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Annual Report

2020-2021



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Who are we

Our History

Hepatitis B Free is an Australian-registered tax-concession, not-for-profit charity. We are run by a group of passionate volunteers mostly based in Sydney, Australia who want to give back and make a difference. Our volunteers come from diverse backgrounds and professions, including doctors, nurses, allied health, lawyers, and students. Hepatitis B Free was founded in 2013 by five Australian doctors and nurses. The team was led by Dr.

Alice Lee, a gastroenterologist and hepatologist with expertise in viral hepatitis and Sue Huntley, a clinical researcher with a background in nursing and project management. Galvanised by their experience in remote Papua New Guinea, where they travelled on foot to vaccinate and provide basic health clinics for tribal villages, they decided to continue taking action towards addressing the huge needs of those with hepatitis B in resource-poor areas.

Our Vision

To work together towards a world free of hepatitis B.

Our Mission

To facilitate improved awareness, vaccination, testing, and life-saving treatment of hepatitis B and care services aimed at those most in need.

Our goals are globally aligned

Our ultimate goal is the elimination of hepatitis B. The World Health Organization has called for the elimination of hepatitis B by 2030. Sustainable Development Goal 3.3 states that “by 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases”.

(United Nations, Sustainable Development Goal 3. <https://sustainabledevelopment.un.org/sdg3>)

Our team

Dr. Alice Lee	Dr David Hilmers	Ms. Sue Huntley	Mr. Kar Chua
Ms. Melissa Kermeen	Dr. Thao Lam	Ms. Jodee Wise	Dr. Aiden Foy
Dr. Moe Moe Thinn	Dr. Carrie Lee	Mr. Peter McGhee	Dr. Isaac Chan

And many other volunteers and consultants both local and international



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Our values

Partnership

We identify and collaborate with key stakeholders in each community, including health care workers, community members, Local Health Authorities and government departments.

Education

We raise awareness about hepatitis B among key high-risk groups, including in countries with high prevalence rates of hepatitis B, people with limited access to health services, and culturally and linguistically diverse communities. We train and upskill local healthcare workers, who we believe are instrumental in providing ongoing health care to their communities. Through consultation, we provide skills and resources in areas they identify as most important.

Sustainability

We work towards making our impact long-term and sustainable, through combined efforts of education in the general community and/or healthcare workers, collaboration with local partners and government, regular evaluation of our projects, and advocacy at a policy level.



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What is Hepatitis B

The hepatitis B virus (HBV) is the most common cause of liver infection in the world. It is spread via blood and certain body fluids, including through unprotected sex, sharing needles, and from mother to child at birth. One in three people in the world have been exposed to HBV.

There are 240 million people worldwide living with chronic hepatitis B. Every year around 700,000 people die from complications of hepatitis B. The highest rates are found in sub-Saharan Africa, East Asia, the Pacific Islands, and the Amazon basin of South America.

Hepatitis B infection can be acute or chronic.

When the infection lasts for longer than 6 months, it becomes chronic hepatitis B. The virus can remain in the body for many years, often without any symptoms.

Without treatment, chronic hepatitis B can increase the risk of scarring (cirrhosis) and liver cancer.

Vaccination

Vaccination is one of the most cost-effective ways to prevent disease. The hepatitis B vaccine is safe and highly effective in providing immunity against infection. Newborns are particularly vulnerable to hepatitis B – if they are exposed to the virus, they have >90% chance of developing lifelong infection, known as chronic hepatitis B. Therefore, the World Health Organization (WHO) recommends all infants should be vaccinated for hepatitis B at birth or as soon as possible (within 24-48 hours) followed by at least two other doses in infancy. These three doses are 95% effective in preventing infection.

However, birth dose vaccination is a major challenge in countries with limited access to healthcare, particularly when women give birth at home without a skilled attendant.

Other priority groups for vaccination include:

Health care workers

Household and sexual contacts of people with hepatitis B

Young adolescents

Migrants from countries with high hepatitis B rates

People who inject drugs

Men who have sex with men

Persons with multiple sexual partners



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Testing

Testing is important because many people with hepatitis B infection do not experience noticeable symptoms. A blood sample tested in a laboratory is the gold standard to determine whether a person has been infected with the hepatitis B virus. There are a range of tests that are used and these can be ordered as individual tests or a series of tests.

