REVIEWS

Critical evaluation of transforming care at the bedside application in a multi-model nursing practice: A reflective review

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Abstract

It will soon be a decade since Transforming Care at the Bedside (TCAB) initiated by the Institute of Healthcare Improvement (IHI) was introduced. This noble idea has had great successes and led to improvements in patient safety. Some institutions have successfully implemented and realized the benefits. We have conducted a reflective review of the possible challenges that may hinder other institutions from successfully implementing this initiative and suggest some action plans that may deliver a better result.

Our review broadly examines the main nursing models in relation to patient care quality improvement, that is American and British models and we base our arguments on our experiences in Australia, the United Kingdom, Ireland and in Saudi Arabia. Where the latter's healthcare practices are a prototype of the American model, mainly because in America, the healthcare is primarily private and has to often cope with care related litigation, contrary to Saudi Arabia where the government offers free healthcare to all its citizens and also, the citizens have the privilege of opting to seek care in other organizational facilities in which they are eligible.

Our review points out that, though all other aforementioned countries have taken steps to incorporate TCAB, it is a new initiative being introduced into one of Saudi Arabia's top healthcare organizations. Being participants in this organization which has recently moved to "implementing" TCAB, our study is focused on reviewing the systems readiness in implementing this initiative, with special focus on system structure and planning.

We also discuss how achievement of success in implementing TCAB and all other quality improvement projects require system and needs analysis and thorough preparedness of all relevant players. The discussion will carefully consider and deliberate on TCAB's core agendas but can be extrapolated to all other safety and quality projects undertaken within a healthcare system.

Key words

Transforming care at the bedside, Nursing, Models, Technology

1 Introduction

Transforming care at the bedside (TCAB) was initiated in 2003 by the Institute for Healthcare Improvement (IHI) [1] as a joint effort with the Robert Wood Johnson foundation (RWJF). The initial goal of TCAB as it has become widely known

was to empower nurses and front line staff to redesign work processes so as to achieve better clinical outcomes, improve the quality of patient care and to reduce staff turnover [1].

This initiative started in 2003 with a small number of hospitals initially totaling three in the first phase and after realizing its success, it was further piloted in 13 different sites, where it was tested, refined and change ideas implemented [1].

The core themes of transforming care at the bedside [1] are:

- Transformational Leadership
- Teamwork and Vitality
- Patient and family centered care
- Value added processes
- Safety & Reliability

Medical/Surgical units were initially chosen for TCAB introduction as these areas are where most inpatient care is delivered [1]. In medical/surgical units as in all other units, one needs to be at the patient's bedside frequently. Medical/ Surgical inpatient areas were chosen as the starting point due to the fact that nurses in this area play a central role in ensuring quality patient care as they are more frequently at the patients' bedside and vigilance here helps prevent medical errors [1]. This close care and contact with the patient also is expected to positively impact on patient's pathway to recovery and length of stay in the hospital.

However, in this area as in other clinical areas in a hospital, the nurses contact time with patients is reduced due to the introduction of other players such as patient care technicians, respiratory technicians, electrocardiographic technicians, orthopedic technicians not to mention non clinical demands on nurses as well as system failures [2, 3]. This paper will further discuss these factors within the context of the British and American nursing models and the effect of these models on the nurses, the patients and of vital importance, the care given to patients.

We shall reflect on the Saudi Arabian practice which is an American model prototype with an amalgamation of systems e.g. a Canadian triaging system which has evolved from Manchester and Australasian triaging system [4] hence a British model, Maternal and child health services which aligns with the British model and a mixture of an American and British drug pharmacopoeia. These amalgamations may be incompatible and a factor in shortfalls on TCAB target achievement.

By contrast, the differences between the patient populations are, for instance, that all the patients in Saudi Arabia, Australia and the United Kingdom, except those who liberally opt to have or use private cover, have a greater expectation from a healthcare service as the Saudi government, Australian Medicare and the UK National Health Service (NHS) systems are free services from the cradle to the grave, whereas in the United States up until currently, the patients are accustomed to paying a fee for services and continued payments for ongoing care [5]. However, this is not in consideration of the changes the American system may undergo in relation to access to care if the recently court approved Obama care is introduced [6].

Besides the public-private healthcare service differences between Saudi Arabia and American health practices, litigation is also a determining factor in service provision. The healthcare system in America has to cope with a high quantity of alleged care and malpractice related litigations that has been labeled "litigation lottery" [7]. Eighty six percent of lawsuits against doctors and nurses are said to be frivolous [8] leading to the formation of the medical malpractice litigation reform system [7, 8]. In Saudi Arabia, healthcare related litigation is just a new phenomenon with very minimal impact to care and service provision [9].

