

Quality Innovation in Healthcare – The Challenge of the Third Era

Pieter Kievit

MA, MBA, Dijklander Medical Center Hoorn

Marianne Schoorl

PhD, Noord West Medical Center

Jeannette Oomes

MSc, DIAGNOS IQ KCL

Piet Bartels

PhD, Noord West Medical Center

Abstract

In the third era of quality assurance in health care, innovation is no longer the exclusive focus area of the individual medical professional dedicated to optimizing patient care nor is it achieved by design thinking by the health delivery organization aiming for economic sustainability. Change platform in the third era is the community of professionals, committed to providing the best possible care within the limits of organizational logic. We aim to clarify the conditions for sustainable quality improvement in health delivery organizations and in doing so to provide a means of improving initial feasibility assessment by identifying critical factors in the cooperation between different parties. We designed a model representing the sources of influence on the process of decision making regarding the selection of innovations and choosing the most effective implementation strategy. These sources are: aspects of legitimacy, core values and change readiness. We tested this model on a project, aimed at improving the efficiency of the OR in a Dutch University Clinic. The example project failed to deliver the projected outcome because of non-disclosed conflicting interpretations of core values and an implicit controversial status shift between medical professionals and OR management. This confirms the explaining power of our model. Successful implementation of quality innovation in health care depends (among other things) on addressing the challenges of differing concepts of legitimacy, conflicting core values and varying change readiness between social systems in complex organizations. Installing a QIC as such does not meet these challenges.

Keywords: innovation in health care, social systems theory

Introduction

Two approaches to quality innovation

All over the world, health care organizations and professionals are under pressure to reduce costs and improve quality of care in terms of clinical outcomes and patient satisfaction (OECD/EU, 2018; Tooke, John, 2017). The focus lies on process innovation and structural change to reach these goals. In everyday practice, the outcome of these efforts are often disappointing in that the initial improvements are soon dissolved in a regress to the *status ante* as proof of the tenacity of once accepted practice. This has been pointed out most prominently by Donald Berwick, co-founder and CEO of the Institute of Healthcare Improvement from 1991 to 2010. In 2003 he rhetorically asked why it takes so long for even the best evidence based innovations to be implemented in health care and why the outcomes are so often disappointing (Berwick, 2003). Grol, Wensing, Eccles & Davis (2013, p xiii) conclude that “only a small proportion of these (evidence based) methods and technologies are adopted into the daily practice of patient care” leading to the conclusion that (2013, p. 5) “on average less than 60% of the patients in a representative analysis received the care they should receive, based on best evidence”. The question is, why the implementation and adoption of evidence based improvements should be so difficult and what can be done to prevent this waste of creativity, energy and resources.

Traditionally, the remedy to the problem is sought in either improving project management and/or enabling employees. Improving management aims at the implementation process itself by optimizing the initial problem analysis, setting SMART goals along the transition process, sufficiently equipping the project organization and strengthening support by higher management (Beausoleil, 2018). Enabling employees aims at rejuvenating staff, generating commitment, training individuals and eliminating resistance to change (Kegan & Lahey, 2009). In the authors' experience neither approach leads to better outcome and less “innovation waste”. This has been corroborated in numerous studies and systematic reviews (Greenhalgh, Robert, Macfarlane, Bate, Macfarlane & Kyriakidou, 2005; Reinhardt, Hietschold & Spyridonidis, 2015).

The two approaches to health care innovation reflect a long standing tradition in sociological research on organizations and their capacity for innovation – selecting, implementing, adopting and eventually assimilating change – where two basic concepts prevail (Scott, 2004).

Organization as rational system

In this approach, organizations are seen as “social machines designed for the efficient transformation of material inputs into material outputs” (Scott, 1987, p. 31-50) or as deliberate constructs aimed at reaching a certain outcome in an economically sustainable way (Scott, 2004, p. 12). They are conceived as a model with components: a mission statement, a strategy on how to realize it, a set of operating procedures in order to structure everyday practice, a description of functions and relations, an

annual budget, a quality system. This installation is aimed at exercising control based on uncertainty reduction regarding the present, the future and the organizational environment and innovation is seen as a rational process which will succeed under three conditions:

The model of the organization is a correct reflection of the experienced organizational reality and if it isn't, then reality is adjusted to fit the model because the model is the *ultimo ratio* to understand reality.

