

Continuous quality improvement and health promotion: can CQI lead to better outcomes?

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SUMMARY

Canadian health promotion organizations currently face two pressures. First, is the desire of health promotion organizations to seek methods which will help achieve health promotion goals. Second, external funders are increasingly likely to require that health promotion organizations adopt 'quality' procedures, such as Continuous Quality Improvement (CQI). This paper explores a set of questions that assess the potential benefits of CQI with respect to health promotion organizations. These questions include: Is the philosophy of CQI compatible with health promotion principles, values and beliefs? Is CQI methodology and approach applicable to health promotion? If there are no irresolvable conflicts between CQI and health promotion,

will implementing CQI processes improve health promotion practice? In addition, the paper highlights several issues that health promotion needs to address before adopting CQI, including: the meaning and relevance of concepts such as 'customer' and 'customer satisfaction', within the context of health promotion; and the heavy emphasis that CQI places on data that are measurable and quantifiable. While further exploration and documentation are required before definitive resolution of these issues, a preliminary overview indicates that CQI, with some modifications, is compatible with health promotion in at least some circumstances and that, if these modifications are implemented, CQI could help health promotion achieve its goals.

Key words: best practices; Continuous Quality Improvement; health promotion; Quality Assurance

CONTINUOUS QUALITY IMPROVEMENT AND HEALTH PROMOTION

Continuous Quality Improvement (CQI) is one of several choices for organizations wanting to join the 'quality movement', which first swept through industry, then health care, and is now lapping at the shores of health promotion. The pressures on Canadian health promotion organizations to consider implementing CQI come from two directions. The first is the desire to improve health promotion practice in order to increase the chances of achieving health promotion goals. The second is the expectation that, within the near future, governments and other funders will start requiring the organizations they fund to follow procedures such as CQI.

For both these reasons it is important for health promotion to take a close look at CQI and ask the following questions:

- Is the philosophy of CQI compatible with health promotion principles, values and beliefs?
- Is CQI methodology and approach applicable to health promotion?
- If there are no irresolvable conflicts between CQI and health promotion, will implementing CQI processes improve health promotion practice and help achieve health promotion goals?
- If CQI is adaptable to health promotion, what would a health promotion CQI model look like?

- Are there options which would be better for health promotion than CQI (both in terms of improving practice and achieving goals)?
- Are there reasons not to implement CQI?
- What, if any, are the consequences of not implementing CQI?

DEFINING QUALITY AND CQI

Quality is defined in a variety of ways. While there is some agreement that ‘quality embodies notions of efficiency, effectiveness and consumer satisfaction’ (Lethbridge *et al.*, 1996), the fact remains that definitions of quality are subjective and depend on who is doing the defining. Further, criteria for ‘quality’ depend on whether the production of concrete goods is at the heart of an endeavour, or whether intangibles such as ‘well being’ are of central importance.

For these reasons it is important that a definition of quality take into consideration different points of view and be specific to health promotion. Ovretveit (1996) attempts to do this in his three-tiered definition, which judges the quality of health promotion programs according to a combination of consumer satisfaction, professional assessment, and efficiency ‘in relation to policies and targets set by higher levels’.

The term CQI, generally interchangeable in the health care quality literature with Total Quality (TQ), Total Quality Management (TQM), and the more recent Continuous Improvement (CI), can be defined briefly as ‘a comprehensive management philosophy that focuses on continuous improvement by applying scientific methods to gain knowledge and control over variation in work processes’ (Tindill and Stewart, 1993). Translating CQI’s notion of ‘continuous improvement’ into concrete terms requires that, ‘Once processes and problems have been identified, improved, and evaluated, the cycle begins again’ (Buccini, 1993).

The term Quality Assurance (QA) is used in some of the health promotion quality literature as an umbrella term which includes CQI, rather than as an adjunct to CQI. More generally, however, a distinction is made between the two, with QA identified as focusing on outcomes, and CQI identified as focusing on processes as well as outcomes (Macdonald, 1997). Some feel that CQI is more progressive than QA, primarily because of QA’s more static nature and its reliance on standards. The main argument against standards

is that, by requiring that only a minimum level be reached, lowered aspirations may result (Jaeger *et al.*, 1994). Others feel that there is room for standards in CQI, as long as they are continually upgraded (Kaluzny *et al.*, 1994). While some in the health care literature think that CQI makes QA redundant, others think the two are compatible and even complementary (Tindill and Stewart, 1993).

