

PEARLS

POCUS for Emergency and Acute Care
in Resource-Limited Settings

Welcome to our Monthly Newsletter

Editors: Dr Jono Henry
Long Nguyen



Long Nguyen and the ED team at National Referral Hospital, Honiara, Solomon Islands: (left to right) Dr Ellison Manegehe, Dr Allison Lalega, Dr Samur, Dr Celestine Tofuramo, Dr Nyrick Eddie, Dr Inity Vaghi, Dr Trina Sale (ED Director) and nurse Kristalee Horoto.



REMINDERS

Upcoming:



**Monday 15th July
+7AM GMT**

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



**Monday 5th August
+7AM GMT**

Monthly Lecture series
Prof Gillian Whalley
Topic: Rheumatic Heart Disease
<https://unimelb.zoom.us/j/81618424483>
PW: 316519

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Message from Jono



Dr Jono Henry

Team, I'm thrilled to announce that I (on behalf of all of PEARLS) have been awarded ACEM's International Development Fund Grant for 2024! This is truly something that belongs to all of the learners and faculty, who have collaboratively built up our project in a million small ways.

The funds will be directed towards the upcoming inaugural courses in Samoa and the Solomon Islands - specifically probes, and international travel for a few previous PEARLS learners who are graduating to become PEARLS faculty.

We hope that the opportunity to become a PEARLS faculty member is something motivating for those of you early in your POCUS journey. Progressing full-circle to teach your colleagues is something I personally find extremely rewarding professionally. And I want to see as many of you as possible catch the 'POCUS bug', so I can have the joy of teaching alongside you in the future.

I want to express my deep appreciation to ACEM for their award. ACEM is the professional body for Emergency Medicine in Australasia, and has a strong Global Emergency Care focus. I have benefitted from mentoring from so many members of the Global Emergency Care Committee, and am hugely grateful for their support at every point on my journey into global health. I still have so much to learn, and rely heavily on the collective wisdom of them, and all of you.

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 team - sponsorships and grant applications**
- **PEARLS Tech Support team**

- PEARLS Country Leads - spots open for senior leads and junior partners in multiple countries
- PEARLS Publicity & Social Media team - coordinating social media accounts, promotional presentations, articles & website
- PEARLS Industry liaison
- PEARLS Remote Coaches
- PEARLS Lecture series - speaker recruitment and coordination - partnered with medical student team
- PEARLS Newsletter - broad scope for contributions of all kinds. Maybe you could start a regular column, share regular brief POCUS tips based on your personal experiences that can't be learnt from a textbook, interview a master sonologist, or summarise the latest global health ultrasound literature. You'll partner with our medical student team who make it all run smoothly!

Many positions are open to medical students as well, often in partnership with a senior lead. If you're interested, please email us at pearls.enquiries@gmail.com.

PEARLS IN NUMBERS

Dr Ivan Chan - PEARLS Cloud Coordinator and PEARLS Research team



76

Clinicians Trained

33

QA image reviewers on cloud

24

Clinicians who've travelled to teach PEARLS

36

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

661

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 Micah Misivet



2 - Dr Tabuto Eria



3 - Dr Losimani Taufa



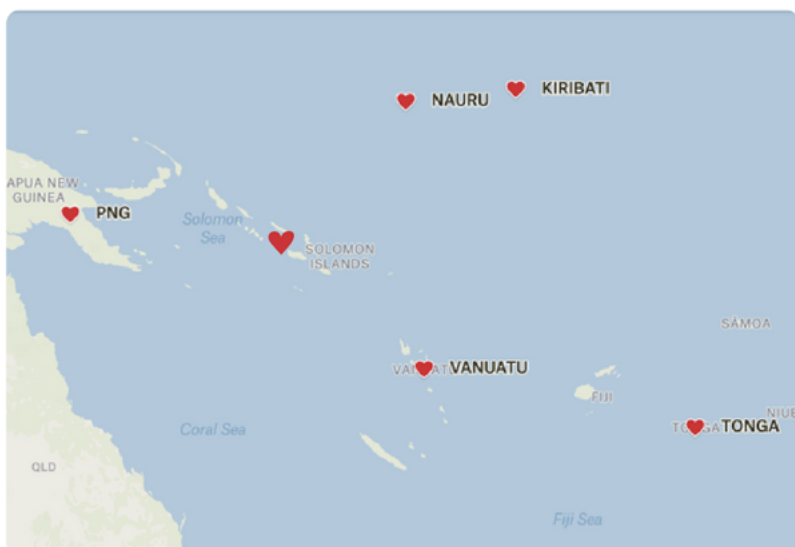
4 - Dr Ellison Bradley Manegehe



5 - Dr Josefa Tama Tokon



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



12

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

1

Learner graduated to faculty:
Dr Lawrence Boe

241

Number of social media followers including Twitter, Youtube

From little acorns grow mighty oaks



Ultrasound presentations at weekly education sessions.

