

HEARTTALK

A biannual publication of the Sarawak Heart Foundation

Registration No. 199601011149 (383498-P)

Volume 24 KDN No.: PPK434/04/2013 (032273)

December 2024



Medical Equipment For Proposed Cardiac Unit In Bintulu Hospital

Electricity for Life 2024

Looking After The Hearts Of Sarawak: Bridging The Gap In Heart Failure Care In Sarawak

pg.3 pg.4-5

pg.10-11

HEARTTALKVolume 24 • Dec 2024

DEPUTY CHAIRMAN

YB Datuk Amar Prof Dr Sim Kui Hian

BOARD OF TRUSTEES

YBhg Datin Patinggi Datuk Amar Hajah Jamilah Binti Haji Anu

YB Datuk Dr Annuar Rapa'ee

YBhg Dato Anne Teng

YBhg Dato Sri Fong Joo Chung

YBhg Datuk Prof Dr Chew Peng Hong

Ms Pauline Kon Suk Khim

Mr Eric Lim Swee Khoon

MEDICAL ADVISOR

Dr Yii Kie Sing

EDITORIAL

Editor Mr. Eric Lim Swee Khoon
Member Ms Lee Siew Hoon

CONTENTS

From the Editor	2
Medical equipment for proposed cardiac unit in Bintulu Hospital	3
MRI for Sibu Hospital	3
Electricity for Life 2024	4-5
World Heart Day 2024	6-7
Diabetes Heart Connection Day	8
Manikins for Sarawak General Hospital	9
Hari Raya Cheer	9
Looking after the Hearts of Sarawak	10-1
Health Screening in Bintulu	12

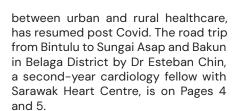
From The Editor

Sarawak Heart Foundation dedicates 2024 to the many collaborators in Sarawak who contributed to an eventful year and this has set a positive outlook for building a hearthealthy community in Sarawak. The shared effort in coming up with the needed resources for our projects is most fulfilling.

After a saga over four years plagued by unforeseen circumstances, we can finally look forward to seeing the delivery of the Magnetic Resonance Imaging (MRI) machine to Sibu Hospital upon the completion of the room scheduled for March 2025. What a relief it is for heart patients in the Central Region of Sarawak as the present MRI machine in Sibu Hospital has reached the end of its life in December 2024. The Foundation appreciates the support of the donors for their sponsorship towards its fund raising for the new machine on Page 3.

Heart patients in Bintulu and the Northern Region of Sarawak will be able to seek treatment in Bintulu Hospital when cardiac services begin there early 2025, thanks again, to corporate sponsorship. The Foundation's proposal in setting up cardiac units in Bintulu, Miri and Sibu Hospitals got off to a good start with Bintulu Hospital where the basic infrastructure was already in place. The Foundation has been working closely with the Sarawak Heart Centre to upgrade facilities and services to improve access and care for cardiac patients throughout Sarawak through fundraising and collaboration with corporate donors. Report on Page 3.

Electricity for Life 2024, a 'Closing the Gaps" initiative by the Foundation and Sarawak Heart Centre, on enhancing the accessibility of cardiology services throughout Sarawak, bridging the gap



Then there was the Foundation's free health screening – a collaboration with National Cancer Society Malaysia – at the launching of the State-level Immunisation Programme "Human Papillomavirus (HPV) at the Spring Bintulu on Sarawak Day 22 July.

It was a first for the Foundation when it collaborated with Sibu Hospital on Diabetes Heart Connection Day in November – one that came about when the Foundation wanted to organise a heart awareness programme in Sibu while Sibu Hospital had in mind World Diabetes Day. Despite their distinct characteristics, heart disease and diabetes share a strong connection, with diabetics having a 2-4 times increased risk for cardiovascular disease.

Another Foundation initiative to equip aspiring cardiologists with knowledge and training, was sponsoring Dr Joshua Chung Bui Khiong, a clinical cardiologist with Sarawak Heart Centre, for a six-month attachment with the heart failure team in National University Hospital Singapore. Dr Joshua who is back in Sarawak Heart Centre, shares his journey on heart failure on Pages 10 and 11.

We welcome a fresh heartful year in 2025 and wishing you all a hearthealthy year ahead!

