

A U S T R A L I A N

Medicine

The national news publication of the Australian Medical Association

Third term

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AMA LEADERSHIP TEAM



President
Dr Tony Bartone



Vice President
Dr Chris Zappala

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AMA congratulates returned Government



The AMA has congratulated the Liberal-Nationals Coalition on its election victory and remains committed to working with the Government to strengthen Australia's health system.

The Coalition defied the odds and unexpectedly won a third term in office at the federal election on May 18.

Prime Minister Scott Morrison himself described the win as a miracle.

"I have always believed in miracles... and tonight we've been delivered another one," he said during his victory speech on election night.

"How good is Australia and how good are Australians?"

Mr Morrison and the Coalition beat Bill Shorten's Labor Party in the face of opinion polls strongly suggesting the Government would fall.

AMA President Dr Tony Bartone has congratulated Mr Morrison and his re-elected Government, saying the AMA stands ready to continue working cooperatively to bolster the health system to meet the needs of the nation's growing and ageing population.

"There is a lot of unfinished business in the Coalition's health reform agenda to be completed. We cannot stand still," Dr Bartone said.

"The policy priorities highlighted in the AMA's *Key Health Issues* document for the election remain our policy priorities.

"We look forward to working closely with the Government on its health agenda for the next three years."

Dr Bartone also urged the Prime Minister to retain Greg Hunt as Health Minister and Ken Wyatt as Indigenous Health Minister.

"They are fully across their complex portfolios and the AMA has strong links with their offices and departments.

"There is plenty to do. There are clear consultative processes in place to ensure we can get straight back to the business of investing in the health of all Australians," Dr Bartone said.

Dr Bartone also acknowledged the health platform put forward by Mr Shorten and Shadow Health Minister Catherine King at the election.

He described it as "significantly bold" and offered commiserations to them on the election outcome.

Bill Shorten was consultative and constructive in our dealings with the Opposition, and the AMA wishes him well following his decision to stand down as Labor leader."

In his concession speech on election night, Mr Shorten said he would resign as Labor leader, while urging the party and its



AMA congratulates returned Government ...continued

followers to “carry on the fight”.

“Labor’s next victory will belong to our next leader and I’m confident that victory will come at the next election,” he said.

“This has been a tough campaign, toxic at times, but now that the contest is over all of us have a responsibility to respect the result – respect the wishes of the Australian people and to bring our nation together.”

The AMA was ever-present during the election campaign, keeping all parties aware of the importance of health policy to the outcome.

During the campaign, the AMA released its *Public Hospitals Report Card*, its *Rural Health Issues Survey* and its overview of election campaign health policy announcements, which rated policy announcements against the AMA’s *Key Health Issues* document.

“There were some very welcome policy announcements from the Coalition, Labor, and the Greens, but there were also some glaring omissions or significant underfunding in some key areas, most notably aged care, mental health, rural health, and prevention,” Dr Bartone said in releasing the AMA’s overview.

On specific issues throughout the campaign, the AMA’s voice was heard consistently on health policy. Dr Bartone made numerous, well-targeted comments during the election.

On private health insurance: “The major parties must commit to ensuring the long-term value of private health insurance and the sustainability of the private health sector in Australia should they be elected to form the next Government.

“Just as we need to ensure our public hospitals are funded and supported appropriately, so too must our governments ensure that the private health sector remains strong to help meet growing community needs for high-quality affordable health care where and when it is needed.”

On rural health: “People in rural, regional, and remote Australia face many obstacles when they require access to the full range of quality medical and health services. There are shortages of doctors and other health professionals.

“It is harder to access specialist services such as maternity and mental health.

“And country people often have to travel to capital cities and large regional centres for vital services such as major surgery or cancer care. We need to see tailored and targeted policies to address these inequities. Rural Australians deserve nothing less.”

On mental health: “The AMA acknowledges that the Coalition and Labor have made funding commitments and investments, but the reality is that there is still no leadership in funding evidence-based policies across Australia that help people access

the services and supports they need.”

On Indigenous health: Indigenous Health policy announcements by Labor are a good start to a much-needed, strongly-funded, long-term strategy to close the life expectancy gap between Aboriginal and Torres Strait Islander peoples and non-Indigenous Australians.

“Aboriginal and Torres Strait Islander people have the right to enjoy the same level of good health that is experienced by other Australians. A key part of achieving this goal is to provide culturally responsive services for Indigenous people, where and when they need them.”

On hospital funding: “The AMA is calling on all the major parties to make a meaningful election promise to commit to significant new long-term funding for Australia’s public hospitals.

“The ability of the hospitals to cope with ever-increasing patient demand continues to decline, and it is a trend that will only accelerate unless something is done.”

On cancer care: “It is a sad reality that every Australian is touched by the scourge of cancer, directly or indirectly, through their own experience or that of a family member, neighbour, colleague, workmate, or loved one.

“Easing the financial burden of many cancer patients and families will help them focus on the primary challenge of treatment and recovery.”

The AMA also came out strongly against election candidates who were spreading anti-vaccination messages.

Dr Bartone said Australians should not vote for anti-vax candidates.

“The science is in and the evidence is clear – vaccination saves lives and improves public health around the world,” Dr Bartone said.

“Spreading false and dangerous misinformation can and does cost lives. Voters should steer clear of candidates who are peddling dangerous lies about the health benefits of vaccination and other measures that protect the health of families and communities.”

The AMA also produced a GP campaign kit to highlight the importance of GP-led primary health care as a priority health issue for the current election.

It supplied the kit to its GP members, with resources to help them lobby their local election candidates at the grassroots level.

The AMA put primary health care at the top of its election policy wish list, and it called on the major parties to roll out further significant funding promises for general practice and Australia’s hardworking GPs.

CHRIS JOHNSON



Taking care of business

BY AMA PRESIDENT DR TONY BARTONE

The AMA has congratulated Prime Minister Scott Morrison and the Coalition on winning the election and earning a third term in Government.

It is now time to get stuck into the unfinished business of health reform – the Government's ongoing agenda plus the issues raised by the AMA during the election campaign.

The AMA stands ready to work with the Government to strengthen the Australian health system and set it up to meet the needs of our growing and ageing population. It cannot stand still.

The Government made it clear in the Budget that primary care and general practice will be a priority going forward, and we welcome that.

Primary health care, especially general practice, must be at the top of the list of the health policy agenda.

General practice is at the heart of the health system. It is the glue that holds everything together. It is the lifeblood that keeps people moving and healthy through the system.

GPs help people navigate their way to the right care for them at the right time. GPs are with their patients throughout life. They need to be supported in this vital role.

General practice is the most cost-effective sector of the health system. General practice keeps patients away from more expensive hospital care. General practice stays with patients as they enter aged care. GPs are trusted. General practice delivers.

The Government recognised this with its Budget announcements on primary care. It must build on this commitment in this third term.

On top of this, the private health insurance reforms need to be bedded down, as is ensuring the symbiotic balance between the public hospitals and the private health system is appropriately supported. It is this co-dependence that will assist access to quality health care for all Australians.

The outcomes of the Medicare Benefits Scheme (MBS) Review need further consultation with the medical profession.

The policy priorities highlighted in the AMA's Key Health Issues document for the election remain our policy priorities.

Major challenges for the Government include public hospital funding, Indigenous health, mental health, aged care, and prevention.

All parts of the health system are linked. The Government cannot and must not focus on a few and neglect others. The whole health system needs nurturing.

We look forward to working closely with the Government on its health agenda for the next three years.

The AMA hopes that Prime Minister Scott Morrison keeps Greg Hunt as Health Minister and Ken Wyatt as Indigenous Health Minister. They are fully across their complex portfolios and the AMA has strong links with their offices and departments.



Targeting re-admission rates – does it really work?

BY AMA VICE PRESIDENT DR CHRIS ZAPPALA

No doubt some policy makers and health system mandarins feel pleased with themselves following the introduction of the Hospital Acquired Complications penalty system.

While it is plausible that the rates of these complications may decrease, any potential positive effect from the policy would need to be differentiated from prior trends, influence from other programs, and the cost of diversion of resources from other safety and quality activities hospitals could be undertaking.

There is always the potential for a persuasive guise to cloak a thoughtless, bad policy (there is no robust evidence basis for HAC penalties) spawning unintended, harmful consequences or deficient outcomes in practice.

There have been murmurings for some time now that the next step should be penalties around unplanned early or 'inappropriate' re-admission to hospital. The USA has provided some experience and evidence in this philosophy which should give pause for thought.

The Hospital Readmission Reduction Program (HRRP) started in 2009. The HRRP imposed financial penalties on hospitals based on rates of 30-day risk-standardised hospital readmission for heart failure, acute myocardial infarction, and pneumonia, with up to three per cent of a hospital's total Medicare revenue from admissions for any condition at risk. In 2018, 80 per cent of the hospitals subject to the HRRP were penalized, amounting to \$564 million in reduced payments by Medicare¹.

The introduction of the HRRP was associated with reductions in hospital readmissions nationally, and the program has been declared a success and worthy of expansion by vainglorious policy makers. But is it?

It now appears that the reduction in readmissions were not the result of improved transitional care quality, which would have decreased unplanned returns to the hospital within the first 30 days. Instead, the apparent reductions were largely driven by unplanned returns to the hospital within 30 days of being directly discharged from the emergency department or coded as observation stays.

Rather than improved patient outcomes, there is the lamentably predictable possibility that necessary inpatient care was

restricted. Wow... there was no way of seeing that coming!

In my field, penalising readmission for patients with exacerbations of COAD has not been shown to work for similar reasons, but also because these vulnerable patients can be readmitted with other reasons e.g cardiac, not related to their prior inpatient stay.

Moreover, prompt follow-up has not been shown to reduced re-admission rates and in other settings e.g. post arthroplasty, general frailty was a good predictor of readmission, mortality and complications. General concerns regarding unintended harmful consequences of policies targeting readmission rates have therefore proven worthy.

Evaluation of the full USA Medicare database revealed a 1.3 per cent absolute increase in 30-day risk-adjusted mortality in patients with heart failure and a concomitant increase in one-year mortality, after the implementation of the HRRP. Prior to the HRRP clinicians were winning and mortality rates had been declining.

Thirty-day mortality after acute MI remained static with the HRRP. For pneumonia, the 30-day mortality was stable prior to the HRRP, but significantly increased following its introduction. A recent large analysis² also demonstrated that the overall increase in mortality associated with the HRRP was mainly driven by patients who were not readmitted to the hospital, but who died within 30 days of discharge which enhances the likelihood of a causal relationship between the HRRP financially incentivized restricting of inpatient readmissions and the harm observed.

Irrespective of the policy's intended outcomes, there remains no evidence that patients have benefited from the HRRP or more broadly penalising perceived inappropriate re-admission. How much good health can be sacrificed by Government in the pursuit of cost savings? As perverse as this question appears, it is presumably what American lawmakers are asking themselves.

Who will they blame for the increased morbidity and mortality? Probably not themselves. I can imagine clinicians and institutions being disparaged. This recent US data brings into sharp focus whether re-admission rates are an accurate measure of hospital quality or a valid basis for financial penalty

Vice President's message ...continued

even if an equitable and appropriate system can be devised. Despite this, government's remain entranced by the notion that re-admission rates are useful measures and offer a credible mechanism to drive quality improvements.

By contrast, I would predict that targeted investment in general practice to facilitate chronic disease management, increased community-based services and mental health support resources and less crippling bed pressure in acute hospital with appropriate funding to rehabilitation/allied health to optimise patient function, would all achieve a great deal and might actually decrease mortality rates as well as reduce hospital re-admission.

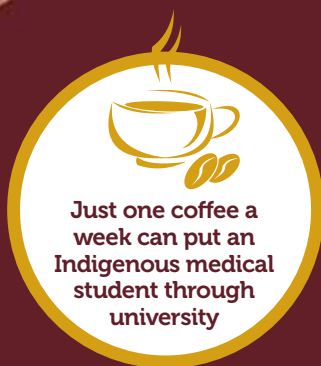
The IHPA documents detailing the HAC system and how financial penalties will be applied is genuinely imposing with its intricacy – no doubt an actuarial triumph. But will it work? Is it no more valid than the misguided US experience with re-admission rates?

Along hospital corridors I sense unintended consequences are expected to emerge from the HAC system and at the very least, there is a frustrating diversion of beleaguered hospital resources away from other potentially more useful pursuits.

Diminished funding generates greater gaming behaviour whereas thoughtful, evidence-based investment will hopefully increase health outcomes. Too much 'stick' is never the answer and politically determined investment always fraught. The AMA remains a relatively lone voice of reason on these issues and our battle to persuade all Governments and others is far from done.

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Bob Hawke fondly remembered



The AMA has joined all Australians in mourning the passing of former Prime Minister Bob Hawke.

AMA President Dr Tony Bartone described Mr Hawke as a larger-than-life figure who earned a national and international reputation as a reformer and humanitarian.

“One of his biggest reforms was establishing Medicare in the 1980s,” Dr Bartone said.

“The bedding down of Medicare throughout the 1980s created tensions and disagreements between the Hawke Government and the AMA and other medical groups, but Bob Hawke and his Ministers remained engaged with the AMA and heard the concerns and recommendations of the profession.

“Using his well-honed industrial skills, Mr Hawke would regularly personally get involved in talks and negotiations with the AMA and the broader medical profession.

“Medicare has evolved over the last 30 years and is still here today as part of a world-class universal health system that is loved by the Australian people and supports their access to Australia’s doctors.

