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## SUMMARY EXCERPTS FROM BENEFIT/COST STUDIES OF IMMUNIZATION

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Following are excerpts from eight benefit/cost studies of the efficacy of childhood immunization programs using the major routinely recommended vaccines as reported in the scientific literature.

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### **PERTUSSIS**

“...A pertussis vaccination program reaching 90% of children would reduce pertussis incidence and **disease-**related costs by 90%, with an overall benefit/cost ratio of 11.1: 1. This represents a conservative estimate, since indirect costs were not included.” (Hinman, A. R., and J. P. Koplan. 1984. Pertussis and pertussis vaccine: Reanalysis of benefits, risks, costs. JAMA 251:3109-3113.)

### **DIPHTHERIA**

“...Before routine immunization started, more than 1 in 20 inhabitants of the temperate zone suffered from diphtheria and more than 1 in 20 of the infected subjects died from the disease. After the introduction of a comprehensive immunization campaign in the U.K. in 1942 covering all diphtheria-susceptible persons below 15 years of age, 10-fold reduction in diphtheria incidence was obtained within 5 years and a 10-fold reduction within 10 years. Similar results were noted in other countries. These immunization programs have ensured that diphtheria has not been a public health problem for more than a generation ...” (Hennessee, and A. H. Griffith, 1978. The role of immunization in the control of diphtheria. International Symposium on Immunization: Benefit versus risk factors. Develop Biol Standard 43:3-13.)

### **MEASLES**

“...Medical and other cost savings from federally sponsored programs prove to be considerable -- over \$1 billion during an eight-year period. Even discounting real savings from pain and suffering associated with death and retardation, direct economic benefits in productivity and medical care resources are approximately \$10.34 per \$1.00 of program costs.... Substantial resources have been released for other purposes by a national commitment to eradicate measles as a communicable disease.” (Albritton, R. B. 1978. Cost-benefits of measles eradication: Effects of a Federal intervention. Policy Analysis 4: 1-22.)

“...In addition to the cases averted and lives saved, an estimated 7,900 cases of mental retardation were obviated, 709,000 years of normal and productive life preserved by preventing deaths from measles and the mental retardation following measles encephalitis.... The value of the net benefits achieved through immunization is \$1.3 billion saved for the 10-year period.” (Witte, J. J., and N. W. Axnick. 1975. The benefits from 10 years of measles immunization in the United States. Pub Health Rep