The innovation contributes evidently (= calculable) to the goals of the organization which are leading in the strategy to reach the ultimate target or the dot on the horizon.

The implementation process is rational, it meets state of the art standards and strongly resembles the well-established stage-gate model of Cooper and Edgett (Cooper & Edgett, 2008; Cooper, 2019).

In this approach, innovation is seen as a form of engineering which in each phase applies the appropriate instruments in relation to the characteristics of the organization and to the nature of the innovation. So "transitions are represented as a set of factors or conditions that, if they all work together, will cause a desired change – as if they are the result of more or less mechanical, instrumental processes" (Rotmans, 2005).

A good example of a standardized method for regulated innovation is Berwick's own Institute of Healthcare Innovations Breakthrough Method (IHI, 2003). In chapter 3 we will present a case study from a program in which the Breakthrough Method is used to innovate sectors of the Dutch health care system and we will show the limitations Breakthrough meets in complex organizational settings.

Organization as a sociotope

The other line of reasoning about organizations focusses on the organization as a relational entity (Scott, 2004, p. 13). In this conceptualization, an organization is a social habitat, a human environment where employees come into their own and cooperate towards a shared purpose. Organizations are described in terms of their contribution to society based on people, planet, product, aiming at social-ecological sustainability. Innovation is achieved through the individual commitment and personal growth of creative and motivated employees, co-operating toward the common goal. Conditions for successful innovation are

Change readiness as a personal character trait. Resistance to change is a personality defect which will be cured through motivation sessions.

Employees are empowered by means of HRD interventions through training and development in order to be able to contribute to change both individually and as a group.

Targets for change are flexible and can be adjusted in the course of the project as long as they are compatible with employee satisfaction as a quality indicator.

In this approach, individual employees and their characteristics are the focus point of organized change. Innovation is an almost organic process of growth in which motivation of employees is the key success factor (Anderson, Potočnik & Zhou, 2014; Kegan & Lahey, 2016).

The problem with these two concepts of organizations is, that neither the formal properties of an organization nor the individual characteristics of its employees are a valid predictor of successful implementation of an innovation, however evidence based it might be (Greenhalgh, Robert, Macfarlane, Bate, Macfarlane & Kyriakidou, 2005). There exists a persistent “quality chasm” (Institute of Medicine, 2001) between innovation process design and the actual innovation potential of an organization (Meissner & Sprenger, 2011; Meissner, 2014). Successful innovation seems to depend on chance and good luck, also known as serendipity (Golin, 1957), rather than on sound vision and managerial competence.

But if neither the properties of an organization nor the characteristics of its employees predict with any significant validity the success rate of innovation efforts, then what does? The question to be answered is what determines successful quality innovation in health care?

Method: a strategy for the third era

Thirteen years after his initial article in JAMA, Berwick pleads for an alternative approach to quality improvement. He sets out to describe, again in JAMA, two eras of quality in health care and medicine (Berwick, 2016). The first, the era of professional autonomy, was dominated by a veneration for and trust in the individual medical professional who was granted the privilege of being the authority to judge the quality of his or her own work. After a period of growing doubts about efficiency, efficacy, safety and patient orientation, the privilege was revoked and the era of declining professional trust was initiated, the era of external accountability - of “scrutiny, measurement, incentives, and markets. The machinery of era two is the manipulation of contingencies: rewards, punishments and pay for performance” (Berwick, 2016, p, 1329). A comprehensive description of the dialectics between era one medical prerogative and era two managerialism is provided by Marnoch, McKee & Dinnie in their analysis of the National Health Service’s “...problem of sourcing, building and maintaining legitimacy” in the eighties and nineties (Marnoch, McKee & Dinnie, 2000, p. 967). Now that era two has run its course and is mired in mistrust, false incentives and bureaucratic overload far beyond any practical purpose, it is time for a new (third) era of quality improvement: the era of overcoming the opposites from era one and two in a new professional ethics based on group responsibilities, both as individual professional to the peer group to which one belongs and as a group of professionals to patients and society as a whole.

How to assess an organizations’ innovation potential?

Health care quality is improved, not by adhering more strictly to established practice but by innovation of this practice (Robinson, 1999) and the question is where to start

when neither the individual professional nor the organizational exoskeleton will provide a viable base for selecting and implementation of innovation. In his prescription for era three, Berwick leads away from individual qualities, organization characteristics and management performance and shifts the focus of quality in health care to the community of professionals which forms the crucial platform for selecting and implementing the appropriate interventions. In this view, the success of a particular innovation depends on its compliance with the community's shared values and rituals of authority building based on explicit and implicit assumptions.

