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INSPIRE

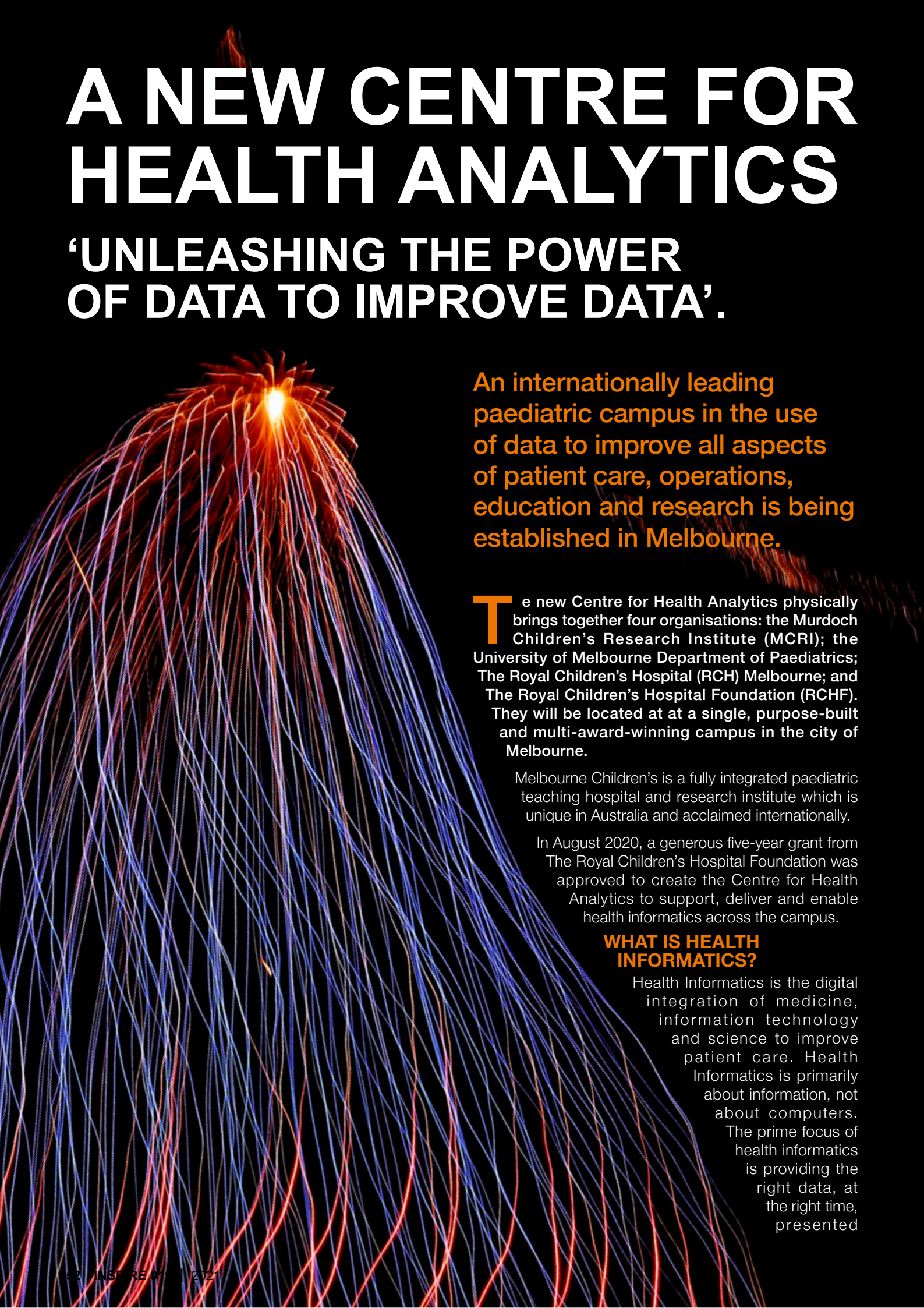
RESEARCH AUSTRALIA SHOWCASES HEALTH & MEDICAL RESEARCH

A FOCUS ON HEALTH AND MEDICAL RESEARCH DATA

CELEBRATING 20 YEARS OF ADVOCACY

A NEW CENTRE FOR HEALTH ANALYTICS

‘UNLEASHING THE POWER OF DATA TO IMPROVE DATA’.



