

A changing environment



AMANDA LYONS

Impacts of environmental health can present to general practice in a variety of ways, from the effects of bushfires to issues of mental health.



Dr Tim Senior says GPs already likely see the effects of environmental health among the people in their local communities.



Dr Janie Maxwell believes GPs will benefit from being more aware of increasing environmental health threats like thunderstorm asthma.

With the year 2016 registering as Earth's hottest on record for the third year in a row,¹ and the majority of the World Economic Forum's top global risks for 2017 centred around environmental concerns such as extreme weather events and natural disasters,² issues of environmental health have become more relevant than ever for general practice.

According to Dr Janie Maxwell, GP and academic at the Nossal Institute for Global Health, University of Melbourne, the notion of 'environmental health' itself has changed over time in response to ongoing global developments.

'For most doctors, "environmental health" originally likely prompted a thought about the traditional discipline of public health, which is related to toxicology and awareness of infectious diseases, epidemics and monitoring,' she told *Good Practice*.

'But [the concept] has expanded in recent times to reflect on broader environmental determinants of health. So anything related to social stability, urban design, air pollution, food and water security.'

Dr Tim Senior, GP and Chair of the RACGP Specific Interests Environmental Impacts in General Practice network, understands that the magnitude of the issue can make it hard

for many healthcare practitioners to process it in the context of day-to-day health.

'[The environment] is such a big topic and often it's talked about in terms of global impacts, changes in weather patterns, Antarctic ice sheets and things like that,' Dr Senior told *Good Practice*.

'GPs are very involved in local communities and see the effects on their individual patients, but that global perspective can often feel quite distant to us.'

However, Dr Senior believes GPs' role within the community is exactly what makes them perfectly placed to perceive the ground-level effects of environmental health.

'General practice is where the rubber hits the road,' he said. 'You hear the talk of global impacts, but we're dealing with the impacts on people in our own communities.'

Changing climate

While there are many environmental health impacts of concern, including air quality and methods of food production, it is climate change, which the World Health Organization declared 'the greatest threat to global health in the 21st century',³ that looms largest.

'Thinking about what climate change is important in terms of its impact on health,' Dr Maxwell said. 'The cardinal signs of climate change are rising temperature and variability in precipitation, which result in increased extreme weather events, particularly heatwaves, droughts, floods and storms, as well as raised salinity, rising sea-levels and storm surges.'

'From a health perspective, those changes can cause immediate impacts such as heat stress; respiratory, cardiovascular and renal exacerbations from a high-pollution, high-heat day; or new outbreaks or distribution of different infectious diseases.'

GPs often see the health impacts of climate change in their practices. The most obvious – and pressing – examples of these result from climate-related natural disasters.

'We've seen flash flooding and bushfires, particularly over recent years, and GPs were at the forefront of providing services to their patients and to those in their own locality, and also having to handle the effects on themselves, their staff and their practice,' Dr Senior said.

Climate change can also lead to less immediate, though no less serious, health impacts.

'Prolonged drought has huge effects on people's mental health and wellbeing in agricultural areas, so [mental health] is a big part of what GPs treat in those areas,' Dr Senior said.

Agricultural workers are not the only people vulnerable to climate change-related mental distress.

'Another big thing in terms of mental illness in rural and peri-urban communities is the impact and threat of bushfires and floods for young people, as well as farmers,' Dr Maxwell said. 'Helping communities prevent and adapt to increasing temperature extremes and bushfires is a key role of the GP. As is validating that experience, looking out for signs of mental stress.'

'There are also mental health consequences of climate change in the city. There has been a documented series of concerns or anxieties among young people who recognise the signs of an ailing environment. That has manifested in general practice consultations as anxiety or depression or existential concerns.'

Dr Senior also raised the issue of changes in plant propagation and air quality.

'We're realising there's other effects, such as pollen distribution changes – allergies, hay fever, even asthma and eczema changes,' he said. 'We saw an example of that with the thunderstorm asthma in Melbourne [in late 2016]. GPs were praised for their good work in keeping people out of hospital, because the hospitals were inundated.'

While thunderstorm asthma is a rare phenomenon, Dr Maxwell explained that the effects of climate change may result in an increase in the incidence of such threats.

'The challenge with climate change health impacts, as we've seen with the thunderstorm asthma, is that it can be a subtle threat,' she said. 'Then it happens all of a sudden and, due to a significant impact that's disparate and dispersed, it's difficult for emergency services to respond.'

'Many doctors were not familiar with [thunderstorm asthma] and unaware that people who have hay fever and have never had asthma before are more likely, in the setting of a thunderstorm, to get it for the first time.'

'It is important to be aware of new threats like this.'

Environmental treatment

While environmental impacts on health are obvious in times of natural disaster, they can also affect day-to-day lives, albeit in ways that might not seem immediately related.

'Climate is measured over periods of years, in terms of averages and extremes,' Dr Senior said. 'No one experiences an average, so people won't come in and talk so much about "climate", but the topic of "the weather" is common.'

'People often come in and say, "It's so hot out there, I'm struggling to get out and do the things I need to do".'

