Using critical appraisal to inform emerging health technology funding

Lessons learnt at the NZ Accident Compensation Corporation

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Research at ACC

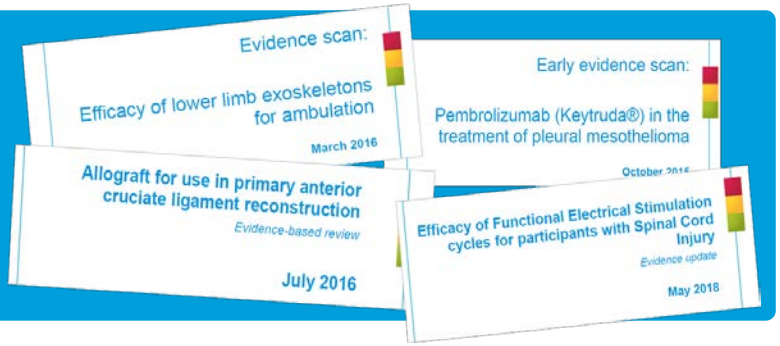
Our research portfolios cover a diverse range of topics from diverse areas of the organisation

For a number of different business needs

For a range of different stakeholders who may be internal or external to ACC, and have a diverse range of backgrounds

Critical appraisal at ACC

The Evidence-Based Healthcare (EBH) team uses standardised methodology to critically appraise and create robust reviews on relevant topics.



Standard critical appraisal / guideline methodologies are robust and stand up to peer-review……

however These methods are resource intense, take time, and rapidly become outdated

also

Literature available for these topics are often*:*

- from lower quality study designs,
- have low sample sizes,
- use outcomes or measures that don't translate to policy
- Sponsored by manufacturers

- **Patients expectations and knowledge of new devices and treatments are changing**

and

- **Technology is developing at an exponential rate**

Published reviews can be found at: www.acc.co.nz, search for 'evidence-based reviews'

The expectations of patients for new health technologies are changing…

Rise of the 'empowered health consumer'

- Convenient
- Integrated
- Personalised

Direct to consumer marketing

*"Imagine a future where disabilities are **super powers**"*
The **Hero Arm**

open bionics

Online patient networking sites connecting patients with similar conditions and symptoms

patientslikeme®

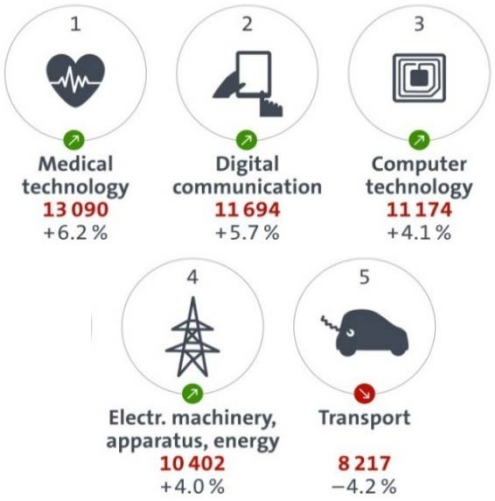
Health Unlocked

Sources: Frost and Sullivan 2014. United Healthcare Trends; PWC 2015. HRI Consumer Survey; patientslikeme.com

Health technologies are developing exponentially…

- Increasing pace of change in health technologies and new industry players joining the market, such as Apple, Verily (Google), Samsung and Fitbit
- Fast track processes in device regulation criticised as favouring industry demands over patient safety and risk management
- Lack of post-market surveillance
- The value of a new technology over the current alternative is often unclear

Patent applications for top 5 technology fields in 2017 (European Patent Office)



1% Of medical devices cleared by the FDA go through the most stringent pre-market assessment process

75% Of high risk devices recalled because they caused serious health problems or death went through clearance without needing evidence of safety or effectiveness

…but they come with costs and uncertain risks and benefits

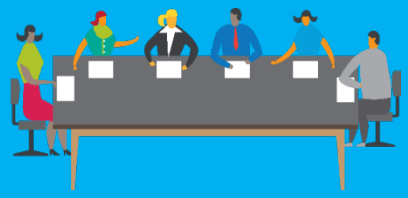
Sources: European Patent Office annual report 2017; Rathi et al 2015; Day et al 2016; Zuckerman et al 2011.

So what are we doing at ACC?

Our aim: To enable decision-making with the best available evidence

To work in partnership with the health sector and other government agencies

- Expert Reference and Expert Advisory Groups



Developing tools based on standardised criteria to assess technologies on

- Cost and benefits
- Effectiveness, safety and risks
- Meaningful outcomes for patients
- Value for money relative to current alternatives

Understanding the underlying drivers and influencers for emerging technology requests

- Project including interviews with internal advisors, providers and ACC clients

Other considerations

- Using other types of evidence:

For example monitoring effectiveness of decision making through:

- Real world data (FDA) – using organisational outcome data, clinical registry data;
- Safety monitoring through registries

Questions?

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