RAM Chair Information Kit

Rotarians Against Malaria

Rotarians Against Malaria is a volunteer-run organization working to eliminate malaria. The primary focus of RAM has been the distribution of insecticide-treated nets to vulnerable populations in Papua New Guinea, the Solomon Islands and more recently, Timor Leste. RAM has raised more than $1.6 million to eliminate malaria since 2003. RAM works in conjunction with the Ministry of Health authorities in each country and complements the work of other malaria organisations, most notably the Global Fund to Fight AIDS, Tuberculosis and Malaria.

RAM was started in the early 1990s from a proposal by Dr Brian Handley of the Rotary Club of Chatswood (NSW) who was concerned about the surge in malaria incidence after the discontinuation of DDT-based malaria control programs. RAM was launched in 1995 in Tulagi, Solomon Islands by the Rotary Club of Honiara and Rotary District 9600. In 1997 Ron Seddon and The Rotary Club of Port Moresby initiated the highly successful Adopt a Village program to encourage Australian Rotary Clubs to fund nets in PNG on a village-by-village basis. The Adopt A Village program was then successfully implemented in the Solomon Islands. In 1998 Rotary Australia World Community Service adopted RAM as an approved multi-district project. In 2005, RAM expanded its support to the National Malaria Control Program in Timor Leste. There are now RAM committees in each of the 21 Rotary districts in Australia, which raise funds to support programs to control and eliminate malaria.

Malaria is not only a significant cause of death in the poorer nations of the world but it is also a significant direct cause of poverty. Chronic malaria leaves sufferers listless, house bound and unable to contribute to productive work to sustain their families and contribute to their communities. In the case of children it interrupts their education and leads to poor concentration even when they are able to attend school. Working to control and eliminate malaria is a good fit with Rotary's ideals and areas of focus.

In Papua New Guinea, RAM funded and distributed 250,000 nets prior to the arrival of the Global Fund to Fight AIDS, Tuberculosis and Malaria and since then has been involved in the distribution of a further 7 million nets as a designated agent for the Global Fund in PNG since 2009. There has been an overall 45% reduction in the incidence of malaria since 2009 and >70% reduction in some provinces.

In the Solomon Islands, RAM provided 180,000 nets before the Global Fund, Australian Government and Solomon Islands Ministry of Health took over operations. In 2002, RAM constructed (or rebuilt) 18 houses and 11 storage sheds for the malaria program in the seven provinces of

the Solomon Islands with the assistance of RAWCS volunteers; five of these houses were fully-funded by Rotarians with AusAID providing material costs for the remaining buildings. RAM has since developed the Healthy Villages program to complement net distribution. The Healthy Villages program involves the supply of tools to villages with Ministry of Health-approved programs to conduct activities to limit areas for mosquito breeding. There has been a 75% overall reduction in malaria incidence since RAM's involvement with the Solomon Islands and two provinces are at the pre-elimination stage.

RAM became involved with Timor Leste in 2006 when the incidence was 220 cases per 1000 people. RAM has provided 75,000 nets to assist the National Malaria Control Program and compliment the work of the Global Fund and the World Health Organisation. The incidence of malaria has been reduced to less than 1 in 1000 since RAMs involvement with Timor Leste and 5 of the 13 health districts are at the pre-elimination stage.

There is an annual RAM conference to update representatives on the progress of RAM programs and the latest research. It is a dynamic and engaging weekend for strategic planning and the conference is open to all with an interest in defeating malaria. The RAM conference was commenced in 2002 by Richmond Manyweathers and has been continued annually ever since.

RAM currently has its seventh National Chair in David Pearson. Past National RAM Chairs include John Reddish (up to 2000), Richmond Manyweathers (2001-2003), Peter Thomas (2004-2006), Bill Dethlefs (2007-2009), Ian Sayers (2010-2012) and Phil Dempster (2013-2015)

After the eradication of polio, RAM would like to see the global community work towards eliminating malaria.

Malaria Key Facts

Global statistics from World Malaria Report 2014

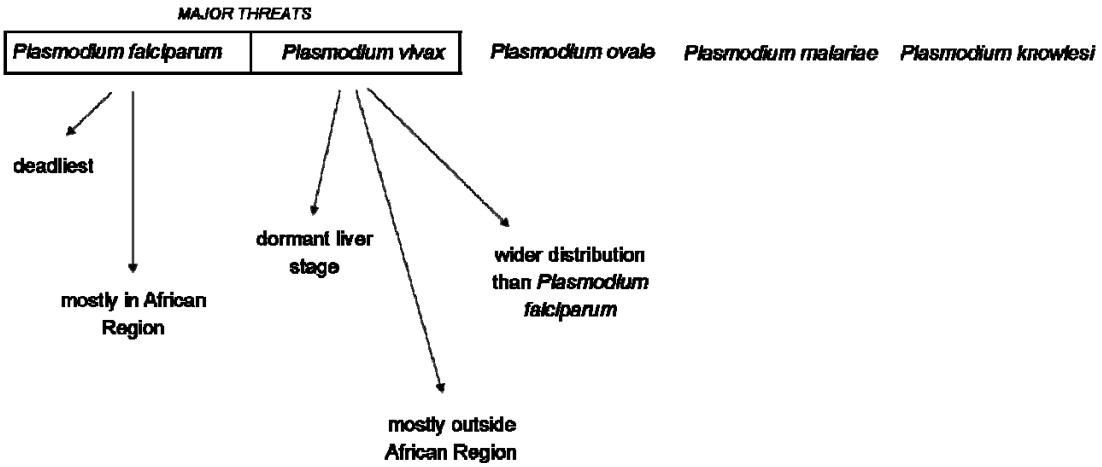
In 2013

- Estimated 198 million cases
- Approximately 584 000 deaths
- 78% of deaths in children under the age of 5.

Global mortality rates have decreased by 47% since 2000.

