

Medical Technology: Cost Impact

Employee Benefit Planning Association
November 6, 2008

Mark Lyons, RPh, MBA

Director, Care Facilitation Consulting

Healthcare Costs continue to rise

- Current medical costs are increasing faster than GDP
- Age of accountability
 - Prevention
 - Quality vs. Quantity
 - Evidence based medicine

Medical Technology

Working Definition: Procedures, equipment, and processes by which medical care is delivered.

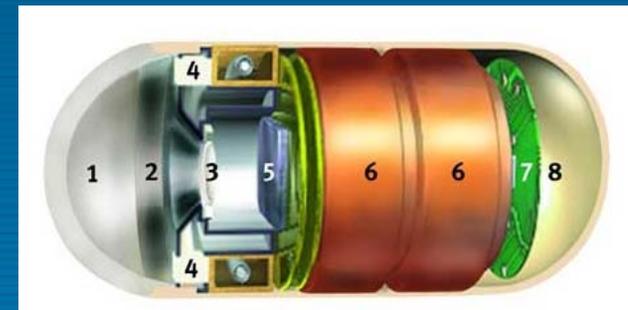
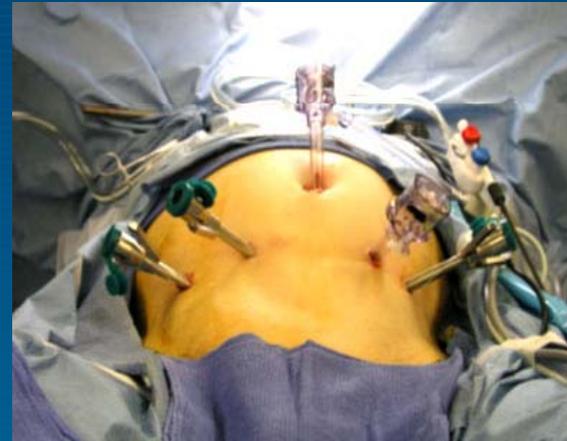
- Examples

- Procedures – angioplasty, robotic surgery
- Biologic agents – treating previously untreated conditions like RA, MS and Pompe disease
- Devices – scanners, implantable defibrillators
- Electronic support systems – electronic medical records

Specific Examples

Procedures

- Robotic surgery
- Bispectral index (BIS) monitor
- radioactive “seeds”
- Capsule endoscopy



Specific Examples

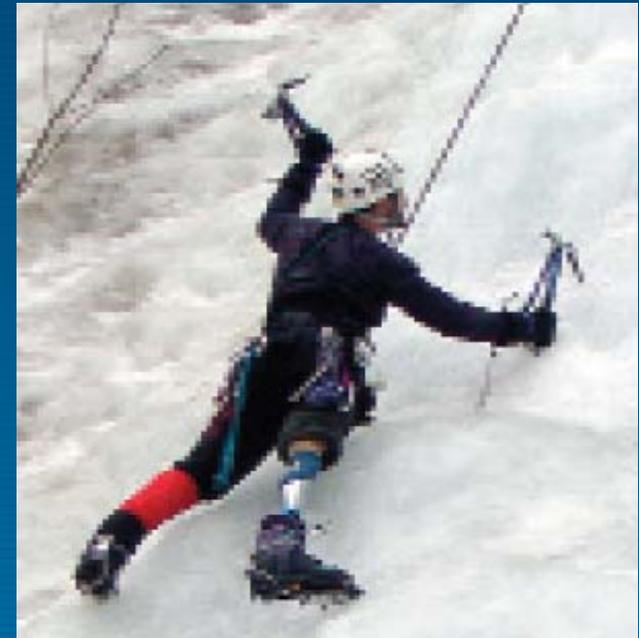
Biologics

- Mostly enzymes and proteins produced from living organisms
- RA, MS and Pompe disease
 - Enbrel & Humira
 - Avonex & Rebif
 - Myozyme
- 150 drugs in pipeline for cancer

