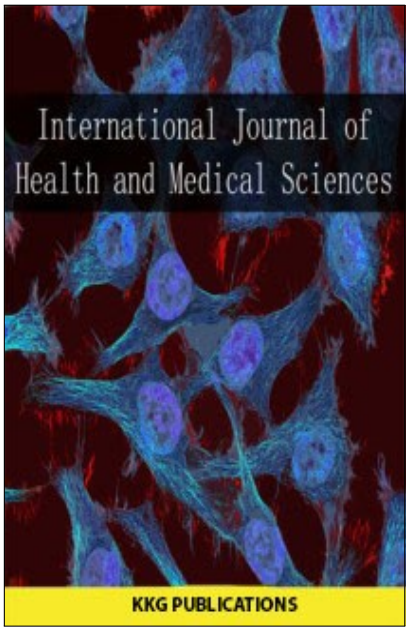

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IS TOTAL QUALITY MANAGEMENT/CONTINOUS QUALITY IMPROVEMENT OR QUALITY ASSURANCE APPLICABLE IN HEALTH SERVICES?

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Abstract. Health services provide many services which entail technology and interpersonal processes. Manufacturing is not so involved in interpersonal processes. The health care labour force has characteristics which influence the organizational culture. One major characteristic is the domination of physicians who are decision makers in terms of medical care. The workforce in health care organisation, hospital, for example are multidisciplinary, such as general practitioners, nurses, therapists, pharmacists ,specialists, administrators, finance officers and managers, while in manufacturing workforce is likely to be homogenous. The goal of health services is not necessarily to gain profit; the most important is to increase peoples health status, so that quality is more focused on accessibility, affordability, and appropriateness. However, industry is likely to have homogenous processes and the goal is to gain profit. Therefore, health services may require special consideration in implementing quality management tools. It may adjust the principle of TQM/CQI/QA in order to conform to health services characteristics.

INTRODUCTION

In modern society, people are likely to be consumerism. They tend to be concerned about the quality of goods or services. In response to this situation, industry had to improve the quality of goods. In the same way, health care had to pay attention as the patients seem to be familiarized with health services quality [1], [2].

Since the 1960s, industry has acknowledged the idea of quality from Japanese industry which implemented total quality management (TQM), developed by Deming, successfully [3].

[4] reported that health care has tried to adapt TQM/Continuous Quality Improvement (CQI) as well as Quality Assurance (QA) which is also adapted from manufacturing [5].

The principle of these tools may be applicable in the health industry as the tools may encourage health personnel to become more motivated and then, implementing the tools may reduce the cost since the organization works effectively. For example, a doctor will not use a X-ray if the patients do not meet the criteria or standard; the nurse will follow the procedure before managing the patients, so medical errors can be avoided [6], [7].

However, some characteristics in the health industry are dissimilar to manufacturing. First is attitude of health personal. They tend to have high autonomy as they are professional.

Moreover, they work with human beings who may suffer from pain and anxiety. It may result in being under pressure. Furthermore, physicians dominate, thus nurses and other professionals may not be empowered [1].

Second, the workforce may not have the same perception of what quality means. Physicians and nurses may not want to be involved in the quality management process as it is more about cost. Patients also have their own perceptions about quality.

Another difficulty is that health services provide many services which entail technology and interpersonal processes. Manufacturing is not so involved in interpersonal processes.

Finally, the important distinction between industry and health services is that profit is not the main goal; making people healthy is more important.

Tools of quality management measurement, such as CQI/TQM and QA which are adapted from manufacturing stereotype may not be suitable for health services organization. It can be explained from two points of view: Workforce aspects including the culture and attitude; and consumer aspects.

Workforce Aspects

Implementing TQM/CQI has a number of obstacles. They are the difference of definition of quality among the workforce, physician domination, empowerment, leadership.

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Definitions of Quality among the Workforce

The workforce in health care organisation, hospital, for example are multidisciplinary, such as general practitioners, nurses, therapists, pharmacists ,specialists, administrators, finance officers and managers, while in manufacturing workforce is likely to be homogenous. For this reason, the definition of quality can be different from one profession to another [7]. The definition and perception of quality among the health care employee are also dissimilar. It depends on their job. For example, medical professions will define the quality based on the advanced of technology. The GPs define quality based on the newest drugs and technology to treat their patient. In contrast, nurses define quality based on their patient care while the manager defines quality in terms of cost efficiently [2], [8] [9], [10]. According to [11] in Donabedian, quality in health services means implementing modern medical knowledge, focusing on prevention disease and managing the patient as a human not as an organ [11].