We shall further critically reflect on how TCAB themes were depicted in various aspects of our work prior to the introduction of TCAB albeit in an ill-defined way. Nursing leadership existed long before introduction of TCAB [10] but

under the new phenomenon are expected to play a pivotal role by transforming their leadership style if they have to practically embrace and implement the themes of TCAB. These themes require system and personnel planning and in some cases restructuring. Therefore, the nursing leadership cohort's role and observed performance along with the other themes will be discussed.

2 Pivotal players in implementation of TCAB

2.1 The digital era nurse discourse

The most pivotal players in making TCAB implementation in an institution a success are the bed-side nurses. Besides them, there are many other players who are required to work towards freeing the bed-side nurses' time in order for them to spend the IHI target of 70% at the bedside [11]. These players include the team leaders, line managers, higher management, nursing informatics and all other departments, most notably the information technology (IT) department.

Currently, we are in a digitalized era where almost everything is electronic, and despite its pitfalls in some settings, it is a basic necessity for any institution that is thriving to free nurses' time from desk related tasks to bedside care. Medical supply companies are outsmarting each other to stay abreast with technological opportunities and advances; hospitals equally are acquiring the most modern equipment with advanced safety features that are also more user friendly albeit at a cost. For this equipment to help institutions free-up nurses' time so as to quantitatively and qualitatively improve care at the bed-side, the institutions need to appreciate and utilize the full functions of the equipment.

The majority of healthcare centers in developed and developing countries have embraced the use of electronic systems within the hospital setting, but these systems need to be interfaced with all gadgets that are being used to give nurses more time to care for patients at the bedside besides minimizing paper wastage and environmental degradation. If new electronic equipment is not always capable of interfacing with what is available within an organization, and in many cases there are different systems capturing different information that are incapable of interfacing if not properly planned and setup, the nurse will spend considerable time manually transferring data or duplicating data either to another machine or paper as a result of poor technology design, selection and inadequate planning with the introduction of new technology [12] and hence negative implications to TCAB target achievement.

Technological nightmares which if it occurs can consume the nurses' time can be prevented by utilizing institutional ancillary services like the IT department, to enhance the nurses' amount of direct patient care time through the optimal use of equipment and technology, but unfortunately this is not realized in centres where the IT governance has not been established to protect patient privacy and confidentiality and the IT personnel as well as the nurses as end-users are not consulted in the planning phase prior to equipment acquisition [13]. We reflect upon stark realities where during initial implementation, proper planning was not undertaken and this has the negative impact of taking nurses further away from the bedside. Equally, the IT personnel's essential services will be required even after the initial implementation as technological turbulence during critical moments cannot be avoided [14].

We also reflect on cases where the digitalization processes are underutilized and the necessary support is not always available, hence achieving TCAB goals are further hindered. Practically, nurses' skills in using the technology and equipment cannot be ignored either as we observed the existence of gaps between nurses' levels of understanding and adaptability [14]. This is even more pronounced in countries which almost entirely rely on expatriate nurses with diverse backgrounds and in some cases limited exposure to IT in the workplace.

To overcome the underutilization of modern equipment, the core themes of TCAB which are team work approach within the organization's various departments should be utilized. All departments within an organization need to mutually work together in order to achieve positive value added processes with enhanced safe and reliable use of the equipment.

2.2 The nurse leadership paradigm

Within the context of history, it is important to note that managerial and leadership skills in nursing have evolved in response to the changing technological and social advancements [15]. Leadership styles in nursing have constantly being changing based on demands and needs. It has progressed from transactional leadership which abdicate responsibility [16] to transformational leadership which provides vision and sense of mission and is related to the adaptation to change [16, 17].

Nursing leadership has evolved through these styles [17] over the years with different models directing it towards different paths, but ultimately with one shared goal, that is, safe patient care. Of course, other factors such as public or private healthcare systems with concomitant litigation playing a great influence on the mindsets of leaders also has had great influence on the quality and quantity of care at the bed side.

When we reflect on nursing leadership across the spectrum working in an institution practicing mixed model care systems, our front line managers, we see that many may be a hindering factor in the implementation of these themes either due to their managerial skill set being aligned to the application of a single model or their lack of expansive, multi-model clinical competencies in areas they ought to manage. This can be attributed to various factors, more particularly the ever evolving nursing education modes and the generational gap within the nursing fraternity.

Those leaders or managers who fail to adopt and familiarize themselves with the current nursing educational mode in the different models and generational way of thinking may be a hindering factor and equally, there are inherent factors like the older generations attachment to processes, whereas the others are more result oriented irrespective of the process [18].

The process oriented leaders may hinder advances in TCAB achievement due to their over reliance on pre-determined processes and rules which may have been overtaken by events given the current rate at which evidence-based practices are being generated. This group's evaluation in relation to TCAB performance is very essential in the process since this group of leaders represent a large number of current leadership.

