# **Belgian vaccines landscape analysis**

# Assessment and plan with recommendations for policy proposals to address shortcomings

**Executive summary** 

authored by



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## Context:

MSD Belgium mandated Inovigate to perform an independent landscape analysis of the Belgian vaccine situation and system during November 2019 - June 2020. This research and analysis have been performed by Inovigate under complete intellectual independence.

The research has been based on (1) interviewing key stakeholders involved with vaccination on federal and regional level and (2) international benchmarking. In total more than 30 in-depth interviews with key stakeholders have been performed. Based on the interviews and international benchmarking, an independent report has been made summarizing the key insights and recommendations for improvement of the Belgian vaccination system. The strategic policy proposals and plan for making a more performing system in the near future are offered to Belgian policy makers with the aim to improve policy.

We hope this report will inspire and facilitate multi-stakeholder discussions to further detail the four priority actions of the vaccination plan for Belgium and build consensus to put them in practice. We would like to encourage all readers of this report to contact us to contribute to the multi-stakeholder dialogue.

#### The project approach in steps:



## Key findings on shortcomings that should be addressed:

It is clear from the interviews that there are multiple shortcomings on planning, governance, budget and implementation levels in Belgium.

	Planning	Governance	Budget	Implementation
Overcome the shortcomings of the "as is" situation	There is no long-term planning	Unclear roles & responsibilities of all actors	Fragmentation on budgets and decision- making	Lack of awareness about the importance of vaccination
	Decision- making process is not harmonised	Bottom-up organisation works (local)	Unclear allocation of budgets (RIZIV, regions & local actors)	Insufficient vaccinators for the entire population
	Lack of data to make decisions	Different VCRs for Flanders and Wallonia & gaps	The current vaccination budgets are not sufficient	Out-of-stocks

The shortcomings on planning are lack of long-term planning, and data and harmonisation in decision-making process. Regarding governance, there are unclear roles and responsibilities, different vaccination coverage rates (VCR) in the regions (and especially a lower VCR in Wallonia), and missing top-down overarching plan and governance (however the bottom-up organisation works). The shortcomings on budget are based on fragmentation, unclear allocation (federal, regional and local) and insufficient budgets. For implementation, the shortcomings are lack of awareness about vaccination, insufficient vaccinators for the entire population and out-of-stocks. The implications of these shortcomings are observable on all levels.

These shortcomings can be seen as opportunities for improvement to become a leading country in vaccination coverage and strategy. However, this will require alignment, goals setting and integrated action.

#### International benchmarking reveals key learnings

Vaccination systems of various EU countries, Canada, Australia have been investigated and benchmarked. Seven key learnings can be identified from international benchmarking of best practices in other countries.

К	ey learning	Description
1	Long-term strategy	Defined strategic priorities and SMART objectives     Resources aligned to the priorities     Clear governance defined and involvement of multiple stakeholders     Use of a framework to detail core functions, strategic priorities & enablers     Horizon scanning to support long-term planning
2	Sufficient budget for prevention & vaccination	<ul> <li>Italy: 4,2% of total health expenditure goes to prevention</li> <li>Netherlands has the highest expenditure (in €) per capita of €157,9</li> </ul>
3	Continuously updated immunization programme	Whole life course immunization programme covering children, adolescents & adults     Additional recommendations for specific populations     Organisation of catch-up programs     Continuously evolving programs incorporating new, more effective, cost-effective vaccines and new uses for existing vaccines across the life course
4	Increase awareness at the public and HCPs	<ul> <li>Publicly communicated policy, strategy and programmes</li> <li>Major public awareness program through different channels (incl. traditional and social media) to disseminate evidence-based and trusted information on vaccines and address public concerns</li> <li>Ensure early access to high-quality information for public and HCPs</li> </ul>
5	Updated data system and continuous surveillance	<ul> <li>Whole life immunisation register</li> <li>Surveillance through rigorous case investigation of suspected cases</li> <li>National surveillance network with an active monitoring system enabling realtime tracking of outbreaks and vaccine adverse events</li> <li>Evaluation framework and cycle to assess program delivery effectiveness</li> </ul>
6	Increased accessibility and vaccinator capacity	<ul> <li>Adequately skilled immunisation workforce through promoting effective training</li> <li>Offering vaccination in a more diverse range of settings (e.g. pharmacies)</li> <li>Ensure healthcare settings to be fully prepared for outbreak</li> </ul>
7	Sufficient supply	Efficient & effective procurement through centralised procurement     Dedicated vaccines manufacturing Innovation centre for clinical trials and for emergency preparedness

