



a decade in communicable disease control and child health

Malaria Consortium at 10

Moving Towards Elimination

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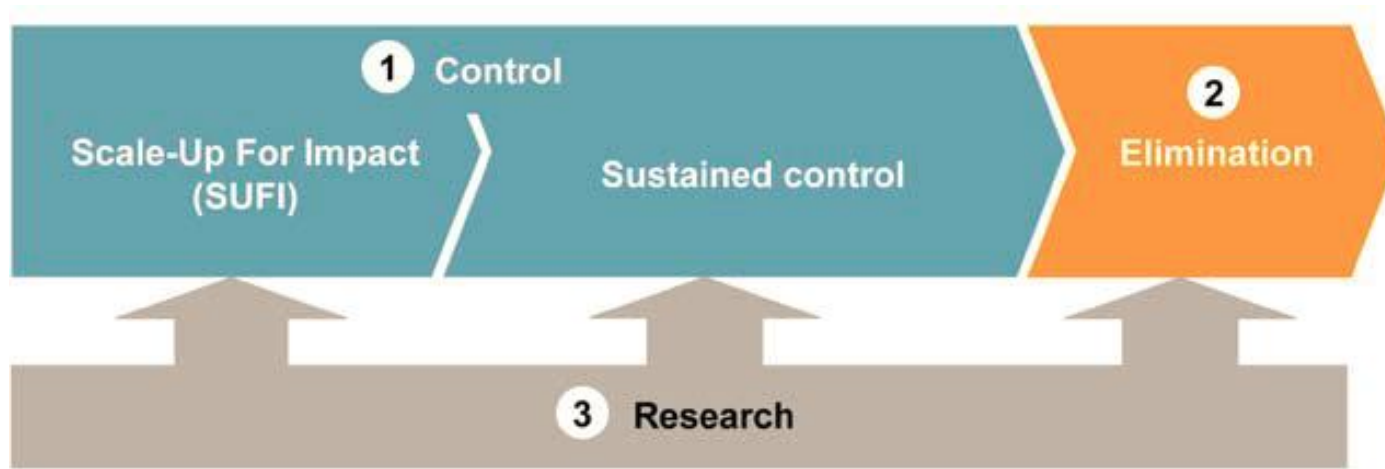
RESEARCH

This decade saw a historical shift in ambitions to fight malaria

- 2004
 - Global focus was on scaling up, achieving coverage, mobilising resources
 - Limited reference to elimination in the Roll Back Malaria Global Strategic Plan for 2005-2015
- 2007
 - WHO released new malaria elimination manual
 - Bill and Melinda Gates called for malaria eradication
 - Focus shifted
 - Reports of artemisinin resistance in Southeast Asia and fears of pyrethroid resistance in Africa make the need for elimination more urgent
- 2014
 - Many countries, even those with high burden, now introduce elimination into their strategic plans

2008 – Roll Back Malaria Global Malaria Action Plan

GMAP called for elimination in 8-10 countries by 2015



Without progressive aspirations the chances of maintaining the great political and financial commitments of recent years would be small

Malaria Consortium's priorities for elimination

1. To push for *Plasmodium falciparum* elimination as quickly as possible in areas of artemisinin resistance
2. To establish much better surveillance systems and capacity to provide the detailed timely information needed for elimination – focus on active response
3. To advocate for continued high quality, highly intense efforts against malaria even when the burden declines
4. To apply lessons from malaria elimination to other neglected tropical diseases and from Asia to Africa

Our research focus

- ▶ Implementation research: embedding research into operational programmes
- ▶ *Improving delivery* of existing or potential interventions and tools
- ▶ Rationale:
 - Many efficacious tools and strategies fail to achieve even half their potential because they are rarely used optimally
 - This means we never know if the tool or strategy was flawed or if it was not given a chance to succeed
- ▶ Testing new systems, strategies and innovative tools, especially for surveillance and response in Asia
- ▶ Engaging implementers from the outset

Improving surveillance and using mHealth for elimination

Through efforts to develop better surveillance using innovative tools in Cambodia, we learnt some useful lessons:

