**RAM Presentation July 2020 - Presentation notes**

Each of us has our own way of presenting a talk, so these notes are a guide only. Please edit wording to suit yourself and your audience. Remember, however, to keep the presentation succinct so that it does not exceed the 20 minutes normally available for the presentation.

|  |  |
| --- | --- |
| Slide No. | Notes |
| Slide 1 | Rotarians Against Malaria, or RAM,is a volunteer organisation working to eliminate malaria, one of the World’s most devastating diseases. |
| Slide 2 | In this presentation, I will give a brief introduction that highlights why we need to eliminate malaria. I will then provide an overview of RAM, its goal and the actions RAM is taking to achieve this goal. The relevance of RAM’s work is highlighted in the history of the fight against malaria and an example is given of where RAM wants to be in each of our malaria-affected, partner countries. I will briefly mention the search for a vaccine and the challenges RAM faces in its quest to eliminate malaria and, in conclusion, I will issue a call to action for you to help RAM achieve its worthy goal of malaria elimination. |
| Slide 3 | The powerful message here is that malaria kills. It kills too many children under 5. In fact, one child under 5 dies every 2 minutes of every day, every year! |
| Slide 4 | Malaria is indeed one of the World’s most serious and deadly diseases. Bill Gates put into perspective nicely when he reminded us that mosquitos kill more people in one day than sharks killed over the last 100 years. Mosquitos do transmit other deadly diseases like Denge and but malaria is by far the most important of these. In fact, in 2018, there were 228 milion cases of malaria causing 405,000 deaths. Many of these deaths are children under 5 years old. Importantly, this level of devastation will continue every year unless we do something about it. Note, the number of malaria cases each year is over 10 times that of Covid 19 in 2020. |
| Slide 5 | 1. When we look at the impact of malaria, we find that it affects nearly half of the World’s population, most of whom live in poor, developing countries, particularly in sub-Saharian Africa but also in our region of the World.  2. The general symptoms of malaria are a a debilitating fever, headache and chills, aand they can result in death.  3. In addition, symptoms in children include anaemia, breathing difficulties, in some cases cerebral malaria, and seizures that may result in learning and behavioural impairment, and in death.  4. The impact of malaria is magnified as people can get malaria up to 3 times a year.  5. Malaria is truly debilitating so affected people are unable to work and children are unable to attend school and study. All this contributes to adverse economic and social impacts. For example, the direct costs of malaria alone amount to US$12 Billion each year, let alone the indirect costs on people’s lives and livelihoods. Malaria is one of the World’s most serious diseases! |
| Slide 6 | **What ia RAM?** It was established in the mid 1990’s, firstly in the Solomon Islands and in PNG and then in Australia. RAM is run by volunteers and has the one goal of eliminating malaria in partner countries in our part of the world. These partner countries are PNG, The Solomon Islands, Timor Leste, West Timor Because of cross-border transmission) and Vanuatu.  **How does RAM achieve its goal?**  1. Firstly, it helps control the ENEMY, the female Anopholie mosquito that transmits the malaria parasite in blood. The first, and still most important way in which mosquitos are controlled is be providing people with insecticide-impregnated bed nets. Other strategies include drainage of surface water and village cleanliness promoted by the Healthy Villages program. Finally, RAM helps control mosquitos by chemical sprays. Internal Residual Spraying of houses is carried out twice a year to repel mosquitos from inside houses. In some cases, lavicides are sprayed on surface water where mosquitos breed.  2. Diagnosis and treatment of malaria is another vital function supported by RAM  3. As is the appoinment and training of Village Malaria Volunteers.  4. The fight against malaria is now more sophisticated by careful surveillance, mapping, and targetted interventions such as those used in the Chasing Malaria project in PNG.  5. Finally, education about malaria and how it can be controlled is a vital element of the malaria-elimination “tool chest”. |
| Slide 7 | In PNG, every household receives at least one insecticide-impregnated bed net every 3 years. Over 12 million bed nets have been distributed by RAM and 3 generations of Papua New Guineans appreciate the protection RAM bed nets give them. |
| Slide 8 | The logistics of distributing bednets to millions of villagers is an enormous task, including warehousing, shipping and distribution by whatever means are available. |
| Slide 9 | In a rugged country like PNG, the RAM bed net distribution teams often face extreme challenges. |
| Slide 10 | In a rugged country like PNG, the RAM bed net distribution teams often face extreme challenges. |
| Slide 11 | The Healthy Villages project in the Solomon Islands provided tools, education and encouragement for villagers to drain surface water away from the village and to maintain a clean village environment to remove mosquito breeding habitats, thus reducing mosquito numbers, and hence reducing malaria. |
| Slide 12 | Diagnosis and treatment of patients suffereing from malaria is an important function supported by RAM.  1. The most common means of diagnosis is clinical, based on symptoms of fever. This diagnosis is often inaccurate, largely because many other diseases cause fever.  2. The most important means of diagnosis facilitated by RAM are Rapid Diagnostic Tests. These are widely used but may be slightly inaccurate.  3. The most accurate diagnosois of malaria is microscopy but it is slow. Moreover, and microscopes and trained microscope operators are seldom available in more remote small towns and villages.  4. There is a need for better, quicker, more accurate diagnostic tests and better, more effective drugs to treat malaria. |