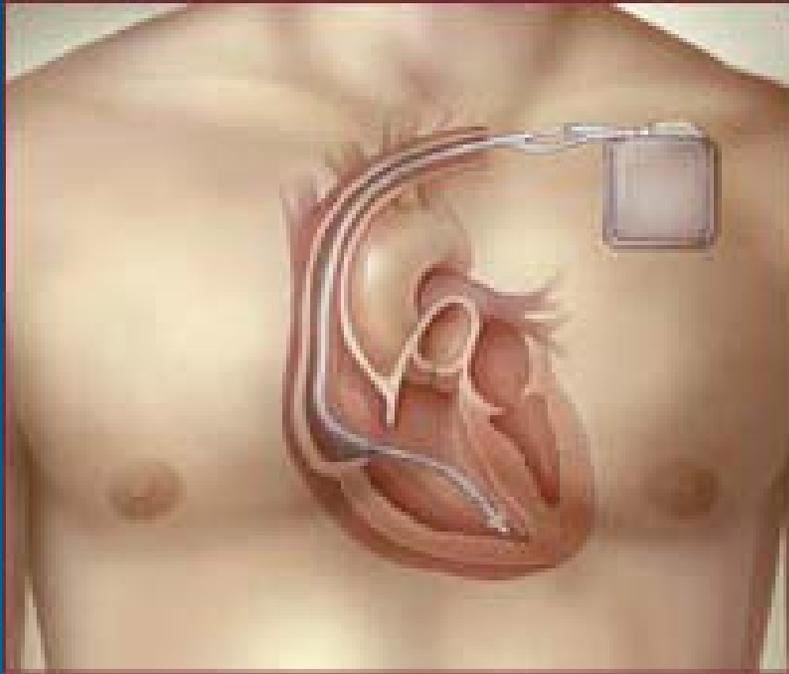
Specific Examples

Devices

- artificial vertebral discs
- computerized prosthetic

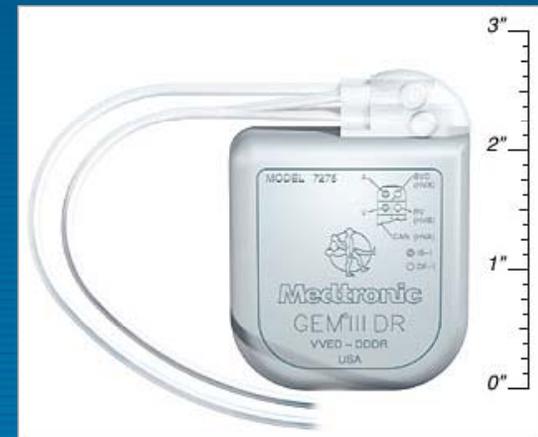


Implanted Cardioverter/Defibrillator (ICD)



An ICD is a pacemaker-like device implanted under the skin. Wires called "leads" are placed in the heart to monitor the heart rate. When the device detects a potentially deadly heart rhythm disorder (arrhythmia), the ICD delivers a controlled, electric shock to restore the heart's normal rhythm.

Medtronic Inc. www.medtronic.com (4/22/05)



Three ways that medical technology increases healthcare costs

- New developments for previously untreatable conditions
 - Terminal kidney disease
 - Coronary artery bypass
- Advancements in treatment or diagnostics
 - Addition of EPO for kidney disease
 - Advanced Imaging
- Incremental improvements
 - Better mouse trap
 - Computerized prosthetics

We need a clear definition of *value*

“Simply stated, **value in health care** relates to whether a medical intervention (drug, device, program, surgery), when used to prevent or treat a condition, improves health outcomes *enough* to justify the additional dollars spent compared to another intervention.”

- AMCP Format Committee, 2004



How can we manage costs and ensure quality care?

Advanced Imaging

- Use American College of Radiology guidelines
- Ask for supporting information for CAT, MRI and Nuclear Cardiology Imaging
- Partner with American Imaging Management (AIM)
- Raise awareness to prevent
 - Needless exposure
 - Duplications
 - Incorrect imaging

