

## **Make Research USEFUL: Lowering the Barriers to Knowledge Mobilisation and IMPACT!**

(The paper I used as a source for much of this talk, and some of its cited papers, is here

<http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002049#pmed.1002049.ref004>

Ioannidis JPA (2016) Why Most Clinical Research Is Not Useful. PLoS Med 13(6): e1002049. <https://doi.org/10.1371/journal.pmed.1002049>

(Whilst the title includes "clinical" I believe the propositions in the paper can be applied to all types of research)

### **Introduction**

Today I am covering:

- What makes research impactful
- What role does policy have to play
- How do we make the most of research findings

### **What Makes Impact?**

\$280bn spent worldwide on biomedical and health research in 2014. Estimated 85% is wasted, or \$238bn

Define waste:

- Looking at basic mechanisms not directly related to improving health
- Results not matching those anticipated, so they are hidden
- Bias introduced by poor study design
- Absence of written protocols and poor documentation
- Taking insufficient account of previous studies in the same domain
- Statistical precision is low or used in a misleading way
- Over emphasis on the meaning of randomness and extremes
- Inadequate emphasis is placed on recording of research decisions and on reproducibility of research.
- Involvement of stakeholders with conflict of interest
- Reward systems favour quantity over quality, novelty more than reliability

Some research shows that it takes between 17 and 23 years from journal submission to make use in clinical practice. The range can be from 6 years to 30 years.

This reality needs to moderate the expectations of the pace of change, as well as providing a focus for improving process.

Research is the other side of the Policy and Practice coin. The two are indivisible. Influence should be an iterative two way process, a continuously functioning feedback loop.

### **Research can Influence by:**

Being USEFUL !!

Which means:

Being aimed at an accepted PROBLEM (definition informed by policy leaders and practitioners) but who decides?

Done in a proper problem CONTEXT so it has some relation to reality

Designed to generate useful, trusted, believable information for EVIDENCE

Be PRAGMATIC, not esoteric, impractical, out on a limb.

Centered on the PATIENT / PERSON / CITIZEN and their situation improvement.

Be FEASIBLE in aspiration and practice, show value for MONEY

Be TRANSPARENT in how it is being done, and the results achieved , be they good or bad or indifferent.

Overall RESEARCH should make a DIFFERENCE for health and disease outcomes, or at least start with a REALISTIC expectation that will be the case.

### **The Role of Policy & Practice People**

Policy and practice should work together to help define what is USEFUL, to scope the PROBLEM question. To provide priority for DECISION.

Policy and practice should ensure a robust systematic review is undertaken to place the question in the right CONTEXT and ensure that it is PRAGMATIC and applicable to real life circumstance.

To guard against DISEASE MONGERING. That is the artificial redrawing of health problem or disease boundaries to create a fictitious burden to generate more needs. Doesn't happen?

Here is an example: Irritable Bowel Syndrome – what for many people is a mild functional disorder requiring little more than reassurance about its benign natural course – is has been reframed as a serious disease attracting a label and a drug, with all the associated harms and costs.

A confidential draft document leaked from a medical communications company, In Vivo Communications, describes a three year "medical education programme" to create a new perception of IBS as a "credible, common and concrete disease". The proposed 2001-03 education programme was part of the marketing strategy for GlaxoSmithKlines drug Lotronex (alosetron hydrochloride).

To make sure the EXISTING information base on which to draw is used, to ensure that research ADDS to the information already known, not repeats it.

Cause the design of the activity to be sufficiently robust and generate sufficient evidence that any results are TRUSTED and BELIEVABLE, so that they can be used to help drive CHANGE and IMPROVEMENT.

### **A Reality**

Research shows few studies have all of these characteristics, for all sorts of reasons. As such much research fails to be USEFUL.

In other words, most research fails because of its DESIGN not because of its FINDINGS.

Alongside this, TRANSPARENCY is vital. Adverse findings are just as valid as any other. When reported (or IF reported!) they inform decisions about the next bout of research choices. If unreported, this adds to and feeds the real research failure burden.

### **Achieving Meaningful Impact – Knowledge Mobilisation**

Assuming the results of research meet the criteria involved in being USEFUL, how do the outputs of research achieve impact?

At this point I will say that the following section and propositions can be applied equally to the output from:

Research, Innovation, Continuous Improvement, Invention and Data analytics and insight. All generate new thinking, ideas and things to be considered for use in improving outcomes. It is the behaviour and culture of people that make all of this work, and in a way the source of the NEW is immaterial.

So what does this mean?

