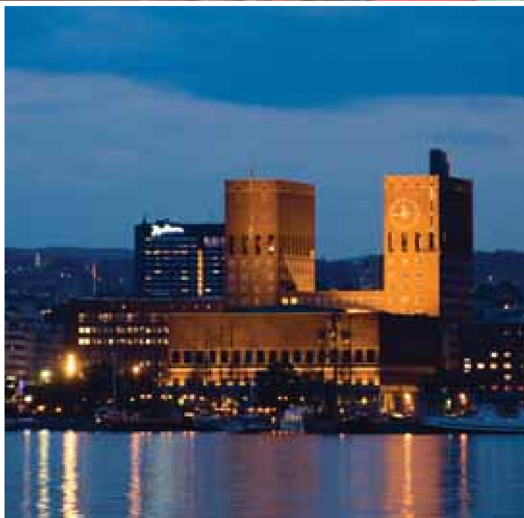
GETTING TO ZERO

The Oslo Malaria Conference

12–13 April 2011, Oslo, Norway



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12 – 13 April 2011, Oslo, Norway

Organizers of the conference

	Norwegian Ministry of Foreign Affairs – http://www.regjeringen.no/en/dep/ud.html
	Norwegian Red Cross – http://www.rodekors.no
	The International Federation of Red Cross and Red Crescent Societies (IFRC) – http://www.ifrc.org
	The Roll Back Malaria Partnership Secretariat – http://www.rollbackmalaria.org

The Oslo Malaria Conference was supported by:

The Oslo Accord

International and national malaria experts, stakeholders and policy makers, convened by the Roll Back Malaria Partnership, the Norwegian Red Cross and the International Federation of Red Cross and Red Crescent Societies, under the auspices of the Norwegian Ministry of Foreign Affairs, met in the Norwegian capital, 12 — 13 April 2011, to define next steps to get to zero malaria deaths by 2015.

They agreed on the need for an extraordinary effort to intensify global political commitment, financial resources and research & development in order to maintain the momentum of the malaria control gains achieved over the past decade and as a pre-requisite to reaching the 2015 target. Participants identified eight points of action which are outlined in the Oslo Accord.

Participating organizations and institutions

African Leaders Malaria Alliance	Lund University, Sweden	PATH Malaria Vaccine Initiative
Bayer Environmental Science	Madagascar Red Cross	Red Cross/European Union Office
Bestnet Europe Ltd	Malaria Consortium	Research Council of Norway
Bill & Melinda Gates Foundation	Médecins Sans Frontières	Roll Back Malaria Partnership Secretariat
Burundi Red Cross	Medicines for Malaria Venture	Roll Back Malaria Partnership Central Africa Regional Network (CARN)
Canadian Red Cross	Ministry of Health, Eritrea	Roll Back Malaria Partnership West Africa Regional Network (WARN)
Danish Red Cross	Ministry of Public Health and Sanitation, Kenya	Sanofi Aventis
Drugs for Neglected Diseases initiative	Ministry of Health, Namibia	Sierra Leone Red Cross
Embassy of Finland	Ministry of Health, Nigeria	Swiss Tropical and Public Health Institute
Ethiopian Red Cross	Ministry of Health, Rwanda	Sumitomo Chemical
European Vaccine Initiative	Ministry of Health, Senegal	United Kingdom Department for International Development
ExxonMobil	Mozambique Red Cross	United Nations Foundation
Finnish Red Cross	Norwegian Agency for Development Cooperation	United Nations International Drug Purchasing Facility
Foundation for Innovative New Diagnostics	Norwegian Ministry of Foreign Affairs	United Nations Secretary General's Special Envoy for Malaria
Global Alliance for Vaccines and Immunisation	Norwegian Institute of Health	United Nations Under Secretary General for Innovative Financing
Global Fund to Fight Aids, Tuberculosis and Malaria	Norwegian Red Cross	United States Agency for International Development
Global Health Strategies	Norwegian Institute for Urban and Regional Research	United States Embassy
GlaxoSmithKline	Norwegian Institute of Public Health	United States President's Malaria Initiative
Innovative Vector Control Consortium	Norwegian University of Life Sciences	World Bank
Institute for Global Health of Barcelona	Norwegian Directorate of Health	World Health Organization
International Federation of Red Cross & Red Crescent Societies	Oslo University Hospital	World Health Organization African Regional Office
Johns Hopkins Bloomberg School of Public Health	Oxfam	World Vision
Kenya Red Cross	Partnership for Maternal, Newborn and Child Health	Vestergaard Frandsen SA
	PATH Malaria Control and Evaluation Partnership in Africa	

The Oslo Accord

On Achieving Zero Malaria Deaths by 2015

International and national malaria experts, stakeholders and policy makers,

Convened by the Roll Back Malaria Partnership, the Norwegian Red Cross and the International Federation of Red Cross and Red Crescent Societies, under the auspices of the Norwegian Ministry of Foreign Affairs,

Determined to relieve all of humanity of an age-old disease,

Acknowledging the impact malaria control has on the achievement of the United Nations Millennium Development Goals - as well as its linkage to the United Nations Secretary General's Global Strategy for Women's and Children's Health

Recalling the agreed targets set forth in the Global Malaria Action Plan (GMAP),

Conscious of the effective measures that exist today to protect all human beings from the disease,

Noting the cost-effectiveness of malaria control and the social and economic benefits of allocating public resources to the endeavour,

Recognizing the contribution that foreign policy can make to eliminate malaria as a global impediment to social and economic development,

In pursuit of the ultimate objective of saving all 780,000 lives still lost every year due to malaria,

***Agreed* on the need for an extraordinary effort to intensify global political commitment, financial resources and research & development in order to maintain the momentum of the gains achieved over the past decade and as a pre-requisite to reaching the 2015 target;**

Have identified eight points of action to achieve near-zero deaths from malaria by 2015:

1. Achieve and sustain universal coverage with malaria prevention and control interventions as an integral part of the United Nations Secretary General's Global Strategy for Women's and Children's Health.

2. Demonstrate the return on investment of malaria control to endemic and donor country governments and to non-traditional partners in support of the need to fund and implement the GMAP.

3. Maintain current donors, gain new donors and promote innovative financing mechanisms.

4. Promote effective interaction and integration of malaria control with other disease control programmes within strengthened health systems to achieve efficiency gains and to develop programme management capacity.

5. Strengthen country-driven partnerships in support of national malaria control programmes, based on the Three Ones – one strategic plan, one coordinating mechanism, one monitoring & evaluation plan.

6. Scale up best practices to effectively engage local communities in demand creation, prevention, diagnostic testing, early fever management and surveillance.

7. Support the World Health Organization in establishing normative guidelines and product-performance criteria to assess new vector control tools.

8. Align the global research & development agenda with GMAP and the Malaria Eradication Research Agenda (malERA) and expand research capacity in endemic countries.

Declared on 13 April 2011

Summary

Every year, 781,000 lives are still lost due to malaria. Every 45 seconds, a child dies of malaria[1]. Yet malaria is a preventable and treatable disease. Malaria morbidity and mortality can be decreased when global and national malaria control partners stand together with peoples and communities at risk and empower them with knowledge and with the available and effective malaria control tools. Forty-three countries around the world, including 11 in sub-Saharan Africa, have already shown that this is possible by decreasing malaria cases by more than 50% since 2000.

2011 marks an important juncture at which to review progress made towards achieving the 2010 universal coverage[2] target and to define the steps needed to reach near-zero[3] malaria deaths by 2015, the target set by the Roll Back Malaria Partnership. The 2015 target is daunting but important, as action on malaria will contribute substantially to the attainment of Millennium Development Goals (MDGs) 4 and 5 on child mortality and maternal health in endemic countries as well as MDG 6 on combating malaria, HIV and other diseases. This target is achievable if partners are prepared to join together in an extraordinary effort.

This extraordinary effort will be needed on several fronts. The Oslo Malaria Conference has brought together experts from the worlds of malaria research & development (R&D), policy making, implementation and finance to chart a way forward. These experts include representatives from Ministries of Health, United Nations agencies, Red Cross/Red Crescent, civil society, academia, the private sector and the donor community. For many, the conference has offered an opportunity to meet and share information in a uniquely broad forum. The resulting cross-fertilization of experiences and ideas has been a great strength and source of success of the conference as participants focused on innovation and partnership, two of the 'big ideas' that have already made a major difference in the fight against malaria and which will be vital in the drive to get to near-zero deaths.

On Day One, participants shared lessons learned and best practices in three thematic sessions – on research, on partnership and delivery strategies, and on financing – and highlighted the key opportunities to be taken and challenges to be addressed.

Participants highlighted the importance of past R&D to current success and recognized that R&D underway today is vital to ensure that countries will be able to go the extra mile to defeat malaria, particularly in the face of emerging challenges such as drug and insecticide resistance.

It was clear from the presentations in Oslo that countries are putting winning formulas for malaria control into place by choosing interventions to fit their specific contexts and needs. Some of the key elements discussed include: broad-based partnerships; mass distribution of long lasting insecticidal nets; demand creation; bed net hang up and keep up activities in local and vulnerable communities; indoor residual spraying; access to rapid diagnostic tests; access to appropriate and early treatment; access to community health workers; effective referral and transport for those who need it; and adequate and sustainable results-based financing.

Investment in malaria is also strengthening health systems, for example, by creating opportunities for health workers to train on integrated approaches to childhood illness, by bolstering procurement and supply-chain management systems, and by strengthening health-information systems. It builds the capacities of Ministries of Health to scale up programmes and sustain progress. Current investment in malaria control is saving lives and providing far-reaching and cost-effective benefits for countries. However, adequate, sustainable and predictable funding needs to be available to carry this success forward.

At the global level, the search for a winning formula highlights the importance of ongoing R&D, of ensuring value for money, of maintaining and expanding financing – including through the Global Fund to Fight AIDS, Tuberculosis and Malaria and innovative financing mechanisms – and of strengthening partnerships that add value to the work of individual malaria partners and promote the integration of malaria with other priority health issues and strategies such as the United Nations Secretary General's Global Strategy for Women's and Children's health.

On Day Two, the key issues emerging from the three panel sessions were taken up in working groups. The outputs from the working groups constitute an agenda for the malaria community to pursue through upcoming major meetings and through individual country, organizational and institutional planning and action.

With the Global Malaria Action Plan in mind, the working groups agreed on a number of specific recommendations for action and agreed that these be set forth as the Oslo Accord.

1 *World Malaria Report 2010.* Geneva: World Health Organization, 2010.

2 Malaria 2010 universal coverage targets, as called for by the UN Secretary-General in 2008, include achieving universal coverage for all populations at risk with locally-appropriate interventions, including the diagnosis and treatment of 80% of malaria patients within 24 hours of the onset of the illness, and the achievement of a 50% reduction in malaria burden (compared with 2000 rates).

3 The Roll Back Malaria Partnership (RBM) Task Force on Priorities and Targets Beyond 2011 has recommended that RBM adopts the following target: "Reduce global malaria deaths to near-zero by 2015".

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1. Introduction

Sven Mollekliev, President of the Norwegian Red Cross, opened the 2011 Oslo Malaria Conference[4] and extended a warm welcome to all participants on behalf of the conference organizers and sponsors. He thanked Her Majesty Queen Sonja of Norway on behalf of all partners for her presence and public commitment to the fight against malaria.

The Oslo Malaria Conference takes place at an historic point in the fight against malaria. Never before has such an impact on malaria morbidity and mortality been seen across the globe. Never before has the ambition of the malaria community – to attain zero malaria deaths by December 2015 – been so high.

One outcome of the conference would be a set of recommendations to guide the malaria community in a joint effort to achieve zero malaria deaths by 2015, to integrate malaria into a broader, household-health approach, to put in place strong linkages with the United Nations Secretary-General's (UNSG) Global Strategy for Women's and Children's Health[5], and to contribute to the attainment of the health-related Millennium Development Goals (MDG). Participants would also be challenged to look beyond 2015 towards the Global Malaria Action Plan's (GMAP) goal of malaria eradication. The recommendations, owned by the participants, would be widely shared with leaders and decision makers at upcoming 2011 events including World Malaria Day, the World Health Assembly, the Roll Back Malaria Partnership (RBM) Board meeting, the Bill & Melinda Gates Foundation (BMGF) forum in October and the African Union Summit.