Cause

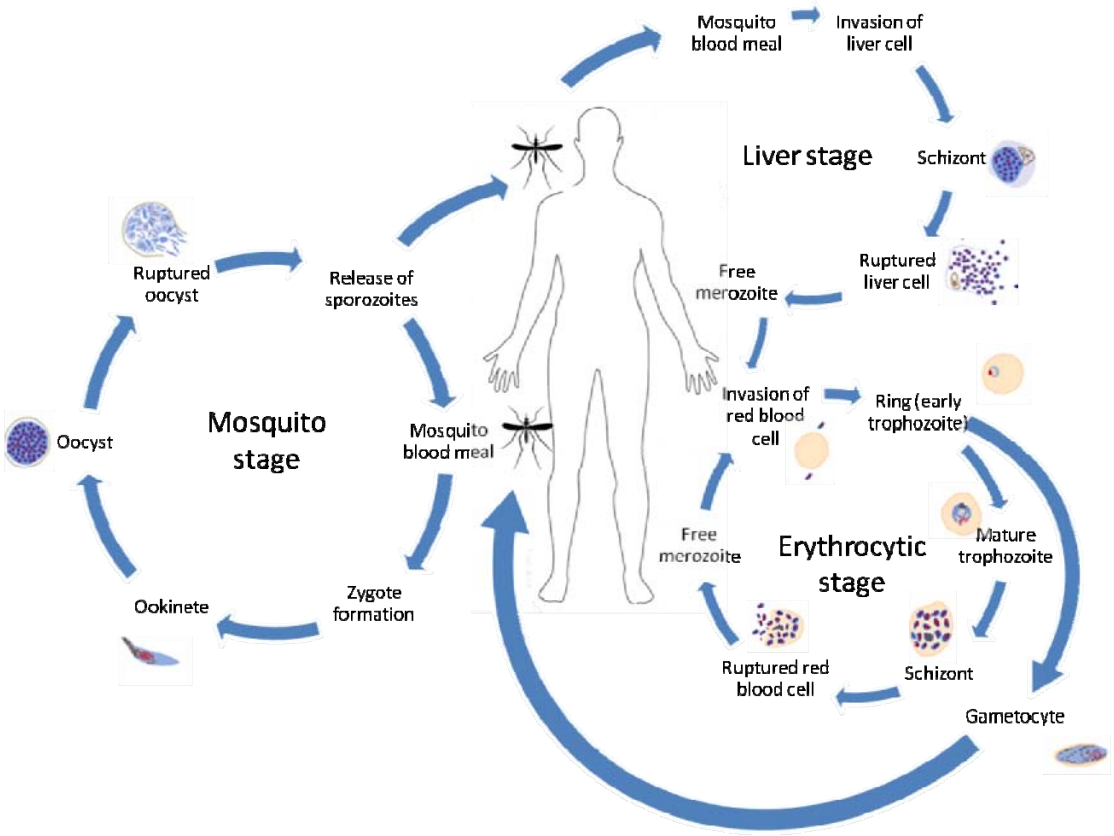
The parasite that causes malaria is called *Plasmodium*. There are five species of *Plasmodium* parasites that can infect humans. *Plasmodium falciparum* causes the majority of cases and deaths. *Plasmodium vivax* accounts for 8% of annual cases but can hide in liver cells and emerge from a dormant state periodically.



Symptoms

Malaria is often confused with cold/flu symptoms and is usually distinguished by a fever. The symptoms of malaria can progress from chills, fever and/or fatigue to organ failure, metabolic acidosis, and occasionally, death.

Transmission

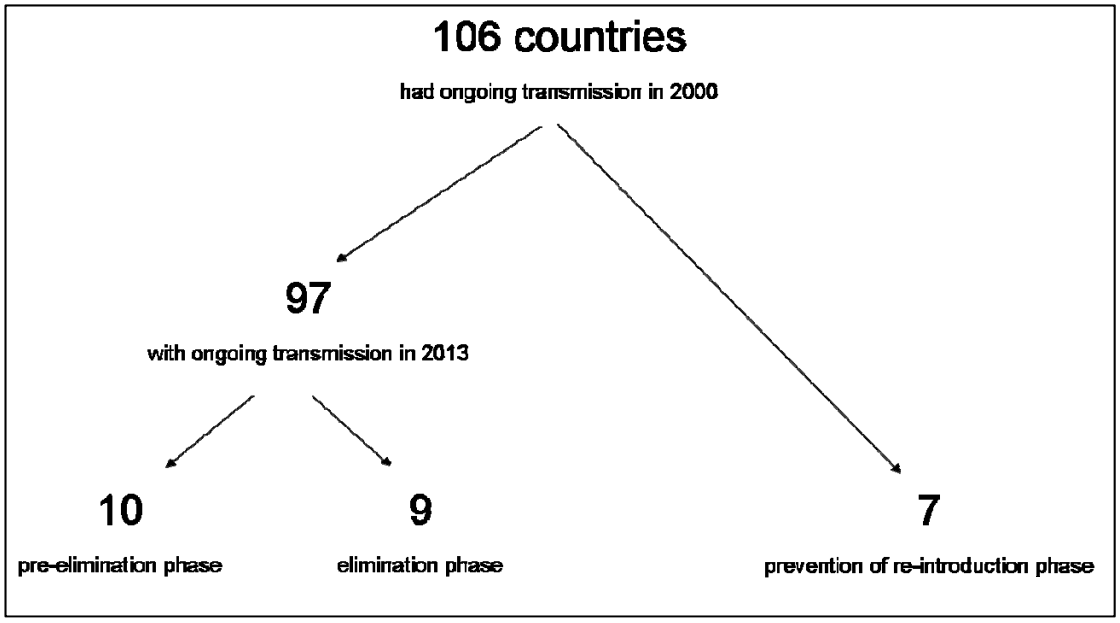


Transmission of the Plasmodium parasite occurs via the females of a number of different mosquito species; Anopheles and Aedes are the primary "vectors" for malaria transmissions. When the female mosquito takes a blood meal, it injects the malaria parasite into the human. The parasite migrates through the blood stream to the liver where it undergoes one round of replication to produce several daughter parasite cells. The resulting parasites enter the bloodstream, invade red blood cells, mature, and burst free to invade surrounding red blood cells in a continuous cycle. Every so often a banana-shaped gametocyte parasite is produced and when taken up by a female mosquito, will develop in the mosquito and migrate from the digestive system up to the mosquito's salivary glands. Once in the salivary gland, the infectious process occurs again when the mosquito takes another blood meal and injects parasites into the human.

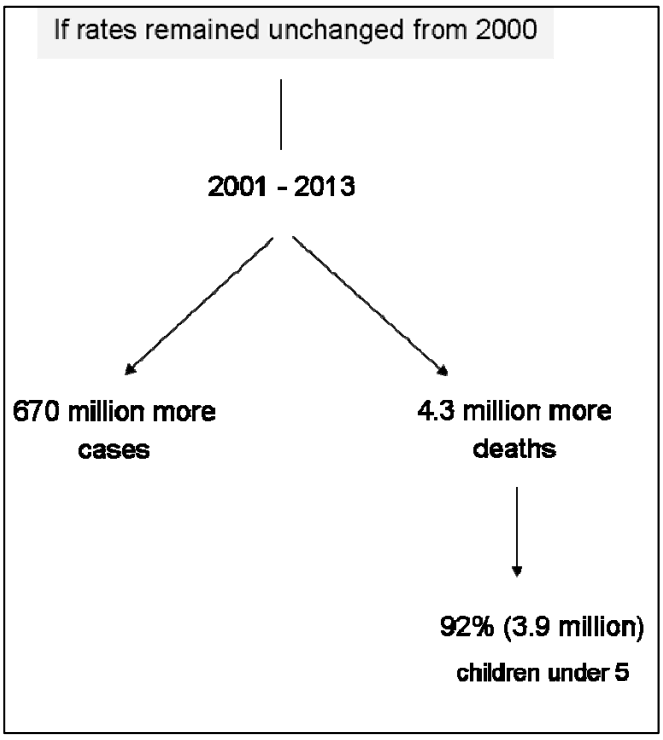
The *Plasmodium falciparum* invasion-maturation-reinvasion process takes 48 hours and the infected person experiences a characteristic fever every 48 hours when the parasites burst the red blood cells to break free.

