

KOREA COUNTRY BRIEF

# Sustainable Immunization Financing in Asia Pacific

February 2018

BREAKING NEW GROUND

THINKWELL

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## ACRONYMS

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<b>BCG</b>	Bacille Calmette-Guerin	<b>NHIS</b>	National Health Insurance System
<b>DTP</b>	Diphtheria-Tetanus-Pertussis	<b>NIP</b>	National Immunization Program
<b>GDP</b>	Gross Domestic Product	<b>NITAG</b>	National Immunization Technical Advisory Group
<b>HepA</b>	Hepatitis A	<b>OECD</b>	Organization for Economic Co-operation and Development
<b>HepB</b>	Hepatitis B	<b>OPV</b>	Oral Polio Vaccine
<b>HFRS</b>	Hemorrhagic fever with renal syndrome	<b>PCV</b>	Pneumococcal Conjugate Vaccine
<b>Hib</b>	Haemophilus influenzae type B	<b>PPS</b>	Public Procurement System
<b>HIRA</b>	Health Insurance Review and Assessment Service	<b>PPSV</b>	Pneumococcal Polysaccharide Vaccine
<b>HPV</b>	Human Papilloma Virus	<b>Td</b>	Tetanus-Diphtheria
<b>HTA</b>	Health Technology Assessment		
<b>IPV</b>	Inactivated Polio Virus		
<b>JE</b>	Japanese Encephalitis		
<b>KACIP</b>	Korean Advisory Committee on Immunization Practices		
<b>KCDC</b>	Korean Center of Disease Control and Prevention		
<b>MERS</b>	Middle East Respiratory Syndrome		
<b>MR</b>	Measles-Mumps-Rubella		
<b>MoHW</b>	Ministry of Health and Welfare		
<b>MoSF</b>	Ministry of Strategy and Finance		
<b>NECA</b>	National Evidence-Based Healthcare Collaborating Agency		

## Executive Summary

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### Changing Demographics

- The Korean middle class is shrinking, requiring more assistance from the government in covering healthcare costs and focusing conversation in the sector around the national insurance mechanism.
- The fertility rate is the lowest of the OECD countries, propelling Korea towards being the second most aged population by 2050. This demographic shift will require strong investments in healthcare and welfare programs and may push health services towards those that benefit the aged.

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### Strong Immunization Performance

- The immunization program currently includes coverage for 17 different vaccine preventable diseases, including a number of new and underutilized vaccines as well as vaccines along the life course for adults.
- Vaccines in the national program are available to all Koreans free of charge in all public and private facilities, though 90% of delivery is done in the private sector. Facilities procure vaccines accepted in the national program and are reimbursed by provinces at a set rate upon delivery.
- Provinces play a major role in the immunization program as managers and co-financiers with the national government.
- Coverage of the national immunization program is nearly 100% across vaccines, with some exceptions for new and underutilized vaccines which continue to grow over time.
- Though Korea has a national insurance mechanism with universal coverage, the immunization program remains a vertical program under the Korean CDC.

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### Future Considerations

- Korea's main interest is security of supply, which drives the decision-making and financials of the Korean immunization program. To push this agenda, Korea accepts and procures multiple brands in the national immunization program and focuses on private market performance of vaccines prior to their inclusion into the NIP in efforts to assure product security. There is also a national push to increase local production of vaccines through the Vision 2020 policy, both for economic growth as well as the supply security benefits – a move that encourages multinational companies to partner locally, but may have limited impact on product choice at the facility level.
  - Korea is working to further expand coverage of services under its national health insurance system, growth that could affect the immunization budget, though it functions as a separate program. The focus of public spending on healthcare could open opportunities for public health programs as more money flows into system and the national health insurance purchaser works to create efficiencies by promoting preventive services.
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## INTRODUCTION

**The Republic of Korea's strong economic growth is supporting public investment in the health sector.** Following the Korean civil war, the Republic of Korea invested heavily in economic growth and the strengthening of local industry. Public social services were deprioritized as the government worked to secure its economic standing as an independent state. The gap in public funding during the middle of the 20<sup>th</sup> century opened the door for the private sector to play an important role in health service delivery. Public investment in industry paid off though and Korea's economy grew sharply at the end of the century, playing a starring role in the technology revolution of the 90s. The country has since become a member of the Organization for Economic Co-operation and Development (OECD) and turned its focus towards protecting its population by investing in health and welfare. Absolute expenditures on health by the government has grown over time and the national budget is increasingly being allocated to health and welfare. Between 2012 and 2017 the health and welfare budget grew from 28% of the national budget to 32%.<sup>1</sup> With plans to further ensure financial protection for the population's healthcare needs, even greater public expenditure is expected in the coming years. The budget for 2018 increases this portion further to 34%.<sup>2</sup>

Korea's investment in health has benefitted the national immunization program (NIP) that is continuously growing to provide available vaccines to the population. Uniquely, the program successfully utilizes both public and private facilities to reach high immunization coverage rates and has multiple vaccine brands available under its national program. New vaccines have been steadily added to the schedule over time. In parallel, plans to expand financial coverage under the national health insurance scheme are underway. As such, the health system is contemplating how an expanding national health insurance scheme might relate to the NIP in the future, whether as a competitor for health funds or a house for the NIP package. With ongoing changes to health system financing in Korea, it is an interesting time to assess the sustainability of the program's financing.

This brief is part of a series funded by MSD that analyzes how countries in Asia Pacific, undergoing financial and/or political transitions, prioritize and fund their immunization programs. The brief contains valuable information for all stakeholders interested in promoting sustainable and robust immunization programs and illustrates a variety of ways to engage in realizing this outcome.

## BACKGROUND

### ECONOMIC CONTEXT

**Steady economic growth benefits Korea's expansion of public healthcare.** GDP growth was 2.8% in 2016.<sup>3</sup> This is below the 3.4% average since 2010, but growth is projected to remain stable through 2020 for the world's 11<sup>th</sup> largest economy.<sup>4</sup> Korea has been able to positively harness macroeconomic growth for financing healthcare in recent decades.

**A shrinking middle class demands more investment in health by the government.** Korea's early economic policies following their civil war resulted in the creation of a large

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<sup>1</sup> Republic of Korea (December 29, 2015).

