

Conference Q2002 – A quality congress for the world
29 September – 2 October 2002, Harrogate, UK

Quality - Beyond the Duty of Care

Abstract

In the pursuit of excellence in quality of care the Australian Government has introduced standards to aged care facilities and imposed continuous improvement of care and service delivery. The aged care industry is a service industry and there are many intangible factors involved in the delivery of care. It is hard to determine the levels of customer satisfaction because customers are not always able to express their views on service due to their medical conditions. The aged care standards are there to protect vulnerable people who are living in aged care facilities.

This paper explores the effects of the use and non-use of statistical tools in continuous quality improvement processes of the Australian Aged Care Standards and how ‘Improvement Indicators’ could be used to measure and monitor standards effectively. Improvement Indicators of standards can monitor and measure the effectiveness and efficiency of the systems and processes of standards by identifying variations in the quality of care.

This paper is based on a proposed research study which will be a major component of a Doctor of Business Administration at Southern Cross University in Australia.

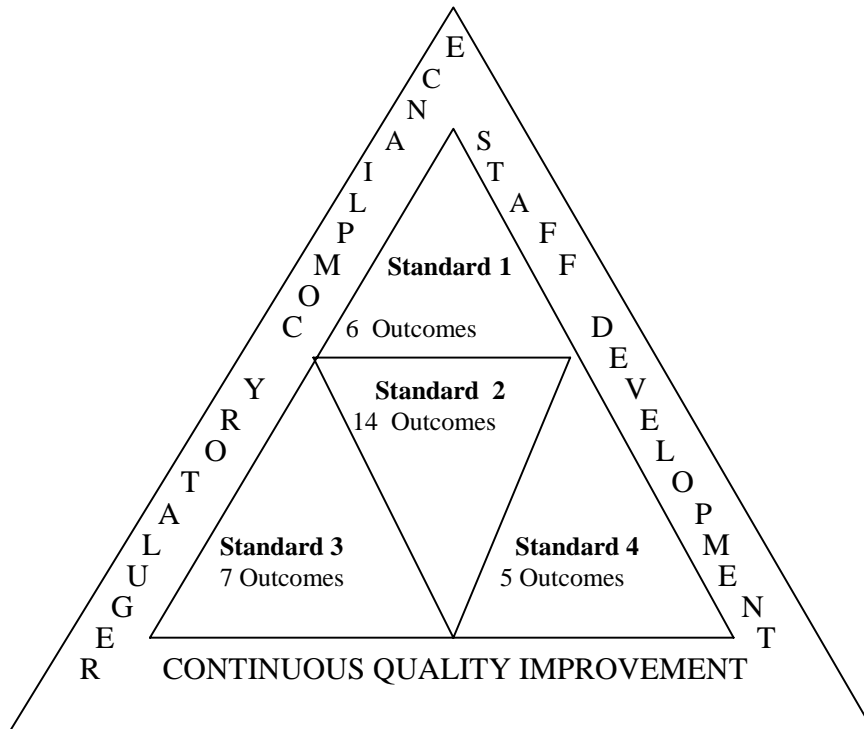
Introduction

Much has been publicized about Aged Care accreditation since 1997 when the Federal Government of Australia announced that all Government funded Aged Care facilities must be accredited by 31st of January, 2001. A major component of this accreditation system is to introduce the “Continuous Quality Improvement” (CQI) process. The initial phase of the accreditation process is now completed, with the second phase just around the corner. However, employers and employees

of the Aged Care sector are unsure about how CQI might apply within the Aged Care industry.