Reflecting on the younger generation of nurses of whom the majority have undergone the current nursing academic structure which is university based rather than hospital based, we observed that this cohort views things differently. The majority want to stay abreast with changing evidence of which major search engines and databases can be easily accessed from hand held device's application systems [19], this however equally requires judicious adoption [20]. Therefore, these groups refer to pre-determined processes only as guidelines when it conforms to the available evidence.

This diversity between the two generations cannot be ignored given the significant differences on theory practice gaps and critical thinking skills which both generations may possess but at different levels and based on differing pathways. Given the fact that, the new era entrant nurses are our future nursing leaders, they are expected to transform nursing care and therefore are the target audience in order to ensure that TCAB is implemented more readily.

Generally, true leadership qualities are a conglomeration of intellectual and emotional intelligence; true leaders are expected to display motivation, empathy, self-regulation, a greater self-awareness and of course lead by example. Without leadership transformation with its proven outcomes, bedside transformation may not be easily achieved and hence the need for a paradigm shift [21]. A shift that needs to stay abreast with the changing leadership styles, the congruent leadership being the new theory best suited for understanding clinical leadership which is guided by passion for care and features actions based on values and beliefs [17].

As with all organizations there are strengths and weaknesses for every age group in the work force. It is crucial to remember that our 'older generation nurses' are the role model for our future generation of nurses. There is no substitute for their vast array of experience, critical thinking, and clinical skills to match, and we must ensure that this generation imparts these skills to the qualified younger generation of nurses who are able to bear the responsibility. This group will have the advantage of integrating these skills with their strong academic knowledge, technological skills and the current leadership style.

We observed that, in order to achieve this we must ensure we have excellent mentoring programs, with professional role models, which will help the younger nurse to learn the necessary skill set for the area in which they work. Through positive mentoring, staff attrition can be reduced [22].

2.3 Organizational human resource management

Reflectively, we found institutional budgeting and staff planning as one of the critical factors relevant to TCAB. Since patient care needs cannot be fully anticipated, staffing issues equally are not static [23]. Different institutions determine their staffing needs differently and many systems have been developed to assist healthcare institutions address this vital issue. Equally, institutions utilize their retrospective data on patient turnover at different seasons of the year and estimate their staffing needs based on this.

We found that relying on an institution's previous performance is constantly being challenged by climate change and emergence or re-emergence of complex conditions coupled with drug resistant organisms that increase patient care needs. For institutions to positively focus on adopting patient and family centered care theme of TCAB and achieve the minimal 70% bedside care, they must alter the methodology in how nursing manpower is allocated.

The need to re-examine the methodology with which staffing patterns are currently made becomes more urgent with the TCAB agenda since variations in care do exist even between two patients with the same patho-physiological illness [24]. Therefore, we don't have to assume that nursing staff plans should follow a patient nurse ratio; this method of staffing needs to be assessed at a minimum on a twelve hourly basis so as to evaluate the true staffing need. This would highly impact on the implementation of TCAB.

Perhaps prior to the implementation of new strategies we would be best advised to do an analysis of each individual organization; just as no two patients are alike no two organizations are alike, both in structure and architecture. Currently this process has been made more accessible with the use of electronic systems. The front line staff along with leaders can make sustainable changes to re-design systems and processes with the aid of existing gadgets so as to calculate and maximize the time spent with patients thus making the organization more patient centered and increasing the staff's vitality and teamwork, through a shared sense of a job well done.

Nurses can equally learn from business or corporate successes and appreciate that we should re-design our processes and systems so that their impact and significance must be felt by frontline staff and impact on patient care, which is care giver and consumer satisfaction.

3 Other TCAB essential issues

3.1 The nurses' time with the patient

TCAB targets the nurse to spend 70% of the time with the patient. During ancient or Nightingale's time, the only players were the physician and the nurse and hence the nurse was able to spend more time with the patient attending to all their needs and in the process, make care more holistic.

Today, we continuously witness the emergence of more complex patient conditions and the ever expanding role of the nurse; it is difficult to meet the desired 70% time at the patient's bedside. Coupled with this are the emergence of several new players during the last century and as with the emergence of any group, nurses have greatly opposed them as with the introduction of nurse practitioners which was opposed by the system [25], but only later realized how vital they were to the patient care continuum. But this, based on how it is utilized can have either a positive or negative impact on the amount of time the nurse spends with the patient versus the amount of time available to be with the patient.

More recently, we observed the emergence of other disciplines i.e. Respiratory therapists, electrocardiogram technicians etc. more particularly within the American model of healthcare. These disciplines play an undisputed great role in patient care, having contributed to free up the nurse to attend to more patients but unfortunately has denied the nurse to spend more time with any particular patient. In essence this has contributed to a greater patient ratio workload with limited quality contact for the nurse and hence affecting holistic care.

