# TABLE OF CONTENTS

1. Executive Summary  
2. Objective  
3. Methodology  
4. Immunization Financing Context  
5. Themes Impacting Immunization Financing in Europe  
6. How can MSD Europe Engage on Sustainable Immunization Financing?  
7. Appendix
1. Executive Summary
EXECUTIVE SUMMARY

— European countries can improve financing of immunization programs to ensure new technologies are adopted and coverage is strong

— Healthcare is a priority in Europe, but prevention and immunization programs receive a relatively low level of investment

— Four trends affect immunization financing across Europe
  — Political prioritization is driving financing
  — Financing is focused on performance improvement
  — Public systems engaging new actors in immunization financing
  — Limited guidance provided from the regional level

— MSD Europe can engage on immunization financing at both the regional and country level by
  — Nurturing the conversation around immunization financing
  — Supporting public systems to improve sustainable immunization financing
2. Objective
THE OVERARCHING END GOAL OF THIS WORK IS TO IMPROVE SUSTAINABLE IMMUNIZATION FINANCING

Sustainable Immunization Financing

Increased national budgets and strong systems to absorb the enlarged budgets efficiently for sustained and growing immunization programs

Immunization financing looks at:
1. Level of funding
2. How funds are used to deliver programming
THIS REPORT AIMS TO IMPROVE THE KNOWLEDGE AND UNDERSTANDING OF IMMUNIZATION FINANCING IN EUROPE

1. Assess immunization financing context in Europe
2. Identify trends for immunization financing in the region
3. Explore opportunities for the regional team to engage on immunization financing
3. Methodology
THE FOLLOWING PROCESS WAS UTILIZED TO CONDUCT A REGIONAL LANDSCAPING ANALYSIS

- Reviewed regional materials on health and immunization financing
- Performed a comprehensive desk review of immunization financing in 6 countries, representative of different financing architectures
- Interviewed respective MSD country teams to validate and build on findings
- Further validated findings with relevant external stakeholders
- Developed a presentation of analysis
EUROPE IS DEFINED AS THE MEMBER STATES OF THE EUROPEAN UNION WITH THE ADDITION OF THE UNITED KINGDOM

28 Countries in Total
SIX COUNTRIES WERE CHOSEN TO REPRESENT DIFFERENT FINANCING ARCHITECTURES

Considered:
- Ability of sub-national governments to control their health resources
- The role of public insurance in financing immunization programs
- Country income level

Poland
- Centralized financing
- Partial Integration into social health insurance

Spain
- Decentralized financing
- No Integration into social health insurance

Greece
- Centralized financing
- Partial Integration into social health insurance

Netherlands
- Decentralized financing for aspects of program implementation
- Risk groups integrated into social health insurance

Romania
- Middle Income Country
- Decentralized financing for program implementation
- No Integration into social health insurance

United Kingdom
- Centralized financing
- Partial Integration into tax-based insurance
WE LEVERAGED AN ANALYTICAL FRAMEWORK OF FOUR THEMES THAT HAS BEEN FOUND TO DRIVE HOW PUBLIC IMMUNIZATION PROGRAMS ARE FINANCED IN COUNTRIES ACROSS THE GLOBE

**Fiscal Space**
Ability and avenues that governments have to expand budgets to achieve national priorities sustainably

**Prioritization**
How governments prioritize financing for health, preventive care, immunization program, and vaccines

**Strategic Purchasing**
Public Health Insurance programs that purchase health services to achieve intended outcomes

**Decentralization**
Administrative, political and fiscal control at the level of subnational governments
4. Immunization Financing Context
EUROPEAN COUNTRIES CAN IMPROVE FINANCING OF IMMUNIZATION PROGRAMS TO ENSURE NEW TECHNOLOGIES ARE ADOPTED AND COVERAGE IS STRONG

Comprehensive Vaccine Schedules

Strong Coverage Rates
COMPREHENSIVE VACCINE SCHEDULES: NATIONAL IMMUNIZATION PROGRAMS ARE GENERALLY STRONG, BUT GAPS REMAIN ALONG THE LIFE COURSE FOR MANY COUNTRIES

- Average of 6 lifespan vaccines included in NIPs
- Zoster is included in 6 countries’ schedules
  - Austria, Czech Republic, France, Greece, Italy and UK
- 11 countries have HPV GNV
  - Austria, Croatia, Czech Republic, Denmark, France, Germany, Italy, Ireland, Luxembourg, Slovakia and the UK

Source: WHO Europe 2019
## VACCINES AVAILABLE THROUGH THE PUBLIC IMMUNIZATION PROGRAM

<table>
<thead>
<tr>
<th>Vaccine/Age</th>
<th>Greece</th>
<th>Netherlands</th>
<th>Poland</th>
<th>Romania</th>
<th>Spain</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTP</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Hib</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>HepA</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HepB</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Herpes Zoster</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>HPV</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Flu Ped</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Flu Adult</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>MMR</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Meningococcal C</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>PCV</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>PPV</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Polio</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Rota</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Rota</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Tb</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Varicella</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Source: ECDC
STRONG COVERAGE RATES: ACHIEVEMENT OF HIGH COVERAGE IS THREATENED ACROSS COUNTRIES

1. Decreasing coverage rates

Falling Coverage: The Netherlands Case

- Vaccination rates have decreased by 2-3% across the schedule since 2014
- HPV vaccination rates dropped from 53.4% in 2017 to 45.5% in 2018

Source: WHO UNICEF Coverage Estimates, HPV Coverage in Netherlands
SNAPSHOT OF COVERAGE RATES ACROSS THE REGION

DTP3

MCV2

2018 Coverage Rates
- 95% +
- 90% - 94%
- <90%

Source: WHO / UNICEF Estimates
FALLING COVERAGE RATES RESULTING IN OUTBREAKS IN SEVERAL COUNTRIES

In 2018, there were 83,500 measles cases reported in the WHO European Region, compared to 5,200 cases in 2016.

In August 2019, the WHO removed the UK’s measles-free status, achieved in 2017.

The Case of Poland

- Poland is experiencing a surge of measles case due to the rise of unvaccinated migrants.
- As a result, employers are expanding their role in immunization financing and providing protective vaccination for employees at risk.

Source: Government of Poland
2. Low uptake on adult and adolescent vaccinations

**Adolescent: The Case of HPV**
- Above 70% coverage in Finland, Hungary, Iceland, Malta, Norway, Portugal, Spain, and the UK
- Below 50% in France and Germany
- Dramatic drops in coverage in Denmark and Ireland, from 80% coverage to 25%, followed by a partial recovery in the last two years thanks to successful campaigns.

