

I need not tell you what a pleasure it is for me to return to the city & institution which the Hendersons call home. I feel as tho I had been away for a very long time indeed and yet it is only 9 months, no gestation period - I am pleased to report, however, that there are no additional Swiss Henderson children and only one additional Swiss cat plus a small fox program in its birth pangs.

One's range of print on the world necessarily changes as an international civil servant, altho the same Parkinsonian laws apply. ^{I am assuredly} One ~~seems~~ ^{perceives} about more frank accounts, I suppose, from ^{colleagues} those visiting this area for the first time - 2 things are mentioned, ^{frequently} aside from ~~the recent flu + tick case~~.
1. The magnitude of LDC and city setting.
2. ~~The inevitable confrontation with the open road~~ ^{which I haven't seen yet}
3. ^{regime one is obliged to keep on leaving a store. Au revoir, merci, most excellent - there is the contrast}
4. ~~A sometimes incomprehensible accent~~ ^{from the yell heavy}
5. The inexplicably non-alcoholic desert across the strait - for which few come prepared.

The contrast between ~~my present~~ ^{present} responsibilities and interests is necessarily ~~an acute contrast~~ ^{an acute contrast} with my past
contrast to work who assume a broader interest in ~~more than by~~

The small print:
The Hendersons:
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If you who have not visited W.H.O., I might dilate a moment to say a word or two about it.
The Hendersons housed in a magnificent & newly built (and already too small) 8 story building set on a rise of land. From our offices we directly overlook the city.
Geneva, I might note, we have found very much to our liking. Clearly it is one of the most beautiful cities I know, bedecked with flowers, ~~and~~ situated on ~~the~~ ^{the} ~~lake~~ ^{the largest} ~~inland~~ ^{inland} ~~lake~~ ^{lake} in Europe.
~~It lies~~ between the ~~Alps~~ ^{Alps} and the Jura Mountains. Our first winter, we found to be milder than in Atlanta.
and the ~~city~~ ^{is a bit cooler}. For a city of only ~~300,000~~ ^{300,000}, it ~~is replete with~~ ^{is replete with} ~~a variety of~~ ^{a variety of} museums, opera throughout the winter, and ~~other events~~ ^{other events} - unfortunately, no professional football. I am happy to note that ~~the~~ that the family is doing very well in French with the exception of the father whose French consists of ~~just~~ ^{little} more than a 100 nouns and perhaps two verbs, present tense. The problem is, of course, need and, in the Smallpox Unit, English is clearly our best common denominator for our professional staff consists of one other American, a Japanese, a Russian (Ukr), a Latin, a Pole, ^{plus} 3 English secretaries and 1 Scottish secretary. ^{French-dialect}
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The disease remains a problem for all countries @ question.

Map shows problems today.

3 major geographic areas. - rates higher in Africa.

Turn to the Development of the Program to date

~~Response to date~~

What have we done? ^{+ data} What are we doing? Where are the problems?

Given \$ 2.5×10^6 for the world - ~~it~~ doesn't go too far.

U.S. came thro with virtually total assistance to 19 W+C African countries

that in part it's with - ~~represent~~

glycerinated + free-dried - est. finally no use of glycerinated vaccine need for 200,000,000 doses per yr. - @ 1¢/dose, this would be our budget.

Therefore - policy of no purchase, effort to build up labs. and to obtain donations.

1) Soviet Union 100,000,000 yr. to India + 8×10^6 over 3 yrs to Arg.

2) Other countries - Netherlands, Yugoslavia, Algeria, Tunisia, Hungary, ~~Sweden~~, Sweden, Switzerland, USSR & others have come thro. For MP use, we now

3) ^{are assured of a supply for at least the next 2 yrs.} Testing of all donated vaccines of free service to other countries.

- 4) Contact & provide
- 5) Contract to European Lab.
- 6) Vaccine producers conference.
- 7) Studies of different strains - USSR -

production potential - Netherlands

8) Bifurcated needle - ^{using very little - 5th extension} Wyeth - expensive - now working out cheap

- b) Bilateral assistance beyond USA - 3 countries active discussion
- c) Methods to be employed.

Observation that national staff and WHO - little experience re. conduct of program, surveillance, etc. - development of manual (hold up)

April convened ^{and} Reg. Bar. from the 5 WHO Regional Offices to discuss this in draft form hoping thereby to get some sort of coherent policy and direction.

Newly published for the Reg. - USA - USSR

Scientific Group - to consider Manual and policies.

d) Necessary to get programs underway - to this end, send staff to various countries.

Refer to map - ~~all~~ AMRO - 5 yr. program for production in Africa - except Ethiopia, Somalia, Rwanda, Uganda.

in ~~Asia~~ - except W. Pakistan + Indonesia.

in remaining countries - 1968.

Coordinate the Reg. Conference - Dec in Bangkok for Africa

Next year in Kunming for Eastern Asia.

2.57106 - must be initiated during 1967

Conf. + 5 April

~~Public health~~

4) Coordination + Reporting

Conferences - Bangkok - ~~Dec.~~ Jan. for Africa
Kisumu - best option for Eastern Africa.
Surveillance reports - 1st hopefully in mid-Sept.

