

Press release, polio vaccine evaluation results, April 12, 1955

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POLIO VACCINE EVALUATION RESULTS

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Ann Arbor: The vaccine works. It is safe, effective, and potent.

Dr. Thomas Francis, Jr., U-M Director of the Poliomyelitis Vaccine Evaluation Center, told an anxious world of parents that the Salk vaccine has been proved to be up to 80-90 percent effective in preventing paralytic polio.

At a meeting of over 500 scientists and physicians and before the penetrating eyes of cameras and powerful spotlights, Dr. Francis spoke on the effectiveness of the Salk vaccine. The meeting was held at the Rackham Auditorium in Ann Arbor under the joint sponsorship of the National Foundation for Infantile Paralysis and the University of Michigan.

Dr. Francis declared the vaccine had produced "an extremely successful effect" among bulbar-patients in the areas where vaccine and an inert substance had been tried interchangeably.

Financed by nearly one million dollars worth of dimes which have been donated to the National Foundation, the Francis Report may slow down what has become a double-time march of disease to a snail's pace.

In strong statistical language the historic trial of a vaccine and its subsequent analysis was revealed. Over 113 pages in length, the Report at long last called a halt to speculations and finally re-enforced laboratory findings with concrete field evidence. There can be no doubt now that children can be inoculated successfully against polio.

There can be no doubt that humanity can pull itself up from its own bootstraps and protect its children from the insidious invasion of ultramicroscopic disease.

For one thing what was feared turned out to be unfounded -- the vaccine proved incredibly safe. Reactions were nearly negligible. Only 0.4 percent of the vaccinated children suffered minor reactions.

An even smaller percent (0.004-0.006) suffered so-called "major reactions."

And the persistence of protection appears reasonably good. When good antibody responses were obtained from vaccination, the report said "the effect was maintained with but moderate decline after five months."

Distribution of antibody levels among vaccinated persons was much higher than that in the control population from the same areas.

Out of a total population of 1,829,916 children a total of 1013 cases of polio developed during the study period and were reported to the Center.

In placebo control areas, where vaccine was interchanged with an inert substance, 428 out of 749,236 children contracted the disease.

In the observed control areas where only second graders were inoculated, 585 cases out of 1,080,680 children developed.

Percentages in the placebo areas were: 67.5 paralytic, 17.6 non-paralytic, 7.2 doubtful, and 7.6 not polio.

Specifically, 33 inoculated children receiving the complete vaccination series became paralyzed in the placebo areas. This is opposed to 115 uninoculated children. Similarly,, in the observed areas there were 38 such children who became paralyzed, as opposed to 330 uninoculated children.

There were four deaths among children who received placebo; none among the vaccinated. In observed areas there were 11 fatalities; none among children receiving the vaccine.

Only one child who had been inoculated with the vaccine died of polio, and this death followed a tonsillectomy two days after the second injection of the vaccine in an area where polio was already prevalent.

The Report also stated that in no area did Type II virus prevail. There was, however, prevalence in certain areas of Types I and III.

Marked sociological differences were noted by the U-M's Survey Research Center among the participating and non-participating children in the study. For example, there was a higher proportion of children participating who had been vaccinated against small-pox, diphtheria, and whooping cough than among the non-participants. Significant auxiliary findings were:

The vaccine's effectiveness was more clearly seen when measured against the more severe cases of the disease;

Although data were limited, findings in Canada and Finland support the Report in showing a significant effect of the vaccine among cases from whom virus was isolated;

Vaccination protected against family exposure. Only 1 out of 233 inoculated children developed the disease, while 8 out of 244 children receiving placebo contracted the disease from family contact. In picking the field trial areas, the National Foundation scored a major victory. Although in placebo areas cases were 27 per cent under the 1949-53 average, and 12 per cent less in the observed control areas, it was found that there had been a 26 per cent increase per 100,000 in trial areas as a non-trial areas.

This meant that trial areas were appropriately selected for the best testing conditions for the vaccine. The field trials and the evaluation were made possible by grants totaling \$17,500,000 in March of Dimes Funds from the National Foundation for Infantile Paralysis.