**Influenza Coverage Rates in Populations >55 Years Old**

- Only Scotland is near the EU target of 75% coverage
- Median of 47.1% coverage in 2016-2017
- Range from 2% in Estonia to 72.8% in Scotland in 2016-2017

*Source: National seasonal influenza vaccination survey, January 2018.*

*: data for UK displayed by respective country (England, Northern Ireland, Scotland, Wales).
TO UNDERSTAND IMMUNIZATION FINANCING, WE START AT A HIGHER LEVEL IN THE SYSTEM TO UNDERSTAND THE IMPACTS

**Structural Shifts within the System**
Health Financing, Structures, and Policies

**Immunization Program**
Coverage Rates and Access

**Product**
Differentiation
MSD product portfolio

European Commission recognizes that “the design and operation of health systems can influence vaccine uptake...”
EU COUNTRIES ARE LIKELY TO CONTINUE INCREASING THEIR SPENDING ON HEALTH, IN LINE WITH GDP GROWTH

Shifting burden of disease

- Main causes of death are cardiovascular diseases and cancers
- NCD burden requires increased spending on chronic and long-term care

Demographic transition

- 20% of the population is over the age of 65 in the EU
- Life expectancy is 81 years

Macroeconomic growth

- Economic growth and health expenditure have a positively correlated relationship
- As economy grows, health expenditure is likely to grow

Increase in health expenditure is driven by:

Source: OECD, 2018.

Source: World Bank, 2019

Source: 2016 WDI Data

Annual growth in health spend and GDP in the EU, 2005-2017

Health expenditure

GDP

Current Health Expenditure (% of GDP)

<table>
<thead>
<tr>
<th>Region</th>
<th>Current Health Expenditure (% of GDP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WORLD</td>
<td>10</td>
</tr>
<tr>
<td>EUROPEAN UNION</td>
<td>9.9</td>
</tr>
<tr>
<td>EUROPE AND CENTRAL ASIA</td>
<td>9.4</td>
</tr>
<tr>
<td>NORTH AMERICA AND CARIBBEAN</td>
<td>16.6</td>
</tr>
<tr>
<td>SUB-SAHARAN AFRICA</td>
<td>8.6</td>
</tr>
<tr>
<td>MIDDLE EAST AND NORTH AFRICA</td>
<td>5.2</td>
</tr>
<tr>
<td>SOUTH ASIA</td>
<td>5.6</td>
</tr>
<tr>
<td>EAST ASIA AND PACIFIC</td>
<td>3.6</td>
</tr>
<tr>
<td>WORLD</td>
<td>6.6</td>
</tr>
</tbody>
</table>
On average, governments spend 7% of GDP on HEALTH in European countries.

Spending on PREVENTION is <3% of the health budget.

About 9% of prevention budget is spent on IMMUNIZATION (<0.5% of the health budget).

PUBLIC HEALTH EXPENDITURE, % PUBLIC BUDGET (2017)

<table>
<thead>
<tr>
<th></th>
<th>Greece</th>
<th>Netherlands</th>
<th>Poland</th>
<th>Romania</th>
<th>Spain</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>11.1%</td>
<td>17.8%</td>
<td>11.4%</td>
<td>12.9%</td>
<td>14.5%</td>
<td>18.2%</td>
</tr>
<tr>
<td>Prevention</td>
<td>.14%</td>
<td>.60%</td>
<td>.35%</td>
<td>.23%</td>
<td>.31%</td>
<td>.95%</td>
</tr>
<tr>
<td>Immunization</td>
<td>.009%</td>
<td>?</td>
<td>.027%</td>
<td>.080%</td>
<td>?</td>
<td>.078%</td>
</tr>
</tbody>
</table>

### Public Health Expenditure, % Public Budget (2017)

<table>
<thead>
<tr>
<th>Country</th>
<th>Health</th>
<th>Prevention</th>
<th>Immunization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greece</td>
<td>11.1%</td>
<td>.14%</td>
<td>.009%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>17.8%</td>
<td>.60%</td>
<td>?</td>
</tr>
<tr>
<td>Poland</td>
<td>11.4%</td>
<td>.35%</td>
<td>.027%</td>
</tr>
<tr>
<td>Romania</td>
<td>.009%</td>
<td>?</td>
<td>.027%</td>
</tr>
<tr>
<td>Spain</td>
<td>18.2%</td>
<td>.95%</td>
<td>.078%</td>
</tr>
<tr>
<td>UK</td>
<td>12.9%</td>
<td>.23%</td>
<td>.080%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>17.8%</td>
<td>.60%</td>
<td>?</td>
</tr>
<tr>
<td>Poland</td>
<td>11.4%</td>
<td>.35%</td>
<td>.027%</td>
</tr>
<tr>
<td>Romania</td>
<td>.009%</td>
<td>?</td>
<td>.027%</td>
</tr>
<tr>
<td>Spain</td>
<td>18.2%</td>
<td>.95%</td>
<td>.078%</td>
</tr>
<tr>
<td>UK</td>
<td>12.9%</td>
<td>.23%</td>
<td>.080%</td>
</tr>
</tbody>
</table>

**Takeaways:**

- All countries allocate less than 1% of their health budget to immunization.
- Romania puts more of its health budget towards immunization than the other countries.
- Greece is allocating the smallest proportion of their budget to the health sector and a limited amount of their health budget is channeled towards prevention and immunization services.
- The UK allocates over 7 percentage points more towards its public health system than Greece, though Greece is not far behind Poland or Romania.

### PUBLIC HEALTH EXPENDITURE, % GDP (2017)

<table>
<thead>
<tr>
<th>Country</th>
<th>Health</th>
<th>Prevention</th>
<th>Immunization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greece</td>
<td>5.2%</td>
<td>0.10%</td>
<td>0.01%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>7.6%</td>
<td>0.34%</td>
<td>?</td>
</tr>
<tr>
<td>Poland</td>
<td>4.7%</td>
<td>0.20%</td>
<td>0.02%</td>
</tr>
<tr>
<td>Romania</td>
<td>4.3%</td>
<td>0.09%</td>
<td>0.03%</td>
</tr>
<tr>
<td>Spain</td>
<td>6.0%</td>
<td>0.19%</td>
<td>?</td>
</tr>
<tr>
<td>UK</td>
<td>7.4%</td>
<td>0.50%</td>
<td>0.04%</td>
</tr>
</tbody>
</table>

Takeaways:

- % of GDP spent on public health gives a different view of the landscape. Though Greece allocates less of its public budget towards health, it spends more on health as a % of GDP than both Poland and Romania.

- We can see that Romania still spends a relatively high amount of its GDP on immunization and Greece is still spending a smaller portion of its GDP than others.

- Across both metrics, the UK is shown to spend a relatively high amount of prevention and immunization.

