VACCINES
a tool for spending SMART
Vaccination programmes have had a significant impact on reducing mortality and morbidity throughout life from numerous infectious diseases, saving 2 to 3 million lives worldwide every year. Effective vaccination programmes relieve pressure on health systems and budgets. This, in turn, allows freeing resources for other areas of the healthcare system, as well as for investment in medical innovation.

**Contribution to Public Health**

Reducing Morbidity & Mortality

Several vaccines are key to protecting patients affected by underlying chronic conditions. Such vaccines contribute to reducing the burden of medical complications in these patient groups, thereby also helping to address issues of poly-medication.

In patients with underlying chronic conditions (diabetes, asthma, COPD, cardiovascular diseases, renal or liver diseases, etc.)

Rational Use of Antibiotics

Vaccines also have the potential to contribute to the global fight against antimicrobial resistance, by helping to reduce the use of antibiotics. Vaccines can help prevent the development of resistant bacteria.

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**Smallpox**

- Eradicated
- 29,005 cases in 1988
- 0 cases in 2014

**Polio**

- Nearly eradicated
- 350,000 cases in 1988
- 399 cases in 2014

**70% Vaccination Uptake**

- 86% projected cases in HPV-related cervical cancers
  - 86% reduction in 12yo girls

**Influenza Vaccination Reduces By:**

- 28% death in diabetic patients
- 50% heart attack occurrence
- 24% the risk of stroke after respiratory diseases

**Rational Use of Antibiotics**

- Each year €1.5 billion loss attributed to antimicrobial resistance
- The use of pneumococcal vaccine in the antimicrobial stewardship programme
- The antibiotic use from 48% to 29.7%
Vaccination is certainly also one of the most cost-effective public health interventions available, accruing returns on investment at the individual, healthcare system, economic and societal levels.

**BEYOND HEALTH**

A population that is healthy throughout all stages of life is one of the key contributors of an economically thriving society:

- Healthy children have the potential to develop better educational attainment
- Healthy adults stay productive and fully contribute to economic development
- Healthy seniors continue to be active and independent members of the society

This prevents overconsumption of healthcare resources due to diseases that can be prevented thanks to vaccines.

**INFLUENZA VACCINATION SAVES PER SEASON**

<table>
<thead>
<tr>
<th>DIRECT COSTS</th>
<th>INDIRECT COSTS</th>
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<tbody>
<tr>
<td><strong>€131 MILLION</strong>*</td>
<td><strong>€22 MILLION</strong>*</td>
</tr>
<tr>
<td>Saved with around 1.6M flu cases &amp; 45,000 hospitalisations avoided</td>
<td>Saved with 701,000 GP visits avoided</td>
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= **€250M SAVED + 25,000 LIVES SPARED/PER YEAR**

*on average, with currently observed vaccination rates, despite these being below the 75% EU vaccination target.

**FISCAL RETURN ON INVESTMENT**

Investment in vaccination can also translate into substantial returns on investment for governments. This is attributed to reduced public expenditure (e.g., social insurance transfers) and increased tax revenue from healthy individuals in gainful employment.

**ADULT VACCINATION:**

- **50+ YEARold INVESTMENT**
- **€4** OF FUTURE ECONOMIC REVENUE FOR GOVERNMENT

**APPLIED TO:**

- Seasonal influenza
- Pertussis
- Herpes zoster
- Diphtheria
- Invasive pneumococcal disease
- Tetanus
- Pneumonia
Effective vaccination programmes can provide equal opportunities to live long and healthier lives regardless of gender, age, and social groups. Addressing changes in the demographic structure of the EU’s population requires a shift of national immunisation programmes to reflect a life-course approach to vaccination. Also, as diseases know no border, all citizens need to have equal access to both vaccines and vaccination programmes, with no geographic or regional disparities.

High vaccination coverage can provide herd immunity, thereby protecting communities from the risks of disease spreading. Herd immunity can indirectly protect individuals with poorer access to healthcare or vaccination programmes, as well as those who cannot fully benefit from vaccination (e.g. new-born babies too young to be vaccinated, the immunocompromised, the immunosenescent).

It is only thanks to successful vaccination delivery programmes that vaccines can unleash their full potential. Achieving the appropriate level of coverage is, therefore, paramount to ensure the right level of protection for the entire population.


7. Boccalini et al. (2013), Economic analysis of the first 20 years of universal hepatitis B vaccination program in Italy - An a posteriori evaluation and forecast of future benefits, Human Vaccines & Immunotherapeutics 9:5, 1119–1128


DID YOU KNOW?

Spending on vaccines only accounts for an average of 0.5% or less* of overall healthcare budgets in EU Member States?

Vaccines Europe is the specialised vaccine industry group operating within the European Federation of Pharmaceutical Industries and Associations (EFPIA). It represents innovative research-based global vaccine companies, as well as small and medium-sized enterprises operating in Europe. For more information, visit:

www.vaccineseurope.eu