

Editorial: what's our vision for a 21st century health service?

Said Shahtahmasebi, PhD

Most of us have come across the following question posed either by our managers, at job interviews or simply as a point of conversation: 'what should health services look like in the 21st century?'

Visions of a future health service are individual specific and based on knowledge and experience. Therefore, there is no right or wrong answer to this question. Given that we all strive to achieve the same goal of improving health outcomes answers to the above question are likely to be variations of the same vision.

Certainly, with the advancement of technology and its many applications in every aspect of our lives it is inevitable to think of many possibilities in the near future. Many believe that technological advancement will lead to cure or successful treatments for diseases such as heart disease and many cancers. Whilst, current treatments such as radiotherapy and chemotherapy and transplantation are quite routine compared to a few decades ago, yet, most people are hopeful for a magic pill to cure all, or, a vaccine to protect against ill-health.

Does this mean the end of secondary health care (hospitals)? Some people on the other hand may have a vision of a high-tech hospital being run by a sophisticated and complex web of hardware and software, where scanners replace receptionists and nursing triage, robots running tests and asserting a diagnosis and advising patients of a treatment.

The point that is being made is that in terms of a 21st century health service it is not too difficult to visualise a health service based on the progress of medical technology to date. A pragmatic example may be the application of nanotechnology in many aspects of health care delivery.

As discussed in the last editorial {Shahtahmasebi, 2014 #149}, due to loss of degrees of freedom as a result of our decisions and actions, both as individuals and societies, some of the health outcomes proved difficult to reduce. Due to interactions with other changes such as the environment we may expect new problems and health outcomes.

Despite decades of advancement in medicine and medical technology; suicide, heart disease and cancer are still the major causes of mortality and morbidity in the developed world.

Then why do people ask the question what should a health care system (or any system) look like? By asking such questions are we critiquing our health outcomes, the effectiveness of our care services, or questioning the effectiveness of the technology i.e. is it the technological advancement that is failing to impact on the rates of mortality and morbidity, or, is it a feedback effect? That is, the knowledge that medical interventions and treatments are continually improving could affect human behaviour such that it increases the probability of risky behaviour.

But, in some cases, in order for someone to survive organ failure such as heart and lung (possibly due to risky behaviour, e.g. smoking and drinking) and live longer someone else must die. So we may envision a 21st century health care system with the advancement of medical farms producing body parts.

Clearly, based on the current level of advancement, e.g. in nanotechnology, genetic engineering, and transplantation, what a future health care service can deliver is only bounded by our imagination. Also based on current statistics mortality and morbidity due to major diseases such as heart disease, cancers, and suicide are still high.

Perhaps we question ourselves every now and then to reassure ourselves that resourcing a high-tech future health service will help to substantially reduce mortality and morbidity especially due to heart disease and cancers.

Certainly, a future health care service must take advantage of technological advancement to maximise efficiency and minimise waste, improve health care delivery through information sharing and unified databases {Shahtahmasebi, 2013 #89}. However, public health must come first.

High-tech hospitals and gadgets are useful at the point of delivering care or treatments, after an illness has occurred. In other words, what role, if any, should technology play in improving public health outcomes, i.e. preventing ill-health in the first place and reducing morbidity rate? The question that arises is whether or not public health too, has to become high-tech, and, what benefits may be gained?

It is commonly agreed that most of the western type diseases are either the result of or are exacerbated by our behaviour, e.g. changes in our dietary patterns, lifestyle, socio-economic patterns, and environment on the one hand and health and social policies that influence these patterns. For example, employment status on its own is no longer indicative of prosperity, health and social status, but it indicates that we must also take into account the number of employment spells, duration of employment, type of employment, working environment and management.

Public health planning requires a broader and more holistic approach than morbidity rates to dictate services requirement and resources allocation. In this context technology can make a huge difference. The advancements in computer hardware and software technology together with telecommunication mean that not only very large databases can be designed to collect relevant information but that they can also communicate with each other. The latter can be used to populate new databases from existing ones (such as hospital or GP records) and to share data. Furthermore, statistical and analysis interface may be used to translate data into information, to share, for research, and to inform decision making at local and regional level.

The unchanging “vision” of a health care service should be the availability and access to appropriate and relevant information, whilst the mode of gathering, storing, analysing, and delivering the information is expected to change with time. So, whatever the reason for enquiring about a vision for the future of a health care service two things must happen to ensure the vision, on average, applies to the population it serves: (i) we need to make sure the decision making process is informed by relevant and appropriate information, (ii) public health and preventative medicine and promotion must receive a higher priority.

In this issue, three aspects of public health is presented, from Colin Thunhurst’s systems approach, to generating and warehousing information, and Damon Berridge’s appropriate approach to analysing health data.

Next issue: The silent epidemic

The next issue of DHH will be dedicated to suicide prevention politics: from research to policy, from politicians to grassroots, identifying and discussing those who oppose a preventative approach: the silent epidemic or a conspiracy of silence.