5. Trends Impacting Immunization Financing in Europe
PROMINENT THEMES INFLUENCING IMMUNIZATION FINANCING IN EUROPE

Limited Guidance From The Regional Level

COUNTRY LEVEL

Political Prioritization Drives Financing

Focus on Performance Improvement

New Actors Engaged In Immunization Financing
PROMINENT THEMES INFLUENCING IMMUNIZATION FINANCING IN EUROPE

Limited Guidance From The Regional Level

COUNTRY LEVEL

Political Prioritization Drives Financing

Focus on Performance Improvement

New Actors Engaged In Immunization Financing
The prevention budget is at risk in volatile economic environments

After the 2008 economic downturn, overall health spending was maintained, or continued to grow.

Prevention budgets, which include vaccination and other health services suffered budget cuts.

Spending on Prevention was Particularly Affected by the Economic Crisis

SECTOR-SPECIFIC RESOURCES ARE NOT WIDELY LEVERAGED FOR IMMUNIZATION IN EUROPE

- Tobacco tax in Finland, Iceland, Poland, Serbia, Montenegro, and Switzerland
- Sugar tax in Belgium, Denmark, Finland, France, Hungary, Latvia, UK, and Malta
- Focus on financing related NCD services

- Co-pays in Czech Republic for some non-NIP vaccines
- Targeted patients have co-pays for the flu vaccine in Austria, Belgium, Bulgaria, Estonia, Latvia, Poland, and Slovenia
- Not widely applied due to equity concerns

- Health is viewed as a public responsibility thus a limited role of the private sector
- Other social sectors experimenting with impact bonds to drive outcomes (e.g. prison recidivism)

- Vaccination delivery reimbursement through public insurance mechanisms is common
- Czech Republic and Latvia’s public purchasers also procure vaccines for their national program
PERFORMANCE CHALLENGES ARE DRIVING THE PRIORITIZATION OF INCREASED IMMUNIZATION BUDGETS IN EUROPE

Re-Prioritizing Funds in Romania

The government recently made immunization a funding priority to respond to poor vaccination performance and to focus on a life course approach.

Measles coverage fell as low as 75% in 2017. In response, the government tripled the immunization budget to US$70 million in 2018.

Securing the Prevention Budget in Poland

The 2015 Act on Public Health in Poland established a legal framework for public health. The National Health Fund is since obliged to spend at minimum, 1.5% of its overall budget to preventive services.

Protected Prevention Budget in Italy

Italy has a long-standing tradition on public health and health promotion, since the 1888 Law on Hygiene, Health Protection and Public Health. In 2014, Italy instituted a 5% protected budget, earmarked for prevention.

Sources: Unicef Coverage Estimates (2019); Poland; Romania Ministry of Health; Italy
RELYING ON THE POLITICAL PRIORITIZATION OF IMMUNIZATION PROGRAM HAS ITS RISKS

Challenges to Re-Prioritization:

- Uncertainty in relying on the political process
- Budgets are not necessarily based on technical inputs

Challenges to Ring-Fencing Budgets:

- Lacks flexibility
- Creates a set allocation that may limit technical consideration for what is needed
- Gives the idea that what matters for the quality of healthcare is the size of the budget
- In a system with multiple actors covering different costs, only one aspect of the immunization program’s budget might be protected

Sources: Ring Fencing;
Other countries are developing vaccination strategies to drive program prioritization and investment.

**Italy**
A push for a life-course approach to vaccination in the National Plan for Vaccine Prevention 2017-2019 unlocked new funding to achieve an expanded schedule.

**United Kingdom**
In 2019, Public Health England launched a UK Measles and Rubella elimination strategy to achieve sustain > 95% coverage for the MMR vaccine.

SPECTRUM OF POLITICAL PRIORITIZATION ACROSS COUNTRIES

- **Greece**
  - Immunizations are reimbursed based on population demand.
  - Government not actively working to cover all costs.

- **Spain**
  - Limited growth in budget over time.
  - Prioritization done down at the sub-national level

- **Poland**
  - Political commitment to prevention through an earmarked budget, but immunization program not as robust as others in the region.

- **UK**
  - New immunization strategy generating support for increased investment to improve performance.

- **Romania**
  - Recent political commitment. In 2018, Romania tripled its budget to US$70 for the immunization program.

- **Netherlands**
  - Ability to unlock funds for new introductions once recommended by the council.
LIMITED GUIDANCE FROM THE REGIONAL LEVEL

COUNTRY LEVEL

POLITICAL PRIORITIZATION DRIVES FINANCING

NEW ACTORS ENGAGED IN IMMUNIZATION FINANCING

FOCUS ON PERFORMANCE IMPROVEMENT
Focus on Performance Improvement

Demand
Many countries have focused on legislation to increase demand of the immunization program to improve coverage rates

Supply
There is movement towards leveraging active financing mechanisms to improve the supply of immunization services
**DEMAND: MANY COUNTRIES HAVE PURSUED A LEGISLATIVE APPROACH TO COMBAT COVERAGE CHALLENGES**

<table>
<thead>
<tr>
<th>Approach</th>
<th>Characteristics</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended</strong></td>
<td>Immunization is recommended; No mandatory provisions in either health- or education-related provision. Monitoring mechanisms are in place to assess coverage and provide data</td>
<td>Denmark, Finland, Sweden, United Kingdom, Romania</td>
</tr>
<tr>
<td><strong>Recommended with robust monitoring and follow-up</strong></td>
<td>Immunization is recommended with or without enforcement provision. Robust monitoring and follow-up mechanisms are in place in the case of non-immunization</td>
<td>Austria, Estonia, Germany</td>
</tr>
<tr>
<td><strong>Recommended with mandatory requirements for school attendance</strong></td>
<td>Immunization is recommended; Enforcement provisions are in place that can prevent a child from attending school if not immunized, effectively rendering immunization somewhat mandatory. Monitoring and follow-up mechanisms are in place to assess coverage and provide data</td>
<td>Cyprus, Greece</td>
</tr>
<tr>
<td><strong>Mandatory immunization with monitoring and follow-up</strong></td>
<td>Immunization is mandatory with limited enforcement provisions. Monitoring and follow-up mechanisms are limited or do not exist.</td>
<td>Croatia, Latvia, Poland</td>
</tr>
<tr>
<td><strong>Mandatory immunization with robust monitoring and follow-up</strong></td>
<td>Immunization is mandatory with robust enforcement provisions. Robust monitoring and follow-up mechanisms are in place</td>
<td>Belgium, France, Italy,</td>
</tr>
</tbody>
</table>

Source: Approaches to Legislation, Sabin (2018)
SUPPLY: FINANCING NEW DELIVERY CHANNELS TO IMPROVE ACCESS TO SERVICES

School-Based Vaccination

**Sweden**
- In 2012, Sweden introduced catch-up vaccination campaigns targeting girls 11-16 years old
- Vaccinations were offered in health centers, primary care settings and/or schools, depending on the county
- Counties that offered HPV vaccination in schools reached the highest vaccine uptake

**Spain**
- Spanish regions have also experimented with HPV vaccinations in school-based settings
- The regions with highest rates of HPV coverage are NOT using a school-based delivery approach

Reimbursing Pharmacists for Vaccination Services

- **Wales**: Pharmacists deliver the influenza vaccine
- **England**: As of 2015, pharmacists are paid £9.58 for each influenza vaccination delivered.
- **Northern Ireland**: The government is experimenting with delivering the shingles vaccine in pharmacies.
- **Scotland**: The 3-year vaccine transformation program includes plans to have all GPs supported by a pharmacist for vaccine delivery.

