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VACCINE RESEARCH

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Among the initiatives in prevention, immunization occupies a premiere place. Universally, it is acknowledged to be the single most cost-effective medical procedure available today. It is the simplest to provide. Its importance is recognized by this Administration -- the President's 1993 budget proposes $350 x 10^6 specifically for Federal support to immunization delivery programs, fully two and a half times the amount provided in 1989. Support for vaccine research has also increased as Dr. Fauci will describe -- and vaccine development is identified by NIH as one of only a handful of priorities in its draft strategic plan.

As significant as developments have been, far more is promised. Growth in knowledge of the immune system has vastly expanded just in the fast few years and techniques in biotechnology -- techniques which permit vaccines to be tailor-made, if you will -- offer incredible promise. And biotechnology this year is one of two new special Presidential budget initiatives.

Two summers ago a group of scientists met at NIH to assess the state of the art and to ask "what if." From these meetings came the vision of a "children's vaccine" -- a vaccine given at or soon after birth, possibly by mouth and protecting the child for life against more than 20 diseases. It is sometimes called "The Communion Wafer." At a distance, this sounded like a Utopian dream but, in fact, it appeard that such a vaccine was realistically feasible given a reasonable investment in research -- Nobel quality

breakthroughs were clearly not needed. And so was born the Children's Vaccine Initiative, a global effort with NIH and Dr. Fauci clearly the major force.

In brief, there is real cause to believe that such investments as we have made and are making in immunization can productively be greatly expanded over the years ahead.

It is to be pointed out, however, that both prevention and vaccines in particular occupy a special niche in medicine and call for special efforts both in the public and the private sector. Until recently, they have received all too little support. In part, I believe this results from the fact that our focus of attention -- whether the press, the public, legislators or even the Executive -- has been primarily on curative medicien and curative interventions. It is a great deal easier to captivate the public with the picture of a man who has received a new heart and now runs a mile a day than it is to picture 1000 children who, for the same expense, were not paralyzed by poliomyelitis. Deans of medicine know this and raise millions from grateful patients; I can say with feeling hat Deans of Schools of Public Health do not get the same response from the hundreds of thousands who have not had polio, smallpox, measles, etc., etcl. But as health care costs have steadily risen, the question of inexpensive methods for prevention of disease and an improved quality of life have appeared on the agenda. I would be remiss, however, in failing to note that we have a special problem with vaccines and vaccine research. Vaccines have generally been far less attractive to the private sector than have pharmaceuticals. It is far easier to recoup investment costs amortized over, for

example, hundreds of millions of arthritis pills than a limited number of vaccine doses -- a vaccine which if successful is given only once in a lifetime. When liability issues with vaccines began to emerge as they did in the late 1960s, many pharmaceutical companies simply abandoned their vaccine operations as being too marginally profitable and too fraught with risk. The result today is that there remain only a very few biologics producers.

To facilitate vaccine development over a far broader spectrum of diseases, to assure that necessary often large scale field trials are duly carried out, to foster necessary cooperation so that antigens against different diseases and developed by different procedures can be combined -- all these and more require a rethinking of priorities and methods of funding and a rethinking of public and private sector relationships.

However, if we recognize that vaccines represent potentially our most powerful tools and if we can agree on longer-term objectives, I am confident that the challenge can be met.