Eric Lim Swee Khoon

Sarawak Heart Foundation • Member of World Heart Federation

No.11, 1st Floor, Lot 2343, Block 10 KCLD Bormill Estate Commercial Centre, Jalan Tun Ahmad Zaidi Adruce 93150 Kuching Tel/Fax: 082-233 784 / 012-886 8491 Email: sarawakheartfoundation8@gmail.com

MEDICAL EQUIPMENT FOR PROPOSED CARDIAC UNIT IN BINTULU HOSPITAL

he Sarawak Heart Foundation has successfully raised RM2.25 million for the purchase of medical equipment and consumables for the setting up of a cardiac unit in Bintulu Hospital.

Petroleum Sarawak Berhad (PETROS) contributed RM1.6 million while Press Metal Bintulu Sdn Bhd sponsored RM500,000 and Bintulu Port Holdings Berhad added RM150,000.

Some of the basic infrastructure was already in place in Bintulu Hospital and upon the delivery of the equipment scheduled for early 2025, cardiology services will commence immediately.

Cardiologists from Sarawak Heart Centre will be assigned to take care of the patients in Bintulu Hospital.

The cardiac unit will be able to address the immediate needs of Bintulu Hospital in providing cardiology services to patients in the Northern Region of Sarawak. Presently, heart patients in Bintulu and the Northern Region of the State have to be referred to Sarawak Heart Centre in Kuching.

The Foundation also have plans to complement the government's efforts in establishing cardiology services at Sibu Hospital and Miri Hospital through seed funding as the process of

upgrading existing infrastructure and setting up of new services can take a number of months or years.

The Foundation has been working closely with the Sarawak Heart Centre to upgrade facilities and services to improve access and care for cardiac patients in Sarawak through fundraising and collaboration with corporate donors. However, access to Sarawak Heart Centre located in Kota Samarahan remains a challenge for many patients and carers from other parts of Sarawak, including Bintulu, due to the physical distance that they have to travel.



Sarawak Heart Foundation Deputy Chairman YB Datuk Amar Prof Dr Sim Kui Hian (fourth right) and Board Trustee, Datin Patinggi Datuk Amar Jamilah Binti Haji Anu (fifth right) receiving a mock cheque for RMI.6 million for the proposed cardiac unit in Bintulu Hospital from PETROS chairman Tan Sri Datuk Amar Dr Hamid Bugo at his office at Dewan Undangan Negeri Sarawak, Kuching on 12 November 2024.

Sarawak Heart Foundation Deputy Chairman YB Datuk Amar Prof Dr Sim Kui Hian (fourth right) receiving a mock cheque for RM150,000.00 for the proposed cardiac unit in Bintulu Hospital from Chief Executive Officer of Bintulu Port Holdings Berhad Encik Ruslan bin Abdul Ghani at his office at Wisma BSpa Malaysia Kuching on 4 November 2024.

MAGNETIC RESONANCE IMAGING MACHINE FOR SIBU HOSPITAL

Sibu Hospital will finally get its Magnetic Resonance Imaging (MRI) machine upon the completion of the room scheduled for March 2025.

Sarawak Heart Foundation successfully raised RM2.02 million for the Philips Diamond Select 1.5T Achieva dStream machine recommended by Sarawak Heart Centre as the existing one was near end of life then and heart patients in the Central Region of the State had to be referred to Sarawak Heart Centre.

The Ministry of Health Malaysia approved an allocation of RM1,208,018.00 for the upgrading of the room for the MRI machine in October 2023.

The new machine will be able to address the immediate needs of Sibu Hospital in providing MRI treatment to patients in the whole of the Central Region of the Sarawak that includes Mukah, Sarikei and Kapit Divisions.

Our heartfelt thanks to our donors: -

- 1 Hock Peng Furniture & General Contractors Sdn Bhd
- 2 Simalau Plantation Sdn Bhd
- 3 Titanium Project Management Sdn Bhd
- 4 Cahya Mata Sarawak Bhd
- 5 Harum Bidang Sdn Bhd
- 6 Asteel Sdn Bhd
- 7 Samling Resources Bhd
- 8 R H Forest Corporation Sdn Bhd
- 9 Sanyan Holdings Sdn Bhd
- 10 KTS-BLD Foundation
- 11 TAS Offshore Bhd
- 2 One Medicare Sdn Bhd
- 3 Biomedix Solutions Sdn Bhd
- 14 Sarawak Timber Association
- 15 Ta Ann Holdings Bhd
- 16 Ibraco Bhd
- 17 Hock Seng Lee Bhd
- 18 Sarawak Energy Bhd
- 19 Petroleum Sarawak Bhd
- 20 Mr Kong Lek Chai