The challenge is, how to reconcile the crucial role of the professional community in determining the quality of care with the health delivery organization's commitment to improve performance and economic sustainability.

A possible means to address this dynamics is by way of approaching organizations as social systems. In applying this concept we follow the lead of Wolf, Meissner, Sprenger and Schoeneborn who have demonstrated the added value of systems theory as a paradigm to address and explain the conditions for creating and sustaining innovation (Wolf & Meissner, 2010; Meissner & Sprenger, 2011; Schoeneborn, 2015). The concept of the organization as a social system has been introduced by Talcott Parsons (1951/1991) and applied to the problem of diffusion of innovations by (among others) Everett Rogers (2005).

A social system is not a fixed structure with ontological status, but "a patterned network of relationships between people constituting a coherent whole which exists within and between organizations" (Williams & Durrance, 2008). This network between people is expressed primarily in communication and hence a social system could be described as the whole of all its communications over time (Luhmann, 1985, 1989, p. 145). As far as communication is the negotiation of meaning within a social system (Grant, Hardy, Oswick & Putnam, 2004, p. 22), the definition of a social system in this sense is the totality of all available semantic reference. The aspect of compatibility of these semantics becomes especially relevant in our case study where it will prove to be one of the decisive factors in the outcome of the discussed project.

Organizations are a special case of social systems which "come into existence, persist and are transformed in and through interconnected communication practices" (Schoeneborn, Kuhn & Kärreman, 2019, p. 476). So: "communication constitutes organization" (Schoeneborn, 2011, p. 663). But organizations are networks of a special kind of communication which leads to decisions which generate new decisions, thereby securing continuity of the organization. Organizations - whatever they may be in a material sense - are primarily networks of "decision-based communication" (Luhmann, 2003, p. 32; Seidl & Becker, 2005). Based on this definition, the description and analysis of an organization as a social system operates through the study of communication in action and analyzing the discursive patterns in which decisions are argued about and decided upon by a community (forming an organization or being part of it). In this we subscribe to the idea that "language is the principle means by which institutions create a coherent social reality that frames

their senses of who they are” (Mumby and Clair, 1997, p. 5), but add that in health delivery organizations several concepts of social reality operate within a shared arena, resulting in “sites of struggle where different groups compete to shape the social reality in ways that serve their own interest” (Mumby and Clair, 1997, p. 182).

An organization exists as long as it takes decisions (Luhmann, 2000). As soon as decision making stops, the organization is reduced to a building full of equipment, materials and people sitting together, not knowing why. But how are decisions negotiated? The decisions which are taken are always only a subset of all the decisions which could have been taken at any given moment. How is the selection made? The process to reach a decision – and to implement it – consists of a chain of arguments pro and contra the several possible decisions which are deemed to be relevant to the organization at any given moment. This exchange of arguments follows a set of rules which determine the impact of an argument in the chain of argumentation. These rules, which are the rules of discourse, reflect three sources of influence on decision making: legitimacy, values and change readiness.

Dynamics of innovation: a comprehensive model

At this point, it is important to stress that an organizations’ innovation capacity is not an ontological but a situational quality. It comes to expression in relation to a specific innovation in an actual situation and it shows in discursive patterns leading to decisions. The question to be asked before all others is “What innovation is this organization capable of in this situation and how can we know”.

In the diagram below, all aspects relevant to (successful) innovation are brought together in a model.