While CQI has been adopted by many health care organizations in Canada, it is still in its infancy with respect to health promotion. A quality movement approach to health promotion, however, is fairly advanced in some European countries such as Britain. There are growing signs of interest in Canada, and it will be interesting to see what direction this takes.

AN OVERVIEW OF THE CQI PROCESS

A number of plans and cycles can be used in an ongoing way in order to apply CQI. One example is the PDSA (plan–do–study–act) cycle, also known as the Shewhart or Deming Cycle. In this cycle, the first step is to plan a change designed to improve a product or process. The second step is to implement the change. The third is to observe the positive and negative results of the change. The fourth step is to ‘Adopt the change. Or abandon it. Or execute the cycle again, possibly under different environmental conditions’ (Levin, 1994).

On a more concrete level, Baker outlines a series of steps that a health promotion organization considering CQI might follow. The first step, according to Baker, is to identify the desired outcome. The second step is to decide the focus or population of interest, which could range from a particular set of clients to the broader community. Third, is to specify how to recognize whether a change is an improvement by developing measures to test that change. ‘For example, with smoking and teenagers, the improvement wanted is to decrease the number of teens smoking, the measure is the percentage smoking, then you need tests to measure this, then identify the intervention ...’ The fourth step is to ‘identify what you might do differently, that is, what changes might you try to create improvement, and then engage in “tests of change” where you try out these changes to see if they result in improvement. When you change things, possible results are: things might improve, they might stay

the same, they might get worse. Then you act appropriately ...' (Baker, R., personal communication, 1997).

Main components of CQI

The three main components of CQI are customer satisfaction, the scientific approach, and the team approach.

Customer satisfaction

CQI literature emphasizes the importance of the 'customer', who 'can be external or internal to the system—a patient, a payer, a colleague, or someone from another department' (McLaughlin and Kaluzny, 1994). In a health promotion context, 'customers' might include program participants, the broader 'community', funders, other organizations, and people within the organization who fulfil different functions such as staff, management, and board members. Some authors include 'need' in the concept of customer satisfaction. For example, 'Quality is achieved when the needs and expectations of the customer are met' (Al-Assaf, 1993).

Scientific approach

Roughly grouped under the category of CQI's scientific approach are a number of elements including data analysis, systems thinking, benchmarking, and variation (Murray, J., personal communication, 1997). The importance of *data* to CQI is to provide a sound basis for decisions (Scholtes *et al.*, 1996). *Systems thinking* means that even while analyzing separate parts of a process, the relationships among them are still kept in mind. It also means that the system's processes are considered more likely to be the cause of problems than are individuals (Buccini, 1993). A systems approach is compatible with health promotion, which emphasizes the interconnectedness of a number of different factors. Health promotion, however, would apply a systems approach not just internally to the organization, but to society as a whole. *Benchmarking* is used in CQI 'to identify best practices in related and unrelated settings to emulate as processes or use as performance targets' (McLaughlin and Kaluzny, 1994). Finally, the elimination of *variation* in processes and outcomes is critical to CQI (Buccini, 1993). However, for several reasons, the elimination of variation in health promotion practice is likely to be difficult and, on occasion, inappropriate.

First, the kinds of variation that exist in health promotion are broader in range and more complex in nature than the variations that exist in activities to which CQI is generally applied. Second, variability in circumstances is an inherent characteristic of the world and of issues with which health promotion is concerned; this variability, in turn, usually requires flexibility and variability in response. Third, even when communities are relatively homogeneous, the inevitably unique characteristics of each may require different processes to achieve the same outcomes; furthermore, even homogeneous communities may differ in their own assessments of the desirability of goals, objectives, processes, and outcomes.

