



Rancho Los Amigos

Post-Polio

Support Group

Newsletter - June 2016

“The Switch”

The world is in the process of trying something it has never attempted before. 155 countries have committed to a switch in polio vaccines. Some polio survivors might be asking why. Haven't the vaccines been protecting children from polio for more than a half-century?

The Salk injected vaccine introduced in 1955, and the Sabin oral vaccine introduced in 1961, have helped take the world to the edge of polio eradication. In the 1980s, polio dramatically changed the lives of 350,000 children annually. This year there have been only 10 cases of wild polio in the two countries where polioviruses are still spread - Pakistan and Afghanistan.

It has been a monumental achievement in public health.

But for several years, a component of the Sabin oral vaccine has caused more problems than it has solved, and has actually resulted in a relatively small number of cases of paralysis. So now all countries that use the oral polio vaccine must stop administering the current formula and replace it with a new version.

This synchronized campaign, over 18 months in the planning, is appropriately known as “The Switch”.

The switch does not come without risks. There are three strains of polioviruses: Type 1, Type 2, and Type 3. The new vaccine will not protect against Type 2. For the most part, that's not a

(Continued on page 2)

No article in this newsletter may be reprinted without written approval. **No** article may be edited. The full text of an article, including most graphics, can be obtained by request. Please send requests to: RanchoPPSG, 12720 La Reina Avenue, Downey, CA 90242 or **RanchoPPSG@hotmail.com**

The information presented at our meetings and/or contained in this newsletter is solely for information. It is not an endorsement of any product, medication, or individual.

(Continued from page 1)

problem. The Type 2 polio virus hasn't been seen since 1999 and has been declared eradicated. But, after the switch, infants in some parts of the world won't have any protection against Type 2 polio. The Sabin oral vaccine includes live, but weakened, polio virus; if there are any Type 2 vaccine derived viruses left in the environment, children could become infected.

History of the Polio Vaccines

Back in 1988, the World Health Organization, (WHO) the Centers for Disease Control and Prevention (CDC), UNICEF, and Rotary International embarked on an ambitious plan to get rid of polio. The Bill and Melinda Gates Foundation has added millions of dollars to this partnership. At that time, there were three strains of the virus circulating.

Since then, the Type 2 polio virus has been declared eradicated. The Type 3 virus hasn't been seen in more than three years and is also thought to be gone.

The polio eradication efforts contained , then and now, only two effective tools: Jonas Salk's injectable vaccine, which is made with killed viruses, and the oral vaccine, developed by Albert Sabin. Each has strengths and weaknesses. The injectable vaccine, which is used in the United States and most countries with a developed medical infrastructure, is safer. It does not paralyze. But it is more expensive and, because it is injected, it must be administered by a health professional. The oral vaccine costs pennies a dose, and anyone with a few minutes of training can squeeze the drops into a child's open mouth.

Children who get the oral vaccine excrete those live, but weakened, vaccine derived viruses for days or weeks when they have bowel movements. In places where sanitation is rudimentary, that initially was beneficial. Vaccinate some of the children in a community and others will eventually also be protected as the weakened vaccine viruses spread.

But, as vaccine viruses move from one child's gut to the next, they evolve and can regain the ability to paralyze. When polio was crippling hundreds of thousands of children each year, the oral vaccine's advantages far exceeded its negatives. But as the polio equation has shifted, so have the scales on which the vaccine's risks and benefits are weighed.

Last year there were 74 children in the world paralyzed by wild polio. But an additional 37 children were paralyzed by the live vaccine-derived polio virus. Over 90 percent of those cases in recent years have been caused by the Type 2 component of the oral vaccine. Because there is no longer any risk from the wild Type 2 polio virus, that vaccine component is now more of a

(Continued on page 3)

(Continued from page 2)

threat than a benefit. Polio eradication campaigners decided that in order to stop the Type 2 vaccine virus from causing polio, that part of the vaccine had to go.

When the idea for the switch was proposed, experts who advise the WHO recommended a prerequisite for making the change. Before countries that use oral vaccine move to the version without Type 2, they should give all their children at least one dose of the injectable vaccine to try to minimize the dangers inherent in the process.

That hasn't happened. Vaccine manufacturers haven't been able to increase vaccine production sufficiently to make enough of the injectable vaccine. At this point, about 30 countries haven't given children doses of the injectable vaccine, and 20 countries won't get the needed supplies until 2017.

The available injectable vaccine supplies have been directed to countries felt to be at the highest risk of having vaccine derived virus outbreaks. Those that have been told they'll have to wait are countries where vaccination rates are known to be high; meaning many children are already protected against the Type 2 vaccine-derived virus. When vaccine coverage is high, the vaccine-derived virus is less likely to circulate.