Sources: (Rehn et al. 2016); (Limia and Pachón 2011), NHS England
**SUPPLY: PERFORMANCE-BASED FINANCING TO IMPROVE THE QUALITY OF SERVICES IS USED ACROSS THE EU**

### What is PBF?
Performance-based financing (PBF) is an incentive payment mechanism whereby health providers are, at least partially, funded based on their performance to meet targets or undertake specific actions. It may also be known as results-based financing or pay-for-performance.

### Objective
PBF is meant to maximize health outcomes while simultaneously increasing provider autonomy in how agreed-upon targets are achieved.

Note: Though many countries are experimenting with this mechanism, few analyses exist to establish causal impact.

### What You Can Incentivize

<table>
<thead>
<tr>
<th>Process</th>
<th>Outputs</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: Names are recorded in the register</td>
<td>Example: Individuals vaccinated</td>
<td>Example: Population coverage rate</td>
</tr>
</tbody>
</table>

COUNTRIES CAN TAILOR WHAT THEY MEASURE TO FIT THEIR CONTEXT
PERFORMANCE-BASED FINANCING TO IMPROVE THE QUALITY OF SERVICES IS USED ACROSS THE EU

What You Can Incentivize

Process

England’s Outreach Incentives: Call-re-Call

Example Indicator:
Parents called to remind them to bring in their child for vaccination

Challenge Addressed:
Parents were uninformed of the national vaccination schedule and were not adhering to it

Payment:
GPs are paid a fee for each parent that is reached out to at least three times regarding bringing in their child for vaccination

Source: Call Re-call
PERFORMANCE-BASED FINANCING TO IMPROVE THE QUALITY OF SERVICES IS USED ACROSS THE EU

What You Can Incentivize

Output:

Romania: Signaling that Immunization is a Priority

Example Indicator:
Number of vaccinations administered by GPs.

Challenge Addressed:
Poor performance in vaccine coverage rates which contributed to the measles outbreak

Payment:
GPs are now paid an increased rate of EUR 7 for each vaccinated individual

PERFORMANCE-BASED FINANCING TO IMPROVE THE QUALITY OF SERVICES IS USED ACROSS THE EU

Estonia: Achieving Target Coverage Rates through the Quality Bonus System

*Example Indicator:* The 90% coverage rate of fully immunized child

*Challenge Addressed:* Coverage rates not matching national targets

*Payment:* Physicians receive an annual cash bonus for achieving coverage targets for specific services, including immunization.

Source: PBF in Estonia
SPECTRUM OF ACTIVE PURCHASING ACROSS COUNTRIES

Spain
Capitation payments for prevention. School-based programming depends on region

Greece
Fee for Service payments for each individual vaccinated

Netherlands
GPs are paid a fee for vaccination services

Poland
Fee for Service payments for each individual vaccinated

Romania
Providers are paid an increased rate of 7 euros for each vaccine delivered, signaling the government’s prioritization of the program

UK
The UK actively contracts new delivery channels to increase access (schools, pharmacists, etc.). They also have the call-recall program to incentivize outreach

SPECTRUM OF ACTIVE PURCHASING ACROSS COUNTRIES
Limited Guidance From The Regional Level

Political Prioritization Drives Financing
Focus on Performance Improvement

New Actors Engaged In Immunization Financing
COUNTRIES ARE LEVERAGING MULTIPLE ACTORS TO DELIVER NATIONAL IMMUNIZATION PROGRAMS

Immunization programs have multiple costs, including 1) procurement and distribution of vaccines, 2) delivery of vaccination services, and 3) costs that cannot be tied to a single person, like campaigns, monitoring, surveillance, etc.

<table>
<thead>
<tr>
<th>Immunization Costs</th>
<th>Procurement</th>
<th>Cold Chain</th>
<th>Salaries/Incentives</th>
<th>Campaigns</th>
<th>Monitoring &amp; Reporting</th>
<th>Surveillance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procurement and distribution</td>
<td>Program Delivery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Population-based Services</td>
</tr>
</tbody>
</table>

National immunization programs leverage multiple actors in different ways:

1. Each cost can be covered by different actors within the system (Ministry of Health, an insurance purchaser, sub-national government, etc.)
2. Many actors can cover each of the costs for different segments of the population
3. Individual vaccines can draw on funding from different actors to expand financing
4. Different vaccines may leverage unique delivery channels, bringing in additional actors to provide vaccination services
1. EACH COST CAN BE COVERED BY DIFFERENT ACTORS WITHIN THE SYSTEM

In Greece, 4 unique offices work together to deliver the public immunization program.
2. MANY ACTORS CAN COVER EACH OF THE COSTS FOR DIFFERENT SEGMENTS OF THE POPULATION

In Spain, the 19 autonomous regions work together to deliver a national program.
3. Individual Vaccines Can Draw on Funding From Different Actors to Cover Costs

Most of the NIP vaccines are procured centrally, while flu and pneumococcal vaccines are procured through different channels.

**Pneumococcal in the UK**
- Vaccines are procured directly by GPs
- The GPs are reimbursed by NHSE for each eligible patient vaccinated

Source: [OHE 2010]
The Netherlands delivers pediatric/adolescent and adult vaccines through different channels requiring unique lines of financing

**Child Vaccinations**
- Individuals under the age of 18 are covered under the NIP, which is run by the Public Health Authority
- Vaccines are administered by youth officers

**Adult Vaccinations**
- Covered under a unique program with its own line of funding
- Administered by GPs as the point of contact in the health system for adults
- Risk groups covered by social health insurance
Increasing the number of actors involved in delivering the immunization program has its potential challenges.

— Splitting the budget between multiple actors can make it difficult to understand what is really being spent overall and what program needs might be.

— If system incentives are not aligned across actors, providers may behave in unexpected ways.
  — For example, lack of incentives for the delivery of zoster vaccine in the UK resulted in lower coverage rates when compared to the pneumococcal and flu vaccines, for which delivery is financially incentivized.

— If lines of accountability are not created between engaged actors, program implementation may suffer (see example on the right).