Team approach

CQI's premise is that teams are better able than individuals to analyse processes fully. The main features of the CQI team approach are support from management, worker involvement, and the removal of artificial work boundaries. The result of boundary removal is that people from different departments might be on the same team, as might people at different levels in the organization's structure. In health promotion, an additional boundary would be removed, with people from outside of the organization such as community members also included on teams.

Difficulties

Whalen lists a number of 'implementation and development barriers' that face organizations trying to implement and practise CQI (Whalen and Rahim, 1994). These range from poor planning and lack of commitment on the part of management to lack of resources and an unsupportive organizational philosophy.

HEALTH PROMOTION ISSUES RELATED TO CQI

Does it matter that health promotion doesn't produce goods and isn't always a service?

CQI was first applied to the manufacturing of goods, then adapted for the provision of services. Health promotion, however, is not product oriented, and only in some cases does it provide a service. Products and services are individually oriented whereas much of health promotion is community or society oriented. What implications does this have, if any, for the application of CQI to health promotion?

Customer satisfaction

'Customer satisfaction', a major driving force in CQI, requires careful examination in the context of health promotion.

The elusive customer

While some health promotion 'customers' can be readily identified, others are customers in only an abstract sense. For example, it is important that the category of customer include not only those who participate in health promotion programs; as Simnett writes, non-users of health promotion programs 'may be the people with the greatest needs' (Simnett, 1995).

What does expressed satisfaction indicate?

People may not express dissatisfaction with a program or service for a number of reasons. For example, 'recipients of services are especially loathe to indicate dissatisfaction for fear of loss of these services. An unwillingness to express dissatisfaction appears to be especially common among vulnerable populations or groups' (Raphael, 1996). In many cases, satisfaction is partly a function of expectation (Levin, 1994; Michie and Kidd, 1994). If we expect only a little bit, and that is what we get, then very likely we will express satisfaction. We need to know that more is possible before we can be dissatisfied with getting less. For an expression of satisfaction to have meaning, it is important, among other things, for customers to be critical and aware, and to feel safe to express negative as well as positive feelings.

Is satisfaction always the appropriate goal?

When a number of customers with different needs and conflicting interests exists, is customer satisfaction across the board possible? For example, if some customers are not happy with a policy to increase the price of cigarettes or alcohol, should the policy not be implemented? The issue of conflict among customers is not addressed in the CQI literature. For health promotion, however, conflict is a major issue which needs to be addressed, whether CQI is a consideration or not.

Importance of going beyond measurement of satisfaction

'Quality related to participation of local people in health promotion work involves a much more radical approach than simply assessing user satisfaction with what is provided. Health

promotion seeks to share control of activities with the people concerned ...' (Simnett, 1995). In addition, 'need' is an important consideration that goes beyond satisfaction. It is not inconsistent with CQI to broaden the scope of 'customer satisfaction' to 'customer focus', which could include the health promotion principle of community participation as well as consideration of need.

Implications of the term 'customer'

The term 'customer' implies a financial transaction and is more suitable in a for-profit market-driven context than in the non-profit equity-driven context of health promotion. In addition, 'customer' has a strong association with the individual, whereas health promotion also deals with groups. Again, this issue of language is not specific to the conjunction of CQI and health promotion, but is a general problem for health promotion. 'Consumer', for example, has many of the same problems as 'customer' but, in addition, has connotations of passivity. Both terms focus attention on the product or service rather than the relationship, whereas health promotion is, ultimately, more about relationships than about products or services. Words are powerful; it is important to use those that are consistent with health promotion philosophy.

Structure

The CQI literature emphasizes a hierarchical management structure with senior management, middle management, and workers (although some advocate a more 'flattened' hierarchy than the usual). If the principles of health promotion include an emphasis on non-hierarchical forms of organization, self-management would seem to be an appropriate goal for health promotion practice. According to Murray, this goal does not necessarily conflict with CQI practice (Murray, J., personal communication, 1997).

While stressing the important role of management, the CQI literature invokes the necessity for greater worker involvement and decision-making power. This is consistent with a health promotion vision of increased worker empowerment.

Data

Data are another topic requiring careful thought by health promotion in the context of CQI.

