

Evidence versus innovation, getting the balance right in the NHS

Evidence based practice (EBP) became mainstream during my clinical career. It was initially resisted as something that might undermine professional autonomy and devalue individual judgment. However as increasing evidence emerged, exposing many examples of established clinical practice to be of little value or in fact actually harmful, it became hard to resist.

Eventually EBP founds its level, the evidence being seen as only one component of a successful consultation along with the human aspects of judgment, wisdom, instinct and critically, the patient's own perspective. It therefore gained its place in clinical practice in a balanced way.

It was a hard won battle and it still rages. A typical example of reluctance to change is the use of colloid in acutely shocked patients, a practice which despite the emergence of clear evidence

that it was associated with a higher mortality, took over 15 years to exit into the history books. Of course evidence isn't a static thing, it changes and grows over time - we should really talk about current evidence based practice! On my first day at medical school one of our professors told us that half of what they were going to teach us would be wrong – the problem, he bemoaned, was that they didn't know which half.

There are many examples of this; when I qualified beta-blockers

were absolutely contraindicated in heart failure but now are an accepted treatment. Treating the menopause with HRT has been generally discouraged, encouraged and now is discouraged again - if you don't like the current evidence just wait – change will come around.

Gradually the evidence-based way of life has spread from clinical practice and entered into other areas of healthcare such as service planning and system management. This is to be applauded but there has to be a balance between doing what has been shown to work and allowing people to try new things – to innovate.

I was recently in a discussion about ways to engage a population in health promotion. We talked of texting, use of social media, smart phones, nudge theory, 'wearables' linked to group initiatives and much more.

However, it was clear that the

purchasing authority's low risk, academic approach required evidence for any program. It struck me then that there was a need for a mature, nuanced relationship with evidence.

As a GP, I was at first enthusiastic about EBP and its application at the point of care. However, over the years, two major problems have emerged ...

The first was simply my inability to remember all the relevant evidence. We need to stop pretending that we can remember everything for every patient.

A gap has emerged between the requirement in modern clinical practice to process the available

knowledge and the finite capacity of the human brain to process such a volume of information.

Robert A. Freitas tells us that there has been a 1000 fold increase in medical knowledge between 1948 and 1994 – unfortunately there has not been

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a 1000 fold increase in clinician brain power. The mismatch is clear. There has never been a better time for contextually relevant information support.

The second problem was that the patient in front of me in surgery often seemed to fit neatly into the exclusion criteria of the studies I was trying to apply.

My patients reflected real life and tended to have multiple conditions, to be older and have the usual complex interplay between social, medical and psychological factors. They bore no resemblance to the neat cohorts

in the randomised controlled trials, which had screened out the more complicated patients. A luxury that is largely unavailable in clinical practice.

The first problem is being addressed by solutions such as the widespread adoption of electronic patient records with built in logic

systems which use prompts to guide clinicians down a best practice route (such as highlighting drug interactions, or offering protocols when particular key words are typed in).

In addition machine-learning systems will start to impact clinical practice in the next few years.

These will access big data resources and start to ask their

own questions in an intelligent way to look for relevant evidence to support the management of the specific patient in front of you.

I think the solution to the second problem is to start to redefine our relationship with 'evidence'. Rather

than slavishly just following the evidence, we should, where appropriate, create the evidence 'in flight' using real world data analysed as an intrinsic part of clinical practice.

Clearly there are some circumstances where this isn't appropriate because of the risk or

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scale of the intervention, but to slavishly insist on the evidence base before any business case gets approved is a major barrier to innovation in the NHS.

So if we are going to innovate - let's try new things, collect the evidence as we go and have the

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courage to be reactive. Where it isn't working, to fail fast or where it is, allow our patients to reap the benefits.

The NHS needs innovation and Evidence based practice - its time to rethink the balance.