These include:

- Hepatitis B Surface Antigen – the protein on the surface of the hepatitis B virus. A positive result means a person has hepatitis B virus in the blood.
- Hepatitis B Surface Antibody – the body normally produces antibodies (proteins that are part of the immune system) in response to infection. A positive test means that either: a person has been successfully vaccinated against hepatitis B; or they have recovered from an acute infection from hepatitis B and the body has produced an antibody.
- Hepatitis B DNA – can be used to quantify the amount of hepatitis B virus in the blood. This can assist doctors to assess if a person is at increased risk of liver damage.

In resource-limited settings, rapid point of care test kits, typically conducted via simple finger prick, can provide results within minutes and can be beneficial in the absence of laboratory infrastructure.

Treatment

Hepatitis B is not curable, but it can be treated. Not all people with chronic hepatitis B need treatment, however all people should be monitored by a health professional who can monitor their liver function and virus levels.

Treatment with antiviral therapy medicines such as tenofovir and entecavir reduces risk of death after five years from nearly 30% to about 5% in the sickest patients. Not only is this treatment lifesaving, it brings health and a future for patients and those around them. Treatment can turn a death sentence into a treatable condition



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Where we work





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Papua New Guinea

We have been working in the Oro Province since 2013 in both remote villages as well as the provincial capital of Popondetta. Our work in this region has grown from immunisations and medical outreach clinics in remote villages to a hepatitis B treatment program run through a public-private partnership model with the Popondetta General Hospital, Oro Provincial Health and New Britain Palm Oil Limited (NBPOL), a company that provides healthcare for its 20,000 employees and their families.

While the hepatitis program continues, competing resources due to the COVID-19 pandemic has meant health resources and staff man power have had to shift their focus to manage the waves of COVID-19 cases. Local staff turn over is also a compounding factor. Last report advised 8 patients were currently on treatment and this has remained unchanged.

After many months without the ability to analyse blood samples Siroga Clinic received the new haematology and biochemistry analysers that were ordered prior to the end of 2019. The computer setup used to report the results was found to be outdated and unable to run reports. HBF donated a compatible laptop to be used to support the program. The company IT team set up the computer in June and hopefully samples will be able to be processed in the coming weeks.

The Hepatitis B patient information booklet has undergone the first round of translation from English to Pidgeon by health workers in Siroga Clinic. There have been some minor updates to the English version of the booklet that will be made to the translated version also. We hope to have this completed in the coming months depending on local workload.

In March 2021 HBF purchased 4000 Hepatitis B test kits to be used for 2 PNG projects. 3000 kits were sent to Port Moresby to be used for an antenatal screening program and the remaining 1000 kits were sent to Popondetta to be used between Siroga clinic and Popondetta General Hospital for general community screening. The shipments arrived in country in June and are pending use.

Online training is provided on an ongoing ad hoc basis by Dr Alice Lee via zoom teleconference. Whatsapp and email are used to assist with reviewing challenging cases together with local health workers. Discussion is underway for a new program site at the NBPOL compound health clinic in Milne Bay, this is projected for 2022.



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Kiribati

written by Dr Thomas Russell

The year 2021 has so far proved to be an extension of 2020 – a pandemic-ravaged year with disruptions to medical supply chains, lack of international flights and local staff movement for overseas training and migration.

Local health care providers comprised of doctors and nurses continue to provide the backbone for continued clinical management and support of patients at the Hepatitis Clinic (HOPE). Two senior medical registrars with postgraduate training left the country at the beginning of the year for further training leaving behind three junior registrars to carry the national clinical load. There continues to be no consultant in internal medicine on Tarawa.

Weekly clinic days continue to remain once a week at Tungaru Central Hospital (TCH) with averages of twenty patients being seen. Since the beginning of the year (2021), 140 patients have been registered to the clinic. Nine patients have since started treatment, with an additional 16 awaiting drug availability. A significant number of patients have incomplete blood analysis.