<sup>2</sup> Ibid.

<sup>3</sup> International Monetary Fund (April 2017).

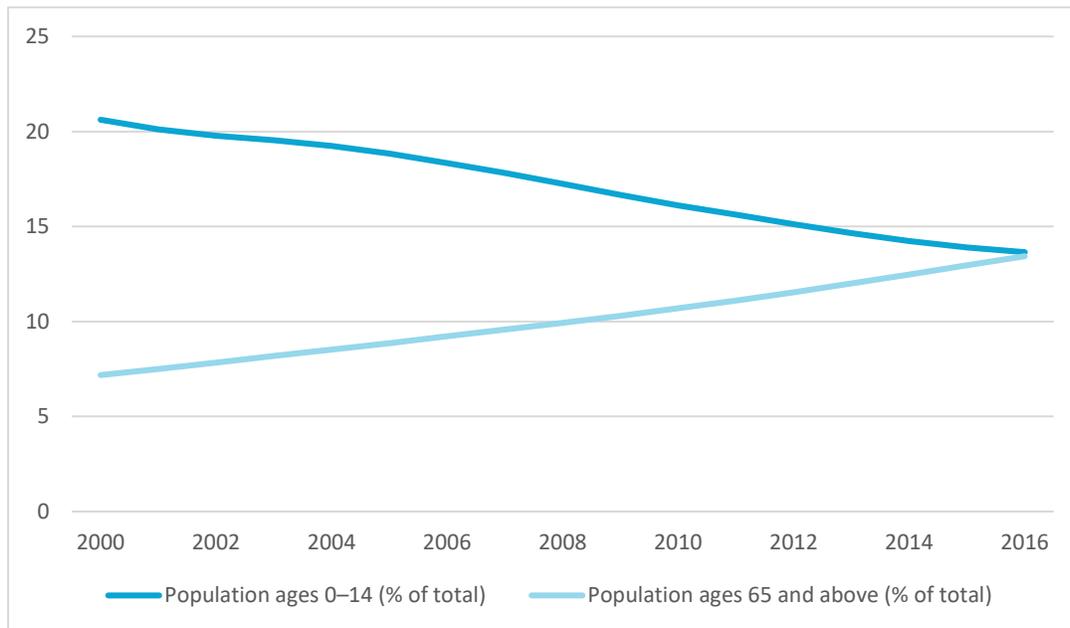
<sup>4</sup> Ibid.

and strong middle class.<sup>5</sup> However, this section of the population is shrinking. National economic indicators, like GDP, continue to grow, but this has not always translated into security at the household level. According to a 2013 McKinsey study, half of all middle-class Koreans risk falling into poverty due to slow income growth and increasing living expenses (including high healthcare and education costs).<sup>6</sup> Household savings rates fell from 20% in 1994 to 3% in 2012, the lowest of the OECD countries.<sup>7</sup> The financial requirements for health and other social investments will need to be covered by the government if the people cannot pay for them.

## DEMOGRAPHIC CONTEXT

**Korea is set to be the second most aged society by 2050, requiring increased resources for health services focused on the elderly.** Korea’s fertility rate is the lowest of the OECD countries at 1.2%, propelling it towards being the second most aged population by 2050 (Figure 1).<sup>8</sup> This demographic shift will require strong investments in healthcare and welfare programs. Noncommunicable diseases account for 82% of the national burden of disease (compared to 3% communicable diseases).<sup>9</sup> The burden of noncommunicable diseases will require a focus of resources towards these services, especially as the population continues to age and more people require these services. Immunizations for further down the life course are recognized quick wins and are often demanded by the aged population. As the power of this population segment grows, opportunities will arise to expand cohorts and add new vaccines applicable to their needs.

**Figure 1. Converging Population Segments**



<sup>5</sup> Asian Development Bank (August, 2010).

<sup>6</sup> Choi et. al (April, 2013).

<sup>7</sup> The Chosunilbo. (April 16, 2013).

<sup>8</sup> Organization for Economic Co-operation and Development (2016).

<sup>9</sup> Institute of Health Metrics and Evaluation (IHME) (2016).

## STRUCTURES AND POLITICAL TRENDS FOR HEALTH

**The new political administration in Korea is investing heavily in expanding coverage under the national health insurance scheme, a move that may not directly affect immunization, but is currently a major focus of health financing discussions.** Korea reached universal health coverage in 1989 and unified public insurance programs in 2000 under a single purchaser – The National Health Insurance System (NHIS). The prioritization of health and welfare has spanned decades and across different administrations. The current government is proposing new reforms for expanded coverage under the NHIS. The expansion, popularly known as Moon Care after President Moon Jae-In, is hoped to be initiated in 2018 and rolled out by 2021. Though immunization is currently a vertical program and not covered by the NHIS, the focus of public spending on healthcare can open opportunities for other public health programs as well.

### Box 1. Financing the Korean Health System:

Healthcare in Korea is mainly financed through the national health insurance system (NHIS). In 2016, the funding sources for the NHIS was mainly beneficiary contributions (85.2%) followed by general tax provision (10.5%) and a small input from the cigarette tax (3.5%). 1.5 million out of the 52.3 million beneficiaries are completely subsidized by the government through the tax provisions (3%)

NHIS payments are paid mainly on a fee-for-service basis with the independent body HIRA (Health Insurance Review and Assessment Service) validating all claims before reimbursements are expended to public and private facilities.

Despite the insurance mechanism, large amounts of health expenditures are out of pocket. 36% of health spending in Korea is done out of pocket, compared to 11% spent by the government and 43% paid in social health insurance contributions (WHO, 2017a). Factors contributing to this are high co-payments for services, a limited benefits package, and a fee-for-service model that incentivizes quantity of service care, amongst others.

(NHIS Training Presentation, 2017)

**Government efforts to put greater decision-making power in the hands of local governments decentralized the implementation of public health programing to the provincial level.** Though local governments often still rely on central fund transfers, an increasing amount of autonomy has been handed down to provinces over time. Some public programing, including immunization, is already placed in the hands of provinces, but there remains room to further the transfer of decision-making power to the local level for other programs. President Moon has aligned his administration to this trend, considering decentralizing the police force and drafting amendments to redistribute more power to the local level.<sup>10</sup> The strong performance of the immunization program may only provide support to further gains in local autonomy.

