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Introduction

Vaccination has been a transformative tool in society, with an estimated 4-5 million lives saved each year.¹ Vaccine innovation continues to play a significant role in public health, increasing the efficiency of healthcare. Accelerated by the COVID-19 pandemic and technologic advancements, the vaccine pipeline is developing at a breakneck speed. Innovations in vaccine technology, such as the advent of mRNA vaccines, are transforming vaccine development, while changing global threats and burdens are shifting the focus of the vaccine pipeline to address diseases for which no vaccine has previously been registered.²⁻⁵

This rapid pace of innovation, in a period when society is recovering from the pandemic, creates new challenges for decision-makers. The pandemic exposed the need for more strategic resource allocation and a careful approach to managing public perception around vaccines.⁶ However, it also reinforced the critical importance of vaccination, leading to heightened global awareness and renewed commitment to immunisation efforts.⁷ This heightened focus on vaccination presents an opportunity to reshape policies and improve access to vaccines, but demands a deeper understanding of emerging vaccine trends and their implications for healthcare systems over the next 5-10 years.

Methodology

Literature review

Searching academic journals, industry reports and publications to identify common themes and emerging vaccine trends

Online survey

A diverse range of stakeholders participated in the survey, totaling 30 respondents

Survey sample

Region	Percentage
US (n=5)	17%
Europe (n=18)	60%
Asia (n=2)	7%
Global (n=5)	17%

Stakeholder types

Stakeholder type	Percentage
Payers/NITAGs (n=18)	60%
Industry/Consultants (n=8)	27%
Policymakers/KOLs/Academics/HCP (n=4)	13%

Results

Top 5 trends overall (% of respondents)

- 1 Use of vaccines as a therapeutic agent (80%)
- 2 Rise of combination vaccines (70%)
- 3 Increased focus on adult vaccines and vaccination throughout the life-course (53%)
- 4 Development of vaccines targeting more tropical infectious diseases (50%)
- 5 Increasing budgetary pressures for new vaccines (43%)

Trends by stakeholder type

Payers and NITAGs (% of respondents)	Industry stakeholders and consultants (% of respondents)	Policymakers, KOLs, Academics and HCPs (% of respondents)
Use of vaccines as a therapeutic agent (80%)	Increasing budgetary pressures for new vaccines (75%)	Use of vaccines as a therapeutic agent (75%)
Increased focus on adult vaccines and vaccination throughout the life-course (67%)	Rise of combination vaccines (75%)	Use of vaccines as a tool for combating antimicrobial resistance (75%)
Development of vaccines targeting more tropical infectious diseases (67%)	Use of vaccines as a therapeutic agent (50%)	Development of vaccines targeting more tropical infectious diseases (50%)
Use of vaccines as a tool for combating antimicrobial resistance (50%)	Increasing vaccine hesitancy or vaccine fatigue (50%)	Increasing vaccine hesitancy or vaccine fatigue (50%)
Increasing budgetary pressures for new vaccines (33%)	Rise of regional manufacturing hubs to reduce reliance on global supply chains (38%)	Rise of combination vaccines (50%)

■ Prioritised trends only for specific stakeholders

Expectations on vaccine uptake rates in the next 5-10 years

Expectation	Percentage
Vaccine uptake will decrease	13%
Vaccine uptake will remain the same	47%
Vaccine uptake will increase	37%

A limited perception that vaccine uptake will increase, even with new vaccines entering the market, due to an increase in vaccine fatigue and questioning the value of new vaccines

NITAG/Payer assessment of relative future importance of different elements on procurement decision-making

Element	Current rating	Future rating
Price	3.8	3.7
Quality and technical criteria	3.8	3.7
Service related criteria	2.9	3.4
Patient related criteria	3.2	3.3

Very important (5.0) to Not important (1.0)

Quotes on opportunities for MNFs

- “Growing recognition by governments and the public of the value of vaccines and the need for greater investment in prevention.”
- “Leveraging real-world evidence to clearly demonstrate the health benefits and effectiveness of vaccines.”
- “Expanding through collaborative partnerships to share expertise, infrastructure and manufacturing capacity.”
- “Innovating vaccine combinations and alternative routes of administration to improve compliance and address more disease areas.”

Quotes on challenges for MNFs

- “Constrained healthcare budgets and the prioritization of system recovery, which limit public spending on new vaccines.”
- “Ongoing vaccine hesitancy, misinformation and growing vaccine fatigue in the population.”
- “Proving the added clinical value of new vaccines through real-world evidence, and demonstrating cost savings from combination vaccines.”
- “Conducting high-quality studies with sufficient patient numbers and rigorous methodology, to provide robust evidence, while competing with alternative treatment options.”

Conclusions

There is broad alignment across stakeholders that the biggest trends affecting vaccines will be about the innovation in therapeutic vaccines, combination vaccines and tropical and endemic diseases. This supports an overall increased focus on life-course vaccination schedules, which increases budgetary pressures to support access to this innovation and potentially expand population coverage for both new and existing vaccines.

Key recommendations for policymakers and access decision-makers

- Improve horizon scanning and demand forecasting**
 - Implement mechanisms for early and continuous scientific dialogue
 - Develop demand forecasting mechanisms to manage vaccine supply-demand value chain
- Provide clear evidence guidelines for assessment**
 - Co-develop evidence guidelines with input from a broad range of stakeholders, and create streamlined pathways for quicker recommendations
- Ensure sufficient investment in prevention to meet vaccination demand**
 - Prioritise the budget allocated to prevention and implementation of NIPs to meet population needs across the life-course
- Improve vaccine delivery infrastructure**
 - Expand access points across the life-course for target populations to support equitable delivery, and ensure investment in more robust data collection
- Invest in public health education campaigns**
 - Dedicate increased budget for national awareness campaigns and promoting vaccine safety and efficacy

Supporting actions for vaccine manufacturers

- Strengthen pipeline planning to meet future vaccine needs**
 - Invest in R&D for vaccines that address emerging and forecasted health needs, with a focus on combinations and vaccines for tropical infectious diseases
 - Establish early collaboration with regulatory bodies, HTA associations and NITAGs
- Invest in real-world evidence to demonstrate vaccine value**
 - Collaborate with health systems for real-world evidence collection
- Generate data on long-term cost savings**
 - Generate evidence for the long-term socio-economic benefit of vaccines and the return on investment to support increased budget allocation
- Strengthen manufacturing and distribution**
 - Invest in regional manufacturing hubs to increase security of supply
 - Invest in distribution technologies and partner with local logistics companies to streamline delivery and accessibility
- Integrate public health education into commercial strategies**
 - Be aware of vaccine hesitancy reports and trends, and integrate behavioural insights to design uptake programs and service-related provisions

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