Countries with top performing vaccination systems, use standard 'core outcome sets' for prevention (like in other disease areas), and assess return on investment (ROI) for prevention beyond financial, including also other values and benefits, like demonstration of larger and more transversal value add. Good public health promotes economic growth, social and well-being of a country.

#### **Recommendations and policy proposals**

Based on the interviews and the international benchmarking, a framework has been formulated to articulate the strategic goals, priority actions and enablers, to meet the Immunization mission for Belgium in line with WHO's Immunization 2030 goals. The priority actions outline the policy proposals and recommendations for Belgium to overcome the shortcomings of the actual system, supported by enablers to successfully deliver the priority actions.



These strategic goals and actions are aligned with the strategic priorities of WHO 2030.

	Objectives	
Immunization for primary healthcare and universal health coverage	<ul> <li>To build effective, efficient and resilient immunization programmes that deliver high-quality immunization services as a part of national primary healthcare systems aimed at achieving universal health coverage</li> </ul>	
Equity and Access	<ul> <li>To ensure that everyone has equitable access to vaccines, irrespective of their geographical location, gender, socioeconomic status or any other factor, that might prejudice their access to services</li> </ul>	
Ownership and Accountability	<ul> <li>To ensure that everyone, everywhere values immunization and seeks out immunization services, by positioning immunization as an undeniable human right, building community ownership, and strengthening accountability at all levels</li> </ul>	
Outbreaks and Emergencies	<ul> <li>To maintain and strengthen capacity to prepare for, prevent and respond to vaccine-preventable disease outbreaks, and ensur that those affected by conflict, political instability and other emergencies continue to receive essential immunization services</li> </ul>	
Life course and Integration	<ul> <li>To realize the full benefits and impact of immunization by establishing and strengthening people-centred platforms to deliver vaccines and additional interventions along the life course, by collaborating with other health programmes and sectors, and by utilising all available opportunities to provide catch-up vaccination</li> </ul>	
Research and Innovation	<ul> <li>To encourage and intensify the development and adoption of new vaccines and vaccine administration technologies, novel vaccine manufacturing platforms, and programmatic innovations to enhance equitable access to immunization, taking account of ever-changing infectious disease epidemiology and emerging infectious disease threats</li> </ul>	
Availability and Sustainability	<ul> <li>To ensure a reliable global supply of affordable vaccines of assured quality, as well as a clear pathway for countries to programmatic and financial self-sustainability of their immunization programmes, taking account of global vaccine shortages and transitions out of global support programmes</li> </ul>	
Economic Advantages*	<ul> <li>Immunization can deliver economic benefits: maintain a healthy and productive workforce; reduce poverty, through avoidance of healthcare costs, lost wages, and lost productivity to illness*</li> </ul>	

Source: WHO Immunization Agenda 2030: A Global Strategy To Leave No One Behind, August 2019

From the interviews it was clear that there are 4 main priority actions that need to be put in place to overcome the identified shortcomings in the actual system. A plan with four priority actions is proposed for a performing vaccine system in Belgium in the near term.



#### The enablers for the priority actions are:



Each of the priority actions are further detailed below and formulated as policy proposals, addressing the shortcomings and providing the plan with concrete actions for a more performing vaccine system.

