Finding new ways to fight TB

The Britain-Nepal medical trust

Annual Report 2022/23

Gillian Holdsworth

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Cover photo:
Soma Rai, BNMT Nepal human resource and administration officer, paraglides in Pokhara to raise awareness for Stop TB, December 2022

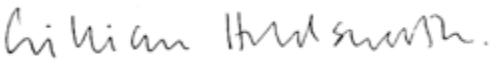
Chair's Foreword

In 2012 the Britain-Nepal Medical Trust established a local Nepalese non-governmental organisation: the Birat Nepal Medical Trust (BNMT Nepal). This year we celebrated the first ten years of BNMT Nepal, who we continue to support through our close partnership. So this year's report reflects the exciting and important work which BNMT Nepal is delivering in Nepal – to improve the prevention, diagnosis and treatment outcomes of tuberculosis (TB) in Nepal.

Sometimes I need to remind myself why tackling TB is so hard. TB was a public health problem in the UK once – but its incidence was decreasing before the introduction of TB treatment in 1952. That was primarily because of improved social conditions, notably better housing and nutrition.

In this year's report we consider the situation in Nepal in terms of social conditions as well as available treatments. BNMT Nepal is seizing new opportunities for prevention and reduction in disease transmission, improved diagnostics and treatment. But it also takes into account the impact of social issues – poverty, poor nutrition and housing – on TB and strives to build these into a more effective TB control programme.

Finally – I would like to thank you all for your continued support for our work, without which none of it would be possible!



Gillian Holdsworth
Chair of BNMT UK

Raghu Dhital

A message from the Executive Director of BNMT Nepal

In 2022/23, BNMT Nepal successfully implemented 19 projects, strengthening service provision and making healthcare more accessible in remote areas, and improving health outcomes for underserved communities.

One notable achievement this year was the piloting a new way of treating latent tuberculosis infection in adults. The 3HP treatment regimen, approved by the World Health Organisation (WHO), prevents adults infected with TB bacteria from developing active TB. It is significantly shorter and easier to take than the old treatments. Our project, carried out in collaboration with Nepal's National Tuberculosis Control Centre (NTCC), introduced 3HP treatment in Nepal and showed that it is not only acceptable, but in high demand among communities with a high burden of TB.

BNMT will continue to work with communities and the government to bring innovative patient-centred models of care to communities in Nepal. Through rigorous research, data collection, and trend analysis, BNMT has produced evidence-based reports and policy briefs which have enabled decision makers to incorporate our strategies into policies that effectively address critical healthcare issues.

We also supported the NTCC by supplying emergency TB drugs to help manage a logistics crisis. This prevented potentially dangerous delays and interruptions in treatment for TB patients.

As Nepal moved beyond the COVID pandemic, BNMT Nepal completed its data collection for SARS CoV-2 sequencing and long COVID analysis in Nepal, within the Epidemic Intelligence project. To push forward pathogen genomics science in Nepal, BNMT Nepal organised a week-long Pathogen Genomics and Bioinformatics Training Workshop in Kathmandu. It was a collaboration with five experts from the Centre for Pathogen Genomics, University of Melbourne, Australia, and our Epidemic Intelligence consortium partners. Forty participants from laboratories across Nepal participated and we hope to conduct further training in coming years.

BNMT Nepal's tenth anniversary celebrations

BNMT Nepal celebrated its tenth anniversary on 21 September 2022. BNMT Nepal builds on the 55-year legacy of BNMT-UK in serving the people of Nepal to improve the health and wellbeing of Nepali people. Our celebration reflected on the history and achievements of BNMT over the past six decades and we shared our strategic vision for the future of the organisation with our partners. The Chair of BNMT UK and one of the original BNMT team, Rosemary Boere, who travelled overland in 1968 when the Trust started up were both able to participate. A ceremony was also held

to recognise extraordinary contributions from members of the BNMT team with special awards.

None of our achievements would have been possible without the unwavering team spirit demonstrated by our dedicated staff members. I express my sincerest gratitude to every one of them for their tireless work, unwavering effort, companionship, and invaluable contributions to our organisation.

I would like to extend my heartfelt appreciation to our national and international partners, who have been instrumental in our success. These partners include the Ministry of Health and Population, the National Tuberculosis Control Centre, the Nepal Health Research Council, the Health Offices, the Provincial Health Directors, the Centre for Molecular Diagnostics, GENETUP, TB Nepal, Bheri hospital, Koshi hospital, Teku hospital and local government authorities. Their unwavering support and collaboration have played a crucial role in our achievements and the positive impact we have made.

I also want to express deep gratitude to all our generous donors. Your continued support and trust in BNMT, particularly during these challenging times, have been vital to our ability to carry out our mission of enhancing healthcare access and quality for all the people of Nepal. We value your partnership in our effort to create a healthier and more equitable Nepal for all its citizens.

