

GP LINK Lunches | Dr Nhung Nguyen Nguyen

Dr Kenneth McCroary, Chair of Sydney South West GP Link, hosts a series of meetings with clinical/ political/regional individuals or organisations to discuss issues and solutions for GPs working in South Western Sydney.



Dr Nhung Nguyen Nguyen Ken McCroary

One of the benefits of Sydney Southwest GP Link's Breaking Down the Silos event, where we invited specialist GP and non-GP specialists to dinner to discuss issues in the region involving cooperative and collaborative healthcare for our local community, was the opportunity to touch base with known colleagues and meet new colleagues.

One attendee at the event was Dr Nhung Nguyen Nguyen, a consultant cardiologist who is passionate about working with patients in optimising their cardiovascular health, maintaining wellness and using the latest clinical evidence to provide excellent patient care.

Dr Nguyen Nguyen graduated from the University of NSW with a combined Bachelor of Medicine and Bachelor of Surgery and worked extensively across different NSW districts before completing cardiology training at Liverpool Hospital. She then pursued specialty training in cardiac electrophysiology (heart rhythm concerns) and cardiac device implantations. Dr Nguyen Nguyen has a special interest in the assessment and management of chest pain and breathlessness, heart attacks, heart failure, arrhythmias (heart rhythm abnormalities) and cardiac devices.

She enjoys supporting the budding careers of medical students and junior medical officers and has been providing formal mentorship as well as informal mentorship and teaching throughout her career.

Ken McCroary - You are working as a cardiologist in South Western Sydney. Can you share your journey to becoming a cardiologist?

Nhung Nguyen Nguyen - The journey in a way started in Campbelltown, so I'm pretty much southwest-trained. I did my last bits of medical school in Campbelltown and Liverpool; I was an intern in the southwest network, in Bankstown and Campbelltown. When I was at Campbelltown as a junior medical officer, I did a cardiology term and enjoyed it. I then decided to pursue cardiology training after physician training. I applied for the position at Liverpool Hospital and got in the Liverpool/Campbelltown rotational training. After three years of general cardiology training, I developed an interest in arrhythmias and syncope, so I pursued an electrophysiology fellowship over the last two-year period.

My areas of interest, besides general cardiology, include syncope palpitations heart failure, but I also have a focus on electrophysiology, particularly device implantation like pacemakers and defibrillators. That's pretty much my journey. I was on maternity leave recently, and prior to that I was consulting in Macarthur Cardiology. I also worked as a locum consultant in South Western Sydney at Bankstown and

Campbelltown hospitals, where I did EP procedures and device implantation. When my maternity leave is over, I'm back at Macarthur and I'll start dipping my toes into more procedural work as well in the hospitals.

Ken McCroary - We know about the interest in electrophysiology. What can you tell us specifically about that sphere in cardiology?

Nhung Nguyen Nguyen - Electrophysiology is about heart and liver disorders. There are two branches. In Australia we tend to combine electrophysiology into both, looking in the electrophysiology like procedures themselves, as well as looking at cardiac devices and implantations. Conditions such as atrial fibrillations, super tachycardias and heart blocks fall under the umbrella of the electrophysiologist in terms of the patient's therapy.

In terms of electrophysiology procedures, you may have SVD AVNRT ablations or we may do atrial fibrillation, we do pulmonary isolations to try with the patients or atrial fabulation burner of atrial fibrillation itself, otherwise the patient's syncope may have conditions like advanced heart blocks that require pacemakers. This is one of the youngest fields in cardiology but also one of the most rapidly evolving. I can give you an example in terms of uncarded pacing alone. When I started cardiology training, we mainly looked at a general pacemaker so there will be a cardiac read and atrium or cardiac in parts of the ventricle. We have moved on to becoming even more focused on not just the cardiac atrium and somewhere in the ventricle we do have particular areas we do aim for, but particularly something called conduction system pacing as well. The goal of conduction system pacing is to be more physiological, and it has a lot of potential in terms of giving patients better outcomes. There are much better outcomes as well in preventing potential complications from traditional pacemaker implantation.

Ken McCroary - You mentioned the management and some of the breakthroughs for dysrhythmias, including the isolation burns. Is that being done locally?

