

2019 RAM Conference Summary of Proceedings

2019 Rotarians Against Malaria Conference Ciloms Airport Lodge, Tullamarine, Victoria

Acknowledgements

The 2019 RAM Conference could not have come to fruition without the inputs of many RAM Executive Committee members and the generosity of our world-renowned Professionals (academics and researchers) who donated their time and expense to be at our Conference. We are also grateful to Speakers from partner countries: Tim Freeman (RAM Papua New Guinea); and Director Len Tarivonda and Dr. Tessa Knox (Vanuatu). We thank you all for your contribution to this Conference. Also, thank you to RAM Executive Committee members: Dave Pearson, Gloria Hargreaves, Virginia Turner, Bill Oakley, and Bruce Anderson. RAWCS Chair John McLaren, played an important role in this Conference. He stepped up for Dave Pearson at the last minute. Thank you. Finally, thank you to the Ciloms Airport Lodge Judy and staff.

Introduction

This year, the annual RAM Conference was held at the Ciloms Airport Lodge, Tullamarine, Victoria. A total of 53 delegates attended the Conference over the two half days. For the first time in its history, the annual RAM Conference included two Pre-Conference workshops on the Saturday morning. The workshops were well attended with 24 and 30 delegates in the first and second workshops, respectively.

The Conference opened at 13:00 on Saturday 24 August. It provided up-to-date information on malaria disease from world renowned academics: Professors Brenda Crabb, Stephen Rogerson, Maxine Whittaker, Dennis Shanks, Tom Burkot, and Harin Karnajeewa. Graham Strachan presented an interesting session on Aquatain AMF – an anti-mosquito tool. In addition, we were pleased to have at the Conference, Vanuatu's World Health Organisation (WHO) Technical Adviser Dr. Tessa Knox and Dr. Len Trivonda, the Director of Public Health, Vanuatu Ministry of Health. The speakers powerpoint presentations are on the RAM website <https://ram.rawcs.com.au>

Saturday 24 August 2019

Two pre-Conference workshops were offered this year. An overview of each of the workshops are presented below.

Pre-Conference Workshops

Workshop One: Dr. Tessa Knox (WHO Technical Adviser, Vanuatu) and Director Len Tarivonda (Director of Public Health, Vanuatu)

Dr. Knox highlighted WHO's key documents and in particular, the Global Technical Strategy (GTS) 2016 – 2030 for malaria elimination. The GTS is a major guide to countries working towards malaria elimination. Dr. Knox emphasized that malaria resurgence can occur if control efforts are reduced with serious outbreaks in populations with little to no immunity. In line with WHO, vector control core interventions (nets and indoor residual spray [IRS]) remain important. Her take home message is that "Malaria elimination is achievable – Vanuatu is well on its way to elimination" Collaboration in the fight against malaria is important. She quoted If you want to go fast, go alone. If you want to go far, go together.

Director Len Tarivonda shared the findings and recommendations of the Vanuatu Malaria Program Review (MPR) (July 2018). Importantly, there were no confirmed malaria deaths since 2012. In 2017, there were no local cases in Tafea and Torba with 96% of cases in Malampa and Sanma – two most problematic provinces in terms of malaria infections. The MPR concluded that Vanuatu is well on its way to achieving malaria elimination. Director Len presented several recommendations and plans for support from various donors. He invited RAM to support Vanuatu.

Workshop two: Tim Freeman, RAM PNG Project Manager. RAM PNG is the principal recipient of the Global Fund. Topic: Chasing Malaria Program.

Tim examined the Papua New Guinea (PNG) Chasing Malaria Program and whether the Project can be replicated in other RAM partner countries. He highlighted the criteria for successful Community Malaria Control Program. An important aspect of the Chasing Malaria Project is local data monitoring for malaria cases. Surveys were conducted at schools and nets were given to children who tested positive for malaria. In remote locations, an innovative approach is to engage volunteers and teachers who were trained in testing and treatment of malaria cases. The community-based approach and the training of volunteers and teachers to bring malaria services to remote communities are key strengths of the Program. With the information presented to us, it appears that the Chasing Malaria Program could be replicated in other RAM partner countries.

Conference Opening

Rotary District Governor Brian Peters, District 9790, extended a warm welcome to all delegates and formally opened the Conference.