Raghu Dhital

BNMT and BNMT Nepal

The Britain-Nepal Medical Trust established a local Nepalese non-governmental organisation – the Birat Nepal Medical Trust (BNMT Nepal) in 2012 to continue the work of BNMT UK and this year we celebrated their tenth anniversary. BNMT UK continues to work in partnership with BNMT Nepal and the work described in this report is carried out by BNMT Nepal with support from BNMT UK and other organisations.

Where we work

Prevention and diagnosis

Vaccination. The BCG vaccine is good at preventing severe TB disease in the first year or two of life – but it does not protect long term.

Preventing latent TB infection from progressing to TB disease. Some people who have latent TB infection are more likely to develop TB disease than others. Those in the high-risk groups, which includes all household contacts who test positive for latent, TB are recommended to take a course of preventative medicine. This is a shorter, simpler treatment than the treatment for TB disease.

Diagnosing latent TB infection. A positive TB skin test shows only that a person has been infected with TB bacteria. It cannot determine if the person has or will progress to TB disease. A chest X-ray, followed by a sputum test if necessary, can help confirm whether the individual needs to be treated for TB disease or whether they should receive a simpler course of preventative medicine.

The long battle

Effective treatments for tuberculosis have existed for decades and in wealthy countries the disease has been all but eradicated. Why, then, does it persist in Nepal?

What causes TB and how does it spread?

Tuberculosis (TB) is caused by a bacterium called Mycobacterium tuberculosis. It usually attacks the lungs, but TB bacteria can attack any part of the body.

The bacteria spread through the air from one person to another. When a person with TB disease of the lungs or throat coughs, speaks, or sings, TB bacteria can get into the air. People nearby may breathe them in and become infected. People with TB disease are most likely to spread it to people they spend time with every day: family members, friends, co-workers or schoolmates.

But only some of the people infected become sick. Two TB-related conditions exist: TB disease and latent TB.

TB disease

Some people develop TB disease within weeks of becoming infected, before their immune system can fight the TB bacteria. People with TB disease are sick. They may also be able to spread the bacteria to people they spend time with every day. The risk of developing TB disease is much higher for people whose immune systems are weak, for example those with HIV infection, diabetes or malnutrition.

Latent TB infection

People with latent TB infection have no symptoms and do not feel sick, although TB bacteria continue to live in the body. They cannot spread TB bacteria to others. But they usually have a positive TB skin test.

They may never develop TB disease. But if their immune system is weakened, they may get sick – even years later.

World TB Day celebrations in Nepalgunj, 24 March 2023

New technologies

BNMT is harnessing new methods to prevent, diagnose and treat TB in a series of pilot projects that show the effectiveness of the technologies and how they can be applied to benefit communities in Nepal.

Prevention: 3HP

TB preventative treatment used to take a long time. People needed to take isoniazid tablets every day for six months, which was difficult for people to complete in areas like rural Nepal. However, in the last decade a new, shorter, preventative treatment called 3HP has become available. People take the medicine once a week for 12 weeks, and it has fewer side effects. That makes it much easier for people to complete the treatment, and for healthcare workers to support the patients. This treatment is recommended by the WHO. BNMT is pioneering its use in Nepal through the IMPACT TB project (see p6).

Professor Andy Ramsay supervises microscopy training in Chitwan

Diagnosis: GeneXpert and microscopy

GeneXpert is a molecular test for TB and is more accurate than microscopy for diagnosing TB. It can help increase TB case detection and get people on to the correct treatment. Nepal's government has set expanding the use of GeneXpert as a priority, but has insufficient funds to make this happen. BNMT introduced GeneXpert machines in Nepal (see page 6), but much of the country continues to rely on TB microscopy. BNMT, in partnership with provincial and district health authorities, supports laboratories in Bardiya, Chitwan, Dhanusha, Makwanpur and Mahottari districts with theoretical and practical training of laboratory staff, and the service and maintenance of microscopes and other equipment.

Understanding TB: Genomic sequencing

Sequencing the genome of TB bacteria allows us to compare the DNA sequences of the bacteria from different people. This helps us understand how TB spreads between people and communities, and how it has changed over time. It also helps us understand patterns of drug resistance, so we can improve the diagnosis and treatment of drug resistant strains of TB. This technique is one of our most effective tools to understand infectious diseases and respond with better treatments, vaccines, and diagnostic tests. BNMT participates in the Target TB genome sequencing project (see right).

DNA extraction from a TB Culture

Target TB

TARGET TB is the first large-scale whole genome sequencing project for TB in Nepal. The project takes TB bacteria from three contrasting districts of Nepal (Kathmandu (capital), Pyuthan (a rural hill district) and Banke – urban, border with high cross border migration with India). This will improve understanding of TB transmission patterns in different urban and rural environments, and the effects of cross border migration, reactivation of latent TB, drug resistance and strain virulence. All this will help us develop more effective approaches to targeting resources for TB control. The project is being conducted by a consortium including BNMT, GENETUP, and the University of Melbourne (Australia) in collaboration with the NTCC.