Electricity For Life 2024

Report by Dr Esteban Chin, Clinical Cardiologist, Sarawak Heart Centre on behalf of the travel team for Electricity for Life Initiative

A Sarawak Heart Foundation Initiative in collaboration with:

- Sarawak State Health Department
- Sarawak Heart Centre
- Medtronic International (Malaysia)

Introduction

he Sarawak Heart Foundation and the Sarawak Heart Centre have a long-standing tradition of organizing the annual Electricity For Life (EFL) initiative in conjunction with World Heart Day since 2015. However, like many initiatives, it was placed on hold during the COVID-19 pandemic, with the last event held in 2019. This year, we are proud to resume the program with a renewed focus, and our mission is to reach some of Sarawak's most remote communities, specifically Sungai Asap and Bakun.

Sarawak is an incredibly vast state, the largest in Malaysia, covering 124,451 km², which accounts for 37.5% of the country's total land area. For many communities deep within the interior, accessing specialized care at the

Sarawak Heart Centre can take days of travel. The logistical difficulties posed by these geographical challenges is almost unthinkable.

As the only government tertiary referral centre for cardiology in Sarawak, we understand the importance of raising public and healthcare provider awareness about the latest advancements in heart disease management. Equally crucial is the introduction of new services available at the Sarawak Heart Centre. While our centre continues to advance and provide cutting-edge treatments for heart disease, we remain mindful of the healthcare needs in district hospitals and rural areas.

A core theme of Electricity for Life is "Closing the Gaps." Our goal is to strengthen the connection between

Sarawak Heart Centre and all district healtcare providers across the state. This tour is not only about delivering continuing medical education but also about listening to and understanding the healthcare needs of rural communities. With this in mind, we strive to enhance the accessibility of cardiology services throughout Sarawak, bridging the gap between urban and rural healthcare.

As we embark on the Electricity for Life 2024 journey, we extend our heartfelt gratitude to Dr. Ong Ting Kiam, Head of the Department of Cardiology, Sarawak Heart Centre; Dr. Alan Fong, Senior Consultant Cardiologist, Sarawak Heart Centre; Dr. Veronica Lugah from the Sarawak Health Department; and Ms. Susan Lim from Medtronic International (Malaysia), for their invaluable support in organizing this event.



From left: Sally Sie (Medtronic), Dr Esteban Chin (Clinical Cardiologist PJS), Dr Azlee Bin Ayub (Timbalan pengarah JKNS), Dr Alan Fong (Consultant Cardiologist PJS), Susan Lim (Medtronic)



Day 1: Sungai Asap and Bakun

Our first day of the Electricity For Life (EFL) initiative took us to Sungai Asap and Bakun. They are both located in the Belaga district. One of the more accessible ways to reach these remote areas is by road from Bintulu, a journey of about 184 km. While the Pan Borneo Highway has improved access, only one-third of the journey benefits from this highway. The remaining two-thirds are narrow trunk roads. We set off from Bintulu in a 4-wheel drive at 8 a.m. and arrived at Klinik Kesihatan Sungai Asap around 10:30 a.m.

Sungai Asap is a resettlement area for indigenous communities displaced by the construction of the Bakun Hydropower Dam. The Klinik Kesihatan Sungai Asap is the only clinic in the area equipped with a family medicine specialist, providing essential healthcare to the surrounding communities. I had the privilege of meeting Dr. Allen Chai, the clinic's first in-house family medicine specialist, who has been serving there since 2022. There are also 6 medical officers currently serving in the clinic.

During our brief tour of the clinic, I was deeply impressed by the range of healthcare services provided. From performing emergency deliveries to administering thrombolysis for heart attack patients, the clinic had to take on the role to handle emergencies with limited resources. This is especially remarkable given that the nearest hospital is at least 2.5 hours away. I was in awe of the dedication and sacrifices made by the healthcare professionals who choose to work in such a remote location, committed to serving the communities here.



