

Opportunity Cost & Low Value Healthcare

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SIT DOWN IF

you have enough

Time

Space

Staff

Goods and services

to provide appropriate care in an appropriate environment for all
your patients.

SIT DOWN IF

you believe that the government will give you ALL the resources you require to meet the objective outlined above.

SIT DOWN IF YOU HAVE ONE OF THESE



Opportunity Cost

Where ever there is a finite resource

- Time
- Space
- Money (Staff, goods & services)
- Cognitive capacity – especially analytic thinking

If you commit that to one activity, you can't re-commit it to another

No magic pudding

Opportunity Cost of Gangnam Style

The Economist 2014

- In 2014
- 2 billion people watched “Gangnam Style” You Tube video
 - @ 4m:12sec = 16,000 person years
- If they hadn’t done that then collectively they could have
 - Completely re-written Wikipedia
 - Built 4 Great Pyramids of Giza
 - Built 20 Empire State Buildings



Opportunity Cost - The Vitamin D story

- 2012
 - Medicare rebated \$146,000,000 for Vitamin D testing
 - Up from just \$1M in the year 2000!
 - 4 million tests
 - Even RCPA agreed that **at least half** were not indicated
 - \$146M could pay for
 - 5 Nepean Emergency departments
 - Treat 300,000 patients
 - > 4000 hip replacements
 - > 20000 natural childbirths



- 28 year old woman. No significant past history
- Presents with pleuritic chest pain. No dyspnoea
- Entirely normal physical exam
- PERC negative.
- D'dimer ordered by JRMO “just to be safe”
 - Positive
- Proceeds to V/Q scan
 - Intermediate scan
- Gets admitted overnight, given LMW heparin
- Next day – CTPA – no evidence PE
- Total radiation dose: > 10mSv (Harm)
- Clinical benefit = NIL

Opportunity costs of PE work up

- Money
- Staff time (ED & Radiology)
- Space – ED bed
- Radiology machine time
- Cognitive load on ED and radiology decision makers

ALL could have been used to provide better, safer, faster care to another patient – one who may have benefited

NOT TO MENTION the patient's time

The opportunity cost of low value health care is
the high value health care forgone

Rather than treating the sick, we are testing the
well.

Low Value Health Care & Opportunity Cost

- What is Low Value Healthcare?
 - Hard to define who benefits and what the benefit is
 - Low value to who?
 - Patients, providers, funders, society
 - Harmful care easier than “wasteful” care
- Low value health care defined by opportunity cost
 - Can you get greater benefit allocating that resource elsewhere?
 - Even “good” care may have an unacceptable opportunity cost
 - Many quality initiatives and RCA / Coronial recommendations

Types of Low Value Healthcare

- Over testing
- Over diagnosis
 - When people are diagnosed with a disease from which;
 - They will not suffer
 - They will not die early
- Over treatment
 - Treatment not associated with improved outcome
 - Useless or harmful treatment

Over-testing

- Tests that will not change management
- Tests that confirm what is already known
- Tests that try to prove a negative in low (no) risk patients
- Tests for conditions that don't need treating → overdiagnosis

Driven by

- “Just in case” or “Can't exclude”  “Rule out culture”
 - Misguided belief that you can “prove a negative”
 - (False) Reassurance (Who for?)
- Lack of understanding of the test and what it tells you
- Ease of ordering
- “Do something” bias
- Time pressure
- Lack of Continuity of Care
- Fear (Litigation, Complaints, Clinical Governance, Uncertainty

Supply side economics

- Imaging has been a major component of rising health costs
- More CT scanners = More CTs
 - Market based health care  Supplier induced demand
- Diagnostic Tests are introduced without evidence of clinical outcome efficacy
 - Safety and Test Characteristics
 - Implementation >>> Understanding
 - HS-Troponins, CTPA, CTCA
 - Without efficacy studies – hard to assess cost effectiveness and opportunity cost

Blood cultures in cellulitis

- Perl et al 1999
- Retrospective chart review - Community acquired cellulitis
- 710 blood cultures on 533 patients (41 months)
- 3.6% contaminates (false positive)
- 2% contained a relevant (true positive) organism
 - Surprise, surprise – 73% streptococcus
- All patients recovered /improved with initial antibiotic
 - Cefazolin replaced by penicillin in 8 patients
- **Cost for each change in management = \$US 4,500**

Pre-operative coagulation testing

- Salar et al 2014
- Prospective study of 814 hip fractures (1 year)
- 744 (91%) had pre-operative coagulation studies.
 - 164 (22%) abnormal – 55 on warfarin. 109 “not predicted”
- Abnormal coag group not on warfarin
 - No therapy was instituted to reverse the abnormality
 - Some reduction in rate of spinal anaesthesia
 - No increase in blood loss, need for transfusion, haematoma rate or GIT bleeding.
- Annual saving for UK NHS = £432,000

Its not just about cost

- Overcrowding
- Staff efficiency
 - Morale and satisfaction
 - Stress and cognitive load
- Patient satisfaction
- Patient safety

The paradigm shift

- Less is more
 - Fast care is good care
 - Decreased LOS associated with **better** outcomes
 - Reversal of many established practices
 - Large trials to prove efficacy of
 - Less testing
 - Less intensive treatment
- Less is More (JAMA)
- Too Much Medicine (BMJ)
- Dartmouth Atlas
- Preventing Over-diagnosis
- Choosing Wisely

Think Global, Act Local

- Remember Gangnam Style
- Activity Based Funding
 - More accountable budgeting
 - Greater control at cost centre level
 - More opportunity to manage costs locally
- Chance for “opportunity cost” decision making
 - Nepean: Annual cost of CRP tests = New ultrasound machine
 - Mallows, JL (2013). "The effect of a gold coin fine on C-reactive protein test ordering in a tertiary referral emergency department.". MJA, 199 (11), p. 813.

Ask not what you can do **to** the patient

Ask what you can do **for** the patient.

With apologies to John F Kennedy