## Policy proposal 1: Set up of a Vaccination Institute

Integrated vaccination policy in Belgium by setting up an overarching vaccination institute to improve vaccination policy in the future.

This vaccination institute with clear responsibilities, consolidates on a permanent basis all the key roles, players and expertise in vaccination, including federal and regional policy makers, health authorities and health insurance funds, academics and manufacturers.

The Institute develops and oversees the implementation of an evidence-based vaccination vision and policy. This includes defining priorities and timelines, the vaccination calendar and proactive horizon scanning. In addition, the institute has its own budget, bringing together existing scattered vaccination budgets, to make budget decisions and allocation.

To this end, (1) the Institute has to have access to an accurate vaccination database, (2) it ensures alignment on the parameters of data collection and its structural analysis, as a basis for the development of the best available evidence supporting policy, and (3) it is organised according to the most modern principles of transparency regarding everyone's role and responsibility, evidence-based decisions are made public, and the Institute develops a code of good management of potential conflicts of interest.



**Policy proposal 2: Objective and transparent decision-making process on vaccination calendar:** The decision-making process for a new vaccine, to be included in a vaccination program, has to become objective and transparent, be decided in a concerted decision-making process for new vaccines, based on a common standardized vaccine value framework, as well as based on horizon scanning (to support long-term planning)

The decision-making process, for a new vaccine, to be included in a vaccination program, has to be objective and transparent, based on:

- Priorities need to be defined by an overarching structure with representation of all actors
- Publication of decision-rationale, priorities and budget allocation, will increase transparency.
- Budgets need to be decided in the inter-ministerial conference, in a transparent manner
- Concerted decision-making process for new vaccines to be included in a vaccination programme
- A common standardized vaccine value framework supporting objective evaluation
- A standard 'core outcome sets' for prevention (cfr. in other disease areas)
- A common standardised overarching vaccine value framework reflecting a ROI for prevention that goes beyond financial. This includes economical, societal, other values and benefits to demonstrate larger and more transversal value add. Good public health promotes both economic growth and social and well-being of a country.
- Horizon scanning required for improved decision-making on the longer-term.



A vaccine value framework integrates the strategic health goals of a life course immunisation plan and effective preparedness of pandemic outbreaks. This framework should include vaccination and coverage needs, "unmet medical" needs in the field and the pipeline of vaccines in development (horizon scanning), to plan and prepare budgets on long term. The value framework should be the reference basis for decision-making based on objective and transparent demographic and health criteria.

Figure 3 Common standardized vaccine value framework



# Policy proposal 3: One plan with top-down definition of priorities & budgets, bottom-up fulfilment of the local needs:

An overarching one vaccination plan (including pandemic plan), outlined as a framework to detail core functions, with aligned resources to the strategic priorities and enablers, will support engagement and collaboration of all system stakeholders. Complemented with a continuously updated immunization program and a centralised accurate whole-of-life immunisation registry (e-vaccination records).

An overarching one vaccination plan (including pandemic plan), will support engagement and collaboration of all system stakeholders. This overarching vaccination plan is outlined as a framework to detail core functions, with aligned resources to the strategic priorities and enablers, and should combine:

- Well-defined vision, mission and strategic priorities (in line with WHO immunization 2030 goals)
- Clear objectives, defined as SMART key performance indicators (KPIs), along the entire life course
- Virtually pooled budgets, translated into priorities and budgets on regional policy level, and to the local needs, reported by the cities/communities
- Pro-active horizon scanning to plan long-term for life course vaccination
- Science-based priority decisions (including based on registry data analysis), budget decisions and allocation.