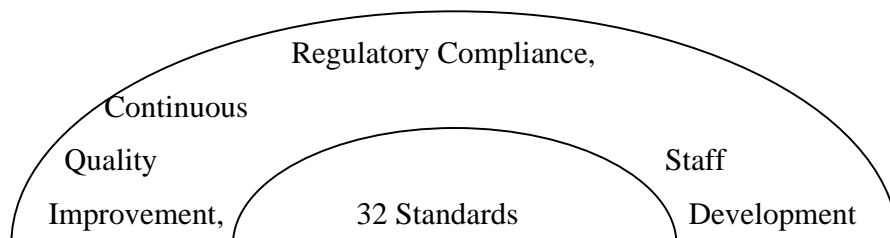
The Australian Aged Care Standards consist of four broad-based standards, which in turn have thirty-two sub-standards. (These are listed in Appendix 1). The relationship of these standards is illustrated in Figure 1.

Figure 1: Relationship of aged care Standards.



Source; Developed by NDR 2000

The three standards in the outer triangle must be included in improving care and service delivery of the four standards in the inner triangle. In other words, they over- arch the other 32 standards.



Source: Developed by NDR2002

Research problem and study purpose

The Australian Aged Care Standards are broad and complex. The standards provide a baseline of the “required care” to improve quality of life of our older generation who live in aged residential care facilities. Quality of life is difficult to conceptualize and it can be interpreted differently from person to person. There are many factors / aspects of care delivery included within the one standard. The standards as a whole are difficult to measure. Many of the services delivered within the standards are intangible; therefore it is difficult to measure the improvement without any indicators.

Accordingly, this research will examine how a measurable outcome could be achieved by introducing “Improvement Indicators” to assist in measuring the Aged Care standards and further examine the use of Statistical Process Control (SPC) tools to find, monitor and measure processes and systems in Continuous Quality Improvement in Aged Care standards.

The research is intended to be conducted with two objectives. The first and foremost objective is to develop simple, measurable and unique “*Improvement Indicators*” for the thirty two (32) complex, sub standards.

Secondly it is intended to examine the effects in terms of value and the importance of the utilization of Statistical Process Control (SPC) tools in measuring variation in processes and systems within a quality improvement framework. Indirectly, the research is designed not only to demonstrate to the reader the how, why, what, and when the SPC can be used in “*Improvement Indicators*” in improving Aged Care Standards, but to produce evidence-based practice data, which will in turn facilitate internal and external “Benchmarking” for Best Practice models.

The most important part of the CQI process is the use of the statistical tools and techniques to collect, analyze and monitor data to identify the variations to the process and the system. However, there are very few employers and employees in the Aged Care industry around the world that possess a clear understanding of how, why, what, and when to use these statistical tools and techniques. The lack of knowledge of the use of statistical tools in CQI has become a barrier to improving quality outcomes in Aged Care.

Literature review

Defining “Service Quality”

Defining the term “quality” is difficult and the definition inevitably varies from person to person. Flood (1993) summarized how Deming, Juran, Crosby and others had defined “quality”.

1. Quality is a predictable degree of uniformity and dependability, at low cost and suited to the market. - Deming.
2. Quality is fitness for use. - Juran.
3. Quality is conformance to requirements. - Crosby.
4. Quality is the (minimum) loss impaired by the product to society from the time the product is shipped. - Taguchi.
5. Quality is in its essence a way of managing the organisation. - Feigenbaum.
6. Quality is correcting and preventing loss, not living with loss. - Hoshin.
7. Quality is the totality of features and characteristics of a product, service or process, which bear on its ability to satisfy a given need; from the customer's viewpoint. - British Standard Definition.

(Flood. 1993, pp 42)

There are many definitions and theories of service quality in today's literature. Most modern writers define service quality as meeting customer's needs and expectations to improve customer satisfaction. Some theorists explore a little further into customer satisfaction in different cultures and conclude that satisfying customer needs and expectations in service delivery are varies in different cultures. In discussing managing quality through outcome based practices, Hill (1997) says that within the health care industry, *quality* is defined as the degree of excellence in care provision. Although many concepts and strategies are used to shape and determine quality care, including total quality management, continuous quality improvement, quality assessment, quality assurance, and quality control, it remains difficult to differentiate health care systems on the basis of quality care.

(Meisenheimer, C.G. 1997.)