Infographic History of the Global Fight Against Malaria

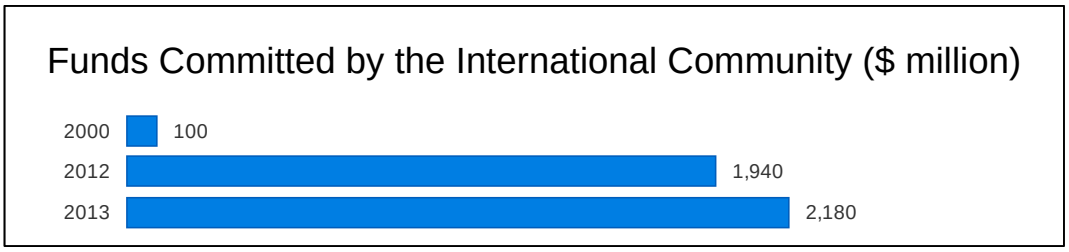
There are currently 97 countries with ongoing transmission compared with 106 countries in 2000.



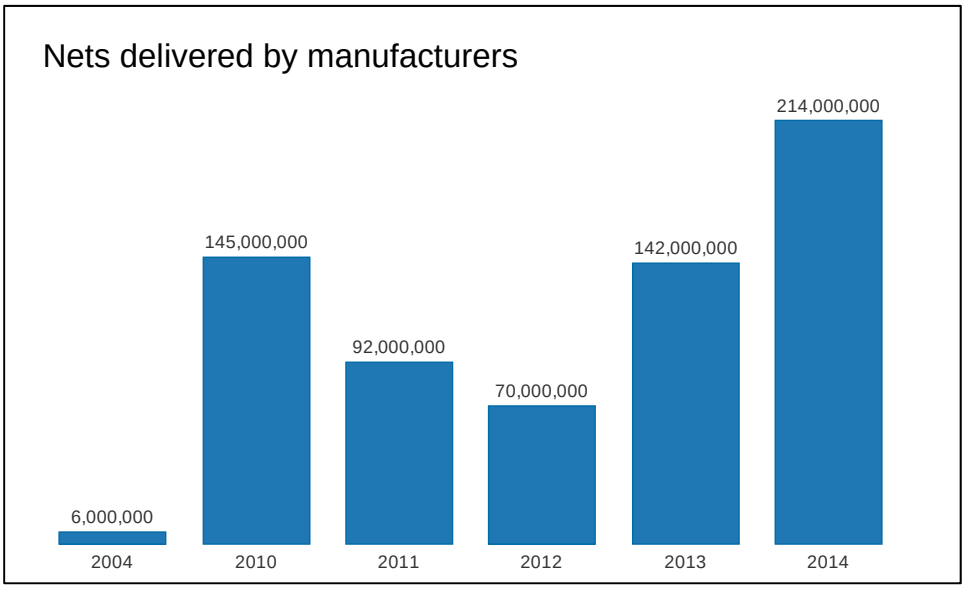
Malaria rates have been reduced by 47% since 2000. The reductions in malaria have averted 4.3 million deaths.



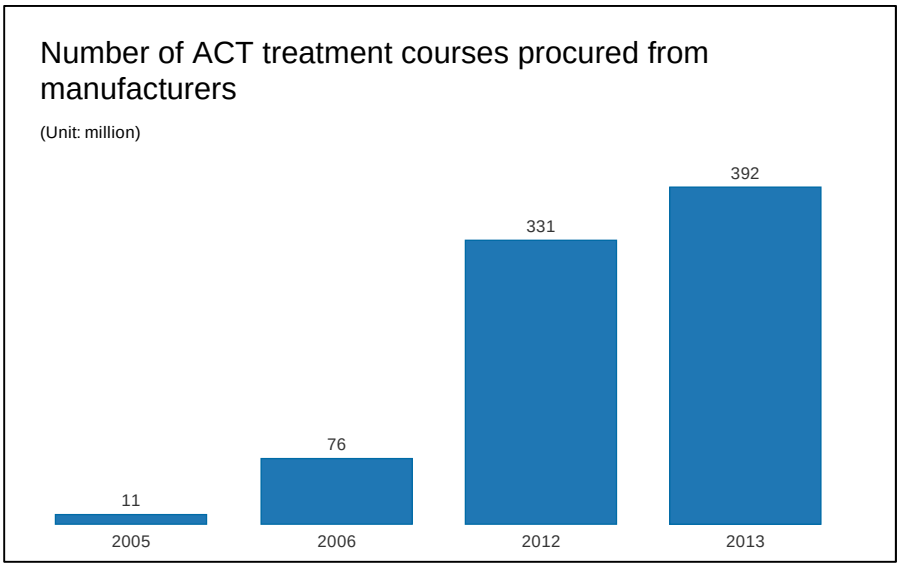
International funding for malaria control has grown substantially in the past 15 years enabling increased access to insecticide-treated nets and antimalarial drug treatment.



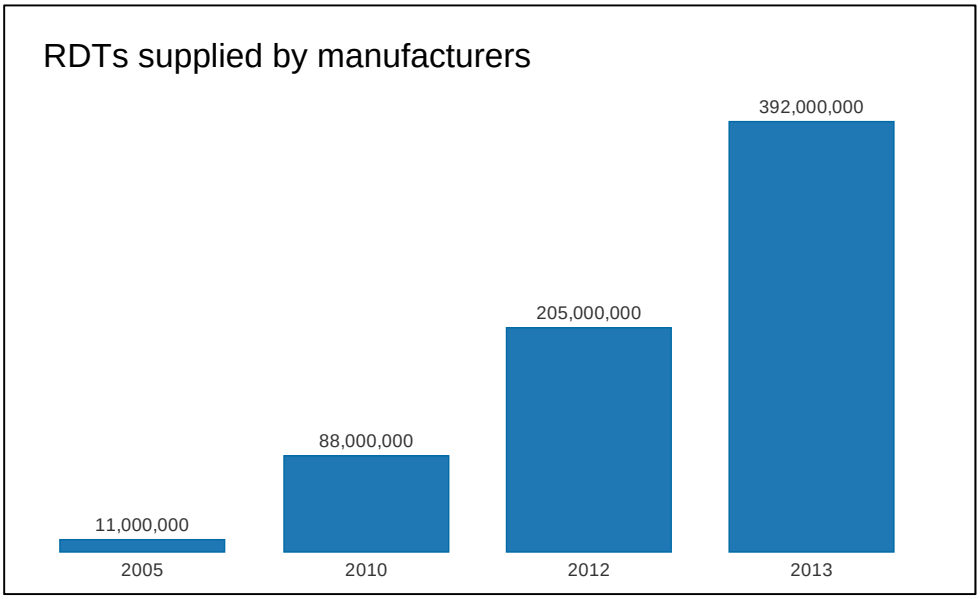
Much of the reduction in malaria rates has been a result of increases in the accessibility of nets. It is estimated that 450 million nets are required over a three-year period (average of 150 million nets per year).



