Mulanje Mission Hospital Newsletter

March 2018

Mulanje Mission Hospital

CCAP Blantyre Synod

PO Box 45 Mulanje

Malawi

E-mail: director@mmh.mw

National Bank of Malawi
P.O. Box 945 Blantyre

Hospital accounts:
407275 ($)
286818 (£)
380873 (€)

SWIFT CODE: NBMAMWMW

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Editorial Comment

Ruth Shakespeare

Dear friends of MMH, partners and colleagues,

It is our hope that this newsletter will bring you a snapshot of life at MMH - our community is busy as ever, and everywhere you go, whether to maternity, the adult wards, the old TB block or down to the Sustainable Livelihoods centre, work is in progress to improve our infrastructure and thus the services we can offer to patients. See more on page 4!

We have been able to renegotiate and extend our Service Level Agreement with government to provide free services for all children under 5, and free care for those with chronic diseases such as asthma, diabetes and high blood pressure, enabling many more people to access the long-term care they need.

Work continues on essential public health programmes such as malaria control and interventions to improve nutrition at village level, and we are rolling out an expansion of primary healthcare prevention and treatment services to more and more village health posts.

We are so grateful for all the prayerful support that makes our work possible, and hope that you will join us this week in your various communities around the world, as we celebrate the amazing joy of Easter.

And we hope that our younger and young-at-heart supporters will also enjoy their chocolate! *Ruth*

MMH is very proud of our most recent graduates!

Annie Kaseka

BSc in Palliative Care

Diverson Mkwapatira

BSc Surgery

Improving access to care for Non communicable diseases; Mulanje Mission Hospital experience

by Tabu Gonani and Majorobela Ramarikhoane

The burden of communicable diseases has affected health delivery systems globally. It is estimated that NCDs account for up to 70% of deaths globally, with more than half of the deaths occurring in low and middle income nations.

Malawi has not been spared from the burden with NCDs accounting for up to 29% of the country`s disease burden. In view of this, the government of Malawi in 2013, launched a National Action Plan for prevention and management of NCDs. Since then several strategies have been put in place to fight the burden. Among other things, Government and mission hospitals established clinics to see patients with the top four NCDs i.e. diabetes, cardiovascular diseases, cancer and chronic lung disease.

Mulanje Mission Hospital, joined this fight in 2014. Apart from having a cervical cancer screening program in place, the hospital had also introduced a Diabetes and Hypertension clinic which has grown over the years. August 2016 saw the introduction of an Asthma clinic which is also making a big difference to our patients.

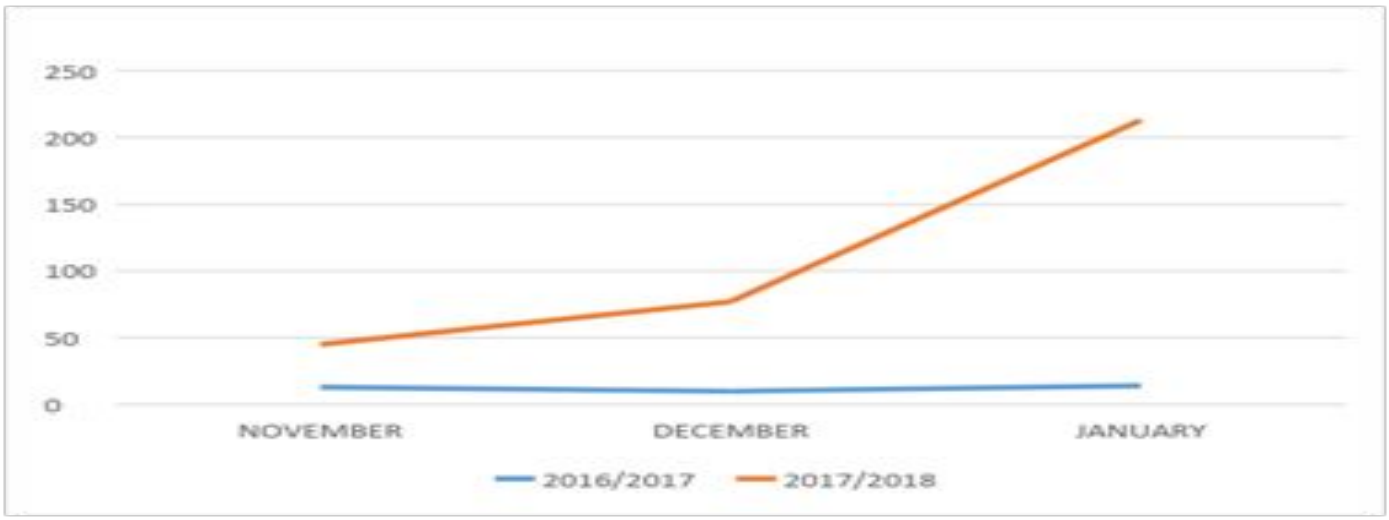
MMH operates in a rural environment, where poverty is rampant and acts as a barrier to health care seeking behaviour. This has been a big burden since most NCD patients have to take long life medication. The burden of poverty prevented patients from adhering to their medication.