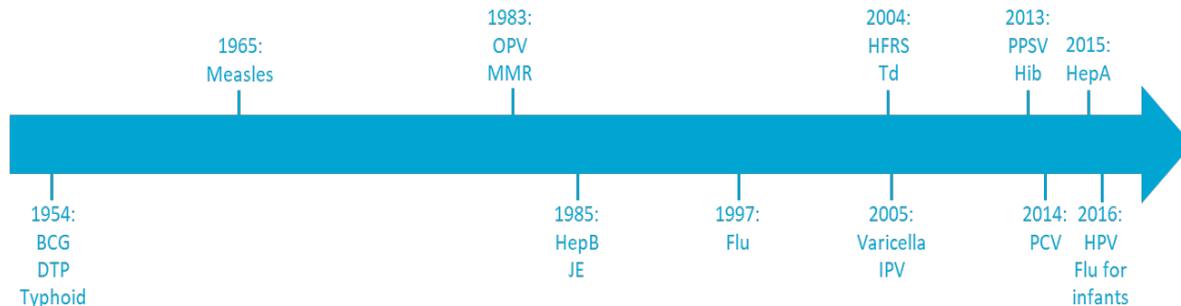
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<sup>10</sup> Rowan, Bernard. (September 26, 2017).

## THE NATIONAL IMMUNIZATION PROGRAM IN KOREA

### Program Snapshot

Figure 2. Vaccine Additions and Regional Comparison of National Immunization Program



Source: Korea Centers for Disease Control and Prevention (2017b).

**The national immunization program is strongly focused on access.** All Koreans have free access to vaccines in the NIP. The program currently includes coverage for 17 different vaccine preventable diseases (Figure 2.),

including a number of new and underutilized vaccines as well as vaccines along the life course for adults.<sup>11</sup> This schedule is extensive when compared to others in the region (14 in Philippines, 12 in Japan, 10 in Thailand, 9 in Singapore, and 9 in Taiwan) (Figure 2). Immunizations can be accessed in public and private facilities, though 90% of services are provided in the private sector. Private infrastructure is expansive and easily accessible, and most health services are delivered there. Easy access has helped to produce high coverage rates. DTP3 coverage was 98% in 2016.<sup>12</sup>

10%

of vaccination is accessed in the public sector

### Program Financing

#### *Sources of Financing*

**The national immunization program in Korea is politically prioritized, receiving strong financial support from the national government as a vertical program.** The Infectious Disease Control and Prevention Act (2011) made the national immunization program a legal priority and requires it to be funded annually through general taxes.<sup>13</sup> In 2015, the government spent \$9.62 per capita on routine immunization (in comparison to other high-income countries in the region, like Taiwan which spent \$3.22).<sup>14</sup> Out of the total US\$490,781,122 spent on routine immunization, over half (US\$263,000,000) was spent on vaccine procurement.<sup>15</sup> The immunization program budget is managed by the Korean Center for Disease Control and Prevention (KCDC). Though Korea has a national insurance mechanism with universal population coverage, the immunization program remains a

<sup>11</sup> Korea Centers for Disease Control and Prevention (2017b).

<sup>12</sup> WHO. (2017c).

<sup>13</sup> Republic of Korea (December 29, 2015).

<sup>14</sup> WHO (2017b).

<sup>15</sup> Ibid.

vertical program and allows for it to be controlled tightly by the central government as a public health program.

**The financing structure for immunization in Korea, separate from the health insurance mechanism, brings together a multitude of actors to deliver the program in a manner focused on access.** Funds are sourced at the district, provincial, and national levels. Provinces have guidelines from the Ministry of Strategy and Finance (MoSF) as to how much of their program budget should be sourced locally, depending on the provincial government’s ability to cover costs. On average costs between national and province-level are split 50-50, though this can vary. Seoul city, both the city government and the districts that it consists of, is responsible for 70% of its local program costs as it is financially feasible for the city. Minimal inputs may come from additional service fees charged at some private facilities. Informants noted that despite it being illegal to charge for immunization, some private facilities may charge a service fee for a visit to their facility.

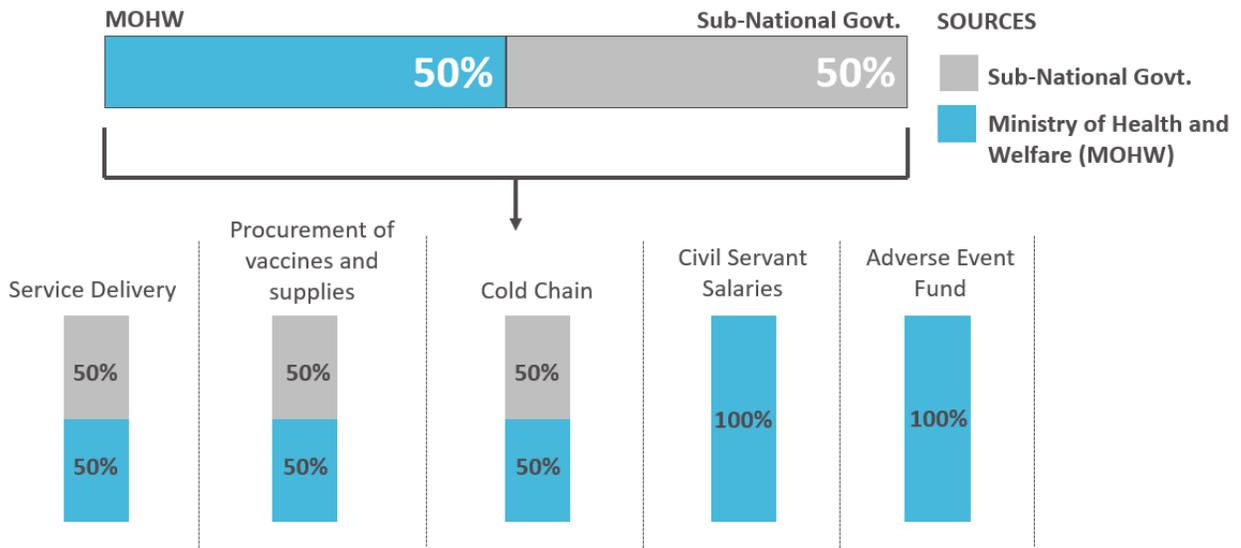
**Table 1. Actors in the National Immunization Program**

Actor	Role
MoSF	Budget Approval
KCDC under the MoHW	Budget and planning for immunization program
Provinces	Develop implementation plan and reimburse facilities for implementation costs
Wholesaler	Contracted party to sell vaccines to public clinics. Autonomy to choose between KCDC approved vaccine brands.
Private Sector Clinics	90% of delivery. Procure vaccines from distributors and have decision-making space as to which products (within the KCDC’s approved list) they provide
Public Sector Clinics	10% of delivery. Procure vaccines from contracted Wholesaler.

