

# Advancing Australia's e-health agenda

Impact  
Case Study

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## CSIRO tools connecting and improving electronic patient information across the health system

### the challenge

Australia's health care system faces many challenges. One is the increasing demand for clinical information to be shared between individual health practitioners, health care provider organisations and state/territory health departments. Patient data is often captured in disparate electronic systems, different formats, and described using different clinical terminologies or "languages". This makes it difficult for computers to process and combine the information.

The National e-Health Transition Authority (NEHTA) was established to tackle this challenge and design the information standards for electronic health information to be shared securely. A key requirement was to develop standard clinical terminology to describe the care and treatment of patients, to allow full interoperability between electronic health systems.

### the response

CSIRO research is supporting the goal of health data interoperability and more broadly the National e-Health Strategy, by developing innovative tools and technologies for use in electronic health and medical records systems. CSIRO informatics researchers have created solutions and tools that underpin the continued development of the international Systematised Nomenclature of Medicine-Clinical Terms (SNOMED CT) and its implementation for use in Australia. The tools allow improvements in the use, interoperability and effectiveness of patient data captured in electronic medical records.

### the engagement

The clinical terminology tools were developed at the Australian e-Health Research Centre (AEHRC), a joint venture between CSIRO and the Queensland Government. The adoption of research outputs was enabled through collaboration with external bodies, such as NEHTA, the International Health Terminology Standards Development Organisation (IHTSDO) and Queensland Health. The AEHRC is now working with software vendors to embed the tools throughout the health system.

### the impact

A major impact from using these tools, as part of a broader e-Health platform, is the direct improvement in efficiency in Australia's health system. With data seamlessly shared between health service providers, Electronic Health Records are expected to provide a benefit to Australia's health system of up to \$4.7 billion per year<sup>1</sup>, largely due to improved identification of the most effective treatment and reducing unnecessary services.

Making patient information more accurate and available can also reduce medical errors and improve patient outcomes. Patients will benefit through reduced human error, fewer adverse effects and improved patient safety from the use of a standard and contemporary clinical terminology. The total value of attributable impact on both improved health outcomes and reduced system costs resulting from CSIRO's Clinical Terminology Tools at full maturity is estimated at \$161.9 million per year<sup>2</sup>.

<sup>1,2</sup> Deloitte Access Economics. 2014. Evaluation of CSIRO's research impacts – Impact Case Studies



contact us

FOR FURTHER INFORMATION  
Dr David Hansen  
CEO of Australian e-Health Research Centre

t +61 7 3253 3610  
e David.Hansen@csiro.au

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