Consequently, measuring the quality in a health care organisation tends to be more difficult than measuring in manufacturing which may be concerned only about cost and performance of goods. As a result, implementing continuous quality improvement or quality assurance in health care may face substantial problems.

Physician Domination

The health care labour force has characteristics which influence the organizational culture. One major characteristic is the domination of physicians who are decision makers in terms of medical care. The definition of quality in health care may be determined by them even though there are many people involved in delivering health services. In [12] point of view, health care is an organisation which is dominated by professional groups which have their own values. For this reason, hospitals tend to be controlled by professions rather than manager [8], [12], [13]. Nevertheless, [14] assumed that the skilled employee are likely to be controlled by manager in the manufacturing [13].

Empowerment

Empowerment employee in health care is likely to be difficult. First reason is physician domination. Second is time constraint. From [2] point of view, medical professions found it difficult to allocate time for discussing. A doctor has to make decision after diagnosing a patient. Third is that health personnel may not work in one room.

Eventually, every employee in health care has their own role. The roles of a doctor are diagnostic, examination and making a prescription and the role of a nurse is taking care.

As an illustration a patient visits a doctor, then the doctor examines the patient, diagnoses, then gives a prescription. The doctor makes a decision based on knowledge and experience without involving the other health personnel.

Then, a nurse gives a prescription to a pharmacist and the pharmacist will give medicine to the patient. The nurse and pharmacist only do what they should do, they are unlikely to interfere in diagnosing or making the prescription [7].

Some studies found that most of nurses who work at hospital could not make decision at a ward, particularly in France. Even though 1980's there is change in nurse they can do their own job as a patient care, physicians are unlikely to resign this function [2]. Most of people blame the doctor when there is medical error.

According to [11] *the quality of medical care as the management that is expected to achieve the best balance of health benefits and risks. It is the responsibility of the practitioners to recomend and carry out such care* [2, p. 478]

It is clear that empowerment is still a dilemma in health care. On the other hand, empowerment is needed to generate motivation of the workers to perform well [2], [15], [16].

Empowerment also refers to teamwork. Nevertheless, medical professions tend to work individually since most of them are very specialized in their work [17]. [17] found that physicians and nurses may not have the same perception of teamwork because the difference in socio economic level, gender, skills and culture.

Leadership

Deming claimed in [8] that to implement the CQI, an organisation needs leadership [8], [13].Yet, health care doesn't have strong leadership who are concerned about quality management. The health workers also think that they already performed their job satisfactorily by using high technology equipment and the best knowledge. Moreover they assume that TQM is only concerned with cost, while they perform the services in order to achieve better health [13].

From [17] point of view that doctors and other medical professions also have workload and work related stress. Therefore, they don't have enough time to improve, especially for physicians who work in small organisations. They also don't have enough time to participate in TQM/CQI [17], [18]. [17] also claims that doctors and the managers may not have good relationships due to their powerful positions within the organisation. For this reason, the hospital manager may have difficulties implementing TQM/CQI.

Implementing QA

Implementing quality assurance, which refers to standardisation [19] is difficult in health care organisations. There are three problems:

The first problem is that medical technology has developed dramatically; thus standards and measurement criteria are quickly out of date. [20] found that some QA programs tend not to be successful in health care, as physicians and nurses are unlikely to use those standards due to limited time. They may not know the advantages of quality assurance as they lack information [21].

Furthermore, they may have high expectations about the results of quality assurance. Accordingly, they may feel it is a waste of time and money if the result is not as good as their expectations [21].

The second problem is that accreditation may be bias as the standard are influenced by many aspects, such as level, validity and sensitivity, for example standard in Australia is different from New Zealand. The most important obstacles of implementing QA because the outcome of health care is unlikely to be measurable because of many circumstances [22] quoted in Buetow.

Regarding to professional autonomy, doctors and nurses have strong value in their profession, so other profession will not interfere in their performance. This is debatable when the assessor want to asses their performance with regards to medical care [22].