Her Majesty Queen Sonja of Norway at the Oslo Malaria Conference (from the left: Sven Mollekliev, HM Queen Sonja, Tore Godal, Robert Newman, Awa Marie Coll-Seck and Jonas Gahr Støre)

2. Malaria, foreign policy and development

"Malaria is a global emergency that affects mostly poor women and children; it perpetuates a vicious cycle of poverty in the developing world."

As a former Norwegian Red Cross Secretary General, and having worked at the World Health Organization (WHO) with then Executive Director Gro Harlem Brundtland as she set RBM in motion, Jonas Gahr Støre, now Norwegian Minister of Foreign Affairs, has engaged in the fight against malaria in several different roles. He shared his conviction that malaria and poor health are inextricably linked to poverty, leading potentially to failed states and local and global insecurity. He called for strengthened, evidence-based advocacy focusing on public health as a foreign policy issue.

Because malaria is a global emergency that affects mostly poor women and children, it perpetuates a vicious cycle of poverty in the developing world. Ultimately, malaria control preserves both lives and livelihoods. It keeps parents at work, children and teachers at school, and helps create the economic and social conditions that eliminate extreme poverty and inequality.

Without sustained and predictable funding, the significant contribution of malaria control towards the achievement of socio-economic development and the attainment of the MDGs could be reversed. Partners need to strengthen the investment case for malaria in the face of those who think that malaria is 'a job done' and those who would re-direct resources to other global priorities such as climate change.

Increasingly, the focus is on investment in health systems and integrated approaches. The Red Cross/Red Crescent, for example, has demonstrated the value of linking the mass distribution of bed nets with mass immunization interventions, and has highlighted the importance of social mobilization and a bottom-up approach.

The malaria community must find a way to 'place malaria at the centre' so that it is linked with foreign policy, poverty alleviation, MDGs 4, 5 and 6, the UNSG's Global Strategy for Women's and Children's Health, and with the strengthening of health systems and community systems.

[4] See Annex 2 for the conference agenda.

[5] http://www.everywomaneverychild.org/

The success of the conference owes much to the contributions of two distinguished moderators: On Day One, Tore Godal, Special Adviser on Global Health to the Prime Minister of Norway, Norwegian Ministry of Foreign Affairs, encouraged participants to share, discuss and learn from both their successes and from the things that are not going so well; and on Day Two, Joy Phumaphi, Executive Secretary of the African Leaders Malaria Alliance (ALMA) kept participants focused on the task of identifying specific recommendations.

The focus during the first day was on lessons learned and best practice related to three themes – promoting partnership and innovation in the use of existing tools and in new tool development; promoting innovative delivery strategies and the partnerships needed for effective implementation across the public, private and civil society sectors; and partnering to promote innovative approaches to making available malaria funding work harder and to mobilizing additional, sustainable funding in a changing funding environment.

The presentations and plenary discussions on Day One were followed up in three thematic Working Group sessions on Day Two during which the conference recommendations were developed. In this report, the presentations, discussions and eventual recommendations related to each theme are presented consecutively in order to maintain the flow of debate and discussion.

3. The 2011 malaria advocacy report

"Malaria will ultimately be defeated by empowering communities with the knowledge and materials needed to prevent, diagnose and treat it."

Sven Mollekliev, President of the Norwegian Red Cross, announced the launch of the 2011 Red Cross Malaria Advocacy Report: 'Beating malaria through partnership and innovation'. The report emphasizes the power of partnership in the fight against malaria. A key understanding is the linkage of health-related MDGs in countries where malaria is widespread. Malaria's main victims are children and pregnant women, and MDGs 4 and 5 will not be reached if malaria is not given priority in terms of resourcing and research.

The power of communities must be harnessed if the 2015 target of near-zero deaths is to be reached. In 2010, Red Cross/ Red Crescent community-based volunteers demonstrated this power by reaching 2.2 million households in Africa alone; 11 million individuals were reached with nets, with follow-up activities to ensure high and sustained rates of net use, and with community-level management of fever. The Kenya Red Cross presentation at this meeting further demonstrates how civil society, community volunteers, and local and national health authorities, can partner to roll back malaria in a sustainable manner in even the hardest to reach areas of the world.

A challenge today for governments, nongovernmental organizations (NGOs), academia and the private sector is to make research, innovations and existing tools easily accessible to local communities, including the poorest. Seeking innovative solutions to this challenge is the purpose of the Oslo Malaria Conference. It will be essential to step up efforts, to bring new partnerships into play, to give hope and protect dignity, and to ensure that what is achievable is done.

4. The 2011 malaria landscape

"In the past decade, large parts of the world have started to extricate themselves from malaria, a millennia-old problem."

To set the scene for the Panel discussions, Awa Marie Coll-Seck, Executive Director of the Roll Back Malaria Partnership (RBM), reviewed progress to date and emphasized that the malaria community has every right to take a moment to look back proudly at what has been achieved over the past 10 years.

Many malaria-related initiatives have been launched, including: the Global Fund to Fight AIDS, Tuberculosis and Malaria Global Fund, the United States President's Malaria Initiative (PMI), the World Bank Malaria Booster Program, the United Nations International Drug Purchasing Facility (UNITAID), the United Nations Secretary General's Special Envoy for Malaria (UNSE) and the African Leaders Malaria Alliance (ALMA). Groundbreaking public-private research and development (R&D) consortia have also been created, particularly with support from BMGF. Today, the Drugs for Neglected Diseases initiative (DNDi), the Foundation for Innovative New Diagnostics (FIND), the Innovative Vector Control Consortium (IVCC), the Medicines for Malaria Venture (MMV) and the PATH Malaria Vaccine Initiative (MVI) are all focusing on developing new tools for malaria control and elimination. Such joint initiatives have revolutionized the way malaria awareness and resources are raised, the way health care is delivered to communities, and the way in which new technologies for malaria control are developed. The fight against malaria it is now a joint venture with real leadership from endemic-country governments and a track record of achievements.

It is now time to renew commitments to reach the 2015 targets and to drive the fight forward. As conference participants develop the specific recommendations that will pave the way to near-zero deaths from malaria by the end of 2015, some of the key areas where commitment must be strengthened include:

- **Maintaining and expanding financing.** Existing commitments at global and national level must be maintained, new donors identified and alternative sources of funding secured;
- **Making the money work.** Recent events have confirmed that accountability, good governance and transparent reporting must be encouraged to promote continued and increased investment;
- **Maintaining and extending universal coverage.** Results achieved this year are as fragile as they are impressive. Old nets must be systematically replaced, and high levels of distribution and use must be maintained for years to come. Net coverage must be complemented by effective IRS, where appropriate;
- **Expanding access to effective diagnosis and treatment.** Another massive international push is needed, focused this time on ensuring that every single suspected malaria case is confirmed with a diagnostic test and treated appropriately in order to maximize lives and resources saved and minimize drug resistance;
- **Increasing political commitment and empowering communities;**
- **Promoting the collection of 'real-time' data** to underpin strategic planning and effective programming with available resources and the case for investment in malaria control;
- **Ensuring the continuation of malaria R&D;** and
- **Promoting the integration of malaria with other priority health issues.**

The malaria community must believe in the power of partnership and continue to strive towards what promises to be a great development success story – near-zero deaths from malaria by 2015.

The fight against malaria promises to be a great development success story

- Intervention coverage has improved around the world
  - Between 2008 and 2010, nearly 289 million long-lasting insecticidal nets (LLIN) have been distributed in sub-Saharan Africa (SSA); enough to protect over 76% of those at risk compared with 5% in 2000
  - Indoor residual spraying (IRS) protected 70 million people in SSA in 2009, up from 15 million in 2005
  - 33 million rapid diagnostic tests (RDT) were distributed in 2009, compared with 200,000 in 2005
  - 229 million doses of artemisinin-based combination therapy (ACT) were procured worldwide in 2010, up from 2.1 million in 2003
- 43 countries have decreased malaria cases by more than 50% since 2000, including 11 in SSA. Several more countries are very close to meeting this target
- Morocco and Turkmenistan were certified in 2010 as malaria-free by WHO

Source: WHO *World Malaria Report 2010*

5. Partnerships: lessons learned and best practices

In a keynote speech, Timothy Ziemer, United States Global Malaria Coordinator, presented lessons learned and best practices related to working in partnership.

The United States Government (USG) is committed to partner: as a major donor, in programme implementation, and in research and advocacy. Partnership is required on multiple levels, but the USG's key partner is always the host country. The USG's strategic and policy documents embrace the principle of partnership. For example, the principles of President Obama's Global Health Initiative include country ownership, working in partnerships and innovation. The President's Malaria Initiative (PMI), launched in 2005 with a four-year budget of US$1.2 billion and a goal of reducing mortality by 50% in 15 focus countries, works in partnership with international partners and over 200 NGO partners of which 33% are faith-based organizations.

Private sector engagement has been one of the strengths of the RBM Partnership, and Steven Phillips of ExxonMobil has identified the need for four things when partnering with the private sector: a plan, a point of entry, a clear idea of how progress is to be measured and of how impact and return on investment (ROI) are to be achieved and reported.

The malaria community has a plan – the GMAP – which is the comprehensive blueprint for global malaria control and elimination. The USG five-year strategy parallels and is linked to the GMAP, the United Kingdom Department for International Development (DFID) strategy is linked to the GMAP, the BMGF strategy is linked to the GMAP, and most national malaria control plans are directly or indirectly linked to the GMAP. These strategies clearly define a point of entry for all partners, a monitoring and evaluation component and expected impacts and ROI. The GMAP allows partners to anticipate how the fight against malaria should be taken forward and to work through governments to preserve the current inventory of tools – including IRS which has been a focus of PMI investments – and levels of funding. It is an excellent tool to be used to engage both traditional and also non-traditional donors, in government and the private sector.

Some opportunities to broaden partnerships with the private sector have been highlighted in conference presentations, for example: work with WHO to retain the current list of insecticides and support research for IRS alternatives; work with MMV to accelerate the arrival of new anti-malarial drugs; and work with industry to accelerate the arrival of a malaria vaccine.

Remarkable progress has been made in the past five years through effective partnership and there is much to celebrate. However, a heavy dose of reality is needed as the landscape is changing. There are funding challenges and gaps, resistance issues and competing health priorities. Nevertheless, this is a noble cause and the requirement to partner on behalf of host countries has never been more important.

6. Panel One: Existing tools, new research and innovation

Robert Newman, Director of the WHO Global Malaria Programme (GMP) opened the Panel One session[6] by noting that the multiplication of malaria funding and renewed interest of key stakeholders over the past decade has been motivated greatly by the availability of new, safe, effective and evidence-based tools.

He identified significant potential and opportunities for future success including: the scaling up of malaria diagnostic testing and surveillance; moving towards greater community ownership and management of malaria prevention and control; the adaptation of intervention mixes to local malaria epidemiology; new integrated strategies on childhood diseases such as community case management (CCM); and potential new tools such as a malaria vaccine. However, emerging threats to success, such as drug and insecticide resistance, need to be monitored closely.

HIGHLIGHTS

- Incentive mechanisms – to motivate the development of new products and to improve the delivery of existing products – need to be better understood and applied
- A more strategic approach to the assessment of new products, perhaps involving dialogue between WHO and product manufacturers, may accelerate their introduction into practice
- Malaria is changing in ways we understand and in ways we do not yet fully understand. Ongoing R&D is therefore vital

While today's tools are not perfect, they will have a profound impact if fully scaled up, and innovative ways to share operational research findings and programmatic best practices within countries and sub-regionally (especially through south to south collaboration) must be found so that implementation is strengthened and maximum value for money is achieved.

Continuing investment in R&D is needed in order to have new tools ready for the next phase of the fight. Public–private partnerships have transformed the R&D landscape for malaria and must be encouraged to continue to improve the performance of existing tools and develop the tools needed to counter emerging threats.

For long-term success, the leadership of endemic-country scientists must be fostered, and the research–programme divide must be broken down enabling researchers and implementers to learn from each other in a continuous cycle that will bring the ultimate prize – a world free of malaria – closer.