Creating Alignment Across Multiple Actors in Spain

Spain’s 19 autonomous regions have complete control over their immunization programs. To ensure public safety within the country, the governments have devised a system to create alignment across the various actors.

1. Regional governments, along with the Minister of Health meet and come to a consensus on the national immunization program’s schedule
2. Each region decides how and when to implement the NIP for their population

This structure allows for consensus amongst various sub-national actors, while the law makes it a compulsory agreement for the regional actors to implement allowing for accountability in the system.

**Romania**
The Ministry of Health controls the financing of the NIP.

**Greece**
Program planning and direction is the responsibility of the MoH. Public insurance finances routine delivery.

**Netherlands**
Separate channels used to delivery pediatric and adolescent vaccines vs adult vaccines. Youth clinics and GPs are both contracted to deliver vaccinations.

**Spain**
All 19 autonomous regions work together to finance and implement a national immunization program.

**Poland**
Responsibilities are split between the MoH (procurement and distribution) and the states (implementation) with provider payment support from the public insurer.

**UK**
Within the 4 countries of the UK, governments leverage multiple financing pools to deliver different vaccines and engage unique delivery channels to increase access.
Limited Guidance From The Regional Level

COUNTRY LEVEL

Political Prioritization Drives Financing

Focus on Performance Improvement

New Actors Engaged In Immunization Financing
IMMUNIZATION IS ON THE HEALTH AGENDA IN THE EU REGION

January 2017
Joint Action on Vaccination

March 2018
EU Parliament Resolution on Vaccine Hesitancy

December 2018
EU Council Recommendation on Strengthened Cooperation against Vaccine Preventable Diseases

April 2019
EC Roadmap on Vaccination

Source: European Commission
European Regional Actors are Engaged on Immunization, but Focused on Challenges of Vaccine Hesitancy

European Center for Disease Prevention and Control
ECDC is focused on regional surveillance of measles and influenza, interoperability on coverage and performance rates, and creating a standardized methodology to collect information from member states.

European Joint Action on Vaccination (JAV)
JAV is a 3-year effort, launched in 2018, to enhance confidence in vaccinations, improve forecasting supply needs for preparedness, ensure cross-border cooperation in the EU, and set priorities for research and development for vaccinations.

Vaccines Europe
Vaccines Europe is focused on improved access to immunization, raising awareness about the value and benefit of vaccines and proactively represents the industry on key issues at the EU level. Vaccines Europe is also involved in addressing challenges in immunization financing and delivery costs for good performance.

European Council Roadmap for Vaccination (2019 –2022)
The council seeks to promote coordination across countries. The objective of the council is to establish a European vaccination information sharing system; and perform joint procurement for pandemics, unexpected outbreaks, and small demand programs.

Sources: ECDC; JAV; Vaccines Europe; European Council Roadmap for Vaccination
FINANCING IS SEEN AS A COUNTRY ISSUE AND NOT TAKEN UP BY REGIONAL ACTORS

- No clear definition of immunization financing across the region
- No advocacy to increase the prevention and/or public health budgets by regional actors
- Limited analysis of best practices or knowledge sharing between member states
- No financial support available at the regional level
- No clear avenue to discuss immunization financing at the regional level
6. How can MSD Europe engage on sustainable immunization financing?
ENGAGING ON TRENDS

- Immunization financing is a subject specific to individual country systems.
- Many countries are experiencing the same challenges and can learn from each others’ experiences with particular solutions or improvement efforts.
- At this point in time, there is limited guidance from regional actors on what sustainable immunization financing is or how a country can improve it in their system.
- MSD can convene regional players to nurture thinking around immunization financing in Europe.
ENGAGING ON TRENDS

• How to engage on sustainable immunization financing is particular to an individual country market.

• Each country has a unique financing system that depends on a unique political environment, unique funding lines, financing actors, and delivery channels, and unique performance challenges that may or may not be driven by financing.

• To improve sustainable financing in the region, it is pertinent to engage on improving sustainable immunization financing at the country level. This requires sound knowledge of the country financing context and analytical insights into opportunities.
MSD CAN ENGAGE AT TWO DISTINCT LEVELS ON IMMUNIZATION FINANCING

Nurture thinking around immunization financing

Engage on improving sustainable immunization financing at the country level
MSD CAN ENGAGE AT TWO DISTINCT LEVELS ON IMMUNIZATION FINANCING

Nurture thinking around immunization financing

- Drive the financing discussion as a thought leader, using case studies and regional forums
- Engage with Vaccines Europe to bring attention to financing at the EU level
MSD CAN ENGAGE AT TWO DISTINCT LEVELS ON IMMUNIZATION FINANCING

Support country teams to engage with public programs on improving sustainable immunization financing in a way that makes sense for their context.

Engage on improving sustainable immunization financing at the country level.
This presentation was produced by ThinkWell, with funding and input from Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, New Jersey, USA.
Appendix:
How Regional Trends Impact Different Markets:

• Greece
• Spain
• Netherlands
• Poland
• Romania
• United Kingdom
Greece
GREECE SNAPSHOT

2017 Government Expenditure on Health

1.26% Preventive Health Services (share of total public health spend)

Total public spend on health = 5.2% GDP


<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Targeted Risk Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>Only for high-risk groups</td>
</tr>
<tr>
<td>DTP</td>
<td></td>
</tr>
<tr>
<td>HepA for adults</td>
<td></td>
</tr>
<tr>
<td>HepA pediatric</td>
<td></td>
</tr>
<tr>
<td>HepB for adults</td>
<td></td>
</tr>
<tr>
<td>HepB pediatric</td>
<td></td>
</tr>
<tr>
<td>Hib</td>
<td></td>
</tr>
<tr>
<td>HPV</td>
<td>Girls only</td>
</tr>
<tr>
<td>Flu for adults</td>
<td>Adults over 60 with chronic conditions, pregnant women, healthcare workers, and other risk groups</td>
</tr>
<tr>
<td>Flu pediatric</td>
<td></td>
</tr>
<tr>
<td>IPV</td>
<td></td>
</tr>
<tr>
<td>MenACWY-135</td>
<td></td>
</tr>
<tr>
<td>MenC</td>
<td></td>
</tr>
<tr>
<td>MMRV</td>
<td></td>
</tr>
<tr>
<td>PCV</td>
<td></td>
</tr>
<tr>
<td>PPV</td>
<td></td>
</tr>
<tr>
<td>Rotavirus</td>
<td></td>
</tr>
<tr>
<td>Td</td>
<td></td>
</tr>
<tr>
<td>Tdap</td>
<td></td>
</tr>
<tr>
<td>Varicella</td>
<td></td>
</tr>
</tbody>
</table>

2018 Vaccine Coverage Rates

- MCV2: 83%
- PCV: 96%
- DTP3: 99%

Source: WHO-Unicef Coverage Estimates

Source: WHO Monitoring System
GREECE FINDINGS

Fiscal Space:
• Large drop in health spending due to economic crisis.
• A cap was put on health spending of 6% GDP during the recovery. This cap has since been removed, but Greece still only spent 4.9% GDP in 2017 (OECD).
• Ongoing reforms are focused on efficiency gains. There are efforts to implement a public primary care system, gatekeeping, and caps on spending, amongst other things.