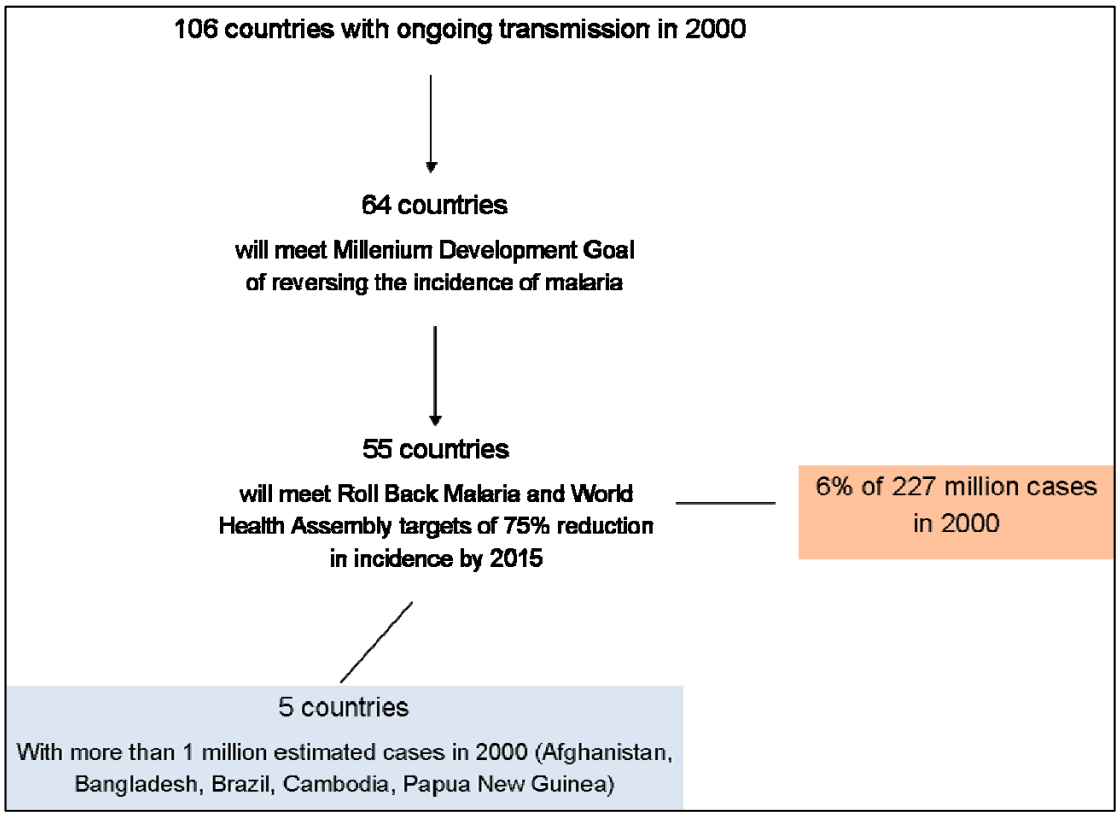
The increased accessibility of artemisinin-based combination therapies (ACTs)has also contributed to the reduction in incidence and mortality of malaria.



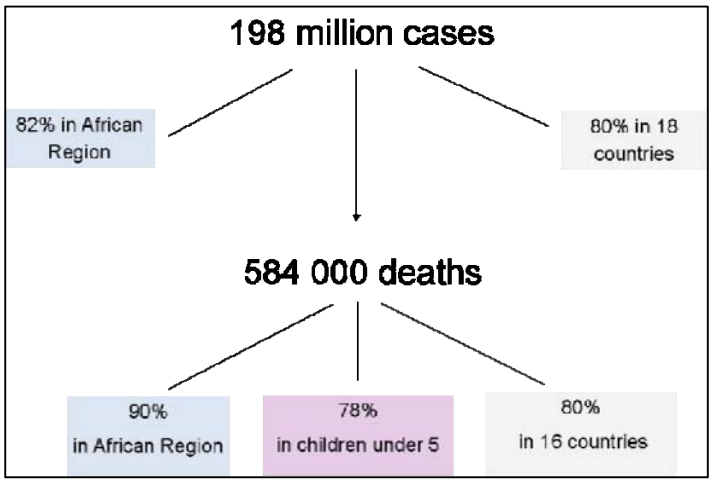
Malaria can be mistaken for other illnesses but increased availability of rapid diagnostic tests (RDTs) enables areas without microscopy facilities to confirm malaria.



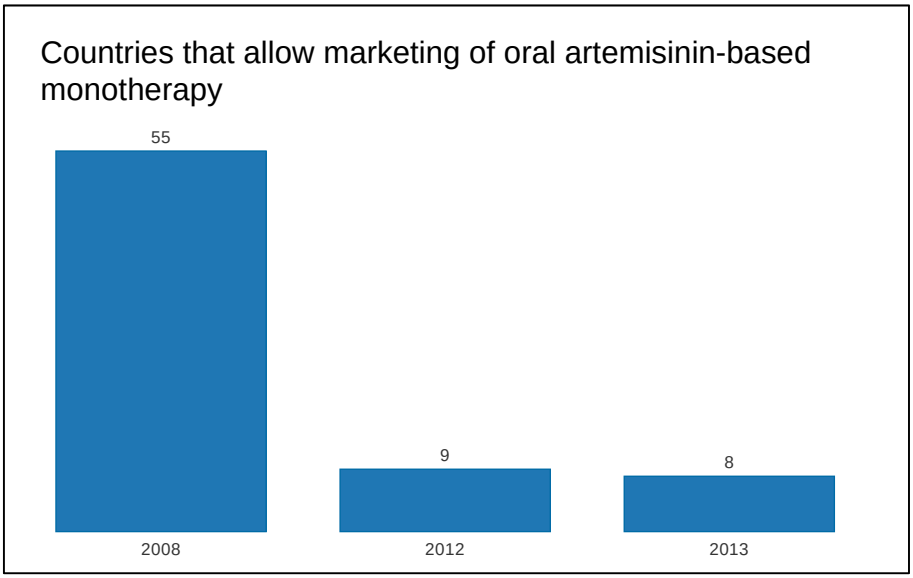
Reductions in malaria have made a significant contribution to the millennium development goals for the period 2000-2015 but have mostly been observed in countries with low burden.