Berry (1995) viewed service quality as value creation. From his experiences with colleagues that have performed qualitative and empirical research, he concluded that they determined five broad dimensions that customers use as criteria to judge service quality. The dimensions are not mutually exclusive, yet they provide a helpful framework in understanding customers' expectations:

- ◆ Reliability the ability to perform the promised service dependably and accurately.
- ◆ Tangibles the appearance of physical facilities, equipment, personnel, and communication materials.
- ◆ Responsiveness the willingness to help customers.
- ◆ Assurance the knowledge and courtesy of employees and their ability to convey trust and confidence.
- ◆ Empathy the caring, individualized attention provided customers.

Of these five service dimensions, reliability is the most important dimension in service delivery. Regardless of the service industry they studied, customers rated reliability as the single most important feature in judging service quality.

Service reliability poses some challenges different from manufactured goods reliability. Goods are first manufactured, then sold and consumed. Services are first sold and consumed simultaneously. The buyer of tangible products never witnesses "what goes on" in the factory. Manufacturing mistakes can be corrected before the customer experiences the product. With service, the customer enters the "factory" and is more likely to experience firsthand any production mistakes.

A very important factor discussed by Berry (1995) was the "Human Factor". Many services are labour intensive, introducing a greater degree of variability in the production process than if machines dominated the process. Human beings deliver a more variable service than machines. This is a reality of the human condition. People delivering services not only differ from one another in their technical skills, service attitudes, and personalities, but the same server can provide quite a different service from one customer to the next depending on the circumstances of each situation - customer attitude, server fatigue, complexity of the service requested. Labour-intensive services are more error-prone.

The service reliability depends on attitude, design of the service and customer experience. Perhaps, errors occur in every organization, but one that continuously nurtures and values the accuracy and dependability of its services may prevent many errors caused by carelessness. Wanting to be reliable is a key to actually being reliable.

It is difficult for an organisation to exceed customer expectations by reliably delivering the promised service. Improving service quality not only involves understanding the customer; it also involves understanding the service.

(Berry 1995. pp.78 - 95)

Gummensson (1991) stated defining quality in services is especially difficult because of the intangible nature of the service offering. The definition of quality may vary from person to person and from situation to situation. Quality-by- design or designed-in-quality means that quality should be present from conception.

He says service quality stands out for several reasons:

- ◆ Service industries lag behind in systematic quality efforts.
- ◆ There is considerable customer dissatisfaction with service delivery.
- ◆ The public sector, which was originally meant to serve the citizen, has lost its mission to a large extent.

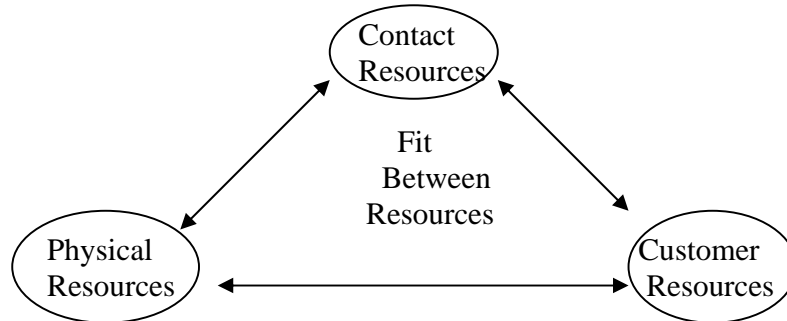
Lehtinen raised an interesting dimension of service quality - that the definition of the quality is different, in different cultures. He carried out studies in Europe (Scandinavia, Central Europe, and the Mediterranean countries), North America, Far-East Asia (including Japan and India), the Soviet Union (European part). He says the process of service delivery consists of three sets of resources: customer resources, contact resources, and physical resources. This process is illustrated in Figure 2.

To be able to operate, management of the service organisation must find a “fit” or compatibility among the elements so that the service production process may function properly.