The third problem is that medicine is an art and a science: thus, to manage patients, physicians have to use their knowledge and skills. They can be creative to adjust to the individual characteristics of patients. For instance, consuming aspirin may cause some patients to have abdominal discomfort, but some do not feel it. Hence, not all patients who are prescribed aspirin, have to take medicine to relieve the side effects of aspirin. Therefore, standardization may not be implemented consistently in health care [23]. In contrast, manufacturing produces goods which have similar characteristics and the process is repetitive; it is to measure the quality using the standard.

Consumer's Aspect

Measuring quality in health care from the consumer's point of view is also problematic. It can be explained from some aspects

Definition of Quality

The consumers in health care is divided into two categories. First is internal consumers, such as nurses, pharmacists, and others health personnel. Second is external consumers, such as patients and Pharmaceuticals Company [2], [8]. As a result, the need of health care consumers may have variation. Therefore, the definition of quality meaning meeting consumer needs may not appropriate in health care. Otherwise, the health care have to make many variation tools to measure the quality of health care services [2].

Consumers Ignorance

Furthermore, patients, as external consumers, lack knowledge of the product which they are going to consume. They may not know their demand and their needs; that is, what kind of medicine they need and what type of services they need. In health care demand is judged by providers (doctors). It is known as supply induced demand [13], [24]. They only need to feel better or relieve from the pain after visiting doctors or hospital [2], [23]. How can patients determine the quality if they do not know about their need and how can provider meet patient needs if the need is feeling better, which is a very subjective thing.

In terms of quality, the physicians and patient may well dispute about the quality of health care. Sometimes patients refuse to certain treatments. Instead, they may ask for injections which may be inadequate for their condition. This illustration shows that the doctor does not meet the demand, then the patient will not be satisfied. How can we judge that the quality of this health care is not good? Nevertheless, [19] and [23] found that, even if patients are not satisfied with services, they still receive the health services because they need care, for example in life threatening and emergency case. For this reason, the philosophy of TQM /CQI about consumer focus may not applicable in health care.

By contrast, meeting the requirements of consumers will be possible in a manufacturing because the consumers, probably, can determine their needs which refers to performance of goods.

Consumers Expectation

[25] and [26] found that consumers tend to have expectation beyond the ability of health personnel to perform the services. As a result, the services will not meet the consumer needs.

Consumers Satisfaction

Other tools of measuring quality is measuring satisfaction which is related to the outcome of services [1], [2], [19].

Measuring patient satisfaction is challenging, because of the variation of measurement tools and there is no agreement

among experts on what aspects should be measured. [27] found that patients tend to measure satisfaction or quality of services only from non medical. They may not be able to measure satisfaction the quality of medical care (technology) because of lack knowledge and experience. Lack of knowledge, experience and economic status influence the patient's perception of quality. Another study in Minnesota shows that there was no correlation between consumer satisfaction and outcome [27], [28].

[26] pointed that the patient's perception of satisfaction is very subjective and is often based on the condition of patient. People's perception will be influenced by education, experience, economic background, and personal interesting. Patient satisfaction may refers to affordability of health services, accessibility and safety consequently, it is difficult to establish standardization of patient's satisfaction [19], [26].

[26] shows cases that parents who attended the paediatrics' clinic at first time less concern about the health care quality in terms of process and safety because they lack of knowledge and experience. Conversely, parents who attended the clinic more than twice had set up high expectations as a result of more experience and information. Another case is that unemployed parents are unlikely to satisfy with the health care owing to the cost, and employed parents felt satisfaction because they could afford the health services [26].

Patients tend to assume the quality of health care is good when they receive the health services which are needed, even the technology of health care is unlikely to be qualify. Furthermore, consumer tend to measure satisfaction tangibly, such as the waiting room and wall paper, not safety. They may not measure quality in terms of safety because they may not know if the medical services are safe. As result, patient satisfaction may not represent quality in health care [15], [29].

Following on from this, the relationship between quality and outcome is unclear as outcome of health care is to health [8]. A patient visits the hospitals and the physician makes diagnosis and refers patient to the ward to get treatment.

A specialist has made good diagnose based on their skills and knowledge and give prescriptions of high quality drugs. The condition of patient improves.

However, the patient complains about in the ward, the food and the cost of medicine. How do we measure the quality of health care? Unfortunately, seven days later after going home, the patient had a heart attack as she continued to smoke, and eat more fat, even though she was still taking the medicine from hospital. Did bad quality services result in her heart attack? or the high quality of drugs and the doctor will not make people sick?

