Disseminating good practices for patient safety: the experience of the Italian National Observatory on Good Practices for Patient Safety

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ABSTRACT

Background: The objective of this paper is to discuss how national collaborative programs based on the dissemination of good practices could effectively improve patient safety and be sustainable. The paper also aims at identifying some cross-system characteristics that would allow for a "safe practice programme" to run successfully.
Methods: The quality and safety of the healthcare services provided by the Italian healthcare system to its citizens are very heterogeneous. Therefore, a public agency – by government mandate – instituted a national programme to improve patient safety. The model applied relies on a cyclic scheme for collecting, classifying and promoting the active dissemination of evidence-based safe practices throughout the network of healthcare providers.
Results: The Italian programme has been reviewed by the OECD as a key action to improve patient safety as the results are very encouraging in terms of both effectiveness and sustainability.
Conclusion: In this paper we use the experience of the Italian Observatory on Good Practices for Patient Safety to corroborate and enrich the literature about improvement programs based on good practices. If specific conditions of responsiveness and accountability are met at all levels, these programs can be successful and sustainable. Furthermore, such programs could be easily adapted to other health care systems.

Key words: patient safety, quality improvement, good practices

INTRODUCTION

In recent decades, many countries have significantly advanced patient safety and quality of care by promoting, funding, researching and implementing patient-safety surveillance systems and routine data collection of medical outcomes. One of the key aspects of patient safety is to prevent harm to patients during treatment or care [1] by understanding and learning from errors [2]. Therefore, soon after the Institute of Medicine issued the work "To err is human" [3], adverse events reporting systems and programs were created worldwide, notably in Australia [4] and in United States [5], United Kingdom [6] and France.

An additional action to advance patient safety is the identification of "good practices" to be routinely applied in clinical practice, in order to substantially reduce cases of poor health outcomes due to medical errors [7, 8]. The European Council Recommendation on patient safety of 2009 [8] strongly recommended the adoption of specific approaches "to promote safe practices to prevent the most commonly occurring adverse events" in order to increase and harmonise patient safety throughout the European countries. These key concepts were reaffirmed and

strengthened by the recent European Parliament Resolution on safer healthcare in Europe [9].

International and national organisations have started initiatives aimed at spreading good practices to improve patient safety within professional communities and healthcare organizations. The Joint Commission - through the Joint Commission Resources - developed the Leading Practice Library, an electronic collection of real-life solutions that have been successfully implemented. This tool is available to organisations that are accredited or certified by the Joint Commission and represents an opportunity to share the organisations' efforts and accomplishments in patient safety and quality of care among peers. The database, however, is only free for accredited organisations. The National Institute for Health and Care Excellence (NICE), collects examples of implementation of guidance or quality standards through a Shared Learning Database, to improve the quality of care provided by trusts, local authorities, care homes, charities.

Approaching the matter from the theory of innovation perspective, Berwick asserts "Health care is rich in evidence-based innovations, yet even when such innovations are implemented successfully in one location, they often disseminate slowly - if at all" [10]. Lack of diffusion of innovation and best practices are also highlighted by Landrigan et al. [11] in the six-year study conducted in ten hospitals to investigate the progress made in protecting patients from iatrogenic injury.

The metaphor of "Crossing the valley of death" [12] represents the need to reduce the gap between the discovery of new knowledge and innovation in care and providing it to the patients who need it; this concept embodies the movement of collecting and disseminating good practices for patient safety. Adopting and acting on good practices is an effective approach to improve patient safety, especially when the process resides within a multi-level, large-scale programme based on the assumption of responsibility by central and local authorities and by the health care front line [13,14].

To develop this viewpoint, the methods and tools used to implement the Italian Observatory on Good Practices will be discussed.

METHODS

Due to the wide autonomy guaranteed by the Italian Health Care System to each of the 21 Regions in organizing and managing healthcare services, the quality and safety of healthcare provided to Italian citizens is very heterogeneous [15,16]. To remedy this problem, the Italian National Agency for Regional Health Services (Agenas), based on a government mandate, set up a national programme to improve patient safety by promoting active dissemination [17] of evidence-based safe practices: the National Observatory on Good Practices for Patient Safety. Patient safety practices have been defined as "those that reduce the risk of adverse events related to exposure to medical care across a range of diagnoses or conditions"[18,19]. In Italy, a broader definition was adopted as a result of a restricted survey carried out at the international level among the leading experts in quality and safety in healthcare. Consequently, good practices were identified in evidence-based interventions that have been implemented and proved to improve patient safety. According to this definition, surgical safety checklist, patient ID bracelet, single therapy chart, medication reconciliation are examples of good practices for patient safety.

The Observatory's operations are based on the assumption that continuous quality and safety improvement can be effectively pursued by promoting top-down and bottom-up actions. These must aim at identifying innovative practices and accelerating their diffusion to the community of healthcare professionals [20, 21, 22, 23].