In most cases contact resources are the contact persons, the employee of the service provider. The interaction between customers and contact resources during the process is judged by the customer, according to how their expectations are met

during the process, and especially how their participation style is understood by the contact person, and how they in turn adapt their service styles accordingly.

Figure 2 Service production process



Source: Lehtinen in Brown et.al. (1991)

The service style as well as the participation style concerns both the customer and the contact resources. Participation style depends on the life-path and life-style of the customer; it is also situation specific and to some extent, varies from time to time.

Brown et.al.1991. have found that service styles in different countries vary, and that the implications of understanding customer service styles are manifold. It is beneficial to understand differences in customer service styles in different cultures, in order to achieve quality service and to create expectations that can be met during the service process.

Indicators in Continuous Quality Improvement

Indicators play a crucial role in CQI processes and there are various indicators being used in health care settings. Indicators give a clear understanding of what you are planning to measure. The benefits of indicators are highlighted by Harrigan et.al (2000) and it appears to be obvious that the use of indicators is necessary in CQI. This is especially true for the service industry where many factors are intangible.

Alberta Heritage Foundation for Medical Research, (1998) defined indicators as- “Indicators should actually measure what they are intended to (Validity); they should provide the same answer if measured by different people in similar circumstances (Reliability); they should be able to measure change (Sensitivity); and, they should reflect changes only in the situation concerned. In reality, these

criteria are difficult to achieve, and indicators, at best, are indirect or partial measures of a complex situation.”

(Harrigan, 2000)

In 1996, the Canadian Council on Health Services Accreditation (CCHSA) defined an indicator as a measurement tool, screen or flag that is used as a guide to monitor, evaluate and improve the quality of client care, clinical services, support services and organisational functions that affect client outcomes.

The various indicators being used in health care settings include, but not limited to:

- Health indicators
- Health system output indicators
- Health system outcome indicators
- Outcome indicator
- Technical quality indicator
- Service quality indicator
- Client / Patient satisfaction indicator
- Staff participation indicator

Each of the above concepts are explained further below.

Health Indicators are measures used to describe the state of health and well-being of the population (health status indicators), and the factors that determine or influence health. Example: years in good health, subjective self-ratings of health, functional status, etc.

Health System Output Indicators are measures to describe the processes that were completed as designed to address program or service objectives. Examples: average daily cost per home care client or average length of hospital stay.

Health System Outcome Indicators measure changes in health status or health determinants that can be attributed to a program or service. Examples: the change in functional status of home care clients attributable to program outputs.

Outcome Indicators measure the extent to which a desired change, effects or results were achieved for the client.

Technical Quality Indicators measure the quality of care or service from the prospective of the professional or provider.

Service Quality Indicators measure the extent to which the team delivers service in accordance with expressed or implied promises to its clients.

Client /Patient satisfaction Indicators measure the clients' scoring of their experience of the care or service they received. It is closely related to their personal expectations of the experience.

Staff participation Indicators intend to measure the commitment of the health facility to its staff and the commitment of staff to their work, team and employer.

(Harrigan, 2000, Wilson 1999.)

Literature Synthesis

Many factors influence the quality of care and quality of life of the residents living in Aged Care facilities. It is not only staff attitudes, values, beliefs and job satisfaction that influence the quality of care and life of the resident, but other factors such as: staffing levels, staff characteristics, staff education and training, staff turnover, salaries and wages of staff, management and organizational capabilities.

Extensive literature (Brown, S.W., Gummesson, E., Edvardsson, B., Gustavasson, B. eds. 1991 Harrington, H.J., Hoffherr, G. D., Reid jr, R.P., 1998. Gray. L. 2001. Flood, R.L. 1993 Gabor, A. 1990.) indicates that indicators have a significant positive effect on the continuous quality improvement process. Based on the literature this study aims to fill the gap by developing vigorous indicators that can be used to measure Australian aged care standards.

For this research study, the researcher has developed unique "Improvement Indicators" for Australian Aged Care Standards taking into account the Commonwealth Department of Health and Ageing guidelines as specifications of measurements.