“Medicare is just one of many significant reforms initiated by Bob Hawke. It is a legacy that has touched the lives of every Australian.

“Bob Hawke was a great Australian. He will be missed.”

Timeline – Bob Hawke, the AMA and Medicare

Dr Lindsay Thompson was President of the AMA at the height of its confrontation with the Federal Government over the introduction of Medicare – which was a very different proposal to the Medicare we have today.

Prime Minister Bob Hawke became personally involved in the dispute and offered some concessions, but not enough initially to satisfy rising disquiet among the medical profession. The

nation’s first doctors’ strike was the result.

Below is an edited timeline of events, extracted from the AMA history and annual reports of that time.

MAY 1982 – Dr Lindsay Thompson elected President of the AMA.

MARCH 1983 – Bob Hawke, new Leader of the Labor Party, elected Prime Minister of Australia.

“I was deeply conscious of the new Labor Government’s health plans, to be called Medicare, and the ongoing continuum of problems dating back to the introduction of Medibank which had, in 1973, been fiercely opposed by the AMA,” Dr Thompson later said.

The Government invited the AMA to take part in a National Economic Summit Conference, which would produce the government-union Accord. Dr Thompson noted that the AMA’s invitation to the summit was an indication of its national significance and influence.

The major focus for the AMA in 1983 was the new Government’s health policy and the impending introduction of Medicare. The AMA discussed these issues with Dr Neal Blewett, the new Health Minister, and his advisers.

“Frank discussions took place on a number of occasions in the following nine months,” the AMA’s 1983 Annual Report says, “but, as the Government’s plans unfolded, more and more difficulties arose.”

Provisions of Section 17 of the *Health Insurance Act* introduced with Medicare were of most concern to the AMA. Section 17 gave the Minister the power to impose any controls he chose on the private practice of medicine in public hospitals, including control of fees.

The AMA sought vigorously but unsuccessfully to have a right of appeal included in the legislation, along with the requirement that regulations by which the Minister exercised this power be subject to Parliamentary scrutiny and/or disallowance.

The Government’s refusal to recognise the AMA’s view on this would shortly lead to chaos in the hospital system.

The Parliament amended the legislation in line with AMA advice on some small matters, but for the most part, the legislation remained intact and as the Government intended.

OCTOBER 1983 – The legislation, having been approved by both Houses of the Parliament, was given Royal Assent.

DECEMBER 1983 – The AMA meets with representatives of the Australian Association of Surgeons, the Australian Society of Anaesthetists, the National Association of Medical Specialists and the National Association of General Practitioners of Australia to deal with the Sec. 17 threat to doctors’ existing hospital contracts emanating from the new powers given by the legislation to the Health Minister.

Bob Hawke ... continued

The AMA Federal Council, expressing its “continued strong opposition” to the Sec. 17-type proposal, advised AMA members to consult their State branches before signing any Sec. 17-type contracts.

JANUARY 1984 – Less than three weeks before the onset of Medicare, AMA representatives met with Dr Blewett in Adelaide. He refused any substantial changes. Three days later, Dr Thompson issued a statement that most doctors in most States would not sign the proposed new contract.

FEBRUARY 1984 - Dr Blewett announced that the application of his guidelines would be deferred for a month, and that a three-person committee (including one AMA representative) would inquire into private practice arrangements in public hospitals. The chair would be Professor David Penington of The University of Melbourne. The AMA nominated radiologist Dr John Cashman as its representative. The problem seemed to be heading towards compromise, if not solution. But the Government proceeded with formal gazettal of the prescribed services. More meetings were held between the AMA and the Health Minister. Unrest built among the AMA State branches.

MARCH 1984 – Prime Minister Hawke intervenes and invites the AMA President to meet with him. At that meeting, Mr Hawke offered that, if the AMA asked doctors to sign new contracts where this was required, the Government would agree in advance to any recommendation relating to appeal and review procedures by the Penington Committee. The AMA Federal Council decided at a special meeting that it appreciated the Prime Minister’s conciliatory approach, but that his Government’s offer did not meet the concerns of doctors.

Federal Council urged branches to continue negotiating mutually satisfactory arrangements with State Governments. By then, dissatisfaction had turned into action.

Implementation of the guidelines was deferred to March 14, but on March 6 the NSW branch had already called on medical staff at public hospitals in the State to withdraw all but emergency services for 24 hours on a weekly basis from March 19.

Later in March, it decided to extend its industrial action by calling a one-week strike from April 9. Radiologists in New South Wales had withdrawn services from March 14. Visiting doctors in the ACT began an indefinite strike on the same day. The next day, a meeting of members in South Australia authorised the State President to call a 24-hour stoppage at his discretion. On the day after that, 1,200 members in Victoria authorised the State branch to initiate industrial action on March 27 and to plan selective withdrawal of services from March 29. It was decided later that all but emergency services would be withdrawn in Victoria from April 5.

LATE IN MARCH – on the initiative of the Australian Democrats – the Government amended the Act to provide that the guidelines

be tabled in Parliament where they would be subject to disallowance. The AMA decided that this was still not enough to solve the problem, but it did offer in response a proposal that, if a system of consultation, review and appeal was formally included in the legislation, the industrial action planned in Victoria for April 5 would be called off as a demonstration of goodwill.

As a result, discussions were arranged between the AMA, Dr Blewett and Industrial Relations Minister Ralph Willis (including one meeting that went from 9pm to well into the early hours of the next day) that resulted in a truce – uneasy, but a truce.

OCTOBER 1984 – The final Penington report, proposing that an interim AMA-Government consultative committee consider its many detailed recommendations, was published. Its recommendations included that private doctors’ fees for diagnostic services in public hospitals such as radiology and pathology should be at or below the schedule fee, and that schedule fees be reviewed annually by a committee of medical peers.

DECEMBER 1984 – despite the well-understood formal limits to the power of the Federal AMA to influence what was clearly an internal State matter – the NSW branch of the AMA and senior royal clinical Colleges asked Dr Thompson to intervene in the NSW dispute, which had been festering for most of the year over the State Government’s enacted complementary Medicare legislation that gave it powers over how doctors would be appointed to, and work in, public hospitals. Surgeons and specialists had resigned from public hospitals.

The Society of Orthopaedic Specialists and the Association of Surgeons created the Council of Procedural Surgeons (COPS) to negotiate on their behalf.

FEBRUARY 1985 – Prime Minister Hawke calls a meeting with COPS and, along with the NSW Government, offers an “unequivocal public undertaking” not to abolish private practice in public hospitals and to negotiate changes that would ensure “maintenance of private practice at a viable level”. In return for this, he asked that the doctors return to their hospital positions. The COPS said the meeting was unproductive.

Later, Mr Hawke would say: “It became apparent during the discussions that the specialists had no real intention of reaching an agreement. They came to Canberra simply to tear up Medicare.”

Mr Hawke then contacted Dr Thompson and held a meeting with the AMA the following day. That meeting reached agreement on negotiations on the basis of a call by the AMA for doctors to return to work and an undertaking by the Government not to advertise specific specialist vacancies.

FEBRUARY 1985 – Negotiations agreed with the Prime Minister on February 21 proceeded until, on April 2, agreement was reached, which was widely interpreted in the media as a victory for the AMA.

Overview issued on election promises

Welcome announcements and glaring omissions shaped the federal election campaign when it came to health policy.

That's the message the AMA delivered to political parties and the public, as polling day drew near.

In releasing its overview of health policy in the election campaign, the AMA pointed out that progress had been made in some areas while sorely lacking in others.

AMA President Dr Tony Bartone said there were some very welcome policy announcements from the Coalition, Labor, and the Greens, but there were also some glaring omissions or significant underfunding in some key areas, most notably aged care, mental health, rural health, and prevention.

"While the new funding and policies are welcome, it is disappointing that no party has set an overarching vision for the long-term future of the health system," Dr Bartone said.

"There is no comprehensive and coordinated plan to combat the rising prevalence of chronic disease and address the complex health needs of the significantly increasing and ageing Australian population.

"There is no vision that articulates coordination, collaboration, and efficiency across the whole health system.

"There is no real acknowledgement of the importance of properly funding preventive health measures, and both the major parties have only just started to properly resource and empower general practice-led primary care."

Dr Bartone noted that Labor had made more big-ticket policy declarations, with its Medicare Cancer Plan a \$2.3 billion centrepiece of its election health policy platform.

"There is still a lot of detail to come, and quite a few questions to be answered, but it is a significant investment and will bring some comfort to the millions of Australians affected directly and indirectly by cancer," Dr Bartone said.

"In an unexpected first, it includes a Medicare rebate that is pegged roughly at the level of the AMA recommended fee. This is a significant admission by Labor that MBS rebates are woefully inadequate.

"The AMA will need to discuss with Labor, should it form government, if similar rebate increases will flow to other serious diseases. Indeed, holistic patient care dictates that it must.

"The other flagship for Labor is its \$2.8 billion public hospital funding package, over and above existing recurrent funding under COAG agreements. This is backed up with extra funding specifically targeted to improving emergency services and reducing waiting lists.

"All up, Labor's pledges total more than \$8 billion over four years."

Dr Bartone said that the Coalition had adopted a more modest approach to new policy announcements in this campaign.

"The Coalition has signalled it would continue with its established approach to managing the health system, highlighted by some enhancements to its prioritisation of the Pharmaceutical Benefits Scheme and new drug listings via PBAC, and shoring up the Medical Research Future Fund (MRFF)," he said.

"Labor has matched the PBS and MRFF commitments.

"The AMA is pleased that general practice is finally getting some attention.

"The first highlight was the Coalition's billion-dollar GP package in last month's Budget. It includes \$450 million to improve continuity of care for patients over 70 with chronic conditions, \$200 million in Quality Incentive Payments for general practices and, importantly, the retention of Aged Care incentives for GPs.

"There is also \$60 million for rural generalist training, and \$190 million for lifting of the freeze on a string of GP items – including care plans.

"While not releasing a specific policy package for general practice, Labor has promised to match every dollar of the Coalition's Budget funding commitment to general practice, and will also lift the freeze on remaining Medicare patient rebates.

"We welcome this bipartisan acknowledgement of the importance of general practice. But much more will be needed in coming years from the new Government.

"There has been no effort by either side during this campaign to provide a solution to concerns about the diminishing value of private health insurance and the vital role that the private health system plays in supporting a stressed public hospital system. Labor has announced a Productivity Commission Review, and a two per cent cap on premiums, if elected.

"Labor has flagged a range of aged care reforms, but no funding details ahead of the election.

"Both the Coalition and Labor announced funding boosts for diagnostic imaging."

JOHN FLANNERY AND CHRIS JOHNSON

The AMA's Policy Overview can be found at:

<https://ama.com.au/sites/default/files/documents/Election%20Policy%20Overview%202019.pdf>

Rural doctors call for more staff and workable rosters

Rural health has received little attention from the major political parties during the federal election campaign, a point strongly noted by the AMA as it released the latest rural health survey.

In the last week of the campaign – just three days out from polling day – AMA President Dr Tony Bartone said it would be up to whoever won the election to ensure rural doctors and their communities do not continue to be overlooked.

Rural doctors around the nation are crying out for an urgent investment in funding and resources to improve staff levels and hospital facilities in the struggling rural health system, according to the survey.

The *AMA Rural Health Issues Survey 2019* found that more staff and workable rosters was the most critical priority for improving rural health outcomes as rated by rural doctors, unchanged since the last survey in 2016.

That was followed closely by more trainee doctors in rural areas, and the need for modern hospital facilities and equipment.

“These survey results paint a picture of a struggling system being held together by hard-working and dedicated doctors,” Dr Bartone said.

“All of the groups surveyed – GPs, non-GP specialists, salaried doctors, doctors in training, and other medical professionals – identified extra funding and resources for staff, including core visiting medical officers (VMOs), to allow workable rosters as their top priority.

“This reflects rural doctors’ long-held concerns about the lack of staffing in rural hospitals, the high workload, and the significant levels of responsibility placed on hospital doctors and VMOs.

“Poorly designed rosters and staff shortages lead to fatigue, and doctors in training often have a significant burden of responsibility placed on them in rural hospitals.

“It’s not surprising that the survey results have barely changed since the last AMA Rural Health Issues Survey in 2016 – because the conditions in rural and remote Australia have barely changed.

“While there have been some positive developments as a result of the 2016 survey, the impact of these initiatives will not be felt in rural communities for years.

“What is surprising is that rural health has received very little attention from any of the major parties during this federal election campaign.

“The promised roll out of the National Rural Generalist Pathway by the Coalition is a welcome move and the ALP has committed

to developing a National Rural Health Strategy. However, rural communities are looking for something more immediate.

“It remains inconceivable that millions of Australians who experience higher incidence of the drivers of chronic disease are being overlooked.

“Australians who live in rural and remote areas cities have poorer health outcomes than those who live in cities. They access Medicare at far lower rates than city dwellers and wait longer to see their GP.

“Rural communities have fewer doctors and are finding it increasingly difficult to attract new ones.

“Rural doctors are up against it, and it feels like no-one is paying attention.

“The AMA is calling for immediate funding to improve infrastructure, and to support more doctors to build their lives and careers in rural areas.

“One of the most encouraging outcomes of the Survey is the overwhelming satisfaction that rural doctors gain from their work.

“Rural doctors enjoy treating generations of families, feeling involved in their communities, and tackling a wide range of health conditions.