Measurement issues

The CQI literature's emphasis on the necessity for data that are measurable and quantifiable presents a challenge to health promotion: 'There is much of value in health promotion practice which is difficult to quantify and to measure' (Evans *et al.*, 1994). The debate in health promotion generally focuses on the respective merits of quantitative methods compared with qualitative methods, although many are beginning to feel both are important. Assuming that use of qualitative methods in addition to quantitative methods is not incompatible with CQI (although not emphasized by it), the question then is, How do we know which method to use when? Other questions relating to data are: How do we measure abstract concepts such as empowerment? When are subjective, in contrast to objective, measures appropriate? Which categories of data, or what kinds of measures, should be chosen as indicators of quality in processes? On a practical level, is the question of time and feasibility: What kind of data collection and interpretation processes will be easy enough and consume little enough time that people will use them?

Degree of appropriate emphasis on data

Beyond the technical questions listed above lies the broader issue of whether reliance on data, as CQI seems to advocate, is a good idea. According to Levin, 'Knowledge will not advance if our attention is concentrated on the immediately observable, as it is in management ... Theory is particularly essential where measurement is not practicable' (Levin, 1994). Bookman, from another perspective, also questions the effectiveness of relying exclusively on data: 'The point is that there are limits to the utility of rigorous, left-brain problem-solving techniques. Statistical analysis simply is not the best approach to every problem in the working world ... many problems need solutions that come more readily through nonlinear, creative problem-solving approaches' (Bookman, 1992). Both of these may be important points for health promotion to consider with respect to CQI and its emphasis on data.

Relevance of paradigm

Another issue concerns knowledge paradigms and how we 'know' things. An emphasis on data to solve problems and make decisions may be more appropriate to some paradigms than to others. There is no clear consensus, however, concerning which paradigm, or combination of

paradigms, is most appropriate for health promotion.

Evaluation and outcomes

On paper it is easy to say that the first step in applying CQI to health promotion is to define which outcomes are the most important of many possibilities, including feelings of well-being and degrees of control and congruence, in addition to more traditionally identified outcomes, such as smoking rates; and that the next step is to gauge which processes lead to the best outcomes. However, 'There is a paucity of empirical evidence concerning the impact of health promotion (i.e. the 'new public health') on instrumental (mediating) health-related objectives, or on terminal (ultimate) goals' (Goodstadt, 1995).

This lack of evidence is partly explained by the specific challenges facing evaluation of health promotion. These include: (i) there is relatively little research into the effectiveness of health promotion as recently conceptualized; (ii) many health promotion concepts (for example, 'empowerment', 'enabling', 'capacity building') are in the early stages of conceptual development, rendering them elusive for evaluation; (iii) 'measurement' of recent health promotion concepts and strategies requires the development of new research procedures and technologies; (iv) many traditional research/evaluation designs and statistical procedures are inappropriate in the context of many population/community-based health promotion initiatives; and (v) the very nature of evaluation within a health promotion context is hotly debated—traditional paradigms appear to conflict with the underlying values associated with health promotion (for example, partnership, empowerment) (Goodstadt, 1995). Other difficulties in evaluating health promotion initiatives include the challenge of relating outcomes specifically to health promotion activities when many other factors are involved, and 'the long-term nature of health promotion interventions' (Rootman *et al.*, in press). Evaluation methodology is an issue which health promotion has to address, regardless of whether or not CQI is adopted.

Other agendas/influences

Health promotion has to be aware not only of its own agenda with respect to CQI, but the agenda and influences of those outside of health

promotion. Is everyone's aim, in implementing CQI, to improve health promotion practice and to achieve health promotion goals? Are there other aims that might also be valuable to health promotion; are some aims potentially harmful from a health promotion perspective? For example, is it true that, 'Much of what passes for quality improvement can justifiably be viewed as thinly veiled cost containment or marketing' (Chassin, 1996)? Questions such as these are important to ask in the current cost-cutting climate, where cost-containment might be seen by funders or others as more important than goals that are more basic to health promotion. The inappropriateness of funders' reasons for wanting health promotion organizations to adopt CQI procedures does not, of course, mean that health promotion organizations should not adopt CQI. Health promotion can guard against unwanted consequences of inappropriate CQI by being aware of unstated as well as stated expectations, and by identifying strong health promotion-oriented reasons for adopting CQI.