Nhung Nguyen Nguyen – In terms of pulmonary isolation that is the one focused on treating atrial fibrillation. At present, that procedure is being done more in Liverpool Hospital. It is quite a specialised procedure and should be done ideally in high-volume centres, so all the specialists are well-versed and get good outcomes for patients. But in terms of a lot of other procedures which occur quite commonly, radiofrequency ablations or an AB Mridul re-entry tachycardia - that is done in Campbelltown Hospital.

Ken McCroary - That's really handy. Our community no longer has to travel outside the region.

Nhung Nguyen Nguyen - The electrophysiology offerings are very wide in South Western Sydney.

Ken McCroary - That's really pleasing. You also mentioned implantable devices - there has been much development in that area, with impermeable defibrillators and different pacemakers as well?

Nhung Nguyen Nguyen - It has been successful. In terms of conduction system pacing, that is something we are getting into a lot more. But your traditional pacing and cardiac resynchronisation therapy devices - we do all of that. We do subcutaneous devices as well in South Western Sydney. The defibrillator devices do not have any leads in the heart themselves.

Ken McCroary - We were talking about heart failure previously. There have been breakthroughs in terms of end-stage failure in defibrillators and other implantable devices hasn't there?

Nhung Nguyen Nguyen - In terms of combing heart failure and cardiac devices, that's when you are looking at particular patients who meet certain criteriums and could potentially benefit from a cardiac resynchronisation therapy device addressing the electrical inefficiencies of the heart. We will implant an additional lead to help it more efficiently depolarise the heart and then hopefully allow patients that are going to have heart failure outcomes than what they have been having minus this device.

Ken McCroary - It's an exciting field, what do you think is coming in the future?

Nhung Nguyen Nguyen – We need more widespread conduction system pacing. We need more data on that as well. There's a lot of very good data coming out of the United States, but even US colleagues are saying they still need a bit more information. All in all, it looks very promising for patients. Conduction system pacing is one treatment, and the other new exciting aspects are potentially even more effective procedures to treat atrial fibrillation. It is quite a hot topic now, but again we request more data, many areas of pulse fibrillation is not something we practice yet, but it may be coming to us some day.

Ken McCroary - With the atrial fibrillation and the recurrences we get over the years, I have seen that repeated multiple times in the same patient. Is that getting better now?

Nhung Nguyen Nguyen - You bring up a great point, Ken. The important thing in treating atrial fibrillation is firstly treating the factors that contribute to the atrial fibrillation. If you don't have excellent control of that - and that can be difficult to have - there is a high chance the procedure will fail. I think a lot of the time it's about careful patient selection and very close management of their contributing conditions such as hypertension, obesity, sleep apnoea, diabetes, etc. They should be treated well before we consider ablating them. I think, in a lot of instances, patients don't have good control over all their symptoms, over all these conditions, before they go for an ablation procedure. They see that procedure as potentially being a cure. But it's a complement, not a cure in itself.

Ken McCroary - That leans towards that team-based care, doesn't it, where GPs are trying to improve lifestyle and control blood pressure; it's not just about treating anaemia and the thyroid disfunction anymore. You mentioned sleep apnoea - that's quite significant, isn't it?

Nhung Nguyen Nguyen - It's one of those conditions patients often don't think about, and it generally doesn't come up in conversation either. You must ask about those symptoms. Often the first person they go to is their GP. They are not going to go to a specialist for some time and then be diagnosed with apnoea, because by the time they see a specialist they may have another condition they want to discuss. I believe really strongly that sleep apnoea is something patients should be screened for, whether or not they have atrial fibrillation, because it has such a significant impact on their wellbeing - with hypertension, cardiovascular disease, and also their general mental health. If you have poor sleep, you don't function well.

Ken McCroary - Patients respond well, don't they, with increased overnight oxygenation and getting rid of hypoxia. There are major benefits for cardiovascular disease - essentially, they all cause mortality.

Nhung Nguyen Nguyen - There is so much benefit from it. I find a lot of patients may have already initiated investigations into sleep apnoea management because they see you have a CPAP machine. That makes such a difference for them. At the end of the day, it's a small sacrifice for the overall improvement in their wellbeing.

Ken McCroary – It also helps with diabetes, hypertension, arthritis and everything else, doesn't it?