“Rural doctors love their work – they just need more support to keep doing it.”

The AMA Rural Health Issues Survey of more than 600 rural doctors was conducted during March 2019. Survey participants were asked to rate the importance of 31 different proposals, and to provide additional comments or suggestions.

Rural GPs were the largest group of respondents (32.6 per cent), followed by non-GP specialists in private practice, salaried doctors (17.4 per cent), other doctors including rural generalists, locums and VMOs (16.6 per cent) and doctors in training (14.1 per cent).

The majority of responders were from New South Wales (30.5 per cent), followed by Queensland (26.1 per cent), Victoria (22.9 per cent), Western Australia (8.4 per cent), Tasmania (6.8 per cent), South Australia (4.2 per cent), Northern Territory (1 per cent), and the ACT (0.2 per cent).

MARIA HAWTHORNE

The AMA Rural Health Issues Survey 2019 is available at:
<https://ama.com.au/2019-ama-rural-health-issues-survey>

AMSA holds leadership conference in the capital



AMA President Dr Tony Bartone participated in a panel discussion at the Australian Medical Students' Association premier academic conference, the student-run National Leadership Development Seminar.

The four-day AMSA NLDS was held in Canberra during the last

week of the federal election campaign and featured a number of young doctors and inspiring leaders.

Dr Bartone is pictured here with AMSA President Jessica Yang (centre) and Dr Michael Bonning, who is a former AMSA President and a former Chair of the AMA Council of Doctors in Training.

Measles vaccines in short supply

GPs are being forced to ration measles vaccines to patients because of supply problems.

The Federal Government and GPs have been working to find alternatives after pharmaceuticals manufacturer GlaxoSmithKline Australia reported that two of its measles vaccines are facing supply constraints.

AMA President Dr Bartone said the supply constraints had meant GPs were rationing the current supply.

"Many of our members are reporting some difficulties in obtaining supplies and, in some cases, are having to appropriately ration supplies to necessary cases," he said.

"Measles knows no boundaries and all people should be very clear about their (immunity) status and have that conversation

with their family doctor."

Dr Bartone said the public health message to get vaccinated is still particularly relevant for those planning to travel to tourist hotspots in southeast Asia where Australians have been infected with measles.

Up until April 5 this year, there have been 83 cases of measles reported nationally, compared to 103 cases in 2018.

The AMA has urged the Government to fund universal catch-up vaccinations for all Australians through the National Immunisation Program.

"A universal catch-up program would be the way to restore herd immunity right across the Australian landscape at above 95 per cent or more," Dr Bartone said.

AMA responds to allied health report

The AMA has formally responded to the Allied Health Reference Group (AHRG) Report, saying MBS Review Taskforce recommendations to the Government should be focussed on ensuring the centrality of GP care.

The AMA is supportive of enhanced access to allied health services (AHS), preferably within a medical home model of care and where they align with best practice.

The continuity and coordination of patient care should be strengthened and well supported, the submission states.

The AMA is supportive of enhanced access to allied health services (AHS), preferably within a medical home model of care and where they align with best practice.

In its submission, the AMA has supported:

- the introduction of a comprehensive assessment item for when the allied health professional first sees the patient;
- stratified access to AHS based on the complexity of care requirements;
- enhanced access to group therapy within the M10 treatment items;
- gaining an improved understanding of the benefits of allied health group sessions, enhancing GP referral for pervasive development disorders to facilitate more timely access to diagnosis and treatment, improved access to allied health via telehealth;
- exploring alternate funding models to best fund integrated health care; and
- enhanced communication between patients and their health care team.

“A number of the recommendations of AHRG were specific to what is considered an emerging and complex cohort of patients for whom there are significant barriers to equitable and timely care,” the AMA submission states.

“In responding to these more targeted recommendations, the AMA has put a priority on early identification and intervention.”

The AMA has supported increasing the number of assessment items for children, adolescents and adults up to age 25 with a potential Autism Spectrum Disorder (ASD), Complex, Neurodevelopmental Disorder (CND) or eligible disability diagnose up from four to eight with review by referring practitioner after the first four.

However, the AMA was not supportive of enabling interdisciplinary referrals between AHPs, believing that access to assessments should be coordinated by a central member of the patient’s health care team – ideally the GP.

The AMA was also not supportive of incentivising AHPs to provide group sessions for chronic disease management. It makes more sense to support general practices to co-ordinate and organise group sessions in consultation with the AHPs who either work within the practice or with who the practice has a working relationship.

On expanding the AHPs recognised under the Medicare Benefits Schedule, the AMA considered that funding mechanisms outside of the Medicare Benefits Schedule might be more appropriate. This included for orthotists, prosthetists and non-dispensing pharmacists.

Access to orthotic and prosthetic services not so much a lack of services subsidised by the MBS but an underfunding of public hospital orthotic and prosthetic services across Australia.

Regarding non-dispensing pharmacists, these services should be funded as part of an additional overarching payment to practices participating in the Workforce Incentive Program (WIP). Specific items would be limiting in terms of the breadth and number of services that could be provided to the patient.

CHRIS JOHNSON AND MICHELLE GRYBAITIS

The AMA Submission can be found at:

<https://ama.com.au/submission/ama-submission-response-allied-health-reference-group-report-0>

The AHRG Report can be found at: [http://www.health.gov.au/internet/main/publishing.nsf/content/58EFEA022C2B7C49CA2583960083C4EA/\\$File/AHRG-Final-Report.pdf](http://www.health.gov.au/internet/main/publishing.nsf/content/58EFEA022C2B7C49CA2583960083C4EA/$File/AHRG-Final-Report.pdf)



Medicare Compliance: What providers need to know

BY SIMON COTTERELL, FIRST ASSISTANT SECRETARY, DEPARTMENT OF HEALTH

Have you been contacted by the Department of Health or Medicare about your MBS billing? Here's what you need to know.

The Department of Health is responsible for protecting the integrity of Medicare payments to health care providers. More than \$36 billion is paid each year to more than 140,000 providers and 6,700 suppliers through the Medicare Benefits Schedule (MBS), the Pharmaceutical Benefits Scheme (PBS), the Child Dental Benefits Scheme (CDBS), Practice Incentive Program (PIP) and other incentive payments. It is estimated that two to five per cent of claiming may be non-compliant.

The Department aims to support compliance and prevent non-compliance wherever possible through:

1. **Provider education.** General Medicare compliance training materials are available at: <<https://www.humanservices.gov.au/organisations/health-professionals/subjects/education-services-health-professionals>> and the Department is working with the AMA, the professional Colleges and specialist Associations to develop more tailored approaches for each professional grouping. Since March 2019, the Department has taken responsibility for the AskMBS email advice service – AskMBS@health.gov.au – to provide authoritative advice on MBS schedule interpretation and to ensure consistency with compliance approaches;
2. **Targeted letter campaigns** to alert providers whose claiming patterns indicate they may be at risk of non-compliance. These letters generally compare the individual provider's claiming to that of their peers and attach a schedule of claims for review. Reviewing the schedule and responding to the letter is voluntary. However, it is in the provider's interest to do so. In monitoring future claiming and deciding whether an audit or other intervention may be required, the Department will take into account information received from the provider about why they consider their claiming is correct, any corrections to claims and/or any changes in claiming patterns following the letter.

Where these letters attach a lengthy schedule, one approach open to providers is to review a sample of the claims before deciding whether a line by line review is needed.

The Department undertakes the following activities to treat non-compliance:

3. **Audit**, which is generally used to treat potential incorrect claiming. In an audit, the Department writes to a provider requesting documentation to substantiate a set of claims about which the Department has concerns. The letter will indicate the kinds of documents that may be accepted to substantiate claims. If clinical notes are involved, in order to protect patient privacy the provider may redact elements which are not relevant to the claim and/or request that a medical adviser review the documents. Responding to audits is not voluntary. While the initial letter requests a voluntary response, if required the Department may issue a Notice to Produce documents under s129AAD of the *Health Insurance Act 1973*, and administrative penalties may apply for failure to comply. The Department conducted 153 audits in 2017-18;
4. **Practitioner Review Program (PRP)**, which is generally used to treat potential inappropriate practice. Inappropriate practice is defined under the *Health Insurance Act 1973* to mean conduct by a practitioner in connection with rendering or initiating MBS services that a practitioner's peers could reasonably conclude was unacceptable to the general body of their profession. Under the PRP, the provider will receive a telephone call from a departmental medical adviser to let them know that their claiming appears to be significantly different to that of their peers. This is followed by a letter setting out the claiming of concern and an interview to seek to understand the pattern of claiming. Where concerns remain after the interview, the provider's claiming may be monitored over the following six months or the provider may be referred to the Director of the Professional Services Review (PSR). The Department conducted 421 PRP interviews in 2017-18 and referred 109 matters to the Director PSR.
5. **Investigation**, which is generally used to treat potential fraud. The Department uses investigative approaches common to many law enforcement agencies, drawing on powers under the *Health Insurance Act 1973* and the *Human Services (Medicare) Act 1973*. Where evidence of fraud is found, the matter is referred to the Commonwealth Director of Public

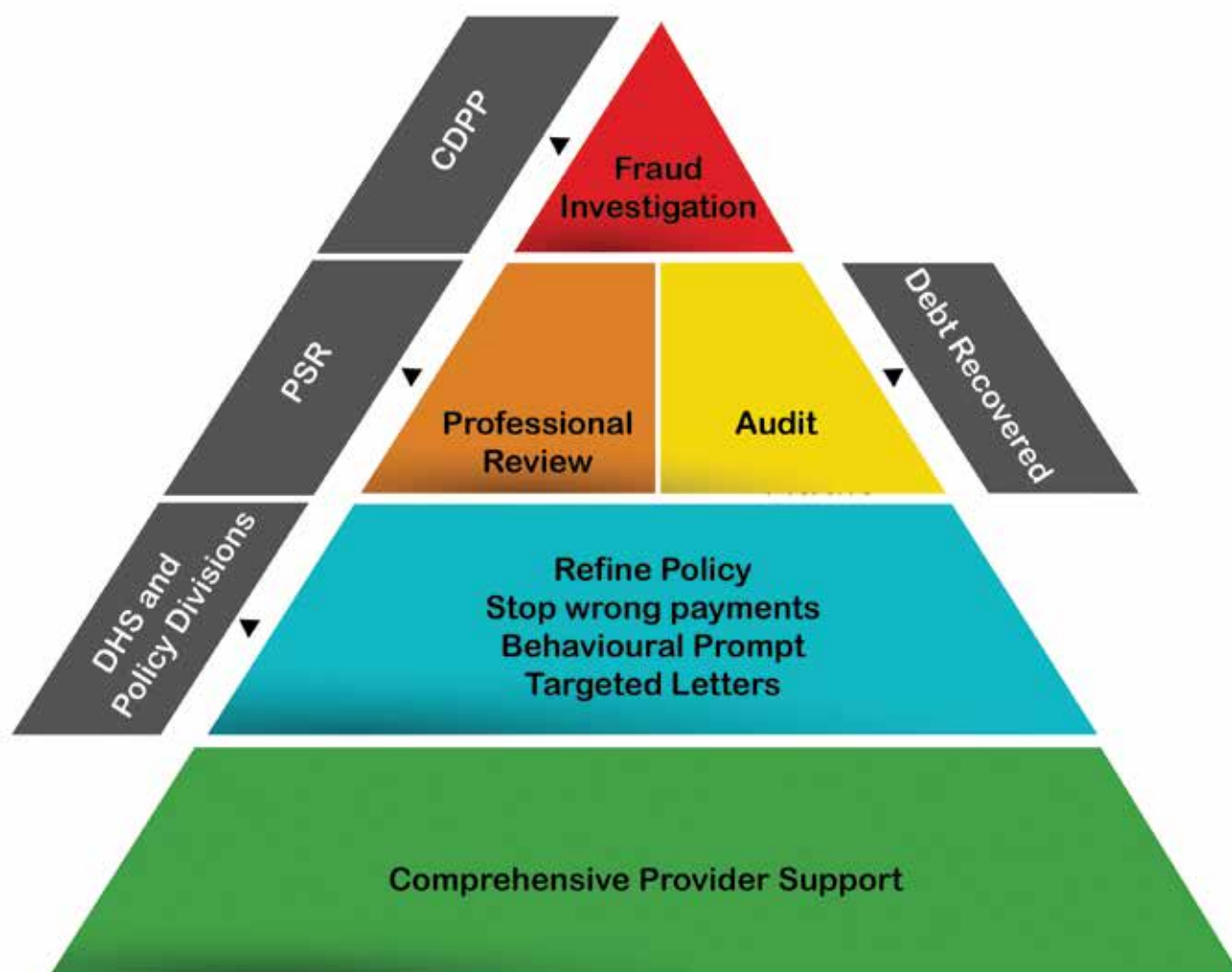


Medicare Compliance ... continued

Prosecutions (CDPP) for action in the courts. The Department conducted 50 investigations in 2017-18. Court action on 21 matters referred to the CDPP was completed in 2017-18.

The Department seeks comments from the AMA and the professional Colleges and Associations on its compliance activities.

The aim, wherever possible, is to support compliance and prevent non compliance rather than to address incorrect claiming, inappropriate practice and fraud after they have occurred. These compliance activities support the integrity of the Medicare system and help to ensure that health resources are directed where they are needed to support the health of the Australian population.