Improvement Indicators intend to monitor and measure the particular standards for:

- Regulatory Compliance level
- Systems and the processes of the Standard
- Staff knowledge, skills and practices.

The Action Research Method

The action research method is divided into the selecting a research site, the intervention phase and the data collection and analysis phases.

Selecting a research site - aged care facility

The site of this study will be a 30 bed private aged care facility. The reason for selecting a small facility is two-fold. Firstly, small facilities do not have resources that large organizations have yet they are to achieve the same accreditation as large organizations. Secondly, the researcher found it will prove easier to implement, monitor and control the action research cycles. However, the facility must fulfill the following two criteria:

- Regulated by the Commonwealth Department of Health and Ageing
- Receive government funding for care delivery thus, facility has been accredited by the Accreditation agency.

The change was introduced by the researcher introducing a data collection method which was developed for aged care standards. This research study included education of statistical tools in CQI process and implementing improvement indicators for aged care standards. The seven criteria will be met during this research study.

Action Research Intervention Phase

The action research intervention has three (3) cycles. For the first cycle there will be five phases. Cycle two and three will have three phases.

Cycle 1

- *Phase 1 – Obtaining permission from the facility management and informing the other stake holders of proposed research.*
- *Phase 2 – Pre-Implementation Questionnaire*
- *Phase 3 - Education program on Improvement Indicators and use of Statistical Process Control tools*
- *Phase 4 – commenced action research cycles (Implementation of Improvement Indicators)*
- *Phase 5 – Post-Implementation Questionnaire*

Cycle 2

- *Phase 1 – Cycle 1 – post-implementation questionnaire*
- *Phase 2 -commenced action research cycles (Implementation of Improvement Indicators – data collection)*

- *Phase 3 – Post-Implementation Questionnaire*

The second and third cycles will only have three phases because phase one and phase three are not required to be repeated as they are once only actions.

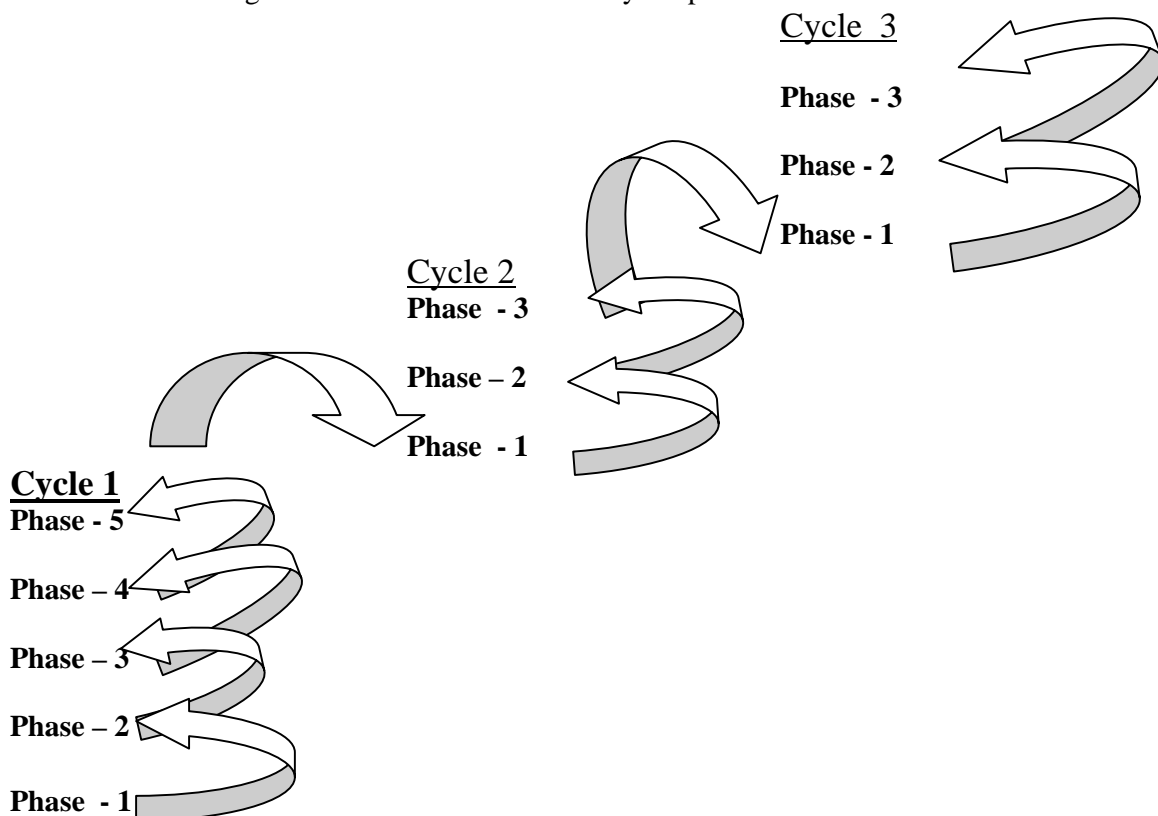
First cycle phase five will be the second cycle's first phase. The first cycle phase four (4) will be second cycle's second phase. Fifth phase of first cycle will become the third phase of second cycle.

