

PEARLS

POCUS for Emergency and Acute Care
in Resource-Limited Settings

Welcome to our Monthly Newsletter

Editors: Dr Jono Henry & Long Nguyen
Design: Marcus Chan & Long Nguyen



Dr Lawrence Boe (feature story) and the children, Vanuatu

REMINDERS

Upcoming:



**Monday 17th June
+7AM GMT**

Image Review Session 03
Dr Lewis McLean
<https://unimelb.zoom.us/j/89171569520>
PW: 584496



**Monday 1st July
+7AM GMT**

Monthly Lecture series
Dr Luke Nottingham
Topic: Regional Anaesthesia
<https://unimelb.zoom.us/j/81618424483>
PW: 316519

04

PEARLS in
numbers

05

Feature
story

06

Education
corner

Message from Jono

Hi everyone - welcome back to our newsletter, a collaborative monthly effort from many contributors - but I want to give a special shout-out to the hard work of our medical student team.



Dr Jono Henry

3 things to emphasise this month:

1 - As our grassroots network rapidly grows, many opportunities are arising to get involved for those who are interested - see Vacancies below. Better yet - forward this newsletter to someone you think may be a good fit.

2 - Make sure you read Dr Lawrence Boe's profile - a really special guy I met way back in 2019, so well-respected in the Vanuatu medical fraternity, who we are privileged to now have as a PEARLS faculty member.

3 - And last but not least - **upload, upload, upload!** We have over 30 incredible top-quality QA reviewers on the cloud, ready to share their vast breadth of expertise, and we love doing it - it stretches our skills and we enjoy reviewing diverse tropical pathology which we don't see every day.

Take care and happy scanning,
Jono

Vacancies

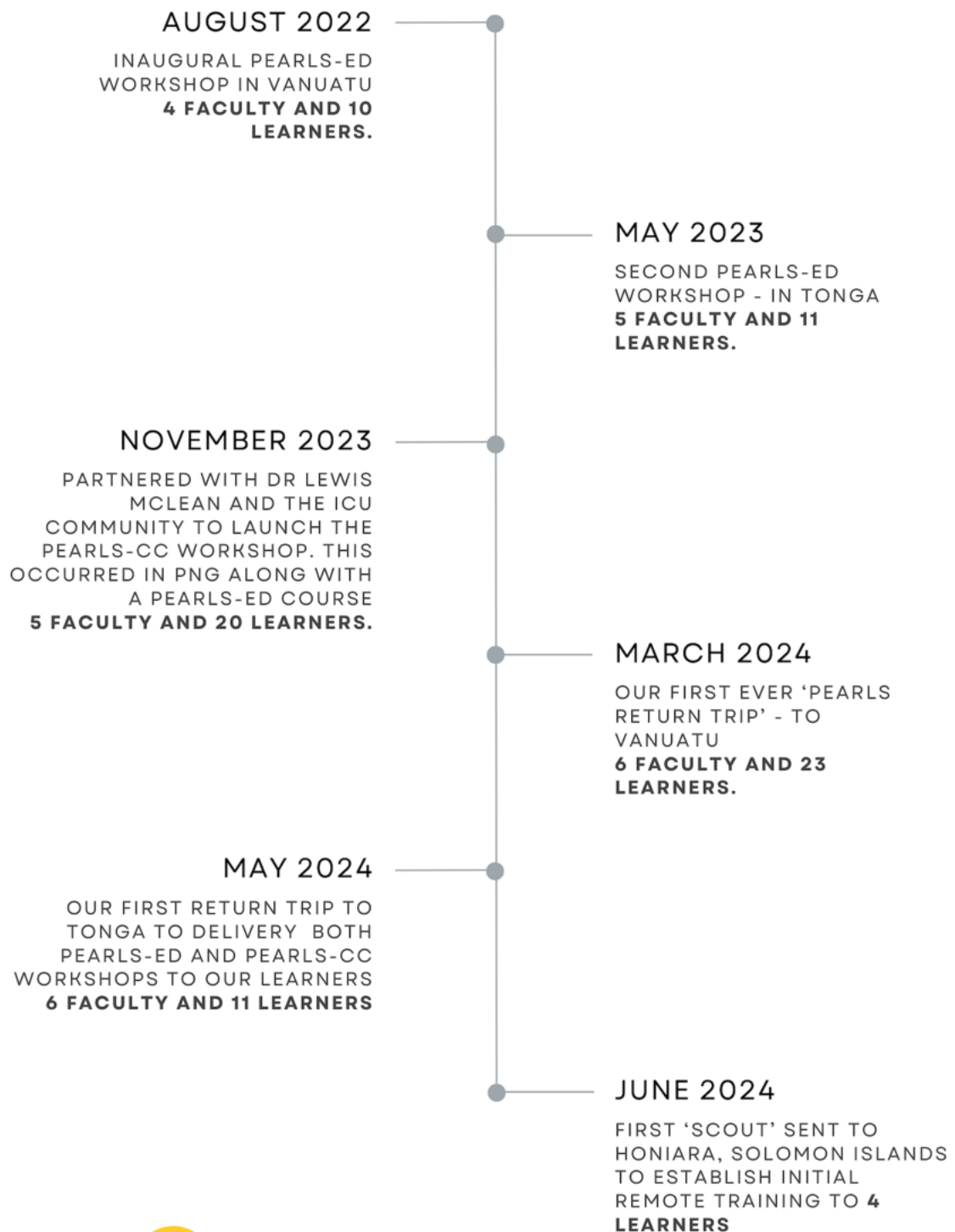
PEARLS has mini-teams working on various projects in the background. We are on the lookout for anyone interested in contributing in these fields:

HIGHEST PRIORITY:

- **PEARLS Fundraising Lead - sponsorships and grant applications**
- **PEARLS Tech Support team**
- **PEARLS Country Leads - spots open for senior leads and junior partners in multiple countries**
- PEARLS Publicity team - coordinating social media, lectures and presentations
- PEARLS Industry liaison
- PEARLS Remote Coaches
- PEARLS Lecture series - speaker recruitment and coordination - partnered with medical student team
- PEARLS Newsletter - content creation, regular column, summary of latest global health ultrasound literature - partnered with medical student team

Some positions are open to medical students as well. If you're interested, please email us at pearls.enquiries@gmail.com.

A brief timeline of PEARLS's history



PEARLS IN NUMBERS

Dr Ivan Chan - PEARLS Cloud Coordinator and PEARLS Research team



72

Clinicians Trained

33

QA image reviewers on cloud

24

Clinicians who've travelled to teach PEARLS

33 + 2

Butterfly probes linked to cloud: Distributed through funding support of partners + self-sourced

650

Studies uploaded to cloud

8

In-person workshops across 3 countries (5 PEARLS-ED, 3 PEARLS-CC): Vanuatu, Tonga, PNG



Top 5 learners

Ranked by the number of successfully QA-ed uploads in the previous month.

1 - Dr Losimani Taufua



2 - Dr Siniteke Taufua



3 - Dr Sale Vurobaravu



4 - Dr Alu Kali

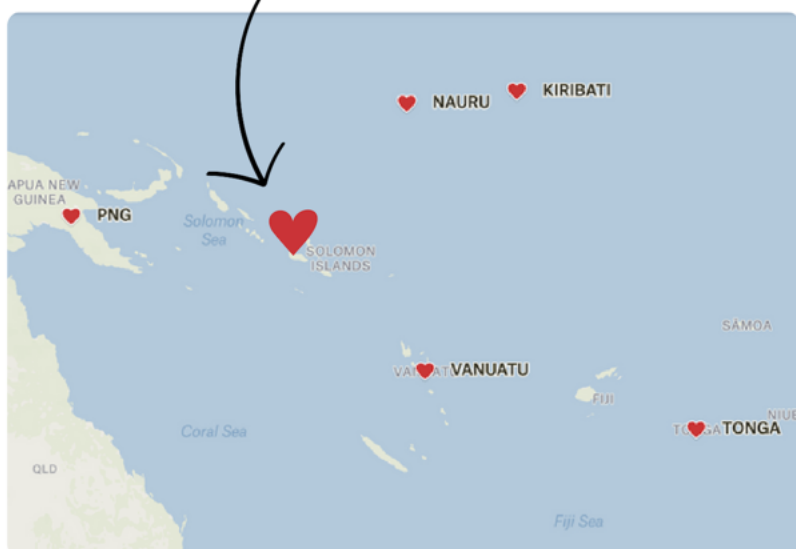


5 - Dr Eliesa Ma'u



Super amazing everyone! Keep up the great work and we look forward to reviewing more scans this month! 🙌

Just landed!



8

Learners began PEARLS training through remote coaching from PNG, Kiribati and Nauru

1

Learner graduated to faculty:
Dr Lawrence Boe

241

Number of social media followers including Twitter, Youtube

People of PEARLS

Hi, I am Lawrence, currently working as the only doctor in Godden Memorial Hospital (GMH), in Ambae Vanuatu for 3 years now. Prior to this I was working in Santo where I worked mostly in the medical ward. In pursuing my training in Rural Medicine, I was transferred to GMH. This hospital is the provincial hospital for Penama Province comprising 3 islands, and it serves a population of about 35,000 people.

What is it like living on the island? Is it true you catch your own fish for dinner?

This hospital has become my home. This is the part about rural medicine where you blend in with your community but always maintain your professional prowess, placing their health needs as priority.