MMH is one of the Christian hospitals in Malawi that has a service level agreement with government. Under this arrangement, the hospital offers free services to patients within the catchment area for selected diseases. For the past years, the services included Under fives inpatient care and Maternity services.

In negotiating the SLA for 2017/2018, MMH proposed with support from the district health office, to expand the SLA to a few more services; Non communicable diseases, under five outpatient services and cervical cancer screening. This expansion has improved accessibility of health services by the communities.

One of the areas where the expansion has made a big difference is the diabetes and hypertension clinic. The number of patients seen per clinic day used to be not more than thirty, with the average number of new patients being seven per clinic.

After SLA was extended, the number of people attending from the catchment area has tremendously increased as illustrated below. MMH has also extended its services to mobile clinics so that the distance patients travel to get their chronic disease medication is minimised. Currently the NCD outreach clinics are offered at Misanjo, Ngolowera and Demula Health Posts .



The increase in patient numbers after diabetes and hypertension services were included in the SLA from November 2017

Malaria elimination is possible - Sheilla Mangwiyo Chilowa

MMH has been implementing a malaria vector control program in its catchment area since 2012. In 2017, larviciding was added to the Indoor Residual Spraying (IRS) programme as an additional control measure.

These malaria control interventions are in line with the National malaria control programme strategic plan, but are not yet implemented in most of Malawi.

Indoor Residual Spraying targets adult mosquitos while Larviciding targets the larvae.