Nhung Nguyen Nguyen - It highlights how it's similar because one does not necessarily cause the other, one contributes to the other as well. Sleep apnoea can make you tired; if you are tired you tend to snack on unhealthy things. This exacerbates your diabetes. I think it's about addressing the patient as a whole - and trying to optimise all these factors as well. We must work together on this. We must look not just at one little side, our little corner of the problem, and ignore the others, because otherwise you miss giving the patient good holistic care.

Ken McCroary - That is an important point, about the holistic management of the entire person.

Nhung Nguyen Nguyen – As a cardiologist, I try to think of the patient as someone with many different facets. I try to incorporate not just a focused assessment of the cardiovascular status but all the other factors that contribute to cardiovascular health as well. I find my GP colleagues are imperative in that respect. It is great to be able to communicate with my local GP colleagues so we can work together to reach a good outcome for the patient.

Ken McCroary - Improving quality, and improving patient reported measures and outcomes – they are important for all of us. We also were talking about repeated treatments for AF and how that is improving. One of the things I hear repeated - as a community we live longer with more comorbidities - is about the replacement of implantable devices. I've had people on their third box. How is battery life looking in the future?

Nhung Nguyen Nguyen - At the moment there is not a big change in terms of battery life, but it also depends on the patients and how much they use the device. The battery life for a pacemaker can be around 10 years. I usually say to patients 10 years +/- 2, but some have lasted a lot longer if they don't need the device too frequently. For defibrillators, I tend to quote around seven years +/- 2, but usually seven to 10 more years. I've had patients ask me when we are going to have rechargeable devices. I am not aware of any rechargeable technology out there, so we cannot put ourselves onto a recharging plate like our iPhones just yet. But in terms of battery changes, it is mostly a straightforward procedure and doesn't require a general anaesthetic to do it. I say this is for most devices, just because some devices have had a complex insertion and they require - for patient comfort reasons - a higher-level anaesthetic.

Ken McCroary - The battery switch over isn't as complex, but what about the longevity and life of the leads?

Nhung Nguyen Nguyen - Generally speaking, the leads do not get exchanged. They stay in the patient's body as long as they are working appropriately. There are leads that last many decades because, as you mentioned, we have had patients onto their second, third or more, box change. Usually, it will be the same lead. Before any box changes, the leads are always interrogated carefully to ensure there is no indication of an insulation failure and malfunction. If that is the case, a new lead may need to be inserted at the time of a box changing. I have been involved in doing a number of those as well.

Ken McCroary - We are not charging ourselves on our iPad docks, but the machines are talking Bluetooth and things like that to monitors, aren't they?

Nhung Nguyen Nguyen - Referring to home monitoring, it is another area in cardio device management. It's a community that has become mainstream now. It was useful during COVID-19 because you could remotely monitor patients as opposed to them having to come to me in person in the clinic.

There are certain features of home monitoring that are not as in-depth as coming to an in-person clinic, but certainly very handy. Even now, post significant COVID restrictions, we are still using home monitoring. It has become important for patients who may have significant arrhythmia burdens or concerning arrhythmias - having a home monitor can be important for them. They are very easy to use as well. Most frequently, what happens is that when you receive the home monitor you plug it into your bedside power socket and leave it there. You can generally forget about it unless you get a call from your cardiologist with any concerns - which doesn't happen that frequently or at all really.

Ken McCroary - With device monitoring, is that done private rooms or hospital, or both?

Nhung Nguyen Nguyen - With device monitoring, there are a number of ways to set up who reviews the monitoring. There is a public hospital monitoring usually run by cardiac technicians together with the electrophysiologists at that hospital. Patients, who've had their devices implanted privately, will have their home monitoring linked to the implanting electrophysiologist. I have a number of patients on my home monitoring list, who I review through the home monitoring ops. It is done together with the industry; by that I mean the device company, from where the device originates, will screen through the monitoring and pretty much flag anything even mildly concerning. If the patient has a short pause or a wide complex rhythm that is a concern - everything will get flagged. The cardiologist or the electrophysiologist will either receive a phone call or a notification of an alert for the device.

Ken McCroary - Another challenge I find in this area is MRIs and devices.

