World Health Organization Initiative for Vaccine Research (IVR)
Quantitative Immunization and Vaccines Related Research Advisory Committee
(QUIVER)
TERMS OF REFERENCE

1. FUNCTIONS

The specific responsibilities of the Quantitative Immunization and Vaccines Related Research Advisory Committee (QUIVER) are:

1.1 To advise the Secretariat of the Initiative for Vaccine Research (IVR) on quantitative research issues, particularly those related to:
   1.1.1 Estimating the burden of vaccine-preventable diseases;
   1.1.2 Modeling of vaccine intervention;
   1.1.3 Economic evaluations of vaccines, immunizations, and related technologies and interventions;
   1.1.4 Analytical components of operational and implementation research.

1.2 To assist IVR in preparing its workplan on quantitative research in relation to vaccines and immunization and to identify opportunities for new or neglected lines of research.

1.3 To review the public health relevance, scientific quality and budgets of projects proposed to IVR for support, and monitor technical and scientific progress of research activities - please refer to Annex A for review procedures.

1.4 To make recommendations on scientists and institutions suitable to formulate and carry out specific research and development projects or other studies for IVR.

1.5 To assist in the establishment of subcommittees, expert working groups or study groups required to address issues relevant to specific aspects of quantitative immunization and vaccines related research.

1.6 To review norms and standards\(^1\) relating to methods for conducting and reporting on quantitative immunization and vaccines-related research.

2. THE COMMITTEE

2.1 QUIVER consists of no more than twelve members, appointed by the Director IVR. Areas of expertise required for membership are in the following areas: infectious diseases, public health and epidemiology, health economics, statistics, modeling, demography, vaccines and immunization.

2.2 Committee members are appointed following a transparent process, including an open call for nominations made on the IVR website. The call specifies the particular expertise

\(^{1}\) A document articulating such norms and standards is currently being prepared by WHO and partners, and will be reviewed by the committee and updated on a periodic basis.
sought as well as the Terms of Reference. Nominations are also solicited from partner agencies as well as from existing Committee members.

2.3 Members are selected in their personal capacities for their scientific and technical knowledge and experience, as well as for their commitment and willingness to volunteer the necessary time and effort. Membership has a broad geographic representation and balance of gender from industrialized and developing countries.

2.4 Members are expected to attend QUIVER meetings and make available their advice in the interim, and may occasionally be asked to participate in other meetings as well as site-visits.

2.5 When traveling for WHO activities, members are reimbursed for travel costs and accommodation according to WHO standard procedures.

2.6 As a rule, members are appointed initially for one year, renewable for a maximum of two consecutive two-year terms. However, if a member misses two meetings in the absence of sufficient justification (e.g. illness, inability to procure visa, cancellation of flights, etc.), his/her appointment will automatically end. Director IVR may decide to appoint a new member in replacement of that member.

2.7 Depending on the expertise required for WHO activities, including the review of proposals submitted for support, the Advisory Committee may be supplemented by other experts, including those from other WHO advisory groups.

2.8 Members should be free of any significant conflict of interest. To this end, members are required to complete a declaration of interest form on an annual basis and their participation is subject to the evaluation of completed forms by the WHO Secretariat.

2.9 The Committee reports to WHO through the Director, IVR.

3. **THE COMMITTEE CHAIR**

3.1 The Chair is appointed by the Director IVR, and has the following responsibilities:

3.1.1 to chair the meetings of the Advisory Committee;
3.1.2 to liaise with the IVR Secretariat between meetings and provide advice on a regular basis;
3.1.3 to review meeting reports and reports from any interim recommendations;
3.1.4 to represent the QUIVER at the request of the IVR Secretariat.

3.2 The duration of the appointment is two years with the possibility of one renewal; maximum of four years.
4. **MEETINGS**

4.1 QUIVER normally meets in plenary once a year but may meet more frequently depending on the volume and timing of its work.

4.2 Members are normally notified at least three months in advance of meetings.

4.3 The IVR Secretariat participates in the meetings.

4.4 All documents must be treated as confidential and the members and Observers must agree to sign a confidentiality agreement upon appointment.

5. **OBSERVERS**

5.1 Observers to the Committee consist of one representative from each of the following partner agencies:

- The World Bank
- The United Nations Children's Fund (UNICEF)
- Global Alliance for Vaccines and Immunization (GAVI)
- Rotavirus Vaccine Programme at the Programme for Appropriate Technology in Health (PATH)
- PneumoADIP at the John Hopkins Centre for Global Health
- International Federation of Pharmaceutical Manufacturers & Associations (IFPMA)
- US Centres for Disease Control and Prevention (CDC)
- The Bill and Melinda Gates Foundation
- International Vaccine Institute (IVI)
- GAVI HibInitiative

5.2 Other Observers may be nominated on an as-needed basis. Observers are responsible for all their own expenses for any meeting which they attend. Observers do not participate in closed sessions of the Advisory Committee unless individually invited to do so by the Chair and approved by the Committee.