An internationally leading paediatric campus in the use of data to improve all aspects of patient care, operations, education and research is being established in Melbourne.

The new Centre for Health Analytics physically brings together four organisations: the Murdoch Children’s Research Institute (MCRI); the University of Melbourne Department of Paediatrics; The Royal Children’s Hospital (RCH) Melbourne; and The Royal Children’s Hospital Foundation (RCHF). They will be located at at a single, purpose-built and multi-award-winning campus in the city of Melbourne.

Melbourne Children’s is a fully integrated paediatric teaching hospital and research institute which is unique in Australia and acclaimed internationally.

In August 2020, a generous five-year grant from The Royal Children’s Hospital Foundation was approved to create the Centre for Health Analytics to support, deliver and enable health informatics across the campus.

WHAT IS HEALTH INFORMATICS?

Health Informatics is the digital integration of medicine, information technology and science to improve patient care. Health Informatics is primarily about information, not about computers. The prime focus of health informatics is providing the right data, at the right time, presented

in the right way, to clinicians, patients, researchers, managers, and others who use data to inform their decisions. Health informatics has the potential to affect how we prevent, treat and cure conditions, and how we influence policymakers and the government's management of public health.

NEW APPOINTMENT

To support the establishment of the Centre for Health Analytics, Professor Jim Buttery has been appointed as the inaugural Professor of Child Health Informatics in the University of Melbourne Department of Paediatrics. Professor Buttery's vision for child health informatics includes five pillars for improved use of data in direct patient care, patient care processes, public health, population health and policy, and engagement with our community.

Professor Buttery is a senior clinical researcher and an infectious diseases physician with a strong track record of building and developing health services in hospital medicine and public health using informatics and data. He developed and continues to deliver Australia's leading vaccine safety service, SAEFVIC.

> ***SAEFVIC pioneered online vaccine safety reporting in Australia and was the first organisation to demonstrate the importance of reporting by community members.***

SAEFVIC has established novel informatics strategies for ensuring vaccine safety in the community, with further data innovations to help with COVID vaccine safety. These include innovative use of de-identified data from telehealth, emergency departments, general practice and residential aged care facilities.