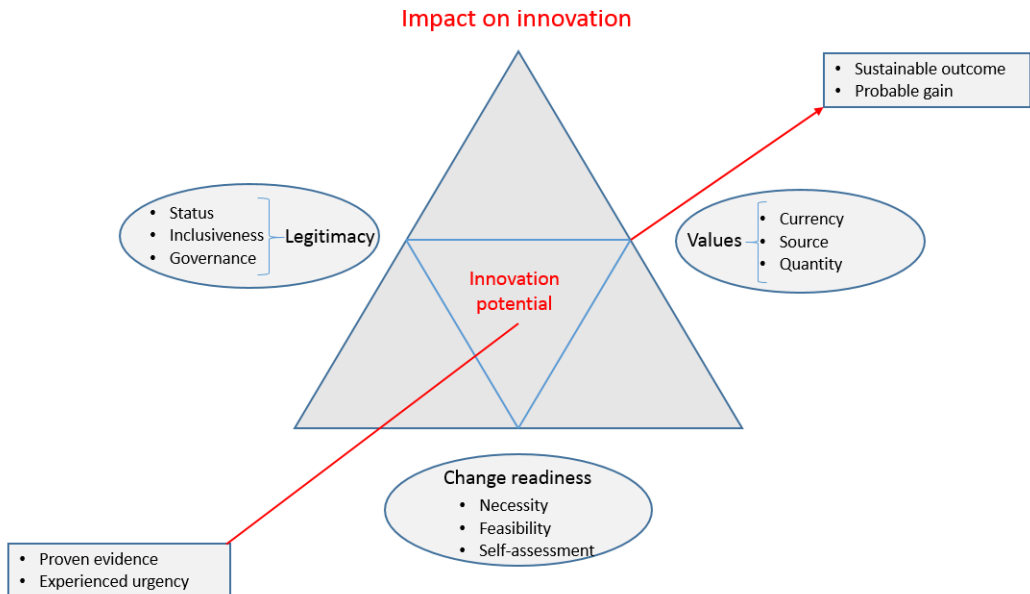


Figure 1: Explaining the sources of impact

Primary diagonal: motivation for change

Every innovation always begins with the experienced urgency of change (Kotter, 2012). Whether from internal development or outside pressure materializing in an event, there has to be cause and occasion to rethink current practice and look for alternatives.

Then in order to minimize the waste of resources and time, risk-averse environments such as the health care sector where patient safety is top priority and surveillance is strict, will prefer evidence based interventions, reflecting rule one in Berwick's original Special Communication: "Find Sound Innovations" (Berwick, 2003, p. 173).

The third element in the motivation for change will be the expected gain or the probability that the innovations' projected effect will be realized and invested effort will not have been in vain (Then, Schober, Rauscher & Kehl, 2017).

The final element of motivation is the sustainability of the outcome of the innovation or the expectation of durability of the projects' result.

Against the background of motivation for innovation, the organization's innovation potential becomes relevant. As stated above, this potential is determined by the dynamics between legitimacy, values and change readiness as they appear in communication in action or the discursive practice which characterizes the organization as a social system.

Legitimacy or degrees of influence

Legitimacy has an external and an internal dimension. According to the frequently quoted Suchman (1995, p. 574) external legitimacy is "a general perception or assumption that the actions of an entity are desirable, proper or appropriate within some socially constructed system of norms, values, beliefs and definitions". In order to be perceived as legitimate, an organization has to conform to institutionalized social norms of "good conduct" (Parsons 1956).

The internal dimension of legitimacy of arguments in a discussion refers to the agreement with prevailing social norms which function as a mechanism for stabilizing relationships of authority or dominance (Lamb, 2014, p. 7). Legitimacy in this sense is a form of recognition and is grounded in language: the process of constructing meaning as shared reference; it is established in discourse and comes to expression in impact of arguments. This process of "discursive legitimation" (Suddaby, Bitekine & Haack, 2015, p. 27) embodies the systems' status hierarchy, its degree of inclusiveness and the validation of decisions as sources of impact.

Status: the first element in the impact of an argument in favor or against a decision is the status of the speaker presenting the argument. Hierarchy of status is expressed in impact of arguments. Social systems confer status (and influence) to their members in accordance with degrees of legitimacy. In that sense, a social system is first and

foremost a tangle of informal status hierarchies which are negotiated and expressed in communication in action (Johnson, Dowd & Ridgeway, 2006, p. 57, 60). The words of the participants in a communication don't carry equal weight. In every exchange of arguments, the relation between the participants comes to expression as a source of impact, based on power distribution, expressed in concepts of leadership and the dynamics between dominance and submission (Fairclough, Mulderrig & Wodak, 2013). These relations not necessarily reflect the formal authority structure of the organization which is expressed in functional relationships and delegated, formalized power of control.

Inclusiveness: related to the element of status of the speaker is the element of in- or exclusion (Labonté, Hadi & Kauffmann, 2011). No social system is conceivable without a mechanism to establish its boundaries and to decide the question of belonging and extradition. These boundaries are established in the practices of communicative competence. Participating in a social system means being able to perform the language game (i.e. to realize validated patterns of performance) which identifies the system. Influence on decision making is granted along the lines of proficiency in these games (Wittgenstein, 1953).

