departments and in the primary care sector are cost effective, compared with traditional physician-led models. The overarching intent is to use these data to enable evidence-informed policy and practice changes, so that more appropriate and cost-effective care is provided to patients with back pain.

OP64 Review Of Economic Evaluations Of Next-Generation Precision Oncology

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INTRODUCTION:

Proponents of precision oncology report that genomic testing has the potential to reduce health system costs and improve patient health. Yet, testing also involves significant expenditures that challenge the sustainability of adopting technologies into routine practice. Our study explores the availability and scope of economic evaluations of precision oncology informed by next-generation sequencing (NGS).

METHODS:

We searched Medline (PubMed), Embase (Ovid), and Web of Science databases for English-language full-text peer reviewed articles published between 2000 and 2016. We focused our search on articles that estimated the benefit of precision oncology in relation to its costs. We excluded studies that did not undertake full economic evaluations or did not focus on NGS. We reviewed all included studies and summarized key methodological and empirical study characteristics.

RESULTS:

Fifty-five economic evaluations met our inclusion criteria. The first study was published in 2005 and the number of published studies increased steadily, from three studies between 2005 and 2007 to twenty-six between 2014 and 2016. Most studies evaluated multiplex panels (86 percent). Testing was frequently used to diagnose patients (24 percent) or predict prognosis (67 percent), rather than identify targeted therapies (7 percent). Methods varied considerably and cost-effectiveness differed according to test type, test strategy, and cancer type. Deterministic and probabilistic analyses were typically used to characterize uncertainty (91% percent and 75% percent).

CONCLUSIONS:

While the availability of economic evidence examining precision oncology increased over time, methods used often did not align with current guidelines. Future evaluations should undertake extensive sensitivity analysis to address all sources of uncertainty associated with rapidly changing NGS technologies. Further, additional research is needed evaluating the cost-effectiveness of more comprehensive next-generation technologies prior to implementing these on a wider scale.

OP65 Genomics: From Horizon Scanning To National Health Policy

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INTRODUCTION:

Technology advances have resulted in cheaper and quicker genomic sequencing (panels, exomes, whole genomes). Uptake into clinical practice has been rapid despite limited consideration of workforce, patient safety, consent, practice standards, guidelines and cost benefit. AUD 150M (USD 113M) has been independently allocated to genomic initiatives by Australian state and federal governments that don't reflect a national approach to genomics.

METHODS:

Modified horizon scanning (HS) methodology identified issues around genomic sequencing to be considered by governments regarding their support, or otherwise, before appropriate implementation and diffusion into local healthcare systems. A national jurisdictional advisory group was subsequently established that undertook extensive stakeholder consultation across Australia, including written submissions, over a four-month period.

RESULTS:

HS identified that genomic sequencing is diffusing rapidly through the health system and flagged issues of

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