9) Non-adenovirus - San. vaccine reserve -
Story of Oman -

Vaccine reserve in Geneva.

~~with~~
Problems

1. Epidemiology of smallpox ^{re: strategy of program} - comparatively easy to study

~~Dealing with~~ ~~man to man transmitted disease~~. Subclinical cases virtually nil.
~~Questions to what level of herd immunity needed before disease vanishes.~~

Analyse problem - 2 wk. incubation period - assume most transmission during 1st week - requires one new case of 3 wks. - Thus one chain of infection in country is minimum of 17 cases. ^{one offspring per generation} Perhaps, therefore, one strategy needs to be a specifically two pronged attack.

- 1) raise immunity level to point where transmission is markedly suppressed.
- 2) determine; prompt vaccination and containment in areas where disease

This requires ^{immunity level} case identification and active field investigation - a real scarcity in most countries
~~Feeling that in most countries, a basic immune level already established~~

Can this be developed and what are the problems - must find out.

~~As such this goes~~

2. Jet injectors

One developed - good, expensive (\$1100)

Dermojet being aggressively pushed - Higson - cost \$200. Results as yet not good.

Handicapped by vaccine availability. Jet injector vaccine standards.

3. Animal reservoir - Y.F., Malawi - monkeys

~~Disease~~

Disease eradicated in many areas @ monkeys and has remained absent.

~~However~~ mid 80's - smallpox decided in monkeys.

now know transmission to monkeys and from one cage full to another is possible.

1958 miliary monkey fox described by von Magnus. Virus similar to vaccinia, cross protection provided - no way to distinguish by neutralization. The monkey appears to be subclinical infection & carrier state.

Just completed a survey of major travelers. Pox have seen. No evidence here or in literature of human acquisition.

Now in the group here and in Mexico, serological studies of monkeys to find their source and to permit more definitive studies.

4. Neurotropic

~~As far as cases - need. U.S. Japan entry - Dec 1~~
4. Research ^{with} International Conference

Problems are many more than the few but these are the major ones. However, a start has been made and, to every one of us, the start has been far more aggressive than anyone had any reason to hope. However, an initial enthusiasm can wear quickly. We must sustain what has been started.

Quite Generous + Open

Table 1. Evident that the program overall was not proceeding spectacularly.

(Discuss) - 1967 1st 6 months - 56,775 cases. ~~India~~ - Pakistan.

Small countries quite successful -

Asia - Malaysia, Thailand, Iran, Saudi Arabia ceased reporting cases

Africa - Sudan, Algeria, I.C, Senegal and Mauritania - similarly

Americas - Ecuador⁺, route ordered into Peru.

Principle areas, ^(1st 6 months) India, Pakistan, Indonesia - ~~WFO~~

India/Pakistan problems. Some success but no report.

Indonesia - nothing done at all.

The countries of WHO responded minimally to requests for assistance. Need particularly for f.d. vaccine but except for Soviet Union, Switzerland, Netherlands - nothing was forthcoming.

USA provided \$L 480 funds to India but otherwise nothing.

In May of last year - ^{D-G of WHO} ~~Assembly~~ considered all of this, prepared to Assembly that money be appropriated for that the annual plans resolutions of 18. SE be stopped. He suggest \$2.5 x 10⁶ - the US and other major contributors said \$1.0 x 10⁶ would be enough but the endemic countries voted them down.

In Nov. last year, an SE unit established and as of 1 Jan 67, a 10 year program of SE was initiated.

Consider

~~What is the rationale of all this - why is global concern for this disease -~~

Of all diseases known to man, more concern is evidenced re: ~~smallpox~~ than any other. Throughout Europe + N.A., vaccination is widely practised. In fact, as many vac. are performed for ~~smallpox~~ as for any other disease. A bit paradoxical, isn't it? ~~In some of these the ^{are cases per year} of cases per year for all of Europe + N.A. ^{over past 20 years} ~~has been~~ not more than 50 ~~cases in the past 8 yrs.~~~~

Well to recall, however, that ^{in the} pre-Jennerian era, in the 18th century, smallpox was widely prevalent - 95% ~~of~~ contracted the disease; variably between 15 and 35% died. 45000 deaths/yr. occurred in the U.K. alone; at the London Hospital for the Blind, 75% of all cases were caused by ~~smallpox~~.

Vaccination changed all of this ^{in the history of the world - this difference - your own concern of Waterhouse vaccine} but ~~contrast~~ unlike the situation with respect to cholera, malaria, y.f., plague in which socio-economic ~~factors~~ play a major role in transmission, the potential with respect to ~~smallpox~~ transmission ^{has} remained little changed. ~~we~~ ^{we} concern ourselves ^{today} ~~less~~ ^{more} with the threat of substantial outbreaks ^{in this country of India or U.K.} of these other diseases.

Potential re: severity has not changed. Variola major in ~~India~~ causes 35-40% mortality in these areas. In the UK/Sweden in 1962-1963, 40% of unvaccinated pts. died in spite of ^{excellent} ~~excellent~~ care.

Reporting + impress ~
surveillance + help

Critical mass
Pakistan.

Remote areas

Die out. ~

~~High~~

Timetable ~