We conducted a brief lecture on interpreting ECGs for cardiac emergencies, focusing on identifying life-threatening conditions and managing them in resource-limited settings. The staff shared the logistical challenges they face, particularly in handling emergencies. One key issue is the shortage of ambulances. With only one available to transport critically ill patients, they face serious challenges if multiple emergencies arise simultaneously. The round-trip journey to Bintulu Hospital alone takes five hours, leaving little room for error in such critical situations.

After our session at Klinik Kesihatan Sungai Asap, we continued to Bakun, an hour's drive away. Bakun Dam, one of the tallest concrete-faced rockfill dams in the world, was a breathtaking sight. The Bakun Lake, formed by the dam, is now Malaysia's largest by storage volume and surface area. The dam, which began operations in 2010, is currently managed by Sarawak Energy.



We were welcomed by Mr. Alvin and Mdm Juliana, the team running Klinik Bakun. Mr. Alvin, a Medical Assistant originally from Sibu, has been at the clinic since 2014, while Mdm Juliana joined in 2019. Initially, the clinic was intended to serve dam employees, but it has since expanded its services to the surrounding communities due to the lack of nearby healthcare facilities. Mr. Alvin gave us a tour of the dam and the lake, and I was struck by the immense engineering accomplishment, made all the more remarkable by its location in one of Sarawak's most isolated areas. He also explained the significant logistical challenges faced by people in the region in accessing healthcare, a situation further compounded by an unreliable communication network that frequently breaks down.

As we wrapped up our visit and began the bumpy ride back to Bintulu before dusk,my thoughts lingered on the profound difficulties faced by both the communities andhealthcare workers in these remote regions. Their resilience, despite these hardships,left a lasting impression on me.

Day 2: Bintulu Hospital

Bintulu Hospital is the main secondary referral center, covering a vast area from the Mukah region to Belaga, serving a population of about 350,000 residents. This hospital holds a special place in my heart, as I served as a medical specialist here from 2021 to 2023, during the height of the COVID-19 pandemic. Since then, Bintulu Hospital has evolved significantly. During my tenure as the head of the medical department, we established a new medical high-dependency unit. Now, the hospital is exploring the possibility of starting an invasive cardiology catheterization lab service. The Sarawak state government is also considering developing cardiology unit in Bintulu Hospital to extend cardiology service for the central region of Sarawak.

Our day began with a Continuing Medical Education (CME) lecture on the electrocardiogram in cardiac emergencies. The CME session also covered implantable cardioverter-defibrillators, pacemakers, and temporary transvenous pacing for bradyarrhythmias. We focused on the diagnostic and management challenges of cardiac emergencies in the absence of a catheterization lab. It was a rewarding experience, reconnecting with my former colleagues and engaging in a fruitful exchange of knowledge. We concluded the visit at 10 AM and flew back to Kuching shortly after.

This two-day initiative gave me firsthand experience of the arduous journey many people must undertake to access cardiology services in Sarawak. It reinforced the vastness of Sarawak and the pressing need to improve healthcare access for people in the district and rural areas. These visits enabled us to build stronger relationships with the communities and facilitated discussions on how to enhance cardiology services in Sarawak. We are also deeply grateful to Medtronic International (Malaysia) for supporting our travel to some of the most remote areas of Sarawak. In summary, Electricity for Life 2024 has been a rewarding journey, and we hope to continue this initiative in 2025, reaching other parts of Sarawak.







