



# George

RESEARCH

NEWSLETTER OF THE GEORGE INSTITUTE FOR INTERNATIONAL HEALTH

ISSUE 14 | SEPTEMBER 2009

## Risky driving puts young drivers at high danger of crash

*First results from the largest study of young drivers: The DRIVE Study*

Results from The George Institute's DRIVE study, Australia's largest study of young drivers, has shown that risky driving habits are putting young drivers at a significantly increased risk of crashing, irrespective of their perceptions about road safety. The DRIVE study surveyed over 20,000 young drivers and examined their crashes reported to police. These findings are the first of several analyses to be released by The George Institute over the coming year and reveal that young drivers who said they undertook risky driving were 50% more likely to crash.

Young drivers are more likely to be injured or killed in car crashes than older drivers. Previous research has also confirmed risky, dangerous driving behaviour is more prevalent among younger drivers than older drivers. As a part of the DRIVE study, researchers investigated the relationship between risky driving behaviour, risk perception and the risk of crash to find that young drivers who had a poor risk perception or an inability to recognise driving risks were more likely to crash. However, those who did have a good understanding, but undertook risky driving behaviour when they were behind the wheel, still had a much greater likelihood of crashing.

"Our study shows that if young drivers engage in a range of risky driving behaviours, regardless of their perceptions, their crash risk escalates significantly. Risky driving behaviours included speeding, carrying multiple passengers, listening to loud music and text messaging while driving. The research evidence shows that these behaviours are significant contributors to road crashes, particularly among young drivers who are still building their road skills in the first year of driving", said report author, Associate Professor Rebecca Ivers.



"The key finding in our study was that we discovered the main contributor to crashes is actual behaviours when young drivers are behind the wheel – not their perceptions or attitudes about safety", Associate Professor Ivers added.

"These results point to the fact that young driver policies should be focused on changing behaviour rather than targeting perceptions about safety. Education is important, but just focusing on increasing knowledge and improving attitudes is not enough. Legislation that deters risky driving, such as serious restrictions for new drivers, and enforcement of those restrictions will have far more impact", added Dr Teresa Senserrick, another investigator on the study.

Recent changes to young driver legislation in Australia is a step in the right direction. This includes the introduction of stronger graduated licensing systems in various states. The findings of this report, published in the *American Journal of Public Health*, suggest that restrictions such as passenger and night time driving restrictions in addition to zero tolerance to speeding are warranted.

The DRIVE study was funded by Australia's National Health and Medical Research Council,

NRMA Motoring and Services, and NRMA-ACT Road Safety trust and the Roads and Traffic Authority of NSW. The DRIVE study recruited 20,822 young drivers holding red P-plates in NSW aged 17-24 years. The overall aim of the study is to investigate the risk factors in motor vehicle-related crashes and injuries among young drivers and to find ways to improve the safety of young drivers and help make roads safer for all users. Additional results due to be released during 2009/2010 include rural and socioeconomic factors for young drivers, pre-licensing driving experience, training and education, mental health, and sleep habits.

### IN THIS ISSUE

- PAGE TWO  
The Young Driver Factbase
- PAGE THREE  
Treating cardiovascular disease
- PAGE FOUR  
A new national stroke registry for Australia
- PAGE FIVE  
Low birth weight and chronic kidney disease
- PAGE SIX  
New analysis benefits type 2 diabetes
- PAGE SEVEN  
Second year results for neglected disease R&D

# Introducing the Young Driver Factbase

[www.youngdriverfactbase.com](http://www.youngdriverfactbase.com)



The George Institute has launched a new online resource called the Young Driver Factbase. The Factbase contains the most up-to-date information on young driver safety and provides recommendations based on the best available research evidence.

The policy environment for young drivers is a sensitive and sometimes heated, media-driven one in which the evidence about interventions being considered can take a back-seat to headlines, public response and pressure from different interest groups.