1. If a system does not work manually, technology unlikely to help
2. Use existing sources of data as much as possible, and add only to data collection work of health workers if absolutely necessary
3. Keep it simple; smaller systems may be better than a single big system
4. Decentralise the surveillance system to a level where decisions are made
5. Monitoring and evaluation and sufficient refresher training are needed
6. Try to make the mhealth systems free for the users by working with the telecoms companies

CAMBODIA MALARIA BULLETIN

DECEMBER 2013 BULLETIN, DATA TO 4TH QUARTER, CNM, CAMBODIA

Estimated coverage with LLIN or retreated mosquito net	Target ¹	Mobile ²
No. of persons at risk of malaria	3,342,007	448,593
No. of LLIN distributed YTD	2,244	4,568
No. of LLIHN distributed YTD	1,607	467
No. of conventional nets distributed and retreated YTD	35,137	300
No. of long lasting nets distributed in last 3 years	2,954,224	5,035
Estimated coverage with LLIN / treated net (1 net / 1 pers)	89%	1%

¹ Pop of target villages

² Mobile pop (est from census)

Indicators	HIS			VMW			Total		
	2012	2013	Change	2012	2013	Change	2012	2013	Change
Malaria cases	45,553	24,135	-47%	28,613	20,068	-29%	74,166	44,203	-40%
Malaria Incidence ³	3.10	1.60	-48%	24.31	14.40	-41%	5.04	2.94	-42%
Malaria deaths	46	12	-74%	0	0	0%	46	12	-74%
Mortality rate ⁴	0.31	0.08	-75%	0.00	0.00	0%	0.31	0.08	-75%

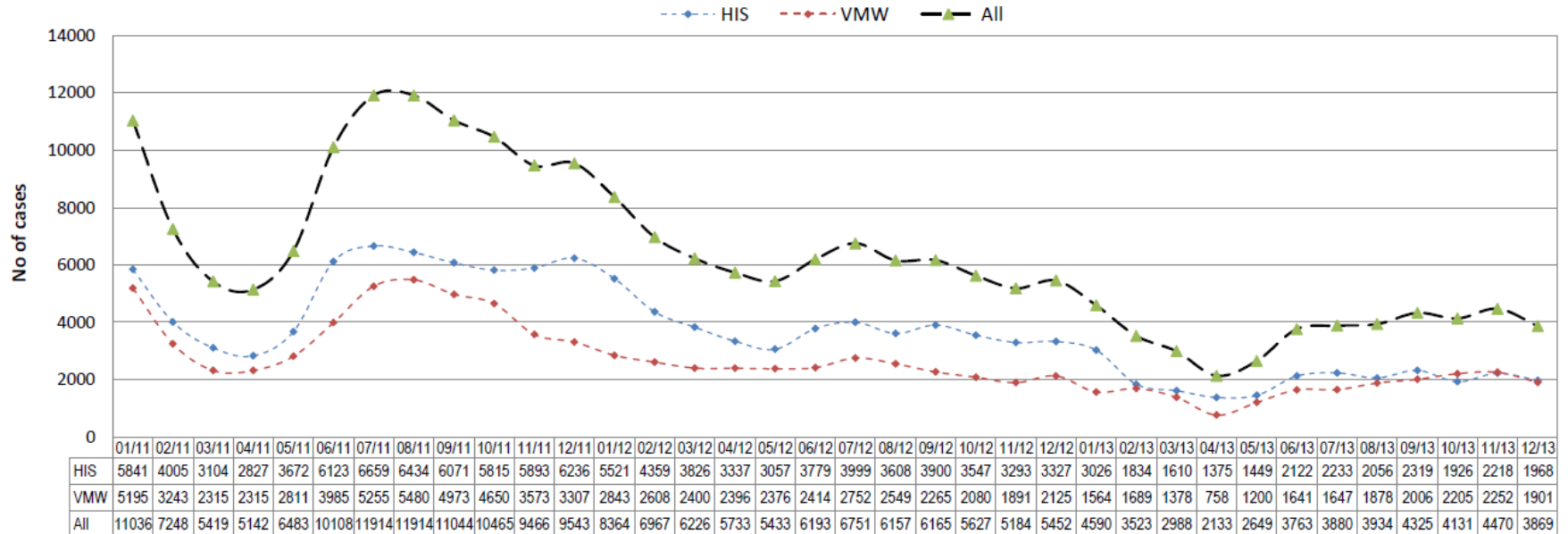
³ Cases per 1000 pop

⁴ Deaths per 100,000 pop

^{4,5} VMW rates uses VMW village populations

TRENDS IN SURVEILLANCE

Treated malaria cases from HIS and VMW by month



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Filling gaps in information

Elimination can only work where every case can be found

What to do about all the cases treated in the private sector?

