Welcome from the CEO

Dear Doctors

We hope this edition of our GP e-News finds you well. We continue to work closely with the Faculty of Medicine and Health Sciences on further developing the Macquarie University Health Sciences Centre (MUHSC). To find out more about this initiative [click here]. This year two services - Cardiology and Macquarie Plastic and Reconstructive Surgery have already moved under the umbrella of MUHSC. You can read more about these developments in the following pages.

This month we celebrate ENT surgeon, Associate Professor Catherine Birman’s 1000th Cochlear implant, as well as the growth of our Tavi program. We also address the topical issue of Hepatitis C treatments. Included in the newsletter are invitations to two of our events: Macquarie University Health Sciences Centre Grand Rounds and a special screening of Legacy’s Ride To Conquer Motor Neurone Disease. We hope you can come along, if these events are of interest.

The Hospital has now been open for just under six years. We are continually looking to improve our practices. You can assist us in this process by providing feedback. If you have a suggestion please don’t hesitate to contact our team by [clicking here].

Alternatively our new Director of Medical Services, Professor David Gillatt is eager to meet GPs in our local community with the aim of better understanding your needs. If you would like to meet with him at your practice, please [email us] with preferred times and dates.

Carol Bryant, CEO
Macquarie University Hospital

If you would like to receive further information about our GP education activities for 2016, please email events@muh.org.au
Associate Professor Catherine Birman, one of Australia’s most experienced and well-regarded cochlear implant surgeons from Macquarie University Hospital, achieved a feat last week that must be heard to be believed: she completed her thousandth cochlear implant procedure. “It is such an honour to be part of so many different people’s journeys to better hearing,” said Catherine.

The announcement of Catherine’s many achievements, some of which include being the first female ear, nose and throat surgeon in Australia, was welcomed with excitement and pride from her colleagues. This milestone is another addition to Catherine’s clinical work and research, in inventions, allowing profoundly deaf children to learn to hear and speak. It is not only for children, however. The cochlear implant helps adults throughout their lives to regain hearing and stay actively involved in work and their favourite activities. For the elderly, the implant can also return hearing, helping to minimise social isolation, depression and possibly dementia.”

“This milestone is another addition to Catherine’s many achievements, some of which include being the first female ear, nose and throat surgeon in Australia,” said Professor Martin Ng, Consultant, Interventional Cardiology. “I hope to see greater improvements in cochlear implant technology in the future, with even better outcomes and more people with hearing loss willing to embrace these wonderful medical inventions,” she concluded.

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“The cochlear implant is a modern miracle, allowing profoundly deaf children to learn to hear and speak. It is not only for children, however. The cochlear implant helps adults throughout their lives to regain hearing and stay actively involved in work and their favourite activities. For the elderly, the implant can also return hearing, helping to minimise social isolation, depression and possibly dementia.”

For more information please visit: [click here.](#)
With 12 to 15 surgeons and specialists – each with sub-specialty training and collectively covering all sub-specialties – Macquarie University Ophthalmology is now well-established and is Sydney’s only comprehensive eye centre located in a private hospital setting.

We also have the first private hospital teaching clinic in Australia, drawing some of the most respected specialists and surgeons to the Hospital.

Macquarie University Ophthalmology offers the full range of surgery – from simple, routine procedures to complex surgery – making us comparable to other major eye centres. Our critical number of advanced surgeons mean that we can perform complex cataract surgery, with the back-up of retinal surgeons

Patients choosing Macquarie University Hospital for their ophthalmic care have access to the Hospital’s state-of-the-art operating theatre. Due to our arrangements with industry bodies, Macquarie University Ophthalmology also received the most advanced TGA approved equipment several months before it was launched more widely. We are one of about six ophthalmic centres in the world to acquire fully approved equipment before its national launch.

One of the biggest strengths of Macquarie University Ophthalmology is in retinal care. Under my leadership and with an outstanding team, the centre is currently one of the best retinal surgical centres in the country. We are able to respond to the increasing retinal problems seen by GPs as a result of an ageing population and, specifically, to macular degeneration – also increasing as a result of diseases such as diabetes.