Following a brief introduction and welcome by new National Manager for RAM, Dr. Jenny Kerrison, our RAWCS Chair PDG John McLaren presented the RAM Annual Report that was prepared by Dave Pearson who was unable to attend the Conference.

Professor Brendan Crabb (Burnett Institute) Topic: WHO 2018 World Malaria Report and WHO's "High burden to high impact" strategy.

He highlighted the successes in malaria reduction since 2010 due to better testing and treatments. Rapid Diagnostic Tests (RDTs) and bed nets remain very important

in malaria elimination. However, progress in malaria disease reduction has stalled. There is resurgence of malaria in PNG and in many African countries. There are no clear answers as to why progress has stalled. Some of the challenges that will slow further progress are: financial challenges; shifts in climate, populations and vector location; and complacency, conflict, other competing priorities. WHO targets are unlikely to be met. Professor Crabb provided an overview of the "High burden to high impact" – a country-led response to remind countries of the need to forge ahead with available tools and strategies.

Professor Stephen Rogerson (Department of Medicine, Doherty Institute, University of Melbourne). Topic: Malaria in Pregnant Women.

Over 100 million women are at risk for malaria during pregnancy. Women in their first pregnancies have far worse outcomes because they have not developed immunity to the plasmodium parasite protein VAR2CSA in the placenta. Major problems with malaria during pregnancy are maternal anaemia deaths and infant deaths from low

birth weight (LBW). The WHO's three-pronged approach (early diagnosis and treatment; IPTp and use of LLINs) to malaria in pregnancy guides prevention and treatment of malaria during pregnancy. Research to identify the best drug for intermittent preventive treatment of pregnant women (IPTp) was presented. Professor Stephen concluded his session with a list of key points for delegates to consider. One of the points was What "package" of antenatal interventions would offer most benefit? In other words, what approaches can be integrated with routine antenatal care services to bring the best outcomes for pregnant women.

Professor Maxine Whittaker (James Cook University, Townsville). Topic: Community participation and malaria elimination.

Community engagement is commonly referenced in projects but the concept is poorly understood. A key message in Professor Whittaker's presentation is that people living in affected communities must be at the centre of all efforts in our malaria services. Professor Whittaker spoke about the global civil society movement initiated by the group Civil Society for Malaria Elimination (CS4ME). Underpinned by social justice and human rights, effective community-based malaria surveillance and response systems can be successfully implemented by partnering with civil society. The notion of the 'determinants of community participation' was a useful, and highlights the factors that encourage community participation. The presentation was useful for RAM to improve how we engage with communities in malaria elimination efforts.

Professor Dennis Shanks, Australian Army Malaria Institute. Topic: Potential of the new antimalarial drug Tafenoquine

The presentation underscores relapsing malaria (vivax) as a threat to malaria elimination. It will be much harder to eliminate plasmodium vivax than falciparum. The two drugs available for treating relapsing vivax infections are Primaquine and Tafenoquine. Tafenoquine (TQ) is Australian TGA approved. It kills all stages of parasite including liver parasites (hypnozoites) critical for malaria elimination. G6PD test is required before treatment because severe haemolysis can occur in patients with G6PD deficiency. To eliminate relapsing vivax, it is recommended that mass

drug administration be undertaken (e.g. as occurred in China). However, mass drug administration will not be adopted until the G6PD problem is better managed.

Professor Tom Burkot, Australian Institute of Tropical Health and Medicine (AITHM), James Cook University, Cairns, Queensland. Topic: Malaria vector surveillance in countries of elimination and control status.

Vector control (LLINs and IRS) contribute to 80% reduction of malaria cases. Entomological surveillance allows proactive response to insecticides resistance. Surveillance, including vector surveillance, is a core intervention in the Global Technical Strategy (WHO, 2016 – 2030). Professor Burkot shared with us the information on the Vector Surveillance Survey that was conducted on 35 countries. He emphasized that monitoring vector control intervention coverage and quality is essential to identifying gaps and opportunities. One of the key takeaway points is that vector surveillance is important to preserve LLIN and IRS effectiveness. In ending the presentation, Professor Burkot emphasized that “if data is collected, it should be used” – without which the surveillance would be meaningless.

Professor Harin Karunajeewa, Walter and Eliza Hall Institute (WEHI). Topic: Update on studies of primaquine for vivax malaria in the Solomon Islands.