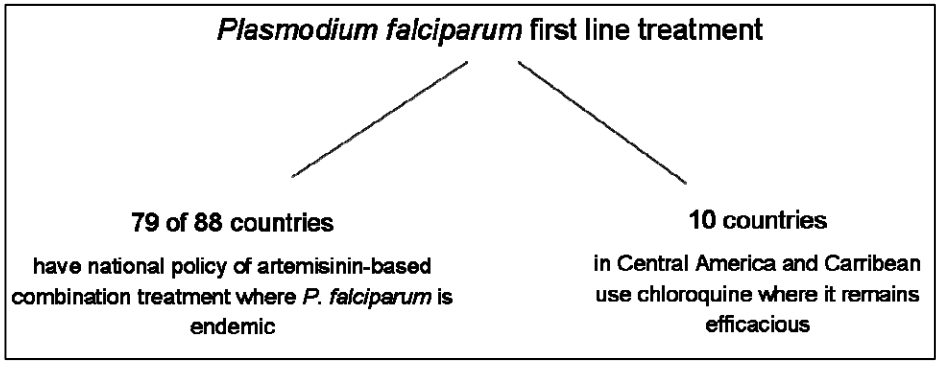
In 2015 there is still much work required to eliminate malaria.



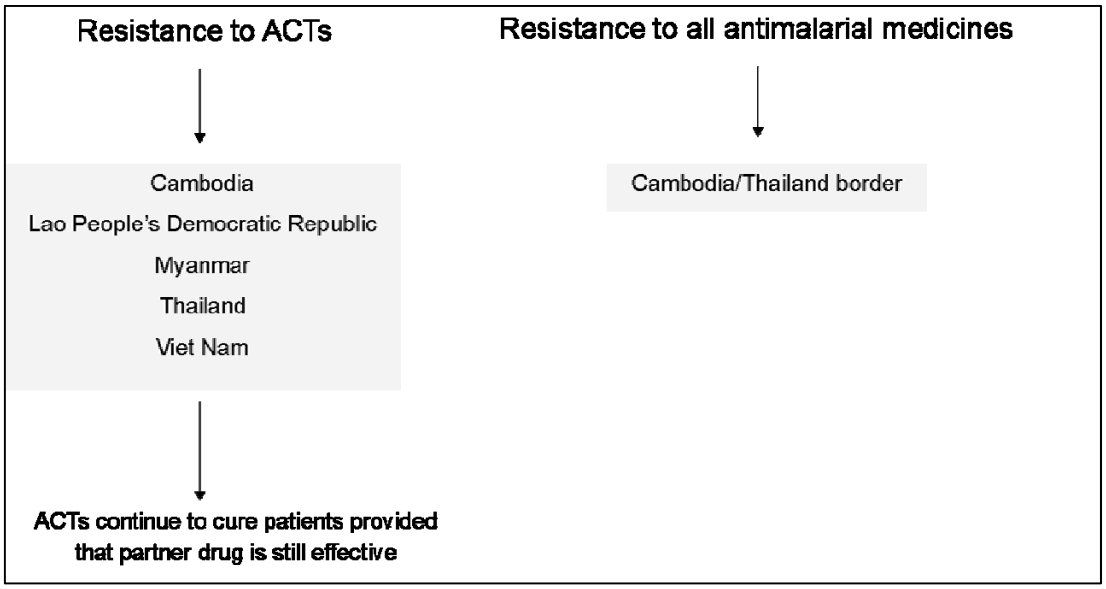
Drug resistance has been a major problem for the treatment of malaria. The World Health Organisation recommended in 2000 that malaria monotherapies (single-drug treatments) cease to be administered in favour of multi-drug treatments such as artemisinin-based combination therapy.



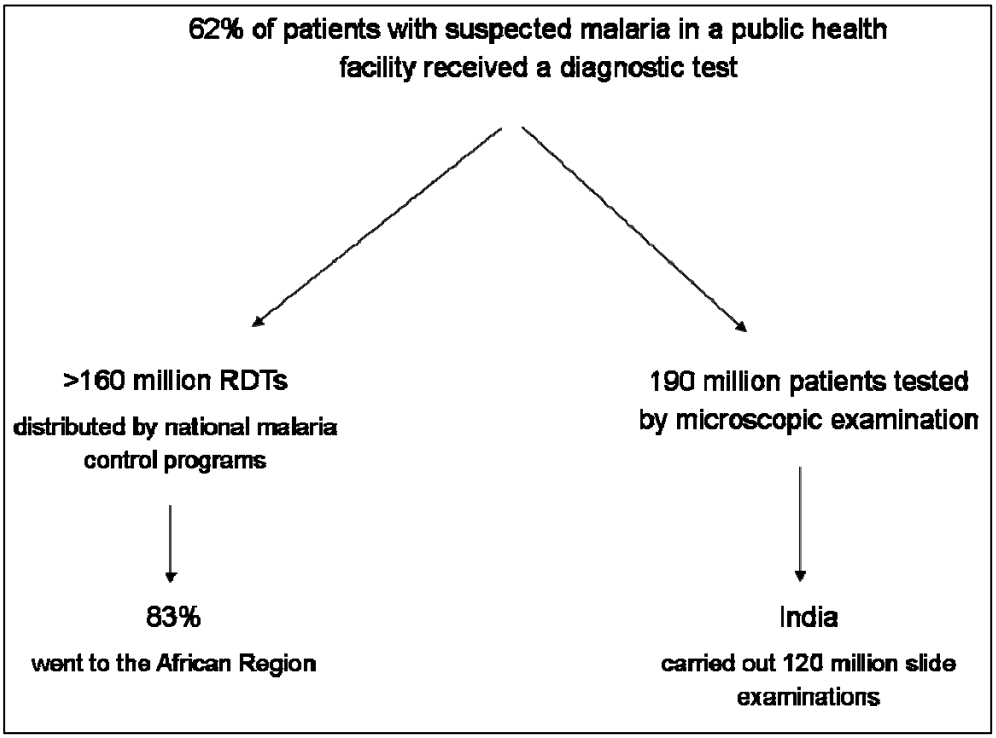
Preventing the spread of resistance of important and artemsinin-based combination therapy is now the first-line treatment for malaria in most countries.



