESS-MOC for eligible arthroplasty patients in Australia would generate significant cost and healthcare resource savings. This budget impact analysis demonstrates a best practice approach to comprehensively assessing value, at a national level, of implementing sustainable models of care in high-burden healthcare contexts. Findings are relevant to other settings where hospital stay following joint arthroplasty remains excessively long.

PP43 Budget Impact Analysis Of Next-Generation Sequencing Coverage In Taiwan's National Health Insurance

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Introduction: The exploration of molecular characteristics has emerged as a prominent trend to advance precision medicine. The utilization of genetic testing to guide therapy is integral to precision medicine. This study aims to investigate the potential patient populations for the reimbursement of next-generation sequencing (NGS) and assess the budget impact from the perspective of Taiwan's single insurer, the National Health Insurance Administration.
Methods: To comprehend the scope for medicines with companion diagnostics (CDx) involved, we analyze the U.S. Food and Drug Administration-approved/cleared diagnostic tests, conduct a literature review to identify medicines approved by the European Medicines Agency that require a CDx, and identify the medicines with CDx involved covered by the National Health Insurance (NHI) in Taiwan. Subsequently, we explore the potential reimbursement indications for NGS testing and conduct a budget impact analysis to evaluate the expected financial impact for the NHI over a five-year period. Furthermore, sensitivity analyses are conducted to deal with uncertainty.
Results: We have compiled 13 cancer types for which NGS can serve as a companion diagnostic. These encompass non-small-cell lung cancer, colorectal cancer, breast cancer, ovarian cancer, biliary tract cancer, acute myeloid leukemia, acute lymphoblastic leukemia, melanoma, cholangiocarcinoma, prostate cancer, pancreatic cancer, gastrointestinal stromal tumor, and thyroid cancer/medullary thyroid cancer. The implementation of NGS reimbursement in NHI will benefit 25,000 to 30,000 patients undergoing targeted therapies. The projected incremental budget impact ranges from TWD570 million to TWD650 million (USD19 million to USD22 million) over five years.
Conclusions: This study focuses on evaluating the financial impact of incorporating NGS testing into NHI reimbursement for relevant cancer drug indications. The findings can serve as references for the planning of reimbursement policies. However, with the advancement of precision medicine, it is foreseeable that there will be a broader range of applications for NGS, and its cost will gradually decrease.

PP45 Core Outcome Sets For Research And Core Outcome Sets For Routine Care: Do They Overlap?

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Introduction: Core outcome sets (COS) are increasingly being developed for routine care, but it is unclear how they compare to COS for research for a given condition, particularly regarding recommended outcomes. If similar, embedding COS within clinical practice creates opportunities for improving data for real-world evidence. This work aims to compare outcomes in COS for different settings.
Methods: Cancer, neurology, cardiovascular, rheumatology, and orthopedic COS within the Core Outcomes Measures in Effectiveness Trials (COMET) database were reviewed to create matched sets of COS (COS that were developed for the same condition but different settings). Recommended outcomes were extracted along with information on COS scope (condition, population, and intervention), patient involvement, and year of publication. Specific outcome matches (e.g., cognition and executive capacity) and general outcome matches (e.g., mobility and physical function) were identified within each matched COS set to report the number and percent of distinct outcomes recommended for both settings.
Results: Eighteen matched sets were identified. The median (IQR) number of distinct outcomes recommended for both settings was 6 (4, 8) and the median (IQR) percent of all distinct outcomes that were recommended for both settings, of those included across both settings, was 20 percent (12%, 33%), ranging from nine percent for stroke rehabilitation to 50 percent for psoriatic arthritis. Variation due to potential factors such as outcome granularity, number of

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