Compliance Pyramid



Marking International Clinical Trials Day

BY SOOZY SMITH, CHIEF EXECUTIVE OFFICER, BREAST CANCER TRIALS



International Clinical Trials Day is a timely reminder of how far we have come in breast cancer research but importantly, why there is still more work to do.

May 20 each year marks the anniversary of the day James Lind began the world's first clinical trial to investigate the prevention and treatment of scurvy in 1747.

At the time, HMS Salisbury of the British Royal Navy was patrolling the English Channel and scurvy was thought to have killed more British seamen than French and Spanish arms.

James Lind was a surgeon mate on board the ship and had a hunch that the putrefaction of the body could be cured through the introduction of acids.

Lind's pioneering randomised controlled trial consisted of just 12 men and two men were allocated to each of the six different treatments – cider, diluted sulphuric acid, vinegar, sea water, two oranges and one lemon, and a paste made up of garlic, mustard seed, dried radish root and gum myrrh.

According to Lind's report, the men who took the citrus fruits experienced "the most sudden and good visible effects" on the trial.

While clinical trials started as very humble research more than 270 years ago, they have grown to become one of the most important scientific research endeavours that have changed clinical practice and the treatments available to patients today.

A clinical trial asks a scientific question and aims to identify if a new treatment is better than the current standard of care.

All of the major milestones in controlling breast cancer, for example, have come through clinical trials, and women have also benefited from improved screening and early detection.

During the last two decades, breast cancer mortality has fallen by more than 30 per cent and more women than ever before are surviving their diagnoses.

The research program of Breast Cancer Trials has played a significant role in these breakthroughs and has meant Australian women have had access to new treatments sooner.

Breast Cancer Trials (BCT) is Australia's largest, independent, oncology clinical trials research group and for more than 40 years, BCT has been conducting multicentre national and international clinical trials, bringing together almost 800



Clinical trials ... continued

researchers across more than 100 institutions throughout Australia and New Zealand.

Take for example the HERA clinical trial, which was ground-breaking research for women with HER2-positive breast cancer – a more aggressive form of the disease affecting approximately 20 to 30 per cent of women with breast cancer.

HERA found that the administration of trastuzumab (Herceptin) following standard chemotherapy reduces the risk of the disease returning for these women by 46 per cent.

This trial enrolled 5,000 women from 39 countries worldwide, including 110 women from Australia and New Zealand.

Results from a joint interim analysis of more than 3,000 patients from two North American trials provided similar and equally remarkable results for trastuzumab in early-stage HER2-positive breast cancer. This data, at a median follow-up of two years, showed that trastuzumab in combination with a specific chemotherapy regimen provided a 52 per cent reduction in risk of cancer coming back as well as a 33 per cent reduction in risk of death.

The Prevention of Early Menopause Study (POEMS) clinical trial offered a new treatment option for young women with breast cancer, to better preserve their fertility during cancer treatment.

Chemotherapy is usually given to women with breast cancer to destroy any remaining cancer cells after surgery and to prevent these cells from growing and spreading to other parts of the body. One in four breast cancer patients are premenopausal and, unfortunately, a common long-term side effect of this treatment is early menopause. In addition to avoiding the potential long-term medical problems resulting from early menopause (such as osteoporosis and heart disease), many young women also wish to avoid infertility which may result from treatment.

The POEMS clinical trial found that women who received the drug goserelin were less likely to be in menopause two years after their cancer treatment and were twice as likely to have a normal pregnancy after their cancer treatment.

A total of 256 women participated in this study worldwide, including 58 women from Australia and New Zealand.

There have also been other clinical trials which have looked at how we can prevent breast cancer in women at higher risk of the disease.

The IBIS-I clinical trial for example looked at whether the hormone therapy drug tamoxifen could reduce the risk of breast cancer developing in women aged 35 to 70, with a family history of the disease.

Initial IBIS-I results released in 2002 demonstrated that tamoxifen reduced the risk of hormone receptor positive breast cancer developing by about one third in pre and post-menopausal women at increased risk of the disease.

Long-term follow up of IBIS-I released in 2006, found that tamoxifen reduced the risk of hormone receptor positive breast cancer by 34 per cent in women at increased risk and that the benefit continues for at least several years even after treatment with the drug has stopped. This accounts for two thirds of all breast cancers.

In 2014, new extended analysis of tamoxifen showed that the preventative effect of the drug continues for 20 years.

More than 7,100 patients worldwide participated in the IBIS-I clinical trial, including 2,674 from Australia and New Zealand.

While these are fantastic results produced by clinical trials, our work is a long way from being complete.

This year, more than 19,500 people will be diagnosed with breast cancer, which equates to 53 people every day and recent statistics from the Australian Institute of Health and Welfare show that breast cancer will likely become the most diagnosed cancer of all cancers in 2019.

Clinical trials have improved the treatment of breast cancer, led to changes in the way breast cancer is managed and saved millions of lives through research collaboration.

It is only through clinical trials research that we will find new and better treatments and prevention strategies for every person at risk or diagnosed with breast cancer, so that they can get on with living and loving their lives.

Concern expressed over suggested radiographer revisions

The AMA is concerned certain proposed revisions to the medical radiation practice professional capabilities document could be interpreted as expanding the scope of practice of radiographers beyond their training into areas that require medical training and specialist expertise.

The AMA has welcomed the opportunity to comment on the Medical Radiation Practice Board's draft revised professional capabilities document. Overall, the AMA considers the Board has produced a robust document reflecting important changes to the healthcare environment in which medical radiation services operate.

In its Submission, the AMA states its support for a model of medical radiation practice where the medical practitioner – a clinical radiologist – is the leader of the healthcare team.

"This means the clinical radiologist provides professional supervision and oversight of all aspects of patient care," the Submission says.

"The AMA values radiographers as highly skilled members of the medical imaging team who have undergone extensive education

and training. Radiographers' technical expertise enables them to play an essential role in image acquisition with limited supervision and undertake significant responsibility to support the work of the clinical radiologist.

"The core focus of their role is image acquisition and presentation, assisting patients during imaging and procedures, and maintaining equipment. Safe, high quality medical radiation practice involves all members of the medical imaging team working in collaboration.

"The AMA does not support extension of the role of a radiographer to include tasks that require medical training. Radiographers are not qualified to assess requests or referrals, suggest alternative imaging, or to interpret and communicate findings."

The AMA's full submission can be found at:

<https://ama.com.au/submission/ama-submission-medical-radiation-practice-board-revised-radiographer-professional>

Submission to TGA on proposed scheduling changes

The AMA opposes the down-scheduling of Finasteride from Schedule 4 to Schedule 3 due to potential risks to patients; and it supports the proposal to classify Sanguinarine as a Schedule 10 medicine, which would effectively prohibit its sale, supply and use in Australia.

In its Submission to the Therapeutic Goods Administration on proposed schedule changes to Finasteride and Sanguinarine, the AMA has made some very strong and clear points.

On Finasteride: "The AMA opposes the down-scheduling of Finasteride so that it is available without a prescription in preparations containing not more than 1 mg per dose unit in packs not greater than 30 dosage units.

"The treatment of hair loss is a highly lucrative and easily abused industry. People seeking help are often highly motivated to find a 'cure' and are easily exploited.

"The AMA considers this is an attempt by the sponsor to widen its market penetration and little to do with improving outcomes for patients. Assessment of alopecia firstly requires medical evaluation to rule out other causes."

Regarding Sanguinarine: "The AMA supports the classification of Sanguinarine, except in preparations containing 0.1 per cent or less, as a Schedule 10 substance in the interests of protecting public safety.

"AMA members report seeing serious harms to their patients from its use, and consider it is a noxious and dangerous product."

The AMA's full submission to the TGA can be found at: <https://ama.com.au/submission/ama-submission-tga-proposed-scheduling-changes-finasteride-and-sanguinarine>



Universal catch-up

BY DR RICHARD KIDD, CHAIR, AMA COUNCIL OF GENERAL PRACTICE

But it is time to go all the way and ensure that anyone 20 years and older who wants to complete their NIP vaccination schedule is supported to do so.

According to Australia's immunisation tables, the nation is as close as it has even been in reaching the aspirational immunisation coverage rate of 95 percent for five-year-olds.

But, close enough is not good enough when it comes to preventing and stopping the spread of highly infectious diseases, such as measles. A number of Australians, aged 20 and over, missed out on being fully vaccinated against preventable diseases, like measles and rubella, when they were growing up. They are still missing out because their catch-up vaccines are not funded under the National Immunisation Program (NIP).

The AMA thinks it is time for this gap in preventive health care to be closed. Both the AMA Council of General Practice and the AMA Federal Council are supportive of clinically appropriate universal catch-up vaccines funded through the NIP being made available to anyone living in Australia wishing to bring their vaccinations up to date, irrespective of age, race, country of origin and state or territory of residence.

The Government has gone some way to provide free catch-up vaccinations to children aged 10 to 19 years of age and to refugee and humanitarian entrants. But it is time to go all the way and ensure that anyone 20 years and older who wants to complete their NIP vaccination schedule is supported to do so.

About four million adults, typically those born from

1966 to 1994, are not fully vaccinated against measles. These unprotected individuals are at risk when travelling overseas of becoming infected with measles, and of bringing it back into the country.

Over the last few years, outbreaks of measles continue to highlight just how virulent this disease is and how vulnerable those who have not been fully immunised against it are. Despite Australia being declared by the World Health Organisation to be measles and rubella free, we continue to see outbreaks occurring within our shores when this highly contagious disease is caught overseas, brought back and spread.

All States and Territories, except Tasmania and South Australia, provide a free catch-up for measles, mumps and rubella for those born in or after 1966. Obviously, with two States missing out, more needs to be done to ensure as many Australians as possible are fully vaccinated against measles, as well as the other diseases covered under the NIP.

The AMA wrote to the Minister for Health at the end of 2017 in support of universal catch-up vaccinations for all Australians but nothing has been done. With 16 per cent of the population at risk the AMA believes it is time that the Federal Government steps up and provides the funding necessary to ensure all Australians have free access to the vaccines covered under the NIP so they can be fully protected against preventable deadly and debilitating disease.



It's the economy, but not just jobs and growth

BY PROFESSOR STEPHEN LEEDER, EMERITUS PROFESSOR, PUBLIC HEALTH, UNIVERSITY OF SYDNEY

You will not have been able to escape hearing a lot about the 'economy' as you listen to what our major political contestants have to say in the run up to the May election. But there are other versions of 'economy' beside the dollar and cent variety.

For example, the term 'political economy' captures the rich context in which our financial economy operates and concerns more than financial accounting and management. 'Political Economy', according to the University of Sydney Web page, 'focuses on the links between the economy, society and political interests.' It encompasses 'pressing economic issues in the contemporary world, including inequality and economic development, economic crisis and change, and the conflict between economic growth and environmental sustainability'.

Now in the world of political competition for your vote when contestants use phrases such as 'jobs and growth' to define their philosophy and intentions, you might not expect to hear much about the political economy because of its complexity. And that is a pity.

But let's look at health as an election issue. Appropriately, there is concern about access to health care where and when it is needed. The adequate support of Medicare for this purpose is not in question. Efforts to defray the out-of-pocket costs of care, including cancer, are welcome and consistent with the spirit of Medicare in which financial barriers to access to care are removed. Patching up of holes in the fabric of healthcare financing are encouraging.

But deeper problems exist that fall within the economic basket. These relate to the nature of the disease challenges that we face and what we might do to reduce their occurrence.

Yes, we need to support strongly the medical care arrangements for patients for whom prevention is no longer an option, if it ever was. Dementia is currently in this category. But more generally, especially in relation to heart disease and stroke, we know enough to do better by way of prevention.

I am not writing here about attempts at prevention that leave it to the individual to adopt behaviours that are health promoting but frequently impossible for them. Rather, I am thinking of changes in the environment, the economic arrangements relating to labour, the big-business agenda, globalisation and trade and their impact on how we live our lives.

Trade arrangements that make cheap rubbish food attractive, urban development that takes no account of the effects of open

space deprivation, education systems that favour – without compensation – the wealthy all affect our health. They are elements of the political economy.

Let's take an example. Coronary heart disease remains a scourge. We now have an armamentarium of drugs, devices, scans, and surgical interventions of proven effectiveness. This requires a good chunk of national treasure to support. Good use of money.

But many studies have shown that the steady progress in reducing deaths from heart attack in prosperous countries (now at least 50 per cent less than at their peaks in the 1950s) are due to a combination of medical care and prevention. However, when you calculate the years of life saved by prevention and care, it turns out that prevention has, proportionally, a much higher yield because the lives saved are those of younger people who have longer to live.

The point about prevention of heart disease is that it requires political action. Without government support tobacco control would not have happened in Australia, and without that heart disease would be a far worse problem than it is today. The traditions of government intervention in pursuit of prevention were established in the first half of the last century, including clean water and immunisation.

What other things could be done in the political economy today to improve health? We hear nothing about new or amplified approaches to abate small particle air pollution (diesel is a major contributor). In this case there is nothing for the individual to do but there is a lot for government and business.

Similarly, with the amounts of added salt and sugar and trans fats in our food, the political nature of the economic decisions that sustain these hazards suggests that political action is needed to remedy these intoxications. We have seen this approach with road trauma where political action has reduced fatalities and serious injury through vehicle design regulation, safer roads and stricter policing of speed, inattention, alcohol and drugs.

We need not confine our thinking about the economy to jobs and growth. Those of us with careers that commit us to seek health gain for our patients and the community should urge our leaders to consider ways their political influence could make for a healthier future.



