

Building an Integrated Information Management System for Translating Evidence into Clinical Practice

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Objective:

To provide information management solutions that assist in delivering safe and high quality clinical care and that also provides for the monitoring and reporting of clinical performance.

Methods:

The Towards a Safer Culture (TASC) Project is a joint initiative between the Clinical Excellence Commission (CEC) and the Royal Australasian College of Physicians (RACP). The aim of TASC is to ensure that all patients presenting to emergency departments in the 30 participating hospitals across New South Wales, Australia, with chest pain or stroke are assessed, diagnosed and treated according to the best available evidence.

TASC is implementing the methodologies of evidence-based medicine and clinical practice improvement (CPI) to enable clinicians to embed best practice routinely in clinical care.

The TASC project aims to initiate changes in the system of care through the implementation of specific clinical pathways with distinct levels of risk to guide the most appropriate evidence-based care for each patient.

The demand for timely and accurate clinical information within the health system to support improved health outcomes is increasingly being recognised.

The TASC Online System was jointly developed by the TASC Management Team and the NSW Department of Health in 2003. The TASC Online system is a centralised web-based measurement system accessible via a secure network to the participating hospitals. The use of computer form reader software to convert paper-based information into electronic data has simplified the process of recording clinical information. The TASC Online System provides a means to report performance and measurement of clinical outcomes and provides clinicians with web-based reports to facilitate CPI.

Results:

TASC is providing the stimulus for organisations to reallocate resources to affect change such as increasing the capacity for exercise stress testing. This is contributing to the average length of stay for ACS patients in a number of rural hospitals being reduced by two days; strongly reflecting improved secondary risk stratification.

In a number of rural hospitals the implementation of the ACS pathways, and the application of the risk stratification principles is resulting in more appropriate admissions and discharges with a resultant decrease in readmission rates (6.5% to 5.4%).

There has been a 50% reduction in patients with a diagnosis of stroke/transient ischaemic attack (TIA) receiving inappropriate food or fluids prior to speech pathology review in a metropolitan emergency department within three months following the implementation of the stroke clinical pathway. The rate of aspiration pneumonia at this same hospital over a twelve-month period July 2003 – 2004 has decreased from 24% to 6%.

CPI has facilitated increased use of aspirin (1999* 85%; 2003 87%; 2004 89%), heparin (1999* 64%; 2003 84%; 2004 90%), and beta-blockers (1999* 57%; 2003 85%; 2004 90%). * Baseline data from Heller et al (Med J Aust 2001; 174: 217-221).

Conclusions:

The TASC Project has been a catalyst to initiate changes in the system of care for the management of cardiac and stroke patients, with a focus on risk management and measurement of clinical practice.

A multidisciplinary and interdepartmental approach to managing patients is seen as an effective way of implementing change. Fostering a sustainable culture of evidence-based practice and clinical improvement requires ongoing clinical management and leadership, local team building, skills development and training.

Reference:

Heller RF, D'Este C, Lim LL, et al. Randomised controlled trial to change the hospital management of unstable angina. Med J Aust 2001; 174: 217-221.

