

# The evolving vaccine landscape: Insights from the 6th ESCMID Conference on Vaccines

The 6th ESCMID Conference on Vaccines took place in Lisbon, Portugal on September 10–13. The conference brings together the vaccine community and stakeholders, including industry representatives, clinicians, regulators, policymakers, academics, National Immunization Technical Advisory Group (NITAG) members, and payers, to share their unique perspectives on the latest developments in the field of vaccination.

The 6th ESCMID Conference on Vaccines featured numerous sessions, talks, and new data releases, with a few of the key themes that emerged examined below.

## Importance of adult immunization

- Although many organizations, such as the WHO, UN, and the International Federation on Ageing, are working towards a life-course vaccination program and are aiming to increase the rates of adult immunization globally, recent data shows that adult vaccination policies are inconsistent (e.g., 58% of countries have a vaccination policy for influenza, but only 13% for pneumococcal and 5% for herpes zoster).
- Adult immunization is important for several reasons:
  - As some childhood vaccines do not offer life-long protection, boosters during adulthood may be required.
  - New viral strains, disease re-emergence, and age-related immunosenescence may challenge existing immunity.
  - Older adults have a higher risk of severe effects from diseases such as influenza, shingles, and RSV.
  - Adult immunization can reduce the broader societal impact of infectious diseases by lowering work absenteeism, easing the pressure on hospitals and caregivers, and helping to maintain productivity and independence across generations.
- Several solutions were discussed to increase adult immunization:
  - Relying on trusted well-informed healthcare professionals (HCPs) as the vaccine advocates. HCPs are consistently ranked as patients' most trusted source of vaccine information.
  - Integrating adult immunization into proactive plans helps avoid diseases later in life and reduces associated long-term treatment and care burden.
  - Positioning adult immunization as protecting from diseases and preventing the cascade of chronic illnesses, reduces treatment burden and protects the body's long-term resilience.

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### While combination vaccines offer potential benefits, several key challenges must be overcome

- Vaccination schedules are congested, and in some markets, vaccination services are already over-subscribed. By 2030, there could be vaccines available for up to 30 diseases, with the majority recommended for infants and toddlers. This creates challenges for national programs, which may not be able to cope with the influx of new vaccines.
- Combination vaccines offer an opportunity to streamline immunization schedules to reduce the workload on health workers and make room for additional vaccines.
- Several technological alternatives for developing combination vaccines exist, with more to come. There are promising candidates in the clinical development pipeline.
- There are several key challenges that must be overcome to facilitate investment in, and access to, combination vaccines:
  - o Regulatory headwinds with stricter US FDA requirements and US policy shifts are likely to slow down approvals and availability.
  - o Matching to circulating viruses may be more challenging.
  - o The duration of protection and the need for boosters may vary for the individual components.
- Ultimately, it was determined that there is a need for proactive dialogue among different stakeholders (e.g., industry, regulators, governments, policymakers, and NITAGs) to create a paradigm shift in regulatory, policy, and financing perspectives that recognize the intrinsic value of combinations.

### Influenza vaccination in children

- Severe influenza affects children and adolescents, with the majority of hospitalized cases occurring in healthy and unvaccinated individuals. Severe influenza-related complications are common in children and adolescents.
- Children begin to shed the influenza virus earlier and more often than compared to adults. There is a high risk that infected children and adolescents may pass the virus to elderly family members who may face more severe disease and complications. This can result in direct healthcare costs and loss of caregiver productivity.
- Recommendations and funding for pediatric influenza vaccinations are increasing, but coverage rates remain low in several countries.

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- Strategies such as administering vaccines in schools or at other easily accessible and convenient locations, utilizing the nasal administration route (as opposed to injections), and strengthening community services can help increase uptake.

### Hurdles and advances in developing an HIV vaccine

- Prophylactic and therapeutic HIV vaccines remain the holy grail to end the HIV pandemic. While some progress has been made in prophylactic HIV vaccine development, several challenges remain.
  - o Functional, virological, and immunological correlates of HIV “control” remain, at best, ill-defined.
  - o Prophylactic HIV vaccines will require prolonged B-cell / affinity maturation and strong, sustained T cell immunity. Therapeutic vaccines will need higher than the currently achieved levels of virus control.
  - o Further interventions may be required to attain more effective viral suppression.

### Pandemic preparedness

- The Coalition for Epidemic Preparedness Innovations (CEPI) presented their ambitious 100 days plan for vaccine development in case of a pandemic (100 Days Mission). This is far shorter than the ~350 days that it took to develop the COVID-19 vaccines.
- A key element in making this bold vision possible is preparedness, with respect to regulatory approval, technological execution, and platforms. Achieving this will require close alignment among international and regional stakeholders.

The meeting in Lisbon highlighted the significant amount of work being done by the vaccine community to overcome infectious diseases. The community also highlighted some key challenges related to research and development, regulatory approval, policy, delivery, implementation, funding, access, and uptake of vaccines.

**We invite you to connect with members of our Life Sciences Practice to discuss our perspective on overcoming these challenges and realizing the full potential of vaccines. If you need assistance with critical questions regarding market evolution, R&D and commercialization strategy, and stakeholder engagements, please do not hesitate to reach out to us.**

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