Professor Harin’s presentation added to our understanding of the challenge of relapsing plasmodium vivax infections and malaria elimination. The problem is important as four out of five episodes of *P. vivax* are due to hypnozoite relapse (hypnozoite being previously dormant in the liver) with release of parasites in the blood stream. It should be emphasized that malaria elimination is only possible if the hypnozoite are killed. Professor Harin’s research “ACT-radical” looked at the use of two artemisinin combination therapies (ACTs) in combination with primaquine for radical cure of Plasmodium vivax malaria in the Solomon Islands. The research revealed that dihydroartemisinin-piperazine (DHP) + primaquine for treatment of Plasmodium vivax resulted in the highest percentage of patients who were vivax free after six months. His research brings us one step closer to malaria elimination.

Sunday 25 August 2019: 09:00 – 12:30hr

The Conference on Sunday morning focused on malaria elimination progress in our partner countries. Also, an Annual Meeting was held with Rotarians followed by a session presented to RAM supervisors by National RAM Secretary Gloria Hargreaves. An overview of each session on Sunday morning is presented below.

Tim Freeman, RAM PNG Program Manager in the PNG Global Fund project. Topic: PNG Malaria

Tim presented an overview of the Global Fund RAM PNG work. RAM PNG works closely with the National Malaria Control Program to deliver key malaria programmatic tasks. Global Fund is a major donor for the RAM PNG project and contribute 74.9% of their funding. Under very difficult conditions, RAM PNG has delivered 10,873,695 LLINs between 2010 and 2018. Following great successes between 2009 and 2014, PNG faced increases in malaria in 2017 and 2018. An interesting phenomenon that Tim highlighted was that in some provinces they had not seen decreased number of malaria cases following LLINs distribution. Studies

have commenced to look at identifying causes of the large increases in cases. An important finding was that bed nets are losing their insecticidal activity before the three-year duration is up. Tim also shared with delegates regarding the Chasing Malaria Program that is underpinned by community participation in malaria elimination strategies.

Dr. Jenny Kerrison, National RAM Manager. Topic: Updates on the Rotary Global Grant Project in Timor Leste

A Rotary Global Grant project of USD251,334 for Timor Leste was made possible through multi-district donations of District Designated Funds (DDFs) from 15 of 21 Districts and 15 Rotary clubs in Australia. The 18-month project commenced in December 2018 and is jointly managed by the Rotary Club of North Hobart (D9830) and RAM. Key Grant activities were: 40,000 long lasting insecticidal nets (LLINs) for pregnant women, and 80 Hudson Sprayers for indoor residual spraying – these donations are distributed for use throughout Timor Leste. The Grant also included important training programs for community volunteers, midwives and Rotarians. Project implementation is progressing well and project completion is due in June 2020.

Andrea Grosvenor, D9710 Assistant Governor and RAM Project Manager. Topic: Brief Update on Solomon Islands

In March 2019, Andrea Grosvenor, Tim Freeman, and Dr Ivor Harris conducted a scoping visit to Solomon Islands in preparation for the DFAT project application for

Solomon Islands. In the visit, Central Islands was identified as a priority location for DFAT-RAM support. Solomon Islands' malaria burden is among the highest in the Western Pacific Region of the World Health Organisation (WHO). Since 2016, Annual Parasite Incidence (API) has increased significantly from 88.8 per 1,000 to 93.2 per 1,000 in 2018. (Solomon Islands Annual Malaria Program Report (2018)). The RAM DFAT project, if funded, will improve capacity of provincial malaria staff. Funding sought from DFAT was \$738,000 with \$300,000 from RAM.

Dr. Tessa Knox, WHO Technical Advisor Vanuatu. Topic: Progress Against Malaria in Vanuatu and beyond: lessons from history

Dr. Knox message was that “We must stay positive”. Malaria elimination is possible. She believed that we need to “pick the low hanging fruits and learn by doing”. With lessons from Tafea Province where malaria is eliminated using a mix of strategies, she suggested that a “whatever it takes” approach is necessary. Echoing Professor Whittaker’s emphasis on true community participation, Dr. Knox believed that citizen control, delegated power and partnership are critical elements for a successful partnership with communities. Malaria elimination is possible. However, WHO is less confident about the global achievement of malaria eradication.