World Heart Day











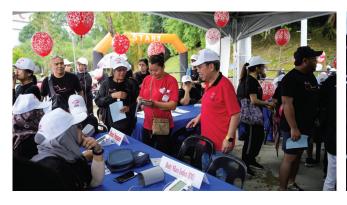




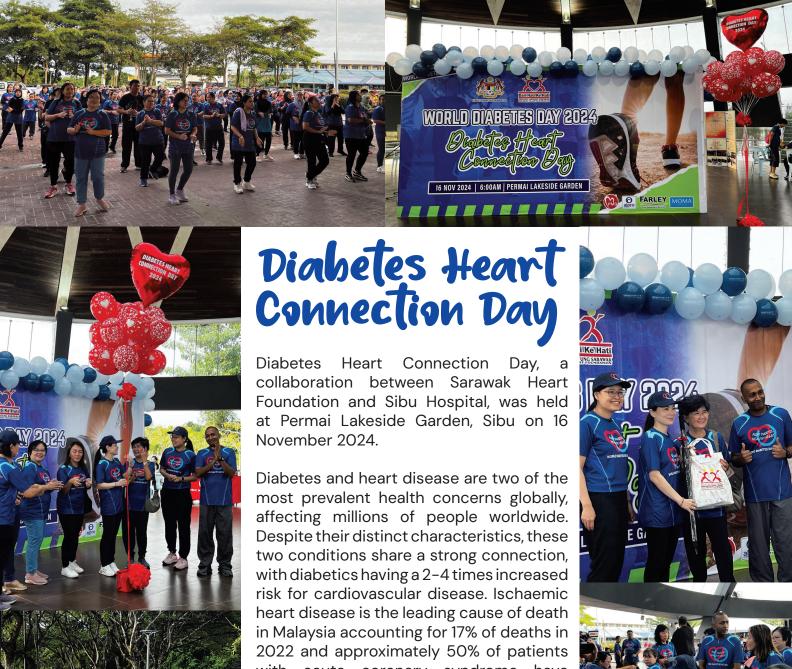












with acute coronary syndrome have diabetes.

Deputy President of Dewan Rakyat YB Alice Lau who is also Member of Parliament for Lanang, officiated at the event. The activities included free health screening, a heart walk around the Lake, a treasure hunt for diabetic patients and a lucky draw.





MANIKINS FOR SARAWAK GENERAL HOSPITAL





Sarawak Heart Foundation has donated 12 units of manikins to Sarawak General Hospital. The manikins consisting of seven units of CPR Manikin ½ Body Little Anne and five units of Infant Manikin Little Baby cost RM20,100. They are needed for the Basic Life Support courses for the staff in the hospital.

The manikins were handed over to Dr Vanitha Kandasamy of Sarawak General Hospital at a simple ceremony at Sarawak Heart Centre on 2 April 2024. Present at the ceremony were Foundation Deputy Chairman YB Datuk Amar Prof Dr Sim Kui Hian and Board Trustees Datin Patinggi Datuk Amar Hajah Jamilah Binti Haji Anu, Dato Anne Teng and Ms Pauline Kon.

The Trustees later proceeded to distribute Hari Raya goodies to the patients in Sarawak Heart Centre.





arawak is Malaysia's largest state, spanning around 800 kilometres along its northwest coast. As of 2021, it is home to 2.8 million people from almost 40 different sub-ethnic groups across varied socioeconomic backgrounds. The state of Sarawak is divided into 11 divisions with its capital, Kuching city, on its southwest tip. Sarawak Heart Centre, Sarawak's sole cardiology centre, is located in Kota Samarahan with a limited number of cardiologists to provide care for HF patients throughout the state. Owing to the expansive size of the state, access to cardiologists is constrained by logistical challenges. The care is often shared by other hospitals without cardiology specialty.

HF is a disease of the heart when it does not pump as well as it should. As a result, our body does not get enough of the oxygen-rich blood it needs to function properly. As the heart's pumping becomes less effective, blood may back up in other areas of the body causing fluid to build up in the lungs and other areas, leading to symptoms such as shortness of breath, difficulty sleeping, swollen abdomen and feet, and fatigue.

The prevalence of HF is increasing due to an ageing population as well as improved survival of patients with heart attacks, high blood pressure and other chronic illnesses. However, HF mortality remains high with a 67% mortality rate within 5 years following diagnosis. One

of the key components in reducing mortality and HF hospitalisation is the optimization of guideline directed medical therapy (GDMT) among patients with HF. The latest European and American management guidelines of HF recommend early initiation and dose optimization of 4 different pillars of medications namely reninangiotensin system inhibitors (RASi), beta blockers (BB), mineralocorticoid receptor antagonist (MRA) and sodium glucose co transporter inhibitor (SGLT2i) in management of HFrEF.

A prospective observational study (SGH-HF) in 2020 led by Dr Ling Hwei Sung on the characteristics of patients with acute heart failure admissions in Sarawak, showed that prescription of GDMT is challenging following acute admission in a non-cardiology centre, Sarawak General Hospital (SGH), as shown in Figure 1. The most common challenge is the management of the side effects of HF medications, like low blood pressure, increased potassium levels and deranged kidney function. In addition, with the overcrowding of patients in the hospital, it is nearly impossible to adequately optimise medications prior to discharge. The average wait period for an appointment at clinic is three months and some patients will either be readmitted or succumb to death. The adverse effects of HF therapy may also result in disruption of GDMT during followup and lead to delayed optimisation of GDMT.

