Creating global guidance for vaccination and immunization

WHO's Strategic Advisory Group of Experts (SAGE) on immunization – Impact on global immunization

Philippe Duclos, WHO
Immunization Policy Advisory Framework

- **Other WHO Technical Advisory Committees**
  - Safety
  - Standards
  - Practice
  - Burden assessment & modelling

- **Strategic Advisory Group of Experts (SAGE)**
  - Global policy recommendations & strategies
  - Support regional/national challenges

- **Regional Technical Advisory Group**
  - Regional policies & strategies
  - Identify & set regional priorities
  - Monitor regional progress

- **Countries**
  - National Policies & Strategies
  - Prioritize problems & define optimal solutions
  - Implement national programme & monitor impact

- **National Immunization Technical Advisory Group**
Strategic Advisory Group of Experts (SAGE) on Immunization

- Principal advisory group to WHO for vaccines and immunization
  - reports directly to DG and involves all relevant WHO departments

Membership - 15 members
- Individual capacity and broad range of expertise
- Balance of professional affiliation, geographic representation
- Declarations of interest – strict avoidance of conflicts
- Appointed by WHO DG upon recommendation of external selection panel - Public call for nominations

Meetings and operational procedures
- Two meetings a year (April and Oct)
- Only plenary sessions – transparent process
- Extensive representation from key partner organizations including industry
- Experts invited as needed on ad hoc basis
- Evidence-based – GRADing of evidence
- Working groups

Report and communications
SAGE working groups

- Establishment and ToRs decided by WHO and SAGE members

- Composition
  - Public call for nominations
  - At least two SAGE members & additional experts
  - Declaration of interests

- To review evidence and address specific issues in great depth and prepare for fruitful discussions at plenary SAGE meetings

- Not allowed to make decisions or speak on behalf of SAGE

- No observers

- Time limited though some set to run over a number of years (e.g. GVAP)
Issues taken into consideration by SAGE

Disease epidemiology
- disease burden including age specific mortality, morbidity, and societal impact; projections for future disease burden; specific risk groups; epidemic potential; disease occurrence over time; serogroup or serotype distribution; and changes in epidemiology over time

Clinical characteristics
- clinical management of disease, disease severity, primary/secondary/tertiary care implications, long term complications of disease and medical requirements
Issues taken into consideration by SAGE

- **Vaccine and immunization characteristics**
  - efficacy, effectiveness and population impact of vaccine; indirect effects; vaccine safety; cold chain and logistics concerns; vaccine availability; vaccine schedules; schedules acceptability and ability to deliver

- **Economic considerations**
  - disease, vaccine and vaccine delivery costs, perspective for vaccine price reduction, vaccine cost and cost-effectiveness of immunization programmes and affordability of immunization
Issues taken into consideration by SAGE in developing recommendations

- Health system opportunities and other existing intervention and control strategies
- Social impacts
- Legal considerations
- Ethical considerations
Aspects for which there is a lack of data to support decision making

- Effectiveness in developing countries and herd immunity
- Adjust schedules: reduce number of doses, dose spacing and duration of protection
- Vaccines co-administration
- Risk groups: immunodeficient, pregnant women, very young and very old
- Impact of vaccination strategies
- Cost-effectiveness studies

→ Need good and coordinated surveillance
WHO Vaccine Position Papers

- Position papers = Key reference documents
  - Available in all 6 official languages
  - Convergence of other WHO documents (International Travel and Health, Essential Drugs List, …)

- Developmental and review process (SAGE, extensive peer review including by industry, evidence-base, periodic updating)

- Format
  - Weekly Epidemiological Record
  - Current structure (Intro, background (Disease epidemiology, the pathogen, disease…), info on vaccines (composition, safety, immune response, efficacy and effectiveness, cost effectiveness and any other relevant issue), WHO position)

- Additional posting of information on the web: Grading of Recommendations Assessment, Development and Evaluation (GRADE) tables, references, summaries (one pager and PowerPoint presentation)
In order to assist programme managers develop optimal immunization schedules WHO has compiled key information on its current routine immunization recommendations into three summary tables.

Table 1 summarizes recommended routine immunizations for all age groups - children, adolescents, and adults. As such, it provides an overview of vaccine recommendations across the lifespan, including both primary series and booster doses.

Table 2 provides detailed information for routine immunizations for children, including age at first dose and intervals. It reiterates recommendations on the primary series and booster doses.

In Table 3, WHO has consolidated its recommendations for interrupted and delayed vaccination. These irregular situations can be challenging to health workers who may not know what to do.