Last month I had the opportunity to travel to Honiara, Solomon Islands for a two-week elective placement at the National Referral Hospital (NRH). I was able to incorporate PEARLS into this trip by bringing a Butterfly IQ+ and Samsung Galaxy S9 tablet which PEARLS acquired through funding from ASUM Outreach grant. The initiative originated from ongoing discussions between Dr Jono Henry and Dr Trina Sale, head of the ED at the NRH.

Before leaving, I received hands-on training in eFAST and echo with Dr Henry and Dr Sally Hansen at Frankston Hospital, as well as after-hour training with Dr Kate Gleeson, a resident at Boxhill Hospital.

Four registrars are part of this pilot training program where I acted as the 'scout' and in-person technician with remote guidance from Dr Hansen. The four registrars who received focused training are Dr Fred Fangalasu'u, Dr Alison Lagela, Dr Ellison Manegehe and Dr Celestine Tofuramo. Additionally, to maximise this opportunity, I was also asked by Dr Sale to provide presentations on the basics of ultrasound, eFAST, FELS and echocardiography to the ED team of around 20 clinicians. They all had the chance to practice some simple scans to familiarise themselves with the Butterfly probe as well as eFAST and Echo protocols.

The team were absolutely wonderful to work with. Everyone was extremely kind, welcome, open and friendly and very appreciative of the work that PEARLS is implementing.

We are all excited and can't wait for the PEARLS's inaugural in-person workshops in Solomon Islands later this year!

Long Nguyen, medical student/coach coordinator

I would like to thank the Andrew Dent Student Elective Scholarship for making this trip possible.



Dr Alison Lalega



Dr Trina Sale



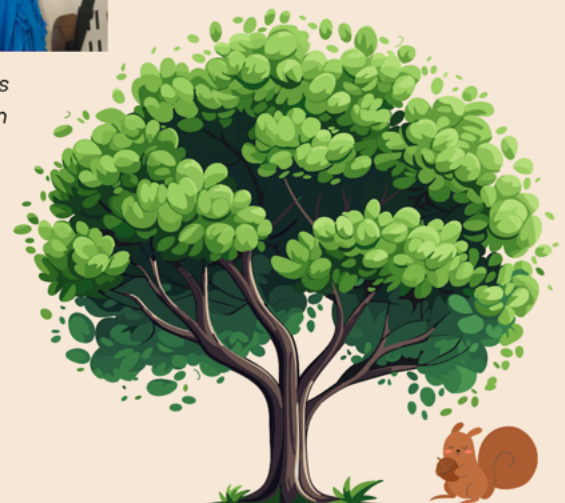
Dr Ellison Manegehe



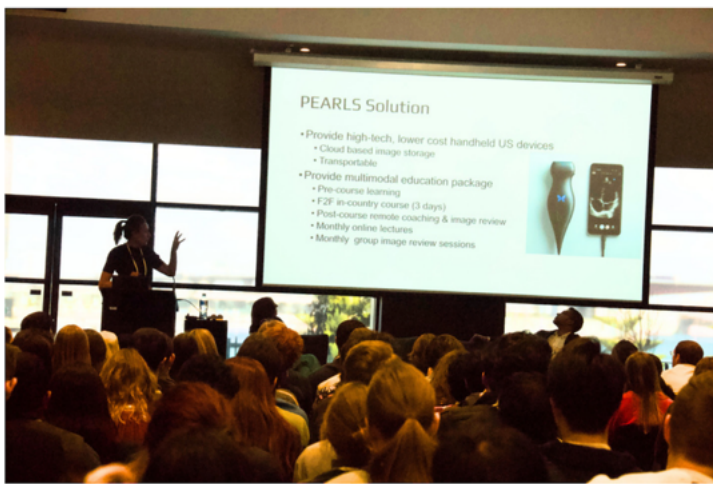
Dr Inity Vaghi



Farewell presents from the ED team



PEARLS bringing POCUS to medical students



Last month, Dr Elise Pascoe represented PEARLS at the University of Melbourne Medical School's MD Student Conference 2024 (MDSC2024). Alongside Dr Karen Freilich from Humerus Hacks and Dr Lahiru Amaratunge from ABCs of Anaesthesia, Dr Pascoe presented the global work of PEARLS as part of the session titled "MedEd: An Open Era".