6.1 New generation vector control challenges

"A net cannot save lives if it is still wrapped in its packaging and stored in a warehouse."

Mikkel Vestergaard, Chief Executive Officer of Vestergaard Frandsen SA, identified two major challenges:

- Innovation stifling; and
- A failure to link rewards and performance for product suppliers.

Promising new products that could address emerging issues such as resistance are not getting to market because accreditation bodies have not developed specific and suitable product categories (such as those established for LLINs and IRS) and appropriate and accredited testing guidelines to allow them to be independently evaluated.

WHO Pesticide Evaluation Scheme (WHOPES) testing guidelines were developed for existing types of vector control and are not necessarily well-adapted to new types of vector control tools that use more than one active ingredient or that are intended specifically to address the problem of insecticide resistance. Yet these types of product are precisely what are required today. Institutions with a normative role must develop systems that can accommodate an increasingly diverse product group.

The value of risk takers

Participants paid tribute to Tore Godal for his work to establish the efficacy of bed nets in the 1980s when the malaria community was not strongly supportive of the use of nets as a primary method for malaria prevention.

During his time as Director of the Special Programme for Research and Training in Tropical Diseases (TDR), he set up a comprehensive field trial of nets in the Gambia which succeeded to demonstrate their value. Without this work, bed nets may not have made it into today's toolkit.

Tore Godal acknowledged the work of TDR on this issue and the passion of his fellow researchers at the time and their determination, indeed excitement, to find out once and for all whether nets worked.

[6] Find the Panel One background paper at: http://www.rodekors.no/om-rode-kors/malaria-conference-2011/

Once products are on the market, opportunities to create incentives to motivate suppliers to set up effective distribution systems are being missed because suppliers are currently paid long before their products reach end users. A LLIN cannot save lives if it is still in its packaging. So why do suppliers and distributers get rewarded while nets remain in warehouses?

A simple SMS-based monitoring and reporting system, such as that used in the 'SMS For Life' initiative[7], could be adapted to create an independently-verifiable monitoring system sensitive and quick enough to allow performance-based payments to suppliers.

Q&A The current lack of capacity at WHO/WHOPES to develop necessary new categories and testing guidelines in a timely fashion was acknowledged. A more strategic approach to the assessment of products, perhaps involving dialogue between WHO and product manufacturers, may be the solution. This would be congruent with WHO's role as a convenor.

Q&A Product developers noted that the assessment pipeline for malaria vector control products is currently saturated with products that are variations on existing products and questioned whether more innovatory products would remain at the back of the queue even if new categories and testing guidelines are developed.

Q&A While there is a need to accelerate the process of getting new products into practice, the task of identifying and gathering the relevant evidence needed to assess new products and to ensure that they will be used most effectively (e.g. in rural versus urban settings or in settings with different prevalence rates and environmental conditions) should not be underestimated. Acceleration will require increased collaboration between product developers, field-trials sites and policy bodies.

Q&A Health systems around the world offer a number of examples where incentives have been used to increase demand and performance. For example: in Mexico, mothers are paid if their child is fully vaccinated; India pays mothers if they deliver at a health facility; Rwanda has linked the transfer of funds to its provinces to the proportion of children sleeping under bed nets and doctors are paid according to how many people they treat.

Q&A Mobile phone companies are targeting SSA for expansion and this could provide new opportunities for public–private partnerships to develop information gathering and sharing initiatives. Norway, for example, has recently committed US$1 million in an initiative to promote the use of mobile technology to improve the quality of maternal health. The initiative is now underway with the signing of 12 public–private partnership agreements.

6.2 Innovation in vector control product development and delivery

Tom McLean, Chief Operating Officer at the Innovative Vector Control Consortium, highlighted that:

- The landscape of vector control is changing with the emergence of resistant mosquitoes, changing human populations (especially due to urbanization), and growing evidence of alternate modes of transmission (e.g. outdoor biting *A. gambiae/arabiensis*); so that
- New products and tools are vital and a new 'army' of vector control professionals will be needed to manage them in practice.

To address the changing landscape, IVCC has an exciting set of new products at various stages in the development process, including: three new active ingredients to manage insecticide resistance; longer-lasting formulations to reduce the cost of use; and products that represent new paradigms in vector control (e.g. products designed with 'consumer appeal' in mind and products to combat outdoor biting). This level of innovation has been generated using the Product Development Partnership (PDP) model which works by involving a wide range of companies, institutions and field-trials sites, by galvanizing the latent enthusiasm in the private sector for making progress in the fight against malaria, and by focusing public-sector partners on real products.

Promotion of access is increasingly on the PDP agenda, and the IVCC model is being expanded to address the problem of product delivery and management in the field. A key challenge will be local capacity. Capacity building at a professional level, rather than at a PhD level, should be the focus in order to ensure that sufficient human resources are available to manage complex interventions such as vector control combinations, rotations and mosaics even at the district level.

Q&A Considerable research into outdoor biting will be needed to identify what actually is going on (e.g. unmasking of outdoor biting once indoor biting is controlled or behaviour change as indoor biters adapt to bite outside) and what the possible product solutions might be.

Q&A Endemic countries do not currently have sufficient research and entomology capacity to address issues such as resistance or outdoor biting or to ensure that intervention strategies are tailored at national level – and increasingly at district level – to local vector populations, prevalence rates and environmental conditions. Increasing this capacity will be essential as the era of a 'one size fits all' intervention comes to a close.

[7] In the 'SMS For Life' initiative currently being scaled up in Tanzania, health workers receive free cell-phone credit in exchange for reporting in data on RDT and ACT stocks. Stock outs have been significantly reduced.

Q&A Malaria products that require minimal customer 'training' and provide the customer with an immediate impact in terms of their quality of life are a target for development as these will be a key to demand creation.

6.3 New developments and directions in diagnosis

"A new challenge will be sustaining the image of malaria as a high-risk disease in places where prevalence has dropped dramatically."

Research presented by David Bell, Head of Malaria at the Foundation for Innovative New Diagnostics, demonstrated that:

- Without RDTs, the performance of other malaria control tools may be significantly underestimated;
- With RDTs, the need for new diagnostics to identify causes of non-malarial fever or markers of a 'need to treat' is highlighted.

Following a rapid roll out of RDTs in one district in Zambia, reported cases of malaria decreased almost to zero over a period of 18 months. LLINs, IRS and ACT had made a significant difference to the malaria burden in the district, but, without RDTs to establish a clear diagnosis, it had not been possible to assess how well these tools were performing. With improved RDT coverage, an area thought to have had high levels of malaria turned out to have virtually none and ACT use dropped dramatically with resulting cost savings. Rapid roll outs of RDTs in Senegal and Zanzibar have produced similar results.

A challenge for the future is to find ways to sustain funding and Ministry of Health interest for malaria control interventions when malaria-related child mortality is shown to be near-zero. Addressing fever as a 'syndrome of illness' rather than simply as a symptom of malaria will highlight the importance of RDTs for the early identification of non-malarial febrile illness and as a step on the pathway to rapid gains in the reduction of child mortality.

However, new diagnostics will be needed to identify causes of non-malarial illness or markers of a need to treat. R&D in the field of diagnostics is relatively low-cost and quick to yield results, and may lead to the development of such tools.

However, for this to happen, an increase in diagnostics R&D funding will be required.

Q&A The importance of improving the management of non-malarial febrile illnesses alongside efforts to scale up universal access to malaria diagnostic testing was discussed at a recent WHO meeting[8].

Q&A WHO must rise to the challenge of updating policy advice on the basis of new tool development and new evidence such as this. A group is being set up to look at the process of policy setting and revision. This group will break with the tradition of policy setting in expert groups and aim to take an overarching view.

[8] Consultation on the economics and financing of universal access to parasitological confirmation of malaria. 31 May–1 June 2010. WHO and Global Fund.

6.4 The development of new, effective and affordable malaria drugs

David Reddy, Chief Executive Officer at the Medicines for Malaria Venture, highlighted a number of lessons learned during the 10 years that MMV has been in business as a not-for-profit PDP:

- The kind of risk-taking investment undertaken by MMV works;
- A critical part of the MMV approach has been to prioritize use of limited resources by setting profiles for the types of drug needed to add-value to the malaria portfolio and to deselect compounds at any stage of development if it becomes apparent that they do not fit the required profiles;
- New medicines may be efficacious in the laboratory, but not effective in the field: This has prompted MMV to set up an access and delivery team to work on identifying key barriers to the uptake of medications e.g. packaging, patient and health-worker information, and management of the supply chain;
- The WHO prequalification process should aim to ensure that both a quality drug and a low-cost delivery system are brought to market simultaneously.

MMV is a PDP – encompassing the public, private and philanthropic sectors – which uses donor funds to support the development of new antimalaria drugs. An early focus was on increasing the range of ACTs available to include formulations tailored for children and for the treatment of severe infection. Today, MMV has a pipeline of over 50 antimalaria drugs that are focused on several unmet needs and potentially provide a whole arsenal of new drugs to combat this highly-adaptable parasite, for example, single-dose cures, drugs that prevent transmission of the parasite and medicines that fight the parasite during its dormant liver stage.

Q&A Is the assumption of a 'known market' for malaria drugs becoming leaky and what effect will this have on the future work of PDPs? Much progress to date has been driven by the existence of a well-funded Global Fund, but the recent pledging conference demonstrated that future contribution levels cannot be guaranteed. Ensuring the sustainability of production and investment in R&D should also be considerations for innovative commodity supply and funding schemes.

Q&A Procurement and supply-chain management remain stubborn bottlenecks, so it is welcome that the PDP creativity that has re-energized R&D is now also being focused on implementation challenges.

Q&A Logistics capacity is lacking at country level and the logistics profession is not represented at conferences such as this. Public health may not be making adequate use of the logistics expertise that is available.

6.5 Vaccine development, innovations and investments

Jean Stéphenne, Chairman and President of GlaxoSmithKline (GSK) Biologicals, gave a progress report on the RTS,S malaria vaccine candidate that GSK is developing in partnership with the PATH Malaria Vaccine Initiative (MVI), BMGF, African researchers and others. Full enrolment of a Phase III trial in Africa has been reached (infants aged 5 to 17 months) and initial results are expected in the fourth quarter of 2011. This stage of development represents more than 25 years of research, including more than 10 years of clinical trials in SSA.

Vaccines have proved to be extremely successful and cost-effective public health interventions and create the potential for disease eradication. However, vaccine development requires significant time and investment, and a range of partnerships and access mechanisms are necessary to ensure that they get to market, including: PDPs, technology transfers, partnerships with key multilateral agencies such as the Global Alliance For Vaccines and Immunisation (GAVI) and the United Nations Children's Fund (UNICEF), and the use of innovative financing instruments such as the International Finance Facility for Immunisation (IFFIm), Advanced Market Commitments (AMC) and tiered pricing.

Tiered pricing has played an important role. Vaccines are priced according to a country's ability to pay; the poorest countries pay the lowest prices. The model ensures that all will benefit from ongoing R&D and that no country or child will be left behind.

6.6 A new, multidisciplinary R&D agenda for eradicating malaria

"There is a need for continuous R&D, even when we think we are winning the battle."

Pedro Alonso, Director of the Institute for Global Health at the University of Barcelona, reflected on the renewed call in 2007 for malaria eradication, the incorporation of the eradication goal into the GMAP in 2008, and the accompanying global consensus that eradication probably will not be achieved with currently available tools.

The Malaria Eradication Research Agenda (malERA) which followed was an extensive consultative exercise to delineate the research that would be required to identify the tools and strategies needed to bring about eradication. The papers that

resulted from the exercise were published in January 2011, and a number of malaria research consortia are now pursuing the development of tools that will interrupt transmission (which represents a paradigm shift in malaria research), sustain transmission interruption and address asymptomatic reservoirs.

To support the technical aspects of malaria elimination and eradication, there is an immediate need for more research focused on health systems. Countries will need guidance on when their systems and structures are ready for the elimination button to be pressed.

In addition, researchers need to explore the possibility that decreases in malaria prevalence may not only be due to increasing LLIN, RDT and ACT coverage. Underlying economic development, climate change or long-term climate cycles may also be influencing the situation.

Q&A Is there enough operational research being carried out? While the quantity of research may be sufficient, the quality is probably lacking, and findings are often not being translated into policy and practice.

