



www.vaccineseurope.eu

CONTRIBUTION & PUBLIC HEALTH

REDUCING MORBIDITY & MORTALITY

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 alleviate 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.





PROTECTING CHRONIC PATIENTS

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.



CONTRIBUTION & ECONOMIC GROWTH

REAL DROP. NET SAVINGS

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







10

INDIRECT COSTS

= €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.

SAVED WITH AROUND 1.6M FLU CASES

& 45,000 HOSPITALISATION AVOIDED

ADULT VACCINATION:



$\begin{array}{c} \textbf{CONTRIBUTION} \not = \textbf{HEALTH} \notin \textbf{SOCIAL EQUITY} \end{array}$

EQUAL HEALTH ACROSS THE LIFE-COURSE

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.



HERD IMMUNITY

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).







2012 -79% 2013 INFANT DEATHS

COVERAGE MATTERS

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.**



REFERENCES



CONTRIBUTION TO PUBLIC HEALTH

- 1. Roush et al. (2007), Historical Comparisons of Morbidity and Mortality for Vaccine-Preventable Diseases in the United States, JAMA;298(18):2155-2163. doi:10.1001/jama.298.18.2155.
- 2. WHO (2015), Poliomyelitis Fact Sheet N. 114, accessible at: http://www.who.int/mediacentre/factsheets/fs114/en/
- **3.** Dasbach et al. (2008), The epidemiological and economic impact of a quadrivalent human papillomavirus vaccine in the UK. BJOG: An international journal of obstetrics and gynaecology; 115(8):947–56).
- 4. Udell et al (2013); Association Between Influenza Vaccination and Cardiovasuclar Outcomes in High-Risk Patients, JAMA. 2013;310(16):1711-1720. doi:10.1001/jama.2013.279206
- **5.** ECDC and EMA (2009), The bacterial challenge: time to react, Joint Technical Report, available online at: http://ecdc.europa.eu/en/publications/Publications/0909_TER_The_Bacterial_Challenge_Time_to_React.pdf
- 6. Wilby et al. (2012), A review of the effect of immunization programs on antimicrobial utilization, Vaccine. Oct 12;30(46):6509-14. doi: 10.1016/j.vaccine.2012.08.03



CONTRIBUTION TO ECONOMIC GROWTH

- 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
- 8. Atkins et al. (2012), The cost-effectiveness of pentavalent rotavirus vaccination in England and Wales, Vaccine. Nov 6;30(48):6766-76. doi: 10.1016/j.vaccine.2012.09.025
- Préaud et al. (2014), Annual public health and economic benefits of seasonal influenza vaccination: a European estimate, BMC Public Health 2014, 14:813 http://www.biomedcentral.com/1471-2458/14/813
- SAATI (2013), Adult Vaccination: A Key Component of Healthy Ageing The benefits of life-course immunisation in Europe. Available online at: http://www.ifa-fiv.org/wp-content/uploads/2015/03/8-Full-Report-Economic-Benefit-of-Adult-Vaccination.pdf



CONTRIBUTION TO HEALTH & SOCIAL EQUITY

- **11.** Vaccines Today (2015), What is Herd Immunity?, available online at: http://www.vaccinestoday.eu/vaccines/what-is-herd-immunity/
- **12.** Amirthalingam et al. (2014), Effectiveness of maternal pertussis vaccination in England: an observational study, Lancet; 384: 1521–28
- **13.** ECDC (2015), Measles and Rubella Monitoring, July 2015. Available online at: http://ecdc.europa.eu/en/publications/Publications/measles-rubella-quarterly-surveillance-july-2015.pdf

DID YOU KNOW?

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

* O'Riordan et al. (2015) The impact of economic recession on infection prevention and control. J Hospital Infection; 89:340-5; DREES (2014) Direction de la Recherche, des Etudes, de l'Evaluation et des Statistiques. Comptes Nationaux de la Santé, 2008 à 2013 ; MSSSI (2015) Minesterio de Sanidad, Servicios Sociales e Igualdad. BUDGET; Suplemento de la Razón. Vacunas. Ahorrar en inmunización hoy, disparara el gasto sanitario en unos anos. A Tu Salud 2013;467:4-6; EH Ambrosetti (The European House – Ambrosetti) Meridiano Sanità. Le coordinate de la salute. Rapporto 2014.





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