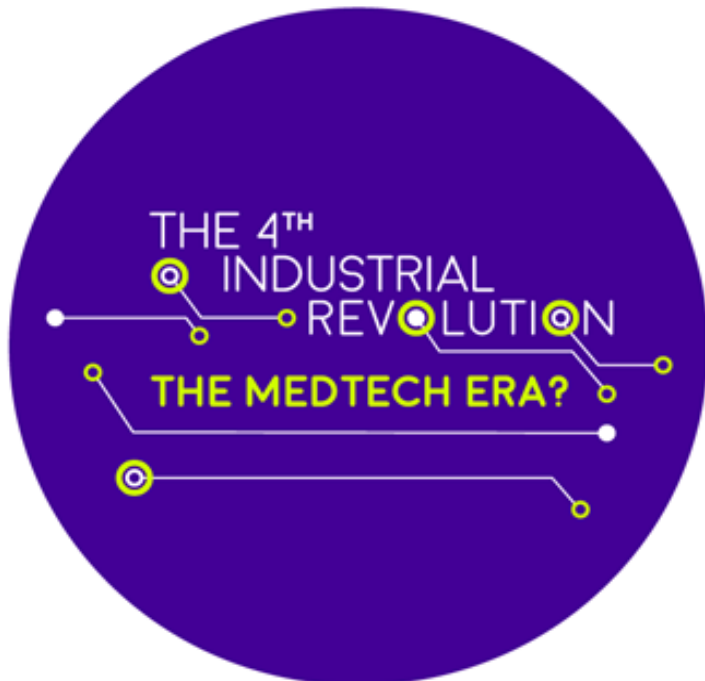




Personalisation – the HTA challenge



SPEAKER:

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#MTF2016



About NICE



#MTF2016

About NICE

- National Institute for Health and Care Excellence
- Established in 1999 to reduce variation in the availability and quality of NHS treatments and care
- Guidance and evidence to support the health service and local authorities
- Since April 2013 responsible for social care
- Independent of government
- Status: Non-departmental public body established in primary legislation



What NICE does

- NICE's role is to improve outcomes for people using the NHS and other public health and social care services. We do this by:
 - Producing evidence-based guidance and advice for health, public health and social care practitioners.
 - Developing quality standards and performance metrics for those providing and commissioning health, public health and social care services.
 - Providing a range of information services for commissioners, practitioners and managers across the spectrum of health and social care.
- Since 2010, produced guidance on medical technologies and diagnostics, using bespoke evaluation methods
- Recommends incrementally cost-effective technologies and clinically non-inferior technologies that save money



«Simple» vs. «complex» technologies in a time of personalisation



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Characteristics of technologies and interventions

Simpler technology

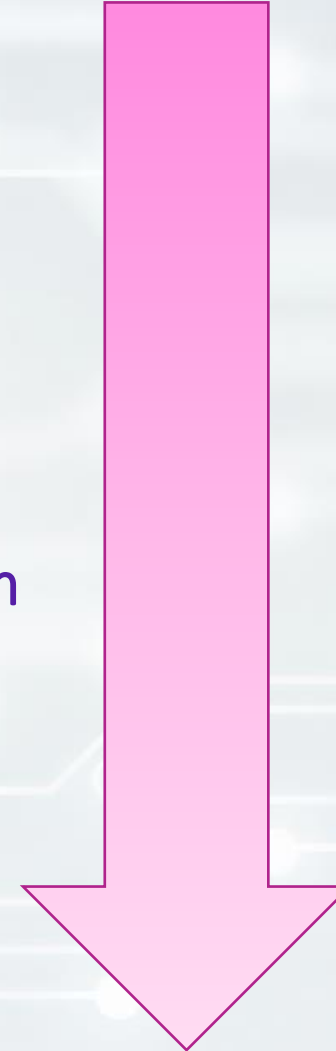
- Standalone device or technology (eg implantable)
- Data not collected, or self-contained

More complex technology

- Device with software that measures patient outputs
- Data transmitted to operator
- Patient-level data feeds into or refines treatment algorithm

Complex intervention

- Simple or complex technologies
- Used in context of service provision model
- Complex data transactions across multi-sector partners



HTA on a straightforward intervention

Population	Adults with lower urinary tract symptoms (LUTS) presumed secondary to benign prostatic hyperplasia (BPH), in whom surgical intervention, mostly commonly a TURP, is indicated
Intervention	TURis system (Olympus)
Comparator	Monopolar TURP system
Outcomes	<ul style="list-style-type: none">• Hospital length of stay• Procedural blood loss and blood transfusion requirement• Time of removal of urinary catheter post-operatively• TUR syndrome• Re-admittance for repeat procedures• Duration of surgical procedure• Healthcare associated infection• Quality of life• Device-related adverse events

NICE Medical Technology Guidance 23

Home > NICE Guidance > Conditions and diseases > Urological conditions > Lower urinary tract symptoms

The TURis system for transurethral resection of the prostate

Medical technologies guidance [MTG23] Published date: February 2015

Recommendations

The case for adopting the transurethral resection in saline (TURis) system for resection of the prostate is supported by the evidence. Using bipolar diathermy with TURis instead of a monopolar system avoids the risk of transurethral resection syndrome and reduces the need for blood transfusion. It may also reduce the length of hospital stay and hospital readmissions.

..... using the TURis system results in an estimated saving of £375 per patient for hospitals that already use an Olympus monopolar system and an estimated saving of £285 per patient for other hospitals.

HTA in complex interventions

As for a simple intervention, but....

Population	Heterogeneous, with minimal (real-world) exclusion criteria
Intervention	Multiple linked interventions, not all applying to all patients
Comparator	May involve many versions of “usual care”
Outcomes	More reliance on intermediate outcomes Resource use outcomes involving a wide range of service settings

Test bed approach in England

Announced at World Economic Forum, January 2016

Introducing and evaluating 'combinatorial' innovations that integrate new technologies, bioinformatics, new staffing models and payment-for-outcomes

5 sites including:

- Promoting healthy ageing for 1m people in London
- Using predictive techniques to support patients with long term conditions in Manchester

2 Internet of Things sites

- Diabetes digital coach
- Technology Integrated Health Management – supporting people with dementia at home

Successful examples will be rolled out to other parts of the country

Current lack of specifics on evaluation

Evidence assessment and decision-making in complex interventions

Multiple confounders

Interventions poorly described in studies

Can be difficult to precisely isolate the “active” component of the combinatorial intervention

High uncertainty about generalisability of evidence

May need a linked evidence analysis from intervention to outcome

High level of expert commentary needed on validity of results

NICE decision-making using balanced approach



Opportunities and challenges for developers

- Real-time, patient-level data to aid evidence development
- Increased sophistication of bioinformatics to aid analysis
- Technologies embedded in services becoming the norm
- Real problems to be solved in health and social care interfaces – plausible solutions focused on reducing costs in the highest users of healthcare resources will be welcomed by payers!
- NICE and other HTA agencies/regulators can help with scientific advice

Contact NICE Office for Market Access

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