An overarching vaccination plan based on a well-defined vision is required as a basis for achieving the immunization goals (in line with WHO immunization 2030 goals). Defined strategic priorities and SMART objectives (specific, measurable, achievable, relevant and time-based) are key to accelerate the availability of vaccines and use innovation to increase access and vaccination rates. These SMART objectives should be based

on clear VCR objectives, KPI-target setting (including universal mass vaccination (UMV) outcomes reporting) and systematic surveillance. Resources should be aligned to the priorities, as well as a clear governance should be defined with clear roles and responsibilities of all relevant stakeholders (including the public) involved.

#### Figure 4 Overarching one-vaccination-plan for Belgium





A continuously updated immunization program is required, covering whole life course immunization for children, adolescents and adults, additional recommendations for specific populations, organisation of catchup programs, continuously evolving programs incorporating new, more (cost)effective vaccines and new uses for existing vaccines across the life course.



Furthermore, a centralised registry, e-vaccination records (Vaccinnet, e-VAX), to support insights, priority setting, and KPI setting are required. Whole life *Figure 7 Centralised accurate whole-of-life* immunisation registry is key and should be *immunisation registry* 

immunisation registry is key and should be systematically and accurately populated to support and inform policy decisions. In addition, systematic surveillance through rigorous case investigation of suspected cases, should be facilitated by an overarching surveillance network with an active monitoring system that enables real-time tracking of outbreaks and vaccine adverse events. Finally, an evaluation framework and cycle is required to assess program delivery effectiveness.



#### Policy proposal 4: Supply management & infrastructure

Ensure reliable and secure vaccine supply, based on improved planning and forecasting. One plan, collaboration between authorities and responsible actors, centralised stock management and oversight through the implementation of a vaccine inventory system, centralised procurement and working closely and pro-actively with vaccine companies to support continuous supply of essential vaccines for Belgium, will solve out-of-stock issues. Furthermore, also a dedicated vaccines manufacturing innovation centre for clinical trials and emergency preparedness is needed.

Occurrence of out-of-stock of vaccines, also at the pharmacists, requires improved planning and forecasting.

To achieve this "one vaccines supply plan" and collaboration between authorities and responsible actors will be crucial. In addition, centralised stock management and oversight through the implementation of a vaccine inventory system will reduce out-of-stock situations, improve forecasting demand and supply, reduce product waste and demanding on staff time. Efficient and effective procurement through centralised procurement will also be needed to ensure an adequate, stable, safe, timely, and affordable vaccine supply. The centralised procurement enables the successful negotiation of contracts, efficient vaccine ordering, and safe and timely management and delivery of vaccines.

Furthermore, several supporting measures should be implemented. Communicating best practices to



all providers and introducing strategies to implement best practices in vaccine management and administration across the service system, including defining an acceptable standard of wait times for immunization services, will be needed. Also, implementation of a robust system for prevention, identification, and management of immunization incidents across the system, is required. And finally, the development of a common understanding of the criteria for programme success have to be developed and specific standards established for each element. Several examples are vaccine wastage targets, cold chain standards, protocols for vaccine distribution and redistribution, and vaccine return policies. The largest portion of any Immunization programme budget is for the purchase of vaccines. Steps to ensure all providers have timely access to vaccines, have to be defined.

Opportunities to proactively work with vaccine manufacturers have to be explored, to improve product design, scheduling, vaccine safety and influence research and development to address innovative solutions. Proactive pipeline communication by manufacturers enables long-term planning. Moreover, a dedicated vaccines manufacturing Innovation centre for clinical trials and for emergency preparedness will be needed.

The ambition of this report is to deeply understand the prevention and complex vaccination landscape in Belgium and identify opportunities for improvement. With this report, we provided a plan based on four priority actions and supported by four enablers for a top performing vaccine system, meeting the WHO 2030 requirements.

We hope this report will inspire and facilitate multi-stakeholder discussions to further detail the four priority actions of the vaccination plan for Belgium and build consensus to put them in practice.

Readers of this report are encouraged to take contact with us, to contribute to the multi-stakeholder dialogue.

You can read the full report on the website of Inovigate via the following link: www.inovigate.com