

Compass

MAGAZINE

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Life-saving journey

Of donated blood

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The *Life-saving* journey of donated blood

Almost half a million Australians give up an hour of their time to donate blood. Have you ever thought about what happens when that hour is up?

John Perry is alive today thanks to blood transfusions. He is now helping tell the story of the network of health professionals that worked hand-in-hand to save his life. And NSW Health Pathology experts have been a vital partner in this.

Just over a year ago, John and his elderly mother were driving on a country road in central west NSW when they hit a tree travelling at 90 kilometres an hour (pictured right).

They were 15 kilometres from the closest town of Forbes (population 7,500) and more than 100 kilometres away from the regional trauma centre at Orange Hospital.

It would be almost three months before John returned home.

NSW Ambulance's Helicopter Medical Team arrived first to the scene and immediately began life-support and a blood transfusion.

The Aeromedical Control Centre sent an extra four units of blood which were given to John in-flight enroute to Orange Hospital.

But the seriousness of his injuries meant they needed to fly to the major trauma centre at Liverpool and John would need more blood if he were to survive the trip.

With the helicopter engine still running and the rotors still moving, the team took on more units of blood, plasma and cryoprecipitate.

He received a total of 15 units of blood before arriving at Liverpool Hospital. Here he underwent emergency surgery before many more weeks of rehabilitation.

Ten weeks after his accident John was discharged and finally returned home to his property (see right with his mum and on our cover).



Being able to provide in-flight transfusions for emergency care has only become a reality in the last few years.

It's the result of the innovative efforts of our transfusion experts like Tony Greenfield (pictured left).

Helicopters carry three units of blood red cells in highly specialised eskies known as 'shippers' that preserve the blood between 2-6°C for on-the-spot emergency care.

Blood stores are kept in specialist blood banks in our hospital pathology units and monitored by our transfusion scientists.

These experts also support a larger network of rural hospitals, along with the ambulance service, to regularly rotate stocks and make sure every drop counts.

After his near brush with death John has become determined to pay tribute to all those who played a role in his care. He also urges all those who can to give blood.