Did you vote?

BY DR SANDRA HIROWATARI, CHAIR, AMA COUNCIL OF RURAL DOCTORS

This past election marks the fifth Federal Election I have not been able to vote in. This is because (despite years of trying) I am not an Australian citizen. Another Australian election has come and gone without my vote being counted, without my voice being heard.

I am often referred to in policy documents as an IMG (international medical graduate) or an OTD (overseas trained doctor). In the communities where I work, I am more commonly referred to as “Doc”. There are now more of us than there are Australian medical graduates working as GPs in Australia, especially in rural Australia. Due to the absence of any medical workforce planning in Australia for fifteen years, we have watched ourselves go from being a solution to the problem of maldistribution to part of the problem of impending medical workforce oversupply.

Despite this, we continue to do the hard work out bush. Often, we do this with limited support for our own family’s medical or educational requirements. And we are excluded from the decision-making processes which affect our lives and livelihoods as rural doctors who were not born in Australia. We don’t get a say in who governs our communities, even if the local member happens to be one of our patients.

I have to rely on the AMA to be my voice on many of the issues that affect me as a doctor. I am grateful that the AMA listens, and when it can, acts.

We rural doctors have had some wins with the last Government, part in thanks to AMA advocacy. This included hundreds of millions of dollars invested in rural health through the Stronger Rural Health Strategy, the introduction of the National Rural Health Commissioner and the National Rural Generalist Pathway. Unfortunately, we are yet to see any significant results from this.

This was reflected in the results of the AMA Rural Health Issues Survey conducted earlier this year. Unsurprisingly, the number one priority for rural doctors was to provide extra funding and resources

to support improved staffing levels in hospitals, including core visiting medical officers, to allow workable rosters. This is the same as it was in 2016.

The second most important issue was the inclusion of rural rotations for doctors in specialty training. This is because we know rural experience increases the likelihood of a doctor in training remaining or returning to us.

Other key issues included broadband internet access, improving infrastructure, improved support for upskilling – these are all issues which were at the top of the last Survey, too. At our last Council of Rural Doctors meeting, two members could not join for lack of connection! This is not good enough.

Another major recent win which that take some time to pay off was the announcement of a new National Medical Workforce Strategy. I was overjoyed with the announcement, but a strategy alone won’t fix our issues out bush. We need action, and we don’t want to wait for it.

When the new Strategy is completed, our new Government will likely be in power. It is crucial that this taken seriously. We need to ensure that the development of the Strategy includes the voices of all rural doctors, not just those who got to vote, because the outcome will have a major impact on us. We need to remember the doctors who have been faithfully serving the rural communities for years and value their commitment.

I hope that in four years’ time I will be able to say the I voted in an Australian election, but in the meantime I am going to keep advocating for rural health and for rural doctors, and you should too. Did a candidate make a promise to you during a campaign and now they are in power? Hold them to that promise. That’s what the AMA will be doing. The AMA will be doing it for all doctors, regardless of where they graduated.



Gender equity is about everyone

BY CLARE VINCENT, VICE PRESIDENT EXTERNAL, AUSTRALIAN MEDICAL STUDENTS' ASSOCIATION

Gender equity is a key issue for all and it is one that is crucial to discussions of how medical students engage with medical leadership, and with potential specialties. The topic is broad and shifting; it encompasses so many different areas and aspects of health and can often affect not only those within the medical profession, but also our patients. When these discussions arise, we need to consider the current state of gender inequality within our health system, what has been done so far and what still needs to be addressed.

Over recent months, I have had the opportunity to attend several meetings which have seen gender equity as their core focus. This has included the AMA Gender Equity Summit in Sydney in March, which brought to the forefront current issues within the space – especially those still on the horizon within my medical career. While I must admit I could not contribute to conversations around parental leave and breastfeeding from personal experience, the Summit made me reflect on two things. One: why, with there being so many young, female leaders at a student level, does that not seem to translate into more senior levels of representation? And two: why is this Gender Equity Summit the first time I am hearing about major progress within the space around gender equity?

At present, I am currently sitting on a National Executive team with eight other accomplished women. In the process of team selection, we blinded our applications to remove name, university and gender and we chose to interview those who were best suited to the role. What I have found in my time with AMSA, are student leaders who have developed an impressive background of experience and who feel empowered to apply for roles like these. As a student group, we are often asked how doctors are encouraging similar representation at levels much further within medical training.

Listening to the speakers at the Gender Equity Summit, I reflected on this question and my own experience coming into a leadership role. Last year, I was nervous and felt under-skilled, but had an amazing team and support network that I was able to go to for encouragement. Feeling under-skilled, or out of depth, are phrases that are often heard as reasoning why someone

might not put their hand up for a role.

There are several approaches to this issue, including mentoring programs and upskilling opportunities from very junior levels, both translatable to a junior doctor environment. A novel approach implemented by our Rural Health Committee is having positions of Members-Without-Portfolio on the Executive, targeted to those who may not feel as skilled or as experienced for more senior roles, but are still passionate to contribute and lead at a more accessible level. While this is only one issue to tackle within a multifactorial problem, it is always important to consider personal experiences and learn how you can improve within the system.

My second major take-away from the Summit was my surprise of what was being done by specialist Colleges to progress in this area and support their trainees. These conversations are not ones I have heard within my own hospital environment, or even from registrars who offer advice on training and Colleges. While I am pleased to see progression, albeit slowly, within the space of gender equity in the medical field, there is still more to be done.

Communication and language play key roles in cultural change, especially when relaying positive progress within this space. Tell your male medical students that general practice has a good work-life balance if they want a family, and tell your female medical students that the anaesthetics College will support a new mother at a conference to bring her baby and partner so she can continue to breastfeed. There are so many little things in the medical system that have changed, or still need to change; it often comes down to these nuances which may deter medical students away from your speciality.

These are experiences we have in our hospital years which formulate our decisions for our junior doctor years. Please remember that we are watching and listening to your training experience and we want to know how progress is going.

I am grateful that through AMSA, I have been able to learn about these opportunities and grow as a leader. I hope that I can pay these experiences forward to those around me to encourage an incoming generation of passionate leaders.



Prevocational limbo

BY DR TESSA KENNEDY, CHAIR, AMA COUNCIL OF DOCTORS IN TRAINING

Limbo *n.*

1. An uncertain situation that you cannot control and in which there is no progress or improvement.
2. A dance or contest that involves bending over backwards and passing under a horizontal pole lowered slightly for each successive pass.

Interestingly, both of these connotations can be strangely apt descriptions of the experience of unaccredited or service registrars (vernacular dependent on your State).

As Australian medical graduate numbers more than doubled in the five years from 2010, the number of College-accredited training places in many specialty programs have been much slower to rise.

The sudden influx of prevocational doctors superimposed on the variously positioned training bottlenecks has resulted in an ever-expanding prevocational potential space, oedematous with those intent on pursuing an oversubscribed specialty with tight constraints on entry and training numbers.

Where once a simple concentration gradient set up by a universal deficit of doctors facilitated continuous passive flow of PGY2+ into whatsoever vocational training program they desired, active transport is now required. CV buffing, hoop jumping, fee paying active transport.

Yet for some specialties 'selection' into training has equated simply to getting a job at an accredited site alone. Flow into these has remained effectively uncapped, a function purely of the workforce need of Royal Hospital of the Day, rather than a more nuanced capacity of that site and crucially its supervisors to train, let alone community need for specialists at the other end. In these cases we are finding oedema in the dependent advanced training or fellowship parts, pushing largely into private practice.

The original policies increasing student numbers were brute force attempts to solve medical workforce by flooding the system and assuming doctors would just trickle out to where they were needed. And yet while you could very realistically spend the length of an oversubscribed training program waiting to get on it; general practice, psychiatry and pretty much any health service MMM2+ are coming up short. Suffice to say brute force hasn't panned out too well. The Australian medical workforce paradigm has shifted from a demand to supply driven model in many areas, and we are scrambling to find balance.

In the meantime, being a trainee can be a bit of a thankless experience.

Several months ago the blog of Dr Yumiko Kadota's experiences as an unaccredited surgical registrar went viral. It described experiences of unsafe working hours, unfair rostering, bullying, sexual harassment, inadequate supervision, and an all too common sense that she was powerless to change the situation for fear of retribution, fear of remaining in unaccredited limbo. Unable to progress, but simultaneously being asked to bend over backwards, pushed ever closer to the ground.

The worst part of the fallout for me was that very few doctors were surprised. Shocked, yes, but not surprised. Some of us have experienced some or all of what she did, or we have borne witness to it through our colleagues and friends. There will be countless other marvellous doctors, perhaps some reading this, for whom the only difference in their situation is their necessary silence, bound by the hope, not even the promise, of a training position.

Dr Kadota had left training and indeed medicine by the time her story gathered media attention – only now, un beholden to any supervisors, assessors, referees (often all the same person) can she speak freely.

Her story touches on so many of the problems that have plagued our profession with increasing public scrutiny of late. Most aren't unique to unaccredited or service registrars, but they hold the least power to change their lot. So it's up to the rest of us.

The best way to support unaccredited registrars and indeed all trainees is to start with making every doctor in training job compliant with employment law and various enterprise agreements, so even life in limbo is sustainable. (I'm looking at you, six months of nights).

CDT has also recently called for the accreditation of all prevocational medical roles by the various state-based postgraduate medical councils, to ensure minimum supervisory and educational quality for all posts occupied by doctors in training. This will require additional resourcing from COAG, and would ideally include reinstating funding to the Confederation of Postgraduate Medical Education Councils to encourage national consistency of standards.

Even without College oversight, each of these jobs is a valuable source of training opportunities, whether they are being realised or not. Some might be appropriately transformed into College-accredited training positions where this is feasible and in line with community need, and we have encouraged Colleges to review their criteria, especially in regional and rural settings where more





Indigenous health funding needs to match Indigenous health needs

BY AMA PRESIDENT DR TONY BARTONE, CHAIR OF AMA INDIGENOUS TASKFORCE

Equitable, needs-based funding must be committed to Aboriginal and Torres Strait Islander health or the Government's own goal of closing the health and life expectancy gap between Indigenous and non-Indigenous Australians will never be achieved. Despite the fact that that Aboriginal and Torres Strait Islander communities experience disproportionately higher rates of diabetes, cancer, kidney disease and obesity, and have rates of avoidable deaths and hospitalisations three times higher than other Australians, there is a major shortfall in current government funding for Aboriginal and Torres Strait Islander health services.

As the AMA's 2018 *Report Card on Indigenous Health* showed, the burden of disease for Aboriginal and Torres Strait Islander people is 2.3 times greater than their non-Indigenous peers, but overall Government funding is only 53 per cent of the needs-based requirements. Governments must stop the repeated process of providing fragmented, piecemeal funding and resource Aboriginal and Torres Strait Islander health services accordingly to make a real change.

Spending less per capita on those with worse health, and particularly on their primary health care services is dysfunctional national policy. Similarly, spending more on health services for those who are in more need is not special treatment – it is an uncontroversial proposition. Governments spend proportionally more on the health of elderly people in Australia compared to younger people, simply because the health needs of elder people are proportionally greater. It raises the question about why this is not the case for Aboriginal and Torres Strait Islander Australians whose needs are much higher than the rest of the population as a whole.

The newly elected Federal Government has the opportunity to turn around previous policy failures and make a serious commitment to truly closing the gap in health and life expectancy

by resourcing Aboriginal and Torres Strait Islander health to the level that is required. The AMA has called for the Government to increase funding for Aboriginal and Torres Strait Islander health services by committing \$100 million over four years to fill health service gaps and address the underutilisation of the Medicare Benefits Scheme and Pharmaceuticals Benefits Scheme by Indigenous Australians, which is about one-half and one-third of needs-based requirements, respectively.

It is extraordinary that Federal Governments can identify savings to create a budget surplus and promise tax cuts, but they cannot find money to boost funding for its own Closing the Gap strategy – a measure that was implemented specifically to improve the health and wellbeing of Aboriginal and Torres Strait Islander people. If the Government's commitment to adequately budget for the health and wellbeing of Aboriginal and Torres Strait Islander people matched the promises made over the years, we would be a lot nearer to closing the gap in health outcomes and life expectancy and not have a life expectancy gap that is currently widening.

The AMA is pleased that Governments have recently entered into a formal partnership agreement with the Coalition of Aboriginal Peak organisations to negotiate the new Closing the Gap Strategy. It is widely known that when Aboriginal and Torres Strait Islander people are involved in the design and implementation of the policies and programs that affect their lives, better outcomes are achieved.

Not only is closing the gap in health and life expectancy between Indigenous and non-Indigenous people an achievable task – it is also an agreed national priority. The AMA will continue to call on Governments to invest in long-term funding and commitments to Aboriginal and Torres Strait Islander health. We will work closely with key ministers, government departments and other key stakeholders to ensure that appropriate action is taken.

Doctor's in Training ... continued

innovative training and supervisory models may be required. Others jobs might be promoted to a broader pool of trainees who would benefit from the experience without seeking fellowship in the same specialty, such as paediatric jobs for budding general practitioners.

But I would also suggest we need to start by reframing the role and the language we use to describe it. 'Unaccredited' has

connotations of unqualified or unsuitable, even rogue, while 'service' registrar connotes a blinkered line worker without educational or professional development needs, which couldn't be further from the truth.

Thank you Dr Kadota for telling your story. It's now imperative that we learn from it.