Nhung Nguyen Nguyen - The new generation cardiac devices tend to be compatible with many MRI machines. I think the most important factor, whenever a patient needs to have an MRI and has a cardiac device in situ, is to contact the patient's cardiologist who will have, or should have, details of the device. They can be crossed-checked whether the device is of an era where it is compatible with the MRI machine. Generally, 1.5 tester MRI machines should be safe. Some cardiac devices now have MRI modes they go into when they undergo the procedure. Otherwise, to be safer, you could consider getting the patient to follow up with their cardiologist and device clinic after they have had the MRI done to check that the device hasn't mode-switched in any way.

Ken McCroary - We are used to checking with the cardiologist prior to the procedure, but getting a post magnet exposure check is also a good idea.

Nhung Nguyen Nguyen – Generally, checking is a good idea. When you check prior, unfortunately the prohibitions with patients about box changes is if there are different companies involved (between the device leads and the box), that would mean the patient generally would be called MRI incompatible because if there was an issue it would harder to say whether if it was from the leads or from the box. But with these new generation devices, generally speaking, if they are all from the same company it tends to be fine.

Ken McCroary - You have significant experience working in South Western Sydney and I thought I might branch out and talk more about the region. Are there any particular cardiovascular issues you see regularly in this area?

Nhung Nguyen Nguyen - There are a couple of issues. Firstly, a lot of diseases are more advanced in younger patients in South Western Sydney. That is always something really at the forefront of my mind. Certainly, skin with coronary artery disease, heart failure, also tachyarrhythmia disorders like atrial fibrillation quality control leading to cardiac disfunction. Often conditions I find are much more concerning in our community. In terms of lipid management, patients tend to have a bit more trouble.

I think a lot of the factors in South Western Sydney stem from patients coming from diverse backgrounds. They have diverse cultural factors that play into their health management behaviours as well as, at times, limitation in health assessment. In my practice, I find when I talk to patients and we go through all the factors that have contributed to their current presentation, a lot of things can be changed and a lot of things can be worked on but, at times, it is still affected by their present situation. For a general example, one of my patients had never realised flavoured milk was bad for their diabetes. They found it was the only thing that helped keep them awake on their night shift. They didn't know what else to get at that time of night because nothing was open except the vending machine. Those are just the small things you have to be practical about when you discuss management with patients. You must go down to the personalised levels of care and once you do, the patient appreciates it and you get those outcomes for them.

Ken McCroary - It is a challenge with social and other health determinants in our region such as cultural changes, the Aboriginal and Torres Strait Islander population and socio economics. I find that has an impact with lifestyle choices. We smoke more than average, exercise is probably less, there is increase obesity, any advice in dealing with this, which is unique to the region?

Nhung Nguyen Nguyen - In terms of these patients, it's never a quick-fix solution. I think it is about persistence more than anything. We must persist. Even though patients often want a quick-fix solution, we must persist and chip away one small issue at a time. Eventually we will be able to treat more and more of their comorbidities. I often focus on one issue at a time. None of us have time to treat all of them, so it's important we collaborate with each other. We need to work together to help the patient; I do not think there is one single person that can do it all. We need to communicate and come together to help these patients.

Ken McCroary - One of the GP's roles is preventative health including blood pressure and other risk factors for heart disease. What do you want to see the GPs doing more of, or doing more frequently?

Nhung Nguyen Nguyen - I think my GP colleagues have a lot on their plate. I find because patients are getting more complex nowadays, they have a lot more conditions to manage. The way forward is to continue to adhere to the recommended testing: screenings for blood pressure, lipid levels, etc. This would be sufficient, and then afterwards I would continue to work collaboratively with my GP colleagues to try to get down to the nitty gritty of those conditions and help treat the patient. I think that is probably the main way forward.

Ken McCroary - In terms of treatment in primary care, collaborating with cardiology colleagues as well, we often find lipids, hypertension, and heart failure sub-optimally treated, don't we? I don't know whether that is experience or confidence. What can you say to my GP colleagues about treating these long-term cardiac conditions?