Prioritization:
• A lot of focus is on the health sector at this point in time. Due to austerity measures though, focus on the system is pushing efficiency and restructuring, not greater investment.
• At this point Greece spends under 2/3 the EU average on healthcare (OECD, 2015).
• The majority of primary care runs through private physicians. Any vaccine that is recommended by the NITAG can be procured and delivered for a reimbursement by private providers.

Strategic Purchasing:
• The EOPYY acts as the public purchaser of health services. The institution, overseen by the MoH, was founded in 2016 to provide universal health coverage to all residents – a change from the employment-based system that failed during the recession.
• EOPYY pays private providers (majority of providers offer vaccinations) a fee-for-service. For immunization, this includes a reimbursement for the service. The patient is charged for the cost of the vaccine.

Decentralization:
• Despite legislation passed in 2014 to have YPEs take on primary health care facilities (Law 4238/2014), healthcare planning, organization, and provision, remains quite centralized in practice (Economou, 2018).

Program Prioritization
The ongoing reforms in Greece’s health system focus on providing UHC following the economic crisis. Though there are efforts to improve primary healthcare, immunization is mainly driven by the private sector.

Performance Improvement
- Supply: Greece enacted a law that all migrants and refugees in Greece for 10 days are to be vaccinated according to the national recommendations.
- Demand: Vaccinations are required to attend public school.

New Actors Engaged in Immunization Financing
- Expensive role of physicians in vaccination delivery may result in changes over time.
- Greece’s ongoing efforts include the creation of a primary healthcare system with the hopes that sub-national governments will take over planning and implementation for these health services.
Netherlands
NETHERLANDS SNAPSHOT

Government Expenditure on Health (2017)

3.35% Preventive Health Services (share of total public health spend)

Total public spend on health = 8.9% GDP

Source: Eurostat, 2019; Eurostat, 2020

2018 Vaccine Coverage Rates

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Targeted Cohort</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTaP-IPV-Hib-HepB</td>
<td></td>
</tr>
<tr>
<td>DT-IPV</td>
<td></td>
</tr>
<tr>
<td>DTaP-IPV</td>
<td></td>
</tr>
<tr>
<td>MMR</td>
<td></td>
</tr>
<tr>
<td>PCV</td>
<td></td>
</tr>
<tr>
<td>MenACWY</td>
<td></td>
</tr>
<tr>
<td>HPV</td>
<td>Females 12-13 years of age</td>
</tr>
<tr>
<td>Flu adult</td>
<td>&gt;60 years of age; healthcare workers, residents living in long-term care facilities, other risk groups</td>
</tr>
<tr>
<td>PPV23</td>
<td>60 – 75 years of age</td>
</tr>
<tr>
<td>Vaccines for Risk Groups (not in NIP)</td>
<td></td>
</tr>
<tr>
<td>PPV23</td>
<td>Specific risk groups</td>
</tr>
<tr>
<td>Tetanus Toxoid</td>
<td></td>
</tr>
<tr>
<td>Tdap</td>
<td>Pregnant women (22 weeks)</td>
</tr>
</tbody>
</table>

Source: WHO-Unicef Coverage Estimates

Source: WHO Monitoring System
**NETHERLANDS FINDINGS**

### Fiscal Space:
- Modest growth expected in the coming years (World Bank estimates)
- The Netherlands is one of the highest spending countries on health (8.9% of GDP)
- Long-term care costs have drastically increased over the years
- The government is making efforts to reduce spending and focus on finding efficiencies

### Prioritization:
- Health is a priority investment in the Netherlands with 17.8% of the public budget spent in the health sector
- Despite stagnation in vaccine introductions in past years, introductions of new vaccines have accelerated recently with introduction of MenACWY in 2018.
- Rotavirus for risk groups, expansion of HPV cohorts and the addition of PPV for adults are also on the horizon.

### Strategic Purchasing:
- Mandatory statutory health insurance delivered by private (for-profit and non-profit) insurers (Health Insurance Act, 2006).
- The benefits package is mandated by MoH and does not include the NIP.
- Health workers (GPs) that deliver vaccines (Flu and PPV) are paid a fee-for-service for the vaccination.

### Decentralization:
- The leadership of the NIP has remained centralized, while public health is the responsibility of the municipalities (2008 Public Health Act).
- The municipalities deliver pediatric immunization through dedicated centers. In 2019, there was a change in financing that led to municipalities directly paying the youth officers for delivering pediatric vaccines, but there were no changes to program delivery.

Source: Health Insurance Act, 2006; Public Health Act, 2008; *van Wijhe et al. 2019*
Netherlands: Trends at Country Level

Program Prioritization

• Despite stagnation in vaccine introductions in past years, introductions of new vaccines have accelerated recently with introduction of MenACWY in 2018
• HPV GNV will start in 2021 and the new PPV adult program will launch in 2020

Performance Improvement

• Existing performance-based initiative for GPs whom receive fee-for-service payments for each vaccination.

New Actors Engaged in Immunization Financing

• Pediatric/adolescent and adult vaccination programs are delivered through different channels (youth health centers vs GPs).
• Strong monitoring system supports coordination across actors (vaccination register linked to population data, automatic sending of reminders)

Poland
# Poland Snapshot

## Vaccine Targeted Risk Group

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Targeted Risk Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>Only for high-risk groups</td>
</tr>
<tr>
<td>DT</td>
<td></td>
</tr>
<tr>
<td>DTaPHibIPV</td>
<td></td>
</tr>
<tr>
<td>DTwP</td>
<td></td>
</tr>
<tr>
<td>HepB_Adult</td>
<td>Specified risk groups</td>
</tr>
<tr>
<td>HepB_Pediatric</td>
<td></td>
</tr>
<tr>
<td>Hib</td>
<td></td>
</tr>
<tr>
<td>Influenza_Adult</td>
<td>Adults with chronic conditions</td>
</tr>
<tr>
<td>Influenza_Pediatric</td>
<td></td>
</tr>
<tr>
<td>IPV</td>
<td></td>
</tr>
<tr>
<td>MMR</td>
<td></td>
</tr>
<tr>
<td>Pneumo_conj</td>
<td>Children 2-5 at risk</td>
</tr>
<tr>
<td>Rabies</td>
<td></td>
</tr>
<tr>
<td>Td</td>
<td></td>
</tr>
<tr>
<td>TdaP</td>
<td></td>
</tr>
<tr>
<td>TT</td>
<td></td>
</tr>
<tr>
<td>Varicella</td>
<td>Specified risk groups</td>
</tr>
</tbody>
</table>