Not only did this session help bring more awareness around the amazing and very unique work of PEARLS to the next generation of enthusiastic medical students and doctors, but it also highlighted the importance of working towards global healthcare equity.

Many of our faculty members also volunteered for ultrasound workshops titled "POCUS Heartbeat: Unlocking Cardiac Secrets with Point-of-Care Ultrasound" at this conference. In attendance from PEARLS were Dr Elise Pascoe, Dr Sally Hansen, Dr Ivan Chan alongside their colleagues, and our medical student Long Nguyen. The team provided a taste of FELS protocol to around 50 enthusiastic medical students of various experience and training levels.

Through these various activities, we hope to inspire more medical students to engage in realizing the potentials of POCUS in supporting their medical practice. Furthermore, by using their peers as examples, we seek to encourage medical students to see their values and potentials in participating and contributing to grassroots movements such as PEARLS while at medical school.

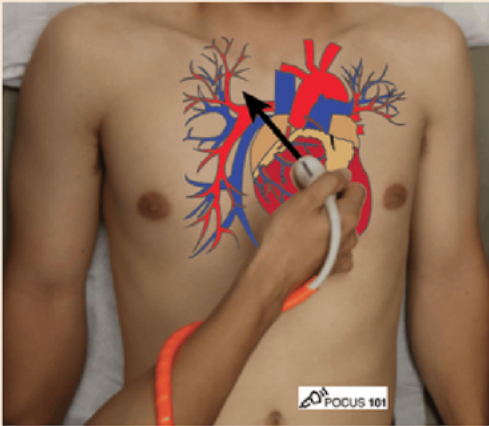
We are very pleased to have recruited two brand new medical students as part of our newsletter team!



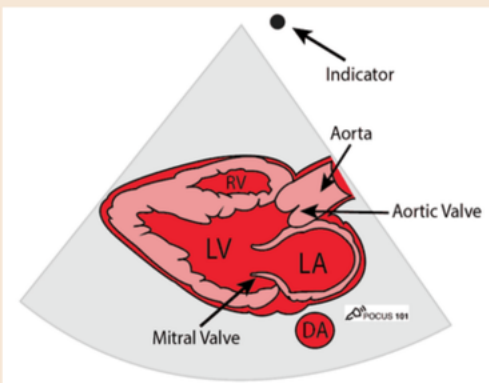
(Left to right) Long Nguyen, Dr Sally Hansen, Dr Wai Chung Tse, Dr Ivan Chan, Jake Donovan, Dr Elise Pascoe and Dr Kevin Phang (front)

Tips of the month:

Parasternal Long Axis (PLAX)



Hand and probe positioning



PLAX view structures - illustration

Reference: <https://www.pocus101.com/cardiac-ultrasound-echocardiography-made-easy-step-by-step-guide/> (accessed 7/7/2024)

- Step 1
Point probe indicator toward the patient's right shoulder
- Step 2
Place probe at 4th intercostal space - approximately nipple line for males or inframammary fold to the sternum for females
- Step 3
Optimise the gain to visualise and identify important structures: Right Ventricle, Left Ventricle, Left Atrium, Aortic Valve, Mitral Valve, Aorta, Pericardium
- Step 4
Optimize the depth to visualise and identify the Descending Aorta
- TIP:
To orient yourself, remember **the 3 L's**: In Parasternal **L**ong Axis view, the **L**eft Ventricle is on the **L**eft side of the screen.

Monthly lecture series

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

July's lecture was on "*Regional Anaesthesia*", delivered by Dr Luke Nottingham, specialist anaesthetist on the Gold Coast. He currently works as a Staff Specialist at the Gold Coast University Hospital and multiple private hospitals across the coast.



Dr Luke Nottingham, Gold Coast, Australia

Key takeaways from the lecture:

General: Never inject if high pressure; hold syringe nose down; use visual and tactile feedback; use colour doppler!

1. Sciatic Nerve Block: Fan the probe, find the common peroneal nerve (and only then block!), use the hour glass spread as visual cue
2. Adductor Canal Block: Frog Leg position, femoral artery is at the 6 o'clock position, beware the nerve to Vastus Medialis (NVM)!!!
3. Femoral Nerve Block: Scan proximally, LA should displace femoral nerve medially
4. Supra Inguinal Fascia Iliac Block: Bow tie sign, beware the bowel and circumflex vessels!

The next lecture is on Monday 5th August: Prof Gillian Whalley 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.