The British model of nursing practiced in many developed countries have by and large not adopted these other disciplines and thus the nurse is utilized for all of these roles leading to the nurse spending more time with any single patient, but unfortunately the British nursing system does not reward nursing in proportion to the multi-tasks they perform, and in line with the economic gains institutions make from not hiring other disciplines for the care of the patients.

Other factors that we observed to either enhance or hinder nurses to meet the TCAB target and achieve beyond the target are staffing roster issues as mentioned previously. Institutions who consider patients as numerical factors rather than considering patient care needs are bound to fail in meeting these demands. This has a huge negative impact on the nurses since compromising care by institutions leads to high nursing turnover, particularly highly skilled and ethical nurses, as they will be unprepared to jeopardize their professional and moral standards. This in turn affects the remaining staff and leads to burn out and increased staffing turnover.

Given the current economic climate this can have a twofold impact, neither particularly appealing for organizations or patients. On the one hand, the nurses remaining in the current job are there due to financial pressures; they may be disgruntled, unhappy and the negativity may spread to other staff. On the other hand, they may leave the organization, unhappy with the system and also potentially informing prospective new candidates of the pressures and failures of the organization, of which the latter is made easy by internet blogging. Private health systems which are profit minded were known to face these challenges, but with the current economic upheavals, public institutions may be affected too.

3.2 The models

Nursing is a universal profession and both the USA and UK have a special status as the pioneers of nursing for new techniques, research and in nursing education. We observed the increasing incidences of complex care needs as a result of emerging new disease patterns accelerating advances in healthcare practices through technological and knowledge development and nursing is no different.

Historically the two models of Nursing Education, the British, and the American, were initially the same and began as the British model, but the American model moved quickly from the hospital-based diploma to formal Nurse training schools offering degrees by 1910 [26] and the UK, similarly commenced structured degree programmes only from 1972 [27].

In both countries, diploma programs have gradually been replaced by degree programs; as a result the differences in the models of Nursing Education are shrinking. This shift is measured but consistent, and essential in order to improve the image of Nursing. Nursing must have an opportunity to shape policies that determine the quality of care, and the quality of life to which patients, people, and communities are entitled and this can be achieved through TCAB implementation and improvement.

We observed that the consequence of nurses moving towards higher education has been that their knowledge base and critical decision-making requirements have been overwhelming as in other professions, but unfortunately, the compensatory rewards in terms of recognition and monetary pay have been disproportionate and worse in some countries more than others. This has become a major issue and stumbling block in the recruitment of nurses, particularly when there are shortages of nurses, increasing levels of acuity, ever increasing workloads and in many circumstances there are not the jobs to match the degree qualifications.

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Nurses are the fundamental key to transforming how we deliver our health care; nurses need to realize the power they hold and that they have the ability to transform systems. If we are to implement TCAB successfully, and in order to preserve the ethos of nursing at the centre of health developments, intense attention must be given to the environments in which nurses work.

We reflect on how health care has become emotionally distant and the profession's long-standing attachment to caring through interpersonal relationships is eroding, and has been overridden by a fast-track system of care management. Our ability to nurse patients has been undermined by all of the challenges we face in our daily work. It is therefore difficult to have a sense of satisfaction in a job that has been done well; instead we feel that no matter how much effort we have made, it is never enough.

Nurses must enjoy the work they do and the energy and passion arising from their job satisfaction can be contagious and can positively infect an entire team. TCAB focuses on small changes, which would be perhaps easier to implement in a system where there is a greater expectation of care by the patients, and that is the case in all healthcare institutions; rightfully, greater expectation from service providers particularly nurses.

4 Summary

The initiation of TCAB by an institution that is focused on improving healthcare service provision just strengthens further the notion that, however much we develop technologically, the physical presence of nurses at the bed side to offer patients the care they need cannot be substituted.

As we discussed, technology is supposed to ensure greater safety for the patient and ease up more time for the nurse. It is meant to make data more reliable, be more user friendly and free-up clinicians' time further, not to fast track patients but to be able to critically assess patients and offer them holistic care. Technology will only achieve its desired results when systems are fully prepared to engage and embrace the technological advancement.

Organizations or Institutions are theoretically aware of the fundamental similarities and differences between various models and are supposed to judiciously choose and align themselves to one model rather than adopting incompatible models piece meal. Equally, organizations are supposed to conduct a thorough systems check and stakeholder consultation before acquiring very expensive equipment to make sure that the equipment functions are optimized and that they do not hinder the nurses' contact time with the patients.

Organizational hierarchical and leadership styles need to be congruent with the needs of the employees and service recipients. And of course, the staff quantity and quality in terms of skills and ability to perform tasks should be considered beyond budgets, that is to say based on constantly changing patient acuity and needs. With adequate and appropriate system structuring and pre-planning, TCAB and any other quality improvement and innovative projects will be a success.

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