IMPACT TB

In 2022/23 under the IMPACT TB Project:

- 30,154 people were screened for TB
- 22,774 people were tested for TB through GeneXpert
- 1,366 new cases of TB disease were identified through GeneXpert
- 500 people with latent TB were enrolled for preventative therapy.

The IMPACT TB project

BNMT's flagship project is finding better ways to prevent and detect TB. The evidence it gathers at community level informs work to eradicate TB across the country.

IMPACT TB builds on BNMT's experience of detecting TB in communities, using an approach called active case finding. This means working with a network of community health volunteers who are trained to recognise TB symptoms and to encourage people who have them to go for early diagnosis and treatment. The volunteers also trace the contacts of each person diagnosed with TB, so that they too can be tested for the disease.

The project operates in four districts: Mahottari, Chitwan, Pyuthan and Bardiya. It uses GeneXpert technology to diagnose TB. BNMT supported the installation of five new GeneXpert machines in government health centres in Bardiya, Pyuthan and Mahottari.

The IMPACT TB project is also piloting the 3HP method of preventing TB – the first time this new, WHO-approved therapy has been used in Nepal. Preventative therapy reduces transmission of the disease, because it eradicates the bacteria from the body before it can cause disease and transmit to other people. The 3HP treatment is being piloted in Chitwan and Pyuthan districts, in collaboration with the NTCC.

Five hundred household contacts of TB cases have been enrolled to treatment and 95 per cent of these have now completed the 3HP course. The high completion rate shows that the therapy is acceptable to people with latent TB and is a practical solution in TB-affected communities.

Active case-finding in a remote area of Chitwan

The project also includes extensive consultations with provincial and local health officials and hospitals. Scaling up TB prevention therapy is essential if TB is to be eradicated in Nepal. The findings from IMPACT TB will inform efforts to scale up TB prevention.

Promoting End TB at BNMT Nepal's 10th anniversary

From case-finding to treatment

Through IMPACT TB's active case finding in Pyuthan, Deva Kumari BK, 72, was identified as having TB. BNMT Field Supervisor Sita GC visited her home for latent TB testing and counselling. It turned out that six adults needed testing, of whom five were living at home. The sixth was one of Deva Kumari's sons, Baburam BK, who works in Libang, Rolpa district, 90 km from Pyuthan.

Talking with Deva Kumari's family, Sita learned that Baburam had taken responsibility for getting his mother to her appointments before she was diagnosed with TB. Sita realised that it was of upmost importance to test Baburam for latent TB infection. She called him to explain that he urgently needed to be tested. Latent TB was diagnosed and Baburam started 3HP medication the same day.

Baburam said: 'I saw the pain and suffering that my mother experienced due to tuberculosis, and would not wish it on anyone. I understand that latent TB also occurs, and that it is necessary to diagnose and treat it quickly.'

Because he worked in Rolpa, it was a challenge for Baburam to go to Pyuthan each week to receive his medication. For the first two weeks he claimed leave, saying that his mother was ill and needed his help at home. But in the third week he had to return to work. The latent TB focal person at Pyuthan Hospital coordinated with the nearest treatment centre in Rolpa to enable him to continue to receive his medication locally and on time.

Unfortunately, Deva Kumari died of tuberculosis and for the seventh and eighth weeks of his treatment, Baburam returned home to complete the required rituals, and Sita delivered his medication there. Baburam completed the full course of treatment for latent TB. He is happy to be healthy again and has gone back to work

Bhola Rai interviews a participant in the TB recovery project

The TB Recovery project

Recovery from TB requires at least six months' intake of medicine, along with a healthy and nutritious diet – something that many poor families cannot afford. BNMT's TB Recovery project is devising ways to ensure TB patients and their families can eat well.

For many TB-affected households, the cost of TB can be catastrophic. If a breadwinner falls ill, earnings fall, debts accumulate, there is less food to go round, and children may drop out of school. A vicious circle ensues: malnutrition slows down recovery from the disease and increases susceptibility to TB in other family members, and the household falls deeper into poverty.

The importance of healthy food

Sunita (not her real name), 51, lives in one of the more remote areas of Manahari rural municipality in Makwanpur district. She lives with her husband and one daughter. Sunita has physical and mental impairment. The family's primary income sources are her husband's senior citizen allowance and the disability allowance Sunita receives from the government.

When Sunita developed a cough, night sweats, loss of appetite and fever – signs that suggest TB – she did not want to seek treatment, hoping that the symptoms would go away by themselves. But they got worse. Sunita went to the nearest health facility, where she was referred to Manahari hospital for TB testing. Her husband borrowed 2,000 rupees from a neighbor, promising to pay it back when he received his senior citizen medicine allowance. Sunita was diagnosed with TB on 6 February 2023.