And yes I do catch my own fish. In my free time, I like to go fishing, so since I've been here I never buy fish, I get it for free! There are good sides and bad sides to working in the rural. Despite all, I have come to find that serving the rural population is very rewarding.

The geographical locations of the 3 islands pose certain challenges to access in health care. There are very remote communities separated by poor road conditions and also the sea which at times make travelling impossible for our patients. Many emergencies cannot be medevac due to no available flights and location in these days. This leads to disabilities and even deaths. Almost everyday, I am answering calls from nurses working in health centres and dispensaries discussing emergencies on the phone. The challenges are there, and one of the main tasks of rural doctors is to close this gap, bringing the service closer to the people.

When did you first start scanning?

I first held an ultrasound probe and scan when I was doing my obstetrics rotation internship in Vila Central Hospital. This was in 2013. Further on, in my internal medicine block, I had the opportunity to learn basic echo views with my consultant. Being a medical imaging tool, it helps a lot in patient management.

I was quite fond with echocardiography and obstetrics scanning prior to the courses. Although I had informal teachings on ultrasound, I was very eager to become better so I figured I had to get more hands-on which I did whenever I had the time. In the medical ward in Vila Central Hospital, there is an old, donated Siemens echocardiography machine so I practised a lot with it, looking at valves, pericardial



Dr Lawrence Boe (left) at work, Vanuatu

effusion etc., going back to textbooks, if need be, as my guide. Then with time, I would have a skilled cardiac scanner who would teach me a few tricks, hence fine-tuning my style each time. I have always admired the idea of looking inside the body knowing what is normal and what is abnormal - it is like a motivation to do good for my patient.

What do you find most useful in your daily practice?

The modalities I find useful are eFAST scan, obstetric scans, musculoskeletal scans looking at swollen lumps like abscesses and cysts. Lately I have been doing a lot of nerve blocks. Ultrasound guided nerve blocks are very effective and give fast reliable anaesthesia in time for a procedure.

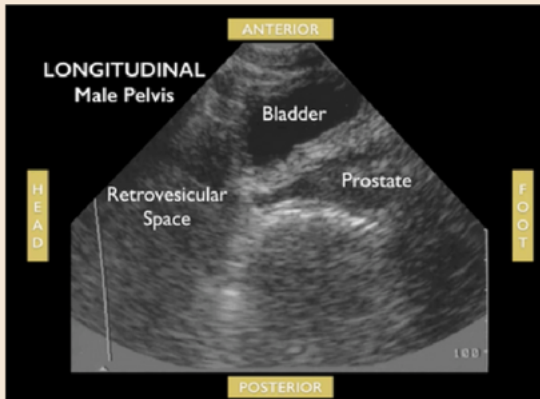
How have you found the process of becoming PEARLS faculty?