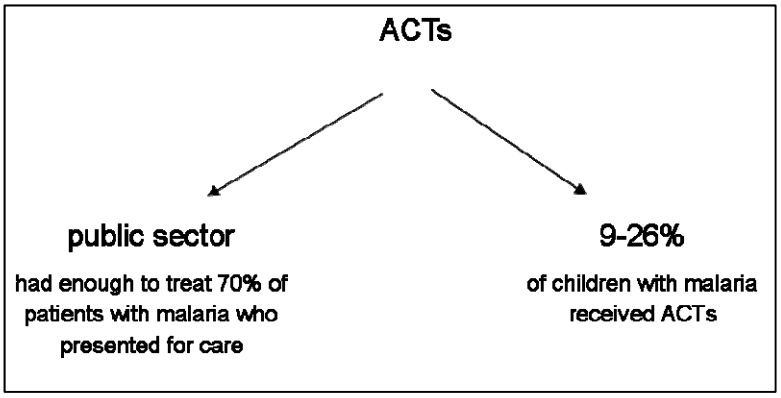
Resistance against current antimalarials is a major problem in South East Asia and the global malaria community is focused on preventing the spread of resistance strains to Africa where artemisinin-based combination therapy is the only effective treatment.



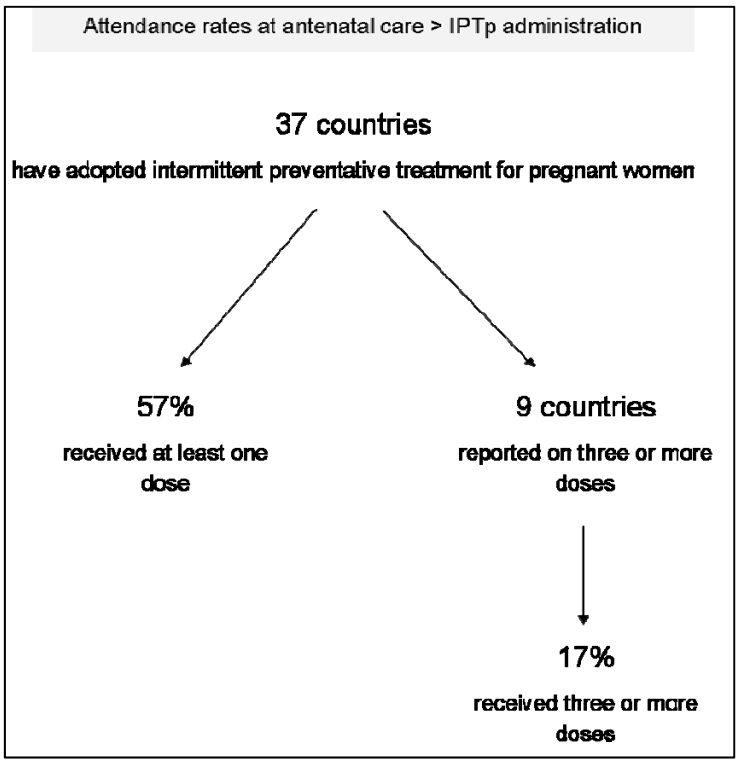
Diagnostic tests play an important role in the delivery of appropriate treatment and limit drug resistance.



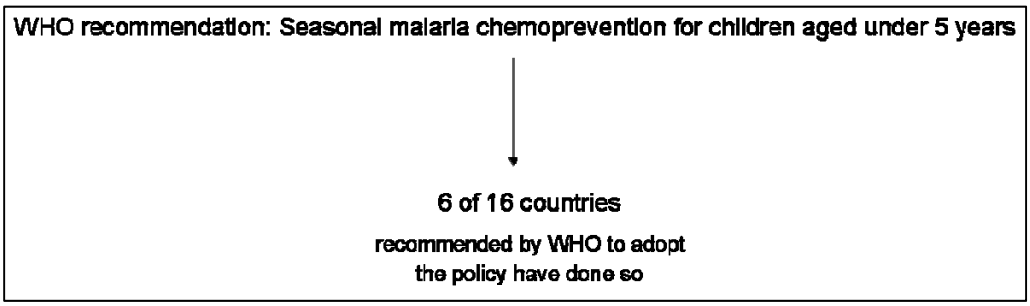
Artemisinin-based combination therapy rarely is delivered to children who are more susceptible to malaria.



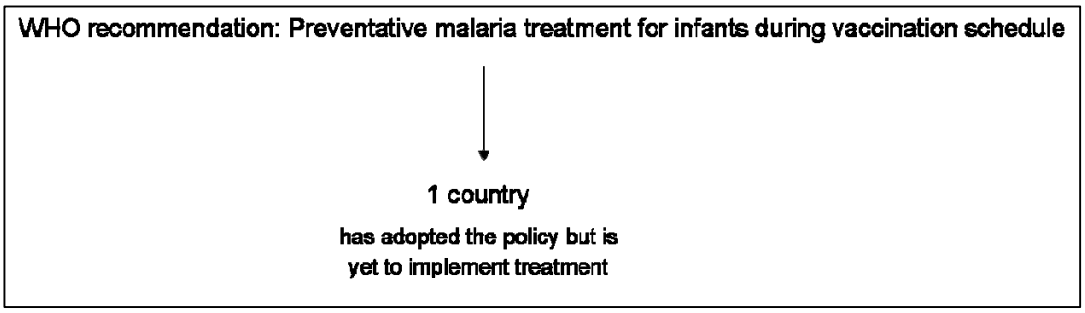
Treatments for pregnant women saves lives but not all receive preventative therapy.



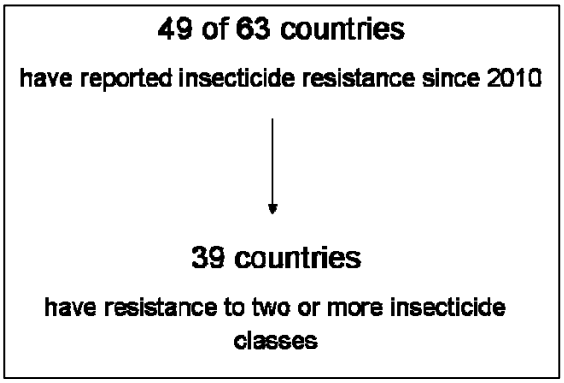
Children under the age of five are more likely to die from malaria than any other age group but rarely receive preventative therapy.