6. **IMPLEMENTATION OF RECOMMENDATIONS**

6.1 All recommendations from the Committee are advisory to the Director IVR, who retains responsibility for any subsequent decisions or actions by IVR regarding any proposals, policy issues or other matters considered by the Advisory Committee. WHO retains full control over the publication of the reports of the Advisory Committee meetings, including whether or not to publicise them.
Annex A

1. USUAL PROCEDURE FOR REVIEW OF PROPOSALS

1.1 For any proposal under review, two Principal Reviewers will be chosen by the Chair in consultation with the IVR Secretariat. Their expertise should be relevant to the proposal and they should prepare written independent assessments on the appropriate form, which will become part of the proposal file. Principal Reviewers may consult with colleagues or other experts provided that contributions by such experts to the review are acknowledged, and that such experts sign a confidentiality agreement, destroy or return all documents and otherwise maintain confidentiality of all documentation.

1.2 Outside reviewers may also be asked to review and provide comments on specific proposals, and/or to participate in the meeting, at the invitation of the Chair and/or Secretariat. These reviewers must also declare any conflict of interests, sign a confidentiality agreement, destroy or return all documents and otherwise maintain confidentiality of all documentation.

1.3 Proposals are presented to the Committee by the Principal Reviewers, along with their comments.

1.4 The Committee will score and rank proposals, using a pre-determined scoring system. After an open discussion of the proposals, the Chair will attempt to formulate a consensus recommendation concerning the proposal. If a consensus cannot be obtained, or if any member requests it, minority views will be recorded. The Committee will make a recommendation to IVR regarding support for the proposal.

1.5 Any amendments or clarifications to the proposal that are considered necessary should be included in the recommendation and the justifications for them clearly delineated.

1.6 Assessment Summaries are written by the Principal Reviewers, amended as necessary and signed by the Chair before the end of meeting.

1.7 All reviews, rankings, scores, comments, and recommendations of the Committee are advisory to IVR. Ultimate decisions on awards will be the responsibility of the Director IVR, and will include the Committee recommendations as well as financial, strategic, and administrative considerations.

1.8 Further to a positive recommendation from the Committee, proposals for research involving human subjects will then be considered by the WHO Ethics Review Committee (ERC).

1.9 Members should not submit proposals for funding to the Committee. Members are asked to disclose any conflict of interest or involvement (financial, professional or otherwise) in a project or proposal under consideration by QUIVER. Members who have a conflict of interest with a proposal or project may remain present during discussions to answer questions, but do not participate in the formulation of the final recommendations. The Director IVR has the authority to make a determination in each individual case of whether a member's conflict of interest or involvement warrants his/her exclusion from the recommendation process.
2. **USUAL INTERIM REVIEW PROCEDURES**

2.1 A proposal will be eligible for interim review (between scheduled meetings) by mail/telecommunications if it is perceived by the Chair and Secretariat that postponement of review until the next Committee meeting will significantly delay progress and adversely affect the research project.

2.2 Interim review will be carried out by mail, conference call or other means of telecommunication, as appropriate. Interim review should be performed by no fewer than three members of the Committee (including the Chair). Interim review should also involve a written independent assessment of an Individual Reviewer.

2.3 Any member performing an interim review may recommend that consideration of a proposal be deferred to the next meeting of the Committee.
Annex B

COMMITTEE COMPOSITION
August 2007

IVR Secretariat

Dr Marie-Paule KIENY
Director
Initiative for Vaccine Research

Dr Raymond HUTUBESSY
Economist
Implementation Research, Initiative for Vaccine Research

Dr Lara J WOLFSON
Scientist
Implementation Research, Initiative for Vaccine Research

Chair

Dr ALAN HINMAN
Senior Public Health Scientist, Task Force for Child Survival and Development,
Decatur, Georgia, USA

Members

Dr Zulfiqar Ahmed BHUTTA
Professor, Pediatrics and Child Health, The Aga Khan University,
Karachi, Pakistan

Dr Bryan GRENFELL
Professor of Biology, The Pennsylvania State University,
Pennsylvania, USA

Dr M. Elizabeth HALLORAN
Professor of Biostatistics, Fred Hutchinson Cancer Research Center/University of Washington,
Seattle, Washington D.C., USA

Dr James KOOPMAN
Professor, Epidemiology, University of Michigan,
Ann Arbor, Michigan, USA,

Dr Ramanan LAXIMINARAYAN
Economist, Resources for the Future,
Washington D.C., USA

Dr Anthony NELSON
Lecturer/Senior Lecturer, Department of Paediatrics,
The Chinese University of Hong Kong
Hong Kong, People's Republic of China

Dr Walter ORENSTEIN
Associate Director, Emory Vaccine Center, 
Atlanta, Georgia, USA

Professor Maarten POSTMA
Professor of Pharmaco-Economics, Groningen Research Institute of Pharmacy (GRIP), Groningen, The Netherlands

In addition, representatives from the following agencies attend the meeting as Observers on a regular basis:

The World Bank
The United Nations Children's Fund (UNICEF)
Global Alliance for Vaccines and Immunization (GAVI)
   GAVI's Rotavirus Vaccine Project
   GAVI's PneumoADIP
   GAVI's HibInitiative
International Federation of Pharmaceutical Manufacturers & Associations (IFPMA)
Technical Agencies (eg US Centres for Disease Control (CDC), Programme for Appropriate Technology in Health (PATH))
Developing Countries
The Bill and Melinda Gates Foundation (BMGF)

Representatives from other WHO departments

Child and Adolescence Health and Development (CAH)
Food Safety, Zoonoses and Foodborne Diseases (FOS)
Global Influenza Programme (GIP)
Health Systems Financing (HSF)
Measurement and Health Information Systems (MHI)