## 2017 Government Expenditure on Health

- 3.11% Preventive Health Services (share of total public health spend)
- Total public spend on health = 4.7% GDP


## 2018 Vaccine Coverage Rates

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Coverage Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCV2</td>
<td>92%</td>
</tr>
<tr>
<td>PCV</td>
<td>60%</td>
</tr>
<tr>
<td>DTP3</td>
<td>95%</td>
</tr>
</tbody>
</table>

Source: WHO-Unicef Coverage Estimates

## Source

- WHO-Unicef Coverage Estimates
- WHO Monitoring System
POLAND IMMUNIZATION PROGRAM FUND FLOW

Sources
- National Taxes
- Individual Contributions

Pools
- Ministry of Health
- Sub-national Governments
- National Health Insurance Fund

Immunization Costs
- Procurement
- Cold Chain
- Salaries/Incentives
- Campaigns
- Monitoring & Reporting
- Surveillance

Procurement and distribution
- Program Delivery
- Population-based Services
POLAND FINDINGS

Fiscal Space:
- The immunization budget doubled when the pneumococcal vaccine was introduced to the NIP.
- Health spending was protected in the wake of the financial crisis and even increased at about 2.4% per year in real terms between 2009-2013 (OECD, 2018).

Prioritization:
- 2015 legislation requires the National Health Insurance fund to devote 1.5% of the overall budget to preventative services.
- Poland spends less than the EU average on healthcare, at 4.7% of the GDP (Eurostat, 2017).
- The country has been slow to expand to adolescent and adult vaccines. Poland was the last country in the EU to adopt the pneumococcal vaccine into their NIP.

Strategic Purchasing:
- In 2003-2004, 16 sickness funds were consolidated to establish a single, National Health Insurance fund.
- Immunizations are included in the benefits package, set by the Ministry of Health.

Decentralization:
- Vaccine delivery costs are covered by the territorial self-governments that pay GPs a fee for delivery.

Poland: Trends at the Country Level

Program Prioritization

• 2015 Act of Public Health requires the National Health Fund to devote 1.5% of the budget to preventative services

• Poland is utilizing funding from the European Structural and Investment Fund for health system activities – infrastructure, eHealth solutions, NCD prevention programs

Performance Improvement

• Legislative - NIP vaccines are mandatory, refusal to vaccinate results in a fine – although this seems to have minimal affect

New Actors Engaged in Immunization Financing

• 2015 Act on Public Health puts in place systems for better coordination among various actors at the national and local levels

Source: Sabin, 2018; Eurostat, 2017.
Romania
ROMANIA SNAPSHOT

2017 Government Expenditure on Health

1.75% Preventive Health Services (share of total public health spend)

Total public spend on health = 4.3% GDP


2018 Vaccine Coverage Rates

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Targeted Risk Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td></td>
</tr>
<tr>
<td>DTaPHibHepBIPV</td>
<td></td>
</tr>
<tr>
<td>DTaPIPV</td>
<td></td>
</tr>
<tr>
<td>HepA Adult</td>
<td>Outbreaks</td>
</tr>
<tr>
<td>HepA Pediatric</td>
<td></td>
</tr>
<tr>
<td>HepB Adult</td>
<td>Accidental exposure to blood</td>
</tr>
<tr>
<td>HepB Pediatric</td>
<td></td>
</tr>
<tr>
<td>Influenza Adult</td>
<td>Adults over 60 with chronic conditions, pregnant women, healthcare workers, and other risk groups</td>
</tr>
<tr>
<td>Influenza Pediatric</td>
<td>Children with chronic conditions</td>
</tr>
<tr>
<td>MMR</td>
<td></td>
</tr>
<tr>
<td>PCV</td>
<td></td>
</tr>
<tr>
<td>Rotavirus</td>
<td></td>
</tr>
<tr>
<td>Tdap</td>
<td></td>
</tr>
<tr>
<td>TT</td>
<td></td>
</tr>
<tr>
<td>Typhoid conjugate</td>
<td>Travelers</td>
</tr>
<tr>
<td>Typhoid PS</td>
<td></td>
</tr>
<tr>
<td>Varicella</td>
<td></td>
</tr>
<tr>
<td>Yellow Fever</td>
<td>Travelers</td>
</tr>
</tbody>
</table>

Source: WHO-Unicef Coverage Estimates


Source: WHO Monitoring System
ROMANIA FINDINGS

Fiscal Space:
• At 4.3% of GDP, Romania has the lowest health expenditure in the EU.
• Political and economic instability have contributed to low levels of health expenditure.
• Since 2016, Romania’s government has increased the budget for health to address underfunding.

Prioritization:
• The National Health Strategy 2014 – 2020 is the first time that an allocated budget is associated along with 8 regional plans for health.
• National Health Strategy 2014–2020 covers public health, health services and system-wide measures, setting key objectives for each.
• Implementation of the strategy is one of the conditions for accessing new EU funding.

Strategic Purchasing:
• To incentivize delivery, a ministerial order implemented fee-for-service payments to GPs at the rate of EUR 7 per vaccination.

Decentralization:
• The Ministry of Health establishes the national vaccination schedule, approves the national immunization programme and organizes the centralized procurement of vaccines.
• The District Public Health offices are responsible for the implementation of the national immunization program, ensuring that the vaccines are distributed to the family medicine physicians and reimbursing doctors for providing the service.

Romania: Trends at the Country Level

Program Prioritization
• In 2016, the new government increased the budget for health to achieve key objectives such as improving access to medicine and health workforce capacity
• Immunization budget tripled to US$70 million in 2018

New Actors Engaged in Immunization Financing
• Vaccinations are centrally procured while implementation is carried out by district health authorities
• Centrally coordinated immunization reporting supports alignment across the system

Performance Improvement
• Supply: GPs are incentivized EUR 7 for each vaccine administered
• Demand: Debate on whether to make child vaccinations mandatory to address coverage rates

Sources: Order of the Minister of Health no. 223/2017 of 31 March 2017; OECD, 2019.
Spain
### 2017 Government Expenditure on Health