We must act to ensure we keep the best health outcomes in the world

BY DR OMAR KHORSHID, CHAIR, HEALTH FINANCING AND ECONOMICS COMMITTEE

In response to the Sustainable Health Review, the Western Australian Government recently announced a plan to increase spending on 'prevention' from the national average of 1.8 per cent up to 5 per cent of the overall health budget within a decade. This has been broadly welcomed, including by the AMA and the announcement has increased pressure on our Federal Government to follow suit.

However, the recent call by several bodies, including Public Health Australia to remove the means tested 30 per cent Private Health Insurance (PHI) rebate and redirect that funding to public hospitals and prevention ignore the complex interplay that underpins both the success and the challenges facing our health system.

Australia enjoys what is internationally recognised as close to the best health care in the world. In terms of outcomes, it is the best. Our overall life expectancy is fourth in the world, a remarkable feat considering our diverse population with high levels of migrants and our disadvantaged groups including indigenous Australians.

The interplay of our private and public systems is at the heart of this success. When looking at the hospital sector, we have a vibrant private sector that delivers high quality health care to those who can afford it, with minimal contribution from the taxpayer. The public sector, almost completely taxpayer funded is then able to focus on emergency care, highly complex care and care for those Australians who cannot afford PHI or choose not to pay for it.

The private sector delivers the majority of elective surgery and does so in an efficient and productive way. It offers patient choice regarding doctor, hospital and timing but the underlying value proposition is fragile as it competes with the public sector that provides care completely free.

The fact that the private sector has delivered profits to doctors, hospital and insurers whilst competing with a product that is free is testament to the efficiency of the sector and to the value that Australians put on that patient choice. However, the high levels of PHI in Australia are also due to specific policy decisions in the 1990s, a time when PHI levels were plummeting.

The three key decisions were the 30 per cent PHI rebate (initially not means tested), Lifetime Health Cover, which penalises those who take up PHI late and the Medicare Levy Surcharge. While

the impact of each of these policies individually is arguable, together they rapidly turned around the trajectory of PHI in Australia.

Currently though, PHI is in trouble. Overall, PHI levels are falling, but importantly it is young people who are dropping their insurance and older Australians (those far more likely to claim) are actually increasing their coverage. This problem, if it continues, will threaten the viability of PHI and will cause rapid increases in PHI premiums at a time when wage growth remains very low.

Policy decisions like removing the 30 per cent rebate and capping premium rises risk causing catastrophic damage to the PHI industry and therefore to our private hospital sector. If older Australians are no longer able to afford PHI or if the insurers fail, those patients will be coming to the public hospital sector for their elective surgery and the cost of that care will far outweigh the savings from dropping the rebate. Not to mention the fact that there is simply no capacity in the public hospitals to take on this patient load.

Similarly, increased spending on health promotion and better public policy in areas like smoking, alcohol and obesity along with better management of chronic disease have the potential to significantly improve the health of Australians. However, to expect that will translate into decreased need for public hospital spending is naive and ignores the lessons of history. At best, savings will be many years into the future, but the aging of the population and advances in health care mean that the demand for spending on health will continually increase and threaten our ability to pay for it. We need to acknowledge that asking those Australians who can afford it to put their hand in their pocket to contribute to the cost of their health care actually improves equity in healthcare outcomes because the taxpayer can focus on looking after the disadvantaged.

We desperately need an informed discussion of the long-term financing of health care rather than politically motivated, knee-jerk or simplistic policies that ignore the realities of our system. The AMA, through its Health Financing and Economics committee, Councils and Federal Council is taking concrete steps to drive that discussion and ensure that Australians can continue to enjoy the best health outcomes in the world.



Workforce priorities for the new Government

BY AMA VICE PRESIDENT DR CHRIS ZAPPALA, CHAIR OF THE AMA MEDICAL WORKFORCE COMMITTEE

The election is over for another three years. For the new Government, medical workforce management will be one of the defining requirements for ensuring the sustainability of Australia's health system. Maldistribution and access balanced against oversupply and cost.

The new Strategy will hopefully allow the Commonwealth and the States and Territories to cooperate more closely in planning and coordinating our future medical workforce.

Health was a major issue during the election, with all parties proposing significant investment in the areas that they either believed required investment, or hoped would win them votes. Management of Australia's medical workforce lamentably did not feature significantly – it's hard to make people interested in something so dry! However, it remains crucial and doctors must shape this discussion – no one else, least of all those who wish to subjugate or control us.

The AMA had a significant win earlier this year with the announcement of the National Medical Workforce Strategy. This is the first strategy of this kind in fifteen years and is a largely a product of years of work by the AMA, culminating in the AMA Medical Workforce Summit held in March last year. The new Strategy will hopefully allow the Commonwealth and the States and Territories to cooperate more closely in planning and coordinating our future medical workforce. It must start therefore as a joint document and not a Commonwealth dictate. Clearly, the 115,000 doctors in this country need to work wisely and ethically together and accept their responsibility in solving our workforce challenges.

The maldistribution of the medical workforce, the vexing issue of workforce oversupply and undersupply in some specialty areas, and the mismatched lack of prevocational and specialist training places for medical graduates once they have left medical school

are all issues which the Strategy must address if it is to succeed. But we cannot wait for this Strategy, which is only in the earliest stages of development, before we start to address these issues.

People who know me and read my articles (thank you) will know that I strongly believe we need to actively monitor the number of doctors we are allowing into Australia. We had 3,569 graduates in 2016 (15 per cent of whom were international students). We have the highest medical graduate rate per capita in the OECD and a doctor to patient ratio well above the average and comparable nations. We cannot allow new medical schools. Right now, we are carefully monitoring the situation in Queensland to ensure that no new student places result from the agreement between Central Queensland University and Queensland University. The big business of university education pays no heed to workforce requirement or the enervating effects of oversupply or mismatched/underfunded vocational training. A fortune is made out of nearly a quarter of all medical students who are full-fee paying (most of whom are from overseas) who then add to the 'lost tribe' of junior doctors facing significant hardship.

In the same vein, we also need to carefully monitor the immigration of doctors to Australia. Recently introduced visa requirements now mean that a doctor seeking to work in general practice must have the approval of a rural workforce agency first. This is the result of Government regulation and is positive inasmuch as it indicates intention to address workforce issues. However, it is an imperfect solution, and specialties in need that define immigration levels must be revised to ensure that we can recruit specialists when and where they are required without undue bureaucracy.

Moreover, the current definition of a 'specialty in need' is curious at best and is potentially exacerbating access to training for domestic doctors and specialties already in or approaching oversupply. We still had 2,730 immigrant doctors on a 457 visa entering in 2016-2017. No one is really monitoring this properly because their vision is so clouded by the maldistribution problem.

For a new government seeking to make their mark, much of the



Medical Workforce ... continued

groundwork is already there. For example, there are significant opportunities to expand training in rural and regional areas (MMM 2-4) and support a desperately needed expanded workforce with genuine enticements for doctor and family. Many regional and rural communities have significant need of doctors from all specialties while also having the capacity to support more training. There are innumerable practice and by extension training opportunities in regional areas that are yet to be tapped and simply must be if we are to solve our workforce problems.

Earlier this year, the AMA conducted the 2019 Rural Health Issues. The survey asked doctors practising in regional, rural and remote Australia to rank their priority issues for improving rural health. Unsurprisingly, the results were very similar to the 2016 Survey. Despite this, the doctors were overwhelmingly positive about their experiences in their communities.

Many doctors also expressed frustration at the assumptions urban doctors make regarding the infrastructure and facilities available at their local hospitals. Too often, doctors reported that their metro colleagues dismissed opportunities on the grounds that the facilities are not up to standard when in fact there are many 'state of the art' facilities in regional Australia. I visited Rockhampton Hospital recently and it was an amazing facility – but clearly in further need of medical staff. We need experienced doctors in regional areas to train the next generation, but we cannot expect these doctors to just turn up. The AMA has many ideas to bolster this crucial workforce and I hope with the new

Government we can make some genuine progress in this regard.

The National Medical Workforce Strategy is still far from completed, but that does not mean we can be idle waiting for the recommendations. We need the new Government to understand this issue properly and be prepared to take action for the good of the profession, patients and communities without eclipsing political hubris or desire poisoning the outcome.

At a recent meeting in Canberra, a colleague said: "You can't make doctors go where they don't want to and you can't make them work in what they don't want to." This is exactly right, but you can provide medical students and junior doctors with up-to-date data on which specialties are in over and under supply and provide enticing training opportunities that help balance our workforce (e.g. psychiatry would do better if junior doctor experience and training was not rooted in public teaching hospital departments).

We can do better if we map out areas of priority for medical workforce and highlight training opportunities there, you can provide specific and targeted incentives when you know who you need and what you need, and you can begin to change the narrative on what medical practice outside the cities is actually like. We don't need a strategy to start this work, we need a Government willing to take action in the direction many are pointing.



AMA New occupational cancer e-learning module

In some Australian workplaces, employees are exposed to a diverse range of possible carcinogens at higher concentrations and for longer periods of time than the general public. It has been estimated that 3.6 million Australians are exposed to at least one carcinogen at work and about 5000 cancers each year are caused by workplace exposures.

It is essential GPs have the knowledge and skills to be able to assist patients in monitoring their health, identifying potential risks and be able to provide or direct patients to further information if working in high-risk jobs with known carcinogens.

Cancer Council has developed an e-learning module to increase GPs' awareness of workplace carcinogens and cancers. The module includes sections on occupational carcinogens in the Australian context, the role of an exposure history, common occupational cancers including lung, skin, bladder and mesothelioma, and the Australian compensation system.

The 60-minute module is accredited with both RACGP and ACRRM. Visit www.elearning.cancer.org.au/courses for more information and to register for the module.



Research

WITH CHRIS JOHNSON

Don't stand for sitting all day



The best way to reduce the risks of sitting all day is to get 20 to 40 minutes of physical activity.

New research from the University of Sydney suggests at least an extra 150 minutes of physical activity is required to offset the ill effects of sitting at an office desk or on a lounge for big chunks of the day.

Getting the extra exercise could reduce mortality risks of what the study describes as 'high sitters' and offset premature deaths associated with cardiovascular disease.

The researchers modelled death record data against statistics of physical activity and sitting. Almost 150,000 people aged 45 and over participated in the study over a nine-year period.

The study concluded that physical activity is particularly vital to people who sit a lot and that standing more in itself is not enough to offset the health risks.

Walking briskly to or from work or at lunchtime, taking up a sport, cycling, or gym style exercising, were recommended.

"In our study, sitting time was associated consistently with both overall premature mortality and cardiovascular disease mortality in the least physically active groups – those doing less than 150 minutes of moderate to vigorous intensity physical activity per week," lead researcher Professor Emmanuel Stamatakis said.

"For example, people who were physically inactive and sat for more than eight hours per day had 107 percent higher risk for cardiovascular death compared to those who did at least one hour physical activity per day and sat less than four hours.

"But one hour of physical activity per day is not necessary.

"Meeting the Australian public health recommendation of 150 to 300 minutes per week, equivalent to about 20 to 40 minutes per day on average, appeared to eliminate sitting risks."

The findings are useful for public health officials and healthcare workers to help educate people who sit a lot, such as office workers.

"Any movement is good for health but physical activity of moderate to vigorous intensity – that is activities that get people out of breath – is the most potent and most time-efficient," Professor Stamatakis said.

"Exercise and sports are a great way to be active but are not the only way. Walking fast, climbing stairs, and cycling to get from place to place are only some of the many opportunities everyday life offers to move and even huff-and-puff sometimes."

Heart study takes on breast cancer

A two-year Australian study aims to deliver a world-first model of care to reduce cardiovascular disease in breast cancer survivors.

Cardiovascular disease is Australia's biggest killer and treatment for breast cancer increases the risk of cardiovascular disease further, yet no formal clinical pathway for prevention, monitoring and management of this risk exists.

Breast cancer is the most commonly diagnosed cancer in Australia and accounts for more than 13 per cent of all new cancers and 28 per cent of all cancers diagnosed in women.

The study will develop a framework for effective, evidence based care, where cardiovascular risk management is embedded into breast cancer care. This will enable breast cancer patients to reduce their risk of cardiovascular disease and access the services they need in a timely manner while coping with the pressures of their cancer treatment.





Research



Made possible by a \$290,000 grant from the National Breast Cancer Foundation, the project is bringing together Flinders University experts in cancer, cardiology and nursing, who will create an integrated care model across cancer and cardiology.

Project lead, Professor Bogda Koczwara, who leads the Cancer Survivorship Research Group at the Flinders Centre for Innovation in Cancer, points out that many cardiovascular risk factors can be reduced by lifestyle interventions.

“These include weight reduction, diet, exercise as well as medication,” Professor Koczwara said.

“While guidelines exist for managing cardiovascular disease during cancer treatment, the risk factors not related to cancer are often neglected – meaning strategies to improve heart prospects for cancer survivors can be overlooked.

“Neglecting these represents a missed opportunity for better outcomes in terms of cancer and cardiovascular disease.”

Flinders University’s Professor of Cardiology Derek Chew is a co-researcher on the project and Head of Cardiology at the Southern Adelaide Local Health Network.

“It is impractical to expect every breast cancer patient to be seen by a cardiologist,” Professor Chew said.

“However, cancer specialists are not always skilled in managing risk factors for cardiac disease, and general practitioners may not be aware of the potential for cardiotoxicity caused by cancer treatment.”