The question to be answered is, whom is granted access to the exchange of arguments in the first place and in what capacity? Who has the right to present his or her arguments and just what is the appropriate means of doing so in this particular role and context? Whose voice can and will be heard under which conditions in the discussion which leads to a decision? How inclusive and diverse can an organization be and how exclusive will it need to remain in order to survive as a social system defining itself against the perceived social environment?

Governance: the impact of an argument also depends on the way in which an organization validates decisions. Decisions can be validated in many different ways, depending on the nature of the decision and the circumstances under which it has to be taken. Some organizations decide by majority of votes, others by expert opinion or by ruling of an authority – but mostly in a mix of these. Referring to aspects of decision by majority or the opinion of an expert can add to the impact of an argument. In general, the actual rituals of decision making do not necessarily coincide with the formal procedures which the organization has established.

Value, or what motivates an organization

The impact of an argument in a discussion is determined by the values to which it refers (Luhmann, 1985, 1995) and as soon as scientific evidence is abandoned as the overriding value in health delivery, referral to competing values becomes a source of impact of arguments.

Value: an organization takes decisions in order to realize continuity which is the outcome of the relation between investments, return on investments and long term results. This is not just about costs and revenues, but about the currency in which they

are expressed. Just what is important to the organization – is it about financial incentives or societal effects? Is it just profit or also people and planet and in what order? Or is it something completely different like professional pride, customer satisfaction or out-maneuvering a competitor (Moore and Hartley, 2008)? The values which drive an organizations' decision making may be formalized and publicized but it is only in the discussion leading to a decision that the true values which determine the organizations' identity are revealed in the references which are made.

Source: a second element of the nature of an organization's values is their source (Petrova, Dale & Fulford 2006; Marzorati & Pravettoni 2017). Where do these values originate, are they self-generated or the (supposed) values of a client or a partner or a stakeholder which the organization adopts or are they the demands which society or history or politics make? Does an argument represent the well understood best interest of the organization or the preferences of another party or even the demands of global welfare or nr. 3 of the UN sustainable development goals ("Ensure healthy lives and promote well-being for all at all ages")? And are unique selling points also unique buying points?

Units: and in what units are these values expressed? Are they numerical in the way that finances and timelines are or scores on a questionnaire, or are they colloquial as moral incentives or ethical imperatives often are? Or are they defined as part of a formal system like the Quality Indicators of the Agency for Healthcare Research and Quality (AHRQ 2014)? And who has the prerogative of interpretation of these values or assigning significance in a situation calling for a decision?

Change readiness, or how does an organization value change?

How does an organization appreciate change? As a possibility for improvement or as a deviation from absolute standards? In the exchange of arguments in order to reach a decision, the readiness for change plays an important part and it is defined by the experienced urgency for innovation and the perceived possibility of its realization.

Necessity: the arguments for and against a specific change are motivated by the perception of the present state of affairs and the history which lead up to it. Does the organization feel the urge for improvement or is it living in the best of all possible worlds?

Feasibility: arguments for or against an innovation derive their impact from shared views on agency, or how change actually happens. Do events happen by accident in a chain of contingencies to which the organization has to react or are they the outcome of a series of causes and effects which can be known and therefore anticipated and influenced as result of decisions taken? Or is the organization's universe a deterministic one in which all possible state of affairs can be reliably predicted once the initial state as well as the applicable set of rules are sufficiently known?

Self-assessment: A third element of change readiness is the self-assessment of an organization as either a dynamic champion of perpetual improvement or the time-

defying champion of once established best practice – or somewhere oscillating in-between.

So: the innovation culture of an organization and hence it's capacity for change is determined by the interaction between its legitimation strategy, its value system and its readiness for change. These elements underlie the formal description of an organization and its operations and they determine which innovation is relevant and acceptable in a given situation and under which conditions it can be implemented and will be adopted.