*Immunization Expenditures*

**Clear guidelines are set between national and local budgets for the immunization program.** Budgeting for the national program is undertaken by the KCDC with the MoSF and the National Assembly holding authority over the final budget. Once the national budget is finalized, block transfers are made to provinces to be pooled with local funds. The calculation of the transfers takes into account demographics, socioeconomic status, and tax collection policies which are used to determine local capacity to finance public programming. The KCDC budget covers overarching aspects of the program, including staff for program planning and management, marketing and public relations, the national registry, and the adverse event fund. Cost sharing between national and local budgets is directed towards vaccine procurement and immunization service delivery. Though the immunization program is financed through a completely separate structure, it utilizes facilities that receive payments from the NHIS. The NIP may benefit from NHIS payments to facilities which are used to supplement salaries and equipment costs, though these will be impossible to calculate.

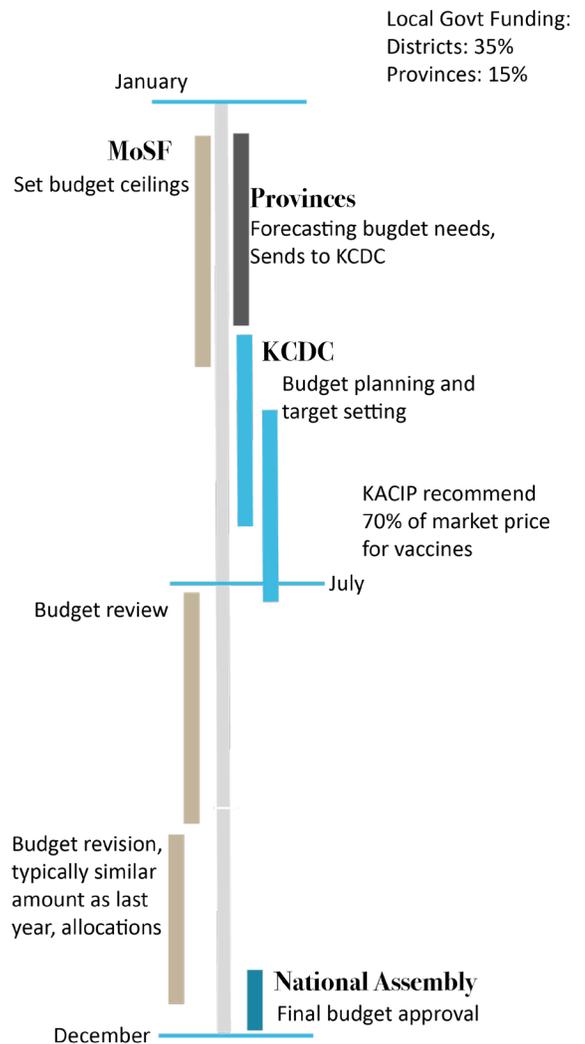
**Figure 3. Who Pays for What in the Immunization Program?**



Note: 90% of immunization delivery is done in the private sector so civil servant salaries have minimal weight on overall program costs.

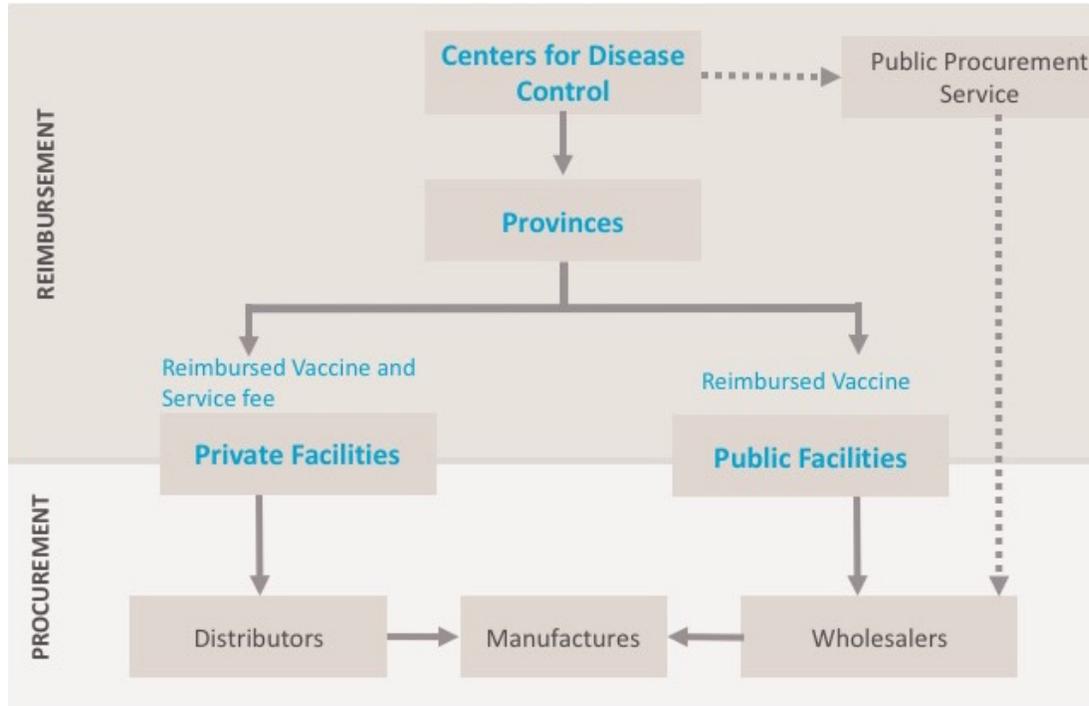
**Figure 4. The Creation of the NIP Budget**