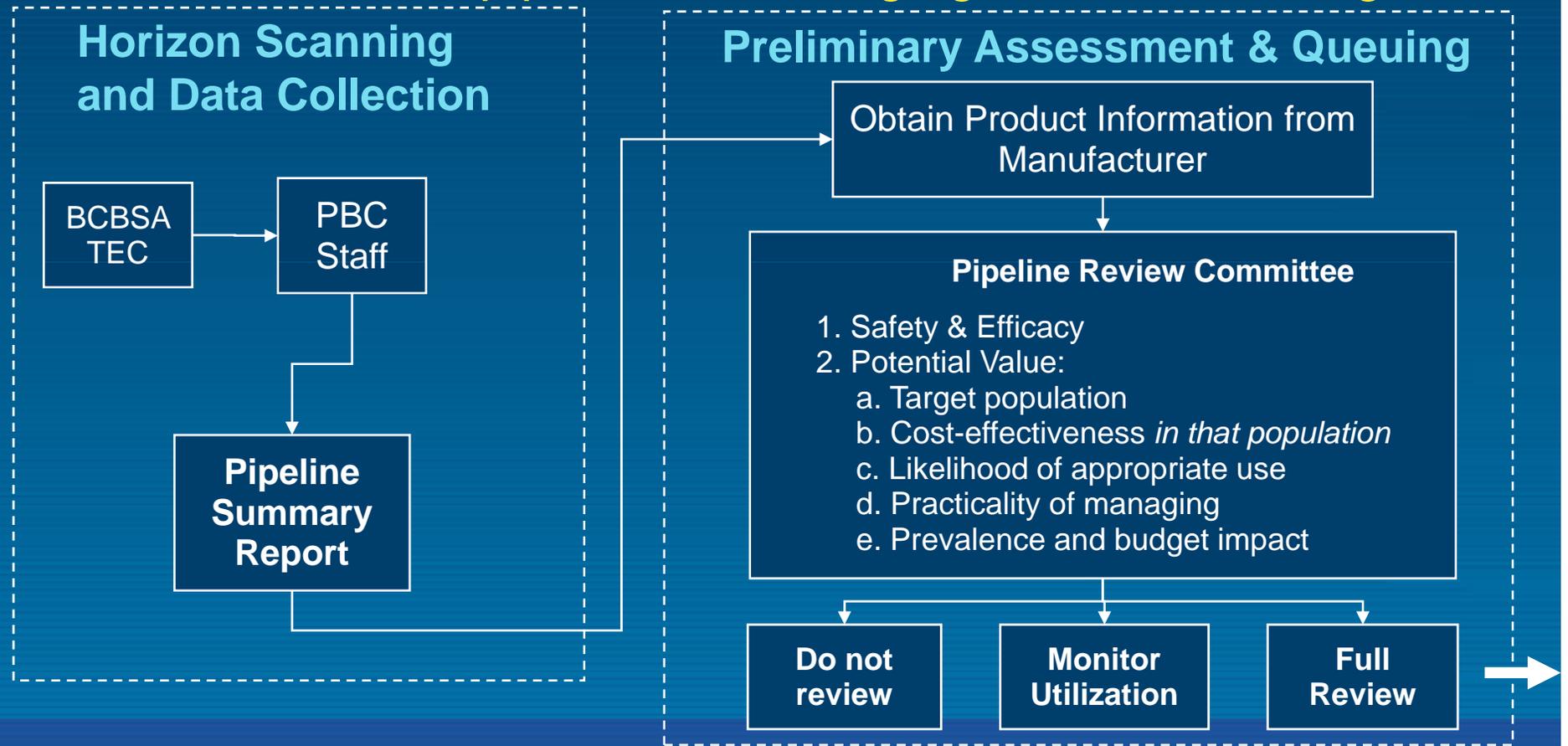
How can medical technology be evaluated to ensure cost effectiveness?

Example – New Medical Technology Process

- Take advantage of P&T process
 - Panel of physician
 - Use evidence of outcomes
 - Place responsibility on manufacturers to prove effectiveness