I guess what got me to this level is my enthusiasm to scan, attend online lectures and the PEARLS courses. Then at least teaching in one or two PEARLS courses. Ultrasound scanning is a technical skill, so as always it is good to observe first, then hands-on and then teach it. One important thing about faculty is that you are also learning from what other people are scanning and discussing openly the findings. However, I find that learning is best done with an experienced trainer.

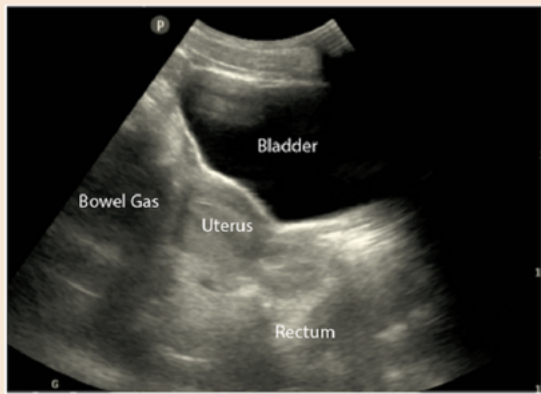
Any thoughts on how POCUS can further enhance patient care in Vanuatu in the future?

All doctors in the Pacific Islands should be trained to use ultrasound at the bedside. It is changing how we manage our patients and the more we get involved the more patients will benefit. The use of ultrasound continues to open new windows on how we see the human body. Recently we have seen more and more applications being created and used to assess and measure new variables that help us to better understand conditions. It will surely become one of the most useful non-invasive tools at the bedside.

Tips of the month: Free fluid in Pelvic region



Longitudinal pelvic view (Male)



Longitudinal pelvic view (Female)

Reference: https://www.pocus101.com/efast-ultrasound-exam-made-easy-step-by-step-guide/#Step_3_eFAST_Pelvic_View (Accessed 5/6/2024)

- **Step 1**
Begin with longitudinal view by anchoring probe with indicator pointing towards patient's head. Ensure it is midline and ideally includes the shadow of pubic symphysis.
- **Step 2**
Ensure the probe is pointing caudally towards the pelvic cavity. If proper images are not visible, the probe is likely too superior.
- **Step 3**
The bladder should sit immediately posterior to the pubic symphysis.
 - In male, prostate/ seminal vesicles should be immediately posterior to the bladder, followed by the rectovesical pouch (Free fluid usually accumulates here).
 - In female, uterus should be immediately posterior to bladder, followed by the rectouterine pouch/ Pouch of Douglas (Free fluid usually accumulates here).
- **Step 4**
Fan the probe left and right to identify lateral borders of bladder for free fluid.
- **Step 5**
Next, in transverse view, centre the bladder and rotate the probe counterclockwise by 90°. Probe indicator should now point to patient's right side.
- **Step 6**
Identify the bladder, prostate (male), uterus (female), and rectum. Tilt/fan the probe from superior to inferior to examine entire pelvis for free fluid.

Monthly lecture series

The PEARLS Monthly lecture series is hosted by Bilal Hafeez, on the **first** Monday of each month at +7AM GMT.

June's lecture was on "Top Tips for Global POCUS", delivered by Dr Jessica Schmidt, Director of Global Health for Emergency Medicine at the University of Wisconsin-Madison.



Dr Jessica Schmidt, Wisconsin, USA

Key takeaways from the lecture:

The questions below are important factors for trainers AND trainees to think about when participating in Global POCUS training programs:

- Needs assessment: What are our goals? What educational gaps do we need to fill?
- Logistics: do we have space? equipment? How can we source these?
- The people: Educators, administration, support staff, enthusiastic attendees, local champions for engagement!
- The TECH: Portability, easy of access, network, experienced IT staff for troubleshooting
- Continuing Education: Ultrasound is Easy to learn...and easy to forget - Lecture series, continuing image review sessions, ongoing learning from coaches
- Sustainability: Train the Trainees to take over, AND find enthusiastic local staff willing to take on the torch!