7. Working Group One: Discussion and recommendations

Working Group moderator, Christian Loucq, Director of the PATH Malaria Vaccine Initiative, presented a number of key themes that had emerged from the Panel One presentations and discussions. Working Group participants homed in on several priority issues for further discussion. Finally, two overarching priorities were selected for inclusion in the Oslo Accord.

Aligning partners for maximum impact

The power of partnership was clearly demonstrated in the Panel One presentations and discussions. However, the need to link up the development of new drugs and low-cost delivery systems and the need to ensure that appropriate and low-cost diagnostics are available to leverage maximum value from investments made in bringing new drugs and other tools to market, were mentioned and suggest a need for more dialogue between PDPs.

All partnerships need to align their R&D and operational research agendas with the GMAP and malERA in order to ensure that the next generation of tools and delivery strategies become available as needed, fill high-priority gaps in the toolkit and address key implementation bottlenecks. Broader partnerships that link malaria research into the integrated child health research agenda should also be fostered. Research to programme must be a continuous cycle and this should be reflected in partnership structures.

Accelerating new tools into policy and practice

A need to develop a more strategic approach to the assessment of new products, which could involve ongoing dialogue between WHO and product manufacturers during product development as well as at the point when a product is ready for market, was identified.

New tools are on the horizon, including a vaccine that is expected to roll out in 2015, and key issues such as the improvement of the diagnosis and treatment of non-malarial febrile illness need to be addressed. Mechanisms to enable better integration of new tools into the existing malaria toolkit will be needed and policy makers need to be supported to develop policy that will ensure timely and effective implementation. The WHO GMP is in the process of setting up a new, overarching body to look at how malaria policy-setting and policy-revision processes can be made more timely, accountable and transparent.

PDPs should be encouraged to expand their model to address the problem of product delivery and management.

Building capacity and country leadership

A number of capacity gaps at the country level were identified including in: entomology, operational research and logistics. Building the capacity of endemic-country scientists to lead the research effort must be a priority as this is critical for long-term success.

Working Group One recommendations for the Oslo Accord

1. Support WHO in establishing normative guidelines and product-performance criteria to assess new vector control tools.
2. Align the global R&D agenda with the GMAP and malERA and expand research capacity in endemic countries.

8. Panel Two: Partnership and delivery strategies

Helga Fogstad, Senior Adviser at the Global Health and AIDS Department, Norwegian Agency for Development Cooperation (NORAD), opened the Panel Two session by noting that the reduction in the global malaria burden seen in recent years has been in large part due to the implementation of effective, evidence-driven delivery strategies supported by successful partnerships at the country and global levels.

The challenge now is to identify the key issues that have limited scale up in some contexts, to address these issues in order to fill universal access gaps, and to become even more innovative, efficient and intelligent in terms of how available tools are applied in order to maximize returns on investments and ensure that no country is left behind[9].

HIGHLIGHTS

- Community health workers – in the public and civil-society sectors – are increasing access to malaria control interventions in even the most remote areas
- RDT roll out is focusing the fight on where malaria really is and resulting in significant cost savings due to decreased ACT use
- A mixed model of net delivery will continue to be needed to ensure gains are sustained
- The era of the 'one-size-fits-all' response is coming to an end. Partnerships and delivery strategies need to become more context specific, requiring increased capacity for more localized operational research

[9] Find the Panel Two background paper at: http://www.rodekors.no/om-rode-kors/malaria-conference-2011/

8.1 Linking global and country level partnerships

"Engagement with country partnerships should be country-driven."

Marcy Erskine, Malaria Adviser at the International Federation of Red Cross and Red Crescent Societies (IFRC), presented the following lessons learned on innovative and effective delivery strategies based on her experience of membership of the Alliance for Malaria Prevention (AMP), a partnership focused on scaling up ownership and utilization of LLINs:

- Engagement with country partnerships should be country-driven;
- Regular communication can facilitate improved service delivery;
- Peer-to-peer sharing of experiences enhances learning;
- Broad membership allows multiple issues to be addressed;
- A focused mandate with a strategy for achieving specific goals encourages membership.

The AMP partnership has seen success in provision of technical support to countries, linking the global partnership to the existing partnership at country level, strengthening and reinforcing both. The linkage of the AMP with country-level partnerships is one reason for the success Africa has seen with the delivery of LLINs: between 2008 and 2010, 289 million nets were delivered to SSA, enough to meet 76% of the total need to reach the universal coverage targets.

Linking a global-level partnership such as the AMP to country partnerships in order to strengthen service delivery is possible when a focused, shared goal and strategy, with which to achieve objectives, exists. A regular feedback mechanism through which lessons learned by the country-level partnership are communicated and used to influence policy by the global partnership can allow for relatively rapid modifications and improvements to delivery systems.

The AMP grew out of an initial linkage with one of the most successful partnerships for health in the past decade, the Measles Initiative. The Measles Initiative has been highly successful in its efforts to reduce measles deaths through mass vaccination campaigns and strengthened routine immunization. It will be important to learn from and build on the experiences of the Measles Initiative, and ensure that, for the purpose of sustaining malaria gains, a mixed model of delivery is used to ensure high coverage through campaigns while routine and other continuous distribution systems are put in place and strengthened. There is also a need to ensure longer-term follow up in communities after large campaigns, although it is important to avoid repeating the same malaria messages continually but rather to build them into an integrated community health programme. Partners in the fight against malaria must continue to advocate for focused resources for this to happen.

Q&A Countries that have succeeded in controlling malaria have enjoyed the benefits of well-performing country partnerships. These country partnerships are able to mobilize international and local technical and financial support to address implementation barriers and emergencies. More needs to be done to strengthen country partnerships in a number of countries.

Q&A The success of the AMP initiative invites consideration as to whether its replication is desirable in other intervention areas. Lessons learned from the AMP may be applicable to other partnerships, but care must be taken to look at the lessons learned in context. For example, the AMP has dealt with relatively short-term interventions and not all lessons learned and best practices may be directly applicable to interventions with a longer timeframe.

Q&A There is a need to resolve a number of tensions around private versus civil society versus public sector delivery strategies including the tendency to adopt an either/or approach. The aim should be to develop a coherent strategy with an appropriate public–civil society–private sector mix. In some countries, many people use the private sector to access products, meaning that the private sector must be brought to the table, encouraged to adopt common standards, and receive the same incentives to distribute products as public and not-for-profit distributors.

8.2 Linking at the federal and state levels to complete scale-up and consolidate gains

Chioma Amajoh, Head of Integrated Vector Management in the National Malaria control Programme of the Federal Ministry of Health, Nigeria, endorsed the innovative power of partnership. Nigeria is one of Africa's largest, most diverse, most populous and decentralized countries, and partnerships between the Federal level and the States are essential. Four key lessons learned from the process of scaling up and moving towards consolidating gains in Nigeria are:

1. Planning for consolidation needs to begin at the same time as planning for scale up;
2. As States are independent and make decisions based on their own strengths and context as well as on guidance from the Federal level, a 'one size fits all' approach will not work;
3. Effective information systems are essential both to inform programming and to respond to donor reporting requirements;
4. Given the resource needs in Nigeria, demand-driven, community-based models need to be promoted.

To complete scale up and consolidate gains in Africa, there will be a need for ongoing commitments from donors, but also from countries where increases in the level of domestic

funding and increased transparency and accountability in the use of funds are needed.

As mentioned in earlier presentations, quantification, procurement and logistics remain bottlenecks in many countries and there is not enough operational research being done to identify solutions. Both health systems strengthening (HSS) and community systems strengthening (CSS) are needed along with an increased emphasis on behaviour change communication (BCC), first to identify why people are not using available products and using them correctly, and then to address these problems.

Countries need to balance equitable interventions with sustainability. The empowerment of communities to sustain interventions and to demand that health systems deliver near-zero malaria deaths by 2015 and attain the MDGs is crucial.

Q&A The importance of advanced planning is shown by experience in Nigeria where the implementation of routine bed-net distribution will lag behind campaigns which may necessitate further campaign activities to ensure that coverage is maintained.

Q&A Investment in malaria control is strengthening health systems, for example, by creating opportunities for health workers, and increasingly CHWs, to train on integrated approaches to childhood illness, by bolstering procurement and supply-chain management systems, and by strengthening health-information systems. It builds the capacities of Ministries of Health to scale up programmes and sustain progress.

Q&A The issue of HSS was addressed in a report undertaken by the World Bank for the 18th RBM Board meeting. The conclusion was that there is currently a shift in the public health paradigm to position HSS not as a competitive or an alternative agenda but as a synergistic agenda; neither health systems OR disease control nor health systems AND control, but health systems FOR disease control.

Q&A RBM, with the World Bank in the lead role, is undertaking HSS case studies in Ethiopia, Mali and Liberia. This is a joint study with other disease-control initiatives which aims to develop a comprehensive HSS approach to disease control and to avoid unnecessary fragmentation. At the same time, the Global Fund is conducting seven country case studies to examine the impact of its malaria control financing on the six health-system building blocks. This evaluation will allow the preparation of guidelines that will lead to the systematic inclusion of HSS activities in disease-specific funding applications.

8.3 Civil society and the public sector partnering to increase access to treatment

James Kisia, Deputy Secretary General, Kenya Red Cross (KRC), presented a pioneering public sector–civil society partnership that has extended access to appropriate and timely malaria treatment to some of the hardest to reach members of the Kenyan population.

The home management of malaria (HMM) project works with community-based volunteers to improve access to ACT. It was piloted in the Lamu and Malindi districts in Kenya's Coast Province where malaria is the priority health issue and access to health services is severely limited.

The project was initiated by KRC with the aim of ensuring political will and ownership and the possibility that the services introduced would be sustained by the Ministry of Health (MOH) in the longer term. The project approach was therefore aligned with Kenya Vision 2030, the Department of Malaria Control National Malaria Strategy (2010–2017) and the MOH Community Health Strategy, and other influential partners at country level such as the Kenya Medical Research Institute (KEMRI), the School of Public Health and the WHO country office were included from the start. Volunteers were selected using MOH community health worker (CHW) selection criteria, trained using the MOH's CHW modules, and jointly supervised by MOH community health extension workers (CHEW) and the KRC at the district level.

From this experience, two lessons learned stand out:

- Civil society must become more proactive in embedding new approaches to ensure that best practices are both well-documented and firmly on the radar of decision makers from the start; and
- This will involve national civil society organizations having the confidence to partner with all sectors, including government, academia and the private sector.

Results after one year of implementation include an overall reduction in malaria cases in the under fives and increased access to ACT, with an over 20% increase in the number of under-fives from 'most poor' households gaining access to treatment within 24 hours. The project also brought wider benefits including increases in the number of children completing their immunization schedule, the number of women attending antenatal care (ANC) and delivering at a facility, and a decreased workload at health facilities due to CHWs following up on treatment at home.

Q&A KRC, as all Red Cross/Red Crescent National Societies, plays an auxiliary role to the Government, and this auxiliary role is cascaded from the national level to the provincial to the district to the community level. At the community level, Red Cross volunteers are part of the community and a project such as this offers an opportunity for them to add to their skills and bring a new and beneficial service to their community. KRC currently has 70,000 volunteers in 63 branches across Kenya and is continually training new volunteers.

Q&A HMM implementation with RDT and ACT is to be scaled up in two provinces in Kenya aimed at ensuring access for 3.5 million people.

8.4 Delivering expanded access to diagnostic testing nationwide

"If we continue to consider every fever case as malaria, we will never reach our goals."

Pape Moussa Thior, Coordinator of the National Malaria Control Programme, Senegal, focused on Senegal's experience of rapidly scaling up RDTs, including to the country's most remote regions.

Before the scale up of RDTs, the national malaria programme was evaluated each year but morbidity and mortality showed little fluctuation even as LLINs and ACTs were introduced and despite community-based behaviour change communication interventions.

A turning point in Senegal came with the realization that it was necessary to stop thinking of every case of fever as malaria.

In 2006, a pilot project to test the feasibility of introducing RDTs into health centres and their acceptability to health workers was launched. On the basis of this pilot, RDTs were rolled out rapidly to health centres and health posts in 65 districts in 2007 and into hospitals and military garrisons in 2008. In 2009, RDTs were introduced into 94% of 'health huts[10] (1,611 of 1,703) across the country and 3,716 CHWs were trained.