Organisations delivering health and care services have to reset themselves to become learning organisations if the scale of transformational change craved by so many is to be achieved. This is at all levels from the person through team to organisation, be that health board or trust, or the NHS in Wales as a whole. We need a national learning NHS system.

There is no point doing research, having companies innovating novel solutions, mining data with artificial intelligences for new knowledge or doing continuous improvement, if the learning and new knowledge is not put to use for improving patient and citizen outcomes as a nation at pace and with national impact.

We all have a role in ensuring that every citizen touched receives a service, intervention or treatment that is evidenced as best practice, from wherever in the world that knowledge originates.

We must endeavour to make the quality of intervention and outcome received by our citizens consistent across all of Wales. It is of particular interest however, that as many new ideas as possible originate in Wales because that adds to our self esteem and our prosperity.

The literature describes many barriers to new knowledge being adopted and making impact. Some of these are:

- Competing priorities and finite budgets – what is important to who – government or trust or board – maybe, goodness, even the patient / citizen! Policy often bumps up against politics here.
- Organisation culture - not recognising value in the new – the right behaviours are not encouraged or rewarded widely enough
- Organisation infrastructure is often not good enough to support change
- Siloed working, not recognising that to do adoption and change often requires a multidisciplinary effort
- Translation of the language of research and its findings into practical deliverable change by the people doing the delivery in language and deed.
- Often it is too easy for researchers to push findings into dissemination and forget, with insufficient effort put into find, pull and adopt by organisations
- Lack of time allocated to reflect and go through the process of change
- Overload of evidence, too much to appraise, sorting the wheat from the chaff
- Overload of improvement initiatives, no body person, organisation prioritising and controlling the pipeline
- Lack of skills to appraise and critically evaluate
- Workforce not tuned to doing; risk averse; needing permission
- Risk of failure is minimised by doing what we already do and know.

To overcome some of these barriers will require a concerted effort by everyone in the workforce wherever they are, whatever level and responsibility they have.

For me the effort for change falls into three main categories:

Leadership, Workforce and Infrastructure.

## Leadership

Leadership at all levels, in all organisations, with an interest in better outcomes for health and care, needs to set the context for the right behaviours to be encouraged, that act positively on the cultural dimension of actively adopting new knowledge. Plus forgetting the old where it does not work or even does harm.

Set the performance measurement aspect of the system to include success measures to counterbalance the failure measures we presently rely on. Set individual performance expectations to value improvement and their part in it.

Leadership is an absolute imperative to demonstrate the **will** to pursue change despite competing priorities and pressures, to **encourage** active seeking out of new ideas and where research is needed, and to champion **execution** to ensure improvement is achieved.

Leadership should encourage all to actively work with the wider research community in Wales to ensure that the new knowledge the health and care needs to improve citizen outcomes is identified, prioritised and included in the strategic research agenda. In doing this we will ensure that researchers, service users and practitioners are all engaged early in the decision making process to do the right work. That which is USEFUL!

## Workforce

We must value our workforce as a source of new ideas and ensure that where new ways of working or treating are demonstrated to be better, we will make sure new thinking is adopted locally and nationally.

Within this we must adopt processes that acknowledge, share and reinforce the good practice people gain through long experience, so showing that we value it.

Work closely with Health Education and Improvement Wales (HEIW) to embed cultural change and behaviour change, both for new entrants and existing staff, to move towards populating our learning organisations.

Show that staff are encouraged and empowered to be inquisitive and search out, trial and adopt improved practice based on good evidence.

Work with the academic and research community to ensure that the language used to describe outcomes of improvement, innovation and research is able to be quickly and easily understood by the target practitioner community it affects, and so is delivered effectively to the citizen.

## **Infrastructure**

Put in place people and processes to make it easier for new ideas to move within and across organisation boundaries, aiming to make Wales a leader in its approach to finding, assessing and adopting new and best practice in pursuit of better health and care outcomes for citizens.

Delivering change needs agency. People and time are needed to change the state from the present to the future. There is always a change "hump of effort" to overcome, and this has to be recognised.

This also means making space in the system for better access to relevant data to create new information, that is timely, condensed, clinically relevant, trusted and says clearly how the citizens needs are met and benefits delivered.

## **To Summarise**

Research to have impact must be useful, as defined by a number of known parameters

Policy makers and practioners should seek to set the context of priority and decision as to what needs to be USEFUL.

When useful research outcomes are achieved, the means by which such new knowledge is moved into practice are as efficient, effective and as consistent as possible across all of Wales.

Thank you.

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## **Post Script**

I am in the process of collecting example stories of where research or innovation has been useful and made an impact, and where it hasn't. What has made things work, and what has got in the way. Feel free to let me know of any examples. I will come and get the story off you!