Cycle 3

- *Phase 1 – Cycle 2 – post-implementation questionnaire*
- *Phase 2 -commenced action research cycles (Implementation of Improvement Indicators)*
- *Phase 3 – Post-Implementation Questionnaire*

Once again, second cycle's third phase will become the first phase of third cycle. Phase two and three will be the same as cycle 2. This process is illustrated in figure 1:

Figure 1: The Action Research Cyclic process



Description of the intervention phases

As stated previously cycle one has five phases. Each phase has distinguished tasks and must be completed before proceeding to the next phase. These tasks are described in the following section.

Phase 1 – Obtaining permission from the facility management

The researcher will have discussions with facility management which includes the proprietor, Director of Nursing/ Manager, and unit managers to provide information about the following:

- The purpose of the research and research problem
- The process of action research
- The education program to be implemented
- Staff participation and co-operation
- Getting a group together (quality Circle)
- Cost involvement
- Data collection and analysis
- Benefits of involvement of research
- How and when to inform the Service users (Residents and their families)
- To obtain the agreement to conduct the research.

Phase 2 - Pre – Implementation Questionnaire

The level of understanding and use of statistical process control tools and techniques in continuous quality improvement needs to be identified prior to implementation of an education program phase. There are seven basic statistical process controls which can be used in the quality improvement process. Use of statistical tools and techniques are important to identify variance in the input, process and outcome. This can be identified by getting management and staff to fill out a simple questionnaire. To explore the depth of understanding and carrying-out of continuous quality improvement in aged care facilities the following questions may be included. Viz:

1. How do employees in aged care facilities collect data to implement continuous quality improvement projects for aged care standards?
2. Do employees in aged care facilities use the statistical tools to identify the variation to processes and systems?
3. What type of tools (i.e. SPC tools) do employees in aged care use to identify the variations to processes and systems?
4. To what extent do employees in aged care use statistical tools to identify the variation in process and systems?

5. Are employees in aged care developing performance indicators or clinical indicators to monitor standards?
6. To what extent the effectiveness of the tools are in organizations' culture change?

Phase 3 - Education program on Improvement Indicators and use of Statistical Process Control tools

Education program will be developed after analyzing the questionnaire. The education program is aimed to give understanding of statistical process control tools and techniques and how and when to use them in continuous quality improvement. The following questions will be included in the questionnaire as well as in the education program. In addition to these details of improvement indicators will be included in the education program.

What is CQI and how it can be applied to Aged Care Standards

What is PDCA?

What is PDSC CYCLE?

Questionnaires, surveys - data collection

What is SPC tools and how they use to identify variation of the process?

