What HIRA does

Health Insurance Review & Assessment Service (HIRA) ensures to build a sustainable and high-performing healthcare system in Korea. HIRA collects and connects the health data across the country and then utilizes data for further use to create values in health. HIRA shares its knowledge and experiences with international communities to bring Universal Health Coverage to the world.

Sustainable Health Financing

- We design and implement the healthcare provider payment systems
- We design the health benefits package
- We conduct the claims review to evaluate healthcare costs
- We re-review claims and providers via a follow-up review and on-site investigation

Excellence in Quality Healthcare

- We use Quality Assessment to improve quality of care
- We encourage providers to take more steps toward quality improvement
- We designate tertiary hospitals with quality assessment results

Maximizing the Value of Health Data

- We collect, connect, and utilize nationwide data in healthcare
- We play a key role in creating added value
  - Drug Management (KPIs / DUR)
  - Health Resources Management
  - Healthcare Utilization Monitoring Dashboard

Bringing Sustainable Universal Health Coverage to the World

- We collaborate with various international organizations
- We provide consultation and capacity-building programs
  - Expert Consulting
  - Capacity Building Program

HIRA: A people centered approach

HIRA puts the highest priority on people. HIRA is committed to improving access to care and promoting healthier and happier lives for people.
HIRA strives toward the achievement of Universal Health Coverage and the betterment of healthcare services worldwide.

HIRA stands at the center of robust healthcare system and responsive e-government system in Korea.

In late February, Republic of Korea was the country with the second-highest COVID-19 infections. But Korea managed to flatten the curve with the robust National Health Insurance system. Korea first introduced its health insurance in 1977. Then in 1989, only 12 years later, Korea achieved Universal Health Coverage for all citizens. In 2000, the Health Insurance Review & Assessment Service (HIRA) was founded to conduct expert claims review and quality assessment of the national health insurance system.

HIRA has always played an important part in the ongoing development of Korea’s healthcare systems. HIRA employs an integrated ICT system to ensure that the vast and various work we do is conducted effectively and efficiently. HIRA sets the scope and standards of services covered by National Health Insurance, efficiently manages health resources, and evaluates the cost and quality of healthcare services. We collect and connect the health data across the country and then utilize data for further use to create values in healthcare.

On top of that, HIRA has put this system to use in its response to the COVID-19 pandemic. With the nationwide data aggregated from all healthcare providers and patients, HIRA is dedicated to detecting early, preventing the spread and responding quickly to surge capacity of healthcare.

HIRA will continue to accelerate the digital innovations and transformation of national health insurance to prepare for the New Normal. Also, to deal with future pandemic crisis, HIRA plans to integrate all data in healthcare from a wide variety of sources on a single platform to allow for more swift and efficient response.

HIRA would like to now actively contribute to the greater international community by sharing the experience that we have built up throughout our long history. In doing so, we hope to contribute to achieve sustainable Universal Health Coverage across the world so that all people might enjoy a healthier life. HIRA is always here for you, and we look forward to your continuous interest and support.

Best Wishes

Sun Min Kim, M.D., Ph.D.
President, Health Insurance Review and Assessment Service (HIRA)
Republic of Korea
The National Health Insurance of Korea

Korea’s National Health Insurance (NHI) system operates under 3 major acting bodies: The Ministry of Health and Welfare (MOHW), the National Health Insurance Service (NHIS) and the Health Insurance Review & Assessment service (HIRA).

The MOHW oversees the National Health Insurance system and supervises its two main pillars: the NHIS and HIRA. The NHIS is in charge of eligibility management and the collection of insurance contributions. HIRA is responsible for setting the scope and standards of services that are covered by the NHI, evaluating the cost and quality of healthcare services and monitoring and managing a wide range of health resources in a centralized way.

What sets the Korean NHI system apart

Korea can collect comprehensive data in healthcare at the national level. This is possible because Korea legally requires that all people and healthcare providers participate in its single-payer insurance system. On top of that, the fee-for-service (FFS) payment system that has been the standard payment model for outpatient care and the majority of inpatient care allows for the collection of a wide range of healthcare data from claim submissions. By means of its exceptional ICT system, HIRA is able to collect, connect, and utilize health data from all across the country.