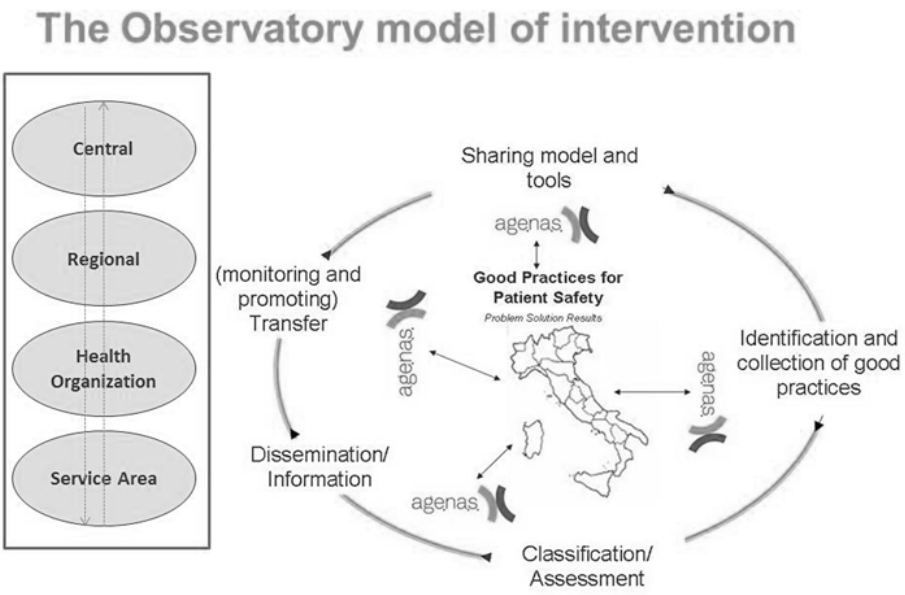
The Observatory' s processes of study design and evaluation are based on the PDCA cycle, and the model of intervention (Figure 1) is itself a cyclic scheme for collecting, classifying, disseminating and transferring patient safety practices.

The model of intervention is applied across all four levels of the Italian healthcare system and is bidirectional: proposals, input and information start from the central level and reach the local level; responses flow in the opposite direction, reorienting the process back to the central level. Collection of the safety practices is done through an annual Call, through which Regional health authorities are invited to coordinate collection of the practices implemented at the local level. An online reporting form based on SQUIRE guidelines[3] had been initially developed to be used by healthcare professionals and organizations when submitting the practices. In 2014, thanks to Agenas participation in the PaSQ Joint Action (European Union Network for Patient Safety and Quality of Care, co-funded and supported by the European Commission within the Public Health Programme), whose focus is to improve patient safety and quality of care through sharing information and experiences and implementing good practices, the form has been revised. It is now made up by 13 sections, each including open-ended questions (e.g. description of the Patient Safety Practice PSP) and pre-defined questions, either single or multiple choice (e.g. has the PSP been implemented/transferred?).

Once the practices are submitted, they are analysed

1. http://www.jointcommission.org/leading_practice_library/
2. https://www.nice.org.uk/
3. www.squire.org

FIGURE 1. The Model of intervention.



The Observatory model of intervention is based on 5 phases that are annually covered in a cyclic process: after defining, updating and sharing methods and tools, safe practices are identified through a call; they are collected in a web archive and classified according to their efficacy level. Dissemination actions are carried out to favour the transfer of safe practices and, according to the results of the data analysis, priorities are set for the next cycle.

and validated by the Regional representatives and then published in a publicly available database (http://buonepratiche.agenas.it/practices.aspx). The validation phase is followed by the classification of the experiences into the following categories:

- **Good Practice**: experiences fully implemented and with a detailed evaluation of results (either with quantitative or qualitative analyses);
- **Potential Good Practices**: ongoing/not fully implemented experiences, with incomplete report of results;
- **Initiatives**: interventions not yet implemented or with very limited documentation about effectiveness.

In order to allow a comparison between the Italian Observatory and the PaSQ database, since 2014 the practices are also classified into the following categories:

- **Safe Practice**: a practice that was implemented and the before and after measurement has documented that it enhanced one or more aspects of patient safety. The before and after evaluation could be quantitative as well as quanlitative
- **Potentially Safe Practice**: a practice that was implemented and a before measure was established. However no after measure exists
- **Not Proven Effective Practice**: a practice that was implemented but the before and after measure did not show improvements
- **Not implemented Practice**: a practice that was not implemented yet. This could be the case e.g. if the practice is under development or it is just an idea
- **Not evaluated Practice**: a practice that was implemented but no before measure was established.