**Expenditure on the immunization program is a complex web that provides high levels of autonomy at the local level (Figure 3).** The process begins with the KCDC which sets national targets and works with manufacturers to set prices for the different antigens, which are referred to as “classes” (rather than the specific branded vaccines). The national immunization program allows for multiple brands within the system so rather than negotiating price for vaccine brand, the prices are set by classes (exceptions are made for the PCV and HPV vaccines which have separate prices by brand due to the higher cost to procure these new vaccines). In the public system, once prices are set by the KCDC, the Public Procurement System (PPS) is given a tender request with the number of doses needed, acceptable brands, and the available budget. Wholesalers then bid on the public service contract. The winning bidder negotiates margins with the different manufacturers and makes decisions between vaccine brands. Procurement thus is often done based on cost savings with the lowest margin winning and the process between manufacturers and wholesalers is very opaque. A high level of interest in security of supply often means that the public system procures from multiple manufacturers for the same class of vaccine. This process is done annually. Public facilities then procure vaccines



from the wholesaler and are reimbursed by the provincial public health centers – an administrative body. There is some brand choice with regards to new vaccines, but traditional vaccines are supplied by the wholesaler without choice of brand offered to the procuring facilities. As public facilities are staffed by civil servants, only the vaccine cost is reimbursed to the facility.

**Figure 5. Who Pays Who (Actors and Relationships)**



Note: Arrows denote the flow of funds. Dotted line denotes tender management.

**Private facilities are also reimbursed with public funds, though their financing process is slightly different.** Private facilities procure their vaccines from distributors that are contracted by manufacturers. They have complete choice between brands that are accepted in the national immunization program and often stock multiple brands to account for patient preference. The prices set by KCDC for the private system are often different from the public system, but there is a set price point that the system is held to. Private facilities are reimbursed by the same provincial public health centers as the public facilities, though they also receive a service delivery reimbursement along with the vaccine procurement reimbursement. This extra financial incentive brings in the private sector infrastructure needed for strong delivery and coverage performance. Good information systems infrastructure across the country supports a strong flow of information and good monitoring, allowing for local control of the national program.

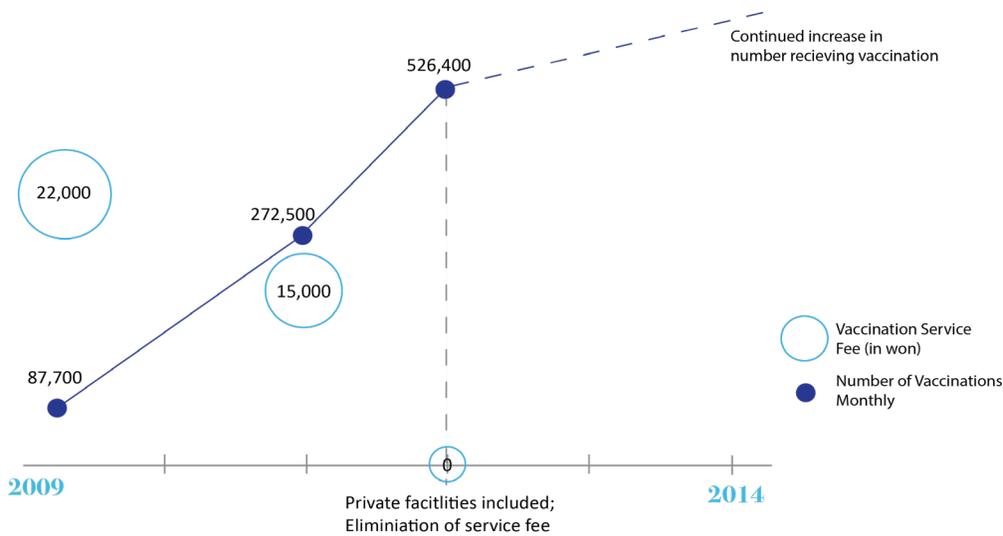
## DEMAND FOR IMMUNIZATION

**There is a high demand from the population for coverage against vaccines.** Coverage rates for vaccines, in and outside of the NIP, are very high. With the exception of HPV

vaccination, coverage is between 96-98%.<sup>16</sup> The HPV vaccination rate has had difficulty reaching these levels and, of its three cohorts (2003, 2004, and 2004), the highest coverage is of the 2004 cohort at 71%<sup>17</sup> Location across the country makes minimal difference. MMR coverage rates in 2016 varied from 97.2% to 98.9% between districts.<sup>18</sup> Even the rotavirus vaccine, which is not in the NIP, has a national coverage rate of around 80%, illustrating strong acceptance and demand for available vaccines.

**The government has worked hard to promote the population’s demand for vaccines.** By developing a comprehensive schedule, minimizing copayments (Figure 6), requiring immunization to enter primary school, and developing a national registry that has a “push” component where parents receive an SMS reminder to go to clinics for vaccinations, the government has successfully promoted high coverage rates. A recent movement to “raise your child naturally” promoted skipping immunizations, but the movement was not widely embraced by the population. Outbreaks, like the recent MERS scare, has only fortified the public demand for vaccines and coverage against communicable diseases.

**Figure 6. Inclusion of Private Sector and Elimination of Patient Copays Increased Demand for Vaccination**



<sup>16</sup> Korea Centers for Disease Control and Prevention. (2017a).

<sup>17</sup> Korea Center for Disease Control and Prevention. (December 2017).

<sup>18</sup> Ibid.

## NEW AND UNDERUTILIZED VACCINES

**Private performance drives the new vaccine prioritization process, but is supplemented by Health Technology Assessments (HTA) and the National Immunization Technical Advisory Group (NITAG).** The strong acceptance of vaccines has promoted a system for NIP inclusion where the KCDC, along with an advisory group, considers private market performance of vaccines as a major factor in decision making (Box 4). The local NITAG, the Korean Advisory Committee on Immunization Practice (KACIP) plays an important role in decision-making for the immunization program. The committee is filled by nominated members from the different patient and consumer groups, practitioner groups, and is chaired by the Director General of the KCDC. Much of the thinking, including recommended introductions and price setting (both for procurement and reimbursement) run through KACIP.