The Fortnightly virtual Zoom sessions have been maintained as consistently as possible accounting for varying clinical schedule and time differences. This continues to provide invaluable assistance for local case management, considering the lack of specialist care on the capital island.

Table below summarizes these findings

Patients registered	On Treatment	Awaiting Treatment	Awaiting Blood Results
140	9	16	115

There have been 29 pregnant mothers registered to the Hepatitis Clinic in 2021. All mothers have been referred from their respective antenatal clinics. Two mothers are on treatment whom are known cases and had been on treatment prior to their pregnancy. Four mothers are planned to start treatment once TDF is in stock. 10 mothers are awaiting baseline viral loads and biochemical tests. Seven are to await 28 weeks gestation for a second review.

Table below summarizes these finding

Mothers registered	On Treatment	Awaiting Treatment	Awaiting Blood Analysis	Not yet eligible
29	2	4	10	7

There were several proactive activities undertaken by the Taskforce throughout 2020 in an effort to promote the program as well as seek out new cases.

- World Hepatitis Day 2020 outreach– the day was celebrated at Bairiki, capital city of Kiribati and was led by the public health and health promotion unit with skits and public announcements regarding chronic hepatitis B as well as the introduction of the PMTCT program. Hepatitis tests were offered to the public and positive cases were referred to the clinic. A total of 68 individuals volunteered for testing with 12 turning up a positive result.



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- Southern Kiribati Hospital (SKH) outreach- A seven day visit in November was conducted to the island of Tabiteuea Meang where SK Hospital is located; the eighth such visit to neighboring outer islands since 2019 in an effort to establish, roadmap and address burden of disease. The team comprised of a clinician, clinic nurse, public health officer, laboratory technician, sonographer and pharmacist. Team activities included; public awareness campaigns at public sites (council office, school, clinics), health care worker (HCW) trainings and PMTCT program introduction and serology testing offered to the public and HCW alike. A total of 34 HCW were tested which included medical assistants, public health nurses and nurse aides. There were 6 positive cases among those HCW who were tested. Of the 28 HCW who tested negative, 25 received their first vaccine dose. The team managed to test a total of 235 individuals with 30 positive cases discovered.
- Parliament outreach- A one-day session was held at the House of Parliament at Ambo, Tarawa where members of parliament were invited to partake in presentations made by members of the taskforce. Topics ranged from program overview to hepatitis testing and treatment of patients and antenatal mothers as well as open discussion on ways to address outer island accessibility to testing and treatment.

In May 2021 a five day outreach was conducted to the northern most island of Makin (population 1,900. Five members of the hepatitis program and taskforce took part in this effort.

The team conducted meetings with the island mayor and island council staff along with the island's medical assistant. These meetings covered health education and screening plans for members of six villages and a junior secondary school (JSS).

Plans are underway to conduct a second outreach to another outer-island later this year.

The table below summarizes the results;

Community	No. Tested	Positive	Negative	Pregnant – +ve	Pregnant – -ve
1	59	15	44	3	6
2	81	18	63	1	2
3	50	10	40	2	5
4	107	14	93	2	6
5	35	0	35	-	-
6	31	6	25	0	4
7	30	8	22	0	0
Total	393	71	319	8	23

World Health Day, 2021- The upcoming World Hepatitis Day will be held on Tarawa with the following scheduled events:

- Road Show
- Junior Secondary School Quiz competition
- National radio quiz and promotional broadcast
- Official commemoration, health promotion and screening at Bairiki Square



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Challenges

Throughout 2020, the program was unable to monitor patient's liver and renal functions. As a result, heavy reliance on clinical signs and indirect investigations were performed.

Fortunately, some immunoassay results were still possible due to ongoing monthly chartered flights between Tarawa and Brisbane. This allowed for HBV and HDV viral load testing through the generous support of VIDRL. This informed decision to identify patients who needed treatment initiation, particularly those co-infected. However, there was still a lot of inconsistencies with results and many of the mothers did not have any results, even for those started on treatment.

