



Out of Sight, Out of Mind

A specialised group within EFPIA

THE VALUE AND BENEFITS OF VACCINATION

Each year vaccination prevents up to 3 million deaths and 750 000 cases of permanent disability due to infectious diseases. (GAVI 2001)



Polio: a child has a severely deformed leg because of polio

Vaccination is one of the greatest public health achievements of the 20th century. With the exception of clean drinking water, there is no other human intervention that has had such an impact on reducing infectious diseases as effectively as vaccination. Without the widespread use of vaccines there would be a far greater number of deaths during childhood, and many more people living with the chronic and often crippling side effects of infectious diseases.

FORGOTTEN DISEASES

“OUT OF SIGHT, OUT OF MIND”



A few infectious diseases can be totally eliminated through mass vaccination programmes, while many can be brought under control. The bacteria or viruses that cause those diseases still exist, and remain a threat to the health of those who are not protected through vaccination. It takes only a few people who do not protect their families through vaccination to put their own families and non-immunised

neighbours at risk. If enough people decide to stop vaccinating, infectious disease can spread to epidemic proportions, putting entire communities needlessly at risk.

Many Europeans have no memory of diphtheria, measles or polio epidemics. As diseases disappear from a community, people may begin to question the benefits of vaccination, and underestimate the serious risks of vaccine-preventable diseases. These beliefs are fuelled by concerns regarding the side effects of vaccines, and often by persuasively delivered misconceptions about the risks of vaccines.

Recent influenza pandemic threats remind us of how fragile our gains against infectious diseases can be.

INFECTIOUS DISEASES RETURN IN ABSENCE OF VACCINES

Medical evidence and history have clearly demonstrated that when high immunisation rates are not maintained infectious diseases return and non-immunised people are more likely to get the disease. Whooping cough (pertussis) is a typical example of a

disease that had largely been under control, but which has reappeared whenever vaccine coverage falls. The widespread administration of whooping cough vaccine led to a dramatic reduction in cases of pertussis in Europe.

INCIDENCE OF PERTUSSIS (WHOOPING COUGH) IN THE UK PRIOR TO AND FOLLOWING THE INTRODUCTION OF VACCINATION

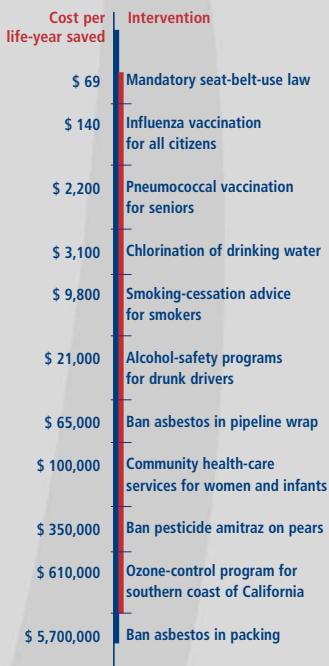
In 1976 in the United Kingdom, unsubstantiated concerns led to widespread worries about the alleged serious side effects of the whooping cough vaccine, resulting in a dramatic fall in coverage from 81 per cent to 30 per cent. In Sweden and in Italy, the vaccine was virtually abandoned altogether. The

result was a substantial increase in the number of whooping cough cases (an estimated 300,000 in the UK) and even death in unvaccinated children (there were over 70 deaths in the UK). The alleged side effects proved to be entirely unfounded.

VACCINATION: THE MOST COST EFFECTIVE MEANS TO FIGHT DISEASE

Immunisation is one of the most cost effective health interventions in existence. If polio is eradicated by 2005, it has been calculated that US\$ 1.5 billion per annum will be saved on immunisation costs alone. Similarly, it is estimated that the eradication of smallpox in 1979 led to direct savings of US\$ 275 million per annum. Immunisation reduces the social and financial costs of treating diseases, offering opportunities for poverty reduction and greater social and economic development.

A COMPARISON OF SOME PUBLIC HEALTH RELATED INTERVENTIONS



Source: Tengs et al. Five-hundred live-saving interventions and their cost-effectiveness. Risk Analysis 1995 June; 15(3):369-390.

THE ROLE OF SOCIAL AND PUBLIC HEALTH SYSTEMS THE SOCIETAL ROLE OF VACCINATION

Vaccination not only protects the individual who receives it but also protects the health of the community. Immunising a large part of the population, called "herd immunity," can lead to protection of the community as a whole by helping to prevent a disease from spreading.

It is the responsibility of the vaccine industry, together with health authorities, to

provide validated, understandable and reliable information to health professionals and the general public.

The table below shows the dramatic reductions in death and disease in the United Kingdom following the introduction of vaccination in the UK's public health programmes.

Incidence of diseases in UK prior to and following the introduction of vaccination

Disease	Diphtheria		Tetanus		Pertussis		Hib Meningitis**		Measles		Mumps****		Rubella****		CRS****		TB	
	1939*	1996	1960*	1996	1956*	1996	1991*	1996	1967*	1996	1989*	1996	1989*	1996	1971*	1996	1952*	1996
Number of cases	47,061	12	NA***	8	94,410	2,387	417	38	460,407	5,613	20713	1,924	14,570	9,081	162	21	14,570	5,859
Number of deaths	2,133	0	32	0	92	2	22	0	99	0	-	0	-	2	-	-	10,590	420

* last year before vaccination

** *Haemophilus influenzae* type b meningitis

*** Not a notifiable disease until 1968

**** 1989 was the first full year of notifications for mumps and rubella

***** Cases of congenital rubella syndrome and terminations related to rubella infections

Source: Office for National Statistics, Public Health Laboratory Service

"BUCKING THE HERD" - PARENTS WHO REFUSE VACCINATION OF THEIR CHILDREN MAY PUT ENTIRE COMMUNITIES AT RISK

The more vaccinated people there are, the safer it is for an unvaccinated person. Consequently when vaccination rates drop, disease returns. Recent cases of endemic disease in the USA and in Germany clearly illustrate the consequences of failing to vaccinate a community. In Boulder, Colorado, the cases of childhood pertussis (whooping cough) have increased significantly. Boulder has the lowest school-wide vaccination rate in the State and has one of the highest rates of pertussis in the nation, with an average of 81 cases a year since 1993.

Parents have avoided one of the vaccines, against diphtheria, tetanus and pertussis,

which has resulted in a revival of this toxin-based disease, whooping cough, which causes inflammation of the airway and a debilitating cough.

Another recent example exists in Coburg, Germany. The town has a population of 44,000, and only a 50% vaccination coverage due to parental refusal to use the MMR vaccine. This resulted in a severe measles outbreak in schools, with 700 children infected and 30 hospitalised with severe infections.

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