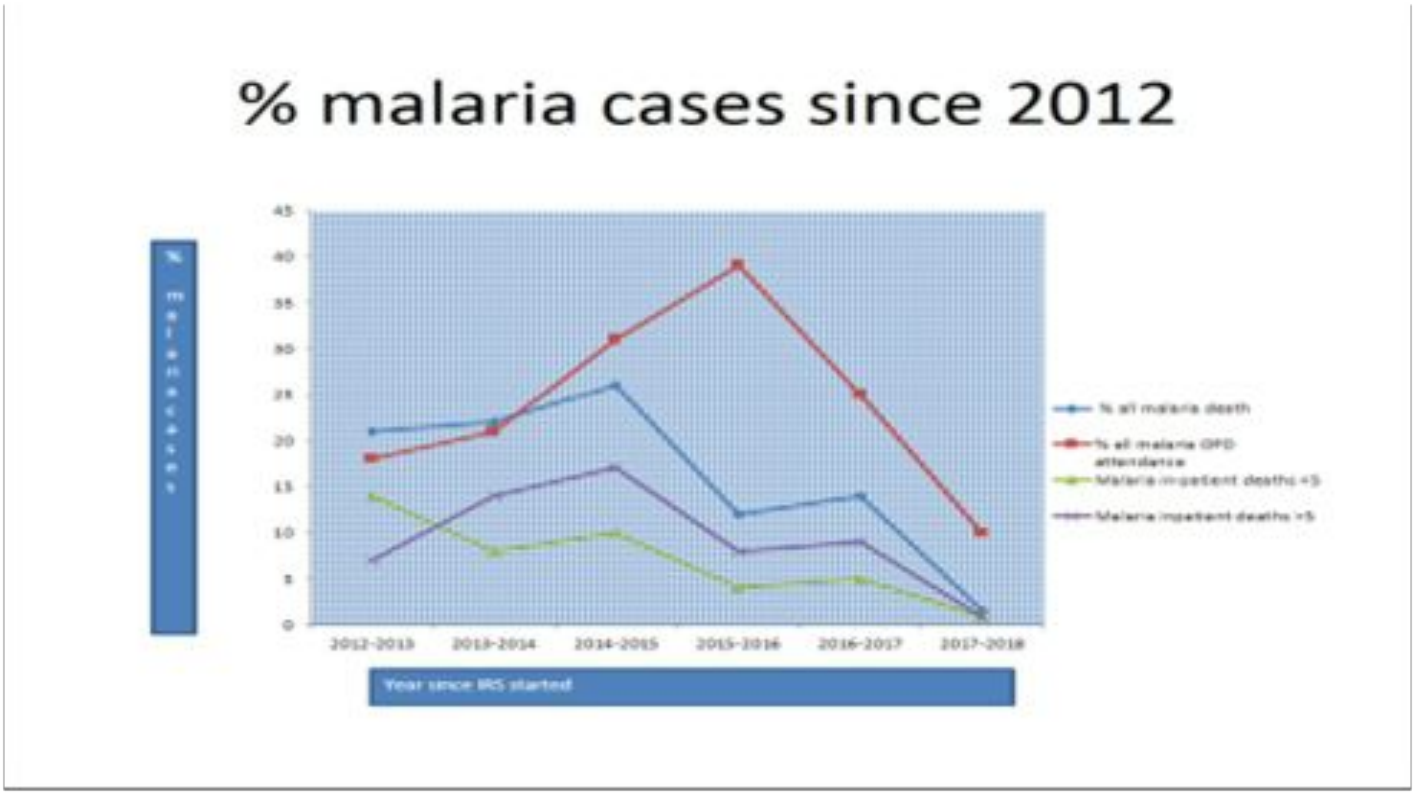
Larviciding is the regular application of biological or chemical insecticide to stagnant water bodies. The larvicide which MMH is using is Bacillus *thuringiensis sub sp. israelensis* (Bti).

Bti presents essentially no risk to the environment, workers and local economies. MMH has been training community volunteers to kill mosquito larva from December 2017 to March 2018. The program is being done in 26 villages of our catchment area by a pool of 52 volunteers while IRS has been carried out in 54 villages in the malaria season 2017/2018.

The results of the vector control program at MMH are remarkable and give a good indication that it is possible to eliminate malaria in sub Saharan African countries like Malawi. Malaria truly is a preventable disease!

Apart from malaria control, beneficiaries have been exceptionally happy with other effects of the programme, such as the ability of the chemicals used to kill other nuisance insects like fleas which keep them awake at night. Other insects of medical importance which die in the process are cockroaches, bed bugs etc.

See below the results for under-five admissions and deaths since the program started in 2012.



The decline in admissions and in patient deaths from the year 2015, when we reached the target of 50 villages in the programme, indicates the positive impact of vector control. ▲

What's happening at MMH this month?

With the support of our partners, MMH has become very busy on the building and renovation front since Christmas. If you were here, most days you would be seeing deliveries of building supplies, hearing hammering and sawing, and smelling fresh paint. So here's a taste of the work in progress:

A solar tree has been constructed to support the new panels powering our laundry and our water pumps. Thanks to the Malawi Workgroup Leeuwarden and EMMS International for this.