Laboratory Tests:

2021 and laboratory support remains a challenge. A period of short-lived availability of biochemical tests was a welcomed reprieve when reagents for liver and renal function panels arrived in the country. However, this only lasted for several weeks. Additionally, rapid-test kits for HBSAg have also run out compounding what has already been a difficult clinical situation.

Financial constraints and payment inefficiency have directly factored into late payments to international supplier and their subsequent delayed shipment.

Drug Shortages:

National supplies of Tenofovir ran out in May, 2021. This, understandably, has caused great angst among those concerned, particularly the patients. There are reports of a drug supply to arrive in late July, 2021 and is dependent on the availability of a repatriation flight from Brisbane, Australia

Outlook

Laboratory Testing

- Plans to procure biochemistry reagents to increase national capability
- Plans to increase order of serology test kits for outer-island outreach

Kiritimati Island Treatment Program

- Plans are underway to actively treat patients on Kiritimati Island, where preliminary data from a recent serosurvey suggest high endemicity and co-infection.
- Plans to begin staff training on clinical registration, management and treatment protocols
- Plans to secure improved telecommunication capabilities
- Plan to start treatment on existing, known patients

Staff Training and Support

- Strengthen staff training through fortnightly virtual sessions for CME and program updates
- Plans to employ local staff to consultant and provide technical and management assistance for program development and support
- Develop an outer-island Standard Operation Procedure for linking positive cases to treatment program
- Develop training methods for outer-island Medical Assistants for early screening and patient assessment



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DPRK

Hepatitis B is the one of the most significant public health problems in the DPRK (Lee et al., 2013; World Health Organization, 2009). Resources to support hepatitis needs are limited. Screening, diagnostics, preventative intervention, monitoring and therapy are very much in need of support. Access to antiviral therapy is not possible for most of the population of 25 million people.

On the positive side, there is a strong vaccination program for infants as part of the universal vaccination program, as well as a successful catch-up vaccination for children. Those with chronic infection are cared for by a well-established, structured medical system, with dedicated health care workers in specific hepatitis facilities. Care includes rest, nutrition and some Korean traditional remedies.

Limited access to hepatitis B treatment is not unique to DPRK. Globally, barriers to treatment include the complexity of management; insufficient laboratory capacity in terms of infrastructure, consumables and skilled workers; and the high costs of antiviral treatments and diagnostics. World Health Organization guidelines on hepatitis B testing and treatment, released in 2015, provide recommendations on treatment in resource-poor settings. The components of such a programme include access to patients for clinical assessment and prioritisation for treatment; basic diagnostic and monitoring investigations, including blood tests and imaging; and the provision and use of antiviral medicines.

Since the program commenced in 2015, more than 2,000 patients had been commenced on hepatitis B treatment at five different treatment sites. The hepatitis C program that commenced in December 2019 was also continuing. Since early 2020 when COVID-19 too hold DPRK has remained closed to communication and resupplies. We anticipated supplies of HB medication would of ran out in mid 2020. We continue to communicate with program partners CFK in the USA about the current challenges, we hope 2022/23 will see communication and resupply reopen in DPRK.

Despite the challenges that working in DPRK brings, this life-saving humanitarian project will continue.



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Myanmar

Fortnightly communication with local teams Medical Action Myanmar (MAM) and Myanmar Liver Foundation (MLF) continues. Dr Alice Lee corresponds via zoom teleconference, Whatsapp and email for program updates and to assist with reviewing challenging cases together with local health workers.

Group format online training is well received with various topics covered. Normally 20-30 doctors are in attendance. There continues to be an ongoing shortage of medical staff in Myanmar.

The HOPE-C treatment program in Patoa that started December 2019 now has more than 20 patients started on DDA treatment thus far with more patient to be commenced. The patients commenced on treatment consist of a mixed cohort of HCV, HCV/HIV, HCV/HBV/HIV. Medications used for the Patoa HCV treatment program is the same regime that was used in the prior Yangon program. Medications have been donated by DAK foundation- an Australian-based foundation.



