

Executive Summary

1. Background and Objectives

Many countries already have their own national healthcare quality indicators (hereafter HQIs) in place and the OECD also has published global HQIs. However, In Korea, there is no national HQI except for several clinical HQIs which are developed by some institutions, academic associations and hospitals. This study aimed to establish conceptual framework of and develop national HQIs, ultimately assisting continuous monitoring of the level of healthcare quality in Korea. Specific objectives are as follows;

- Map and analyze the HQIs used in Korea, OECD, and 6 countries
- Make set of national HQIs based on mapping results, surveys and expert opinions, and
- Publish annual national HQIs report
- Establish a clearinghouse for HQIs to make it easy to access the current Korean indicators

2. Method

1) Collecting and Mapping the HQIs from Korea and abroad

We mapped 256 domestic indicators in the aspects of 12 domains, major diseases, and indicators appear in foreign indicators and identified indicators that need to be developed

2) Making set of national HQIs and publishing annual national HQIs report

First, we organized advisory board consist of policy makers, clinicians,

QI professionals, and had two advisory meetings with them. And we conducted a survey to reflect more various ideas from experts from Nov. 18 to Dec. 11, 2009. The total of 100 subjects including policy makers, clinical practitioners (doctors and oriental medicine doctors), working level staffs in charge of quality control and healthcare policy experts were surveyed and 62% of them responded. Based on two advisory meetings, the survey, and discussion, we selected the total of 29 national HQIs and published the first national HQIs report.

3) Establishing HQIs Clearinghouse

After reviewing 'National Quality Measure Clearinghouse (NQMC)' by Agency for Healthcare Research and Quality (AHRQ) in the US and 'Clinical and Health Outcomes Knowledge Base' by the National Centre for Health Outcomes Development (NCHOD) of the UK, we established a clearinghouse framework and created an online form for Korea HQIs.

3. Results

1) Collecting and Mapping the HQIs from Korea and abroad

Domains in national HQIs for foreign countries were total 12, and effectiveness, accessibility, efficiency, equity, and safety were common. Mapping showed that Korean HQIs had 6 domains such as effectiveness, patient centeredness, efficiency, equity, safety and timeliness.

Major diseases in national HQIs for OECD and 6 foreign countries were myocardial infarction, diabetes, stroke, breast cancer, fracture/osteoporosis, infant fatality, asthma, and congestive heart failure. We ranked Korean major disease with 4 items such as mortality rate, disease burden, prevalence and incidence rates. Myocardial infarction, diabetes, stroke, and cancer were also important in Korea. However, there were some inconsistencies in the level of concern for certain diseases between Korea and OECD and other countries. A huge

inconsistencies are found in the level of concern for gastric diseases, liver diseases, mental diseases (depression and schizophrenia), respiratory diseases (upper respiratory infection, tuberculosis, pneumonia, and COPD), musculo-skeletal disorders (rheumatoid arthritis, herniated intervertebral disc, chronic back pain), etc.

Among 54 major indicators used abroad, 25 (46.2%) are generated or usable in Korea. High consistencies are found in diseases such as neoplasm, myocardial infarction, stroke, pneumonia and other impairments and indicators measuring timeliness such as length of wait.

2) Making set of national HQIs and publishing annual national HQIs report

Six QI practitioners in the first advisory meeting reviewed the mapping results and survey questionnaires, and selected 17 potential national HQIs in both relevance and feasibility

According to the questionnaire survey, the most important domains for Korean national HQIs were effectiveness, safety, patient centeredness, appropriateness, equity, and timeliness. The HQIs were evaluated in three parts such as importance, scientific soundness, and feasibility. Weights on each part were 45% in importance, 28% in scientific soundness and 27% in feasibility. 53 indicators not only belonged to major disease and but scored 3.5 and above (up to 5) in all three parts. 9 indicators showed higher than 3.5 in importance but lower than 3.5 in either scientific soundness or feasibility.

With the second advisory meeting, domains that made final selections were effectiveness, safety, patient centeredness, efficiency, timeliness, and equity. Considering lack of indicators in equity, this study used the other five domains mostly in derive the list of major diseases and indicators. Finally 29 indicators were chosen as a Korean national HQIs (Table 1).