### Box 4. The Role of Evidence and KACIP in Korean Vaccine Introductions

The Korea Advisory Committee on Immunization Practices (KACIP) plays an important advisory role in decision-making for the immunization program, but holds no authority. Recommendations from KACIP are made to the KCDC who have the responsibility to create a program plan, associated budget, and advocate for additions. These recommendations are grounded heavily in private market performance. A vaccine in the private market in Korea must display that a demand for the product exists, that the product adheres to safety needs, and that it offers a stable supply. This evidence can serve as grounds for KACIP to recommend a new vaccine class or a new brand of vaccine for a class already included in the NIP. Due to this process which relies heavily on evidence from the private sector and does not limit brands available to the NIP, there is no systematic utilization of health technology assessments or NECA (the National Evidence-Based Healthcare Collaborating Agency) in the prioritization of new vaccines. HTAs can be requested to illustrate cost-effectiveness, but it is not required. A new long-term strategy drafted by the KCDC includes plans to include HTA in a more formal and transparent decision-making process.

**New vaccines, especially for the elderly, are used for electoral political mileage.** Party platforms have included vaccine additions previously to respond to voters who continue to call for increased health coverage. If a vaccine is written into a political party's pledge at the provincial level, a party member can then write-in the addition to the national budget when it comes to the national assembly and get a new vaccine added to the NIP without support of the KCDC or any further assessment of creating a program for the product. This was done with the adult flu vaccines and the adult pneumococcal vaccines. The upcoming provincial elections in 2018 may provide another opportunity to expand the NIP. There are still remaining cohorts to be covered for flu, a new shingles vaccine, and rotavirus vaccines to consider.

**Local governments can also work outside of the KCDC and the traditional process of new and/or underutilized vaccine additions and add vaccines beyond the NIP for their populations.** Multiple districts added the adult vaccine for pneumococcal prior to its addition to the NIP and currently 3 provinces provide the shingles vaccine to their populations, through local funding for procurement and program costs.

**The national government, beyond the KCDC, has shown strong interest in immunization**

**as well.** There is a current push for investment in biopharmaceuticals in South Korea and the national government is working to build local capacity as a mechanism of economic growth and security of supply. Vision 2020 aims to have 70% of vaccines in the NIP be local products.<sup>19</sup> With the approval of SK's Sky Zostra vaccine in September 2017, 51% of the vaccines in the Korean market are currently local products. The efforts from the government to increase demand for immunization services amongst the

population has helped to build this localization movement. As the government expands the schedule and creates local demand for vaccines, there is a functioning market waiting for local manufacturers to enter. With the market prepared, favorable policies for local products will benefit the sustainable entry of these companies. While entry into the NIP may be supported by the Vision 2020 policy, the majority of procurement is done by private facilities who respond to their patients and prices. Implications at the procurement level are thus difficult to foresee, but multinationals may be inclined to partner locally for the potential benefits of entry into the public market. The government has even expanded their view outside of Korea. A 2013 memorandum of understanding with the International Vaccine Institute in Seoul – itself a signal of Korea's commitment to immunization – agrees to advance global public health and to develop and deliver vaccines and related technologies for developing countries.<sup>20</sup> Korea is also a Gavi donor.<sup>21</sup>

**Korea: Gavi Donor**

**First donation in July 2010**

**US\$15 million: total direct funding 2010-2017**

## **ONGOING CHALLENGES FOR THE CURRENT PROGRAM**

**A protectionist attitude will continue to promote the social welfare of the Korean population, but a shrinking middle class and aging population will threaten fiscal space and demand more from the government.** The ongoing conflict with Democratic People's Republic of Korea has created a strong protectionist attitude when it comes to the wellbeing of the population and the promotion of their culture and people. However, changing demographic dynamics is increasing the pressure on the government to provide for this protectionist agenda. Increasing life expectancy and a low fertility rate has made Korea a quickly aging society. The middle class, a subset of the population that can afford to pay for health services and save for retirement, is shrinking. These ongoing changes will require strong investments in healthcare programs by the government if they are to continue to promote social welfare.

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<sup>19</sup> Ministry of Health and Welfare and the Korea Health Industry Development Institute. (2011).

<sup>20</sup> International Vaccine Institute. (2015).

<sup>21</sup> Gavi. (2017).

### Box 5. NHIS and its Increasing Role in the Health System

The National Health Insurance System of Korea has been developing towards its current state since 1963. The slow expansion of benefits from volunteers (1963) to large private companies (1977) to public servants (1979) to the informal sector (1981-1982) and beyond reached universal health coverage in 1989. Multiple pools of public insurance funds were then consolidated in 2000, creating the NHIS.

The NHIS is extremely popular in Korea though inefficiencies plague the system. 93% of provider payments are made fee-for-service, a mechanism which incentivizes numerous visits and procedures rather than quality or positive outcomes. The lack of gatekeepers in the system means that patients can access care from any level of facility, though copayments differ between levels. Specialized staff at higher levels within the system are more expensive, thus requiring higher payments from NHIS as well. Catastrophic payments are still experienced by some families as high copayments persist and hospitalization rates are high. Efforts to improve the system have been stifled by a strong and influential provider network.

Moving forward, the NHIS hopes to push more preventive measures to cut back on curative spending. 48% of NHIS payments were made to hospitals in 2013. The government also hopes to expand financial coverage to cut back on out of pocket payments. The funds to cover this expansion could be found, in part, by improved efficiency measures if the NHIS can navigate the politics of defying the system's influential doctors.