In 2008–2009, HMM was piloted in 20 remote villages, and this approach was scaled up by the end of 2010 with the training of 1,000 community health providers (CHPs) to use RDT and ACT. Results to the end of 2010 show zero deaths due to malaria in the villages where CHPs work and over 3,700 referrals to health huts.

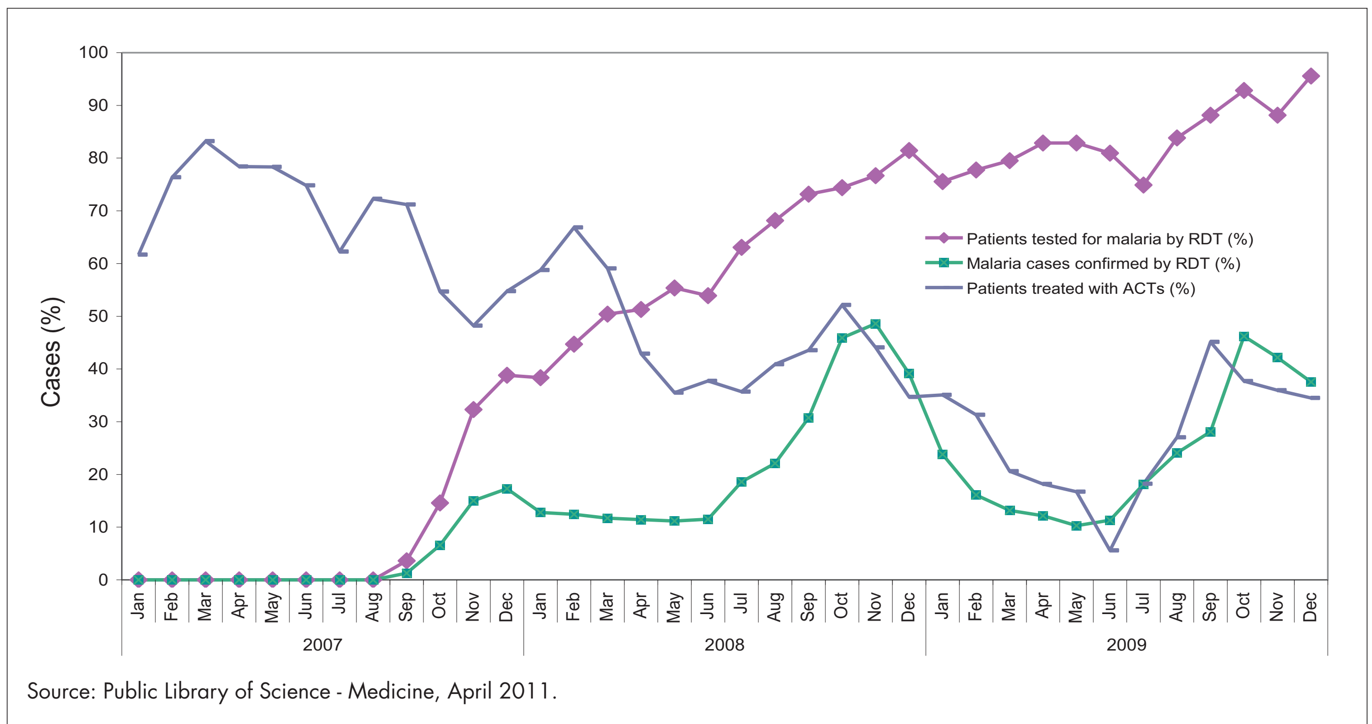
The training and supervision of health workers, CHWs and CHPs have been the main operational costs of the roll out and are vital as there was strong initial resistance to RDTs among health workers.

[10] Senegal has developed the network of health huts in order to extend care to those rural areas far from health posts. They offer a package of health services to rural populations.

The results are striking. From 2006 to 2009, malaria fell from the first to the fifth cause of infant death nationwide. Malaria morbidity in 2009 had fallen to 3.07% of all-case morbidity, down from 33.57% in 2006. Data showing the evolution of ACT use with the scale up of RDTs has just been published. With ACT use only on confirmation of malaria, Senegal avoids significant ACT wastage and makes considerable cost savings, while also reducing the risk of resistance. The results of RDT scale up have convinced Senegal that RDTs as well as LLINs and ACT must be rolled out countrywide.

Q&A In Senegal a basic, integrated package of services is to be delivered through the health huts, including malaria case management with RDTs and ACTs, diarrhoea case management, deworming, growth monitoring and promotion, vitamin A supplementation, management of malnutrition, and a series of health promotional services, including those for family planning and reproductive health. At present, pneumonia case management and basic neonatal/perinatal services are offered in about 30% of health huts and community surveillance for tuberculosis is offered in about half of health huts.

RDT scale up and the evolution of ACT consumption in Senegal



Source: Public Library of Science - Medicine, April 2011.

Q&A ACT over-prescription is probably a big problem in SSA. If RDTs are rolled out, malaria cases will be seen to fall, and it may not be 11 countries but perhaps 20–30 countries talking about meeting their malaria targets.

8.5 Ensuring good evidence supports delivery of effective services

Sunil Mehra, Executive Director of the Malaria Consortium, highlighted the large volume of survey research being carried out by the Consortium and others but questioned whether all of it is both relevant and important. His challenge to participants was to find ways to identify more precisely the research that will ensure more effective delivery of interventions to those who need them most.

Evidence needs to be valid and timely and needs to engage with alternative scenarios and perspectives and not only look at one way of doing things. The roles of the public and private sectors, civil society and communities are in flux and research should reflect such changes. Implementation is now on a large scale, so research and M&E efforts also need to look at interventions on this scale.

When it comes to the use of research, consensus-building around best practices and policy development needs to happen more locally and research and research findings must be contextualized. There is a growing need to understand diversity and come up with local solutions. Centres of excellence need to be shifted from the global to a more local level, and capacity building must take place to enable researchers in endemic countries to ensure that quality research is an integral component of national programmes.

Results need to be made available through publication and dissemination at the local, national, regional and global levels. As has already been mentioned, effective advocacy relies on the availability of credible, timely and relevant data.

Q&A A massive scale up of malaria control interventions has taken place, but this needs to accompanied by adequate evidence about what works to facilitate scale up and what the effects on health systems are. There is a danger that underlying health systems will be fragmented by rapid vertical scale up and will not be strong enough to cope. Research also needs to provide guidance on how malaria control scale up can be leveraged to AIDS, tuberculosis and mother and child health scale up.

Q&A With the recognition that LLINs vary greatly in their durability, it is essential that communities become more knowledgeable about how nets work and how to keep them in good condition. Qualitative research needs to identify what information people need in order to maintain their nets and to inform efforts to increase the longevity of nets. Communities need to know when to come forward and inform decision makers that their nets are no longer working.

8.6 African leadership and ownership

Joy Phumaphi, Executive Secretary of the African Leaders Malaria Alliance (ALMA), identified three issues that would drive the fight against malaria forward and promote the integration of malaria more comprehensively into a broader household approach:

- Country leadership;
- Linking malaria to the broader development agenda;
- A focus on the results and benefits that scale up of malaria prevention, diagnosis and treatment brings to endemic countries.

All partners – national and international, and including communities and individual households – must own the response, but countries must finally be in the driving seat. Technical and financial support will be necessary; to countries, but also to WHO which must be able to fulfil its essential normative role.

There is a need to link malaria to the broader development agenda and ALMA aims to facilitate this linkage. The importance of malaria control should be stated in national poverty reduction strategies (NPRS) and steps taken to ensure that it is incorporated into policy, strategy and action across sectors.

There should be a greater focus on the results and benefits that scale up of malaria prevention, diagnosis and treatment brings to endemic countries. ALMA hopes to facilitate the process through the development of a malaria 'scorecard' that all countries will be encouraged to complete as a way of promoting accountability and of enabling Heads of State and other partners to track progress and results. A key to making this initiative work will be the empowerment of communities to take ownership of the malaria response and to start to demand information on how the response is progressing

Q&A Integration with other health interventions is not straightforward and must be based on joint programming and planning ahead of time. Nigeria has now rolled out bed nets in mass campaigns in five of 21 states, and did not get the process right until the fifth state.

Q&A Integration at the community level can occur naturally and progressively given the overall responsibilities of community health structures and CHWs. Malaria programmes often provide the platform for integration and the strengthening of existing health structures.

Q&A There are perhaps a number of areas where the benefits of integration are well-established e.g. health management information systems, human resource planning and development and logistics planning, especially with regard to campaign activities.

Q&A There is a need for further integration across funding mechanisms as well as across interventions.

Q&A Countries and partnerships need to be strategic about what they aim to integrate, and base decisions on, for example, need, feasibility, available resources and expected impact.

Q&A No government or institution operating alone can achieve optimal malaria control. Cross-border initiatives and regional collaboration and partnership must come into play, and ALMA can play a convenor role.

Q&A In terms of country ownership, it makes sense to have local manufacturing of products such as LLINs and ACT, but this is a complex issue and not necessarily less costly. ALMA has organized a meeting for May 2011 to be hosted by the Kenyan Government which will focus on how to encourage local manufacturing.

9. Working Group Two: Discussion and recommendations

Working Group moderator, Matthew Lynch, Director of the Global Program on Malaria, at the Center for Communication Programs at the Johns Hopkins Bloomberg School of Public Health, presented a summary of key themes that had emerged from the Panel Two presentations and discussions. Working Group participants discussed implementation and partnership working extensively before selecting three overarching priorities for inclusion in the Oslo Accord.

Attaining universal coverage

Participants were energized by the examples of best practice presented and discussed in the Panel Two session, but mindful that major coverage gaps remain, especially with regard to diagnosis, treatment and surveillance. Efforts need to be increased in a number of the countries with the greatest malaria burdens.

Rapid diagnostic tests

The presentations on RDT roll out in Senegal and Zambia were significant. Simple, inexpensive and accurate RDTs exist, the malaria burden is decreasing rapidly and most fevers are not malaria. Therefore, to plan necessary and efficient interventions, and to avoid fuelling resistance to antimalarials, it will be necessary to confirm through RDT use where malaria is present. In addition, it should not be overlooked that people want to know what is wrong with them and they want appropriate treatment for both malaria and non-malarial illnesses.

Integration

Participants support moves towards the integration of malaria with a broader household-health approach and towards strengthening links with the UNSG's Global Strategy for Women's and Children's Health, both of which will more firmly link malaria to the attainment of MDGs 4 and 5.

A 'diagonal' approach to programming which is neither entirely vertical nor entirely horizontal, but which is tailored to the efficient and effective achievement of a given task in a given context, is perhaps most desirable. Such an approach will ensure that investments in malaria contribute optimally to HSS.

Efforts to integrate health system data, human resource development, delivery strategies and financing are vital.

Countries and partnerships need to be strategic about what they aim to integrate and base decisions on need, feasibility, available resources and expected impact, for example. Additional evidence to support decision making with regard to integration within health systems and with other sectors is required.

Remember the 'Three Ones'

Partnerships are mechanisms to achieve objectives, not ends in themselves. Whether convened at global, regional, country or community level, all partnerships need to be based on the principle of the Three Ones – one strategic plan (+ one operational plan), one coordinating mechanism, and one M&E plan – in order to optimize effectiveness, efficiency and inclusivity.

Partnering for results

Partnership plans are needed at the strategic and operational levels. They should have clear objectives that partners can buy into and that reflect global and/or national malaria priorities (which should be linked to the MDGs). Clear objectives also allow the selection and engagement of the 'right' partners to ensure efficient operation and promote an appreciation of the value of non-financial contributions especially at community level. Plans should include budgets to allow financial planning and contributions. All plans at each level need to be specific to the context and for a particular goal and partnership.

Coordinating mechanisms should be country-led and strategic and based on a realistic appreciation of the capabilities of each partner together with a willingness to share roles and responsibilities where capacity is low. Clear governance procedures and transparency in operations will help build accountability and smooth collaboration. There should be increased recognition of the contribution that the private sector, civil society, other Ministries and health programmes can play in malaria-related coordinating mechanisms.