One of the models of HF clinics, namely, the outpatient Multidisciplinary team heart failure (MDT-HF) clinic, has been introduced to overcome the limitation in the optimisation of GDMT. Sarawak Heart Centre HF clinic is the first MDT-HF clinic in Sarawak established since 2016 led by Dr Cham Yee Ling. It has served to improve HF service and patient care. It has proven to improve HF patients GDMT prescription and clinical outcome and its data was recently presented at ASEAN Federation of Cardiology Congress (AFCC) 2024.



An initiative was started to set up physician-lead HF clinics across other district hospitals in Sarawak, to improve management of HF patients who had limited access to cardiology care. In 2020, the first physician-lead heart failure clinic in Sarawak was started in SGH in the city of Kuching, 20km away from Sarawak Heart Centre. Over the next three years, physician-lead HF clinics were started in neighbouring district hospitals in Miri, Sarikei, Serian, Sibu, Bintulu, Sri Aman, Kapit and Limbang, focusing on GDMT optimisation.

Multiple heart failure workshops were carried out by cardiologists at the respective hospitals to educate medical officers and physicians about HF management and basic echocardiogram to improve heart failure care.

Limitations

However, the healthcare system in our setting has limitations in mirroring MDT-HF clinics due to shortage of manpower. Apart from that, limited drug availability also results in lower usage of newer medications. Many studies have shown the benefits of home management programmes and home telemonitoring but it remains challenging in our setting due to geographical reasons and the limited accessibility to telecommunication networks in the rural areas.

challenges, Despite these retrospective study multi-centre consisting of 10 HF clinics across Sarawak (Sarawak-HF) showed improvements in GDMT prescription and clinical outcome. The data was presented at National Heart (NHAM) Association of Malaysia Congress 2024 and AFCC 2024 (Figure 2). This is consistent with a recent study (Strong-HF) which showed an intensive strategy of rapid up-titration of guideline-directed medical therapy





(GDMT) combined with close followup helped to reduce HF re-admissions and mortality.

The success of the HF clinics is attributed to dedicated physicians serving as HF lead in their districts and guiding their team to improve HF care. Each district heart failure clinic is unique – some are bound by rivers and mountains, some are in the middle of jungle while some are located between the two halves of foreign countries. Before the road link, many districts were only accessible by boat or air. Rapid up-titration GDMT would have been near impossible if patients

were required to travel for three hours by ferry and express boat. This makes the Sarawak HF demographic and its characteristics very distinct. The 10 HF clinics will continue to serve and expand in Sarawak for HF patients across varied socioeconomic backgrounds and logistical challenges.

The Future

Many studies reported that nursing and pharmacist-guided titration of GDMT based on a titration protocol showed improvement in HF outcomes. This will be something we look forward to exploring and implementing in the near future.

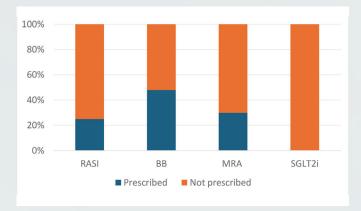


Figure 1: Percentage of each pillar of GDMT on discharge (SGH-HF, 2020)

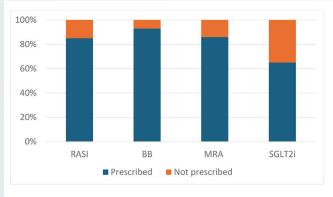


Figure 2: Percentage of each pillar of GDMT on discharge at 3 months follow-up (Sarawak-HF, 2024)





SARAWAK HEART FOUNDATION

REGISTRATION NO. 199601011149 (383498-P) (Foundation Incorporated in Malaysia)

DONATION FORM

Full Name	[] Cheque No RM
Address	Cheque payable to. Salawak neart Foundation
Tel.	[] Bank Draft RM
Fax	[] Direct Remittance : Our Bank details Name : Sarawak Heart Foundation
Email	Bank : RHB Bank
	A/C No. : 21104350033342 (Please fax or email the bank-in slip to us)