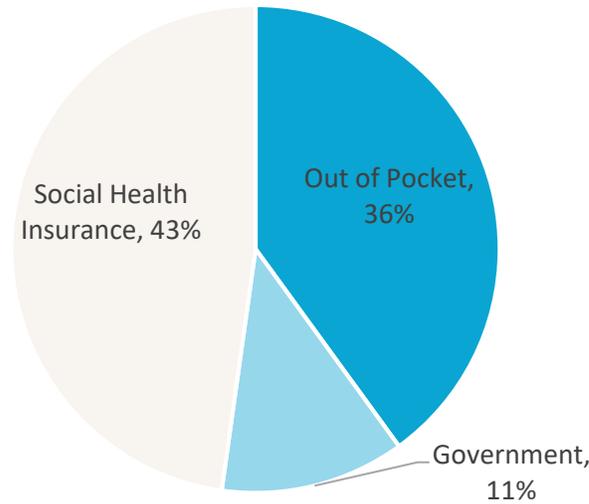
Source: NHIS Training Presentation, 2017.

**The national government is responding with an expansion of the NHIS to minimize the financing burden on the population, but how the expansion will be funded is yet to be decided.** Korea reached universal health coverage in 1989 and unified public insurance programs in 2000 under a single purchaser - NHIS. The prioritization of health and welfare has spanned decades and administrations. The money going towards health has increased annually with 34% of the national budget requested for health and welfare programs in 2018.<sup>22</sup> Still, out of pocket payments are very high in the country. Out of pocket payments contribute to limited savings and a shrinking middle class, a trend that has pushed the government to propose reforms for expanded coverage under the NHIS.

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<sup>22</sup> Korean Ministry of Strategy and Finance Budget Coordination Division. (August 28, 2017).

**Figure 7. Total Health Expenditure by Source**



Source: WHO, 2017a.

Financial coverage under the program is at 63%, compared to the OECD average of 70-80%. To increase service coverage and lower copayment requirements, the government is proposing a 30 trillion won increase in funding to reach 70% financial coverage.<sup>23</sup> How this money will be raised is yet to be verified. Premiums for NHIS beneficiaries will be raised by 3% from the current 6.12% of monthly wages in 2018.<sup>24</sup> An increased government subsidy has been requested with hopes to raise the national budget's contribution to the NHIS from 10.5% of the NHIS budget to 14%. This will be a politically difficult undertaking that would require some reprioritization. Another option includes an increased use of the tobacco tax fund which currently contributes 3.5% of NHIS's revenue, but this will also be politically difficult to pass. A more detailed plan of how the expansion will be resourced is set to be announced in December of 2017. Upcoming 2018 elections also provide an opportunity for President Moon's party to take control of the National Assembly and make for a more politically friendly climate for changes.

#### **Box 6. The Fund for Fostering Public Health**

The Fund for Fostering Public Health was created in the early 1990s with a tax on tobacco. The fund is managed by the MoSF, though its contents are allocated by law by the national assembly. Currently, a portion of the revenue is earmarked for the NHIS. 3.5% of the 2013 NHIS budget came from the tobacco tax. The fund has also been used to fund research on cancer prevention.

The government of the prior administration tried to raise the tobacco tax in efforts to bring in more finances to the general government budget, but was shut down for equity reasons by the opposition. The opposition party from that period is now in power, headed by Moon Jae In suggesting that increasing the tobacco tax to cover part of the NHIS expansion will not be pursued.

<sup>23</sup> Chung, Catherine (August 10, 2017).

<sup>24</sup> National Health Insurance System (2017).

**Localization of biopharmaceuticals is propelling the Korean industry and will change how manufacturers participate within the system.** A demanding populace and outbreak scares made security of supply the main priority of the national immunization program. This is a major driver behind Korea's push for local capacity in vaccine manufacturing. With the goal of reaching 70% localized products by 2020, multinational companies will be increasingly pushed to partner locally. This could have great effects on the sustainability of the immunization program.

## IMMUNIZATION FINANCING IN TRANSITION: KEY TRENDS AND TAKEAWAYS

**Korea has a strong immunization program that has both breadth and depth of coverage and is looking to expand further.** Korea is a high performer on immunization, reaching nearly 100% coverage for majority of vaccines in their schedule with the exception of HPV vaccines. The national and local focus has now shifted to providing more vaccines along the life course and expanding cohorts. While the expansion of NHIS benefits has put pricing strain on pharmaceuticals, the KCDC has focused less on reducing the prices of vaccines, either due to some wiggle room within the budget or a stronger mandate to focus on health outcomes.

**The establishment of a more formal HTA process could benefit a procurement process less focused on price.** The KCDC, provinces, MoSF, and private facilities are the major actors in the system when it comes to budgeting and decision making. Despite this, wholesalers are given a lot of autonomy within the procurement process. Procurement choices are often made based on the margins provided by manufacturers rather than their products. The proposal from the KCDC to create a more formal and transparent decision-making process could potentially aid providing greater direction on product choices. However, the majority of service delivery runs through the private sector, where patient and facility brand preference play a large part in decision-making between products.

**Korea's immunization program is vertical and delivered in a highly decentralized manner – a system that works with the local context, but may be difficult to replicate elsewhere.** The infrastructure for health in Korea is expansive. Facilities are easily accessible, though the majority belong to the private sector. The immunization program thrives because the public program has tapped into this infrastructure. The private sector is inclined to deliver public services because there is a financial incentive to do so through the service reimbursement. Private facilities have strong outputs because payments are made as reimbursements and some risk is transferred to them by requiring that they front the costs of vaccine procurement. The whole system, while complicated with a variety of actors, works in large part due to the robust information systems available to the Korean health sector. It is a system reliant on these contextual foundations.

**The expansion of the NHIS will necessitate maintaining prioritization of the immunization program.** With increasing demands on the NHIS budget, efficiency gains are key to sustainability and maintaining fiscal space. The NHIS is also shifting its focus to increasing preventive care for efficiency gains. While the NHIS does not cover immunization, and may not absorb the program any time soon, the increased focus on the system on prevention could have positive effects on the immunization budget. Stakeholders must work to ensure that as more money flows into the system, the immunization program benefits as a public necessity, but also as an efficient program that helps to cut back on the curative care costs that NHIS wants to minimize.

**The focus on security of supply drives financing decisions in the Korean immunization program.** From the allowance of multiple brands in the NIP to the prerequisite of strong private market performance prior to NIP inclusion, Korea's main interest is security of supply. The recent outbreak of MERS in the country created a lot of fear in regards to capacity to inoculate against communicable diseases. Parties interested in engaging with the system must understand this priority when advocating for the financing of different program activities.