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Pacific Islands

General Pacific Island information-

World Health Organisation release the new HBV guidelines for the Pacific on Mother To Child Transmission (PMTCT) in July 2020. These guidelines will support policy changes to allow treatment of pregnant women to reduce HBV transmission during pregnancy and birth.

Monthly meeting ran by Dr Alice Lee via Zoom teleconference for the PI countries continues. Attendance fluctuates depending on competing in-country priorities with the COVID pandemic ongoing but is usually well attended and generates much discussion. Policy, guidelines, structured education along with reviewing challenging cases together with local health workers has been a focus of the monthly meetings.

Vanuatu-

The HBV program protocol for Vanuatu was finalised in September 2019 just prior to COVID-19. The HB program is moving forward with great enthusiasm. Logistic issues with international shipments remain with shipments being routed via Fiji then forwarded on to Vanuatu and Tonga.

HBF paid for the cost of the shipment of medications in Aug 2020 and in Feb 2021. The country is becoming more self sufficient and is due to take over the medication supply in the coming months.

HBF approved a grant of \$5,000AUD to assist with funding a co-ordinator for the program. We were asked by partners in New Zealand to help facilitate the purchase of a laptop and Hepatitis B viral load test cartridges for program use which was arranged then reimbursed from NZ.

Tonga-

As with Vanuatu, logistic issues meant that the international shipment would first need to be sent to Fiji then forwarded to Tonga. HBF paid for the cost of the shipment of medications in Aug 2020 and Feb 2021.

The country is becoming more self sufficient and the program is doing well under the leadership of program champion Dr Loutoa Poese. The country is due to take over the medication supply in the coming months

Solomon Islands

While the local team are keen for assistance with a Hepatitis program, competing priorities are proving difficult to engage with the local team at the current time.

Samoa

At present Samoa are completely focused on COVID-19 related activities and program start up will be revisited at a late date suitable for the local team.



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Moving online

Hepatitis B Free (HBF) programs rely on good communication, collaboration and ongoing training with local health workers who are primarily responsible for the care of their patients. Due to the remoteness of some locations, online training was always a core part of the programs but with the global COVID-19 pandemic persisting,, online training is now the primary (and in majority of cases) the only training available to health workers.

Since March 2020 when all overseas travel ceased all programs have relied 100% on online training and communication (via various platforms).

However, difficulties remain, including scheduling due to time differences, competing priorities and of course limited internet bandwidth in some countries, making things such as video conferencing and even email difficult.

Training for the Pacific Island countries is provided on a fortnightly/monthly basis by Dr Alice Lee via zoom teleconference. The sessions consist of slide presentations and case reviews. Topics are tailored to local teams specific education needs. Time is allocated during each session to assist with reviewing challenging cases together with local health workers to provide support with their patient management.

Myanmar teams are consistently engaged, with fortnightly/monthly zoom meeting well attended by partners from MLF, MAM and WHO.

Dr Alice Lee and Dr Aiden Foy run the online education for the local health workers in Kiribati. Depending on availability this may be at times large group, small group or one on one training.

While overseas visits are not essential to program success, there is a great sense of joy in experiencing and seeing the great work done by local teams face to face. We look forward to the time we can once again travel to visit our partners and program sites.

Presentations for local organisations such as Lions and Rotary all but ceased in 2020/2021. We look forward to these returning when able. The presentations on Hepatitis B in general and our work in various countries are always well-received and generate much discussion .





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Medical supplies and support for health care workers over the last year

Hepatitis B rapid testing kits donated to:
Papua New Guinea: Port Moresby Hospital, Popondetta hospital, Siroga health post
Kiribati

Days For Girls Sanitary Packs

Birthing Kits

Suture kits

Neonatal cots

Medication trollies

Basic medical supplies to support health posts, hospitals, and vaccination programs

Weekly/fortnightly/monthly zoom education sessions provided for local health care workers (PNG, Myanmar, Kiribati, Vanuatu and Tonga)

Laptop to support program work in Kiribati

Lab supplies and consumables

Colostomy bags sent to Fiji

Laptop to support HBV program in Vanuatu

Anti-viral medications to Tonga, Vanuatu and Kiribati
