Making evidence-based medicine work for individuals

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In 1910 the average life expectancy of a male in the UK was 48 years.
In the next 100 years.....

- Clean water
- Better housing
- Vaccinations
- Antibiotics
- Better anaesthesia
- Better surgery
- Immunology
- Oncology

- HIV
- Imaging
- Lots and lots of lots of more effective medicines and other treatments that have turned previously rapidly fatal conditions into chronic conditions that we live with for years and years.
In 2010 the average life expectancy of a male in the UK was 80.4 years
Multimorbidity and age

Polypharmacy is increasing

Percentage of patients receiving multiple medicines

- None
- 1 to 4
- 5 to 9
- 10 or more

1995 vs 2010
What is evidence-based medicine?

EBP is "the conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual patient. It means integrating individual clinical expertise with the best available external clinical evidence from systematic research."

Sackett D, 1996
Expertise

Evidence

Patient’s values and preferences
<table>
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<tr>
<th>Title</th>
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<tbody>
<tr>
<td>Acute heart failure (CG187)</td>
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<td>October 2014</td>
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<td>Acute kidney Injury (CG169)</td>
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<td>August 2013</td>
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<td>Acute upper gastrointestinal bleeding: management (CG141)</td>
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<td>Acutely ill patients in hospital (CG50)</td>
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<td>Advanced breast cancer (update) (CG81)</td>
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<td>Alcohol-use disorders: Diagnosis and clinical management of alcohol-related physical complications (CG100)</td>
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<td>June 2010</td>
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<tr>
<td>Alcohol-use disorders: diagnosis, assessment and management of harmful drinking and alcohol dependence (CG115)</td>
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<td>February 2011</td>
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New criteria for diagnosis of infective endocarditis: utilization of specific echocardiographic findings
DT Durack, AS Lukes, DK Bright, DE Service - The American journal of ..., 1994 - Elsevier

Proposed modifications to the Duke criteria for the diagnosis of infective endocarditis
JS Li, DJ Sexton, N Mick, R Nettles - Clinical infectious ..., 2000 - cid.oxfordjournals.org

Infective endocarditis in the antibiotic era

Infective endocarditis: an analysis based on strict case definitions
CF Von Reyn, BS LEVY, RD ARBET - Annals of Internal ..., 1981 - Am Coll Physicians

Guidelines on the prevention, diagnosis, and treatment of Infective endocarditis (new version 2009)
Q Habib, B Hoen, P Tornos, F Thurny - European heart ..., 2009 - Eur Soc Cardiology
The patient is a 79 year old woman who had a prosthetic hip 3 years ago, had a dislocation of the prosthesis 2 years ago successfully reduced, and now has a very painful recurrence of the dislocation.
Evidence

Expertise

Patient’s values and preferences
• Fit 61-year-old. 20 half marathons over the last decade and is in training for her second triathlon in a few weeks’ time (BMI 24).

• A week ago, she had 20 minutes of central chest pain at rest with sweating. It was severe but she might have passed if off if she had not been with friends who were worried. It had gone by the time she arrived at the local hospital.

• Her ECG showed a pulse rate of 60. MI excluded. Subsequent CT angiography the next day showed, “small acute pulmonary emboli in the right lobe pulmonary arteries which likely account for the pain”.

• She was taking low dose HRT having slowly decreased this from 2mg estradiol and a progesterone, started 6 years ago. Otherwise the only provocation was a double journey to the northeast 10 days and 5 days earlier – about 3.5 hours in the car each way.

• Bloods taken while in hospital normal platelets, LFTs and ESR – amongst other normal results. A CXR was normal.
• Is this a provoked or “unprovoked” VTE?
• Paper in the BMJ 2013;347:f3368 “When a test is too good: how CT pulmonary angiograms find pulmonary emboli that do not need to be found”
• If she is counted as “unprovoked”, does this paper change the NICE suggestion that she has an 11% chance of a cancer in the next 2 years (because the old studies will have been using a “different population”)
• If she is to be tested, what are the advantages and disadvantages of a pelvic and abdominal CT as against a transvaginal US and a CA125.
Evidence

Expertise

Patient’s values and preferences
• CT-detected pulmonary emboli may be incidentalomas or false positive findings.
• What does the patient knows about pulmonary emboli, how they are treated and why they are treated.
• How would she feel if she didn’t start on an anticoagulant and then had a larger potentially serious PE? Would she find that apparently low risk acceptable or unacceptable? Or if she takes an anticoagulant perhaps unnecessarily and has a serious haemorrhage?
• Perhaps the patient will tell us what to do?

• The uncertainty re the provoked or unprovoked “PE”.
• There are at least 2 potential provocations - the car journeys and the HRT patch, plus possibly dehydration after exercise???
• If the patient’s views shade towards accepting that these factors may have provoked the “PE” then that has an impact on the “do we search for an underlying malignancy" conversation.
• Or not.
• We need a conversation.
And finally, that "do we search for an underlying malignancy" conversation.

"No screening and a malignancy is detected later“ might be an acceptable scenario to one person but not to another. At the other end of the spectrum, we could have a patient fearful of cancer based on her past experiences and acquired knowledge, embark on some targeting hunting for an occult malignancy and end up with a series of equivocal results, incidental finding and false positives all at the expense of unpleasant medical things being done to our possibly increasingly worried and confused patient - but on the other hand she might be completely grateful that “no stone was being left unturned” despite ongoing confusion as multiple test results roll in.

We know what our own responses would be to these scenarios, but we don’t know what the response of the worried individual in front of us would be. Unless we ask. I’m sure there’s the risk of “what would you do doctor”, but I’m completely convinced that what I would do is irrelevant. There are entirely legitimate options and what matters is what the patient thinks is the best choice.
Communicate better.
Conversation can “solve” most complex problems. More data doesn’t.
Knowing Stuff

Communication skills

Decisions
The art of the consultation lies in creating a collaboration where both the clinician and the patient are aware of limitations and uncertainties in the clinical evidence, but still seek to make the most of the opportunity to align goals and values.
Knowing Stuff

Communication skills

DECISION MAKING
Knowing Stuff

Communication skills

DECISION MAKING
Q35. Were you involved as much as you wanted to be in decisions about your care and treatment?

Number of respondents: 2006 (76,770) to 2016 (74,555)
Q27. Did doctors talk in front of you as if you weren’t there?

Answer percentage (%)

Year


No

Yes, sometimes

Yes, often

Number of respondents: 2006 (77,215) to 2016 (74,523)
Learning a new skill

- **Instruction** (nodes of knowledge, stringing them together, effort required)
- **Demonstration** (seeing others do it routinely and well and seeing that it works)
- **Practice** (repeated, supportive feedback)
- **Assessment**
What else are you taking?

OK, tell me some more.

OK, so you're not on a statin, I can add that to your prescription.

The nurse has sent me to talk to you about statins I think.
Summary

• Guidelines are good
• Patient decision aids are good
• But if we want better patient care, we need better conversations
• If we want better conversations, we need to have demonstrations of real shared decision making conversational skills
• And then the opportunity to practice those new skills so they become our new routine.

• THE AVATARS - for every new guideline or guideline update - ARE COMING!