SMS Project Pailin and Battambang, Cambodia (DFID)

Improving referrals and integrate private patient data into the National Malaria Information System (MIS) in Cambodia by piloting a short message service (SMS) technology in the private sector

- ▶ design and test an innovative SMS alert system
- ▶ identify bottlenecks and challenges that could affect the effectiveness of a full scale up of this referral system

Use of mHealth to report malaria cases



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Beyond Garki – trying to understand what really works

- ▶ Increasingly difficult to undertake randomised controlled trials of new interventions because of low case numbers
- ▶ Beyond Garki aims to develop a comprehensive picture of all potential causative elements, which can help to interpret and attribute changes we see in transmission
- ▶ Cambodia, Ethiopia, Nigeria, and Uganda
- ▶ In Cambodia it also aims to:
 - assess conditions towards malaria pre-elimination and elimination goals
 - develop recommendations on an appropriate response system in pre-elimination settings by strengthening the existing health surveillance system and tailor appropriate responses specific to elimination strategies



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Epidemiological monitoring

1. Patterns of malaria transmission are dynamic in the region, because of rapid ecological and socioeconomic changes (deforestation, changes in land use and changes in migration patterns), so we need up-to-date information
2. We are moving towards more targeted programmes, so need robust local data
3. There is a lot we do not understand about low level malaria transmission in Southeast Asia, especially why is there so much low level asymptomatic parasitaemia in people who are unlikely to have much acquired immunity
4. What we can learn in Asia can help us to get started more quickly in Africa in areas of reducing transmission



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Testing interventions

MESA project: To understand the feasibility and potential impact of screening for asymptomatic malaria (Active Detection and Treatment) in households where a febrile case of malaria has been reported - Pailin

A better understanding will be gained of the feasibility of interventions where members of households with a reported case of malaria ('index household') are screened for asymptomatic malaria and treated accordingly



Testing interventions

Cross-border Project (strategic funding DFID)

To strengthen cross-border surveillance to target better hard to reach populations by developing an algorithm with higher sensitivity to predict which individuals will be at higher risk of harbouring parasites and therefore should be tested



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How responding to resistance can enhance elimination

- ▶ Both goals need extraordinary efforts to control malaria even where it is less common
 - Link between resource allocation and disease burden less clear
 - National priority setting is challenging
- ▶ The beneficial side-effects of containment for elimination
 - Improving surveillance
 - Improving private sector strategies
 - Learning to work with mobile populations
- ▶ Both need an obsession with timely, local and accurate information that is used
 - Provided this does not slow response too long
- ▶ Both need to link surveillance with timely, reliable, effective response

Learning

- ▶ Balancing the ideal and the real
 - We need to fly, but that needs a strong ground-based effort behind it
- ▶ Translating science to practical approaches
- ▶ Avoiding over-reliance on externally driven programmes
 - This was the strategy last century but the world has moved on
- ▶ Investing more in local capacity
- ▶ Recognising the importance of governments having the ownership of these systems and new tools so that once piloted they go directly into scale-up
- ▶ Need to combine efforts through strong partnerships to accelerate the scale up in the elimination programmes

Looking ahead

1. Malaria Consortium's priority is to support the elimination of malaria by improving implementation based on targeted operational research
2. Deliver enhanced surveillance of malaria and promote active response to data
3. Support and enable technical developments through field testing new diagnostic and mHealth technologies at the national and community levels
4. Focus more on insecticide resistance management strategies in Africa
5. Explore options to eliminate other neglected tropical diseases in coordination with malaria elimination



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www.malariaconsortium.org

Thank you



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