Table 1. Final Korean national HQIs

I. Effectiveness	<ol style="list-style-type: none"> 1. Cancer <ol style="list-style-type: none"> 1.1. Relative Five year survival rate (gastric, lung, colorectal, liver, breast and cervical cancer) 1.2. Cancer screening test (gastric, colorectal, liver, breast and cervical cancer) 2. Stroke <ol style="list-style-type: none"> 2.1. Stroke 30 Days in-Hospital Mortality Rate 2.2. Stroke Readmission Rate within 365 Days 2.3. Activities of Daily Living (ADL) Three Months after Stroke 3. Diabetes mellitus <ol style="list-style-type: none"> 3.1. Diabetes Patients Receiving Three Recommended Services : HbA1C, Retinal exam, Renal exam 3.2. Diabetes Patients Receiving Lower Extremity Amputations 4. Myocardial infarction <ol style="list-style-type: none"> 4.1. Myocardial Infarction 30 Days in-Hospital Mortality Rate 5. Respiratory diseases <ol style="list-style-type: none"> 5.1. Influenza Vaccination for Adults over 65 5.2. Completion Rate of TB Treatment 5.3. Pneumonia Patients Receiving Antibiotics within 8 hours after Arriving at Hospitals 6. End-stage renal disease <ol style="list-style-type: none"> 6.1. Hemodialysis Patients with Urea Reduction Ratio 65% or Higher 7. HIV/AIDS <ol style="list-style-type: none"> 7.1. New HIV and AIDS cases 8. Maternal and Child Health <ol style="list-style-type: none"> 8.1. Coverage for Basic Vaccination of Children 8.2. Incidence of Vaccine Preventable Diseases 8.3. Neonate and Infant Mortality Rate Per 1,000 Live Births 9. Mental Health <ol style="list-style-type: none"> 9.1. Suicide Rate among General Population
II. Safety	<ol style="list-style-type: none"> 1. Healthcare Acquired Infection Rate <ol style="list-style-type: none"> 1.1. Device-related Healthcare Acquired Infection Rate 1.2. Risk Adjusted Surgical Site Infection Rate 2. Transfusion Reaction 3. Decubitus Ulcer Rate 4. Postoperative Hip Fracture
III. Patient Centeredness	<ol style="list-style-type: none"> 1. Communication with Healthcare Workers 2. Overall Satisfaction and Willingness to Recommend
IV. Efficiency	<ol style="list-style-type: none"> 1. Caesarean section rate 2. Average Length of Stay: in-Patient Care 3. Antibiotics Prescription for Upper Respiratory Tract Infections
V. Timeliness	<ol style="list-style-type: none"> 1. CT/MRI Scan within 24 Hours After Hospital Admission of Acute Stroke Patients 2. Length of Stay in ER for Three Major Emergent Diseases

3) Establishing HQIs Clearinghouse

Clearinghouse was consist of six different elements such as title, classification, description, quality, notes and tables / figures (Table 2). Figure 1 shows the on-line clearinghouse.

Table 2. NECA Clearinghouse framework for HQIs

Title	
Classification	Diseases / Symptoms Kind of Service Domain Structure / Process / Outcome Healthcare needs Subjects by gender Subjects by age Place where services provided
Description	Definition Rationale Goal Measures Numerator Denominator Variables needed Source Developer Funding source(s)
Quality	Representativeness Completeness Units
Notes	
Tables / Figures	



Figure 1. On-line clearinghouse

4. Conclusion and Suggestions

From the study, domains for national HQIs are established as effectiveness, safety, patient centeredness, efficiency and timeliness. 29 national indicators are selected in five domains. Selected indicators are not limited to ones currently in use domestically. They also include indicators that need future developments identified through mapping the indicators of OECD and abroad. Most current Korea HQIs belong to domains of effectiveness, efficiency and timeliness, so it is necessary to pay attention to more HQIs on the safety and patient centeredness. And this is the first time to set up the conceptual framework of national HQIs. Therefore, it is needed to continue refine the national HQIs and publish annual report on national indicators with a monitoring system.