HIRA has built and operated systematically connected network with healthcare providers, the government, and relevant organizations.
What HIRA pursues

Sustainable Health Financing

1) We design and implement the healthcare provider payment systems

Korea primarily uses a Fee-For-Service (FFS) payment system in which fees for each service are unbundled and paid separately. HIRA functions to calculate the “Resource-Based Relative Value Scale (RBRVS)” which acts as the basis for FFS pricing. The RBRVS of a procedure is comprised of three base components: physician work, practice expense, and risk (malpractice). The resulting RBRVS can then be multiplied by the conversion factor (unit price) to arrive at a monetary amount.

Standard-setting and operation of benefit criteria

- **Fee-For-Service Payment system (using Relative Value Scale)**
  - Since the adoption of medical insurance in 1977, FFS has been the basic payment system in Korea.
  - Consisting of procedure (8,699), drug (23,989), medical material (31,373) as of January 2020

- **DRG**
  - Inpatient
  - 1. 7 disease groups
  - 2. New DRG (pilot)

- **Per-diem**
  - Inpatient
  - Per-diem payment for long term care hospital & hospice
  - Outpatient
  - Per visit payment for public healthcare institution

In order to utilize health resources more efficiently, the National Health Insurance employs a variety of payment systems to supplement the FFS that is in place. These include a Diagnosis-Related Group (DRG) system for 7 disease groups, a per-diem rate system (for long-term care hospitals & hospice), and a flat per-visit rate system (for public healthcare institutions). Korea also operates a new DRG system, known as the Korea Case Payment System, which is an alternative model that blends the positive aspects of both the FFS and DRG to reap the benefits of both systems.

2) We design the health benefits package

HIRA designs the health benefits package used in the National Health Insurance of Korea. HIRA determines what items are covered, and sets the scope, criteria, and costs of health services (including procedures, drugs, and medical supplies).

**NHI Coverage decision process: medical procedure, medical supply**

- **Committee for new health technology assessed 0.5% days**
- **Coverage application for new health technology or new medical supply**
- **Working level review**
- **Assessment by expert committee**
- **Report to MDH**
- **National Health Insurance Policy Deliberation Committee**
- **Notification of MDH**

- **Step 01**: Safety and efficacy approval
- **Step 02**: Economic evaluation (effectiveness, cost-effectiveness)
- **Step 03**: Appropriateness of benefit coverage (clinical validity, disease severity, social benefit)
- **Step 04**: Comprehensive evaluation (coverage, RBRVS, selective co-payment)

**NHI Coverage decision process: drug**

- **Pharmaceutical company**
- **Applying for new drug listing**
- **Working level review**
- **Pharmaceutical benefits Committee**
- **Report to MDH**
- **NHI Negotiation of drug price**
- **National Health Insurance Policy Deliberation Committee**
- **Notification of MDH**

- **Step 01**: Clinical validity approval
- **Step 03**: Appropriateness of benefit coverage (benefit provision principle, NHI budget impact)
- **Step 02**: Cost-effectiveness (economic evaluation)
- **Step 04**: Notification of review / reporting (NHI, pharmaceutical company/MDH)
3) We conduct the claims review to evaluate healthcare costs

HIRA conducts the claims review to check whether the healthcare services on the claim are compliant with the predetermined criteria in order to prevent waste and keep healthcare costs affordable. Claims review is conducted to verify that healthcare services that are provided are clinically valid, and that claimed costs are accurately calculated according to the NHI benefit criteria. After 3 step-claims review is completed, HIRA submits the results to the NHIS where reimbursement for providers is processed. In 2019, 1.5 billion cases were reviewed and USD 1.4 billion was saved (1.7% of the total claimed benefit of USD 81.2 billion).

4) We re-review claims and providers via a follow-up review and on-site investigation

* Re-check Process
HIRA conducts follow-up re-checks on items not included in individual case reviews. This includes review of select time-specific, patient-specific, and inter-institutionally shared items.