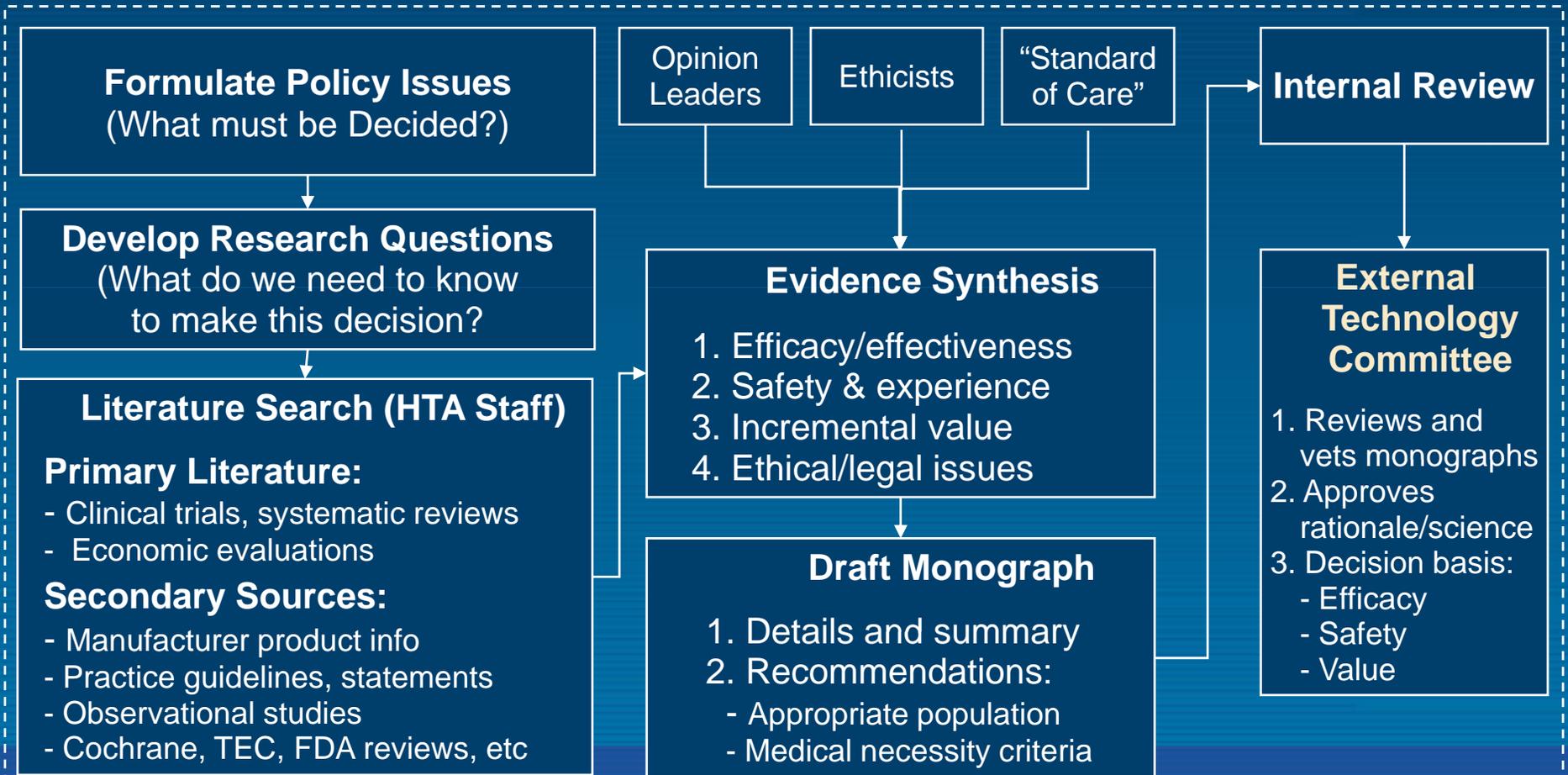
NMT Process: Pipeline Surveillance

We follow market pipeline for emerging health technologies



NMT Assessment Process: Full Review

Medical technology review follows P and T process



We Have Reviewed a Variety of NMT's

- Diagnostic Imaging
 - Computer assisted breast MRI
 - Upright (weight bearing) MRI
- Genetic Diagnostics
 - Oncotype DX
 - Trofile
- Robotic Surgeries
 - Robot-assisted laparoscopic prostatectomy
- Image-guided radiotherapy
 - Calypso 4D system
 - Cyberknife
- Other Diagnostics
 - Long-term continuous glucose monitoring

Results: Diagnostic Imaging

- Breast MRI/Computer Assisted Evaluation for screening:
 - Issues for reviewer
 - ICER vs. mammography in low-risk patients
 - Medical necessity/cost-effective target population
 - Consulted local breast MRI expert, Bruce Porter, MD
 - No comparative outcomes in this population
 - Breast MRI more sensitive, less specific in low-risk patients
 - Committee decision
 - Continue existing medical policy limiting coverage to high-risk patients, imaging of contralateral breast in cancer patients and when mammography is not sufficiently sensitive

Results: Genetic Diagnostics

- Genetic panel for recurrence risk stratification in breast cancer patients (Oncotype Dx)*
 - Issues for reviewer
 - Additional value versus previous risk stratification algorithm
 - What target population will get the most benefit?
 - Reviewer's findings
 - Analytic/clinical validity demonstrated
 - Clinical utility uncertain
 - Published cost-benefit analysis: small net savings
 - Committee decision
 - Cover in subpopulation in which test is most likely to impact treatment decisions

* Bresnahan B, et al. Poster presentation, ISPOR May 2007

Results: Robotic Surgical Procedures

- Robot-assisted laparoscopic prostatectomy
 - Issues for reviewer
 - ICER vs. current standard prostatectomy procedures
 - Should payer allow extra charges for robotic procedure?
 - Reviewer's findings
 - Many studies, none well-controlled, differing results
 - Incremental improvement outcomes uncertain
 - Attempts to demonstrate savings inconclusive
 - Committee decision/implementation
 - Recommended coverage of robot-assisted procedures at same rate as standard prostatectomy

There are options for ensuring that medical technology is use cost effectively

- Insist that it is being used appropriately
- Use guidelines to raise awareness
- Establish a process to evaluate new technology similar to the way health plans review new drugs
- Reward innovation

Easy Questions