The postnatal ward is in the throes of renovation, with the support of the Govt of Canada, through Presbyterian World Service and Development. Two rooms have been completed and two are in progress. Patients will benefit from new toilets and showers and more space in the ward area, a new postnatal clinic has been constructed, and staff have a new work station and cloakroom facilities.

The old TB ward is being converted to a four bedded High Dependency Unit with support from the Beit Trust, the English Reformed Church Amsterdam and Wilde Ganzen.

And the area around the previous Nutrition Rehab Unit is being transformed with the addition of a new orphan care clinic and childrens play area, integrated with a new resource centre for the Sustainable Livelihoods programme.

Research report:: A study of the residual effects of alphacypermethrin, an insecticide used in Indoor Residual Spraying (IRS), for malaria control, on different types of walls. Tikondwe Katumbi

This study is the first of its kind in Malawi to evaluate the efficacy of an insecticide used in IRS after walls of different types are exposed to the chemical for some weeks.

Malaria is a global health problem, with the Africa region accounting for 88% of cases followed by South East Asia (10%) and lastly the Eastern Mediterranean (2%). The majority of deaths occur in African children and nearly all are caused by *Plasmodium falciparum.* Between 2000 and 2015, malaria incidence fell by 37% globally. In Africa, malaria incidence reduced by 42%. The mortality rate fell by 60% globally, and by 66% in Africa.

MMH implemented IRS in 2012, with the use of alphacypermethrin, a pyrethroid. MMH later changed to use of organophosphates after widespread pyrethroid resistance was found in the area. Under mentorship of Professor Dylo Pemba of Chancellor College, MMH, and led by Tikondwe, we embarked on the above research in order to understand if some people had advantages over others from IRS based on the type of houses they live in. Houses selected for study were those with the following types of walls; mud, lime, burnt bricks and cement.

The research team first used a cone bio assay method to determine mosquito mortality rates. Mosquitoes were put in cones against treated walls and mortality rates were observed. The results showed no significant differences in the residual effect of alphacypermethrin on different types of walls and this was not affected by the pH of the wall substrate. .

This study was done two months after insecticide application which gave us confidence that the insecticide was still active two months after IRS although beyond this period, resistance was detected Pemba, 2015 (unpublished), hence this chemical may be used in IRS programme only with intensive monitoring.

During the study, we also evaluated mosquito population density on different types of walls. High mosquito population density was observed in January, then the population decreased in February, March and the least were collected in May, this trend was true in all types of walls. This is related to rainfall and temperature which are favourable mosquito breeding factors. This can be supported with metrological data for Mulanje district over study period which showed high rainfall and Temperature in rainy season and reduced towards winter. However, monthly mosquito population density analysis showed that more mosquitoes were collected in mud houses than other types of houses, this could be attributed to houses with mud walls being substandard which allow more entry to mosquitoes.

Another interesting result of our study was that more malaria positive individuals originated from mud houses than other types of houses. This was done using malaria rapid diagnostic tests, people were randomly tested for malaria and type of their houses recorded. The reasons for this could be the same as those of mosquito population density which is attributed to substandard houses and not type of walls. Since mud houses have *both a* high malaria rate and population densities, these results could lead *u*s to confidently conclude that improving housing standards can contribute to malaria reduction.

Moving new solar equipment into place has been quite challenging ▲

SUSTAINABLE LIVELIHOODS PROGRAMME: A FIELD DAY at BOLOLO VILLAGE IN PICTURES — Hastings Chitengu

Bololo Model Village sign post

A Lead farmer explains the importance of crop rotation

A few of the participants during the field day ▲

Michael Phiri representing Mulanje District support ▲

Nutrition Stand: new recipes made from local ingredients ▲

Improved Goat Khola ▲