<table>
<thead>
<tr>
<th>Examples</th>
<th>Time-specific</th>
<th>Patient-specific</th>
<th>Inter-institutional</th>
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<tbody>
<tr>
<td>Determining whether specific diagnostic tests are administered in excess over a given period of time</td>
<td>Drug shopping or overlapping drug prescriptions</td>
<td>Duplicate claims for health professional's consultation fees</td>
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* On-site investigation
To supplement the claims review process, HIRA employees visit healthcare providers to make on-site investigations. On-site investigation is conducted to check facts and verify the legality of claims at selected providers with a high probability of fraudulent and false claims on site of the providers. On-site investigations enhance the review process and help prevent false and fraudulent claims. It also promotes a sound claims submission culture, prevents loss for the insurance fund, and protects the public’s entitlement to coverage. In 2019, USD 28 million was taken back from 983 providers.

The Reform of the Review & Assessment System

In the past, HIRA conducted claims review on an individual claim-case basis. However, the drastic rise in health insurance expenditures due to an aging population and the increase in items examined in the review process as a result of coverage expansion policies have made it difficult to complete all individual claims reviews within established statutory periods. To confront these problems, HIRA has striven to reform their review system into one that comprehensively evaluates quality and cost together in relation to the particular characteristics of patients and healthcare institutions from a clinical perspective. With the active involvement of the medical community, HIRA was able to implement a by-provider Analytical Claims Review system that factors in cost and quality, as clinical validity.

On-site investigation process

1. Recognition of fraudulent claim
   - Fraudulent claim detection system
   - Report to HIRA
   - Report to NHIS
   - Report to external agencies (police, prosecutor, etc.)
   - Collect civil complaints, etc.

2. On-site investigation
   - Select target providers
   - Conduct investigation
   - Calculate drawback amount
   - Get feedback from the provider
   - Administrative measures

3. Post-management
   - Report violations of other law
   - File a charge and make an announcement
   - Enforcement monitoring
   - Management of history
   - Administrative litigation
What HIRA pursues

Excellence in Quality Healthcare

1) We conduct quality assessment to improve quality of care
At HIRA, our Quality Assessment (QA) measures the quality of care with the intent of preventing the overuse, underuse, or misuse of healthcare services of providers. At the same time, it aims to reduce the variability of quality between individual healthcare providers, ultimately resulting in more stable and consistent provision of healthcare services nationwide.

HIRA assesses the quality of: cancer care, acute disease care, infectious disease care, mental health care, medical procedures, provider-level items, and patient experience. HIRA then publishes the review results on HIRA’s website and notifies the healthcare providers, while also providing support for quality improvement practices. Additionally, some items qualify for the Pay-for-Performance Programs, granting incentives. Finally, review results also influence a variety of other activities, including the quality improvement grant program, hospital designation evaluations, and claims review.

2) We encourage providers to take more steps toward quality improvement
HIRA has introduced a pay-for-performance system called the Value Incentive Program (VIP) to further promote improving the quality of care. Providers that receive high grades and show significant improvement receive incentives, while scoring under acceptable thresholds results in the issuing of disincentives. Additionally, HIRA provides various support programs to providers for voluntary quality improvement, such as consulting and training courses.

HIRA has established a quality assessment grant program for tertiary hospitals and general hospitals. These healthcare institutions are evaluated according to six categories: healthcare quality, patient safety, public interest, healthcare delivery system & support, education & training, and R&D. Based on these categories, healthcare institutions are subjected to a comprehensive evaluation of their overall quality of service. The results are then used to provide compensation according to the grade.

3) We designate tertiary hospitals with QA results
Quality Assessment results are used in the designation of tertiary hospitals where specialized services are offered for patients with serious conditions. The objective of designating such tertiary hospitals is to enable the efficient allocation and utilization of health resources by establishing a reliable healthcare delivery system alongside logical patient assignment according to the severity of illness. Tertiary hospital designations are conducted by evaluating medical specialities (departments), training competency, health resources (workforce, facilities, & devices), patient composition by disease group, and overall quality of care.