Because she lives far away from the hospital, arrangements have been made for her to walk to a nearby health post to receive her medication. Her recovery is supported by healthy foods provided by BNMT's TB Recovery Project program. Her nutrition package includes 25kg of rice, 1 kg of pulses, 1 litre of vegetable oil, 1.5kg of groundnuts, 1 kg of flour, and a crate of eggs. This makes it easier for her to eat nutritious food and means that she does not have to rely on others to eat. To date, Sunita has received three packages. She notes that her weight is increasing, and that nutritional support helps her have the confidence to take her medications as prescribed.

Sunita thanked BNMT district team and said that medicines alone cannot cure TB: people need support with nutrition to make a full recovery.

The World Health Organisation recognises the importance of nutrition for recovery from TB and has called for more research and evidence to inform the design of effective, locally appropriate support to ensure TB-affected families can take in sufficient nutritious food.

The TB Recovery project funded by the Australian John Burge Trust Fund provided six months' nutritional support to 200 TB patients in three TB-affected districts of Nepal: Banke, Pyuthan and Makwanpur. The project also gave training in nutrition counselling to female community health volunteers.

The second phase of the project will explore strategies and create facilities to scale up nutritional support to TB patients and their families.

The ASCOT project

Vulnerability to TB is influenced by social and economic conditions. The WHO advocates social and economic support for households affected by TB, but there is no evidence to help policymakers design effective strategies to provide socio-economic support for such households in low-income countries like Nepal. To address this, BNMT decided to develop a locally-appropriate support scheme.

ASCOT is a small pilot study to field-test the feasibility and acceptability of various types of support package, before designing a bigger study to test the scheme on a larger scale.

Distributing fruit and hygiene kits to TB patients in Pyuthan hospital

The pilot study was conducted in four districts of Nepal with high levels of both TB and poverty: Pyuthan, Chitwan, Mahottari, and Morang. The pilot study recruited 124 people with TB. Twelve TB clubs to support people affected by TB in the districts were also organised. To evaluate the process, the study recruited 27 stakeholders including National TB Programme staff, TB patients and ASCOT field team members.

The TB patients were assigned at random to the four different types of support: a standard care and food package (this was the control group); social support; economic support (in cash); and combined socio-economic support.

All the support packages had benefits for the participants. They found cash was useful to buy medicine and nutritious food. However, the majority of the participants found socio-economic support useful because it provided both education on TB and cash support. The social support package included a calendar and an animated film which encouraged people to seek TB services. Participants used the calendar for multiple purposes, marking their medicine intake as well as different festivals. The animated film empowered participants to reduce discrimination towards TB patients.

One of the evaluation participants said: 'If only money is provided, it would be used just for eating. But it is important to learn about how TB is transmitted and caused. TB doesn't only happen to poor people and, when some people get TB, they overthink and often get stressed and have psychological impacts. When they are like that, if they can understand TB better, they will get relief.'

These findings are being used to inform policy makers at national level and provide evidence to support further funding proposals for a study at increased scale.

TB Recovery

In 2022/23 more than 1,030 members of TB-affected families received nutritional support from this project.

TB patient in a special hostel for patients with multi drug resistant TB is supplied with a winter care package by BNMT, Banke.

Addressing the impacts of Covid

BNMT is helping to rebuild health services in the aftermath of COVID-19, and conducting research to improve understanding of long COVID and guide responses to future pandemics.

The Epidemic Intelligence project

Understanding how the SARS CoV2 virus, which causes COVID, spread to and through Nepal can inform the country's response to a similar pathogen in future.

BNMT's Epidemic Intelligence project used whole genome sequencing to improve understanding of transmission of COVID 19 in Nepal. It also examined how waves of economic migration drive the seeding of the COVID epidemic in South Asia. The project collected and sequenced SARS CoV2 samples from three locations in different parts of Nepal: Bheri Hospital in Nepalgunj (Far West), Koshi Hospital, Biratnagar (Eastern Nepal) and Sukraraj Tropical Infectious Diseases Hospital in the capital, Kathmandu (central region).

The project recruited more than 2,048 participants and sequenced more than 2,000 patient samples. The participants were followed up after three months, six months and one year to understand the frequency and symptoms of long-term complications of COVID-19 (long COVID).

The study showed that Nepal's high levels of internal and external migration make it vulnerable to rapid and widespread transmission of emerging infections.

One recommendation arising from this project is that Nepal should strengthen its capacity in bioinformatics. The molecular diagnostic capacity expanded during the pandemic now needs to address endemic infectious diseases and other emerging diseases of concern, including influenza, antimicrobial resistance, drug resistant TB and dengue.

A second recommendation is that specialist care and research centres are needed to understand and treat long COVID. A significant proportion of COVID patients continue to suffer long COVID symptoms and struggle to access appropriate care. A large proportion of them have additional medical conditions. Vulnerable patient groups experiencing long COVID require a broad range of support, including psychosocial support, livelihood support, personalised plans for managing their health and subsidised medical care.

