

A Model for Health Care System Reforms

The Australian health care system is in need of substantial structural and financial reform. Demands on it are increasing exponentially because of higher patient expectations, obesity, ageing, a greater emphasis on technological solutions and the associated increase in lifespan. All this places increasing financial burdens on hospital care, primary care, and aged care. Whilst clever innovative surgery such as the Da Vinci method for prostatectomy and the use of increasingly sophisticated diagnostic devices like the new generation MRI scanners, provides the opportunity for superior diagnostic solutions, the use of such equipment is expensive and is only quickly accessible for private patients or patients of considerable wealth.

The system must become more efficient and there has to be a significant increase in productivity with an associated decrease in cost and improvement in the quality of services, processes, systems and procedures.

In many ways there are opportunities in other industries where new measurement and organisational structures and improved control of processes if applied to the healthcare industry can assist in strategically improving the health of all.

A model that can be used to accelerate improvement and innovation, is that implemented in the automotive industry. Honda is perhaps the best example of what can be achieved if the correct structure processes and systems are put in place to release latent process and product innovation and remain as a leader.

The Honda manufacturing system incorporates the original ideas of the best process and systems scientists and engineers, like Walter Shewhart, W Edwards Deming, J M Juran, Soichiro Honda and Taichi Ohno.

This method and model has been extended and successfully implemented in Australian businesses from \$20 million to \$1 billion turnover per year through ERP and IT system development. The same opportunity exists for the use of digital data and E health in the healthcare industry using what is called six sigma processes and systems. The healthcare industry needs to embrace the digital evolution.

The Shewhart/Deming philosophy of teamwork, process control, measurements and kaizen, all combined in a strategic business plan with the correct policies and procedures in core business areas offers new hope for improved productivity and customer care if implemented in the healthcare industry.

A prerequisite for a successful healthy life is a system of healthcare based upon continuous monitoring and prevention based processes.

My own *quality management health program* is based on Dr. Kenneth Cooper's model and has been in force in my own health program since 1974. This program has been tailored to suit my own exercise regime, and I have converted the Dr. Kenneth Cooper aerobic point system (1 point = 7mL of oxygen/kg of body weight/minute) to

a range of other activities by interpolation and extrapolation of the original data compiled by Dr. Cooper

In addition, a highly successful innovation using a laser in 1991 designed to release intraocular pressure designed by myself, assisted in saving my own eyesight.

As stated in “Quality Habits of Best Business Practice”, we believe that quality must become a habit. This is the main reason for the outstanding success of Japanese manufacturing and later Japanese service industries. Despite massive re-evaluation of the Yen, these industries are still largely trading in surplus.

Quality must become a habit and a quality habit can be defined as:

“...a settled way of behaving automatically and consistently at a level of general excellence which has a specialised characteristic that inspires confidence.”

On my many tours around the studying the best business systems available, I discovered the Sayama plant of Honda, which was recognised as the best factory in the world by J.D. Power and Associates USA. An overriding principle of their business management system in this case is that they do not make to a tolerance – **they make to a target**. That is, they go beyond the **Six Sigma Process** control system of Motorola in the USA.

The overriding philosophy there is:

1. Quality is a habit
2. Defects and errors in systems and processes are not acceptable
3. Six Sigma Processes are a must.
4. Perform to a target, not to a tolerance
5. Improve on the perfect
6. Kaizen every way, every day
7. Maximise the innovative talent of all stakeholders.

Toyota also practised the same philosophy but in 2009 they made a strategic decision to remove a lot of senior managers and replace them with younger ones. Unfortunately, these new managers were not trained in the Shewhart –Deming philosophy and the results have been catastrophic.

My own belief is that if there is ever an industry that needs to go beyond the **six sigma process control**, it is not necessarily the automobile industry, but definitely the healthcare industry. The old ideas of capability index of being plus or minus the three sigma process must be improved upon for surgery and treatment.

Very often hospital corporate plan documents are weak on data and statistics and good quality information and analysis. However, the basic philosophy of the existing corporate plans makes it relatively easy to translate strategic directions into key

performance indicators and link them with the information and analysis in terms of quality criteria, therefore satisfying **six sigma process** in the healthcare industry.

The mismatch between common corporate plan themes and quality criteria in the area of information analysis can form the major framework for an improved model when combined with a more efficient structure focussing on prioritising all work activities.

It has been our experience that once the organisational framework has been sorted out, this area needs strengthening in all service related industries that we have been associated with (pathology departments, sales and marketing, medical healthcare, rehabilitation, medical centres, restaurants, retail and wholesale trade, and many more). The major driving force behind improvement and, in fact, behind Kaizen, is that if we are to achieve world-class quality or world-class healthcare, will be *measurement* based on prevention.

As far as people are concerned, teamwork is absolutely fundamental if world-class healthcare is going to be achieved. In fact, world-class healthcare endorses the wisdom of a multi-disciplinary diagnostic and treatment approach and, from this, the logical use of statistics, data measurement or information and its interpretation – the international language of quality. Every input of symptoms to a disease requires a broad set of skills for interpretation. A good health system is a shared responsibility of all parties.

In addition, Dr. Deming has estimated that more than 94% of outcome problems reside in the process itself. If the process is to be improved, it has to be measured; hence, teamwork, cooperation, collaboration and process control are absolutely essential to the quality approach.

A world-class healthcare system needs to acknowledge the professional peer relationship that exists between medicine, behavioural science and education. It applies all the relevant knowledge of a well-informed population.

As has already been recognised, there are strong parallels between the manufacturing industry, the development of process control and delivering a world-class healthcare system. The Shewhart Deming technique is really just a restatement of some of the basic principles documented by Albert Einstein.

To complete the loop and provide continuous improvement the patient outcomes should be measured. Such a system already exists overseas as PROM(Patient Reported Outcome Measurements).

Good health outcomes should be regarded as the equivalent of profit in a business, there has to be a system to apply this business philosophy.

A proposed structure using digitally linked hospital networks sharing data and resources and specialist knowledge, in turn linked to care based local medical centres can easily be based upon a quality focussed system. Continuous monitoring must take

place through a top level measurement authority focussed on performance outcomes and accountability.

The healthcare system can learn a lot from what has already happened in the quality management systems applied by some of the best companies in the world, those of which are already aiming for and surpassing six sigma process quality levels.