Patient Centred Audit

Audit from a patient perceptive may improve the quality of health care; however, it is still debatable. [30] tried to develop an audit which is centered on the patient perception to improve the quality of health care, but the tools show that it tends to focus on interpersonal processes. On one hand, quality of care is very subjective in measuring interpersonal processes. Indeed, the audit will be worthwhile if all the process in health care can be audited by consumers, as well as by industry. The auditor assess all the process in manufacturing.

Quality Control

In manufacturing quality control is implemented from the earlier process until finishing. When the product of every process do not achieve the standard, the product may be rejected. This process is known as quality control [19].

However, the health care services can not be rejected or reprocessed while one of the steps do not meet the standard.

For example, a nurse who inserts the intravenous fluid may not achieve the standard when she has to do it in hurry due to life threatening situation, such as losing blood massively in a car accident or a war. It will threaten a patient's life if the nurse reinserts and it may even cause a patient death [19].

CONCLUSION

In conclusion, TQM/CQI or QA may not be applicable in health service organizations as health service organizations are complex, multidisciplinary and the outcome is uncertainty. Measuring quality tends to be difficult. Some aspects contribute to this predicament. First is the characteristics of the health workforce, which is different from the workforces in manufacturing because of high autonomy, high professionalism, while having more stress, domination of certain profession and working with humans being. Second is the consumers' variable needs and wants variation which may cause variation of products. Reaching some standardization may result in much more time and money spent. Third is that the external consumers may lack information or knowledge, so they may not recognize their needs and demand. Consequently, they are unlikely to confident to measure the quality of medical process.

In addition, consumers and health provider interpret quality in different ways. Consumers think more about affordability and interpersonal processes; professions and top manager have their own value about quality. Professions believe that quality is using high technology medical care and working effectively as the goal to making people healthy. Manager may

perceive quality in terms of cost.

In summary, the goal of health services is not necessarily to gain profit; the most important is to increase people's health status, so that quality is more focused on accessibility, affordability, and appropriateness. However, industry is likely to have homogenous processes and the goal is to gain profit.

Therefore, health services may require special consideration in implementing quality management tools. It may adjust the principle of TQM/CQI/QA in order to conform with health services characteristics.

REFERENCES

[1] N. O. Graham, (Ed.). *Quality Assurance in Hospitals: Strategies for Assessment and Implementation,* Rockville, MD: Aspen Publishers, 1990.

[2] J. A. Schmele, *Quality Management in Nursing and Health Care,* Oklahoma, OK: Delmar Publisher, 1996.

[3] A. Ghobadian and S. Speller, "Gurus of quality: A framework for comparison," *Total Quality Management,* vol. 5, no. 3, pp. 53-70, 1994.

[4] K. E. Hamilton, V. Coates, B. Kelly, J. R. Boore, J. H. Cundell, J. Gracey, ... and M. Sinclair, "Performance assessment in health care providers: A critical review of evidence and current practice," *Journal of Nursing Management,* vol. 15, no. 8, pp. 773-791, 2007.

[5] M. A. A. Hasin, R. Seeluangsawat and M. A. Shareef, "Statistical measures of customer satisfaction for health care quality assurance: A case study," *International Journal of Health Care Quality Assurance,* vol. 14, no. 1, pp. 6-14, 2001.

[6] D. J. Cohen and P. Lisagor, "Medical errors-is total quality management for the battlefield desirable?" *Military Medicine,* vol. 170, no. 11, pp. 915-918, 2005.

[7] C. P. Mc Laughlin and A. D. Kaluzny, *Continous Quality Improvement in Health Care,* Rockville, MD: Aspen Publishers, 1994.

[8] A. F. Al-Assaf and J. A. Schmele, *Total Quality in Health Care,* Delray Bay, FL: St.Lucia Press, 1993.

[9] Z. Huq and T. N. Martin, "Workforce cultural factors in TQM/CQI implementation in hospitals," *Quality Management in Healthcare,* vol. 9, no. 2, pp. 43-57, 2001.

[10] Z. Huq, "Managing change: A barrier to TQM implementation in service industries," *Managing Service Quality: An International Journal,* vol. 15, no. 5, pp. 452-469, 2005.