Epidemic Intelligence project findings

- Three major waves of COVID 19 hit Nepal
- More than a fifth of participants had a history of migration, of which 8 per cent had a history of internal migration
- 20 per cent of patients reported long COVID, broadly defined as symptoms lasting longer than 12 weeks
- The highest risk factors for long COVID were diabetes, hypertension and female gender
- Vaccination was highly protective against severe disease and long COVID.

Bioinformatics training course held in Kathmandu for for laboratory expert staff across the country

COVID conversations

Media discussions of the pandemic abounded with complex terminology such as 'sequencing', 'genomes', 'variants' and 'mutations', which often perplexed the public. To bridge the gap between experts and the public, BNMT conceived Covid Kurakani (COVID conversations) – a series of 'Question Time' style panel discussion TV programmes.

BNMT Nepal teamed up with the Centre for Molecular Dynamics and Galaxy Television to produce three discussion programmes for broadcast on primetime national television. Each episode explored different aspects of pathogen sequencing and its applications. They were broadcast in November-December 2022.

Covid Kurakani panel discussion

BNMT was delighted by the enthusiastic response from the expert participants and the public. The Nepal government partners are keen to see similar public engagement for the understanding of science surrounding infectious diseases in Nepal.

The second major goal of the Covid Kurakani project was to build capacity for high quality public engagement within the BNMT Nepal team. Our vision is to embed public engagement throughout our work, from conception, through design, implementation and dissemination of findings.

COVID Kurakani was made possible by the generous support of the Wellcome Trust.

COVID Kurakani can be watched on YouTube or through our website, or scan here to visit our YouTube channel

The SUSTAIN project

The SUSTAIN project, which started in 2020, was designed to respond to the COVID crisis and support continuity in health service delivery. As the situation evolved, with changing community needs and a stronger response from other organisations, BNMT adapted the project to address urgent gaps during different phases of the pandemic.

Since November 2022, SUSTAIN phase V has worked to rebuild and strengthen health services in the aftermath of the pandemic. The project now works in six districts: Mahottari, Chitwan, Bardiya, Morang, Pyuthan and Banke.

BNMT supported five qualified laboratory staff in health facilities to help cope with the post-pandemic surge in medical testing for other diseases. The Trust's support helped decrease the work burden on staff, reduce overcrowding and increase public access to health services.

The pandemic drove many TB-affected households into extreme poverty, while the need for health services to focus on COVID-19 weakened provision for TB patients. Winter on the Tarai (lowlands) can be bitterly cold, particularly for impoverished families without adequate clothing or fuel. The project therefore provided winter care packages to the most vulnerable TB patients and to those with multi-drug resistant (MDR) TB receiving treatment at MDR TB hostels. Nearly 300 TB patients received winter care packages, hygiene kits or bedding.

The project also supported new furniture (including lockers for patients to keep their belongings) and bedding for two MDR TB hostels in Banke and Morang and new flooring for hostels in Nepalgunj and Morang. Patients must live in the hostels, which have only basic facilities, for more than six months, so the aim was to make their stay a little more comfortable. We continue to consult with patients and caregivers on the most effective ways to provide holistic care and support during treatment.

The primary funders of the SUSTAIN project are BNMT UK and Americares.

Care for TB patients

In 2022/23, project SUSTAIN provided:

- 300 sets of winter jacket, slippers and a beanie hat
- 300 hygiene kits
- 200 winter blankets
- 40 beds, including mattress, pillow and sheets, to MDR TB hostels
- 40 electric hot water bottles to MDR TB hostels.

Project horizon achievements

Under this project:

- 166 students, parents and teachers engaged in dialogue in the six schools
- 120 peer educators were trained among the students
- 6 information corners were established, one in each school
- 300+ community people were reached by a municipal SRHR awareness programme
- 40 municipal leaders and officials received basic information about CSE and SRHR
- 17 teachers were trained in CSE
- 530 school students received CSE
- 13 sanitary napkin vending machines were installed in 12 schools
- 6 waste disposal pits were constructed to improve menstrual health and hygiene in schools
- 57 female community health volunteers received basic information about SRHR and cervical cancer

Empowering young people

BNMT's Project Horizon provides comprehensive sexuality education to adolescents.

In Nepalese society, conversations about sex and sexuality are often deemed taboo. However, education on these topics is crucial if they are to make informed decisions and have a voice in their sexual and reproductive health and rights (SRHR).

Although sex education is included in the school curriculum in Nepal, parents and teachers may be reluctant to talk about sex and sexuality owing to social conventions and their own lack of knowledge. Adolescents, therefore, often hesitate to ask them about sex and sexuality and instead seek advice from their peers, who may give inaccurate information.