It is important to note that these recommendations are only a compilation of existing WHO routine immunization recommendations in a new format. All the recommendations come from WHO immunization strategy, regional criteria, and local needs. It's important to consult the most recent guidelines for the most accurate and current information.
Interaction with manufacturers

- Sollicited at all stages
- Input to SAGE processes
  - Contribution with unpublished information
  - Need access to information submitted for licensure and prequalification
  - Production and distribution forecasts
- Participate in peer review of vaccine position papers
- Appropriate processes – watch for conflicts of interest and equity – cannot have direct membership on SAGE or its working groups
Off license indications

- A must to optimize public health impact
- Within limits
- A communication challenge
- A need to work towards reconciliation of public health recommendations and license
Impact of SAGE recommendations and vaccine position papers

Countries

Partners

Prequalification

Industry

The WHO Vaccine ACs play an increasingly central role in determining global vaccine policy.

WHO Vaccine AC recommendations have become a necessary step in the pathway to the introduction and use of vaccines, especially in developing countries and, as a consequence, have clear and significant impact.

A STAKEHOLDERS' PANEL TO EVALUATE THE IMPACT OF "STRENGTHENING WHO'S NORMATIVE AND POLICY SETTING FUNCTIONS FOR IMMUNIZATION, 2006-2010", March 2009
SAGE endorsed the framework on the use of vaccinations during humanitarian emergencies.

SAGE noted that framework fills an existing gap to guide decision-making processes, yet acknowledged the focus on vaccination which is only one priority consideration in humanitarian emergencies.

Three iterative steps:

- an assessment of the epidemiological risk posed by each VPD
- consideration of the vaccine properties and a context-specific analysis of logistics for a mass campaign
- prioritization in relation to other urgent public health actions and in light of contextual factors such as political realities, security issues, as well as available human and financial resources.
SAGE – April 2013 meeting

*Haemophilus influenzae b*

**SAGE concerned that despite a 2006 WHO recommendation calling for the universal introduction of Hib vaccines 9% of member states have not yet introduced the vaccine**

*SAGE urged policy makers in these countries to support the introduction of Hib vaccines*

**SAGE recommended any one of the following schedules:**
- three primary doses without a booster (3p+0)
- two primary doses plus a booster (2p+1)
- three primary doses with a booster (3 p+1)

Age at first dose should be determined based on the local epidemiology, vaccine presentation (Hib monovalent vaccine versus combination) and, how this fits into the overall immunization schedule.
SAGE – April 2013 meeting
SAGE recommendations on Yellow Fever Vaccination

- A single dose of YF vaccine is sufficient to confer sustained immunity and life-long protection against yellow fever disease → a booster dose of YF vaccine is not needed.

- Surveillance in endemic countries and clinical studies may possibly identify specific risk groups (such as infants or HIV-infected patients) that could benefit from a second primary or booster dose.

- Need to revisit the International Health Regulations provisions relating to the period of validity for international certificates for vaccination against YF.

- All countries with areas at risk from YF disease to set time defined objectives for the introduction of YF vaccine into their immunization programme and establish regional plans for controlling YF.
Draft ToRs for SAGE Working Group on Japanese Encephalitis Vaccines

- Review the evidence, identify information gaps, and formulate proposed recommendations on the use of JE vaccines for a SAGE review. This will lead to an update of the 2006 JE vaccine position paper targeted for early 2015.

- More specifically review the:
  - global prevalence and burden of disease
  - role of inactivated mouse-brain based JE vaccines
  - safety, effectiveness, and immunogenicity profile of inactivated, live attenuated, and chimeric JE vaccines*
  - schedule and age of administration for the first dose of inactivated, live attenuated, and chimeric JE vaccines*
  - duration of protection following immunization with inactivated, live attenuated, and chimeric JE vaccines*
  - co-administration of JE vaccines* with other vaccines
  - use of JE vaccines* in special populations (e.g. immunosuppressed, pregnancy)
  - disease impact and cost-effectiveness of JE immunization programs

*Due to the large number of available JE vaccines with limited global use, the Working Group will focus its in-depth evidence review on products with current or likely international distribution.
Vaccination of pregnant and lactating women
Polio eradication
DoV GVAP Monitoring of progress
Stockpile for pandemic influenza vaccines
Measles & rubella status report
Smallpox vaccines
Immunization supply chain & logistics
Sentinel sites surveillance
# SAGE 2014-2015 meetings

Topics on the horizons - cross-cutting and strategic issues

- DOV GVAP monitoring of implementation
- Surveillance
- Dealing with vaccine hesitancy
- Non specific effects of vaccines
- Use of vaccines in immunocompromised populations
- Immunization supply chain and logistics
- Strengthening routine vaccination and integration in primary health care
- Involvement of the private sector
- Strengthening of NITAGs
- Accessibility to affordable vaccines and WHO's role
SAGE 2014-2015 meetings
Topics on the horizons- vaccine specific recommendations and updates

- Polio eradication
- Measles elimination
- Optimizing immunization schedules
- Vaccine specific impact monitoring
- Pertussis
- Vaccine specific Preferred Product Characteristics
- Varicella & herpes zoster
- Japanese encephalitis
- HPV
- Hepatitis E
- Malaria
Thank you