'When that is happening more often, that's the climate impacting on people's health. When people say, "My allergies are really bad, there is so much pollen around", that is an impact of climate on people's health.'

Environmental Impacts in General Practice network

RACGP Specific Interest's Environmental Impacts in General Practice network was established in November of 2015. It provides support for GPs to address the issue of climate change in their practices, both in consultations and within practice processes. The network is also involved in the development of education, policy and public advocacy.

Visit www.racgp.org.au or contact gpsi@racgp.org.au for more information or to join the Environmental Impacts in General Practice network.

'I've had people break bones or fall down steps because of a torrential downpour that made the steps wet. That may not get picked up in statistics about health and climate change, but when it's happening more often because the rain is heavier and more frequent, that's an impact of climate change.'

'So people's experience isn't of "climate", but their experience is changed because of changing climate.'

While incorporating environmental issues in general practice might seem daunting, Dr Senior believes it doesn't have to be difficult.

'The initial actions are relatively simple,' he said. 'We need to get used to speaking with our patients about environment as being a cause of good or ill health, and in our advocacy more generally.'

One helpful aspect is that treatment strategies are often relevant to issues of climate change and general good health.

'Action on climate change, from both a patient perspective and a doctor perspective, can also improve a patient's health,' Dr Maxwell said. 'This is a complex area called "co-benefits".'

Such co-benefits include recommendations that people exercise more regularly by walking rather than driving, or to choose fresh, locally-sourced food over heavily processed options. This type of advice, while beneficial to health and also the environment, can be provided without having to reference climate change at all. >>

>> Dr Maxwell also explained that it is important for GPs to take their community setting into account when considering the impact of environmental events, such as heatwaves.

'If you're a GP in a rural community, for example, you've got to look out for mental stress among your patients, as well as infectious diseases such as Ross River virus emerging in new areas,' she said.

'If you're a GP in a metropolitan area, you should be looking out for older or young people who are more vulnerable to heat stress, or people who are working in outdoor areas, and people with underlying comorbidities that make them more vulnerable to those changes.'

Incorporating environmental factors into general practice can also involve looking beyond individual patients. Dr Maxwell believes the entire healthcare profession, GPs included, has a key part to play in environmental advocacy.

'I think it's important for each doctor to reflect on their role beyond the clinical consultation, in stewardship of both the health system and society to ensure public safety,' she said.

Dr Senior feels that general practice has a demonstrated history of effective advocacy efforts.

'We often find ourselves advocating for our patients in other areas – housing, drug and alcohol problems, effective health services, hospital funding, even things like the Centrelink debt scheme – because we see the impact of those on our patients,' he said. 'Advocacy is nothing new for GPs.'

'It's an important part of our role because there's only so much we can do in consultations with individual people, and we're sending people out from our surgeries, back into the environment ... to live and rest and play and bring up their families.'

Practice matters

GPs can also have an effect on the impacts of climate change by altering operations within their own practices. Dr Senior offered some practical suggestions for practices to try in order to reduce their own environmental impacts.

'Using energy and fuel more efficiently,' he said. 'For example, things like insulation can make a big difference, switching to renewable energy providers, using solar power for either hot water or for electricity. And also looking at the waste and recycling in our practices and how well we're doing that.'

'If people are really keen, there are mechanisms to have audits of how their practice is doing in terms of emissions and recycling.'

Dr Maxwell offered an example of a practice in Benalla, Victoria, that undertook an audit of its energy use.

'[They] found that simple things were using a lot of energy, like the hot water urn being on all night or one of the computer systems throughout the day, plus other little things like using air conditioning but not having two sliding doors to keep the cool air inside,' she said.

'Looking at those things can lead to significant cost benefits for a practice, as well as environmental benefits.'

Dr Senior believes taking that first step towards reducing environmental impacts is the main hurdle to overcome.

'One of the challenges is that it's such a big problem, it's difficult to know where to start. But, actually, your own community is where to start,' he said.

'The effects in some other countries will be devastating, and that is one of the motivations of people who are really passionate about global health. But the

effects on our own community in Australia will also be really quite severe.

'There's no one who is left unaffected by this, which is why it should be everyone's concern and everyone's responsibility.'

References

1. The Climate Council of Australia. 2016: Global heat record broken again. NSW, Australia: Climate Council of Australia, 2017.
2. World Economic Forum. The global risks report 2017: 12th edition. Geneva, Switzerland: World Economic Forum, 2017.
3. The World Health Organization. Climate change and human health. Geneva, Switzerland: WHO. Available at www.who.int/globalchange/global-campaign/cop21/en [Accessed 16 February 2017].

Resources for GPs

There are a number of environmental health resources available to GPs:

- **Doctors for the Environment Australia** – a nationwide voluntary organisation that provides support, education and information about environmental health. Visit www.dea.org.au for more information.
- **The Climate Council of Australia** – a non-governmental organisation that provides evidence-based information on climate change and its effects. Visit www.climatecouncil.org.au for more information.
- **Global Green and Healthy Hospitals** – an international alliance that aims to empower healthcare practices to reduce their environmental impact. Visit <https://noharm-global.org> for more information.