The next lecture is on Monday 1st July: Dr Lewis McLean on the topic of "Rheumatic Heart Disease".

For recordings of previous presentations, please visit our Youtube channel: https://www.youtube.com/@PEARLS_POCUS

Monthly Image Review session

The Monthly Image Review sessions are hosted by Dr Lewis McLean and Long Nguyen, on the **third** Monday of each month at +7AM GMT.

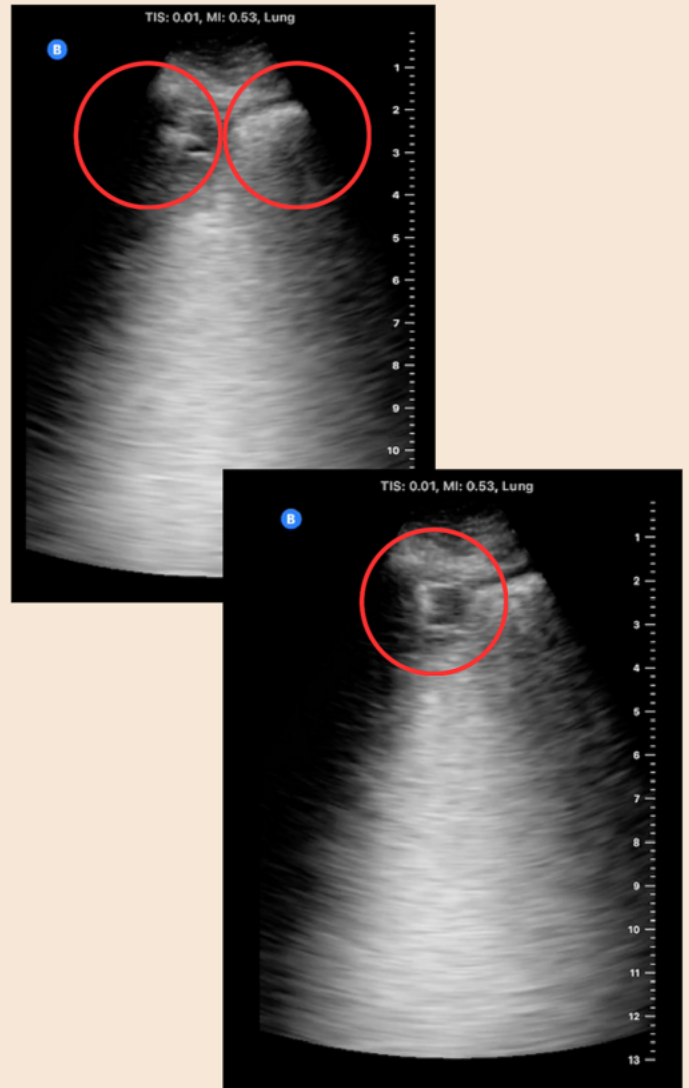
Our second Monthly Image Review session was held last month on the 20th May 2024.

We had the opportunities to view a number of interesting cases. To the right are images of an US scan of lung metastases in a patient with uterine cancer. The scans were conducted by Dr Tannia Binihi in Vanuatu.

We look forward to having you at our next image review session being held on the 17th June.

“Had a great session this evening with Lewis and the team. It’s been a while since I’ve looked at USS images properly. 😊

Would like to encourage everyone to attend the sessions to refresh our knowledge on USS. It’s a key device that’ll aid us in patient management outside of PMGH, where we literally only have clinical judgment to go by” ~ Dr Jemimah Menz



Lung malignancy due to suspected uterine cancer

T@g an expert

To maximise the wealth of expertise and knowledge within the organisation, we are running the “T@g an expert” initiative! For difficult scans, both learners and faculty can T@g one of our experts in an image comment for their opinions and advice as per below. Due to technical difficulties yet to be resolved by Butterfly, the names of some faculty are not yet included here.

