Initiating A Clinical Quality Measurement and Evaluation System: A Case Study From Turkey

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ABSTRACT

Turkey Ministry of Health initiated a project to analyze current methods for the monitoring and evaluation of clinical quality in Turkey, and to develop a system for quality measurement and assessment of clinical quality. Establishment of a system that can measure and monitor clinical quality of private, university and MoH hospitals was targeted. For the pilot study of this project, three health conditions were chosen and subjected to monitoring and evaluation of clinical quality. In this study, steps of the pilot study of this project and lessons learned are presented. Further studies for evaluating the project and reporting the results would be beneficial.

Key words: clinical quality measurement, clinical quality evaluation system, system establishment for clinical quality evaluation

KLİNİK KALİTE ÖLÇÜM VE DEĞERLENDİRME SİSTEMİ BAŞLATMAK: TURKİYE ÖRNEĞİ

ÖZET

Türkiye Cumhuriyeti Sağlık Bakanlığı, Türkiye'de klinik kalite'nin gözlemlenmesi ve değerlendirilmesi için mevcut durumu analiz etmek ve klinik kalite'nin kalite ölçümü ve değerlendirmesi için bir proje başlatmıştır. Özel, kamu ve üniversite hastanelerinin ölçebilen ve gözlemleyebilen bir sistemin kurulması hedeflenmiştir. Proje'nin pilot çalışması için üç sağlık durumu belirlenmiş ve konu edilmiştir. Bu çalışmada bu proje'nin pilot çalışmasının adımları ve alınan dersler ortaya konulmuştur. Projenin değerlendirilmesi ve sonuçların raporlanması için daha ileri çalışmalar fayda sağlayacaktır.

Anahtar sözcükler: klinik kalite ölçümü, klinik kalite değerlendirme sistemi, klinik kalite değerlendirme sistem kurulumu

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Quality (doing the right things correctly) as a combination of effectiveness (doing the right things) and efficiency (doing things right) requires evidence based practicing and continuous improving care (1). In clinical quality perspective, a gap between clinical governance and practice is reported in literature. Understanding the nature of this gap and working towards eliminating it became one of the ultimate purposes of health systems (2). Organizations define quality indicators and collection of data for measuring quality of care to identify whether it can be improved (3).

Quality of healthcare measurement and tracking systems has been established by developed countries to ensure that healthcare systems are delivering effective, safe, efficient, patient centered, equitable and timely care. The United States works

for clinical quality measure preparation, publicity, collection and evaluation with many different organizations. Department of Health and Human Services Measures Inventory (4) serves as a repository of quality measures, defining all of the metrics in detail. It is hosted by the National Quality Measures Clearinghouse (NQMC) which is used as a public resource for summaries of quality measure sets (5). The Agency for Healthcare Research and Quality (AHRQ) declares quality indicators and measure them by AHRQ software. The Center of Medicare and Medicaid Services (CMS) uses metrics to measure many aspects of healthcare including health outcomes, patient safety, clinical processes and adherence to clinical guidelines (6). Independent initiatives in US also worked on clinical quality. As an example of these initiatives, the New Jersey Innovation Institute helped professionals and hospitals continuously measure and report their clinical quality data to ensure that system could deliver high quality care (7). Some organizations, such as the LeapFrogGroup, use clinical quality data to rate and compare hospitals (8). The National Health Services (NHS) of England also collected data of comparable clinical indicators and publicized them as open data (9). In order to disseminate quality culture and increase accountability of clinical practice, France's (HAS - France Health Authority) also worked for improving the information record and using quality indicators for comparative purposes (10). Canada's Institute for Health Information also gathered and analyzed data for quality of care in terms of being appropriate (evidence-based), patient-centered (focused on the patient), safe and timely. The institute has databases (specific to areas as discharge, morbidity and ambulatory care) that can be used for quality of care reporting. Reports could be published with contribution of these databases. Reports on delivery, antipsychotic use, diabetes care gaps, falls were among these reports (11).

After remarkable reforms which were praised in international reports with statements such as *"good practice in the development and implementation of major health system reforms"*(12) and *"quite well in terms of equity and financial protection"* (13), Turkey targeted improvement in the clinical side of quality. Recoveries for some important indicators as maternal mortality, infant mortality and life expectancy (14) could be achieved by improvements in access to healthcare domain, and higher levels of patient satisfaction rates could be acquired by improvements in patient centeredness and equity domains of healthcare quality. The Hospitals Service Quality Standards of pay for performance system and clinical protocols were put into effect to increase quality of services. Beside reforms

which served to increase effectiveness and efficiency in healthcare services, Turkish healthcare system focused on the clinical quality and health outcomes sides of quality. Measuring quality of care by indicators and establishing a system that would enable comparisons between institutions and improvements was targeted. Turkey Ministry of Health (MoH) planned to initiate a clinical quality measurement and evaluation system similar to systems ongoing in developed countries. System establishment started with a pilot project. This study presents steps of this pilot project and lessons learned. Further studies for evaluating the project and reporting the results would be beneficial.

Pilot project for a clinical quality system

Turkey MoH initiated a project to make current situational analysis of the monitoring and evaluation of clinical quality in Turkey, and to develop a clinical quality measurement and assessment system for the measurement of clinical quality. A system that could measure and monitor clinical quality of private, university and MoH hospitals was targeted. A pilot project was started in February of 2012 with current status identification and was completed on July 2014.