Retinal surgery is a fast-moving field with significant breakthroughs in the field in the past few years.

To find out more about the Head of Ophthalmic surgery, Associate Professor Ivan Ho click here.
Chronic hepatitis C virus (HCV) infection is a major public health challenge in Australia. About 230,000 people are infected and they carry an increased risk of progressive liver fibrosis leading to cirrhosis, liver failure and hepatocellular carcinoma (HCC). As a consequence, HCV is now the most common underlying aetiology requiring liver transplantation in Australia and the burden of disease is anticipated to increase substantially over the coming 15 years. Hepatitis C is a curable infection. Until recently, treatment involved the use of injected interferon and the protocols were tolerated poorly and carried only limited efficacy. To date, uptake of treatment has been poor with 20% of those infected having undertaken treatment and only 13% cured. Viral eradication is associated with improved quality of life, loss of infectivity, halting of liver fibrosis progression and even regression of cirrhosis in some, a reduced risk of liver failure and reduced risk of HCC. Cure carries a reduction in mortality. Recently, direct acting antiviral therapies (DAA) have been approved for use in Australia and as of March 1st, some have Pharmaceutical Benefits Scheme (PBS) funding. These medications are extremely well tolerated and most require just 12 weeks of treatment. In Australia, access to treatment has been made available for all those infected, regardless of liver fibrosis stage. Unlike previous therapies, the rate of cure is extremely high and most patients who start therapy, clear their infection. Virtually all patients are suitable for treatment with DAA including those who were previously intolerant, unresponsive or ineligible for interferon-based treatments.

To have a substantial reduction in HCV prevalence and HCV related mortality, modelling shows that increasing both treatment cure rates and the number of people treated each year is required. DAAAs may be prescribed by specialists experienced in treating HCV but in order to increase capacity and allow upsampling of treatment rates, general practitioners (GPs) can also prescribe these DAA and PBS authority drugs, in consultation with a specialist. Protocols are being developed to assist motivated GPs who wish to prescribe or supervise their patients who undertake HCV eradication although it is appreciated that many GPs may not want to invest in the time and skills required to treat this group of people. Regardless, GP assistance is vital to identity patients, arrange pre-treatment assessment, refer to specialists for treatment and encourage treatment compliance. Although treatment is well tolerated and side effects and intolerances are unusual, there are still a number of challenges.

1. **IDENTIFYING HCV INFECTED PATIENTS**

All Australians living with HCV should now be considered for antiviral therapy. High risk populations include people who inject drugs (PWID) and new infections are almost exclusively from this group. Aboriginal and Torres Strait Islander populations have higher HCV rates, as do migrants from high prevalence regions such as Egypt, Pakistan, the Mediterranean and Eastern Europe, Africa and Southern Asia. Other at risk groups include people with tattoos and body piercing or those who had blood transfusions before 1990 (when Australian blood supplies were first routinely screened to exclude HCV infected blood), sex workers and sexual partners of HCV infected people, people who have been incarcerated or those who have had a needlestick injury. At risk individuals should be screened with hepatitis C serology and if positive, infection confirmed with a positive PCR test that directly detects the viral RNA in serum. HCV genotype should then be requested, as it impacts treatment options and duration.

2. **ASSESSING THE PRESENCE OR ABSENCE OF CIRRHOSIS**

Liver cirrhosis influences treatment duration and regimen and a patient’s cirrhosis status must be provided at the time of seeking PBS authority. Patients with HCV and cirrhosis still have high rates of infection clearance; however, they require lifelong surveillance for HCC and portal hypertension.

Evaluation of liver fibrosis stage should be undertaken before commencing treatment. Fibroscan detecting liver stiffness >12.5 kPa is the recommended threshold for identifying people with cirrhosis. Alternatively, serum biomarker scores have a high negative predictive value eg APRI <1.0, and may be used to exclude cirrhosis. If the score is elevated, further specialist assessment is required and it may not reflect cirrhosis.

