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Author	DA Henderson
Title	Smallpox control strategies: Lessons learned from the WHO Eradication Program
Event	G7 Global Health Security Action Group Workshop: Best practices in vaccine production for smallpox and other potential pathogens
Event Sponsor	Paul-Ehrlich-Institut; German Minister of Health; WHO; European Commission
Event location	Frankfurt, Germany
Notes	
Publ as	

Paul-Ehrlich-Institut
Bundesamt für Sera und Impfstoffe
Der Präsident

Paul-Ehrlich-Institut · Postfach · D-63207 Langen

Donald A. Henderson, M.D., Ph.D., Director
Office of Public Health Preparedness
U.S. Department of Health and Human Services. Office of Public Health Preparedness. 200 Independence Ave., S.W., Room 636-G, Washington, DC 20201, USA

Fax: 001 202 690 7412

Ihr Zeichen/Ihre Nachricht	AZ (bitte angeben)	Telefon-Durchwahl	Telefax-Durchwahl	Datum
	Prlip	+49 6103 77-1000 Email: Loejo@pei.de	+49 6103 77-1240	1 July 02

G7+ Global Health and Security Action Group Workshop "Best Practices in Vaccine Production for Smallpox and other Potential Pathogens"

September 5-6, 2002, Paul Ehrlich Institute, Langen (Germany)

Dear Dr. Henderson,

Further to our earlier communication. I have the honour of inviting you to a workshop focusing on the threat posed by the possible use of biological weapons by terrorist groups and on measures to prevent or to minimize the consequences of such an eventuality. The workshop is part of the wide-ranging activities conducted by the Global Health and Security Action Group of the G7 member states plus Mexico. The workshop will be held on September 5 and 6, 2002, at the Paul-Ehrlich-Institut which is the German Federal Agency for Sera and Vaccines. The institute is located in Langen, Germany, which is close to Frankfurt airport. The WHO and the European Commission (EC) are acting as co-organizers of the workshop which will be held under the patronage of Mrs. Ulla Schmidt, the German Minister of Health. The meeting is intended to offer a platform for sharing knowledge among different regions and countries with the objective of translating this into a harmonized approach to effectively combating bioterrorism. Participants will be invited primarily from the G7+ member states, the WHO and EC.

The attached draft agenda has been prepared by the Paul-Ehrlich-Institut in consultation with the German Ministry of Health, EC and WHO.

We would appreciate it very much if you could contribute to the workshop by giving a presentation on "Retrospective analysis of the WHO smallpox eradication program". Please let us know which changes you wish to make either concerning the title or the scope of the topic.

You will be reimbursed for your travel and subsistence expenses. Hotel accommodation will be arranged by the organizers of the workshop. More travel and hotel information as well as organisational details will be sent to you shortly.

Please use the attached reply form to let us know by July 15, 2002, whether you are able to accept our invitation. If so, we would be grateful if you could send us a short abstract and a copy of the slides used in your presentation not later than August 15, 2002.

Yours sincerely,

Prof. Dr. J. Löwer
President

Encl.: Draft agenda
Reply form

- Question – what lessons did we learn during the 1967-1977 period re: smallpox control and how applicable might this be to control of pox should the disease appear today
- In the U.S. today – a veritable tidal wave of models. Almost everyone with a computer & a bit of free time and a simple intro. chapter on smallpox seems to have become engaged in the modelling game. Occasionally but rarely the modellers engage someone who knows something about smallpox and outbreaks – but not very often
- So let me walk you through various aspects of smallpox control in an earlier era and guess what this means for today

Smallpox Control Strategies

Lessons Learned from the WHO Eradication Program

D.A. Henderson, MD, MPH

Principal Science Advisor

Department of Health and Human Services

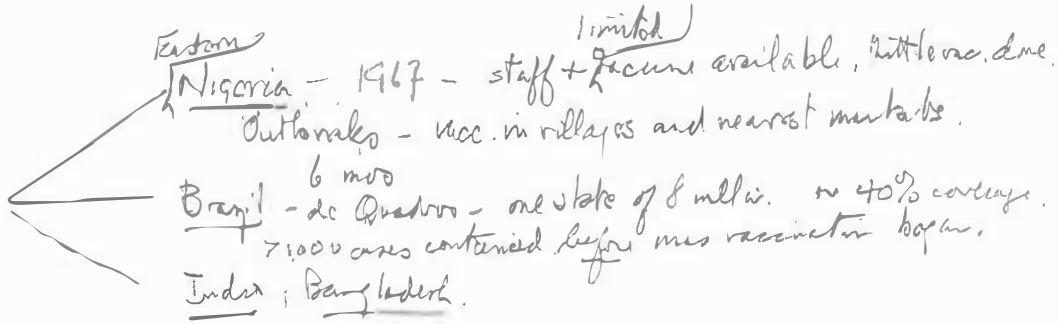
Office of Public Health Emergency Preparedness

Smallpox Control Strategies:
Lessons from the WHO Eradication Program

- Abbreviated historical overview
- Vaccines and vaccination technique
- Epidemiology of smallpox
- Surveillance and containment
- Role of special measures
  - Compulsory vaccination
  - Isolation
  - Quarantine

Historical Overview of Smallpox Eradication

- 1967 – WHO Eradication Program began with a 10 year goal
- Strategy:
  - Immunity of 80%
  - Surveillance-containment
- Traditional beliefs:
  - Smallpox spreads rapidly and widely – NO
  - Airborne spread from hospitals – NO
- October 26th 1977 – Last naturally occurring case, Somalia
- May 8th 1980 – World Health Assembly proclaims eradication, vaccination stops and vaccine production ceases



Vaccines and Vaccination Techniques

- Vaccines:
  - Freeze-dried
  - International standards
  - Strains – Lister and New York City Board of Health
- Vaccination Technique
  - Lancet scarification –
  - Multiple pressure –
  - Jet injector –
  - Bifurcated needle *

Epidemiology of Smallpox
Relevant Attributes

- Age distribution – similar to distribution of susceptibles
- Transmission
  - Usually by droplets
  - Occasionally spread through contaminated bedding/laundry.
  - No animal reservoir
  - After recovery, patient is immune: no carrier state