Data analysis with Statistical Process Control Tools

General understanding of indicators and where and what to use them

Usefulness of aged care standards Improvement indicators

How to develop strategies to improve the process and reduce variation

How to use PDCA or PDSC cycle after strategies implemented.

Education program will be conducted over three two hour sessions. One, two hour session will be conducted to staff who have demonstrated fairly good understanding of CQI process and use of SPC tools with details of statistical tools and techniques including how to develop them. Staff who have not been exposed to any statistical tools or who have difficulty comprehending the CQI process and use of SPC tools will be given a simplified education program for them to gain a basic knowledge. Everyone in the organisation will be included in the session on improvement indicators for aged care standards.

Phase 4 – commenced action research 1st cycle -Implementation of Improvement Indicators – data collection with indicators

Hasim indicated in his thesis that Zuber – Skerritt and Perry (1991) had said that two action research cycles had to be completed for a doctoral thesis. In this study three action research cycles were completed as explained in the following section.

At this phase staff will be asked to collect data by using improvement indicators data collection tools.

Improvement indicators are developed within the given standards guidelines. There will be seven to eight indicators for each standard. To complete data collection for each standard (32) for 30 residents will take approximately six to eight weeks. Simplified data analysis forms will be given to the staff with instruction. Staff will be able to identify gaps in care delivery by analyzing data as soon as they are collected.

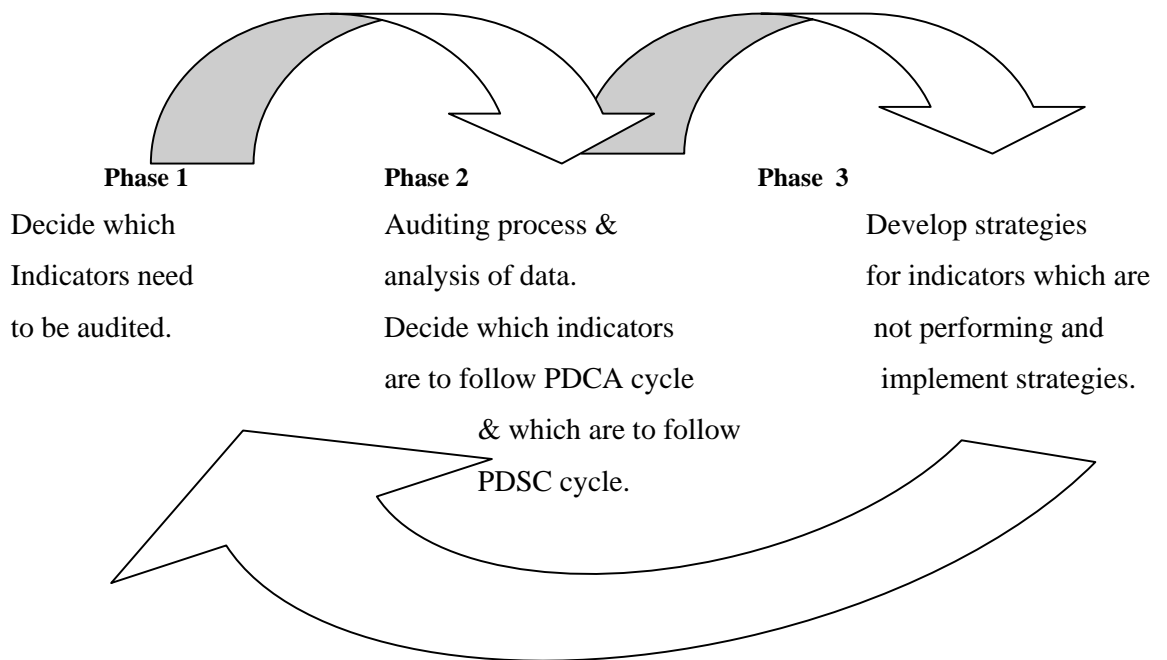
Phase 5 – Post – Implementation Questionnaire

Same questionnaire will be distributed to staff who have participated in pre-implementation questionnaire. Any misunderstandings will be discussed and verified. Further education will be given if needed prior to commencing second cycle.