3. **MANAGING DRUG-DRUG INTERACTION**

Drug-drug interactions are a potential issue with all DAAAs. Important interactions include amiodarone, St John’s Wort, proton pump inhibitors, statins, anti-epileptics, immunosuppressants and antimicrobials. Drug interactions can be checked using the University of Liverpool’s Hepatitis Drug interactions website (hep-druginteractions.org).

4. **PRESCRIBING THE APPROPRIATE REGIMEN**

Treatment options are influenced by HCV genotype, viral load, previous treatment experience and response and the presence of cirrhosis. The recently published “Australian recommendations for the management of hepatitis C virus infection: a consensus statement 2016” is available online from the GESA website (www.gesa.org.au). This document provides details of treatment regimens and will be updated as new drugs are approved.

5. **MINIMISING REINFECTION**

New HCV infections occur almost exclusively in PWID. Cure does not provide any protection against reinfection. Harm reduction strategies are important and engagement with PWID and their injecting networks is recommended. If patients remain at risk of reinfection, annual screening with HCV PCR is necessary as HCV serology will remain positive in most previously infected individuals.

To read Dr Elke Wiseman’s bio click here.
When it comes to cardiovascular health and longevity, nothing is more powerful than engaging in the simple daily activities that help people live longer and the evidence to support this is now very robust. For people who have two major cardiovascular risk factors, the risk of having a cardiovascular event increases significantly. However, for people who have what’s called “optimal risk factors”, the risk of having a major cardiovascular event up to age 85 is actually less than 10%.

When we talk about optimal risk factors, we’re talking about the big seven:
1. Non-smoker
2. Blood pressure less than 120/80
3. A healthy diet score
4. Cholesterol less than 5 mmol/l (ideally without medication)
5. No diabetes
6. Not overweight: A healthy BMI
7. Exercise more than 150 minutes a week.

The point is that these factors are all lifestyle-related; there are no drugs involved. In fact, perhaps it’s time to return to a more hunter-gatherer sort of lifestyle and a diet high in fruit, vegetables and nuts. They had omega-3 fatty acids. They are lean protein. They drink water and they incorporated physical activity as part of their daily routine.

Such an approach, however, must be in conjunction with low calorie intake. As the now well-known consequences of obesity include heart attack, stroke, diabetes, high blood pressure and depression. Every five kilograms people are overweight hastens a heart attack one and a half years earlier. Every five kilograms at age 21 increases the chances of someone dying before 90 by 10%.

Reviewing the American national weight control registry, for people who lost 15 kilograms and kept it off for more than a year, it’s apparent that almost all of them cut their calorie intake in half. Over 95% exercise for an average one hour a day, 75% weighed themselves more than once a week and kept track of where they were and a large majority of them watched TV for less than 10 hours a week. These are simple, practical steps that almost any patient could take.

1. FOOD
It’s becoming clearer every day that food is one of the most powerful tools for keeping the body (and especially the heart) in optimum condition. Recent literature suggests a Mediterranean style diet reduces the risk of cardiovascular events by up to 45%.

While our bodies are not all equal, there are some fundamentals:
• Eat five serving of vegetables, two servings of fruit per day.
• Eat more fish. The DART trial looked at dietary interventions in 2,000 people and it was one of the most powerful predictors of mortality for cardiovascular disease amongst men and, to an extent, post-menopausal women.

Dr. Ken Cooper, of the Cooper Institute of Aerobic Research, found that exercise was associated with a 40% reduction in heart attacks in females and a 66% reduction in heart attacks in males. In another study, he found that people who were in the lower 20% of cardiovascular fitness had a death rate that was three times higher than the fittest group. The study also showed that taking up exercise, even after the age of 60, would increase a man’s life expectancy.

2. SUPPLEMENTS
While it’s better from the plate than from the bottle, here are a few to routinely recommend:
• Omega-3 supplements. Omega-3 fatty acids (Polyunsaturated), and essential fats. People should eat good sources of fish (wild salmon, trout, sardines, anchovies, herring and mackerel) or take supplements in order to get their benefits. Ideally, 100mg to 100mg day of EPA/DHA.
• Fibre. It lowers cholesterol absorption, 25 g/day.
• Plant Sterols.