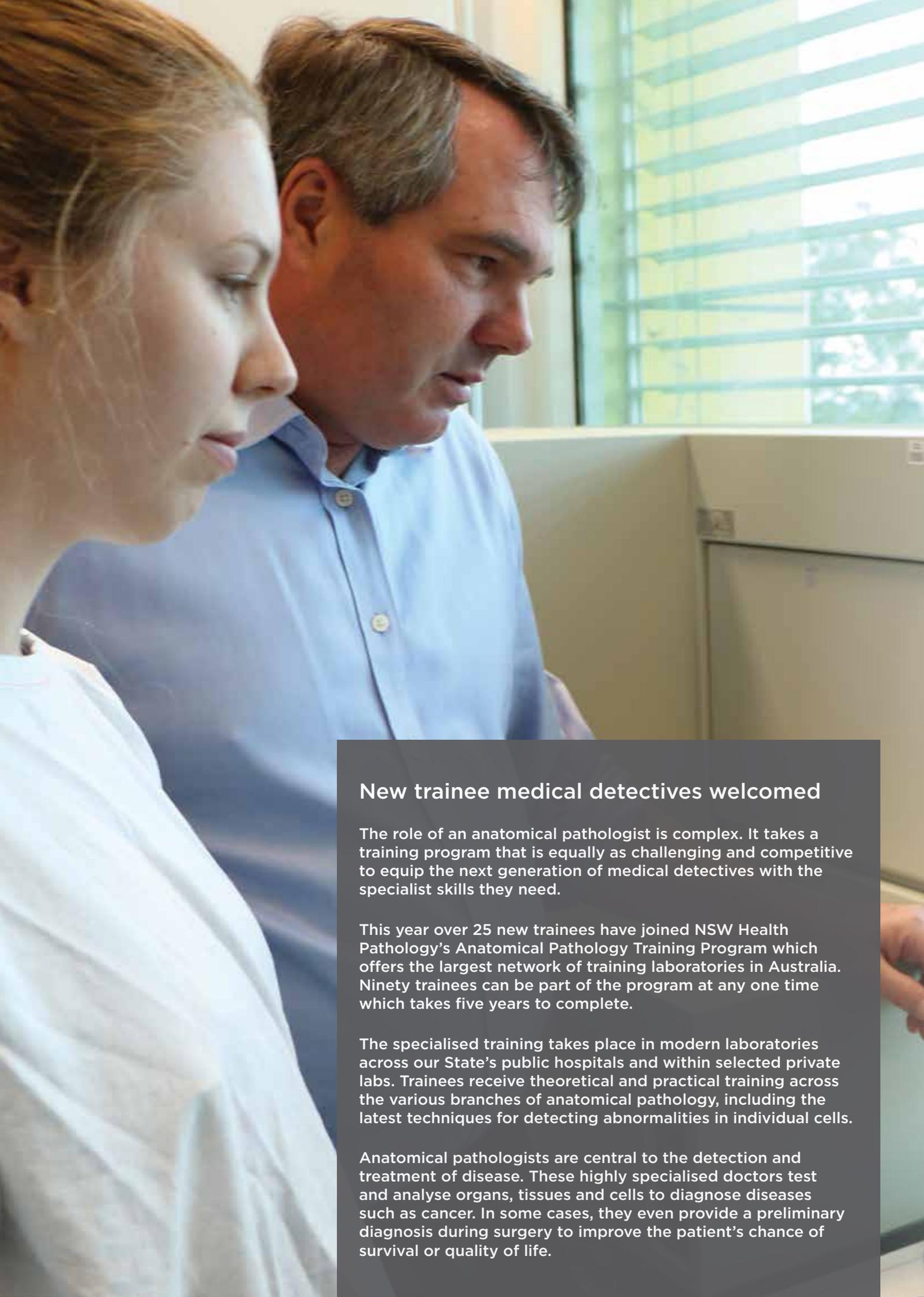


Life-saving stories like these are only made possible with the support of blood donors across the state.

It takes 15 minutes to donate blood, and can be done once every 12 weeks.

The Australian Red Cross currently has a critical need for O type donors.

Visit www.donateblood.com.au for more on how to donate.



New trainee medical detectives welcomed

The role of an anatomical pathologist is complex. It takes a training program that is equally as challenging and competitive to equip the next generation of medical detectives with the specialist skills they need.

This year over 25 new trainees have joined NSW Health Pathology's Anatomical Pathology Training Program which offers the largest network of training laboratories in Australia. Ninety trainees can be part of the program at any one time which takes five years to complete.

The specialised training takes place in modern laboratories across our State's public hospitals and within selected private labs. Trainees receive theoretical and practical training across the various branches of anatomical pathology, including the latest techniques for detecting abnormalities in individual cells.

Anatomical pathologists are central to the detection and treatment of disease. These highly specialised doctors test and analyse organs, tissues and cells to diagnose diseases such as cancer. In some cases, they even provide a preliminary diagnosis during surgery to improve the patient's chance of survival or quality of life.

Behind the

Microscope

Around 70 per cent of people who enter hospital will need pathology to assist with their treatment. And not just blood tests.

There's a dedicated workforce of pathologists and technicians behind the microscopes to ensure patients have access to high quality and timely results.

Dr Mark Formby is the Acting Director at NSW Health Pathology's Anatomical Pathology Laboratory at John Hunter Hospital.

As an anatomical pathologist, he examines tissues and organs to determine the causes and effects of particular diseases such as cancer. The findings are fundamental to medical diagnosis, patient management and research.

NSW Health Pathology employs almost 140 anatomical pathologists across the state who work closely with doctors, nurses and others, as a vital part of the clinical team in larger hospitals.

"I enjoy being part of a multidisciplinary team, where I contribute to discussions about individual patients with a team of surgeons, radiologists, oncologists, nurses and other colleagues," Dr Formby says.

"Between us we discuss all aspects of each patient's care and review all the available evidence to make decisions about the best treatment or if any further investigations can be offered to the patient.

"Typically, the surgeon provides the background to the case, the radiologist shows the scan and I'll describe the pathology findings, including the presence of any markers that will help decide the best course of treatment."

On any given day his work might be with a urology team, or a renal biopsy review team, or perhaps with gastroenterologists. It could

also be as part of a NSW Health Pathology committee working to improve post-mortem services and support to help provide answers for those who have lost a baby.

The job is detailed and diverse, and at the forefront of change.

New technology is revolutionising pathology, improving outcomes, efficiency and collaboration – from voice recognition technology in reporting to pursuing cloud-based technology to manage collection, analysis, storage and sharing of genomic data.

And like many services – imaging, cardiac and stroke management to name a few – anatomical pathology is going digital.

Dr Formby is part of a trial allowing tissue and other slides to be viewed on screen instead of under a microscope, where pathologists can measure and pinpoint features in ways not previously possible. The slides can also be centrally stored, allowing access by pathologists elsewhere across the state and beyond to provide second opinions if needed.

"I'm working with our lab technicians in reviewing new cases on large screens instead of microscopes. These digital slides allow us to zoom in to measure and pinpoint features in tissue samples in ways we haven't been able to do before," he says.

"Digital images are stored centrally and can be accessed remotely from any digital pathology workstation. This makes it easier for us to obtain important second opinions from other pathology experts, no matter where they're located."

