Journal of the Royal Society of Medicine

March 2014, 107

The medical miracles delusion

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Army ants subscribe to a simple rule: follow the ant in front. If the group gets lost each ant tracks another, eventually forming a circle. According to crowd theorist James Surowiecki, one circle 400 m in circumference marched for two days until they all died.1

Humans are not ants, but we often trudge together along the same trail, neglecting to look around for alternatives. Mass delusions involve large groups holding false or exaggerated beliefs for sustained periods. Humanity has a long, sorry list of these shadow-the-leader epidemics of collective consciousness which appear obviously wrong only in hindsight. Some last for centuries: early alchemists intent on transmuting base metals into gold and the Christian Crusades of Europe's middle ages, for example. Others have correlates which resurface decades or centuries later: McCarthy's persecution of alleged communists in the 1950s harked back to the Salem Witch hunts of 16th century America just as the 2008 Global Financial Crisis had much in common with the 'South Sea Bubble' which slashed 17th century Britain's GDP.

In the educated 21st century, too, we blithely trust in economic and political systems which are stripping the earth's resources, altering the climate and facilitating wars. Are we then similarly mistaken, en masse, about the capabilities of the health system?

Most of us believe in the miracles of modern medicine. We like to think that the health system is increasingly effective, that we are implementing better treatments and cures with rapid diffusion of new practices and pharmaceuticals and that there is always another scientific or technological breakthrough just around the corner promising to save even more lives; all at an affordable price.

We maintain the faith despite multiple contra-indications. Modern health systems consistently deliver at least 10% iatrogenic harm.2 Despite very large investments and intermittent but important interventional successes, such as checklists in theatres3 and clinical bundles in ICU,4 there is no study showing a step-change reduction in this rate, systems-wide. Only half of care delivered is in line with

guidelines,5 one-third is thought to be waste,6 and much is not evidence-based,7 notwithstanding concerted efforts to optimise that evidence and incorporate it into routine practice.8

The reality is that progress is slowing, and medicine seems to be reaching the limits of its capacities. The potentially disastrous problems of antibiotic resistance, for example, are yet to play out. This is only one point among many. New technologies such as the enormously expensive human genome project have provided only marginal benefits to date. We still do not have the answers to fundamental questions about the causes of common diseases and how to cure them. Many doctors are dissatisfied and increasingly pessimistic.9,10 It must also be remembered that although death is no longer seen as natural in the modern era, everyone must die. Yet, we inflict most of our medical 'miracles' on people during their last six months of life. Le Fanu describes this levelling off and now falling away of health care progress in The Rise and Fall of Modern Medicine.11

Every major group of stakeholders has its own specific delusion which acts to augment the meta-level medical miracles delusion. Thus, the overarching delusion is buttressed by a set of related 'viruses of the mind', to borrow Richard Dawkins' evocative phrase.12

Although politicians think and act as if they are running things, modern health systems are so complex and encompass so many competing interests that no one is actually in charge. Then, bureaucrats – acting under their own brand of 'groupthink' – assume their rules and pronouncements provide top-down stimulus for medical progress and improved clinical performance on the ground. Yet coalface clinicians are relatively autonomous agents, so there can only ever be modest policy trickle down.13,14

Researchers, too, support the medical miracles industrial complex. The electronic database PubMed holds some 23 million articles and is growing rapidly. Every author hopes it will be his or her results that will make a difference, yet there is far less take up than imagined and comparatively little investment in the science of implementation8 – translating evidence into real life enhancements.

Nor are clinicians or the patients they serve immune. While frontline clinicians strive to provide good care, many myopically assume their practice is above average; the so-called Dunning-Kruger effect.15,16 Of course, statistically, half of all care clinicians provide is below average. And notwithstanding decades of public awareness, patients believe modern medicine can repair them after decades of alcohol, drugs, sedentary lives and dietary-excesses, despite evidence to the contrary.

Meanwhile, the media's unremitting propensity to lend credibility to controversial views and to hone in on 'gee whiz' breakthroughs – while ignoring the incremental and the routine – fuels unrealistic expectations of what modern medicine can deliver.

Throughout history, mass delusions have been aligned with mass desires for favourable outcomes. In the pursuit of medical miracles all of our interests line up in a perfect circle. We seem more like army ants than we think.

Just as the Global Financial Crisis was a wake-up call for the serious consequences of blind fiscal faith we must begin to manage our expectations of the health system. Progress is always in jeopardy when the real problems are obscured.

The challenge is to harness the tough-minded scepticism needed to tackle this widely held 'received wisdom'. One realistic way forward is to encourage stakeholders – politicians, policymakers, journalists, researchers, clinicians, patients – to first consider that their own and others' perspectives are simply not logically sustainable. This may be achieved through genuine inter-group discourse about the health system, where it is at, and its limitations.

As is so often the case, Albert Einstein said it best, in a typically neat aphorism: 'The significant problems we face cannot be solved at the same level of thinking we were at when we created them'.17 If we can humbly accept that we need new perspectives for healthcare – and radically different ways of thinking – we will be better placed to free ourselves from the hold of these peculiar viruses of the mind.

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