3. EXERCISE

Study after study shows that the level of fitness in middle age determines how long people will live. Each metabolic equivalent (exercise capacity) confers 12% improvement in overall survival, and it’s one of the most powerful predictors of mortality for cardiovascular disease amongst men and, to an extent, post-menopausal women.

The interval training necessary to obtain optimum health comes in the form of only three 20-minute workouts per week at a higher heart rate. However, results recommend that your patients do physical activity for 20 minutes a day. That means 20 minutes of sustained activity that leads to being slightly out of breath, or to break into a sweat during that time.

If people are not able to exercise to the levels described above, they should try to do 10,000 steps a day – a wearable exercise tracker is a good friend in this regard.

As with many things, balance is the key. People can actually run too much. In our sports cardiology clinic we see an increase in artherosclerosis in a number of marathon runners. Running marathons is inflammatory for the body and people who consistently put their body in this type of stress promote artherosclerosis. The ideal is around 15 to 20 kilometres a week at about 9 to 10 kilometres an hour.

4. MARRIAGE, SEX AND CHILDREN
Married men live longer than unmarried, divorced and separated men. The tendency is not as obvious with women, although there is a benefit. In addition, sexual activity is associated with decrease in death and cardiovascular events for men, although for the woman it’s not associated with longevity unfortunately. Many women with more than four children had higher rates of cardiovascular and coronary calcium; the optimal number of children is somewhere between two and three.

5. FINALLY, LET’S NOT FORGET THE POWER OF HAPPINESS, OPTIMISM AND CALM
1. Avoid anger and hostility. Learn relaxation techniques and meditation.
2. Depression is bad for the heart! Seeking professional help and managing depression requires recognising it in oneself or friends; getting help or helping friends get help, results in reducing symptoms and consequences in just three months, by more than 90%. Seeking help is not about taking and planning therapy or through medication, it is a needed first step.
3. De-stress. Stress is the greatest aeg of the body in general, especially the nagging, unfinished-tasks kinds of stress that hang around day after day, or the stress of things that are out of one’s control. Just as chronic stress can damage the heart, actively working at reducing stress will keep the heart healthier.

The most consistent stress reducers that also help with heart disease, depression and anger include: exercising, meditating, and nurturing friendships.

4. Sleep. If people get less sleep than they need, it increases arterial aging and the risk of heart attack. The optimal amount is seven to eight hours per night for men, and six to seven hours for women. People have to be sleeping for about two and a half hours in a row before sleep becomes truly restorative. Poor or inadequate sleep causes depression and bad lifestyle habits. Ignoring bad sleep is like not fixing a hole in the roof!

5. Open the heart and develop lifelong friends. Be part of community and stay involved: these are the common traits amongst some of the world’s longest living people.

To sum it up, lifestyle management – with the cornerstone being diet and exercise – remains the most important factor in the prevention of cardiovascular disease. There is no shortcut for patients to long lasting health and longevity and one of our goals as doctors is to encourage patients to make the choices that will serve them throughout their life, not until the bottle of the next new wonder supplement runs out!
On World Hearing Day in March this year, Macquarie University’s David McAlpine, Professor of Hearing, Language and the Brain – and Director of Hearing Research, Macquarie University based at the Australian Hearing Hub – called on the Federal Government to support a public and GP awareness campaign that addresses the causes and risks of permanent and avoidable hearing loss.

Four million Australians are affected by hearing impairment, with a reported $11 billion cost annually to the Australian economy. Yet hearing hasn’t received the same attention that other public health issues have – smoking, sun exposure and safe sex, for example.

Professor McAlpine says a campaign should have three key elements: awareness raising; prevention; and regular check-ups, with support for GPs to assist patients. His approach parallels that of the World Health Organisation, which also used World Hearing Day to highlight the need for global action to prevent hearing loss.

