

Herd Immunity/Protection: an Important Indirect Benefit of Vaccination

Fondation Mérieux Conference Centre
“Les Pensières”
Veyrier-du-Lac - France

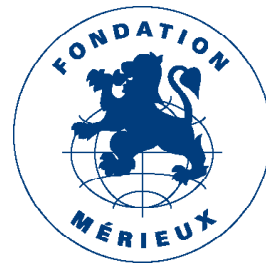
October 25-27, 2010

Steering Committee:

- Marie-Claude BONNET
- John CLEMENS
- Jacques LOUIS
- Peter SMITH

Coordination:

- Katia MIELCZAREK



Background

One of the aims of this conference is to share cross-functional knowledge and to increase awareness of the diverse range of benefits that result from successful vaccination programs with a specific focus on herd immunity / protection.

Vaccination is a very powerful public health tool for preventing many infectious diseases. In addition to the well-documented direct benefit to the vaccinated individual there are multiple indirect benefits to the close contacts, neighbors, and at the community level as well as for society as a whole. It is well known that not everyone in a population needs to be immunized to eliminate disease, because successful immunization has an effect on the transmission of disease. How can we define this benefit? How can we measure it? What are the different methodologies?

The economic impact of vaccination is a rare example of a health intervention that can be not only cost beneficial but also cost saving. Herd immunity / protection are very relevant factors to consider before introducing a new vaccine in an immunization program and are also very important for monitoring and assessing / evaluating this program.

The indirect benefit of vaccination should also be considered in the context of diverse cultural, epidemiological, socio-economical, climatic and geographical as well as political situations in different areas of the world. This will be illustrated with different case studies for different diseases in different contexts. In addition, animal vaccination should also be considered when evaluating the overall benefit of vaccination to human public health.

This conference will bring together vaccinologists, epidemiologists, immunologists, veterinarians, health economists, representatives from regulatory agencies and from non governmental organizations, and decision makers to present the different aspects of these benefits and to discuss their perspectives.



Scientific Programme

Monday 25 October 2010

17.30 - 18.30	Registration	
18.30 - 18.45	Welcome Address	Fondation Mérieux
18.50 - 19.30	Historical perspective on herd immunity/protection	Paul FINE
19.45	<i>Welcome dinner</i>	

Tuesday 26 October 2010

Session 1 **Herd immunity/protection: general concept and methodological approaches to measurement**
08.30-11.40 Chaired by Jacob John

08.30 - 08.50	General concept	Peter SMITH
08.50 - 09.10	Discussion	
09.10 - 09.30	Ethical perspective on herd immunity	Jacob JOHN
09.30 - 09.50	Discussion	
09.50 - 10.10	Experimental studies: individually randomized trials	Mohammad ALI
10.10 - 10.30	Discussion	
10.30 - 11.00	<i>Coffee break</i>	
11.00 - 11.20	Experimental studies: cluster randomized trials	John CLEMENS
11.20 - 11.40	Discussion	



Scientific Programme

Session 2 General approaches to infectious diseases modelling

11.40 - 16.30 Chaired by Daniel Levy-Bruhl

11.40 - 12.00	Approaches and examples of modelling herd immunity/protection	Ira LONGINI
12.00 - 12.20	Discussion	
12.30 - 14.00	<i>Lunch</i>	
14.00 - 14.20	Examples of vaccines where mathematical modelling was used as a tool for decision making	Daniel LEVY-BRUHL
14.20 - 14.40	Discussion	
14.40 - 15.00	The benefits and limits of modelling infectious diseases	Roy ANDERSON
15.00 - 15.20	Discussion	
15.20 - 15.50	<i>Coffee break</i>	
15.50 - 16.10	Herd immunity in economic analysis of vaccines	Brian MASKERY
16.10 - 16.30	Discussion	

Session 3 Herd immunity/protection: case studies

16.30 - 19.10 Chaired by Marie-Claude Bonnet & Kim Mulholland

16.30 - 16.50	Hib vaccines	Richard ADEGBOLA
16.50 - 17.10	Discussion	
17.10 - 17.30	Pneumococcal vaccines	Kim MULHOLLAND
17.30 - 17.50	Discussion	
17.50 - 18.10	Pertussis vaccines	Anders HVIID
18.10 - 18.30	Discussion	



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18.30 - 18.50	Hepatitis A vaccines	Ron DAGAN
18.50 - 19.10	Discussion	
19.30	<i>Dinner</i>	

Wednesday 27 October 2010

Session 3 Continued

09.00 - 10.50

09.00 - 09.20	Dengue vaccines	Derek CUMMINGS
09.20 - 09.40	Discussion	
09.40 - 10.00	A veterinary vaccine: rabies	Katharina STAERK
10.00 - 10.20	Discussion	
10.20 - 10.50	<i>Coffee break</i>	

Session 4 Herd immunity and decision making

10.50 - 11.10

Chaired by John Clemens

10.50 - 11.10	A WHO/SAGE perspective	Liz MILLER
11.10 - 11.30	Discussion	
11.30 - 11.50	A donor perspective: GAVI	Jon PEARMAN
11.50 - 12.10	Discussion	



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12.10 - 12.30	A country perspective: India	Nirmal Kumar GANGULY
12.30 - 12.50	Discussion	
13.00 - 14.30	<i>Lunch</i>	

Session 5 14.30 - 16.00

Herd effect in the context of non-vaccine interventions
Chaired by Peter Smith

14.30 - 14.50	Achieving herd effects through strategies other than vaccination	Simon BROOKER
14.50 - 15.10	<i>Discussion</i>	
15.10 - 15.30	HIV treatment to reduce transmission	TBD
15.30 - 15.50	Discussion	
15.50 - 16.00	Conclusions and end of the meeting	
16.00 - 16.30	<i>Coffee before departure</i>	