M&E remains a critical gap, and needs particular attention in terms of ensuring evidence and operational research lead to action and policy revision. M&E plans need to have budgets to allow collaborative funding and to aid in setting priorities. The results of M&E need to be communicated to the partners and the wider world, especially to donors (including non-financial donors such as communities).

Harnessing the power of communities

A lack of documented and effective best practices for engaging communities in health action which can feasibly be scaled-up was identified. Funding for documentation and operational research should be given higher priority. Integration of malaria interventions with other health and social services at community level needs to be planned carefully, incorporating consideration of the specific context, available partners and resources, and the shared goals and objectives between partners and communities. Best practices need to be translated into national and global policy and included in strategic plans.

Working Group Two recommendations for the Oslo Accord

1. Achieve and sustain universal coverage with malaria prevention and control interventions as an integral part of the UNSG's Global Strategy for Women's and Children's Health.

2. Strengthen country-driven partnerships in support of national malaria control programmes, based on the Three Ones – one strategic plan, one coordinating mechanism, one M&E plan.

3. Scale up best practices to effectively engage local communities in demand creation, prevention, diagnostic testing, early fever management and surveillance.

10. Panel Three: Innovative and sustainable funding

Rifat Atun, Director of the Strategy, Performance and Evaluation Cluster at the Global Fund to Fight AIDS, Tuberculosis and Malaria, focused the Panel Three session[11] on how to mobilize additional funds and new sources of funding in order to ensure adequate, predictable and sustainable funding for the fight against malaria to 2015 and beyond.

External assistance for malaria has increased dramatically from less than US$200 million in 2004 to US$1.8 billion in 2010, although this is showing signs of stabilization given the current financial climate and increasing competition from other global issues such as climate change.

Innovative financing initiatives such as the Affordable Medicines Facility–malaria (AMFm) and UNITAID are now in operation, and domestic spending on malaria control in endemic countries appears to have risen in all regions. However, the total resources available today still fall short of estimated needs[12] and the sustainability of these resources is threatened. The challenge ahead is to maintain existing commitments at the global and national levels, to use available resources more efficiently and effectively, and to identify new donors and alternative sources of funding.

HIGHLIGHTS

- New, credible return in investment studies are needed to demonstrate malaria-specific returns and those related to the MDGs, HSS and broader socio-economic development

- Segmentation approaches and performance-based financing may be tools to make available funding work harder

- A range of potential innovative financing mechanisms can be identified for further exploration in the context of malaria

10.1 Scaling up action to fully fund the Global Malaria Action Plan

Alan Court, representing the Office of the UNSE and Chair of the RBM Resource Mobilization Sub-Committee (RMSC), outlined a six-point plan aimed at scaling up resources to fully implement GMAP taking into account the current financial constraints affecting traditional donors to the malaria effort.

1. **Become more efficient with available resources.** Whether by exerting downward pressure on the prices of goods with high volumes without compromising quality or by maximizing efficiencies in procurement and distribution, this will be the first exercise to undertake in a resource-constrained environment.

2. **Encourage new and credible ROI studies.** New data, focusing on the target of near-zero deaths from malaria by 2015, are needed to show specifically what an investment in preventing and controlling malaria will mean in terms of public health, MDG, HSS and economic impacts.

3. **Promote domestic funding.** Domestic funding, including out-of-pocket expenses, is the only truly predictable and sustainable source of funding and must be expanded on the back of ROI studies.

3. **Maintain the current donor base at least at current levels.** Gains must be maintained and there must be no allowance for a resurgence of the disease. Opportunities to seek synergies and convergence with other investment priorities in health must be embraced.

[11] Find the Panel Three background paper at: http://www.rodekors.no/om-rode-kors/malaria-conference-2011/

[12] The reference for data on costs is the *Global Malaria Action Plan*, which estimated that resource requirements would average US$5.1 billion annually from 2011 to 2020.

5. **Engage new partners.** China, Japan and, to a lesser extent, South Korea, continue to invest heavily in Africa mainly in infrastructure but also in social programmes including health. Their bilateral programmes should be brought under the GMAP umbrella as far as possible. An expansion of Brazil's south–south programme of development cooperation to cover malaria could also be explored.

UNITAID: A laboratory for innovative financing for development

Philippe Douste-Blazy, UN Under-Secretary-General and Chairman of UNITAID highlighted the need to find new funding instruments and revisit resource mobilization approaches based on solidarity in order to close the gap between ever present public health needs and a diminishing public assistance. There is a need to be: innovative in funding; innovative in the distribution of treatments; and innovative in spending.

UNITAID is an innovative funding mechanism. Launched in September 2006 at the UN General Assembly in New York with five founding countries, it introduced a simple idea – the mobilization of resources by increasing the price of a plane ticket by an increment so small that it goes unnoticed by passengers. To date, 15 countries have joined UNITAID, including Chile, South Korea, Jordan, Mali and Niger. Therefore, the mechanism is promoting south to south solidarity as well as north to south solidarity. The funds have been used in the fight against AIDS, tuberculosis and malaria. With UNICEF, US$110 million has been used to procure 20 million LLINs for eight African countries. Bulk purchases have stimulated the market, keeping all the existing producers in the market and leading to new companies becoming prequalified for net production.

UNITAID's solidarity levy on plane tickets constitutes the first step towards a global solidarity tax. Micro-taxes, which must be painless for the consumer and not create market distortions, could be extended to other activities benefiting from globalization e.g. mobile telephone use, financial transactions, tobacco use. This type of financing has the potential to establish a globalized solidarity with the taxes gathered being managed collectively at a supranational level. It would be a true political form of combat.

The AMFm demonstrates the potential for innovation in the distribution of treatments. A global subsidy at the top of the supply chain has been used to reduce the retail price of ACTs in the private, NGO and public sectors. During a first round of price negotiations with ACT manufacturers in 2010, it was possible to negotiate price reductions of up to 80% for private sector buyers. By the end of March 2011, the AMFm had received orders for 71 million ACT treatments. Three months after AMFm ACTs reached Kenya, the average retail price of an AMFm ACT was less than US$1.00 per adult treatment. In Ghana, private sector ACT retail prices dropped from US$9.00 to US$0.60–1.20 per adult treatment in parts of Accra within three months of the AMFm starting operations.

The UNITAID Medicines Patent Pool aims to provide for innovation in spending. A human being living in a developing country must wait 15 to 20 years before having access to the same drug as one gets in Paris, New York or Tokyo. This is truly shameful for humanity. UNITAID, therefore, proposed the creation of a non-profit structure in which patent owners agree to license their patents to enable generic producers to manufacture generics against HIV/AIDS exclusively for developing countries. Negotiations with three pharmaceutical companies are about to start. The world's poorest populations could finally have access to new and efficient drugs at affordable prices. It is a moral duty to work towards such a situation, and the support of investors in the pharmaceutical industry will be vital. What is about to be launched for AIDS, could soon also be done for malaria.

6. **Develop existing and new innovative financing vehicles and mechanisms.** GAVI has pioneered the use of the IFFIm and the AMC for the roll out of new vaccines. UNITAID has quickly converted an airline tax (or contributions by governments unwilling to increase taxes) into a highly-effective instrument for targeted, short-term commodity interventions. PDPs have brought new tools to the world. There is a need to identify other innovative approaches that can be applied at scale.

The order of the day is for each and every partner to do better with their available resources. Meanwhile, the RBM RMSC will commission ROI studies or request the World Bank to do so in order to maximize the independence and credibility of the data.

Q&A Cost-effectiveness should be a constant concern. An RDT costs $0.10, an ACT treatment $4.0, hence the huge advantage of treating only on the basis of a confirmed diagnosis. A longer durability of LLINs would make a large difference in terms of replacement costs. Is it worth producing LLINs at a higher cost, but with a longer lifetime, to achieve this?

Q&A Ashanti Gold in Ghana has provided an excellent example of ROI in the private sector. Following a comprehensive roll out of malaria prevention, diagnosis and treatment tools, ACT use dropped by 70% and annual days off work dropped from 6,910 to 304. The ROI are clear in both public health and business terms.

10.2 Why malaria is a funding flagship for health and poverty impact

"Malaria does not just affect children; entire households, entire nations can be thrown back into poverty. At the same time, malaria interventions are some of the best investments money can buy."

Nichola Cadge, Health Adviser at the United Kingdom (UK) Department for International Development (DFID), reported that the UK Government has protected the aid budget thanks to a cross-party consensus that the national budget will not be balanced on the backs of the World's poorest.

The UK will invest up to £500 million annually to 2014–2015 to fight malaria, where results can be delivered and value for money demonstrated. In building the case for investment, the following four issues had been central:

- The potential for economic returns;
- Malaria's contribution to the attainment of the MDGs and potential to yield additional health outcomes;
- The scope for innovation and partnership with the private sector;
- Malaria's track record of demonstrable results and the risk of a reversal of gains.

To sustain political commitment in donor countries, the malaria community needs to express ROI in economic terms to government authorities using 'real time' data. A considerable part of the ROI on scaling up malaria responses will derive from broader health benefits and HSS. These ROI must be captured, measured and quantified.

Increases in global funding for malaria have improved the commercial viability of malaria commodity markets, and entry by new suppliers has driven competition and product innovation that all purchasers potentially benefit from. Improving malaria results at a country level through new ways of doing things and the use of better products also has benefits internationally. The UK wants to build on this success.

10.3 Financing for malaria control and eradication

Carol Medlin, Senior Programme Officer on the Global Health and Advocacy Team at the Bill & Melinda Gates Foundation, drew attention to the need to improve value for money and make efficiency gains.

An analysis of the cost drivers for malaria control, elimination and eradication, shows that commodity costs represent 50–65% of total spend along the entire pathway to eradication. The analysis suggests that maximum efficiency gains will be made by placing an emphasis on:

- Reducing commodity costs, without compromising quality, and
- New product development that provides better, faster, cheaper tools.

BMGF are experimenting with a market segmentation approach that may help inform current and future investment decisions. To assess the major financing challenges faced by countries, BMGF look to segment according to overall malaria burden, the prevalence trend and a number technical issues.

A market-segmentation approach to mapping malaria-endemic countries

Segment	Number of countries	Average prevalence	Major financing challenges
High steady	42	0.240	Financing for continued scale up
High declining	10	0.080	Sustainable financing, especially domestic, for routine expenditures
Low	27	0.009	Financing for targeted interventions to reduce treatment costs; timing for withdrawing funding for costly interventions

Q&A Cost-efficiency can lessen as countries move towards elimination and require the same level of universal coverage for fewer cases. How can countries prioritize interventions? Will more effective tools sustain investment? Can pricing measures adjust to increased effectiveness?

10.4 Funding health through global, national and community partnerships

David Ferreira, Managing Director for Innovative Finance at the Global Alliance for Vaccines and Immunisation, focused on applications of the IFFIm. The IFFIm has:

- Powerful frontloading capacity and ensures visible and predictable long-term funding for programmes;
- Encouraged diversification of GAVI's multilateral donor base as new donors can be encouraged to commit by the possibility of spreading the fiscal load of a donation over time.

The IFFIm works by taking long-term pledges by governments to contribute money to GAVI and bringing them forward in time so that GAVI can borrow money on the bond market. To date, government contributions of US$576 million to the IFFIm have enabled GAVI to borrow a total of US$3.4 billion on world capital markets at extremely favourable interest rates[13]. It has allowed countries to roll out the pentavalent vaccine faster than would have been possible without the immediate access to funding that the IFFIm provides and to reap the advantages of a rapid roll out in terms of bulk buying and a rapid attainment of herd immunity.

The IFFMm is currently being managed down to a smaller component of the GAVI funding portfolio, but remains in place if another funding spike becomes necessary e.g. if a malaria vaccine becomes available.

Q&A The GAVI IFFIm creates a 'pull' mechanism that motivates innovation as product developers know that money is available for future procurement. In comparison, the MMV PDP model presented during the Panel One session is a 'push' mechanism. A combination of push and pull incentives would be good for malaria.

Q&A AMCs are another pull mechanism used by GAVI to stimulate the development and manufacture of vaccines for developing countries. Donors commit money to guarantee the price of vaccines once they have been developed, thus creating the potential for a viable future market. As part of the AMC, participating companies make binding commitments to supply the vaccines at lower and sustainable prices after the donor funds made available for the initial fixed price are used up.

