

Draft, 10/08/2010

Herd Immunity/Protection: an Important Indirect Benefit of Vaccination

"Les Pensières"
Fondation Mérieux Conference Center
Veyrier du Lac – France
October 25-27, 2010

Steering Committee :

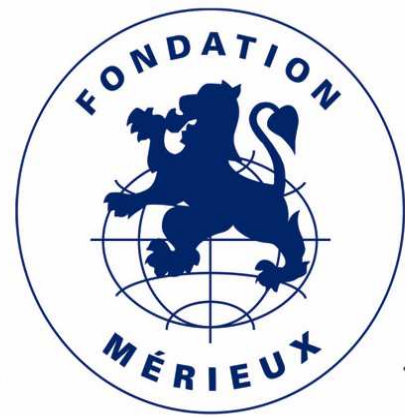
Marie-Claude Bonnet
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Jacques Louis
Peter Smith

Coordination :

Katia Mielczarek



des racines pour la vie • roots for life



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.

MONDAY, 25 Octobre 2010

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| | WELCOMING SESSION | |
| 17h30-18h30 | ►Registration | |
| 18h30-18h45 | Welcome Addresses | Fondation Mérieux |
| 18h45-19h30 | <i>Historical Perspective on Herd Immunity/Protection</i> | Paul Fine |
| 19h45 | ►Welcome Dinner | |

TUESDAY, 26 Octobre 2010

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| SESSION I | Herd Immunity/Protection: General concept and Methodological Approaches to measurement Chair: Jacob John | |
| 8h30-8h50 | <i>General Concept</i> | Peter Smith |
| 8h50-9h10 | <i>Discussion</i> | |
| 09h10-09h30 | <i>Ethical Perspectives on Herd Immunity</i> | Jacob John |
| 09h30-09h50 | <i>Discussion</i> | |
| 09h50-10h10 | <i>Experimental Studies: Individually Randomized Trials</i> | Mohammad Ali |
| 10h10-10h30 | <i>Discussion</i> | |
| 10h30-11h00 | ►Coffee Break | |
| 11h00-11h20 | <i>Experimental Studies: Cluster Randomized Trials</i> | John Clemens |
| 11h20-11h40 | <i>Discussion</i> | |
| Session II | General Approaches to Infectious diseases Modelling Chair: Daniel Lévy-Bruhl | |
| 11h40-12h00 | <i>Approaches and Examples of Modelling Herd Immunity/Protection</i> | Ira Longini |
| 12h00-12h20 | <i>Discussion</i> | |
| 12h30-14h00 | ►Lunch | |
| 14h00-14h20 | <i>Examples of vaccines where Mathematical modelling was used as a tool for decision making</i> | Daniel Lévy-Bruhl |
| 14h20-14h40 | <i>Discussion</i> | |

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| 14h40-15h00 | <i>The Benefits and Limits of Modeling Infectious Diseases</i> | Christophe Fraser |
| 15h00-15h20 | <i>Discussion</i> | |
| 15h20-15h40 | <i>Herd Immunity in economic analysis of Vaccines</i> | Brian Maskery |
| 15h40-16h00 | <i>Discussion</i> | |
| 16h00-16h30 | Coffee break | |
| Session III | Herd Immunity/Protection: Case Studies Chair: Kim Mulholland and Marie-Claude Bonnet | |
| 16h30-16h50 | <i>Hib vaccines</i> | Richard Adegbola |
| 16h50-17h10 | <i>Discussion</i> | |
| 17h10-17h30 | <i>Pneumococcal Vaccines</i> | Kim Mulholland |
| 17h30-17h50 | <i>Discussion</i> | |
| 17h50-18h10 | <i>Pertussis Vaccines</i> | Anders Hviid |
| 18h10-18h30 | <i>Discussion</i> | |
| 19h30 | ►Dinner | |

Wed, 27 Octobre, 2010

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| SESSION III | Continued | |
| 8h30-8h50 | <i>Hepatitis A vaccines</i> | Ron Dagan |
| 8h50-9h10 | <i>Discussion</i> | |
| 09h10-09h30 | <i>Dengue vaccines</i> | Derek Cummings |
| 09h30-09h50 | <i>Discussion</i> | |
| 09h50-10h10 | <i>A veterinary vaccine: Rabies</i> | Katharina Staerk |
| 10h10-10h30 | <i>Discussion</i> | |
| 10h30-11h00 | ►Coffee Break | |
| Session IV | Herd Immunity and Decision Making Chair: John Clemens | |
| 11h00-11h20 | <i>A WHO/SAGE perspective</i> | Liz Miller |
| 11h20-11h40 | <i>Discussion</i> | |
| 11h40-12h00 | <i>A Donor perspective: GAVI</i> | Jon Pearman |

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| 12h00-12h20 | <i>Discussion</i> | |
| 12h20-12h40 | <i>A Country perspective: India</i> | NK Ganguly |
| 12h40-13h00 | <i>Discussion</i> | |
| 13h00-14h30 | <i>Lunch</i> | |
| Session V | An example of Herd Effect in the Context of Non-Vaccine Interventions Chair: Peter Smith | |
| 14h30-14h50 | <i>Achieving herd effects through strategies other than vaccination</i> | Simon Brooker |
| 14h50-15h10 | <i>Discussion</i> | |
| 15h10-15h30 | <i>TB Control</i> | TBD |
| 15h30-15h50 | <i>Discussion</i> | |
| 15h50-16h00 | <i>Conclusions and end of meeting</i> | |
| 16h00-16h30 | <i>Coffee before departure</i> | |

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