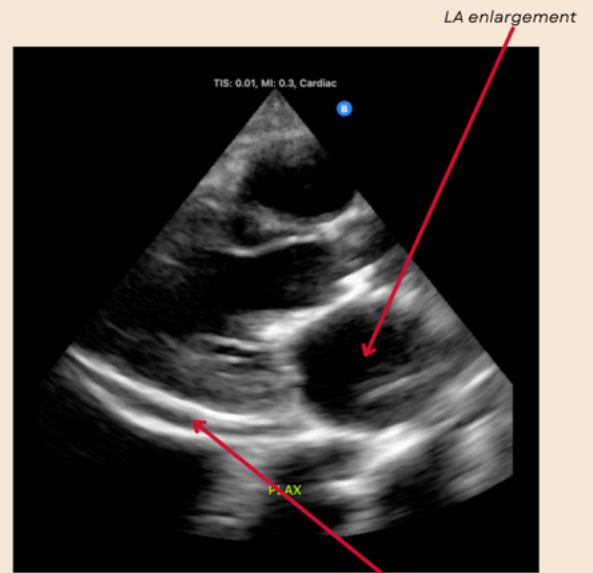
Our third Monthly Image Review session was held last month on the 17th June 2024.

The session focussed on echocardiography - 2 cases of Rheumatic Heart Disease with associated complications.

One of the cases was presented by Dr Alu Kali from Port Moresby General Hospital, PNG. Patient presented with acute SOB and pan-systolic murmur at mitral area.

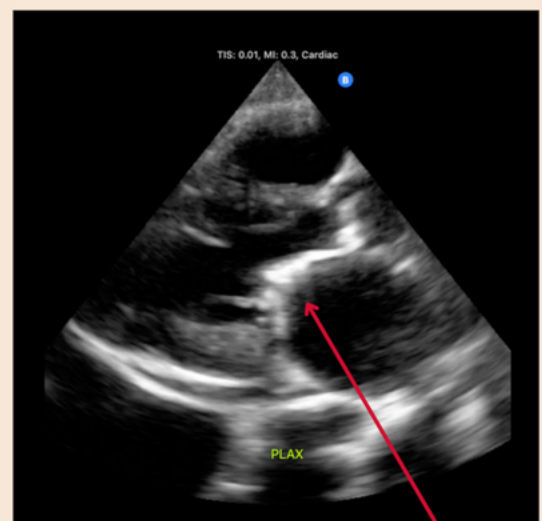
Comments from Dr Lewis McLean: Rheumatic mitral stenosis is definitely present for the following reasons: small orifice in diastole in PLAX, diastolic doming of MV, thickening of the MV and subvalvular apparatus. Secondary signs are LA enlargement, moderate RV dilation, a septal bounce suggesting RV overload and probably mildly reduced TAPSE. Need some colour Doppler in the valves to discern MS vs MR but looking more like MS. The size of the pericardial effusion is worrying - might be end stage pulmonary hypertension.

We look forward to having you at our next image review session being held on Monday the 15th July.



PLAX in systole

Pericardial effusion



PLAX in diastole

Thickening and diastolic doming of MV

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>)
- **Early Nov 2024** (provisional date): First in-person PEARLS workshops in Honiara, Solomon Islands.
- **Nov 18-22 2024**: PEARLS Samoa
- **Late 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

- **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:

- **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>

AUSTRALIAN AWARDS FELLOWSHIP PROGRAM

Supporting Emergency Care Workforce Development across the Indo-Pacific Region

This program is being hosted by the Alfred Emergency Academic Centre on behalf of Alfred Health and Monash University and is supported by the Australian Government through DFAT. The program will offer a comprehensive, hybrid learning experience to enhance the skills, knowledge and networks of 15 emergency care clinicians (doctors, nurses and allied health professionals) from Timor Leste and selected Pacific Island Countries (PICs). It aims to develop clinical and leadership capabilities, promote quality improvement initiatives and foster regional collaboration. Successful applicants will be supported to complete an online short-course; participate in a one-week intensive workshop in Melbourne; and undertake a short-term observership (approximately two weeks, during the period of March - May 2025) in an Australian hospital. The program will also support enrolment in the ACEM Certificate for eligible candidates.

Eligibility: emergency care clinicians who are citizens of Timor Leste, PNG, Fiji, Solomon Islands, Samoa, Tonga, Kiribati and Vanuatu.

Deadline: 17:00 AEST, 15 July 2024.

Source: www.alfredemergency.org/australia-awards-fellowship-program



Sunset in Honiara, Solomon Islands - June 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!