Q&A If donor funding results in a big drop in malaria cases, this will result in significant cost savings over time for endemic countries. Would it be possible to create a malaria bond paid back through such cost savings? Would countries like Rwanda and Senegal, for example, pay into such a malaria bond? Linking the bond market to money made available when results are achieved would be a new frontier.

Q&A Debt to Health is an established mechanism that is already testing the principle of linking debt relief to achieving health-related results.

Q&A Rwanda is already facing the problem of how to manage savings. If a country saves US$1 million on a grant, the donor wants the money back with the implication that planning was poor; a Ministry of Health might also be penalized in future budget rounds according to the maxim of 'use it or lose it'. The private sector could provide support to countries on the management of cost savings.

10.5 Private sector roles and engagement

Steven Phillips, Medical Director, Global Issues and Projects at ExxonMobil, challenged the malaria community to make better use of private sector skill sets.

The private sector cash contribution to malaria financing represents only around 1.1% of total development assistance to malaria, and ExxonMobil contributed over half of this. Clearly, corporate contributions to malaria do not represent a significant market share; even considerable increases will not deliver stand-alone impact.

However, the malaria community can call on the private sector to contribute certain areas of specific expertise that could influence how the other 99% of malaria funding is raised and spent. Three areas where strengthened partnership with the private sector might be advantageous are:

- Increasing the understanding and use of innovative financing mechanisms;
- Development of market-share growth strategies;
- Support to G20-focused advocacy and awareness strategies.

Alongside other innovative financing mechanisms and instruments already mentioned, conditional cash transfers (CCTs) are a particularly 'private sector friendly' concept as they empower end users and essentially turn them into consumers resulting in individual purchasing decisions by a dignified customer. Supply chain management is talked about as a technical, logistics and information-systems problem. It is all of this, but it is also about incentives. CCTs would test this and might unblock a number of bottlenecks.

In a competitive funding environment, setting out a strong business case for how malaria stacks up against other health issues such as cholera, immunization and HIV would be both legitimate and necessary.

G20 governments directly or indirectly provide 80% of malaria development assistance and are increasingly focused on results, value, country ownership and sustainability. Private sector grassroots advocacy strategies can be incorporated into the existing advocacy efforts of the public and not-for-profit sectors.

[13] At 1.15%, the annual rate is cheaper than the weighted average borrowing cost of the IFFIm's various donors.

10.6 How health systems and domestic investments sustain the gains achieved

"97% of Rwandans now have health insurance cover and this motivates them to demand high-quality services."

Rwanda's fight against malaria

Since 2005, the Rwandan Government, with the support of partners, has implemented an integrated strategy including malaria prevention using LLINs, treatment with ACT and health systems strengthening. This has resulted in dramatic reductions in the malaria burden according to a recent external malaria performance review for the period 2005–2010.

- 70% decline in malaria incidence
- 60% decline in outpatient cases
- 54% decline in malaria mortality
- 66% decline in the test positivity rate between 2001 and 2010

The Minister of Health of Rwanda, Richard Sezibera, assured participants that Rwanda strongly believes that malaria can be eliminated in Africa if governments show the willingness to do so. The Rwandan government has committed to this fight, and three pillars have been put in place to roll back malaria.

- An 18% increase in government spending;
- Broad coverage of the population with health insurance;
- Performance-based financing.

Ninety-seven per cent of Rwandans are now covered by health insurance, with 86% taking out community health insurance[14]. As they contribute, Rwandans are becoming increasingly demanding in terms of the range and quality of services they expect to receive.

Malaria control has been decentralized. Performance-based financing (PBF), introduced with the help of the Norwegian Government, has increased both the quantity of services provided (up by 7.3%) and their quality (up by 15%). Transfer of money to providers takes place only on independent verification that a number of quantitative and qualitative performance indicators have been met. This applies to all health facilities and providers paid through the government, including 41 district hospitals and 420 CHW cooperatives.

Even as Rwanda celebrates these successes, the understanding that gains in malaria control are fragile is ever present, and the failure to replace bed nets in 2008 led to a nationwide upsurge in malaria cases in 2009. In Rwanda, it is recognized that there is no *entente cordiale* with malaria: "We will roll it back or it will roll us back".

[14] Insurance currently costs US$2 per year per individual. It will rise in the future to US$5 per year per individual on a regular income and US$10 per year for wealthier members of the population.

11. Working Group Three: Discussion and recommendations

Working Group moderator, Maryse Pierre-Louis, Program Leader of the Malaria Booster Program at the World Bank, presented a summary of key themes that had emerged from the Panel Three presentations and discussions. In a lively session, Working Group participants identified a range of actions to take forward and selected three priorities for inclusion in the Oslo Accord.

Demonstrating value for money

Making existing money work harder through efficiency savings, without compromising quality, is the starting point for 2011.

Building a solid case for investment to 2015 and beyond

Up-to-date, credible studies on the expected returns on malaria investments are essential. ROI studies and advocacy should highlight the 'value proposition' of investments in malaria in terms of the attainment of MDGs 4, 5 and 6, socio-economic development and poverty alleviation.

Positive approaches such as the '485 lives saved today' message developed by Johns Hopkins that demonstrate specific, real-time outcomes are to be preferred and a narrow focus on funding gaps should be avoided. The need to protect and consolidate gains and the risks associated with decreased investment should be communicated clearly.

The message and language of ROI advocacy must be tailored to the target audience (e.g. deaths versus disability adjusted life years (DALYs)). A segmentation approach could be used to increase understanding of the ROI for groups of countries at different stages in the fight, and providing clear timelines for investments may also be a key to attracting new investors.

Selected country-level analyses can be developed by the end of 2011 to influence domestic spending, and the global-level investment case, for use with the international donor community, is needed as soon as possible.

Engaging sources of additional and new funding

To 2015, the focus must be on increasing traditional external aid and increasing contributions from non-traditional donors such as Japan, South Korea, and from the emerging economies of Brazil, Russia, India, China and South Africa. Endemic countries need to prioritise malaria in requests to donors.

Synergies and convergence with other investment priorities in health, in particular with the UNSG's Global Strategy for Women's and Children's Health, should be identified. Opportunities for broader, multi-sector collaborations should be sought out e.g. with water.

Innovative financing mechanisms such as a malaria bond will be explored further. Potential contributions to malaria from Debt to Health and the proposed international financial transactions tax should be tied down. The incorporation of malaria control efforts into innovative poverty reduction strategies, such as conditional cash transfers, can be discussed. Personal and corporate contributions can be promoted e.g. through the United Nations Foundation and NothingButNets.

Increased domestic financing, including through increased government contributions in line with the Abuja Declaration, the expansion of health insurance schemes, and maximizing out-of-pocket expenditures, must be promoted as the only truly predictable and sustainable source of funding.

Targeting investments

The era of the 'one-size-fits-all' approach to malaria control is coming to an end as malaria transmission drops and new interventions are introduced. Moving to market segmentation and to tailoring interventions more specifically to country context, particularly in low transmission areas, were identified as ways forward. Country-by-country and regional roadmaps marking out the steps needed to reach near-zero deaths and eventually eradication could usefully be developed. The Clinton Foundation Health Access Initiative–malaria (CHAI) and ALMA, in collaboration with country governments, are studying four countries (Senegal, Rwanda, Ethiopia and Tanzania) to build the case for investment and to identify tailored and innovative solutions for each context.

Investing in the future

Participants recognized the importance of past R&D to current success and the need, therefore, to continue investments in R&D alongside investments in the scale up of existing interventions.

Rewarding efficiency and good governance

Donors should reward countries for efficiency and good governance by allowing more flexibility in the use of funds.

Working Group Three recommendations for the Oslo Accord

1. Demonstrate the return on investment of malaria control to endemic and donor country governments and to non-traditional partners in support of the need to fund and implement the GMAP.

2. Maintain current donors, gain new donors and promote innovative financing mechanisms.

3. Promote effective interaction and integration of malaria control with other disease control programmes within strengthened health systems to achieve efficiency gains and to develop programme management capacity.

12. Concluding remarks

The Minister of Health of the Republic of Senegal, Modou Diagne Fada, and Robert Newman, Director of the WHO Global Malaria Programme, rallied participants with some concluding remarks.

The Honourable Minister described the war against malaria as a war against poverty. Malaria affects mainly developing countries and kills mainly young people and pregnant women. It leaves loss and despair behind it. Yet many lives have been saved in endemic countries by malaria control interventions and the fight against malaria is also leading more broadly to progress across the health-related MDGs and to the strengthening of health systems.

However, just as significant progress has been made, a financial gap is threatening to take us back to the dark ages of malaria. Existing commitments at global and national level must be maintained, new donors must be identified, and alternative sources of funding must be secured, in order to protect, consolidate and expand these gains and leave no room for a resurgence of the disease.

Great determination is now necessary, along with improved accountability, good governance and transparent reporting, efficient use of available resources and the mobilization of new resources, in order to reach and sustain universal access. Another, massive international push is needed, focused this time on access to effective diagnosis and treatment. Gains are fragile and, from this conference, there is a need to launch a call to all countries and donors to prioritize funding to the cause of getting rid of malaria definitively.

Robert Newman highlighted that the Oslo Malaria Conference presentations and discussions confirm that malaria is a preventable and treatable disease and that near-zero deaths from malaria by 2015 is the right goal to aspire to. However, near-zero deaths will not be reached with a business-as-usual approach and participants therefore identified a number of specific recommendations for action to pave the way to meeting the 2015 target, and agreed that these be widely disseminated as the Oslo Accord.

Innovation on the part of the malaria community is resulting in new, more effective, cheaper malaria control tools. Global initiatives providing necessary policy, strategy, coordination and financing are ensuring that these tools reach populations at risk. Partnership has been critical to past success and will be critical to continued success, and RBM continues to be at the forefront of joint malaria control efforts. Innovation and partnership, together, have revolutionized how malaria interventions are developed, financed and delivered.

Annually, a total of approximately US$6 billion is needed to achieve malaria eradication. This is not too much to ask for to save an additional 780,000 lives a year. In broader terms, investors in the fight against malaria will also see returns on their investments related to poverty alleviation and socio-economic development, key building blocks for national and global security. Their investment in malaria is a proven, cost-effective contribution to the achievement of the aims of the UNSG's Global Strategy for Women's and Children's Health and the attainment of MDGs 4 and 5 on mother and child health as well as MDG 6 in malaria endemic countries. The biggest threat to continued success is insufficient, unstable and unpredictable funding. Innovative solutions are needed, but rich nations can do more. We can live more equitably.

Endemic countries are at the centre of the fight, and building national capacity in key areas such as entomology, operational research, R&D and programme management will be critical to ensure that countries are firmly in the driving seat. Domestic political and financial commitment is essential for sustainability. Regional political will is an important driver, and the establishment of ALMA is a significant step forward.

Communities are at the centre of sustainability. Near-zero deaths will not be reached without an upsurge in community ownership over malaria as a public-health problem and an expansion of community case management. Red Cross/Red Crescent and other community-based organizations have a key role to play. If communities can know the true burden of malaria and can see the fruits of prevention and control efforts, then the will to eliminate and ultimately eradicate malaria will never fade.

The Oslo Conference has marked the opening of a new front – to 2015 and beyond – of the fight against malaria. If the malaria community stays together and stays focused, the shared goal of a world free from malaria can be reached.