![Graph showing Number of Indicators by Domain and Provider Type](image-url)

- **Antibiotic use for the common cold**
  - 2002
  - 2013
  - Acute stroke mortality rate
  - 2011
  - 2013

- **Number of indicators by domain**
  - Patient-centredness
  - Efficiency
  - Integration of care (continuity of care)
  - Equity

- **Number of indicators by provider type**

30th January 2020
What HIRA pursues

Maximizing the Value of Health Data

1) We collect, connect, and utilize nationwide data in healthcare
HIRA collects, connects and utilizes data in healthcare about the cost & quality of healthcare services, drug use, and health resources for the entire population and providers of Korea

Drug Management (KPIS/DUR)
HIRA collects, connects, and utilizes all of Korea’s drug data through two systems. First, HIRA assigns a standard code to all drugs in Korea to track and trace them in the market. The Korea Pharmaceutical Information Service (KPIS) is then used to manage all drug distribution data across various stages—from import and production to patient consumption. Second, the Drug Utilization Review (DUR) system provides real-time information in order to minimize and prevent the unsafe use of drugs at the time of prescribing and dispensing.

Health Resources Management
HIRA collects information on a wide range of health resources such as workforce, medical devices, and facilities across the country. HIRA utilizes this health resource data in a variety of ways, including claims review, quality assessment, on-site investigation, and benefits package design.

\* Workforce: Number and type; Hiring & resignation data of doctors, nurses, pharmacists, and other healthcare professionals
\* Medical Devices: Name, lot number, and price; Certification number of devices such as MRI, CT, PET, and Mammography machines
\* Facilities: Number and type, including beds, wards, ICUs, and Negative Pressure Isolation Rooms

Healthcare Utilization Monitoring – Dashboard
The Healthcare Utilization Monitoring system is used to monitor healthcare utilization at the national level and updated weekly. The system is used to predict fluctuations, detect abnormal patterns in health expenditure and provide useful information for a data-driven health policy making.

2) We play a key role in creating added value
HIRA collects data from various stakeholders including healthcare providers, pharmaceutical companies, and the government, then connects and integrates its own data to create the Big Data in healthcare.

HIRA opens diverse channels for Big Data Use to further improve the healthcare sector, while leading the research and development of promising technologies, ideas, and new values.
What HIRA pursues
Bringing Sustainable Universal Health Coverage to the World

1) We collaborate with various international organizations

**The OECD**
HIRA has played an active role in the OECD Health Committee to serve as a leader in global health, and has represented the Republic of Korea in the OECD Health Care Quality and Outcomes (HCQO) Working Party since 2007. In this position, HIRA leads the way in developing, collecting, and comparing statistical indicators based on comparable data sets to create and share a robust picture of healthcare quality across various nations. HIRA also produces health statistics from Korea that are published in the OECD’s official publication ‘Health at a Glance’. These cross-country comparisons are then used for policy-making purposes in nations all around the world.


**The World Health Organization (WHO)**
HIRA’s expert improved the quality, safety, integration, and people-centeredness of health services around the world. This direct cooperation along with HIRA’s successful contributions to improving global health thus form a bridgehead between HIRA and other international organizations.

www.who.int/safesec/evsafety/measurement/en/

**Joint Learning Network**
HIRA organized and hosted the Medical Audit Collaborative (MAC) for the Joint Learning Network for Universal Health Coverage (JLN). HIRA worked with the MAC to develop a practical toolkit for how to design, implement, and strengthen medical audit systems to improve quality of care. In addition, HIRA has released a detailed case study to act as a reference point for other countries and to share its institutional memories.

www.jointlearningnetwork.org/what-we-do/medical-audits-for-quality-health-care/

2) We provide consultation and capacity-building programs

**Expert Consulting**
In cooperation with multilateral development banks, HIRA provides expert consulting services to help countries around the world improve their health systems.

- **Colombia (2016-2017)**
  - Supporting Health System Governance and Financial Management in Colombia
  - (2019)
  - Payment Certification Agency (PCA) Capacity Building Consultancy

- **Bahrain (2017-2019)**
  - Cooperation Project for Implementing Bahrain National Health Insurance System
  - Contribution of ICT-based health insurance management system

- **The Philippines (2018)**
  - Technical Assistance for the Improvement of Philippine Health Insurance Corporation (PHILHEALTH)

- **Peru (2013-2014, 2016)**
  1. Systematic Use of Information to Improve Health Systems Governance
  2. Support for a Health Information Management System for Transparency and Accountability

- **Malaysia (2018)**
  - Supporting Development of Framework on Medical Audit System