| Slide 13 | An increasingly important strategy for elimination of malaria is careful surveillance, diagnosis and targetted interventions such as those used in Chasing Malaria (and also those currently being used throughout the World to control the spread of the Covd 19 virus). The intervention might include spraying lavicide on water breeding grounds. Teams of trained mobile and village health workers respond promptly to malaria cases and trace to source of the disease - Whether it is local transmission or imported from other villages, towns or regions. Rapid Diagnostic Tests are carried out to confirm that the symptoms are caused by the plasmodium parasite and the patients are treated with anti malarial drugs. All people who are diagnosed with malaria receive a new insecticide impregnated mosquito net to provide ongoing protection, particularly for pregnant women and mothers. from the disease.  Because this effective malaria elimination strategy is labour-intensive, volunteers including school teachers are often given some training on diagnosis and treatment, supplied with Rapid Diagnostic Test kits and drugs so patients receive prompt treatment. School children can play a useful role in surveying waterways for mosquito larvae to identify buildup of mosquito populations, this prompting effective interventions to reduce these populations |
| Slide 14 | This is the sort of detailed surveillance and mapping done by RAM PNG in identifying cases and the ages of those suffering from malaria. These data provide a lot of intelligence to guide effective interventions. Combined with a GPS capability, It is now possible to identify he actual house in a village where malaria has been reported so even more precise, targetted interventions can be given. |
| Slide 15 | Village Malaria Volunteers, proudly identified by their RAM shirts, are used extensively to ensure that every household within their area receives a bed net. In addition, selected village volunteers receive training in diagnosis and treatment for malaria, and resources such as spare bed nets, Rapid Diagnostic Test kits and drugs to provide prompt diagnosis and treatment. |
| Slide 16 | Knowledge is power! Education about malaria and its treatment empowers children, Community Health Workers, Village Malaria Volunteers and villagers to protect themselves from this dreaded disease. |
| Slide 17 | This graph shows the intensity of malaria infections in the Solomon Islands over the last 40 years. This general pattern of infection has also been reported for PNG. Prior to the mid 1970’s, DDT was widely used around the bigger towns and mosquito numbers, and the incidence of malaria, were low but  once DDT spraying was banned, Malaria cased increased rapidly.  In the mid 1990’s, Rotarians in both the Solomon Islands and Papua New Guinea launched RAM to tackle the malaria problem. They asked their counterparts in Australian Rotary Clubs to raise funds for insecticide bednets that they distributed to villages. Each Australian Rotarian was asked to donate $2 each year for RAM bednets and received recognition by pasting a RAM sticker on their dinner badge. Most Rotarians made this modest donation and, in turn, were well informed about malaria and the work done by RAM in distributing bed nets.  After the Global Fund against malaria, TB and AIDS injected huge amounts of money for malaria control in the early 2000’s, however, Australian Rotarians were told that the modest funding they provided was no longer needed. The funding from the Global fund was effective in reducing malaria cases.  However, in recent years, funding from the Global Fund has been shrinking so the suite of additional interventions needed for malaria elimination again required additional funding from RAM Australia. Unfortunately, RAM had dropped the ball in many Rotary Districts in which the average Rotarian has little knowledge of malaria and RAM and hence, little motivation to donate funds.  This situation is exacerbated by the increase in malaria infections over the last few years. A determined effort by RAM is needed to reverse this worrying trend. |
| Slide 18 | This graph is the timeline of where RAM would like to be in all partner countries – zero malaria cases. For WHO to certify a country as malaria-free ie malaria has been eliminated, it is necessary to show zero cases of local malaria over 3 years.  RAM is assisting Timor Leste and Vanautu, both of which are close to that goal of elimination.  The situation in PNG and the Solomon Islands will require a concerted effort over a much longer timeframe before the goal of elimination is achieved. |
| Slide 19 | An effective vaccine has proved to reduce the incidence of malaria (*Plasmodium falciparum*) in African children but efficacy is only about 30%.  A new, whole parasite vaccine developed at Griffith University is currently undergoing human clinical trials. |
| Slide 20 | RAM Faces significant challenges to achieving its goal of malaria elimination in partner countries.  1. For its on-going work, RAM needs to keep the foot on the pedal to maintain gains from vector and parasite control measures.  2. RAM needs to help fund the staff and resources needed for accurate and timely surveillance and mapping of the disease.  3. There is a need for a more reliable, but simple, field test for asymptomatic carriers and,  4. the need for a new, affordable and reliable antimalarial drug and  5. for a multi-valent vaccine. All these things are needed, together with focus and persistence, to eliminate malaria. |
| Slide 21 | In conclusion, RAM will succeed! It will help eliminate malaria!  But—, and here we have ”A call for action”  **RAM needs financial support from Rotarians to finish the job!** |