



CONSIDE

CONSORTIUM FOR THE STANDARDIZATION
OF INFLUENZA SEROEPIDEMIOLOGY

CONSIDE Laboratory Working Group Summary of discussions and future plans

John Wood and Othmar Engelhardt

CONSIDE 4th International Meeting, Cape Town South Africa

3-4 September 2013

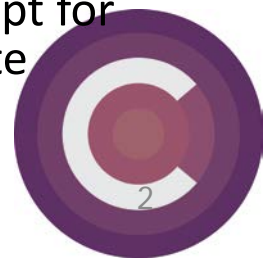
MN assay comparison

Update

- Analysis of bias influencing results of first part of MN comparison study
 - Based on information available to date, no evidence for major source of bias in H1N1pdm09 study
- Extension of MN assay comparison (phase 2):
 - Included H3N2 (5 labs) and H5N1 (1 lab)
 - Results from 5 labs submitted to NIBSC (UK) for analysis
 - Ratio of titres between 3-day and 2-day assay similar in most labs
 - Preliminary data confirm the conclusions of phase 1, i.e. there are no underlying reasons that the two assays could not be comparable

Plan

- collect remaining data from additional laboratories
- Prepare report and post it on CONSISE website, write manuscript for publication, post consensus assay protocols on CONSISE website



HI assay standardization

Background

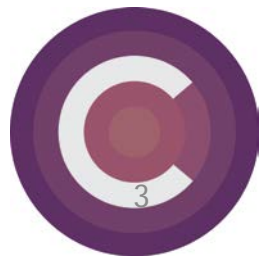
- Karen Laurie and John Wood coordinated comparison of HI protocols and tried to develop consensus assay
 - Starting point: WHO protocol

Outcome of Cape Town meeting

- Following discussion, consensus reached!
 - Largely in agreement with protocol as in WHO Manual
 - Applicable for H1N1pdm09 for subsequent collaborative study

Plan

- Revise consensus protocol and circulate to WG for approval



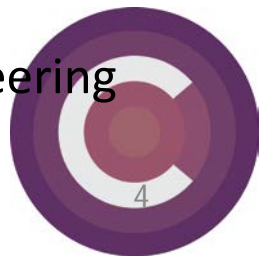
(International) antibody standards

Outcome

- Pathway to developing antibody standards presented and approved in principle by WG
- Possible sources of antibody
 - Human serum/plasma
 - Convalescent – help from Epi WG requested to source sera and obtain all required ethical approvals
 - Post-vaccination
 - Animal sera
 - Monoclonal antibodies
 - Human antibodies produced in trans-chromosomal bovines
- Discussion on status of international antibody standards
 - Agreement that formal WHO IS status not required (and too slow) in the first instance
 - Possible post hoc certification by WHO ECBS

Plan

- Revise pathway following discussion and circulate to lab WG and Steering Committee



MN and HI assay collaborative study

Outcome and Plan

- General agreement to look at lab-to-lab variability
 - Compare consensus HI protocol with local HI methods
 - Compare consensus MN protocols with local methods where local methods are different from consensus
 - Either 2-day or 3-day assay can be used
 - To be conducted for H1N1pdm09
 - Small subgroup to develop study protocol
 - NMRC (N Martin) to contribute panels of human sera
- Use the study to evaluate various sources of antibodies as potential antibody standard
 - Existing human IS
 - Monoclonal antibody
 - Pooled ferret antisera
 - Human antibodies from trans-chromosomal bovines



NI assays

Outcome

- 4 laboratories have implemented ELLA assay
- Technical issues with antigen source and some subtypes still to be resolved
- Other assays have been assessed but need more work

Plan

- Small group to plan collaborative study
- Interested labs to contact Maryna Eichelberger to obtain protocol



New serology assays

Update

- Variations of existing assays (MN) being explored, use of different cell line (CaCO2 vs MDCK) and read-out (R Wagner)
- Pseudo particle MN assay being evaluated – correlation with ‘classical’ MN; NA pseudo particles
- Modified HI assay (stabilised RBCs)
- Protein microarray
- Point-of-care test (dual path platform lateral flow)
- Luminex multiplex platform

Conclusions

- Most assays at early stage, need to wait for further data
 - No recommendation of Lab WG at this point
- Pseudo particle MN assay has potential and needs further work, e.g. standardisation of particle preparation



Thank you

Laboratory Working Group
Presenters

For interesting presentations and lively
discussion