“Noise exposure in our everyday lives is increasing, with most people having no idea of the impacts this could be having on their long-term hearing,” said Professor McAlpine. “In terms of getting hearing checked regularly, it’s one of the last things on people’s minds.

“Events like music concerts – usually in excess of 100 decibels – and sports games in large arenas, far exceed levels we’ve deemed acceptable in workplaces. There is no reason why the Federal Government can’t set limits to noise levels at social events.

“Hearing loss has a profound impact on people lives – on employment and finances, on relationships, and on our ability to maintain social engagement.”

### MAKING NOISES

The Macquarie University-based Australian Hearing Hub gets vocal about hearing health

### REFERRALS FROM GPs

As the first point of contact for most patients, GPs play a critical role in ensuring that individuals with hearing and communication problems receive the help they need.

The Australian Hearing Hub hosts nine specialist clinics where patients, referred by GPs, can receive first-class clinical evaluation, testing and diagnosis from leading practitioners.

These clinics include the Macquarie University Speech and Hearing Clinic, Centre for Emotional Health, Macquarie University Cognition Clinic for Reading, Macquarie University Psychology Clinic, The MindSpot Clinic, Australian Hearing, Royal Institute for Deaf and Blind Children (RIDBC), SCIC Cochlear Implant Program, an RIDBC service and The Shepherd Centre.

For more information on each of the clinics please refer to the website: [http://hearinghub.edu.au/clinics-and-services/](http://hearinghub.edu.au/clinics-and-services/)

### ABOUT THE HEARING HUB

The Australian Hearing Hub is an initiative of Macquarie University. It brings some of the country’s leading hearing and healthcare organisations together with academics at the University to collaborate on world leading research projects.

The Australian Hearing Hub unites researchers, educators, clinicians and innovators with expertise in linguistics, audiology, speech pathology, cognitive and language sciences, psychology, nanofabrication and engineering sciences.
Macquarie Plastic and Reconstructive Surgery (MPRS) was established five years ago as the first and only private academic centre for Plastic and Reconstructive Surgery in Australia. MPRS recently moved under the umbrella of the Macquarie University Health Sciences Centre, and represents a new and exciting model of care based on leading medical units from around the world. Our defining feature is how we integrate clinical practice, research and education to deliver advanced, innovative and personalised care.

The MPRS team has access to Macquarie University Hospital’s state of the art surgical equipment, operating microscopes, imaging and advanced operating theatres. MPRS also interfaces with many other areas of clinical practice, including radiography, oncology, vascular surgery and allied health support. In this way, patients have easy access to the full spectrum of services needed to achieve the best possible outcomes.

PERSONALISED AND PATIENT-CENTRED CARE

Our approach at MPRS is highly patient-centred. Patients are treated individually, with their cases reviewed by a multidisciplinary team (MDT) that looks carefully at all options for treatment. MDTs include hospital-based radiographers, oncologists, vascular surgeons and allied health professionals. Coordinators help navigate a patient’s journey with us.

The extent of our personalised approach is unique in Australia and is possible because of the not-for-profit status of both the Hospital and Clinic, which are driven by the vision of clinical, academic and teaching excellence in the service of patient outcomes.

OUR SURGICAL TEAM

MPRS has some of the best reconstructive and plastic surgeons in Australia. All surgeons have sub-specialist areas with advanced international fellowship training.

As part of the Macquarie University Health Sciences Centre, surgeons also all hold academic positions and are actively engaged in research and teaching. Patients, therefore, have access to recognised leaders in tertiary-level surgery, many of whom regularly take on difficult and complex procedures.

The team’s surgical focus includes cosmetic breast surgery, cosmetic facial surgery, body contouring surgery, skin cancer surgery and major reconstructive procedures. For complex medical conditions, we work in conjunction with other specialty surgeons – including head and neck, orthopaedic, neurosurgery, colorectal, and others, to provide reconstructive surgery for complex medical conditions.

For more information please visit mprs.muhsc.org.au