Nhung Nguyen Nguyen - In terms of these conditions, sometimes there is inertia in management. Once you have patients conformable, they are going OK but there is a bit of inertia in escalating treatment and that is, in part, because patients also don't want to escalate their medical therapy as well. On the one hand, looking at a patient's compliance is important, on the other hand, generally speaking, de-escalating a lot of medical therapies. Unfortunately, we do not have the dialogues beneficial for them and they may eventually end up having a worse outcome. Some heart failure patients want to keep taking multiple different medications, but unfortunately when they do deescalate the medications some of them will have regression in their LV functions, etc. I think any discussion about de-escalation or omissions of medications is better done collaboratively, even if the patient is looking stable and well. Ken McCroary - Being aware we need multiple medications, we need the pillars to treat heart failure - there are multiple medications in there, people with hypertension. The majority still need multiple agents to control their disease, don't they?

Nhung Nguyen Nguyen - Yes, I think it all really comes back to the condition is not very simple. There are many aspects that could be targeted, and hence there are a number of medications the patients can take to do that. Unfortunately, I can only offer a quick answer at this time. Sometimes, looking at a combination of medications is great, just to reduce the pill burden on patients: try to rationalise potentially certain medications, and then remove the medications without any long-term cardiac or general mobility benefits for the patients.

Ken McCroary - You mentioned de-escalation - and I am flipping that over now. As we age, we tend to collect medications as well and poly pharmacy does become an issue especially with the elderly. Cholinergic medication has an adverse effect on rhythms as well. What advice would you give my colleagues about poly pharmacy and potential pro arrhythmic medication?

Nhung Nguyen Nguyen - I think in terms of poly pharmacy and medications I think in mindful of your dementia patients that can have some adverse effects on heart rhythm disorders particularly causing like heart blocks as well. At the end of the day, you work together. I often work with the pharmacist or the GPs, if I have any concerns about medications, just to make sure we are all on the same page about the medications; to see if any medications can be ceased as well. One of the most common medications that can become a problem, more than anything, is eye drops. All the glaucoma beta blocking eye drops, they should be inquired about, especially if patients have concerns - if there is a syncope or suggested for arrhythmias.

Ken McCroary – That's a good point, an increase in communication between all our specialist colleagues and GPs is important. And changing eye drop medication is important. You also mentioned pharmacists and domiciliary medication reviews as part of the teamwork.

Nhung Nguyen Nguyen - I quite frequently email or fax pharmacists about medications for different patients. Whenever I start medications on patients or they're not sure about their medications, I usually call the GP and pharmacist - to make sure there is no overlap of their medications as well. That could have significant adverse outcomes.

Ken McCroary – We've talked about older people and topically younger people. I noticed NBA star LeBron James' son suffered a sudden cardiac arrest. What advice can you give us about kids and tachi-arrhythmias and syncope or presyncope?

Nhung Nguyen Nguyen - Arrhythmic disorders in children, teenagers and young adults are not common, however, it can have devastating effects on the patient and the family. Certainly, in young patients it is important to have a good history - as the history of the presentations of their palpitations and syncope is very important. The circumstances surrounding the syncope are important. Knowing the family history is imperative as well; some patients, particularly those who have a family history, family members who've passed away, or even, let's say, they have an uncle pass away in a car accident at 20, but it's important to ask a bit more detail about that. Was there any chance he could have had passed out at the wheel and then had the accident, or was it someone hit the car, or was it a dark night with rain, etc? Having an in-depth history of those young patients is important. But in those cases, it is also important if they have concerns, if they have a proarrhythmic disorder or a cardiomyopathy, so they can be referred to specialist services. Certainly, in some situations, patients may need cardiac devices like a defibrillator for lifesaving measures, but there are other things that may also need to be addressed.

Counselling for the patient and the family is very important, depending on what conditions they have and about potential triggers to avoid. Family members may also need to be screened, if they have a positive diagnosis of inherited arrythmia cardiomyopathy.

Ken McCroary - When we see our young people, we want to be getting out the chair, we want to be listening to the heart, we don't want to be missing hypertrophic cardiomyopathies ever, do we, even though they are still common in that group. I see things like Brugada syndrome all around, but we don't want to ever miss it because we don't want to see these kids arresting on the basketball court, do we?

Nhung Nguyen Nguyen - I think if there are any questions or it arises in any of these patients, it is good to get more people involved. It is always good to have someone else cast an eye on the patient and then, if there is anything else to be addressed it can be, as well work out how to best manage the patient as well. I often collaborate with colleagues to rule out many non-cardiac conditions, to try and manage them, to make sure the patient gets the best outcome.