ATTEMPTING TO ANSWER BASIC QUESTIONS

CQI is not necessarily incompatible with health promotion in terms of basic approach; moreover, positive consequences might result from its implementation. In judging the value of CQI to health promotion, however, we need to address the issues posed at the beginning of the present paper.

Is the philosophy of CQI compatible with health promotion principles, values and beliefs?

This question partly depends on how individual health promotion organizations define their principles, values and beliefs. Because there is not necessarily a consensus in the health promotion field concerning these, the degree of compatibility between CQI and health promotion philosophy may vary from organization to organization. The major difficulty likely lies with the CQI version of the scientific approach, but there is no reason why an individual health promotion organization, or the health promotion field in general, cannot define this concept in its own terms.

An issue related to the 'scientific approach' concerns the decision-making process. CQI

emphasizes the necessity to have some kind of identified basis for making decisions. According to CQI, the decisions, once put into practice, need to be scrutinized, and then accepted, rejected, or revised depending on results. This new information must then be put back into the pool of knowledge on which decisions are based. This approach to decision making is neither implicit nor explicit in health promotion, but it is a topic of discussion, especially with the current examination of 'evidence-based' decision making.

Despite an incomplete consensus in health promotion concerning philosophy, most people in health promotion would probably agree with the following tenets of CQI philosophy:

- Ongoing improvement is critical.
- Questioning and thinking reflectively are important (*health promotion's 'reflective practice'*).
- Those directly involved in any initiative (either because they are participating in the implementation of the initiative or because they are directly affected by the initiative) should have a major role in the decision-making process concerning the initiative (*health promotion's emphasis on 'participation' and 'empowerment'*).
- People need to work cooperatively together, with their contributions based on knowledge, skills, and experience, rather than on their formal position [*health promotion's concept of 'power-with' rather than 'power-over'* (Labonte, 1997)].
- A systems approach is important—everything is interrelated so the whole always has to be considered; if something changes in one area, it is necessary to check what is affected elsewhere (*health promotion's holistic, multi-factorial approach*).

Is CQI methodology and approach applicable to health promotion?

CQI methodology is probably applicable to health promotion, as long as modifications are made with respect to issues such as data, measurability, evaluation, and criteria. It is possible that CQI could be 'disaggregated' in its application to health promotion; it may not be necessary to apply all aspects of CQI at once. Table 1 summarizes areas where CQI, as potentially applied to health promotion organizations, might differ from CQI as applied to other types of organizations.

Table 1: Comparison of CQI as described in the general literature and CQI as possibly applied to health promotion

	CQI as described in the general literature	CQI as possibly applied to health promotion
Activity	Goods Services	No goods Services Other (e.g. relationships)
Customer focus		<i>(definition is sometimes problematic)</i>
Who	Individual (internal and external)	Individual (internal and external) Groups, communities, populations
Area of concentration	Satisfaction Occasionally need	Satisfaction Need Active participation of all Capacity building
Scientific approach		<i>(definition, approach and application may be problematic)</i>
Data	Heavy reliance on quantitative data	Qualitative as well as quantitative data
Systems thinking	Internal	Internal and external
Variation among processes and outcomes	Critical to eliminate	Is it always bad?
Team approach		
Management support	Central to success	Self-management might be considered
Worker involvement	Empowerment oriented	Empowerment oriented
Boundary removal	Internal	Internal and external
Congruency with prevailing culture	Mixed	Mixed
Effectiveness	Mixed results	Unknown

If there are no irresolvable conflicts between CQI and health promotion, will implementing CQI processes improve health promotion practice and help achieve its goals?

CQI's central value is in its questioning attitude, with its emphasis on being conscious of what is being done and constantly trying to do it better. This value would probably increase empowerment, both internally for an organization's workers, and externally for community members. On the whole, though, more information is required before making a judgement regarding the potential benefits of CQI. It is important to remember, however, that assessing CQI's contributions to health promotion does not necessarily involve all-or-nothing judgements—for example, CQI might be useful in achieving some goals but not others.

If CQI is adaptable to health promotion, what would a health promotion CQI model look like?