Denscombe (1998) said action research is specifically geared to changing matters. It is the core feature of the action research. The part and parcel of research should be that the application of findings and an evaluation of their impact on practice should not only be used to gain a better understanding of the problem but actually set to alter things when the research process is completed. (pp57). Benefit of this research study is that this process can continue after the research process is completed. After cycle 3 is completed, this process would mark the beginning of a continuous quality improvement cycle.

Phase 1 planning of audits by choosing appropriate indicators and phase 2 will be an audit process by using indicator data collection tools and phase three (3) will be “quality circle” meeting time where staff could have discussions to identify which indicators could follow the PDCA cycle or PDSC cycle or strategy development for further improvement. This process is illustrated in figure 2.

Figure 2: CQI with improvement indicators



Data Processing and Analysis

Standard editing and coding procedures will be utilized to collect data and data will be entered into Microsoft Excel spread sheet or Microsoft Access database program. Simple tabulation and cross-tabulation will be used to analyze the data. What questions need to be answered and investigated simultaneously will be decided when the survey questionnaire is developed.

At this stage I am not clear what type of statistical analysis I will be undertaking to test the hypotheses but will follow the research supervisor's advice in testing hypotheses.

Conclusion

The objective of this research is in the area of continuous quality improvement projects in Aged Care. The Australian Federal Government has imposed continuous quality improvement in order to improve the care of the elderly. It has been introduced with very little understanding of Total Quality Management where continuous quality improvement stemmed, let alone the use of statistical tools in Continuous Quality Improvement. Nevertheless, Continuous Quality Improvement is here and will remain so for a very long time. This is the beginning of a revolutionary period. We need to look at improving the process and the system.

Research like this will aim to persuade staff in aged care facilities to use the statistical tools to identify the variance of the processes and systems by monitoring, measuring and implementing continuous quality improvement projects.

Appendix 1 Standards for Residential Aged Care Services

Standard 1: Management systems, staffing and organisational development

- 1.1 Continuous Improvement
- 1.2 Regulatory Compliance
- 1.3 Education and Staff Development
- 1.4 Comments and complaints
- 1.5 Planning and Leadership
- 1.6 Human Resource Management
- 1.7 Inventory and Equipment
- 1.8 Information Systems
- 1.9 External Services

Standard 2: Health and personal care

- 2.1 Continuous Improvement
- 2.2 Regulatory Compliance
- 2.3 Education and Staff Development
- 2.4 Clinical Care
- 2.5 Specialised Nursing Care Needs
- 2.6 Other Health and Related Services
- 2.7 Medication Management
- 2.8 Pain Management
- 2.9 Palliative Care
- 2.10 Nutrition and Hydration
- 2.11 Skin Care
- 2.12 Continence Management
- 2.13 Behavioural Management
- 2.14 Mobility, Dexterity and Rehabilitation
- 2.15 Oral and Dental Care
- 2.16 Sensory Loss
- 2.17 Sleep

Standard 3: Resident lifestyle

- 3.1 Continuous Improvement
- 3.2 Regulatory Compliance
- 3.3 Education and Staff Development
- 3.4 Emotional support
- 3.5 Independence
- 3.6 Privacy and Dignity
- 3.7 Leisure Interests and Activities
- 3.8 Cultural and Spiritual Life
- 3.9 Choice and Decision - Making
- 3.10 Resident Security of Tenure & Responsibilities

Standard 4: Physical Environment Safe Systems

- 4.1 Continuous Improvement.
- 4.2 Regulatory Compliance
- 4.3 Education and Staff Development
- 4.4 Living Environment
- 4.5 Occupational Health and Safety

- 4.6 Fire, Security and Other Emergencies
- 4.7 Infection Control
- 4.8 Catering, Cleaning and Laundry Services

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