The model in health delivery organizations

Health delivery organizations – be it primary care centers, general hospitals or specialized clinics – are complex organizations in the sense that they are the arena where distinct groups of professionals have to interact and co-operate within a dominant policy and a shared business ecology and under close public scrutiny, which is complicating “governance and governability of hospitals” (Muijsers-Creemers 2017 p. 321). The main domains within the health care organization are: the medical domain where specialists are primarily concerned with diagnosis and treatment of disease, the nursing domain where nurses take care of patient needs, hospital services (pharmacy, radiology, lab) where the services are provided which facilitate medical interventions and nursing and last but not least business operations which deliver indispensable infrastructure such as ICT, HRM and finance. Control of the organization is complicated because of potentially conflicting interests and mutual dependency between professional staff and executive board (De Vries, Tummers & Bekkers, 2018). To complete complexity, the health care organization is in the focus of external stakeholders such as policy makers, payer organizations, societal advocacy and last but certainly not least (organized) patients who try to get a grip on health delivery, its quality, accessibility and costs, either through direct action or through substitute agents such as political parties, unions, insurance companies or other agents.



Figure 2: conflicting logics

This complex setting leads to a multitude of conflicting, non-interfering or mutually supportive situational logics, expressed in diverting semantic domains, which impedes governability because they cannot be subsumed under the central perspective of traditional management based on hierarchy and bureaucratic ruling (Bal, Quartz and Wallenburg, 2015). That means that the professed shared priorities such a patient interest, public accountability and financial sustainability run the risk of being quietly eroded by (sub)group perspective and partial interests. Behavior of the actors and the rules of conduct they follow is determined by different forms of economic or medical rationality which condensate in an identity and is expressed in the totality of opinions and behavior which defines the factions within the organizational habitat (Muijsers-Creemers, 2016, p. 64). In an environment where several different rationalities compete over dominance within the same decision making process, conflicts of interest arise, not only based on perception of others but also based on a different perception of the relevant environment. Against this complicated backdrop it is hard to reach a shared commitment to the necessity and feasibility of a proposed innovation and compliance with the best way to implement and adopt it because the innovation itself will have to agree with the value system of all parties involved (according to their contribution to the outcome of the project) and the implementation plan will have to comply with the principles of legitimacy they adhere to.

In order to overcome organizational diversities as obstacle for sustainable quality innovation, the health care sector often resorts to the Quality Improvement Collaborative (QIC) as implementation base – these are “structures to support quality improvement and to support implementation activities” (Cunningham, Ranmuthugala, Westbrook & Braithwaite, 2019, p. 2). QIC’s bring together representatives of the parties involved “to work in a structured way to improve one aspect of the quality of hospital service” and “to make changes in their own hospital setting”. In order to do so they “make use of a continuous quality improvement method to realize changes” (Dückers, Spreeuwenberg, Wagner & Groenewegen, 2009).

The problem with installing a QIC as a means of overcoming organizational resistance to change due to divergent situational rationalities is, that the QIC provides just the arena for these rationalities to engage in open or suppressed combat, thereby undermining the effectiveness of the QIC as a tool for quality innovation (Cunningham, Ranmuthugala, Westbrook & Braithwaite, 2019, p. 2). It is therefore that Schouten, Hulscher, Everdingen, Huijsman & Grol (2008) conclude that: “the evidence underlying quality improvement collaboratives is positive but limited and the effects cannot be predicted with great certainty”. Our case study may illustrate this phenomenon and indicate its causes.

Results - case study: “OK Oké”

In the period 2003 – 2008 the health care sector in the Netherlands undertook a major quality improvement program in general hospitals under the title *Sneller Beter* (“Fast Improvement” or “Better Faster”) focusing on improving health care efficiency, efficacy and patient centered logistics. Of the ca 80 Dutch hospitals, 24 participated in this program which was government-subsidized and applied the well-established and evidence based Breakthrough method for quality improvement of the IHI (Dückers, Stegeman, Spreeuwenberg, Wagner, Sanders & Groenewegen, 2009; Dücker, Spreeuwenberg, Wagner & Groenewegen, 2009; Dücker, 2009; Vos, 2010). Of the 24 participating hospitals, eight initiated a total of 22 projects aimed at improving OR performance. Of these 22, the project by VU University Medical Centre in Amsterdam called “OK Oké” was documented in a published final report which enables a closer analysis of the project itself, its outcome and the experiences of the project team (De Bruin, Lumeij & Veerman, 2006; Van Veen-Berkx, 2016).

The experiences with this project provide a good example of the phenomenon we wish to address in this paper: the limited value of formalized quality improvement strategies in a situation where various social systems have to interact.