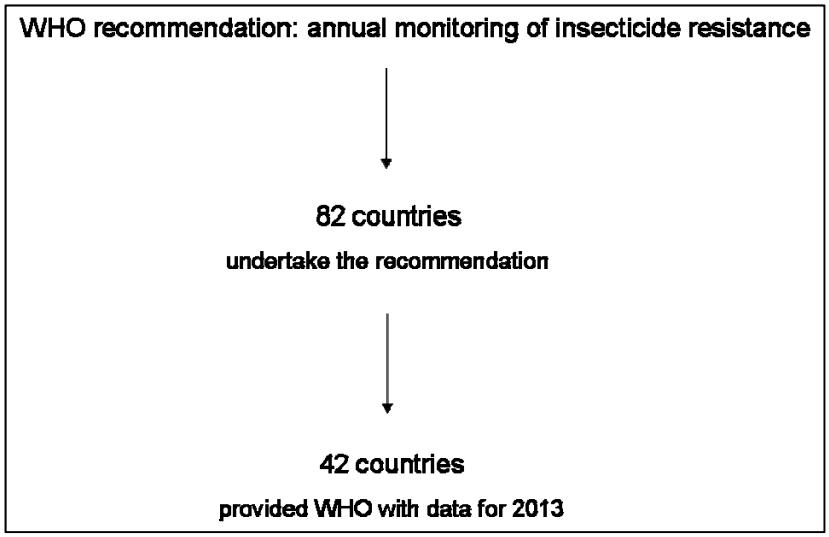
Infants also rarely receive preventative therapy despite opportunities during the vaccination schedule.



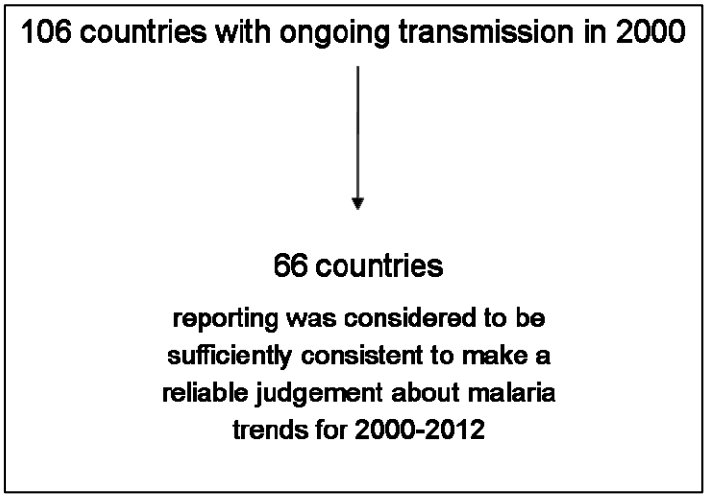
Insecticide resistance is emerging and concerning considering that major progress has been achieved primarily as a result of bed nets.



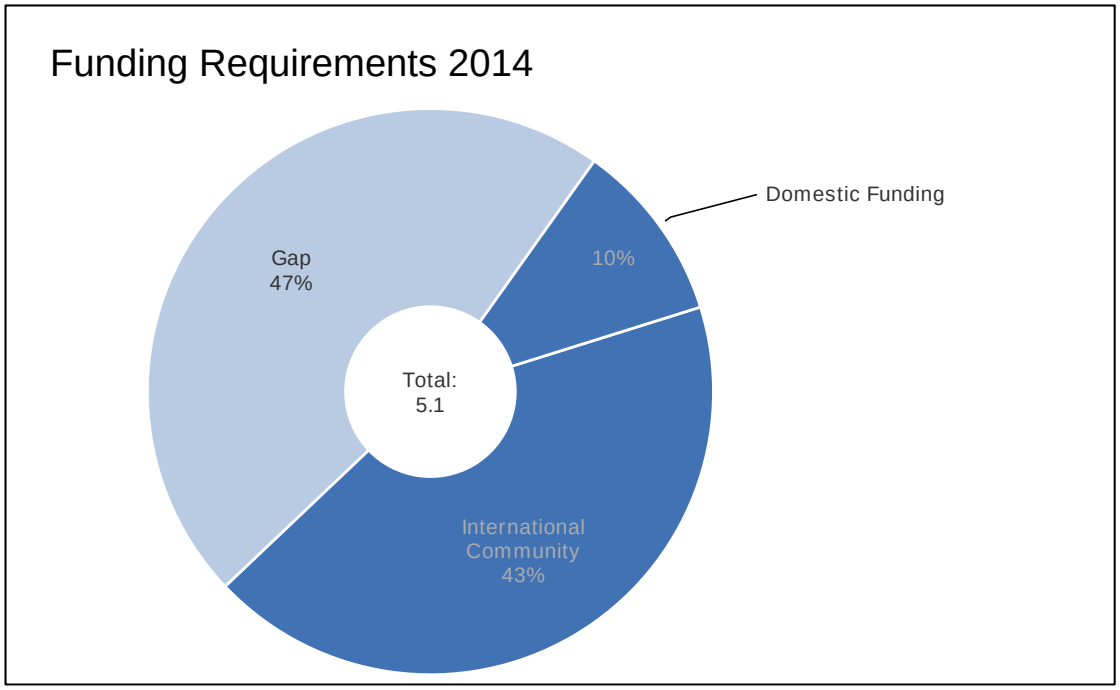
Monitoring of insecticide resistance is especially important.



Reporting of malaria is an impediment to further progress. The world has shown itself to be eager to assist but without accurate numbers, it's difficult to know what to direct the financial resources towards.



The major impediment to malaria, however, is inadequate funding ($2.4 billion shortfall of the $5.1 billion required in 2014).



Key Achievements of RAM

The Solomon Islands

- Commenced bednet distribution in 1995. 180,000 nets distributed before this task taken over by the Global fund.
- 80 villages supported by Health Villages Program (up from 30 in 2013).
- Built microscopy clinics.
- Built housing for malaria program workers and warehouses.

Papua New Guinea

- 250,000 nets provided 1997 to 2002
- 2 million nets procured by RAM for MoH distribution 2002 to 2009
- 7 million nets distributed as agent for the Global Fund to Fight AIDS, Tuberculosis and Malaria 2009 to 2015.
- Rates of malaria have dropped by 70% in most areas.
- Approximately 1,000,000 nets delivered every three months.

Timor-Leste

- RAM has purchased over 70,000 nets since 2012.
- Rates of malaria have declined from 1 in 4 (2006) to 1 in 1000 (2013).
- Latest delivery (2014/15) was 22,700 nets specifically for expectant mothers.

Current Projects for Fundraising

1. The Chasing Malaria Program in PNG

   The Global Fund allocation of nets for the next two years has created a shortfall to the extent that only certain areas will receive household nets and other areas will only get nets supplied to children under five. The Chasing Malaria pilot program maps malaria within the NCD and Central Provinces and supplies nets to areas of malaria outbreak. Every rapid diagnostic test-positive case is given a net and the program team reinforces the message of sleeping under a net each night. With this pilot program it is hoped that RAM will be able to start clean-up programs within the worst affected villages to get rid of malaria entirely.

   As of March 2015, Chasing Malaria is delivering nets through 19 Health Centres in National Capital District and 21 Health Centres in Central Province. The project has recorded 1,210 cases of malaria (approximately 250 cases a month between the two provinces) and delivered as many nets. When the project started many malaria cases were being diagnosed clinically using rapid diagnostic tests. Now all clinics are regularly using RDTs for suspected malaria cases (99% in National Capital District and 95% Central).