To address this gap, BNMT Nepal devised Project Horizon, which aimed to improve access to information on sex and sexuality for adolescents in six schools of Indrawati rural municipality, Sindhupalchowk. The project ran from December 2021 to December 2022. It was based around comprehensive sexuality education (CSE), an age-appropriate and culturally relevant way of teaching about sex and relationships, based on scientifically accurate and non-judgmental information.

The project activities provided adolescents with skills in communication, leadership, negotiation, problem-solving, as well as knowledge about sexual and reproductive health. They empowered adolescents to make informed decisions about their lives and raise their concerns with their peers, teachers, and parents. The challenges discussed included child marriage, adolescent pregnancies, unsafe abortions, gender-based violence, sexual abuse, and mental health.

Project Horizon reached about 2,500 direct beneficiaries including adolescents, parents, teachers, policy makers, community people and female community health volunteers. The initiative received strong support from all involved, and many project partners contributed to its success.

Poster competition for schoolchildren on sexual and reproductive health

Cervical cancer screening

Under Project Horizon, a qualitative study was conducted to explore the acceptability and feasibility of self-sampling for cervical cancer screening in Nepal with the service providers. Self-sampling is where the person being screened takes their own sample, rather than having a clinician do it.

Between August and November 2022, researchers interviewed key service providers: gynaecologists, pharmacists, oncology nurses, online service providers, and representatives from Department of Health services in the Kathmandu valley.

The study found that service providers were positive about the use of self-sampling for cervical cancer screening in urban settings of Nepal. But they said media campaigns were needed to increase women's awareness before the idea could be implemented.

Gender based violence training

Addressing gender-based violence

Sadly, gender-based violence is common in Nepalese society. Through their engagement with households, our field staff and community volunteers may become aware of gender-based violence. To guide our field staff in supporting the victims to access help, we conducted a two-day training session in January 2023. The training aimed to help staff to recognise and prevent such harmful behaviours in their working and domestic lives.

The session explored power and privilege, the types, causes and impacts of gender-based violence, safe places, survivor-centred approaches, and guidelines for managing disclosures of violence in the field. Feedback from the participants was very positive. They appreciated the opportunity to develop psychosocial support counselling skills which will support field staff in responding effectively to gender-based violence issues in the communities they serve.

Sexual and reproductive health training in Sindhupalchowk

Saki Thapa presents the vitamin A review from the READ-It project

Building the evidence base for health policy

BNMT is ensuring that relevant research from around the world and the learning from its own projects are available to practitioners and policy makers in Nepal.

The READ-It project

In the Research, Evidence and Development Initiative (READ-It) project, BNMT works with a team of UK-based experts to review the evidence from research around the world on health issues important for Nepal.

BNMT and its project partners organised a policy dialogue in September 2022 to discuss the findings of our systematic review paper entitled 'Is routine vitamin A supplementation still justified for children in Nepal? Trial synthesis findings applied to Nepal's national mortality estimates'. The participants included the Nepal Health Research Council; the National Tuberculosis Control Centre; the Community Nursing Administrator, Department of Health Services; and representatives from WHO and UNICEF Nepal.

In a lively and wide-ranging discussion, participants noted that Nepal has significantly reduced maternal and under-five mortality rates since Vitamin A supplementation was started in a few selected districts in 1993, gradually expanding to systematic national coverage. However, malnutrition and extreme poverty remain prevalent in Nepal and have risen since the Covid pandemic. The dialogue identified key evidence gaps and the need for further research before considering a revised approach to vitamin A supplementation for under-fives in Nepal.

The READ-It study, published in PLoS One in May 2022, is at **https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0268507**

Research grants

BNMT staff Ms Swastika Shrestha, Ms Anchal Thapa and Mr Rajan Paudel have been awarded research grants from the Royal Society of Tropical Medicine and Hygiene and National Institute of Health Research.

Living with epilepsy

Ms Shrestha will explore and understand the lived experiences and psychosocial impact and quality of life of people living with epilepsy (PLWE) in Nepal. Epilepsy has been historically associated with stigma and discrimination: it was viewed as a disease of evil. So people who live with it endure stress, social dissatisfaction, individual isolation, social stigma and helplessness. Gender bias and traditional mental health stigma amplify these effects. The research findings will be among the first to provide robust data on the experience of people living with epilepsy in Nepal.

Medical drones

Ms Thapa's research will assess the economic efficiency and local acceptability of using drones to transport medical supplies and samples in remote, mountainous rural areas. It will examine whether drones are cost-effective, based on BNMT's DrOTS project in Pyuthan district which pioneered the use of drones to transport TB drugs and sputum samples. The findings will help inform discussions about whether, where and how to extend the use of medical drones to other parts of Nepal.