The project “OK Oké”

The project was designed to deal with the cancellation of a large number of planned (“elective”) procedures caused by :

Priority of intervening emergency cases over planned procedures during the planning period.

Exceeding lead time in subsequent planned procedures leading to cancelling procedures at the end of day.

Lacking available post-surgery beds because of bottlenecks in planning and incorrect prognosis.

Cancelling planned procedures is not only a major disappointment for patients, resulting in diminished experienced quality of care, but also an economic liability as planned procedures are more cost-efficient than the intervening emergency procedures.

Objective of “OK Oké”

In general the project aimed at a shift from function oriented to process driven organization of the Operating Room, resulting in a productivity increase of 30% by means of a more efficient use of the units’ capacity, thereby improving economic sustainability and experienced quality of patient care.

Four interrelated interventions were implemented:

Redefining the concept of urgency: no more procedures in emergency class II and III during the night but reframing them as elective procedures and performing them during day time.

Rescheduling OR staff from night to day shift, reducing the night shift to one team for class I emergencies, thereby reducing staff salary costs.

Realistic planning of OR sessions on the basis of historical data, thereby avoiding exceedance and skipping the last procedure(s) of the day by introducing a planning device fed with historical data as a reference guide and a correction factor.

Introducing an appliance for real time on-screen monitoring of OR sessions in order to provide immediate feed-back to surgery staff and planners.

Outcomes after 12 months:

Number of cancelled elective procedures reduced from 8.1% to 4.8% (aiming at 2% max).

Number of class II and III procedures during the night reduced to 0 (project aim realized).

OR occupancy rate at 85%, up from 81% (aiming at 90%).

Nr. of first procedures starting on time 28%, up from 13%, aiming at 95% (main failure).

Evaluation

A first observation to be made is that none of the 22 nationwide “OK Oké” projects (including that by VU University Medical Center) in the Fast Improvement/Better Faster program realized any structural increase in productivity at the end of the program period whereas the aim was to reach 30% increase (Vos, 2010, p. 12/13). The program management team rated the overall success of the “OK Oké” projects at a score of 5.0 out of 10 (comparable to grade F), the lowest in the program (Vos, 2010, p. 13). This overall impression of disappointing outcome was reflected in the evaluation report of the VUmc “OK Oké” project which concluded that the most important lasting effect of the project has been the “ongoing structural discussion about efficiency of OR procedures” (De Bruin, Lumeij & Veerman, 2006, p. 164).

Probable causes

What caused this disappointing outcome in the case of “OK Oké”, based on an analysis of the final report?

A first indication is the composition of the project management team acting as a quality improvement collaborative. This QIC consisted of three surgeons, one anesthesiologist, the head of OR, two business managers, two consultants and two

unit managers. While this diversity suggests a broad support base for the project, it in fact created a perfect arena for conflicting values and concepts of legitimacy and governance (De Bruin, Lumeij & Veerman, 2006, p. 159). Nowhere in the project documentation is any indication to be found that this issue has been addressed.

The resulting underlying tensions were glossed over but not neutralized by adopting the formalized Breakthrough method for quality improvement in healthcare as project management tool. In line with this method, the project started with defining SMART endpoints. These are quantitative and process oriented and do not reflect the qualitative medical considerations about state of the art procedures, standards of care and patient safety which drive the surgeon during a procedure (De Bruin, Lumeij & Veerman, 2006, p. 160).

The “OK Oké” project aimed at realizing the projected overall productivity increase of 30% in the OR by introducing process based management tools – it was not about quality of care and medical outcome which is the prime responsibility of the medical professional according to the CanMeds profile (De Bruin, Lumeij & Veerman, 2006, p. 161).

In the evaluation report the tensions between medical professionals and OR management participating in the QIC surfaced at two points:

First there were well documented conflicts about the definition and semantic extension of crucial concepts like *start of first session*, *occupancy rate* and even *surgical procedure* itself on which medical staff and management could not agree (De Bruin, Lumeij & Veerman, 2006, p. 161).

Second there was the medical staff’s manifest resistance against the redefinition of “medical urgency”, limiting this status to class I emergencies and redefining class II and III emergencies as elective, resulting in re-scheduling procedures and staff deployment from night to day shift entailing a reduction in irregularity allowance.