In addition to online publication of the experiences, the dissemination phase includes traditional dissemination tools, such as presentations in national and international conferences, booklets containing a summary of the experiences reported (published annually) and other specific tools set up to disseminate and promote transfer of the safe practices. In particular, a model for interregional transfer of the experiences has been tested. It is based on workshop for exchanging experiences and knowledge between groups of Regions that are contiguous from the geographical point of view and have similar organisational models.

RESULTS

In presenting the outcomes of the national program, which is the object of this paper, we focus on some quantitative results regarding the phases of collecting and promoting the transfer of good practices for patient safety.

Over the years, the number of PSPs submitted to the Observatory has been stable (Table 1): around 300 practices per year (ranging from a maximum of 358 in 2008 to a minimum of 230 in 2013). This has produced a total of more than 2100 experiences included in the internet database.

A network of about 800 health professionals from all the 21 Regional Healthcare Systems currently share and exchange knowledge and experiences through the Observatory's dedicated platform. Many types of health care facilities have been participating, including public university and research hospitals, private accredited hospitals, and local health authorities. Based on the answers provided in 2014 to the section "Effectiveness" of the reporting form, 194 practices, which is over 65% of the practices submitted to the Observatory, resulted in an improvement in patient safety (respondents were asked to indicate whether they had carried out baseline and endline assessment qualitative and/or quantitative and whether they achieved positive/negative results; they were also asked to specify qualitative measures and quantitative indicators they used to evaluate the effectiveness of the reported practices)[5].

TABLE 1. Number of practices reported to the Observatory per year

Year	Number of practices reported to the Observatory
2008	361
2009	356
2010	282
2011	300
2012	310
2013	230
2014	299
2015	225[4]

It is noteworthy that in Italy the setting of first implementation is usually the hospital (87%). There are very few exceptions: nursing care, accounting for 5% and primary care, representing 1%. An encouraging result is that over one third (36%) of the practices submitted in 2014 were transferred to a second health-care facility. This data was provided by declarations made by the authors who submitted the practices to the Observatory. Respondents were asked to indicate whether they had successfully implemented the reported practice in healthcare settings other than those for which it had originally been designed, their responses were validated by a representative of the Regional Health Department. This process is in keeping with the Observatory's methodological framework, which requires that each Italian Region set up a specific procedure to evaluate and monitor safe practices adoption and transfer.

To provide an example of transfer, the practice "appropriate use of antibiotics" successfully implemented in the hospitals of the Versilia Local Health Authority, was later applied to Primary Care in the same Local Health Authority. Among the PSPs transferred to a second facility, the predominant pattern of transferability is from one hospital to another hospital (35%). Among the less frequent patterns that were observed flowing from the hospital setting were those to home care (7%), nursing facilities (4%), mental health care (6%) and community care units (4%). The reporting form also includes pre-defined questions aimed at identifying possible barriers to PSP implementation or the drivers for a successful implementation: respondents are asked to identify, from a list of possible barriers one can encounter during implementation of a PSP, the main difficulties they have experienced. Along with insufficient availability of resources (11%), the main barriers reported consist of lack of:

- Sharing of information on implementation status among involved staff (11%)
- Motivation among staff (10%)
- Modern or new equipment (6%)
- Knowledge on implementation strategy (6%)
- Recognition among staff or management of the need for change (6%)
- Management support (4%)

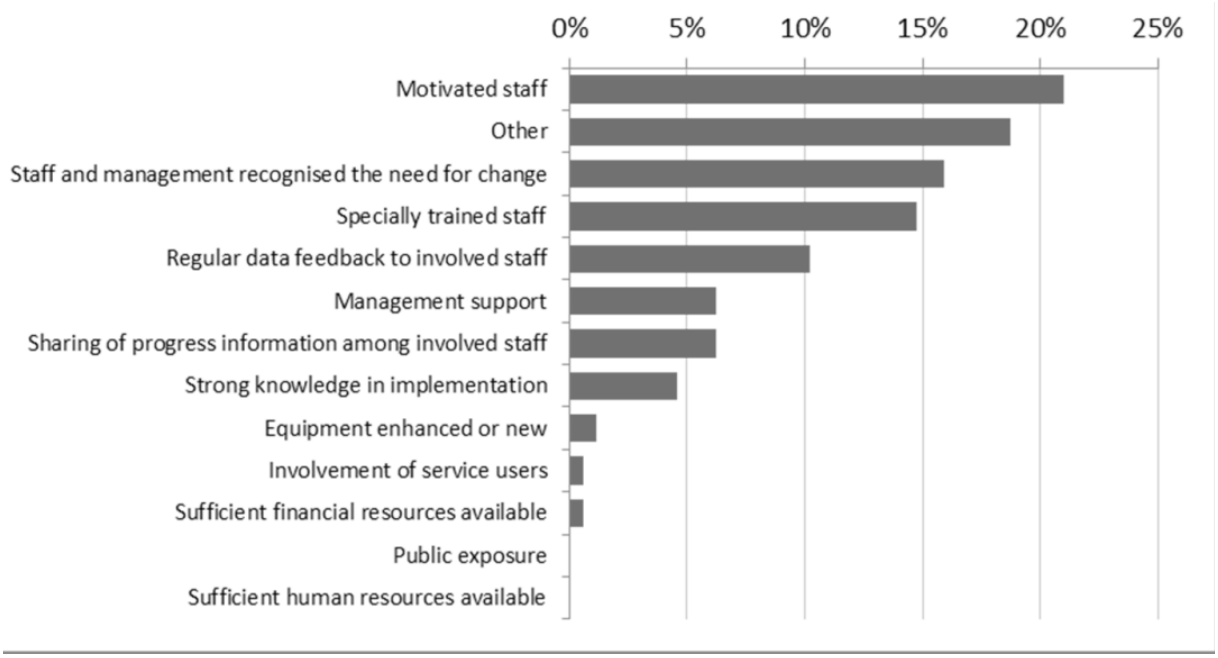
As the barriers reported, the main drivers to implementation of PSPs are related to staff as well, in terms of motivation, training, awareness about the need for change and direct involvement, e.g. receiving regular feedback about the programme being implemented (Figure 2).