- **Indonesia (2014)**
  - Systematic Use of Information to Improve Health Systems Governance

**Capacity Building program**
- HIRA International training program: In this annual training course, HIRA invites healthcare experts from the world and shares its knowhow of review and assessment.
- HIRA International symposium: An annual symposium to discuss global healthcare issues with experts

Since 2013, HIRA has shared its expertise and experience with the world through international training courses and symposiums. As of 2019, 47 countries and about 300 individuals have participated in these events.
HIRA in response to COVID-19

Building off of the MERS crisis in 2015, laws and systems were put in place to rapidly respond to the threat of emerging epidemic outbreaks. HIRA utilized tools and skills that enable a rapid and flexible approach to dealing with COVID-19. With data from patients and providers nationwide, HIRA contributes to preventing spread, detecting and treating cases early, and responding quickly to the surge capacity of the healthcare system.

Our ICT system is connected with all healthcare facilities and pharmacies across the country for claims and reimbursement purposes. HIRA has widened the use of this interconnected system piece-by-piece over the last several decades, developing it into a multifunctional network. We have taken full advantage of the existing systems and can adapt their functionality swiftly according what is needed during an outbreak.

![Staff watch thermal imaging camera screen for checking body temperature in Seoul National University Bundang Hospital.](image)

1) Detection of high-risk groups using DUR/ITS
Using the Drug Utilization Review (DUR) and International Traveler Information System (ITS), HIRA can detect and track high-risk groups during the COVID-19 pandemic and thus prevent spread within healthcare providers at the reception, consultation, prescribing and dispensing stages. This includes identifying groups such as recent overseas travelers, people who have had close contact with confirmed patients, and confirmed patients who are released from quarantine.

2) Expanding health benefits package rapidly
The Korean government and NH11 together cover the entire cost of COVID-19 testing and treatment for all citizens. In addition, HIRA greatly expedited the process of expanding health benefits for diagnostic testing and alternative therapeutic drugs.

*Diagnostic testing: 30-60 days → 2 days
**Therapeutic drugs: 107 days → 1 day

3) Responding quickly to surge capacity through resource reallocation
HIRA operates a health resource monitoring system to provide a daily snapshot of the resources being used by critical COVID-19 patients, including negative-pressure isolation rooms, ECMO machines, and ventilators. This system can identify hospitals with available resources and relocate patients in critical condition in a timely manner. HIRA also can actively track and trace drug distribution data across the country to supply therapeutic drugs where they are needed the most.
Preventing transmission of COVID-19

1) Stabilizing the protective face mask supply
HIRA implemented a Mask Supply Inventory System to stabilize the protective face mask supply. Although face masks are not covered by the national health insurance scheme, the Korean government maximized the use of existing HIRA systems to develop a solution to the growing concerns and demands from the public over face mask shortages.

2) "National Safe Hospital" designation (COVID-19 Protection Hospital)
HIRA designated "National Safe Hospitals" (or COVID-19 Protection Hospitals), where respiratory patients are separated from other patients during the entire care process, from hospital visits to hospitalization. These designated National Safe Hospitals ensure three essential things: patients can receive essential health services from hospitals safely, health professionals can provide well-organized services, and the government can safeguard the resilience of the health system.

National COVID-19 Data Warehouse

1) National COVID-19 Patient Data Repository
HIRA has developed a national COVID-19 patient data repository system through the combined effort of all the major parties involved in handling the pandemic, including the Korea Disease Control and Prevention Agency, central and local governments, and healthcare providers nationwide. This system allows us to centralize how we collect data and make decisions. Its primary functions are to allocate patients to appropriate levels of care by severity of illness, monitor patient status in real-time, and adjust the national COVID-19 response measures as necessary.

2) COVID-19 Global Research Collaboration Platform
HIRA has shared the world’s first de-identified nationwide COVID-19 patient database with domestic and international researchers; the COVID-19 Global Research Collaboration Platform. With Korea’s NHI system acting as a foundation, HIRA collected and processed real-world data sets to build this robust platform. To date, 129 projects from 32 countries have completed research with HIRA’s data (as of October, 2020).

4) HIRA’s efforts for responding COVID-19