[11] R. I. Lee and L. W. Jones, *The Fundamentals of Good Medical Care,* Chicago, IL: University of Chicago Press, 1993.

[12] J. Striem, J. Ovretveit and M. Brommels, "Is health care a special challenge to quality management? Insights from the Danderyd Hospital case," *Quality Management in Healthcare,* vol. 12, no. 4, pp. 250-258, 2003.

[13] C. Zabada, P. A. Rivers and G. Munchus, "Obstacles to the application of total quality management in health-care organizations," *Total quality Management,* vol. 9, no. 1, pp. 57-66, 1998.

[14] M. Arndt and B. Bigelow, "The implementation of total quality management in hospitals: How good is the fit?" *Health Care Management Review,* vol. 20, no. 4, pp. 7-14, 1995.

[15] I. O. Ugboro and K. Obeng, "Top management leadership, employee empowerment, job satisfaction, and customer satisfaction in TQM organizations: An empirical study," *Journal of Quality Management,* vol. 5, no. 2, pp. 247-272, 2000.

[16] S. D. Truskie, *Leadership in High Performance Organizational Cultures,* Pennsylvania, PA: Quorum/Greenwood, 1999.

[17] H. T. Davies and S. Harrison, "Trends in doctor-management relationships," *British Medical Journal,* vol. 326, no. 7390, pp. 646-649, 2003.

[18] H. Geboers, H. Mokkink, P. Van Montfort, H. Van Den Hoogen, W. Van Den Bosch and R. Grol, "Continuous quality improvement in small general medical practices: The attitudes of general practitioners and other practice staff," *International Journal for Quality in Health Care,* vol. 13, no. 5, pp. 391-397, 2001.

[19] R. Ellis and D. Whittington, *Quality Assurance in Health Care: A Handbook,* London, UK: CRC Press, 1993.

[20] F. Baum, E. Kalucy, A. Lawless, S. Barton and I. Steven, "Health promotion in different medical settings: Women's health, community health and private practice," *Australian and New Zealand Journal of Public Health,* vol. 22, no. 2, pp. 200-205, 1998.

[21] R. Grol and M. Wensing, "Implementation of quality assurance and medical audit: General practitioners' perceived obstacles and requirements," *British Journal General Practice,* vol. 45, no. 399, pp. 548-552, 1995.

[22] K. Walshe, L. Wallace, T. Freeman, L. Latham and P. Spurgeon, "The external review of quality improvement in health care organizations: A qualitative study," *International Journal for Quality in Health Care,* vol. 13, no. 5, pp. 367-374, 2001.

[23] J. R. Kimberly and E. Minvielle, (Eds.). *The quality imperative: Measurement and management of quality in healthcare.* London, UK: Imperial College Press, 2000.

[24] G. W. Hill, *An Introduction to Health Economics for Eastern Europe and the Former Soviet Union,* S. Witter and T. Ensor (Eds.). New York, NY: Eskdale Publication, 2002.

[25] V. Currie, G. Harvey, E. West, H. McKenna and S. Keeney, "Relationship between quality of care, staffing levels, skill mix and nurse autonomy: Literature review," *Journal of Advanced Nursing,* vol. 51, no. 1, pp. 73-82, 2005.

[26] S. Lawoko and J. J. Soares, "Satisfaction with care: A study of parents of children with congenital heart disease and parents of children with other diseases," *Scandinavian Journal of Caring Sciences,* vol. 18, no. 1, pp. 90-102, 2004.

[27] J. Spicer, "How to measure patient satisfaction," *Quality Progress,* vol. 35, no. 2, pp. 97-98, 2002.

[28] J. T. Chang, R. D. Hays, P. G. Shekelle, C. H. MacLean, D. H. Solomon, D. B. Reuben, ... and N. S. Wenger, "Patients' global ratings of their health care are not associated with the technical quality of their care," *Annals of Internal Medicine,* vol. 144, no. 9, pp. 665-672, 2006.

[29] M. Avis, M. Bond and A. Arthur, "Satisfying solutions? A review of some unresolved issues in the measurement of patient satisfaction," *Journal of Advanced Nursing,* vol. 22, no. 2, pp. 316-322, 1995.

[30] R. Berman Brown and L. Bell, "Patient-centred quality improvement audit," *International Journal of Health Care Quality Assurance,* vol. 18, no. 2, pp. 92-102, 2005.

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