Researchers reveal key to targeting dormant cancer cells

Researchers have identified what keeps some cancer cells dormant. The finding could uncover new approaches to preventing the spread of cancer.

An international team of scientists has uncovered the unique set of genes that keeps some cancer cells dormant. The study was led by Associate Professor Tri Phan and Professor Peter Croucher at the Garvan Institute of Medical Research in Australia, in collaboration with Professor Ido Amit at the Weizmann Institute of Science in Israel.

The research may reveal new therapeutic targets for multiple myeloma – a blood cancer that arises in bone – and other cancers which spread, or metastasise, to bone such as breast and prostate cancer.

The researchers have published their findings in the journal *Blood*.

Dormant cancer cells, when ‘woken up’, are a major cause of cancers coming back, or relapsing, after treatment – often as metastases, which are estimated to cause 90 per cent of all cancer deaths.

When cancer metastasises, it spreads to different organs in the human body. Some cancer cells can stop dividing and hide in a ‘dormant’ state, tucked-away in niches such as the inner lining of bones. Once dormant, the immune system, our natural protector, cannot find them to target them and conventional chemotherapy is ineffective. There is also no way of knowing how long the cells will remain dormant.

To help prevent dormant cancer cells from being reactivated, Garvan researchers are investigating what makes cancer cells dormant. But isolating the cells to study them has been a challenge – they are rare, often less than one in hundreds of thousands of cells in the bone, and scientists have not known how to identify them.

“What makes our approach different is that we’re looking at the cancer ecosystem as a whole,” Professor Phan said.

“It’s not just the cancer cell but the other cells in their microenvironment which determine their fate. We are trying to find what genes get switched on by the microenvironment and how those genes make the cancer cell dormant.”

The Garvan researchers first developed a way to track dormant multiple myeloma cells inside the bones of living mice four





Research

years ago using a new technique called intravital two-photon microscopy. They have now isolated these rare cells to analyse the dormant cells' transcriptome – a snapshot of all the genes that are switched on in the cell and control dormancy.

“Having been able to identify the rare dormant cells, we were able to isolate them and work out all the genes which were active. What is exciting is that we discovered many of these genes in dormant cells are not normally switched on in these cancer cells. Now that we know the identity of these genes, we can use that information to target them,” said Dr Weng Hua Khoo, first author of the study.

The team analysed the single cell transcriptomes at the Garvan-Weizmann Centre for Cellular Genomics and confirmed their findings independently with their collaborators at the Weizmann Institute of Science.

Unexpectedly, the dormant myeloma cells had a similar transcriptome signature to immune cells, but which was only ‘switched on’ when the cells were located next to osteoblasts, specialised cells found in bone.

“This showed us just how crucial the crosstalk between the tumour cells and the tumour microenvironment is for cancer dormancy,” Professor Amit said.

The researchers are now using their method to collect data on dormant cancer cells from other cancer types, with the hope of finding a common signature that would allow them to target all dormant cancer cells.

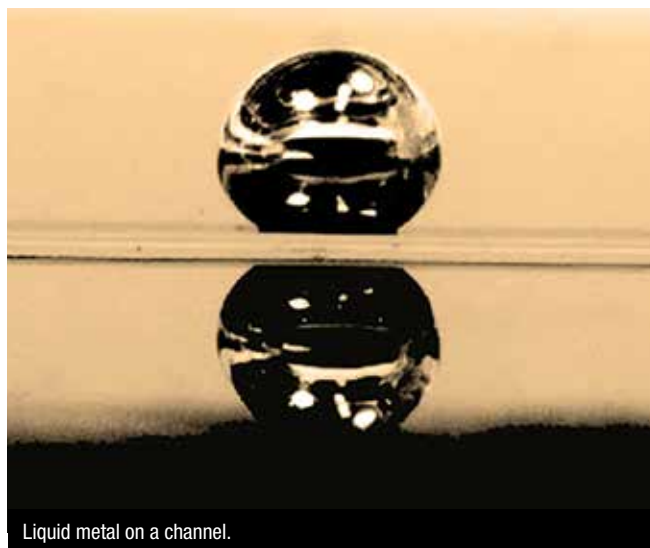
Blood cell study made simpler

An RMIT study has shown how a simple innovation the size of a grain of sand can enable the analysis of cells and tiny particles as if they were inside the human body.

The new micro-device for fluid analysis recently unveiled in *Advanced Functional Materials* will enable more tailored experiments in drug development and disease research.

It also has the potential to transform water contamination testing and medical diagnosis in natural disaster zones, where its low cost, simple use and portability make it a practical tool almost anyone can use.

Microfluidic or ‘lab-on-a-chip’ devices are commonly used to analyse blood and other fluid samples, which are pumped through narrow channels in a transparent chip the size of a postage stamp.



Liquid metal on a channel.

This new chip takes that technology one step further by adding a three-dimensional cavity along the channel, which creates a mini vortex where particles spin around, making them easier to observe.

To make this cavity, researchers inserted a liquid metal drop onto the silicon mould when making the chip. The liquid metal's high surface tension means it holds its form during the moulding process.

Finally, the liquid metal is removed, leaving just the channel and a spherical cavity ready to use as a mini centrifuge.

RMIT engineer and study co-leader Dr Khashayar Khoshmanesh explained that when the fluid sample enters the spherical-shaped cavity, it spins inside the cavity.

“This spinning creates a natural vortex, which just like a centrifuge machine in an analytics lab, spins the cells or other biological samples, allowing them to be studied without the need for capturing or labelling them,” he said.

The device only requires tiny samples, as little as 1ml of water or blood, and can be used to study tiny bacterial cells measuring just 1 micron, all the way up to human cells as large as 15 microns.

Study co-leader and RMIT biologist, Dr Sara Baratchi, said the device's soft spherical cavities could be used to mimic 3D human organs and observe how cells behave in various flow conditions or drug interactions.





Research

“The ability to tailor the size of the cavity also allows for different flow situations to be simulated – this way we can mimic the response of blood cells under disturbed flow situations, for example at branch points and curvatures of coronary and carotid arteries, which are more prone to narrowing,” she said.

Dr Baratchi said the discovery was only made possible through collaboration, with technologists from the School of Engineering and mechano-biologists in the School of Health and Biomedical Sciences joining forces in RMIT’s Mechanobiology and Microfluidics research group.

“Biologists like myself have been struggling to study the impact of flow-associated forces on circulatory blood cells. Now this miniaturised device developed with our engineering colleagues does exactly that,” she said.

“It’s an ingenious solution that really highlights the value of cross-disciplinary research.”

But some of the most exciting applications could also be outside the lab.

Another promising application is for identifying parasites and other infections in waterways, especially in developing countries.

“Detection of water impurities can be a difficult task because you don’t always know exactly what you’re looking for,” Dr Khoshmanesh said.

“But with this device the impurities will be captured and orbited by the vortex without any special sample preparation, saving time and money.”

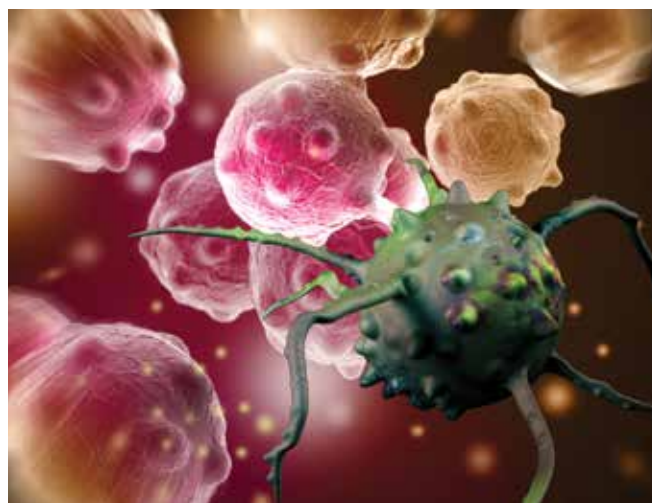
Whether used for analysing water or blood samples, the low cost and portability of the device makes it attractive for a whole range of applications.

The same research group recently developed a pressure pump, made from latex balloons, to operate the device. Unlike conventional pumps, which can be as large as a shoebox and cost thousands of dollars, theirs is low cost and portable.

“Simplicity is a very important parameter for our designs because that often translates to lower cost and great applicability outside the lab,” Dr Khoshmanesh said.

“Our new microfluidic device, combined with our pump and a smartphone capable of capturing high-speed images, makes a low-cost, self-sufficient and entirely portable point-of-care diagnostics device.”

CSIRO study into hard-to-treat cancers



Cancer patients in Australia may soon have earlier access to revolutionary, highly targeted new treatment options through a \$5.1M research partnership, announced by national science agency CSIRO and cancer care provider GenesisCare.

Using an emerging area of science called theranostics, the project aims to develop new therapies against some of the most fatal and difficult-to-treat cancers affecting Australians, using agents that act like ‘homing missiles’ to find and latch onto target markers on cancer cells.

“We’re targeting cancers that are currently the most ‘untreatable’, such as brain, pancreatic and ovarian cancers and metastatic cancers, because that’s where we think we can make a profound difference,” CSIRO project lead Professor Stephen Rose said.

“We’re exploring a very exciting approach called theranostic cancer treatment, which is a type of precision medicine that finds and attacks individual cancer cells in a person’s body – rather than attacking both cancerous and healthy cells.”

Theranostics combines molecular level diagnostics and therapy.

Professor Rose said the project will aim to discover cancer cells’ unique signatures, then design special molecules to find and attach themselves to those cells.

“These molecules can then show us exactly where the cancer is located in the body, and deliver radiation directly to the cancer cells,” he said.





Research

Cancer remains the leading cause of death in Australia, with almost 50,000 deaths from cancer estimated in 2019, including 3,051 deaths from pancreatic cancer, 1,549 deaths from brain cancer, and 1,046 deaths from ovarian cancer anticipated this year alone.

Treatments successfully designed in the project will be trialled locally in Australia through GenesisCare's clinical network, rather than waiting for treatments to be developed and trialled overseas first.

The new research project forms part of CSIRO's Probing Biosystems Future Science Platform and builds on CSIRO's expertise in cancer biomarker research.

Stroke victims get double the time



Melbourne researchers have doubled the window of opportunity when clot-clearing treatments can be given to stroke patients.

An international trial using brain scans instead of a clock to detect salvageable brain tissue following a stroke, revealed that anti-clot drugs could be used up to nine hours after most strokes.

This equates to an extra 3,000 stroke patients can be given lifesaving treatment each year.

As reported in the *Herald Sun*, the research was led by Royal Melbourne Hospital and involved 225 patients whose brain scans indicated they had at risk brain tissue. They were given either placebo or clot-busting medication between 4.5 and 9

hours after a stroke.

Three months later, 35 per cent of stroke victims treated had no or very little symptoms, compared to 25 per cent who had placebos.

In the first 24 hours after treatment, double the number of treated patients had early neurological improvement. Those treated later did just as well as those treated early.

Lead author of the study, which was published in the *New England Journal of Medicine*, Associate Professor Henry Ma, said the results meant a lifeline was extended to one in five who had a stroke in their sleep and would otherwise not have been able to receive time-dependent medication.

It could also help stroke victims in regional areas who are not close enough to specialist treatment.

"Time is important. You're losing two million brain cells a minute after stroke," he said.

"But it's imaging that matter, not the clock anymore, when deciding who to treat.

Until now, only 15 to 20 per cent of eligible patients with ischaemic stroke receive the intravenous medication needed within the 4.5-hour time frame.

That can now be doubled.

Receiving the clot-busting medication gets the blood supply back to damaged brain tissue and can open blocked blood vessels.

Getting the treatment within the required time window is crucial and can determine if a stroke patient can recover to the point of leading a relatively normal daily life.

With that window now doubled, researchers are excited at the prospects.

Director of the Melbourne Brain Centre, Professor Steve Davis, who is an author of the study, said the findings will improve the quality of life for many people.

"In strokes, you get this core that dies very quickly, and it expands but can still potentially be resuscitated," he said.

"In some people, that growth is fast and in some it's slow. The only way you can tell is by doing that measurement.

"It's exciting to speculate we could push this out further to 24 hours."

World first malaria vaccine piloted in Malawi

The Government of Malawi has launched the world's first malaria vaccine as part of a new landmark pilot program. The country is the first of three in Africa in which the vaccine, known as RTS,S, will be made available to children up to two years of age. Ghana and Kenya will introduce the vaccine in the coming weeks.

The World Health Organisation has welcomed the move and said malaria remains one of the world's leading killers, claiming the life of one child every two minutes.

Most of these deaths are in Africa, where more than 250,000 children die from the disease every year, the WHO states. Children under five are at greatest risk of its life-threatening complications. Worldwide, malaria kills 435,000 people a year, most of them children.

"We have seen tremendous gains from bed nets and other measures to control malaria in the last 15 years, but progress has stalled and even reversed in some areas," said WHO Director-General Dr Tedros Adhanom Ghebreyesus.

"We need new solutions to get the malaria response back on track, and this vaccine gives us a promising tool to get there. The malaria vaccine has the potential to save tens of thousands of children's lives."

Thirty years in the making, RTS,S is the first, and to date the only, vaccine that has demonstrated it can significantly reduce malaria in children. In clinical trials, the vaccine was found to prevent approximately four in ten malaria cases, including three in ten cases of life-threatening severe malaria.