The Young Driver Factbase has been designed to help policy makers and other stakeholders, such as media, youth practitioners and interest groups, understand and consider the available evidence about young driver safety issues.

Tabling a list of the major issues facing young drivers, the Factbase includes plain English summaries and discussions of available research evidence and an evidence-based position on controversial issues, such as driver behaviour, driver demographics, driver distractions and young driver restrictions.

Introducing new research outcomes into the pool of evidence under consideration, the Factbase also identifies gaps in our current understanding of best practice road safety for young drivers.

The Young Driver Factbase is updated as new evidence comes to hand, and will soon include information on the impact of self-harm, young driver education programs, and ethnicity and crash risk. Users can sign up to receive alerts, as new information is added to the site.

## Many Australians at risk of cardiovascular disease are not receiving best practice care

Many people are not receiving the best possible care when it comes to managing cardiovascular conditions, according to two new Australian research studies. The studies highlight the need for wide-scale reform to ensure that people at the highest risk of having a heart attack or stroke are identified early and are provided with optimal care. The studies published in *The Medical Journal of Australia* give a comprehensive snapshot of the state of cardiovascular care in the primary health care system for both Indigenous and non-Indigenous Australians.

The new research has shown that around 50% of people over 30 years old did not have sufficient risk factor information recorded to assess their overall risk of a heart attack or stroke. Among people who were assessed as high risk, only 20% were prescribed all recommended treatments in mainstream general practice. A key finding was that patient management was substantially better in Indigenous health care sites, with 44% of Aboriginal and Torres Strait Islander people at high risk being prescribed appropriate medicines.

The research suggests that GPs are still managing individual risk factors such as blood pressure and cholesterol in isolation of one another, and are not adopting recommendations to treat a patient's overall or absolute risk. Absolute risk management is based on the principle that the major risk factors for cardiovascular disease act together. By taking this approach, treatment can be targeted to those most likely to benefit.

"These findings suggest we have not equipped our primary care workforce with the necessary tools to implement best practice standards for preventing cardiovascular disease. It is simply not possible to assess a patient's overall risk of future heart attack or stroke based on any one risk factor. The current resources available to adequately manage risk are clearly not working", said Dr David Peiris, Senior Research Fellow at The George Institute, GP and an author on both studies.



The first study examined cardiovascular risk management for adults routinely attending around 100 GPs across Australia. The second study was part of the landmark Kanyini Indigenous health research program and involved a random health record audit for routinely attending Aboriginal and Torres Strait Islander adults in urban, rural and remote Indigenous health services.

"There remains significant gain that can be achieved in reducing the enormous burden of heart disease in our community, simply by identifying and managing risk with the tools and therapies we already have at our disposal. It is also important to note that Aboriginal primary care providers are outperforming mainstream general practice when it comes to identifying and managing risk of heart disease in their respective communities. This is critical in the context of extensive health system reform for all Australians, and suggests that further building on the strengths of primary care is essential for improving chronic disease outcomes", according to Dr Alex Brown, Kanyini Chief Investigator from the Baker IDI Heart and Diabetes Institute.

Cardiovascular diseases remain Australia's largest health problem and kill one Australian nearly every 10 minutes. Indigenous Australians

are 2.6 times more likely to die from heart, stroke and other vascular diseases compared to non-Indigenous Australians, and these diseases make a major contribution to the life expectancy gap.

"Early deaths due to heart disease, stroke, diabetes and kidney disease drive the gap in life expectancy for Indigenous Australians. Notwithstanding the important contribution of housing, education and employment to Indigenous health, we can do much to close the gap within the health system. This includes providing better access to the treatments that we know reduce the risk of death", suggests Professor Alan Cass, Kanyini Chief Investigator, The George Institute.