Total public spend on health = 6.0% GDP

- Preventive Health Services (share of total public health spend): 2.11%


### 2018 Vaccine Coverage Rates

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Targeted Risk Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTP</td>
<td></td>
</tr>
<tr>
<td>HepA pediatric</td>
<td>HIV-infected women and men, MSM, Sex workers, Women over 26 not previously immunized.</td>
</tr>
<tr>
<td>Hep A adult</td>
<td></td>
</tr>
<tr>
<td>HepB pediatric</td>
<td></td>
</tr>
<tr>
<td>HepB adult</td>
<td></td>
</tr>
<tr>
<td>Hib</td>
<td></td>
</tr>
<tr>
<td>HPV</td>
<td>adults with chronic conditions, pregnant women, healthcare workers, residents living in long-term care facilities, other risk groups</td>
</tr>
<tr>
<td>Flu pediatric</td>
<td></td>
</tr>
<tr>
<td>Flu for adults</td>
<td></td>
</tr>
<tr>
<td>IPV</td>
<td></td>
</tr>
<tr>
<td>MenACWY-135</td>
<td></td>
</tr>
<tr>
<td>MMRV</td>
<td></td>
</tr>
<tr>
<td>PCV</td>
<td>adults over 65, wound prophylaxis, adults without vaccination history</td>
</tr>
<tr>
<td>PPV</td>
<td></td>
</tr>
<tr>
<td>Td</td>
<td></td>
</tr>
<tr>
<td>Tdap</td>
<td></td>
</tr>
<tr>
<td>Varicella</td>
<td></td>
</tr>
</tbody>
</table>

Source: WHO-Unicef Coverage Estimates; WHO Monitoring System
2. MANY ACTORS CAN COVER EACH OF THE COSTS FOR DIFFERENT SEGMENTS OF THE POPULATION

- Government Taxes
  - Ministry of Health
- Regional Taxes
  - Autonomous Communities
- Employer and Individual Contributions
  - Mutual Funds (MF’s)

- Procurement and distribution
- Program Delivery
- Population-based Services
**SPAIN FINDINGS**

**Fiscal Space:**
- The economy has endured a sustained impact from the global economic recession characterized by significant budget constraints in health care at both national and regional levels.
- Following the recession, the health budget decreased annually until 2013 ([Eurostat, 2018](#)). It has since increased year on year opening up new fiscal space for public health investments.

**Prioritization:**
- Prioritization of vaccines is done on the national level with consensus being required from the 19 autonomous regions and the Ministry of Health.

**Strategic Purchasing:**
- Most vaccines in the primary immunization series are given by pediatricians, however, some vaccines for older children are given in schools. The organization and financing of school vaccination delivery is up to the regions.

**Decentralization:**
- The autonomous communities are responsible for the management and delivery of vaccination programs and have latitude to modify the national recommended schedule to local needs.
- Some regions provide additional vaccines not on the recommended schedule and others may differ slightly on the recommended ages for a specific vaccine. Recent reforms target the homogenization of the entire country with a common vaccination schedule.

Sources: [Eurostat, 2018](#), [Deloitte 2018](#), [Spain HiT](#), [EU 2018](#)
Spain: Trends at the Country Level

Program Prioritization

Program Improvement:
Supply: Spain’s regions have experimented with school-based vaccination to improve HPV coverage rates, but the region with the highest coverage does not use this delivery channel.

Actors Engaged in Immunization Financing
- Spain’s 19 regions have autonomy over their programs and how they are financed
- Regulations are in place to develop a common national schedule, though regions retain some flexibility around delivery guidance and target cohorts

Sources: Spain HiT, EU 2018
United Kingdom
### United Kingdom Snapshot

**2017 Government Expenditure on Health**
- **5.24%** Preventive Health Services (share of total public health spend)
- **Total public spend on health = 7.4% GDP**

**Source:** Eurostat, 2019; Eurostat, 2020.

### Vaccine Targeted Risk Groups

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Targeted Risk Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>High risk groups</td>
</tr>
<tr>
<td>DTaPHibHepBIPV</td>
<td>High risk groups</td>
</tr>
<tr>
<td>DTaPIPV</td>
<td>Pregnant women from 16 weeks</td>
</tr>
<tr>
<td>HepB_Pediatric</td>
<td>High risk groups</td>
</tr>
<tr>
<td>HibMenC</td>
<td>Females only up to 18 years of age</td>
</tr>
<tr>
<td>HPV</td>
<td>At risk groups; and 65 years and above</td>
</tr>
<tr>
<td>Influenza_Adult</td>
<td>Ages 2-11 years of age</td>
</tr>
<tr>
<td>Influenza_Pediatric</td>
<td>Catch up to 25 years of age</td>
</tr>
<tr>
<td>MenACWY-135 conj</td>
<td>Catch up to 25 years of age</td>
</tr>
<tr>
<td>MenB</td>
<td></td>
</tr>
<tr>
<td>MMR</td>
<td></td>
</tr>
<tr>
<td>Pneumo_conj</td>
<td>At risk patients aged 2-64 years old</td>
</tr>
<tr>
<td>Pneumo_ps</td>
<td>At risk groups</td>
</tr>
<tr>
<td>Rabies</td>
<td>At risk groups</td>
</tr>
<tr>
<td>Rotavirus</td>
<td></td>
</tr>
<tr>
<td>TdIPV</td>
<td>Routine Cohort: 70 years Catch-up cohort from 78–80 years</td>
</tr>
<tr>
<td>Zoster</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** WHO-Unicef Coverage Estimates, 2017; WHO Monitoring System.
Note: Unique systems exist for some adult vaccines, like pneumococcal and flu.
UNITED KINGDOM FINDINGS

**Fiscal Space:**
- In the early 2000s, the government committed to increasing health spending to be in line with the EU average.
- Health spending was protected during the economic crisis from 2009 – 2014.
- The UK spends above average on health (7.4% GDP spent vs average of 7% GDP).

**Prioritization:**
- The national immunization program is expansive across the life course. UK was the first EU country to introduce the shingles vaccine into the NIP.
- Healthcare and prevention are a top priority for the government. The new immunization strategy aims to secure prioritized funding for the program.
- There is upcoming NICE guidance to improve vaccine uptake in the population.

**Strategic Purchasing:**
- The NHS acts as the public purchaser of health services in England. It is overseen by the Department of Health and Social Care.
- GPs are provided a fee for service for vaccine delivery, paid by NHS England.
- The new NHS England and GP contract review could have an impact on incentives for vaccination delivery.

**Decentralization:**
- The delivery of healthcare is decentralized, giving each country autonomy.
- Though procurement is generally pooled across the countries, flu and pneumococcal vaccines are procured by the individual regions.
- Since 2012, a number of institutions are engaged in immunization policy, including Public Health England which works closely with local governments to provide program leadership.

Program Prioritization

- Prevention budget in the UK is 5.3% higher than the EU average (Eurostat, 2018).
- Vaccine strategy is a top political priority that will likely lead to an increase in health spending

New Actors Engaged in Immunization Financing

- Financing for NIP vaccinations is different than the financing for influenza and pneumococcal vaccination programs
- Ongoing efforts to engage local governments in public health

Performance Improvement

- Supply: Performance-based financing used for childhood vaccinations in a call-re-call mechanism
- Supply: Delivery through school-based vaccination programs and pharmacies