

Mr. Pros, ok.

On behalf of WHO and other participants - appreciation for warm welcome and most gracious offer of facilities for this meeting.

Most appropriate for this meeting to be held here far and from most elegant facilities, we are meeting almost literally in the shadow of the <sup>great and proud monument</sup> Instituto Sorocaba <sup>which</sup> <sup>clearly distinguishes it as</sup> the cradle of the concept "eradication" this institute certainly is deserving. Our hosts, de Souza, will expand upon this further.

Backbone to ~~Mohamadzikwa~~, Miller, Wilson - special consultants

We are meeting in the only <sup>city</sup> country in the Americas now known to be endemic for smallpox. Eradication has progressed in this hemisphere a very long way indeed. Only Brazil remains as a threat to its neighbors but, as you will learn, <sup>plans</sup> steps have been laid and a program set in motion which, with luck - and a bit of sweat - should result in Brazil joining the privileged status of its neighbors.

A year ago we first met ~~the program~~ in Alexandria - the program was 4 months old. A year ~~later~~, ~~still~~ we met again ago, programs were just beginning in a number of countries of West Africa and in Brazil, pilot programs and planning were only beginning; the W-E-M-R, plans of operation were just being written and in SEARCO, programs in Afghanistan and Nepal were hardly operative - in India, a disastrous program was founding badly.

A year later - we find activities underway throughout the Americas; in the 19 country bloc of West Africa, almost 30 million of 115 million inhabitants have been vaccinated, programs are now underway or about to begin in much of East Africa, Sudan, Brazil, Pakistan and Indonesia. The program in Afghanistan has been given new life and the painfully slow process of rebuilding the Indian program has begun.

Thanks in major part to contribution of f.d vaccine from USSR as well as other countries and bilateral support <sup>from (WHO, S.S.)</sup> the form vaccine to West Africa, the use of liquid vaccine is succeeding at a fantastic pace <sup>of</sup> 1/2 yrs ago, <sup>virtually</sup> no f.d. vaccine was used in Africa - today virtually <sup>no</sup> liquid vaccine is in use. The quality of vaccine has markedly improved in many laboratories <sup>in</sup> <sup>new</sup> Kenya <sup>of</sup> <sup>India</sup> <sup>Indonesia</sup> <sup>Brazil</sup>

<sup>During</sup> <sup>last</sup> <sup>year</sup> - the bifurcated needle has been tested in multiple purchase vaccination and is now rapidly replacing the conventional techniques. We have learned considerably about the epidemiology of smallpox which unquestionably influences our strategy & outlook.

During the past year, the Handbook which we worked on so diligently a year ago has now been widely distributed - 2<sup>nd</sup> printing; Scientific Congress held - printed report next month; vaccine production seminar just concluded and methodology to be available within months; <sup>established practice</sup> a play poster manual <sup>will</sup> ~~complete~~ along towards completion.

Eventful year - productive year. I believe we can take some justifiable pride in the accomplishments. I regret to say, however, that this has probably been the easiest year of the program - the honeymoon, if you will - with many hopes and comparatively few recognized problems.

The problems are now becoming apparent - the hopes are not reality, by any means. It will take a greater effort from us in the coming year <sup>than</sup> ~~and~~ in the year just past. ~~We have a goal~~ Unlike so many programs, we have a very clearly defined goal and a very clearly defined time in which to reach that goal. Sir Wm. Kelsey <sup>D.C. Armstrong</sup>, <sup>seconded by others</sup>, stated the case rather clearly at the Exec. Bd. in Jan. when he observed that for the prestige and further growth of the W-H-Q, this program cannot fail - One eradication program was declared and is clearly not to prosper within, I suspect, my lifetime; a second program has been embarked upon by unanimous decision of the Assembly. A second failure in meeting expectations could be disastrous.

<sup>is fitting that we mention</sup>  
The Brazil for ~~eradication~~ <sup>program</sup> I suspect that this is the most important ~~problem~~ of all. It is the bone of our D-C who has and does worry incessantly regarding the program here and its progress and probable success. However much we have endeavored to reassure him, he is certain that the Indians in the Amazon represent the insuperable obstacle which ~~spell~~ <sup>will</sup> ~~doom~~ <sup>spell</sup> down to the program - <sup>as he persists</sup> they cannot be found, but alone vaccinated. To persuade him that <sup>eradication</sup> ~~smallpox~~ <sup>is not</sup> malaria eradication, that ~~if~~ ~~the~~ ~~disease~~ the logistics, the strategy, etc. are totally different - that Indians in the Amazon are of essentially no consequence - has proved futile. He must be shown. We say to our Brazilian colleagues that we shall do all possible to support you.

We look forward to our brief stay in Brazil and thank you Mr. Kelsey for your most cordial hospitality.