"Two key priority areas in the proposed National Primary Care Strategy are to improve chronic disease management and an increased focus on prevention. Innovative tools and strategies are needed to achieve this", added A/Prof Noel Hayman, Medical Director Inala Indigenous Health Service, Kanyini Chief Investigator, and external reference group member on the National Primary Health Care Strategy

Researchers at The George Institute have developed and tested an electronic decision support tool for health practitioners, which analyses patient details and generates an absolute risk assessment and management plan. Importantly, such a tool ensures easier adherence to guidelines. The Baker IDI Heart and Diabetes Institute is developing integrated models of care for vascular disease involving nurse specialist led clinics. In addition to this, both institutes are trialling a polypill (four treatments in one pill) for people at high risk of heart disease or stroke. Easier to prescribe and take, the polypill combines proven risk-reduction medicines into one low-cost, easy to administer pill.

# Australian stroke experts join forces to build a national stroke registry



Approximately 60,000 strokes occur in Australia every year, and two thirds of these are first-ever strokes. While around one third of strokes result in death, many of those who survive will live with permanent and significant disability. The lifetime costs associated with stroke and related disability is estimated to be over AU\$2 billion per year.

The Australian Stroke Clinical Registry (AuSCR) is a new initiative that will collate key data to significantly improve the quality of hospital care for all patients admitted with stroke or transient ischaemic attacks (TIAs).

The AuSCR database will gather information about patients with stroke to determine the patterns of treatment, rehabilitation and recovery of patients. The data collected provides information about the severity of stroke at three months after stroke, as well as the quality of stroke treatment in hospitals, and includes questions such as:

- Whether the patient was treated in a Stroke Care Unit
- Whether the patient and family received a care plan on discharge
- Whether the patient received blood pressure medication on discharge
- Whether the patient has had another stroke since discharge from hospital

The information recorded in the AuSCR database will allow individual hospitals to monitor the quality of stroke treatment and the care they provide to patients. National and state-based comparisons of the quality and outcomes of care are also possible.

“The Australian Stroke Clinical Registry allows us to better understand the effects of stroke and the influence of the care patients receive when they visit hospital, and therefore can be used to provide feedback to improve the quality of hospital care. In most cases, when best practice stroke medicine is provided, lives are saved and long-term disability is prevented”, said Professor Craig Anderson, Director of the Neurological and Mental Health Division at The George Institute and Royal Prince Alfred Hospital Neurologist.

AuSCR is a collaboration between The George Institute for International Health, the National Stroke Research Institute, the National Stroke Foundation, and the Stroke Society of Australasia. Professor Anderson and colleagues want to obtain the most accurate picture about stroke, the care received every day by patients who have had a stroke, and whether or not the best-quality interventions are being provided to all stroke patients. By working together with clinicians, the return on investment in AuSCR will be substantial in terms of better population health and fewer acute episodes of stroke.

The AuSCR initiative is in its first year and was launched at the combined meeting of the 20th Stroke Society of Australasia and the 6th Asia Pacific Conference Against Stroke in Cairns. For more information about the AuSCR project, please contact Joyce Lim on 1800 673 053, or +61 2 9993 4500.

## Low birth weight shows significant link to chronic kidney disease



For some time, researchers have been concerned with the correlation between low birth weight and the development of chronic disease later in life. It has been suggested that nutritional and physiological effects while in the womb may increase susceptibility to a number of disorders as the person ages, such as high blood pressure and cardiovascular disease. In particular, there has been considerable interest in the hypothesis that low birth weight may be a marker of chronic kidney disease.

Researchers at The George Institute recently conducted a systematic review and meta-analysis of observational studies to investigate this relationship. Combined data from 18 studies representing 2.2 million individuals revealed that individuals with low birth weight have an approximately 70% greater risk of developing chronic kidney disease in later life.

"Available data suggests that chronic kidney disease affects 10-15% of adult populations. Our analysis suggests that people who were born with low birth weight (usually defined as less than 2.5 kg) may be vulnerable to accelerated loss of kidney function. However, we also know that early detection and management of chronic kidney disease and its risk factors are effective. People who were small at birth are best advised to avoid obesity that could lead to diabetes, maintain regular physical activity, avoid medications that could be toxic for the kidneys, and have blood, urine and blood pressure checked periodically to identify any abnormalities early", said lead author Sarah White.