A CQI-health promotion model would have to be implemented with an organization's health

promotion goals, values and philosophy firmly in mind (Speller, 1996)—CQI should not be seen as separate from the whole, and CQI should not be arbitrarily slotted into a generic implementation model. A suggested set of steps for applying CQI in a health promotion organization follows (keeping in mind 'customer' focus, team approach, and scientific approach—see above). These steps essentially follow the various quality cycles or circles that have been developed, such as the Shewhart or Deming Cycle mentioned earlier in the paper.

- (i) define goals of the organization with reference to all constituents/constituencies;
- (ii) translate goals into desired outcomes;
- (iii) identify measures/standards/benchmarks that relate to the goals/outcomes;
- (iv) identify processes currently being used to achieve the goals/outcomes;
- (v) look at information from reports, studies, etc. to pinpoint processes which come closest to achieving the desired goals/outcomes (or, alternatively, access information which is already compiled by others);

- (vi) identify the possibilities—decide what to change, specifying how to identify what might be an improvement;
- (vii) implement—change the organization's processes to those more likely to achieve the desired goals/outcomes;
- (viii) document the implementation process;
- (ix) monitor results;
- (x) make changes according to results;
- (xi) continue to review the literature and what other organizations are doing; continue to review own results, and to make changes accordingly.

Are there options which would be better for health promotion than CQI (both in terms of improving practice and achieving goals)?

This would have to be investigated further.

Are there reasons not to implement CQI?

Ultimately, the implementation of CQI is an individual organization's decision to make, rather than health promotion's in general. As a result of the diversity in health promotion some organizations will feel there is an inherent contradiction between CQI's philosophy and an organization's health promotion philosophy, while others will feel the two philosophies are compatible—differences are most likely to occur with respect to the nature, validity and utility of the scientific approach.

In addition, organizations vary widely in their circumstances; what is appropriate in one situation is not necessarily appropriate in another. Specific reasons for not implementing CQI might include the time, money and commitment required; the amount of effort required might be better spent elsewhere.

A major reason for hesitation in implementing CQI is that the effectiveness of CQI with respect to health promotion has not yet been adequately documented. In industry and health care there are both successes and failures; it remains to be seen how successful CQI might be within the field of health promotion. Finally, other basic issues, for example with respect to 'data', remain to be resolved.

What, if any, are the consequences of not implementing CQI?

At a minimum, health promotion organizations that ignore CQI (or similar procedures) risk

excluding a method that might help achieve health promotion goals and improve practice. In addition, if health promotion does not adapt and implement CQI (or adopt methods to demonstrate a motivation to ensure 'quality'), external funders might impose quality approaches that are less kind to health promotion.

RECOMMENDATIONS

By way of summarizing our discussion, we propose the following tentative recommendations:

- *Be clear about what CQI can and cannot address.* To the extent that health promotion organizations are dependent on other institutions/systems, they are often unable to resolve many issues related to CQI, although these issues should be identified and explored, where possible. For example, lack of adequate and secure funding affects long-term planning and morale. These and other problems need to be addressed in their own right.
- *Document.* It is important to investigate further CQI's potential advantages and disadvantages by collecting more information about its effectiveness and problems, especially as these relate to health promotion organizations.
- *Make appropriate modifications.* For example, the application of concepts such as 'customer' require modification for use within the field of health promotion. It is as important to scrutinize CQI processes as it is to scrutinize other processes that might be used in health promotion. A critical and creative approach to CQI, identifying its potential contributions and making changes where necessary, would be the most helpful approach for health promotion organizations to take with respect to CQI.
- *View CQI as an aid to furthering health promotion broader goals.* The real benefit of CQI is if it is linked to the organization's main goals (Baker, 1994). Used in this way, CQI would encourage health promotion to focus on ensuring that health promotion practices/processes are aligned to the achievement of outcomes that are most closely tied to its goals.
- *Address basic health promotion issues.* Many of the challenges that face health promotion organizations in the implementation of CQI are not specific to CQI, but are general health promotion challenges. It is important for health promotion, whether or not CQI is

adopted, to work on issues ranging from evaluation to the clarification of concepts such as community and empowerment.

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