Annex 1: Acronyms and abbreviations

ACT	artemisinin-based combination therapy
AIDS	acquired immunodeficiency syndrome
ALMA	African Leaders Against Malaria
AMC	advanced market commitment
AMFm	Affordable Medicines Facility – Malaria
AMP	Alliance for Malaria Prevention
ANC	antenatal care
AU	African Union
BCC	behaviour change communication
BMGF	Bill & Melinda Gates Foundation
CCM	Country Coordinating Mechanism
CCM	community case management
CCT	conditional cash transfers
CHEW	community health extension worker
CHP	community health provider
CHW	community health worker
CSS	community systems strengthening
DALY	disability-adjusted life year
DFID	Department for International Development (UK)
DOMC	Department of Malaria Control
DNDi	Drugs for Neglected Diseases Initiative
EPI	Expanded Programme on Immunization
FIND	Foundation for Innovative New Diagnostics
GAVI	Global Alliance for Vaccines and Immunisation
GHI	Global Health Initiative (USA)
Global Fund	Global Fund To Fight AIDS, Tuberculosis and Malaria
GMAP	Global Malaria Action Plan
GMP	Global Malaria Programme (WHO)
GNP	gross national product
GPARC	Global Plan for Artemisinin Resistance Containment
GSK	GlaxoSmithKline
Hib	*Haemophilus influenzae B* vaccine
HMM	home management of malaria
HSS	health system strengthening
IFFIm	International Finance Facility for Immunisation
IFRC	International Federation of Red Cross and Red Crescent Societies
IPTp	intermittent preventive treatment for malaria in pregnancy
IRS	indoor residual spraying
ITN	insecticide treated nets
IVCC	Innovative Vector Control Consortium
KEMRI	Kenya Medical Research Institute
KRC	Kenya Red Cross
LLIN	long-lasting insecticide-treated net
M&E	monitoring and evaluation
MACEPA	Malaria Control and Evaluation Partnership in Africa (PATH)
MalERA	Malaria Eradication Research Agenda
MDG	Millennium Development Goal
MMR	measles, mumps and rubella vaccine
MMV	Medicines for Malaria Venture
MNCH	mother, neonatal and child health
MPR	Malaria Programme Review
MVI	Malaria Vaccine Initiative (PATH)
NGO	nongovernmental organization
NIH	National Institutes of Health (USA)
NMCP	National Malaria Control Programme
NORAD	Norwegian Agency for Development Cooperation
NPRS	National Poverty Reduction Strategy
NRC	Norwegian Red Cross
OECD	Organisation for European Cooperation and Development
P&I	Progress & Impact Series (RBM)
PDP	product development partnership
PMI	President's Malaria Initiative (USA)
PPP	Public — private partnership
QDDR	Quadrennial Diplomacy and Development Review
R&D	research and development
RBM	Roll Back Malaria Partnership
RDT	rapid diagnostic test
RMSC	Resource Mobilization Sub-Committee
ROI	return on investment
SSA	sub-Saharan Africa
SMS	short message service
SUFI	Scale Up For Impact
TDR	Special Programme for Research and Training in Tropical Diseases
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNITAID	United Nations International Drug Purchasing Facility
USAID	United States Agency for International Development
UNSE	Office of the UN Secretary General's Special Envoy for Malaria
UNSG	United Nations Secretary General
USG	United States Government
VCWG	Vector Control Working Group
WHA	World Health Assembly
WHO	World Health Organization
WHOPES	WHO Pesticide Evaluation Scheme

Annex 2: The Oslo Malaria Conference agenda

Tuesday 12th April

Overall moderator: Tore Godal, Special Adviser on Global Health to the Prime Minister of Norway, Norwegian Ministry of Foreign Affairs

08:30 Coffee and registration

09:30 **Arrival of H.M. Queen Sonja of Norway**

09:30 **Opening of the Oslo Malaria Conference**
Sven Mollekleiv, President, Norwegian Red Cross

09:40 **Introductory Remarks**
Jonas Gahr Støre, Norwegian Minister of Foreign Affairs

10:00 **Launch of 2011 Red Cross Malaria Advocacy Report**
Sven Mollekleiv, President, Norwegian Red Cross

10:15 **Departure of H.M. Queen Sonja of Norway**

10:20 **Current progress and challenges in the fight against malaria**
Awa Marie Coll-Seck, Executive Director, Roll Back Malaria Partnership

10:35 **Questions and answers**

10:50 **Panel 1: Existing tools, new research and innovation**
Moderator: Robert D. Newman, Director, Global Malaria Programme
World Health Organization (WHO)
Panelists:

- *New generation of vector control - challenges in distribution and coverage*
  Mikkel Vestergaard, Chief Executive Officer, Vestergaard Frandsen SA
- *Breaking down barriers to innovation in vector control product development*
  Tom McLean, Chief Operating Officer, Innovative Vector Control Consortium
- *New developments and direction in diagnosis*
  David Bell, Head of Malaria, Foundation for Innovative New Diagnostics
- *Discovery and development of new effective and affordable anti malaria drugs*
  David Reddy, Chief Executive Officer, Medicines for Malaria Venture
- *Vaccine development, innovations and investments*
  Jean Stéphenne, Chairman and President of GlaxoSmithKline Biologicals
- *A new multidisciplinary research and development agenda for eradicating malaria*
  Pedro L. Alonso, Director, Institute for Global Health of Barcelona (ISGlobal) - CRESIB - University of Barcelona

11:50 **Panel discussion**

12:40 **Lunch**

13:40 **Panel 2: Partnership and innovation in efficient delivery strategies**
Moderator: Helga Fogstad, Senior Adviser, Global Health and AIDS Department, NORAD
Panelists:

- *Global and country level partnership*
  Marcy Erskine, Malaria Adviser, International Federation of Red Cross and Red Crescent Societies (IFRC)
- *Completing scale up and moving towards consolidating gains*
  Chioma Amajoh, Head of Integrated Vector Management, National Malaria control Programme, Federal Ministry of Health, Nigeria
- *Home management of malaria and community health strategy*
  James Kisia, Deputy Secretary General, Kenya Red Cross
- *Expanded access to diagnostic testing nationwide*
  Pape Moussa Thior, Coordinator, National Malaria Control Programme, Senegal
- *Ensuring good evidence supports delivery of effective services*
  Sunil Mehra, Executive Director, Malaria Consortium
- *African leadership and ownership*
  Joy Phumaphi, Executive Secretary, African Leaders Malaria Alliance (ALMA)

14:40 **Panel discussion**

15:30 Coffee break

15:45 Video – interviews from the field

15:50 **Panel 3: Innovative and sustainable funding**
Moderator: Rifat Atun, Director, Strategy, Performance and Evaluation Cluster, Global Fund to Fight AIDS, TB and Malaria
Panelists:

- *Scaling* up action to fully fund the Global Malaria Action Plan
  Alan Court, Office of UNSG Special Envoy for Malaria, Chair of the RBM Resource Mobilization Committee
- *Why malaria is a funding flagship for health and poverty impact*
  Nichola Cadge, Health Adviser, UK Department of International Development
- *Upstream investment in research and development*
  Carol Medlin, Senior Program Officer, Global Health and Advocacy Team, Bill and Melinda Gates Foundation
- *Funding health interventions through global, national and community partnerships*
  David Ferreira, Managing Director for Innovative Finance, GAVI
- *Private sector role and engagement*
  Steven Phillips, Medical Director, Global Issues and Projects, ExxonMobil
- *How health systems and domestic investments sustain the gains achieved*
  H.E Richard Sezibera , Minister of Health, Rwanda

16:50 **Panel discussion**

17:40 **Closing remarks of the day**
H.E. Modou Diagne Fada, Minister of Health, Senegal

20:00 **Conference dinner for international and invited guests**
Key note speech: "Achieving the MDGs: the critical role of Malaria"
Philippe Douste-Blazy, UN Under Secretary General, Chairman UNITAID

Wednesday 13th April
Overall moderator: Joy Phumaphi, Executive Secretary, African Leaders Malaria Alliance

08:30 Coffee and registration

09:00 **Welcome**
Sven Mollekleiv, President, Norwegian Red Cross

09:10 **Working in partnership - lessons learned and best practices**
Timothy Ziemer, Coordinator, President's Malaria Initiative

09:25 **On the way towards ending malaria deaths by 2015**
Working Group 1: Existing tools, new research and innovation
Moderator: Christian Loucq, Director, PATH Malaria Vaccine Initiative (MVI)
Working Group 2: Innovative and effective partnerships and delivery strategies
Moderator: Matthew Lynch, Director, Global Program on Malaria, Center for Communication Programs, Johns Hopkins Bloomberg School of Public Health
Working Group 3: Innovative and sustainable funding
Moderator: Maryse Pierre-Louis, Program Leader, Malaria Booster Program, World Bank

11:00 **Plenary session – Recommendations from working groups**

12:30 **Conclusion and overall remarks**
Robert D. Newman, Director, Global Malaria Programme, World Health Organization

13:00 End of conference

The Roll Back Malaria Partnership (RBM) is the global initiative for coordinated action against malaria. RBM was launched in 1998 by the World Health Organization (WHO), the United Nations Children's Fund (UNICEF), the United Nations Development Programme (UNDP) and the World Bank, and brings together over 500 partners from endemic country governments, multilateral development partners, donor governments, foundations, nongovernmental and community-based organizations, private sector companies, and research and academic institutions, thereby providing a unique platform for coordinated and harmonized action against malaria by all sectors of society, with a focus on areas where consensus and combined effort will provide added value to the quality and impact of the interventions. Partners work together at global, regional and country levels to scale up national malaria control efforts, coordinating their activities to avoid duplication and fragmentation and to ensure optimal use of resources. RBM plays a key role in advocacy to keep malaria high on the political and development agendas and in mobilizing resources for funding the Global Malaria Action Plan.

The Global Malaria Action Plan (GMAP) constitutes the first global framework and blueprint to implement coordinated action against malaria. Developed by the RBM Partnership and endorsed at the September 2008 Millennium Development Goals Malaria Summit in New York, the GMAP outlines goals, strategies, costs, and timelines towards malaria control milestones in 2010, 2015 and beyond. The 2015 targets of GMAP are to reduce malaria mortality to near-zero and to reduce malaria cases by 75% from 2000 levels, by achieving universal coverage of all populations at risk with locally-appropriate prevention and case management interventions. GMAP outlines a three-part strategy focused on: (1) scaling-up and sustaining core malaria control interventions, including through strengthening health systems; (2) eliminating malaria over time country by country and region by region; and (3) researching new tools and approaches to support global control and elimination efforts.

The Global Strategy for Women's and Children's Health calls for a bold, coordinated effort to save the lives of millions of women and children. Launched in September 2010 by the United Nations Secretary General, the Strategy identifies the key areas where action is required to enhance financing, strengthen policy and improve service delivery, as well as critical interventions that can and do improve health and save lives. These include support for country-led health plans; integrated delivery of health services and life-saving interventions; stronger health systems, with sufficient skilled health workers at their core; innovative approaches to financing, product development and the efficient delivery of health services; and improved monitoring and evaluation to ensure the accountability of all actors for results. International organizations including UNICEF, the United Nations Population Fund (UNFPA), the Joint United Nations Programme on HIV/AIDS (UNAIDS), WHO and the World Bank, as well as the Global Fund, the Gates Foundation and GAVI, are collaborating to mobilize ongoing political and operational support, to fight for universal access to care for all women and children, to ensure women and girls have a fair and equal opportunity to health and life, and to ensure integration of services and efforts across a broad range of health needs.

Notes

Acknowledgements

The preparation of the Oslo Malaria Conference was overseen by the members of the Conference Steering Committee: Awa Marie Coll-Seck, Roll Back Malaria Partnership Executive Director (Co-chair); Tore Godal, Special Adviser on Global Health to the Prime Minister of Norway (Co-chair); Børge Brende, Norwegian Red Cross Secretary General; Ray Chambers, United Nations Secretary General's Special Envoy for Malaria; Robert Newman, World Health Organization, Director of the Global Malaria Programme; Rifat Atun, Global Fund to Fight Aids, Tuberculosis and Malaria, Director, Strategy, Performance and Evaluation Cluster; and Regina Rabinovich, Bill & Melinda Gates Foundation, Director, Infectious Diseases.

The Organisational Committee for the Oslo Malaria Conference was comprised of: Lars-Andre Skari, Norwegian Red Cross (Chair); Derrick Deane and Michel Smitall, Roll Back Malaria Partnership Secretariat; Jason Peat, International Federation of Red Cross and Red Crescent Societies; Suprotik Basu, Office of the United Nations Secretary General's Special Envoy for Malaria; and Ingrid Kristiansen, Marianne Monclair, Øistein Mjærum, Irene Løken and Ann Christin Håland, Norwegian Red Cross.

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Further conference information and background papers can be found at:
www.rodekors.no/om-rode-kors/malaria-conference-2011/
http://www.rollbackmalaria.org/globaladvocacy/pr2011-04-12.html

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