1. 1967 - SE was launched <sup>with a 10 yr. target date -</sup> SE representing 1 of 2 programs of Ford. WHO involved with  
At the instigation of the U.S. delegation, ~~it was~~ the WHA formed it, a principle program of WHO -  
toned down from the principle program.

2. Why? Smallpox in perspective - now sometimes thought of as a "lesser" problem - tetanus, cholera, typhoid  
Today Most lethal disease known to man - ~~capable of~~ <sup>capable of</sup> infecting ~~95%~~ <sup>everyone</sup> - 40% mortality in unvaccinated  
before vaccine - variolae.  
No respect of climate  
No subclinical infection (polio, tuberculosis)

Today - it is not as major a problem as many other diseases -

World-wide 115,000 cases reported 1967 - Actual total - perhaps 2 million - deaths ~ 200,000

Today - <sup>only</sup> 29 endemic countries

Almost a paradox - why?

Throughout the world - vaccination is practised. No country can afford not to.

U.S. -  $16 \times 10^6$  vacc. - cost small  $\$20 \times 10^6$  / yr.

<sup>The response evoked by</sup> A single case of smallpox today ~~is~~ <sup>typical</sup> ~~is~~ <sup>is</sup> wholly commensurate with the respect <sup>that</sup> the disease is held.

1967 - Germany - 1 case - 107 people isolated

1965 - Washington 1 suspect case - 1000 people under surve.; a special ward opened;  
about 20,000 specially vaccinated (do we do this in malaria, Hx. polio)

Not forget Int'l travel - cholera vac. needed some areas; y.f. in others. Smallpox is needed in all.

3. Prospects for erad. - long recognized as the single disease known to man as being most susceptible to eradication.

Man to man - no insect vectors, no animal reservoir

Once infected - permanent immunity - not like malaria.

Risk + lesions obvious - detection simple

Vaccination highly effective 78% @ 10 yrs.

Technique - vacc. of sufficient no. of pop. - disease dies out - <sup>(at 3 years)</sup> not everyone. Critical mass of  
population necessary to keep the disease going.

4. Today - recognize 29 endemic countries in 4 principle regions

a. Brazil

b. 23 African countries

c. Asia - Afghan. - India - Nepal - Pakistan complex

d. Indonesia.

Strategy - attack disease in these countries - adjuvant project activities

strengthen programs in adjacent countries to restrict extension

Objective - smallpox free - India + Pak vac. 90% - 90% success 5-10%

5. Progress - end 1<sup>st</sup> year

5 year program S. America. -

- Brazil - <sup>WHO</sup> 10% vaccination - 1967
- 38 x 10<sup>6</sup> " - 1968
- 35 x 10<sup>6</sup> " - 1969

Africa -

U.S. Assistance to 19 countries W + Cent. Africa - WHO providing petrol in half of them.

in 14 mos., ~~38~~ <sup>33</sup> % of 115 million vaccinated. Evidence already appears to be falling sharply.

WHO programs beginning or started in Congo (K), Rwanda, Burundi, Uganda, Kenya, Tanzania, Somalia, Sudan, Zambia.

Asia - <sup>WHO</sup> Prog. operative in E. Pak, Nepal and Afghanistan.

Hopefully beginning <sup>shortly</sup> in Indonesia + W. Pak.

At present - feel we are on target.

3 ~~key~~ developments of major significance.

- 1) F.D. vaccine - <sup>stability</sup> began in major way + <sup>sup</sup> production began a bit over 10 yrs. ago. <sup>UNICEF</sup> ~~activity~~ support to labs. + WHO <sup>training +</sup> ~~formation~~ <sup>establishment of vaccine testing service, quantity + qual of vaccine improving markedly</sup>  
 (Uganda - liquid vaccine - 7 x 10<sup>6</sup> vac.)
- 2) Jet guns - U.S. developed. + tested - <sup>mechanics, speed, success of tests</sup> used in Brazil + W. Africa successfully.  
 Hope to be able to extend them use more widely.
- 3) Bifurcated needles - U.S. developed - exhibit + discuss.

Most encouraged by 1<sup>st</sup> 14 mos. but there are problems identifiable.

1) Countries

- a) Congo (K.)
- b) Ethiopia
- c) Indonesia
- d) India

} Costs of program. If take resources already devoted to smallpox control, add some equipment + vaccine - most can do job. Once job is done - a real saving in resources. 5-10% vaccination.

2) Vaccine for jet infection -

sterility, container - U.S. + Canada.

3) Vaccine generally - Why not purchase

Soviet Union - 125 x 10<sup>6</sup> doses/yr. bilateral + 25 x 10<sup>6</sup> multilateral. + a number of other countries (Netherlands, Switzerland, Germany, Hungary, U.K., Algeria, Thailand, Philippines, etc.)

1966	1967	1968
3	13	56