Six steps towards establishing the program were planned:

1. Current status identification
2. Determining 3 conditions for pilot project
3. Determining health facilities for pilot project
4. Forming indicator pools for each of these 3 conditions by defining patient pathways for conditions
5. Eliminations from indicator pools to reach a final indicator list
6. Carrying out the pilot implementation

Current status identification:
Turkey had started a healthcare service standards set adopting Joint Commission International accreditation standards. Evidence-based and condition-specific sets of clinical quality indicators were decided to be more beneficial and open to continuous improvement of both clinical quality monitoring systems and clinical quality levels.

The project was initiated by conducting surveys (in 14 provinces and 7 regions, 3177 health professionals and 1766 patients-families) regarding quality perceptions in the country. Definitions for clinical quality and service quality, in which both patients and health professionals are in consensus, were made by that way (15).

Determining health conditions for project

Health conditions, which were to be targeted in the pilot project, were determined after an assessment of some criteria such as readiness of information technology infrastructure, maturity of clinical quality study experiences and representation levels of condition. The pilot project was selected to include three medical conditions: diabetes, knee replacement and pregnancy. Diabetes was a condition which had been the subject of previous for its clinical quality in recent years. A set of indicators was already determined, collected from hospitals and analyzed for another project. Considering importance and prevalence of disease and clinical quality experience in the country, this condition was selected. Pregnancy period was another area that was determined for its possible impact on population health status. Better conditions of information technology infrastructure to transfer clinical quality data was another factor while selecting this condition. The last pilot project condition was knee replacement. It was selected to represent surgical operations and to be a pilot for others. As a result, a condition for chronic diseases, one for a continuous care needed condition and one for surgical operations were selected for inclusion in the pilot project.

Determining health facilities for the pilot project

Hospitals that represent different facets of the healthcare delivery system were included in the project. Hospitals from each of 7 regions and from various types of ownership status (7 university hospitals, 8 public hospitals and 7 private hospitals)(16) were determined. In addition to these hospitals, 28 family practice centers (primary healthcare facilities) from 7 regions (3 per each region) were included in the pilot project. Inclusion of all these healthcare facilities was consider an important component of end-to-end pathway analysis of health condition**s** (17).

Forming standard and indicator pools for selected health conditions

Experts who had previous experience in evaluation of healthcare quality were selected to review information collected on the three medical conditions (18). Study groups organized workshops with branch specialists, IT professionals and hospital managers. After the workshops and reviews, patient pathways and clinical quality indicators for each condition were determined. The groups reviewed the international practices and collected indicators that had been used in previous projects reported in literature. Subsequently, each group arrived at a long list of standards and indicators for each of these medical conditions.

Eliminations from indicator pools to reach a final standard and indicator list

A balance between process and outcome indicators was considered when eliminating the indicator pool. Ease of access to data was used as an elimination criteria. Indicators, which could be collected with current information systems were, included so that an additional burden wouldn't be added to recording responsibilities of practitioners. Data requirements were added only if they were vital for evaluating clinical quality. Using this balanced compound of indicators that were easily accessible by information systems, the indicator pools were created. A limited number of indicators for the pilot project were targeted to collect and analyze data conveniently. Hip and knee replacement, maternity, stroke, coronary heart disease and diabetes were selected as fields to be targeted in the first phase (19).

Following steps of project

Recording, collecting and analyzing data will be possible with health information technology systems. Highly standardized and well-organized hospital information systems of Turkish hospitals enabled constructing this recording and reporting mechanism.

The information technology process was planned as follows. Family practitioners and hospital doctors record data required by indicators to current systems. Family Medicine Information Technology Systems (FMITS-AHBYS) and Hospital Information Technology Systems (HITS – HBYS) transfer s data to a common data warehouse. Subsequently, indicators that were produced could be analyzed and clinical quality reports could be generated**.**

Indicators, which have been agreed upon by the stakeholders, will be added to the final indicator list if they have no recording or reporting problems regarding IT systems. Data that are required for measuring these indicators will be listed in the "Health.Net"(a software which is used for integration of health facility IT systems) data warehouse, which transfers data routinely from all of the health institutions for continuous clinical quality information updates.

Conclusion

This program should be approached as a national initiative and considered a part of the system for quality in health in Turkey. In order to monitor and evaluate healthcare quality in Turkey, a clinical quality system must be added to service quality monitoring systems and performance evaluation system**s**.

Lesson learned during pilot program of this project can be summarized as following:

1. Sponsorship: This type of project could not be achieved without top-level sponsorship. In this project, all steps were reported to the Minister of Health of Turkey. He took briefings from teams after each of the 7 workshops.

2. Coordination of different departments: The project necessitated collaboration of different General Directorates such as Health Information Technology, Public Hospital Institute, Public Health Institutes…

3. Project team members from different departments: This helped communication between institutions and departments.

4. Multidisciplinary teams from different backgrounds contributed positively.

5. Consultancy that brings other countries' experience: An expert from England consulted on this project.

6. A department must be devoted to this initiative for sustainability.

7. Proper use of information technology systems: maturity of health IT systems helped with the success of the project.

From date of publication of this paper, the project was continuing in 6 branches (coroner heart disease, stroke, hip replacement, maternity and delivery, knee replacement, and diabetes) and becoming widespread to most of the health institutions. In the later stages of the program, indicators would be identified within the scope of different clinical branches and health conditions by taking into particular consideration the priorities of society and health policies into consideration.

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