"Malaria is a constant threat in the African communities where this vaccine will be given. The poorest children suffer the most and are at highest risk of death," said Dr Matshidiso Moeti, WHO Regional Director for Africa.

"We know the power of vaccines to prevent killer diseases and reach children, including those who may not have immediate access to the doctors, nurses and health facilities they need to save them when severe illness comes.



"This is a day to celebrate as we begin to learn more about what this tool can do to change the trajectory of malaria through childhood vaccination."

The pilot program is designed to generate evidence and experience to inform WHO policy recommendations on the broader use of the RTS,S malaria vaccine. It will look at reductions in child deaths; vaccine uptake, including whether parents bring their children on time for the four required doses; and vaccine safety in the context of routine use.

The vaccine is a complementary malaria control tool, to be added to the core package of WHO-recommended measures for malaria prevention, including the routine use of insecticide-treated bed nets, indoor spraying with insecticides, and the timely use of malaria testing and treatment.

The WHO coordinated the pilot program in a collaborative effort with ministries of health in Ghana, Kenya and Malawi and a range of in-country and international partners, including PATH, a non-profit organisation, and GSK, the vaccine developer and manufacturer, which is donating up to 10 million vaccine doses for this pilot.



Anti-vax student sues, loses, then get chickenpox

An American teenager who unsuccessfully sued his school over his ant-vaccination stance has been struck with the chickenpox virus.

Eighteen-year-old Jerome Kunkel made headlines around the world earlier this year for taking legal action against his Kentucky school Our Lady of the Sacred Heart Assumption Academy.

The lawsuit was challenging the ban the school had placed on him and other students who had not been immunised at the time a chickenpox outbreak swept the school.

More than 30 students at the school were afflicted with the virus during the outbreak.

Mr Kunkel's case was that the school ban was wrong and that his rights were violated because the vaccine was 'immoral, illegal and sinful'.

The teenager and his family said the vaccines were derived from aborted fetuses and therefore were against their beliefs.

The Northern Kentucky Health Department excluded students from school classes and extracurricular activities from mid-March, which obviously bolstered the school's position.

The ban came just as the school's basketball team, which the teenager was a part of, was about to play in state-wide finals.

But the Kentucky judge who heard the case, backed health and school officials and said the teenager did not have the right to play sports.

The student said he was devastated over the court's ruling.

Since then, he has contracted the chickenpox virus, but through his lawyer has stated he has no regrets over the legal action he took, or the decision to remain unvaccinated.

Digital health worldwide

Digital health is receiving strong global attention, with a new group being set up to determine the best ways to use its full potential in delivering better health outcomes for all.

The World Health Organisation is establishing a global multi-disciplinary technical group to advise it on issues related to digital health.

WHO's newly-established Digital Health Department will work to harness the power of digital health technologies and steer developments.

To support this work, WHO is establishing a roster of experts in various areas related to digital health, such as strategic approaches, areas for intervention and governance structures for regulations and adoption of digital health solutions and products. Some of those experts will be selected to be part of a technical advisory group, and others may be called on the be part of specific subgroups.

Members of the technical advisory group will have an understanding and experience working in digital health,

national or large scale digital health programs and policy, artificial intelligence and health, virtual and augmented reality in healthcare, biomedical innovation, robotic surgery, wearable technologies and health and wellness, traceability and health, ethics, governance and security in healthcare ecosystem with focus on digital health, health economics with focus on digital health and health law with focus on digital health technologies.

The aim is to contribute to the attainment of all people to the highest level of health through the General Program of Work (GPW13) triple billion goals and Sustainable Development Goal 3 (Ensure healthy lives and promote well-being for all at all ages). The World Health Assembly resolution WHA/71 A71 on digital health underpins this work.

Individuals interested in applying to participate in this group will find details of the application process at: < <https://www.who.int/behealthy/digital-health/expression-of-interest> >

WHO will publish the membership of the advisory group once it receives responses and assesses conflicts of interest.



Heart disease deaths at 50 year high in UK



The British Heart Foundation (BHF) has pointed to increasing rates of diabetes and obesity as partly responsible for the rise in heart disease deaths in the United Kingdom.

New figures show that deaths from heart and circulatory diseases of people under 75 are on the rise in the country for the first time in 50 years.

In 2017 there were 42,384 deaths in under-75s from heart and circulatory conditions, which is up from 41,042 in 2014.

BHF said the fast pace of progress in reducing these deaths has slowed to a “near standstill” in recent times.

The NGO’s report shows that while more than 14 million adults have high blood pressure, almost five million do not know it because they have yet to be diagnosed. About 15 million, or one in every four, adults in the UK is obese.

Over the last five years the UK has seen an 18 per cent increase in people diagnosed with diabetes, according to the report. Circulatory diseases, which include stroke and diseases of the arteries, are also on the rise.

BBC News reported the BHF saying that a slowdown in the rate of improvement in death rates combined with a growing population is partly to blame for the reversal the UK is now seeing.

Between 2012 and 2017, the premature death rates for heart and circulatory disease in the UK fell by just 9 per cent, compared with a fall of 25 per cent between 2007 and 2012.

“In the UK we’ve made phenomenal progress in reducing the number of people who die of a heart attack or stroke,” Simon Gillespie, chief executive at the BHF, told the BBC.

“But we’re seeing more people die each year from heart and circulatory diseases in the UK before they reach their 75th, or even 65th, birthday. We are deeply concerned by this reversal.

“Heart and circulatory diseases remain a leading cause of death in the UK, with millions at risk because of conditions like high blood pressure and diabetes.

“We need to work in partnership with government, the NHS and medical research community to increase research investment and accelerate innovative approaches to diagnose and support the millions of people at risk of a heart attack or stroke.”

Historically, the UK has made great strides at treating and preventing heart disease, thanks to better prevention – getting more people to stop smoking, for example – and new treatments, the BBC reports.



Norwegian minister for bad health



Norway has a new Public Health Minister and one who has an interesting new take on what healthy living is.

Sylvi Listhaug (pictured), from the right-wing Progress Party that is part of the four-member coalition government headed by the Conservative Party, was recently appointed to the job and immediately made controversial headlines.

During an interview with Norwegian broadcaster NRK, Ms Listhaug said people should be allowed to eat, smoke and drink as much as they want.

“My starting point for this with public health is very simple. I do

not plan to be the moral police, and will not tell people how to live their lives, but I intend to help people get information that forms the basis for making choices,” she said.

“People should be allowed to smoke, drink and eat as much red meat as much as they want. The authorities may like to inform, but people know pretty much what is healthy and what is not healthy, I think.”

On the subject of smoking, the populist politician said: “I think many smokers feel like pariahs. So they almost feel they have to hide away, and I think that’s stupid. Although smoking is not good, because it is harmful, adults have to decide for themselves what they do.

“The only thing we as governments are to do is to provide information so that people can make informed choices.”

Norway’s Cancer Society said the new Health Minister’s comments were harmful and had damaged public health initiatives.

“Many will adhere to what she says,” the Society’s Secretary General Anne Lise Ryel told NRK.

“That is to say, public health has been set back many decades,”

Others in the public realm have criticised the Minister, saying she has little understanding of public health and is the wrong person for the job.

Last year, Ms Listhaug was forced to quit the Government after accusing the Labour and the Christian Democrats parties of putting “terrorists’ rights” before national security over a controversial citizenship bill.

An anti-immigration politician, she also jumped off a rescue boat into the Mediterranean in 2016 saying she wanted to see what it is like to be a refugee.

Ms Listhaug says she only smokes on social occasions herself these days.



WMA says physicians must lead universal health coverage



Governments and international organisations that promote the training of nurses and community health workers rather than fully trained physicians are effectively denying patients' access to quality health care, the President of the World Medical Association has said.

Dr Frank Ulrich Montgomery, speaking at a WMA/Israel Medical Association conference in Tel Aviv entitled 'Physician 2030' on the future of the physician, said: "We must be clear and firm that under a concept of Universal Health Coverage, health care must involve physician-led teamwork and this must be thoroughly financed. And let's be very clear: a patient-physician relationship demands a physician – not a substitute or surrogate."

Dr Montgomery criticised governments for their hesitancy in reacting sensibly to the global shortage of physicians.

"Instead of increasing the number of students in universities and the number of training posts for specialisation, they opt for cheaper alternatives instead," he said.

"Yet it was a fallacy for organisations such as the World Health Organisation to argue that moving tasks away from physicians to less specialised health workers could make more efficient use of available human resources."

Dr Montgomery said patients deserved physicians. Quality of medical care and the right of access to a fully trained doctor were basic human rights. However, he added that in cases where there is no physician it will be helpful to have nurses filling the gap as well as possible, and where there is no nurse this will have to be done by community health workers.

He said the number of physicians was growing too slowly to compensate for the challenges that lay ahead for the healthcare system and he warned: "I firmly believe that if we do not actively address physician shortages now, the situation for patients will deteriorate in the years ahead."

Referring to the emergence of new technology in the field of health care, he said these were only tools in the patient-physician relationship and they could not be substitutes.

"Patients will always need physicians to be a source of professional expertise and empathy – perhaps even more so as sources of dubious online health content are called into question," Dr Montgomery said.

"We have to maintain and fight for our position as serious information brokers to our patients."



My kitchen rules

BY DR CLIVE FRASER

Free-to-air television is clearly struggling against the digitally disruptive streaming services. And without the revenue flow from advertisers, networks can't find the money to fund quality productions.

Subscription services don't need to build costly transmitters all over the world and YouTube et al learn what you like to watch by harvesting data from your viewing history.

Filling the void is an over-load of reality television with *Married At First Sight* and *My Kitchen Rules* being free-to-air ratings winners.

The premise of these shows is that the voyeuristic general public will be entertained by watching disparate and/or desperate real-life unfortunates who are ready, willing and able to bare their souls on national television.

But while I've learnt nothing from MAFS, I have to admit that MKR has taught me something about basic cooking techniques.

Starting with never serving under-cooked chicken, and also being careful not to burn the brownies.

There are some basic chemical principles involved in cooking, starting with the Maillard reaction.

In 1912 the French chemist Louis Camille Maillard described a chemical reaction that took place at 140°C between amino acids (the building blocks of proteins) and reducing sugars that produced a flavoursome brown sticky substance.

This reaction creates the searing on a steak and the brown crust on my bread.

But a temperature as high as 140°C would quickly cook my car's engine which is designed to run at 90°C.

With the temperature in my combustion chamber and exhaust sitting at 600°C my engine relies on a water jacket in the engine and cylinder head to dissipate all of that heat.

Water boils at 100°C at sea level.

An unpressurised radiator would allow the water to boil at 90°C if I was driving at an elevation of 3000 metres.

That means that motorists in Lhasa (China), Cusco (Peru) and La Paz (Bolivia) would have boiling radiators if not for the radiator cap pressurizing the cooling system.

Radiators are sealed with a pressure cap rated to about 12psi which brings the boiling point up to 115°C.

With a thermostat controlling circulation and electric fans adding more cooling modern cars have no trouble running at 90°C even in extreme environments.



That operating temperature is very close to the 87°C required to ensure my chicken is properly cooked.

So it is technically possible to sous-vide chicken in your car radiator.

Which is why I am writing this article.

You see my tummy is still grumbling after last night's chicken dinner served up to me at a 5-Star Sydney Hotel.

I sent the first meal back after eating half of it (the thin bit).

Each slice seemed very pink (aka raw) and I didn't want to risk ingesting too many more bacteria.

I told the waiter not to bother bringing me another meal, but he gave me another one anyway, identically under-cooked.

I wasn't worried about the absence of searing on the outside, but I could tell that neither piece of chicken had reached that magical 87°C on the inside.

So the second meal was sent back without a bite.

Eager to ensure I didn't go home hungry I was then served a third meal, but I'd lost my appetite and was wondering if I would be ill.

At breakfast, I was too polite to ask my colleagues how they'd fared.

So what has my 5-Star raw chicken dinner taught me?

When it comes to cooking, my kitchen rules!

Safe motoring,

Doctor Clive Fraser

doctorclivefraser@hotmail.com

Joan As Police Woman – arrest me now

BY CHRIS JOHNSON



Her funky gold violin was nowhere to be seen or heard all night, but Joan As Police Woman with pink Telecaster in hand captivated the audience all the same.

On the penultimate performance of her Australian tour, Joan had an intimate gathering at Canberra's Street Theatre entranced as her beautiful voice permeated the venue. She headed to Lizotte's in Newcastle the next day for the final show.

There is something about the creativity of Joan As Police Woman songs. They are different. Refreshingly different. Lyrically strong and melodically adventurous, changing direction when least expected.

Joan As Police Woman – Joan Wasser being the front woman – present an almost genre-crossing mix of music that is hard to define. It is soul, it's funk, it's rock, it's punk. Most of all it's poetic.

A good chunk of the setlist was from her new album *Damned Devotion* – a brilliant work of art. There was also a handful of tasty songs from her back catalogue as well as new material she had not performed before the Australian tour.

A strong band of excellent musicians make up the quartet that is Joan As Police Woman; three guys keeping up with their leader's talent, offering not only precision instrumentation but also sweet harmonies to Joan's mesmerising singing – which is sometimes sublime falsetto.

Joan switched between her electric guitar and her keyboard throughout the show. A classically trained musician, she often picks up a violin for a song or two. Not this night. But it didn't matter. She was all class.

The show-stopper – literally, as it was the final encore song – was an incredibly sultry, sex-charged cover of Prince's *Kiss*. Wow! What a version.

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