   The Chasing Malaria program is planned to run for three years and will cost $2.2 million per year. RAM will only be able to provide some of the required funds and is actively seeking corporate partners to assist.

2. Healthy Villages, the Solomon Islands

   Under this initiative villages apply to join the program and in the process can take ownership of their own destiny. On joining the program, villages receive a set of tools and an educational package on the breeding cycle of mosquitos. The tools enable the village eliminate stagnant water around the village and destroying mosquito breeding grounds.

   Each village is provided with 30-40 tools ($1700-2000) that have been purchased locally so as to support local infrastructure.

3. PhD Scholarship

   The RAM Scholarship enables an international student from Timor-Leste, PNG, Solomon Islands or Vanuatu to undertake postgraduate research in Australia and gain experience with leading Australian researchers.

The first recipient of the RAM PhD Scholarship in Vector Control is Mr Edgar Pollard from the Solomon Islands. Edgar holds a Masters in Science from the University of South Pacific and has published several research articles. He commences his studies in the second half of 2015.

RAM is partnering with James Cook University to financially support Edgar who will be working with Professor Tom Burkot. JCU will cover tuition fees and RAM is responsible for a living allowance based on the current Australian Postgraduate Award rate.

4. Covering shortfalls in National Malaria Program control activities when requested.

   Filling the gaps in national malaria programs is the most important strength of RAM. These requests will be circulated via email and posted on the Facebook page.

Fundraising Ideas

Rotarians and members of the public often ask RAM representatives how they can support RAM and get involved. It is useful to have some fundraising ideas at your fingertips. You may even want to get together with other RAM representatives and fundraise together.

- Run/walk events

  Get a Rotarians Against Malaria team together for a fun-run/walk and encourage donations for the team members.

  Tips: a fundraising website may help team members to share the event with their wider network via social media or email.

  Example: Steve Carroll from the Rotary Club of Williamstown conceived and undertook Rotary's Ride Around Against Malaria (RRAAAM) in March – April 2015. Steve, a Vietnam Veteran soldier was joined by his friends on a motor cycle ride in memory of his daughter. The group spoke at Rotary Clubs and other interested groups around Australia to raise >$25,000 for RAM in PNG.

- RAM pins

  Sell a $10 pin to Rotarians at your next club speaking engagement or event.

  Tips: Each pin buys a bed net for two people. Some people may want one pin but may also want to offer a larger donation (ie. $50 gets one pin and protects 10 people from malaria).

- Quiz Night

  Organise a trivia night with a team of helpers or link-in with an existing quiz night.

  Tips: Quiz nights can be quite a bit of work but if done well can raise several thousands of dollars. Best to have a team of 4+ committed volunteers. Contact Roshni Thattengat for quiz night resources (PowerPoint slides for questions, donation letters, running sheets, task list, etc).

- Supporting Rotary Clubs

  Many clubs are energized after hearing from a RAM representative and want to make a donation. You might offer to

give them some resources like flyers or a bed net for an upcoming barbecue, movie night or general club event so that the proceeds support RAM. This is a good way for clubs to support RAM without additional work from club members.

Tips for PowerPoint Presentations

1. The structure is important. Are you telling a story that leads to a call to action for bed nets or RAM activities?

2. Make sure your numbers are up-to-date from this induction kit. For further information check Rollback Malaria or WHO websites.

3. Give adequate background information. Most people need to understand the importance of malaria before they can be persuaded to care about RAM. Keep the first half of the presentation fairly simple so you don't lose anyone along the way. You can use your answers to questions at the end of your presentation to expand further on RAM and each country. Questions are a good sign of how much of the room kept up with the presentation.

4. Minimal writing on each slide.

5. Large enough font for the person at the back of the room to read.

6. Pictures, maps and photographs are a great way to tell a story.

7. Tell the story of RAM that you're passionate about. Is it Timor Leste? Is it the history of RAM's influence in the region? Passion is often infectious.

8. Engage in brainstorming with the audience if that's what's happening. You want your presentation to continue in conversations between audience members after you've left. That's often how Rotary Clubs come up with fundraising events.

Frequently Asked Questions

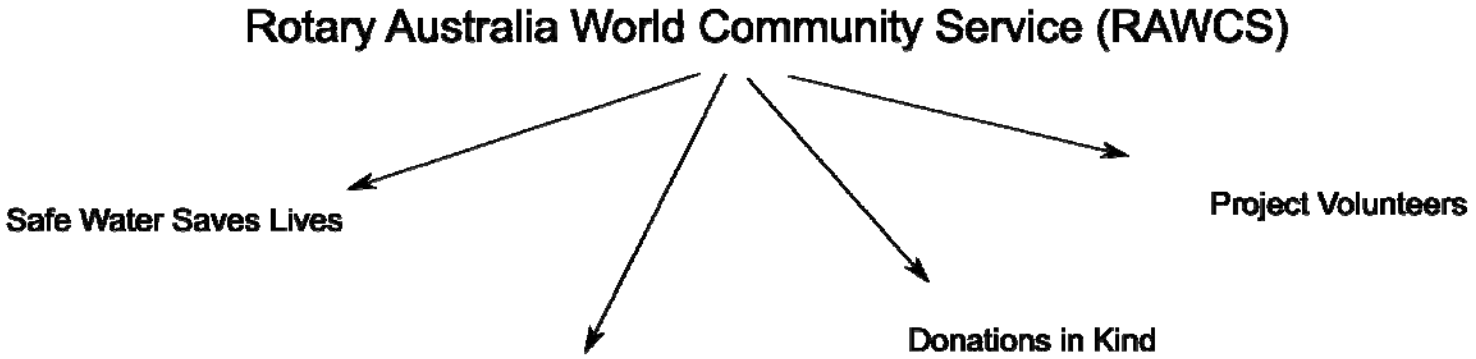
1. What's happening with malaria vaccines?

RTS,S is the most advanced vaccine in terms of development and was designed for children. It has passed clinical trials and in 2015 was approved for commercial release by European regulators. RTS,S however, is only 35% effective which is less than desired. There are a number of new candidates that are being researched but RTS,S is so far the best we have.

2. Will malaria rates increase with climate change?

Not really. There is an increased risk of malaria with climate change, however, urbanization, improvements in sanitation and malaria control activities such as insecticide-treated nets and antimalarial treatment have had more of an impact on malaria than climate change is expected to have.

RAM Structure



Rotarians Against Malaria

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Phil Dempster	Western	9455, 9465
Richmond Manyweathers	Central	9500, 9520
Roshni Thattengat	Southern	9780, 9790, 9800, 9810, 9820, 9830
Ron Seddon	Eastern	9650, 9670, 9675, 9685, 9700, 9710
Wayne Morris	Northern	9550, 9570, 9600, 9630, 9640
Peter Thomas		
George Mills		
Virginia Turner		

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