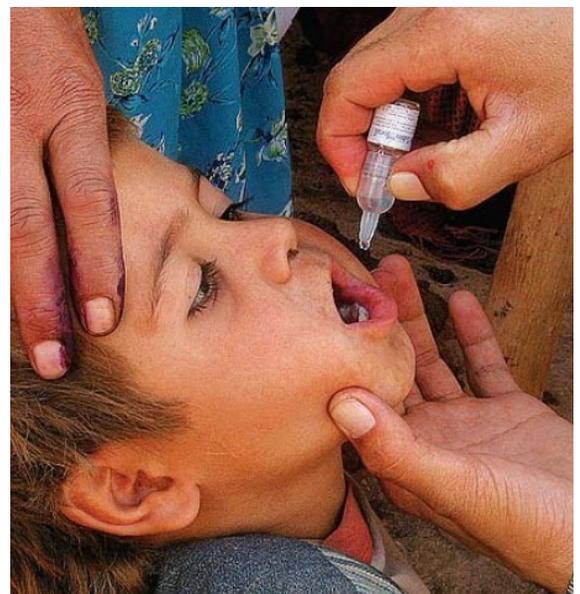
In addition to fixing the Type 2 vaccine-derived virus problem, "The Switch" will lead to the day when all oral vaccine use must stop. Once it appears that polio transmission has ceased, the Sabin oral vaccine will be discontinued to ensure that all vaccine-derived viruses also disappear. At that time only the safer Salk vaccine will be used.



Jonas Salk injected his family and himself with the polio vaccine before it was given to anyone else. This illustrated his conviction that the killed vaccine was safe.



The oral polio vaccine is easier to administer, but it has inherent risks.



More Polio Vaccine News

Research scientists at The University of Queensland's Australian Institute for Bioengineering and Nanotechnology have successfully developed a Salk inactivated poliovirus vaccine that is imbedded in a "Nanopatch". These scientists have been collaborating with the World Health Organization and the Centers for Disease Control and Prevention.

The needle-free Nanopatch technology has been used to successfully administer an inactivated poliovirus vaccine to rats. The research team has found that there is a 40 times improvement in vaccine delivery. This means about 40 times less polio vaccine was needed with this new Nanopatch delivery to generate a functional immune response as compared to the standard delivery using a needle and syringe.

The Nanopatch targets the abundant immune cells in the skin's outer layers, rather than the muscle as in the traditional injected vaccine. This results in a more efficient vaccine delivery system, and much less cost per dose.

Hopeful Future

If human clinical trials are successful, widespread use of the Nanopatch could assist in the campaign to eradicate polio. It can be produced and distributed at far less cost, and its ease of use would make it suitable for house-to-house vaccination efforts in remote areas with only minimal training required.



Support Group Meeting Notices

Rancho Los Amigos Post-Polio Support Group:

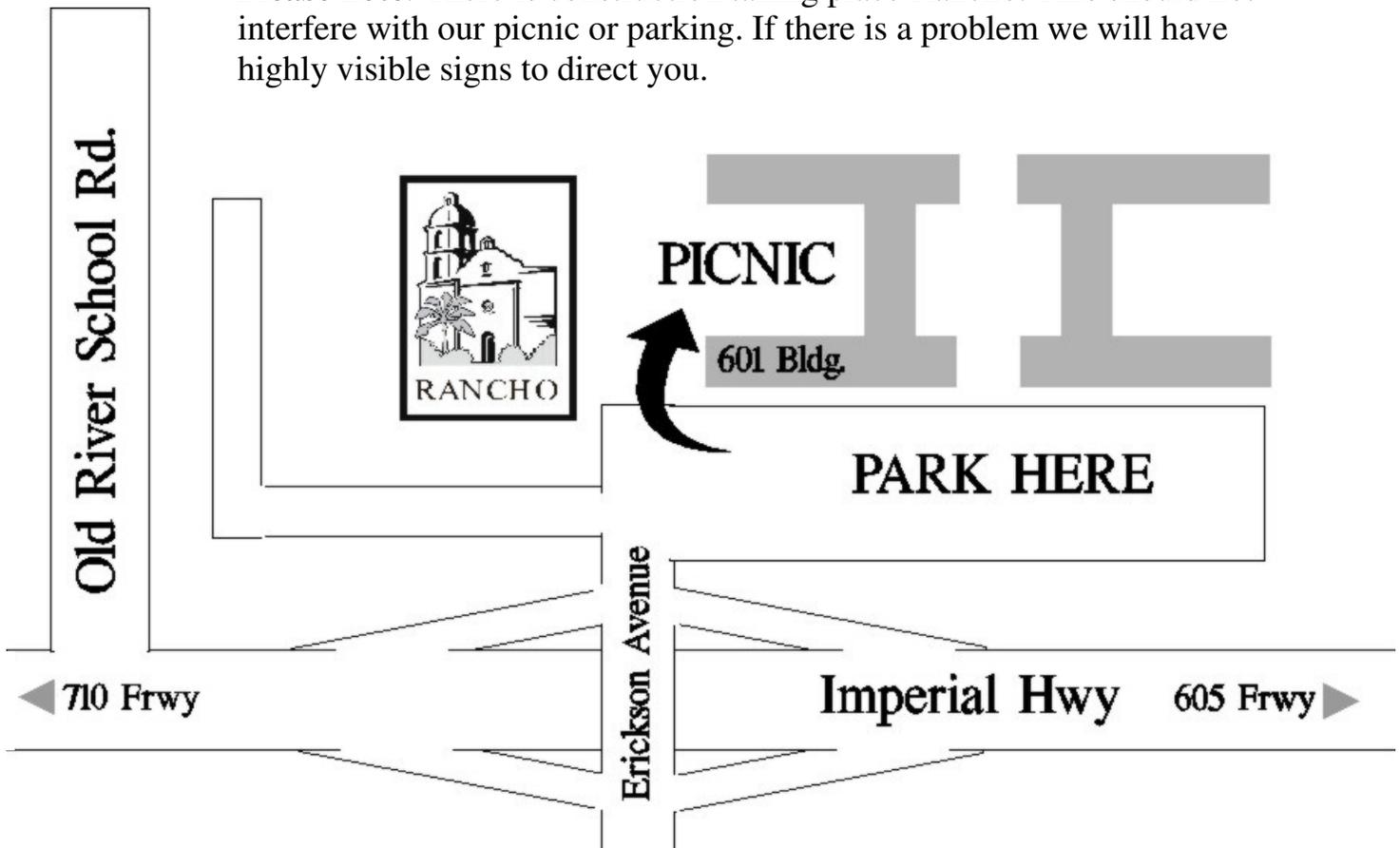
Saturday, June 25, 2016 - 2:00 p.m. to 4:00 p.m. This is our **Annual Picnic**. Join us for Food, Fun, and Friendship. We always have a good time. There might be a game or two, and we might have a surprise guest. If you need additional information please telephone Diane at (562) 861-8128

This **Annual Picnic** is a joint event with the Post-Polio Support Group of Orange County.

Our post-polio challenges are shared at every Rancho Los Amigos Post-Polio Support Group meeting. In addition to our June 25 picnic, we will meet on the following Saturdays: July 23, August 27, September 24, October 22 December 3, and January 28. All meetings are on a Saturday, and most are on the fourth Saturday of the month.

We encourage you to invite your family and your friends to our meetings.

Please note: There is construction taking place Rancho. This should not interfere with our picnic or parking. If there is a problem we will have highly visible signs to direct you.



Support Group Meeting Notices

Post-Polio Support Group of Orange County:

Saturday, July 9, 2016 - 2:00 p.m. to 4:00 p.m. Modifying homes with ramps, easy door widening, safety grab bars, and other simple changes to make living with PPS easier and safer. This presentation is by a former builder experienced with the ADA. You will find this program both interesting and helpful. You might be surprised at how relatively simple modifications can make a big difference in your quality of life.

●—————●

We survive on year round donations from our readers. Small donations from all readers will ensure that our newsletters and meetings will continue to provide information on what polio survivors want to know. Please mail your donation to Support Groups' Newsletters at 12720 La Reina Avenue, Downey, CA 90242. Make your check out to PSA—Support Groups, and write newsletters in the memo area of the check. The Rancho Los Amigos group publishes on even numbered months and the Orange County group publishes on the odd numbered months. We share the same mailing list, and all donations are shared equally. All donors are acknowledged but amounts are never listed. This month we thank:

Diane Maggs
Patricia Blackshaw
Maxima Gacula
Alliene Spence
Sue Haskins
Betty McFarland
Barbara Driggs

Binh Ly
Sherie Shumway
David Elder
Pat O'Neill
Selma Calmes, MD
Kenneth Coulson
Gerry Hime

Receiving the Newsletters Electronically

Another way to help is to sign up for the e-mail version of our newsletters. This will save money and requires much less physical effort from our newsletter staff. An additional benefit to those who choose this delivery option is that any included photographs or illustrations can be viewed in color.

To receive the newsletter by e-mail, please send a message to **RanchoPPSG@hotmail.com** and then be sure to add **richarddaggett@ca.rr.com** and **renison@lagunawoodsvillage.net** to your accepted address list. This is especially important if you use Earthlink e-mail.