**Strong moves towards localization will increasingly push multinational pharmaceutical corporations to partner locally.** The national government has put great emphasis on local production in order to develop a new industry for national economic growth as well as secure the supply of needed vaccines. Local manufactures are supported through coordinated government support of introducing local products into the NIP. The driving force behind the expansion of the flu cohort is that the vaccine is manufactured locally. Partnerships to localize could provide opportunities to increase the scope of the NIP as the government pushes to support local industry.

## REFERENCES

- Asian Development Bank. (August, 2010). "The Rise of Asia's Middle Class". *Key Indicators for Asia and the Pacific: 2010*. Manila, Philippines: Asian Development Bank.
- Choi, Wonsik, Richard Dobbs, Dongrok Suh, Jan Mischke, Eunjo Chon, Hangjip Cho, Boyoung Kim, and Hyunmin Kim. (April, 2013). *Beyond Korean Style: Shaping a New Growth Formula*. Seoul: McKinsey & Company.
- Chung, Catherine. (August 10, 2017). "Moon reiterates need for health care reform, dismisses financial concerns". *The Korea Herald*. Accessed November, 2017. Available at: [www.koreaherald.com/view.php?ud=20170810000490](http://www.koreaherald.com/view.php?ud=20170810000490).
- Gavi. (2017). *Donor Profile: Republic of Korea*. Accessed October, 2017. Available at: [www.gavi.org/funding/donor-profiles/republic-of-korea/](http://www.gavi.org/funding/donor-profiles/republic-of-korea/).
- Institute of Health Metrics and Evaluation (IHME). (2016). *Global Burden of Disease Database*. Accessed October, 2017. Available at: [www.healthdata.org/gbd](http://www.healthdata.org/gbd).
- International Monetary Fund. (April 2017). "World Economic Outlook Database." *World Economic and Financial Surveys*. Accessed October, 2017. Available at: [www.imf.org/external/pubs/ft/weo/2017/01/weodata/index.aspx](http://www.imf.org/external/pubs/ft/weo/2017/01/weodata/index.aspx).
- International Vaccine Institute. (2015). "Korean Ministry of Health and Welfare, International Vaccine Institute (IVI) Sign Agreement on Vaccine Development and Delivery Cooperation." *Announcements*. Available at: [www.ivi.int/?mod=document&uid=930&page\\_id=12463](http://www.ivi.int/?mod=document&uid=930&page_id=12463).
- Korea Centers for Disease Control and Prevention. (2017a). *Coverage Survey*. Seoul: KCDC.
- Korea Centers for Disease Control and Prevention. (2017b). *National Immunization Program and International Cooperation*. Seoul: KCDC.
- Korea Centers for Disease Control and Prevention (December, 2017). *Up to This Point November NIP Consumption*. Seoul: KCDC.
- Korean Ministry of Strategy and Finance Budget Coordination Division. (August 28, 2017). *2018 Budget to Focus on Job Creation, Wage-Leg Growth and Growth Through Innovation*. Accessed October, 2017. Available at: [english.mosf.go.kr/pc/selectTbPressCenterDtl.do?boardCd=N0001&seq=4361](http://english.mosf.go.kr/pc/selectTbPressCenterDtl.do?boardCd=N0001&seq=4361).
- Kwon, Soonman (ed). (2015). *Republic of Korea Health System Review*. Geneva, Switzerland: World Health Organization.
- Ministry of Health and Welfare and the Korea Health Industry Development Institute. (2011). *Korea Pharmaceutical Industry: Present and Future*. Seoul: MoHW and KHIDI.
- National Health Insurance System. (2017). "NHIS Training Presentation". Seoul: NHIS.
- Oh Sung Hee, Choi Eun Haw, Shin Seon Hee, et. al. (May, 2014). "Varicella and Varicella Vaccination in South Korea". *Clinical and Vaccine Immunology, Volume 21 (5)*: pg. 762-768.
- Organization for Economic Co-operation and Development. (2016). "Fertility Rates". *OECD Data*. Accessed November, 2017. Available at: [data.oecd.org/pop/fertility-rates.htm](http://data.oecd.org/pop/fertility-rates.htm)
- Republic of Korea. (December 29, 2015). *Infectious Disease Control and Prevention Act*. Seoul: Republic of Korea. Accessed December, 2017. Available at:

[elaw.klri.re.kr/eng\\_mobile/ganadaDetail.do?hseq=37239&type=abc&key=INFECTIOUS%20DISEASE%20CONTROL%20AND%20PREVENTION%20ACT&param=l](http://elaw.klri.re.kr/eng_mobile/ganadaDetail.do?hseq=37239&type=abc&key=INFECTIOUS%20DISEASE%20CONTROL%20AND%20PREVENTION%20ACT&param=l).

Rowan, Bernard. (September 26, 2017). "Moon and Local Autonomy". *The Korea Times*. Available at: [www.koreatimes.co.kr/www/opinion/2017/09/625\\_237037.html](http://www.koreatimes.co.kr/www/opinion/2017/09/625_237037.html).

The Chosunilbo. (April 16, 2013). "Why Korea's Middle Class is Collapsing". *The Chosunilbo*. Accessed November, 2017. Available at: [english.chosun.com/site/data/html\\_dir/2013/04/16/2013041601219.html](http://english.chosun.com/site/data/html_dir/2013/04/16/2013041601219.html).

WHO. (2017). *Global Health Expenditure Database*. Accessed October, 2017. Available from [apps.who.int/nha/database](http://apps.who.int/nha/database).

WHO. (2017). "Immunization Financing Indicators". Immunization, Vaccines and Biologicals. Accessed October, 2017. Available at: [www.who.int/immunization/programmes\\_systems/financing/data\\_indicators/en/](http://www.who.int/immunization/programmes_systems/financing/data_indicators/en/).

WHO. (2017). WHO vaccine-preventable diseases: monitoring system. 2016 global summary. Accessed October 2017. Available from [apps.who.int/immunization\\_monitoring/globalsummary](http://apps.who.int/immunization_monitoring/globalsummary).