Faculty who’d like to make modifications/additions to this list, please email pearls.enquiries@gmail.com

Name	Happy to be tagged in
@Jonathan Henry	Echo, E-FAST, AAA, bowel
@Katie Newman	Anything except echo
@Jo McCann	Anything except echo
@Lewis McLean	Echo, lung
@Gabriela King	Anything
@Matt Born	Anything
@Ant Allso	Anything
@Darsim Haji	Echo, lung
@Sam Orde	Echo, lung

Upcoming events & Developments

PEARLS Workshops

- **August 22-23 approx** - a PEARLS-CC is provisionally planned prior to the Pacific Society of Anaesthetists' Annual Refresher Course at Pacific Harbour, Lautoka, Fiji.
(<https://www.psaonline.info/event-details-registration/psa-annual-refresher-course-2024-2>)
- **Nov 2024** (provisional date): First in-person PEARLS workshops in Honiara, Solomon Islands.
- **Nov 18-22 2024**: PEARLS Samoa
- **Nov 2024**: We're hoping to hold a PEARLS refresher course around the PMA conference (26-27th Nov) in Christchurch - if travelling, make sure to bring your probe!

Other updates

- **26th June**: Dr Elise Pascoe is presenting on behalf of PEARLS at the University of Melbourne's Medical Student Conference MDSC 2024 on Medical Education.
- **14th September**: Dr Jono Henry is presenting on 'Rural Ultrasound Training - lessons from the PEARLS global health project' at ACEM's Victorial Annual Conference 2024
<https://acemvicconference.arinex.one>
- **22nd-23rd Nov**: Dr Matt Born is presenting virtually at the WINFOCUS World Congress 2024 on the topic of "POCUS for abdo pain in resource-limited settings".

External events:

- **7th July 2024**: The ACEM Rural, Regional & Remote Conference in Darwin will include Progress PoCUS workshop, covering the 5 core topics: eFAST, AAA, Lung, FELS + Procedural. It's essentially a 'finishing school' for clinicians trying to credential via completion of logbooks or recognition of prior learning.
Target audience: Emergency Physicians, CMOs, Trainees, Certificant and Diploma Candidates, and anyone looking to improve their ED POCUS skills.
They'll also finish the day with a review of the SLICE protocol (aka the "quick and easy" RUSH protocol) which provides a stepwise approach to using Lung, FELS, eFAST and AAA scans in the assessment of the shocked or SOB patient.
Mode: In-person only
Cost: \$400/person
Registration link: <https://acemrrr2024.com.au/pages/workshops>
- **9-10th September 2024**: The Global Emergency Care Conference comprises of the Capacity Building in Global Emergency Care Workshop on the 9th and the Global Emergency Care Symposium on the 10th.
Mode: in-person AND virtual
Cost: Multiple options. Delegates from Low and Middle-Income Country could apply for a full fee scholarship. **Deadline for application is Wednesday 14th August 2024.**
Registration link: <https://www.alfredemergency.org/course/the-global-emergency-care-conference>



Honiara from the hill, Solomon Islands, 2024.

SEND US YOUR STORIES AND PHOTOS

We would love to be able to share your photos and stories from PEARLS workshops or remote-coaching sessions, of you using the Butterfly probes in clinical practice or anything associated with PEARLS.

Have a message for your coach(es)? Successfully master a difficult scan? Scan something impressive? Wearing scrubs that fashionably match the probes? Or anything that excites you!

Please send them to pearls.enquiries@gmail.com. 😊



Contact us

General enquiries:

pearls.enquiries@gmail.com

Monthly Lecture series and Image review sessions:

pearls.lectureseries@gmail.com

Coach coordinator:

pearls.coaches@gmail.com

Youtube: www.youtube.com/@PEARLS_POCUS

X: twitter.com/PEARLS_POCUS

Website: Coming soon!