Researchers conclude, however, that there is scope for future prospective studies with accurate assessment of birth weight and kidney function and consideration of important confounders, including maternal and socioeconomic factors.

### Staff Profile



**PROFESSOR LIJING L. YAN**  
Director, Research and Development  
The George Institute, China

A cardiovascular epidemiologist with a background in demography and health economics, Professor Lijing Yan, is the Director of Research and Development at The George Institute, China.

After receiving her Bachelor's Degree in Sociology from Peking University, Lijing secured her Masters of Public Health in Epidemiology and Doctoral Degree in Demography from the University of California, Berkeley. Before joining The George Institute, Lijing spent some time in the USA working for the National Bureau of Economic Research (Stanford, CA), the Department of Preventive Medicine, Feinberg School of Medicine, Northwestern University (Chicago, IL), and most recently in China at the Department of Health Economics and Management, Guanghua School of Management, Peking University.

Lijing has authored a significant number of papers in peer-reviewed journals and says a career highlight has been her several publications in the *Journal of the American Medical Association*.

Her main research interests include chronic disease prevention and control, economic evaluations in health care, and integrated health management. Lijing is also Director of the first center for Chronic Disease Prevention in China, which will be hosted at The George Institute, China and play a vital role in producing evidence that will lead to substantial, positive health and policy outcomes. The centre will conduct research that will provide reliable new evidence to inform the best strategies for the prevention and treatment of cardiovascular diseases.

Lijing is also an Adjunct Associate Professor at the Department of Preventive Medicine, Feinberg School of Medicine, Northwestern University, Chicago, IL, USA and the Health Economics and Management Institute, Guanghua School of Management, Peking University, Beijing, China.

## New analysis confirms benefits for type 2 diabetes



Following the recent release of three major studies into the management of type 2 diabetes there has been uncertainty into the effects of tight glucose control among patients, particularly regarding the prevention of heart attack and stroke.

However, a new meta-analysis of four studies: ADVANCE, ACCORD, VADT and UKPDS, has confirmed that intensive blood glucose (sugar) control protects patients with type 2 diabetes against major cardiovascular events, such as heart attack and stroke. The findings, which have been published in the international journal, *Diabetologia* demonstrate that patients could benefit from a 15% reduction in the risk of a heart attack.

The aim of this new analysis was to generate more precise estimates of the effects of more intensive, compared with less intensive, glucose

control on the risk of major cardiovascular events amongst patients with type 2 diabetes.

Diabetes mellitus is one of the greatest threats to the health of populations worldwide. Globally, there are approximately 250 million people with diabetes and that number is estimated to rise to 380 million in 2025.

Researchers point out that patients without a history of heart disease appear to derive greater benefits compared to those patients who have already experienced heart complications. While the results showed an increased risk of hypoglycaemia (very low blood sugar levels) with intensive control, there was no evidence of increased risk in mortality (as had been seen with ACCORD). However, researchers suggest that glucose lowering regimens should be tailored to the individual patient.

ADVANCE was initiated and designed by The George Institute and involved a group of independent medical researchers from 20 countries worldwide. The study involved 11,140 patients with type 2 diabetes who were treated and followed up for five years. When combined with the other three major research studies, this meta-analysis was able to assess a total of 27,049 participants. It is hoped that these results will not only provide reassurance to clinicians and patients about the value of lowering glucose, but also inform type 2 diabetes guidelines to improve management and prevent complications for the millions of patients worldwide.

(ACCORD Action to Control Cardiovascular Risk in Diabetes; ADVANCE Action in Diabetes and Vascular Disease; UKPDS UK Prospective Diabetes Study; VADT Veterans Affairs Diabetes Trial)

## Neglected disease R&D survey to launch second year results

The first international survey to reveal the total investment in neglected disease research and development will soon release the second year results.