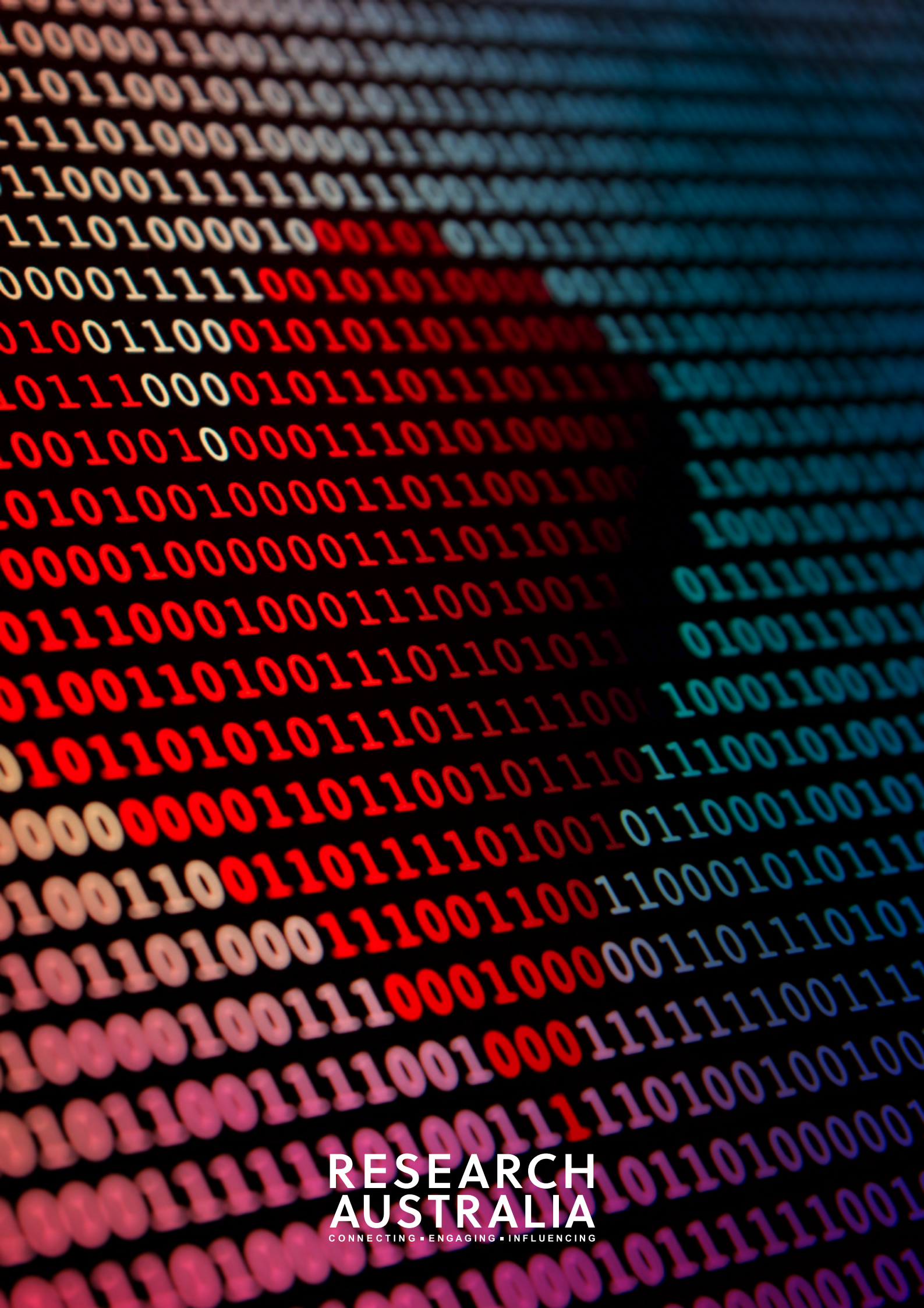
FOUR INITIAL PROJECTS

As the Centre for Health Analytics commences, four exemplar projects will be the initial focus and learnings from these projects will guide how the Centre extends its work across the campus.

1. More than half of children in hospital are on antibiotics at any one time. This program is set to optimise use and reduce harm caused by antibiotics in children by identifying patterns of antibiotic prescribing in the hospital that lead to poor outcomes, and optimising pathways for empiric antibiotic choice and duration. Outcomes for patients and families will be improved through the reduction in the negative outcomes of antibiotic use.
2. Australian estimates indicate that 50% of children with diagnosed kidney disease have a genetic form of the condition with pre-natal onset. Children often suffer from birth and have more severe forms of the disease. Current pathways for diagnosis can be long and invasive, with surgery and dialysis as treatment options. By exploring data already captured in the hospital, patients who may have early signs of a genetic form of kidney disease will be identified and offered a genomic test that has the potential to provide rapid, accurate, cost effective diagnosis.
3. Central lineassociated bloodstream infections are a serious complication that can require significant treatment and a longer stay in hospital. Applying health informatics to an array of datasets to better understand the relationships between line use, maintenance, assessment and complications, the hospital will enable improved central line management and reduce these serious complications.
4. In Australia at least 50% of infants and children are prescribed at least one medicine each year. Unfortunately, the safety and effectiveness of many medicines are established from adult clinical trials. In the absence of paediatric trials clinicians are forced to select medicines and dosages based on non-paediatric data. The advancement of sophisticated health informatics and data science along with new trial methodologies are introducing a new era of embedded clinical trials. The integrated culture of embedded trials will enable clinicians to undertake trials with shared resources and sophisticated statistical support through a centralised clinical research facility.

> ***The Centre for Health Analytics, by delivering the above projects and in time many others, will increase the use of quality data on campus, leading to better health for Victorian children.***

Author: Kate Lucas, Director Centre for Health Analytics & Professor Jim Buttery, Professor of Child Health Informatics, The University of Melbourne



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