Diagnosing multi-drug resistant TB

Mr Paudel's research aims to develop virtual implementation models to help guide policy makers in deciding which new diagnostic tests to adopt in Nepal. There is an urgent need for better access to drug-resistant TB testing services, particularly beyond the Kathmandu valley. However, given limited resources and competing priorities for healthcare spending, evidence is needed to identify the best diagnostic tools to use.

BNMT in the UK

Trustees' meeting

We had our first face-to-face meeting of the Trustees in May at the Nepal Embassy in London. In the picture, left to right: Dr Maxine Caws, Jeff Mecaskey, Raghu Dhital, Dr Gillian Holdsworth, Gyan Chandra Acharya (Ambassador of Nepal to the UK), Dr Raghav Dhital, Dr Bob Fryatt, Dr Johnny Payne

In memoriam Don Patterson

Sadly, Don Patterson – a former Trustee and director of BNMT – died in November 2022. Don worked initially as a field doctor in Nepal with the Trust (1971-2) and then as director (1976-79) accompanied by his wife Jan. He served as a Trustee from 1981 to 2013.

Don lived a full and meaningful life with a remarkable energy and enthusiasm for using his time learning and giving. His contribution to the Trust was enormous and he will be much missed

Fundraising

Ann and Chris Walters, long term supporters of BNMT, opened their garden to raise money for the Trust in June 2023. Trustee Johnny Payne, his wife Caroline and Gillian Holdsworth joined the family at Bell Bank House, Blockley, Glos for the day. Also attending were Rosemary Boere and her husband Wim. Rosemary was one of the original team who travelled to Nepal in 1968. The day raised £1,000 for the Trust. A big thank you to Ann and Chris.

Welcome to our new Trustees

Two new Trustees and a former patron have joined us this year.

Professor Andrew Ramsay MSc, PhD, FIBM, is an Honorary Professor at the Infection and Global Health, School of Medicine, St Andrews University, Scotland. Andy has more than 20 years of international experience working in infectious diseases, clinical microbiology and antimicrobial resistance with the Liverpool School of Tropical Medicine, the London School of Hygiene and Tropical Medicine and Hygiene and WHO.

Ms Sarah Barton is Director of Operations of the Oxford University Clinical Research Unit (OUCRU). Based in Ho Chi Minh city, Vietnam, she has responsibility for OUCRU operations in Vietnam, Nepal and Indonesia. Sarah has 25 years of experience as a senior leader of multi-cultural, international experience in both programme and operational leadership in the not-for-profit sector.

Dr Bob Fryatt – a former field doctor, Trustee and Patron of BNMT UK has rejoined the board of Trustees in 2023.

Financial Report

The financial information presented in this report does not constitute the statutory accounts of the Britain-Nepal Medical Trust. The full accounts for the year ended 31st December 2022 have been submitted to the Registrar of Companies and the Charity Commissioners. A copy of the Reports and Financial Statements may be obtained from the Trust's office c/o Foot Davson Ltd, 12 Church Road, Tunbridge Wells TN1 1LG

Donations

Many organisations and generous private donors have supported the Trust over the years. Without their generosity much of our work would not have been possible.

The Trust would like to thank the following for their kind support over the last year:

The Acacia Charitable Trust
The Janelaw Trust
The Stonewall Park Charities

The Trust would also like to thank all individual supporters who continue to support us.

BRITAIN-NEPAL MEDICAL TRUST

BALANCE SHEET

AS AT 31 DECEMBER 2022

	Notes	2022 £	£	2021 £	£
Fixed assets					
Tangible assets	11		299		735
Current assets					
Debtors	13	8,259		1,163	
Investments		100,359		102,889	
Cash at bank and in hand		80,724		91,784	
		189,342		195,836	
Creditors: amounts falling due within one year	14	(8,046)		(4,846)	
Net current assets			181,296		190,990
Total assets less current liabilities			181,595		191,725
Income funds					
Restricted funds	16		2,310		9,385
Unrestricted funds			179,285		182,340
			181,595		191,725

The charitable company is entitled to the exemption from the audit requirement contained in section 477 of the Companies Act 2006, for the year ended 31 December 2022.

The directors/trustees acknowledge their responsibilities for complying with the requirements of the Companies Act 2006 with respect to accounting records and the preparation of financial statements.

The members have not required the company to obtain an audit of its financial statements for the year in question in accordance with section 476.

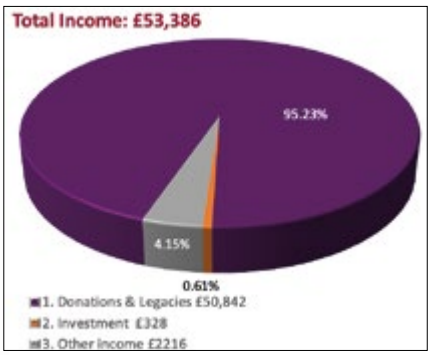
These financial statements have been prepared in accordance with the provisions applicable to companies subject to the small companies regime.