The G-FINDER (Global Funding of Innovation for Neglected Diseases) survey collects public, private and philanthropic investments on all aspects of developing new products for the prevention and treatment of neglected diseases, from basic research, through discovery and development, to the post-registration activities needed to support large-scale use.

The first year results of the survey found that US\$ 2.5 billion was invested in neglected disease R&D. The second year of the survey has expanded to include over 600 participants in 46 countries, including India, Brazil and South Africa. The new results will be announced in India at the end of the year.

A wide range of neglected diseases are covered by the survey, ranging from diseases like malaria, sleeping sickness and TB, to developing-country strains of global diseases, such as pneumonia and meningitis.

The G-FINDER survey provides invaluable evidence to policy-makers and funders to inform and support the major decisions being made in global health funding now and into the future.

The survey is funded by the Bill & Melinda Gates Foundation. More details on the survey and first year results can be found at [www.thegeorgeinstitute.org](http://www.thegeorgeinstitute.org)

The G-FINDER survey is managed by the Institute's Health Policy Unit. The Unit's purpose is to provide comprehensive and accurate information so that governments and other bodies can make better policy decisions and allocate funds more effectively.



# PEDro: Providing essential knowledge and information for physiotherapists

Like doctors and nurses, physiotherapists must have diverse skills so they can work across most areas of health care. Physiotherapists need a tool that provides them with easy access to the latest research findings so they can provide the best possible care for their patients.

PEDro is the Physiotherapy Evidence Database, a free, internet-based system that contains bibliographic details and abstracts of about 15,000 randomised trials, systematic reviews and evidence-based clinical practice guidelines in physiotherapy.

PEDro differs from all other available evidence databases in that all trials on PEDro are independently assessed for quality using widely accepted criteria. These ratings are used to quickly guide users to trials that are more likely to be valid and to contain sufficient information to guide clinical practice.

Established 10 years ago, PEDro is the most widely regarded information system available to physiotherapists both in Australia and internationally.

## More about PEDro...

1. The most complete database of clinical trials in physiotherapy
2. Provides free and easy access to high-quality physiotherapy interventions research
3. Answers over 2,400 clinical questions each day
4. More than 15,000 trials, reviews and guidelines
5. Available in eleven languages
6. Searchable by topic, publication or journal
7. Provides links to free full-text articles
8. The PEDro scale measures the quality of trials
9. Servicing therapists in over 80 countries
10. Now informing a consumer site, called Physiotherapy Choices

## Support PEDro into the future

You can play an integral role in supporting physiotherapists by investing in the continued innovation of PEDro and Physiotherapy Choices. To find out more about how we can build on these widely used and successful resources please contact the PEDro team at The George Institute on +61 2 9657 0300.



[www.pedro.org.au](http://www.pedro.org.au)

Celebrating  
10 years  
of informing  
physiotherapy



THE GEORGE INSTITUTE  
for International Health

Postal Address  
PO Box M201, Missenden Road, NSW 2050 AUSTRALIA

Hospital  
Level 10, King George V Building  
Royal Prince Alfred Hospital  
Missenden Road, Camperdown Sydney NSW  
AUSTRALIA

Telephone +61 2 9993 4500 Facsimile +61 2 9993 4501  
info@george.org.au www.thegeorgeinstitute.org

City  
Level 7, 341 George Street  
Sydney NSW 2000  
AUSTRALIA

Telephone +61 2 9657 0300 Facsimile +61 2 9657 0301

China  
Room 1302, Tower B, Horizon Tower  
No. 6 Zhichun Road, Haidian District  
Beijing 100088  
PR CHINA

India  
Plot No. 839C  
Road No. 44 Jubilee Hills, Hyderabad  
INDIA

United Kingdom  
London International Development Centre (LIDC)  
36 Gordon Square, London WC1H 0PD  
UNITED KINGDOM

ISSN 1833-3656