This competing for “prerogative of definition”, deciding on the semantic extension of technical terms, is confirmed by the evaluation study of a benchmarking collaborative between the eight University Medical Centers in the Netherlands in which the authors found “difficulties with respect to harmonization of the definition and registration method of indicators” of OR procedures (Van Veen-Berkx, Korne, Olivier, Bal & Kazemier, 2016, p. 1179). The difficulty in reaching agreement on which indicators provide relevant steering information is confirmed by Fixler & Wright in their study of operating room efficiency indicators, where they conclude: “Owing to the diverse group of stakeholders involved - surgeons, anesthesiologists, nurses and hospital administrators - it is often difficult to achieve consensus on which indicators are most important for measuring performance” (Fixler & Wright, 2013, p. 224). Their conclusion reflects the discursive practice of referring to values as part of competing arguments in a social system working toward a decision.

Conclusion on “OK Oké”

The case of “OK Oké” in VU University Medical Center Amsterdam, limited as it may be, provides a good example of the tensions which may arise between a group of medical professionals and the organization in which they practice, although they are all dedicated to providing the best possible patient care. As soon as this commitment has to lead to decisions aimed at changing (in this case) a function oriented department to a process oriented one, a number of misunderstandings and differences arise which can be attributed to the characteristics of the social systems involved. Medical professional and OR management do not share the same concepts of legality, notions of added value and concepts of change. The resulting contradictions cannot be resolved by introducing a formalized quality program like “Breakthrough”. The program calls for quantified SMART endpoints which contravene the doctors’ qualitative value system and undermines their prerogative in defining key concepts of medical care. OR management finds it difficult to impose its dominant monetary value of 30% productivity increase as primary outcome measure on the medical professionals.

Shared decision making as basis for successful quality innovation depends on a number of preliminaries which must be fulfilled. One of the most important is a minimum of compatibility between professionals and their peer-group and between professionals and their workplace (Herkes, Churruca, Ellis, Pomare & Braithwaite, 2019) concerning legality, values and change readiness.

Discussion

Innovation in the third era of quality in health care faces a complex challenge. Efforts aimed at improving clinical outcome and patient satisfaction as well as financial and social sustainability requires reconciling the situational rationalities of medical professionals and the organizational environment in which they practice. This cannot be accomplished by adopting a formalized management tool.

The evaluation of even a broadly supported, well managed and adequately financed long term quality improvement program such as *Sneller Beter*, applying the well-established and evidence based Breakthrough Method by Berwick’s IHI eventually leads to the conclusion that the efforts to reorganize the primary process in the OR did not lead to quality improvement or more efficiency (Vos, 2010, p. 165). This is a strong indication that a formalized quality improvement strategy like Breakthrough in the form it was applied in the “Fast Improvement”/“Better Faster” program might work in the context of a second era management environment in a homogenous organization but less so in a complex hospital setting where the interaction between groups of professionals determine success or failure of quality improvement initiatives.

Organizations are more than a rational construct to reach a sensible goal or an environment for professional development and personal growth. Especially in

healthcare, organizations are complex arenas where oppositions and alliances develop between different groups of professionals who have to negotiate between experienced identity and adherence to the common cause of the organization as a whole. The dynamics of conflicting concepts of legitimacy and validation, shared or adverse values and concepts of change and development determine the outcome of quality improvement initiatives more strongly than formal relations and professed priorities do. Support for any particular innovation does not depend on a formal decision and ample supply of means, but rather on the compatibility of the initiative with the concurring value systems and the agreement of the implementation strategy with the prevalent status hierarchies based on legitimacy.

Several authors have concluded that not enough research is being done into barriers to and enablers of health care innovation (Nilsen, 2015). In our experience, the selection of innovations and the strategies and instruments for implementation are generally based on formal models of organizing change which pretend to be universally valid but usually fall short of the specific underlying reality of competing situational rationalities, carried by group identities and vying for dominance. That means that the real barriers and enablers for change are to be found below the surface of flowcharts and budgets. Who needs to know what really drives an organization, has to look below this surface and see what moves in the shadows.

So any strategy for quality improvement in health care in the third era should start with a feasibility check on intended interventions, identifying the several groups which will participate in the project and assessing their status hierarchies, value system and change readiness. In a second phase, their mutual compatibility should be checked, followed by an assessment of the appropriateness of the innovation and the effectiveness of the implementation strategy. Only by addressing these issues with all parties concerned will it be possible to generate true commitment and avoid innovation waste by investing means, energy and creativity in an endeavor destined to fail.

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