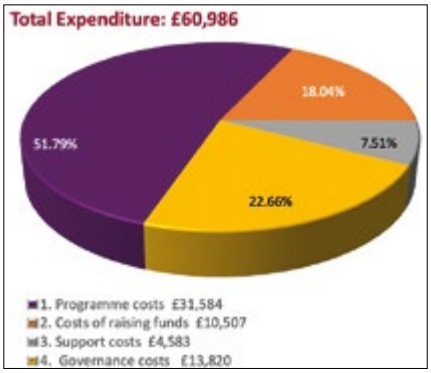
The financial statements were approved by the Trustees on 7.6.23

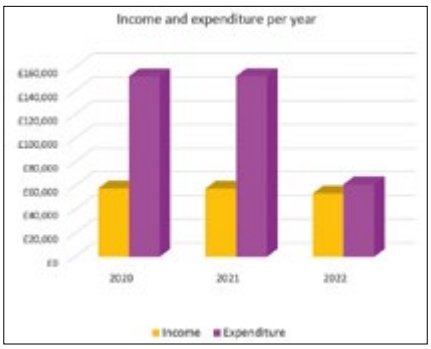
Dr G M C Holdsworth
Trustee

Dr J M V Payne
Trustee

Company registration number 921566







How your donation/s can help us ...

... reduce the gaps in health service provision, especially for poor and disadvantaged people

£20	provides warm blankets for 10 MDR TB patients in hostels during initiation of treatment
£50	provides two months' nutritional support to a family affected by TB
£100	buys 50 packets of sanitary kits for school children
£250	can buy a set of life-saving basic equipment for a health post in a remote village
£2,000	contributes to the purchase and running costs of a GeneXpert machine for early diagnosis of TB

☐ I enclose a cheque/postal order made payable to the Britain Nepal Medical Trust for £

Committed giving and donating online

Alternatively, you can imagine how a regular monthly amount between £10 and £15 would make an even greater impact on the lives of the Nepalese. You can arrange this by completing and returning this form. Or you can donate, or set up a direct debit, online through the Charities Aid Foundation's secure fundraising service by going to **www.britainnepalmedicaltrust.org.uk** or **www.givenow.org**

To the Manager .....Bank)

Address .....

..... Post Code .....

Name.....

Address .....

..... Post Code .....

Account No. ..... Sort Code.....

Please pay the Britain Nepal Medical Trust the sum of.....figures)

.....words)

Starting on...../...../..... ☐ Monthly ☐ Quarterly ☐ Half-yearly ☐ Annually

Signed: ..... Date: .....

Tax-effective giving

Since April 2004 a scheme from the Inland Revenue enables you to give to charity through your tax return. All you have to do is quote the reference **UAK68HG** and nominate The Britain-Nepal Medical Trust as the recipient of your tax repayments.

Gift Aid

The other way you can help BNMT raise funds is by returning the Gift Aid declaration below. This means that you authorise BNMT to reclaim from the HMRC tax you have already paid. All gifts from UK taxpayers now qualify for Gift Aid.

Gift Aid declaration

☐ Please treat as Gift Aid donations all qualifying gifts of money made: today/in the past 4 years/in the future until further notice.

☐ I confirm I have paid or will pay an amount of Income Tax and/or Capital Gains Tax for each tax year that is at least equal to the amount of tax that all the charities that I donate to will reclaim on my gifts for that tax year. I understand that other taxes such as VAT and Council Tax do not qualify. I understand that the charity will reclaim 25p of tax for each £1 that I give.

Date ...../...../..... Full name.....

Signature .....

Full home address .....

.....Post Code .....

☐ Please tick here if you would like to receive details on making the BNMT a beneficiary of a legacy.

Please let us know your email address, either by mail or by email, if you would like to receive information by email, (see below for the address)

.....

(No individual personal information will be sold, routed or otherwise transferred to a third party without your explicit consent)

Please return completed form to

The Britain-Nepal medical trust

BNMT, c/o Ms Maidrag, 8 Hazeldean Rd, London NW10 8QU
Tel: +44 (0)7375 747038
Email: info@britainnepalmedicaltrust.org.uk
www.britainnepalmedicaltrust.org.uk

Charity Registration No 255249

BNMT Nepal Strategic Pillars 2020-2025

Accelerating the elimination of infectious diseases

Building resilient, prosperous and healthy communities

Improving mental health and adolescent sexual and reproductive health

Strengthening health systems and increasing equity of access

Generating evidence to inform policy and facilitate optimal strategy implementation by policy makers

The Britain-Nepal medical trust

Registered Comp any Address
c/o Foot Davson Ltd • Chartered Accountants
17 Church Road • Tunbridge Wells • Kent TN1 1LG
Tel: +44 (0)7375 747038 **Email:** info@britainnepalmedicaltrust.org.uk
Web: www.britainnepalmedicaltrust.org.uk

Registered Charity No 255249