Ken McCroary - Another issue for anticoagulating people with fibrillation - do you think that could be instituted a bit earlier? I have too many people in nursing homes admitted with strokes who have long-term arrhythmic disorders not being managed.

Nhung Nguyen Nguyen - In terms of atrial fibrillation, we have guidelines on initial anticoagulation that may change in time. There was a discussion about whether a Chadsvacs score is no longer the beall and end-all for initiating anticoagulation. I think it is always a discussion with the patient. It's about evaluating what their risk of stroke is versus the risk of bleeding, or risk-taking behaviours that could lead to catastrophic outcomes of taking anticoagulations. It's a tough one a lot of times. We all wish for the patient with straightforward risks and straightforward benefits, but it's not often like that. In terms of patients in a nursing home, there is especially challenging class of patients for anticoagulation, because it's balancing out their benefits of their sickness certainly benefits in terms of prevention in formation of a clot, but there is also potential risk if they have a UTI, or they have acute worsening of the renal function versus risk of falls in a patient who may not be particularly mobile. It becomes an individualised decision each time.

Ken McCroary – You've just had a baby and you're getting back into things - you sound pretty busy. How do you balance life/work and everything, and keep up?

Nhung Nguyen Nguyen - There is no denying it's hard. A whole new world has been opened to me. I try to be as efficient as possible in everything I do. I try to have set days where I get certain things done - and they must be done at that time. I am lucky when my daughter has a couple of good sleeps and I usually try to get any of my work-related matters done then. But I do believe the saying "it takes a village"; it certainly does take a village to raise a child and work and do anything else at the same time. Having a family when working as a doctor of any kind is interesting because it's about balancing the needs of your family, your education and sleep and meeting the needs of your patient. I always try to improve, but it's a good problem to have, I think.

Ken McCroary - Well said. Lots of support and lots of thought go into it. What about advice to GPs in terms of their wellbeing and heart health?

Nhung Nguyen Nguyen - Do not neglect yourself! Doctors tend to neglect themselves. GPs need to have GP themselves. All doctors need to have a GP and annual reviews, if you do not have any medical conditions, need to be managed. You can only do so much for your patients if you are not well.

I encourage my friends or colleagues who are on medicines to make sure they have blood tests and do basic screening for all chronic conditions on an annual basis or as per guideline requirements. Then we can say to our patients we lead by example. We need to think about our mental health as well. There is so much talk about burnout and stressors and a lot of focus on junior doctors as they carry a huge burden at the start of their career. But also, for our more senior colleagues as well; at times, they need to address their mental health. It is important to find one support person who you can talk to and debrief with.

Ken McCroary - That yearly check-up and bloods are not a corridor thing. It's actually getting someone you're sitting down with to order these things.

Nhung Nguyen Nguyen - I think a suggestion, from my own experiences, is not to go to someone you know well; rather, someone that sits further removed from you. That also removes the burden from the close association. They might be willing to be a bit more firm about certain aspects of your own health you may have overlooked as opposed to someone you are closer to, where they try to be more mindful, they know your personal situations, your stressors, how busy you are, and they will try to couch some of their suggestions or advice.

Ken McCroary - That is important advice. Following the good doctor guide is not going to your friends and your colleagues, it's going to your GP.

Nhung Nguyen Nguyen - Yes, I think your GP needs to be your GP, not your GP/friend.

Ken McCroary - Do you have any parting advice for GPs on hearts? What would you like to say?

Nhung Nguyen Nguyen - My parting advice would be that it isn't all about the heart; I am learning that more and more. As much as it is about the heart, it's about diabetes and sleep apnoea.

Ken McCroary - We will turn you into a generalist eventually.

Nhung Nguyen Nguyen - I did a number of different rotations before I did cardiology and I enjoyed all of them. I thought about becoming a geriatrician for a little bit, but then I think the cardiology circus called out to me more strongly.

Dr Ken McCroary - Thank you so much for taking time out of your day, caring for the little one and working so hard. We really appreciate your input and thank you for spending time with us today.

Remember if you're not a member of GP Link already or you would like to learn more, log onto our website at https://sswgp.link/.