One thing hasn't changed though – Dr Formby's pride in his team is making sure patients are given the answers they need, with the respect, dignity and compassion they deserve.

A new direction

They say that a change is as good as a holiday and for Anthony Woodward that meant becoming a driver in our new look fleet vehicles



Anthony Woodward is offering some advice to job seekers with additional needs and employers.

Anthony, 25 and who has cerebral palsy, is one of NSW Health Pathology's newest couriers.

It's a role he applied for after deciding it was time to try something new.

As a courier, Anthony transports patient pathology samples and equipment around the region.

He and two other couriers travel between Wagga Wagga Base Hospital and facilities at Tumbarumba, Batlow, Gundagai, Tumut, and further afield.

He also supports life-saving emergency deliveries.

"I just love it," Anthony said.

His mum Kate, who is a nurse at Wagga Wagga Base Hospital, said Anthony's grandfather Graham

Woodward had been particularly dedicated to helping his grandson learn to drive.

Now that he is settled into the job, which began in March, Anthony has a straightforward tip for people with additional needs who are looking for a job.

"Don't give up, keep going, get new skills and just keep trying," he said.

Our laboratory manager at Wagga Wagga, Anthony Flaskas said courier Anthony's CV stood out.

"When we interviewed him, he was by far the best applicant," he said.

"Our recruitment process was no different for this job.

"Anthony's drive stood out and he just shone well above all the other applicants, and he's now doing really well."

Have you noticed one of our new look vehicles zipping about town?

In April this year, we re-badged our cars and vans with colourful new branding to reflect our move to a statewide organisation.

We want to make sure it's easy for you to recognise us, because you can rely on NSW Health Pathology for exceptional service and testing that underpins our health and justice systems.

We're also reviewing our hospital and collection centre signage and will start rolling out new statewide signage later this year.

Shining a light on *Bed bugs*

A dramatic rise in these creepy crawlies leads to the world's first academic textbook in 50 years.

With mutant bed bugs unexpectedly making a global resurgence, *Advances in the Biology and Management of Modern Bed Bugs*, has been launched by NSW Health Pathology's international bed bug expert and key editor Stephen Doggett, with Dini Miller (USA), and Chow-Yang Lee (Malaysia).

The last academic bed bug textbook was published in 1966 and coincided with their global decline which, at the time, was attributed to powerful insecticides.

The return of these public health pests has prompted renewed interest in bed bug research.

"Fortunately bed bugs are again on the decline in Australia. However, our economy spent over \$200 million dollars between 2000-2012 on pest control, loss of revenue for hotels that are closed for treatment, replacement of furniture, purchasing new linen, and medical expenses for affected guests.



Since the start of the new millennium bed bugs have made a sudden come back and the global resurgence has affected every nation across the globe.

"The return of bed bugs has been unexpected and dramatic. Over the last two decades they've evolved preventing insecticides from killing them," said Stephen Doggett (pictured above).

Bed bugs bite and suck our blood, resulting in extremely irritating bites but beyond this, they also cost the world economy billions of dollars every year.

The textbook captures the global picture and scale of their impact with information from the past to the present. It includes contributions from 60 experts from Northern and Latin America, Europe, Russia, Asia, Australia, Africa, the Middle East, and the Indian subcontinent.

The book is the most comprehensive, up-to-date academic review of bed bug literature worldwide and available to anyone affected by these pests.

Visit www.abmmbb.com for more.

First of its Kind

Clinical Governance Framework

NSW Health Pathology is Australia's largest provider of public pathology.

Our pathologists are medically trained clinicians who work in public hospitals and modern laboratories. They're supported by scientists, technicians and support staff so clinical teams can make the best possible treatment decisions for patients.

To deliver better health and justice systems, we work together to provide world-class care for patients and customers – whether that's in a lab, hospital, collection centre or office.

NSW Health Pathology's *Clinical Governance Framework: Excellence in Service and Outcomes*, is the first pathology framework of its kind in Australia and will help guide our journey to lead through innovation, excellence and collaboration.

Quality and patient safety are essential parts of the foundations for delivering world-class care and services to our patients, customers and wider community.

It's essential to providing a truly exceptional service.

Director Quality and Patient Safety, Linda Sorum, said the comprehensive framework has been developed following an extensive literature search and widespread internal and external consultation.

"The Framework provides the foundations for our focus and commitment to always deliver safe, reliable, timely and quality results and care.

"It also informs and guides us on our journey to lead through innovation, capability building, collaboration and excellence," Linda said.

The Framework helps us stay true to our goals to provide quality and timely care that is patient-centred and customer focused services. It also encourages our teams (like those pictured below in Newcastle) to develop innovative models of service delivery and practice.

Visit pathology.health.nsw.gov.au for more about the Framework.