Dr Len Tarivonda, Director of Public Health, Vanuatu. Topic: Malaria elimination in Vanuatu

By 2020, Vanuatu aims to achieve Annual Parasite Incidence of < 1 per 1,000 population and maintain zero deaths from malaria. Statistics on malaria infections

revealed that as infections by Plasmodium falciparum (Pf) decreased there was the attendant increase in Plasmodium Vivax (Pv). Of the 6 provinces in Vanuatu, two provinces (Malampa and Sanma) have the highest API (5.1 and 3.8, respectively). Relapsing cases of Pv-malaria is a major obstacle to achieving malaria elimination. Primaquine is used but its safety and effectiveness cannot be guaranteed. A major challenge to malaria elimination is decreased funding from donors such as Global Fund and DFAT Australia. Vanuatu has set ambitious new goals to achieve zero indigenous transmission of malaria by the end of 2023, and to attain WHO malaria elimination certification by the end of 2026.

Graham Strachan, Inventor of Aquatain AMF. Topic: Aquatain AMF: Non-toxic weapon against mosquitoes

Aquatain AMF is a silicone-based liquid that self-spreads across water surface to prevent mosquitoes from breeding in the water. Trials were conducted across the world. The Aquatain is effective for four weeks on the surface and is environmentally friendly. Mosquitoes do not develop resistance to this substance. Approved by WHO, Aquatain is for sale in 60 countries. The product is also available as drops and small blocks. Aquatain AMF is promoted as an ideal complement to LLINs and IRS.

RAM Annual Meeting

The meeting focused on RAM's financial situation with a review of disbursements of funds and donations from the districts for period 2018-2019. To date, from 2003 – 2019 (16 years), RAM has raised a total of \$2,223,836.08. The 2019-2020 funding allocations for our partner countries were shared with delegates. As agreed by RAM Executive Committee, 24% of funds will be in reserve for funding the DFAT-RAM partnership for Solomon Islands in year 2020, if our application is successful. Thus, less funds will be available in 2019 – 2020 for our partner countries, scholarship, and

RAM administration. Jenny emphasized that this amount of funds is not be sufficient to provide meaningful support to our partner countries.

At the Annual Meeting, RAM acknowledged the contributions of D9810 Shelley Gurney who adopted RAM as a DG wife's project; and Steve and Doreen Carroll (District 9670 RAM Supervisor, Eastern Region) who personally donated to RAM. In Southern Region, DGE Mark Humphries and wife Linda are exploring the possibility of adopting RAM as Linda's project. We look forward to supporting DGE Mark and wife Linda in their fund-raising efforts for RAM.

A brief mention was made of the new RAWCS Constitution; the three national vacant positions, and the Rotarians Eliminating Malaria a Rotary Action Group (REMaRAG). Delegates were encouraged to register with REMaRAG.

Dai Mason, Malaria Vaccine Project Ambassador, presented an overview of the progress and future directions of PlasProtect®.

During General Business, Steve Carroll presented a cheque for \$8,500 to RAM. An important message from delegates was that they would like to see greater transparency in how RAM uses its funds.

At the closing of the Annual Meeting, it was announced that the next RAM Conference 2020 will be held in Newcastle, New South Wales.

Gloria Hargreaves, National RAM Secretary. Topic: Role of RAM District Supervisors

Before the Conference closed, Gloria provided an overview of the District RAM Supervisors role in promoting malaria awareness and support for RAM's work. RAM promotional resources were available to delegates at the Conference.

Conclusions

The Pre-Conference workshops were well received. They were useful in guiding RAM in future project developments with Vanuatu and Papua New Guinea.

At this Conference, a similar message to that presented last year was that progress in reducing malaria infections has stalled. It was clear that malaria cases are on the increase in PNG and Solomon Islands. It was also clear that researchers have not found new innovations in regards tools to use in the fight against malaria.

The Conference confirmed that relapsing malaria from Plasmodium Vivax is a threat to malaria elimination in PNG, Solomon Islands and Vanuatu. New drugs offer hope in the treatment of relapsing malaria infections but the use of these drugs are delayed until the availability of point of care G6PD testing.

In the meantime, as Professor Dennis Shanks said to RAM delegates in 2018, we need to *“maintain sense of progress and success. ...[and] a great deal can be done with what we have now.”*

In conclusion, malaria elimination is possible and will happen if, as Prof Helen Evans reminded us, in 2018, of Prof Feasham's advice Make your commitment and go for it.

Jenny Kerrison PhD, D.Ed, RN, RM
National RAM Manager