The cost assessment performed on the program points to the overall sustainability of the initiative. The costs related to the system's set up were about €30,000 (mainly personnel costs), while the annual cost of managing the program is about €15,000. A greater variability on annual needed resources has been noticed for the dissemination phase, as a consequence of the variety in both scale and depth of the dissemination activities realised.

With regard to the specific objective of the Observatory to promote the exchange of knowledge and experiences among the professional community, in the period January 1st 2012 to December 31 2014, the statistics produced by Google Analytics report about 13,500 sessions per year of the Observatory web portal and more than 23,600 users visiting the Observatory's web archive in the three-year period. Most downloaded practices refer to procedures to prevent patient falls (218 downloaded in 2014), implementation of incident reporting (157

4. This figure is partial as the call for good practices for 2015 was still open at the time of preparation of this work.
5. http://buonepratiche.agenas.it/practices.aspx

FIGURE 2. Main drivers to the implementation of PSPs.



In Figure 2 main drivers to the implementation of Patient Safety Practices, as resulting from the Observatory's data analysis, are presented through histograms.

downloaded in 2014), application of surgical safety checklist (101 downloaded in 2014).

Moreover, Google reports more than 12,000 citations of the Observatory's web portal.

DISCUSSION

The debate on evaluation and efficacy of large-scale improvement programs is still very much alive. Benn et al. [24] highlight the challenges in studying large-scale interventions, as they are subject to a range of sociotechnical and contextual influences beyond their developers' control. There are, however, several activities considered to be important for the success of these programs: obtaining commitment of senior management, engaging clinicians, implementing quality-reporting processes, and developing safety awareness [25, 26, 27, 28]. These are some of the main features of the Observatory.

In this paper an experience carried out in Italy at national, institutional level by Agenas in collaboration with the Ministry of Health and the Regions is presented. The work intends to support the conclusions of the OECD Review [15] and provide a reasoned opinion on national programs for improving patient safety based on good practices. In the review recently carried out by the OECD on the quality of health care in Italy [15], the Observatory was described as a "key action to improve patient safety" both for the methods applied and for the results achieved and it has been considered as a successful model to emulate. In the OECD Review, the Observatory is also described as a good demonstration of the PDCA cycle in action. Sharing the insight gained from adverse events and promoting the transfer of safe practices are the elements highlighted by the OECD as the key points of the programme. According to the OECD, a key strength of the programme is that it was based on the input of multiple stakeholders. These inputs, along with feedback from the professionals who are part of the "good practices network", drive the periodic updates to the Observatory's tools. Another feature praised by the OECD is the underpinning philosophy that bottom-up and top-down actions are complimentary to improve patient safety.

CONCLUSIONS

This Italian experience corroborates the literature and experience of change management, continuous collaborative quality improvement actions [24,26,27,28]. It also suggests that the strategy outlined above constitutes an important trigger to improve patient safety as long as the following conditions are met:

- Safe practices are implemented as a tool within a multi-level, large-scale, pluriannual programme.
- The programme is responsive to both national and local needs, as well as international evidence based indications.

- A central independent body is committed to act as facilitator, promoting a sense of ownership in the programme among professionals and healthcare systems.
- Methods and tools are continuously shared among the main stakeholders of the Healthcare Systems (including patients and citizens).
- Costs are "reasonable" to sustain.
- Responsibility and accountability are shared at all levels.

The presence of these factors allows for a "safe practice program" to run successfully and to be transferable to other national health care systems or at international level.

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