

CEC eChartbook Portal Extract

Executive Summary

eChartbook

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Across NSW, people want to be confident that they will get high quality, safe healthcare when they need it. Patients in need of immediate or ongoing services want compassionate care that meets their needs. Their healthcare providers want to offer the best possible care. All these people share a need for information, so that they can be assured that care is high quality, they can make informed choices and work to make services demonstrably better.

NSW has one of the better public healthcare systems in the developed world. Its doctors, nurses and other clinical staff are well trained, skilled, caring and dedicated. Each day thousands of people receive care in emergency departments and hospitals. In order to inform efforts to make healthcare demonstrably better and safer for patients, the Clinical Excellence Commission (CEC) put together a team of experts to create the *eChartbook*, aiming to:

- Provide an overview of trends in quality and safety across the NSW health system, to demonstrate improvements and identify areas requiring continued attention
- Offer insights that guide efforts to improve care
- Highlight variations in care and outcomes on the basis of geography or socioeconomic status
- Provide commentary on the findings, so that healthcare professionals across the State can use the data to guide improvement
- Report on the progress of key initiatives of the CEC and the Ministry of Health that address quality and safety issues.

eChartbook is a window into a complex system of care. Across the collection of indicators included, the CEC team and the Chartbook Advisory Group thought it important to offer a broad scope of information. From the charts presented through the eChartbook Portal, many insights emerged.

Initiatives in Safety and Quality

Between the Flags (BTF) The finding shows that there has been a significant inverse correlation between the Rapid Response Call Rate and the Cardiac Arrest Rate in NSW hospitals following the introduction of the BTF Program. This supports the premise that implementation of the 5 elements of the BTF program, including a consistent approach to the Clinical Emergency Response Systems, has had an impact on cardiac arrests in NSW hospitals. The BTF program has also highlighted the pre-existing barriers to escalation as evidenced by the CEC's 2012 Quality Systems Assessment (QSA) report which has identified the following barriers: team feel situation is under control and escalation not required; staff failure to recognise; not wanting to 'bother' doctors; and staff not knowing when to escalate. Further work is required in addressing these barriers to escalation which will need to include interventions that address culture, behaviour and teamwork.

Collaborating Hospitals Audit of Surgical Mortality (CHASM) The number of reported surgical deaths has increased from 2,171 in 2009 to 2,321 in 2011 and during this period percentage of completed surgical case forms (SCF) returned has also steadily increased from 61per cent to 68per cent. The rate of SCF returned widely varied across local health districts.

Special Committee Investigating Deaths Under Anaesthesia (SCIDUA) During the period 2008 to 2012, a total of 1,012 deaths were notified to SCIDUA. Of

these, 88 (8.7%) cases were deaths after sedation or related to anaesthetic factors. The total number of deaths and deaths after sedation notified to SCIDUA varied across local health districts.

Blood Watch Program Relative to the 2005/06 financial year red cell utilisation data for NSW public hospital overnight admitted patient episodes, in 2011/12 there was a demonstrated 12 per cent reduction in the rate of red cell transfusions administered per 100 episodes of care. The findings demonstrate an overall ongoing decrease (improvement) in both the number of red cell transfusion episodes and the red cell dose administered per episode.

Hand Hygiene Compliance In March 2013, the overall hand hygiene compliance for NSW was 79.6 per cent which represents a continuous improvement of over 17.8 per cent as compared to 61.8 per cent compliance in November 2009, when NSW joined the National Hand Hygiene Initiative (NHHI). The compliance rate significantly varies by healthcare worker groups across local health districts/networks. Doctors' overall compliance ranged from 50.6 to 82.3 per cent, with a NSW average of 66.5 per cent. The compliance for nursing/midwifery staff ranged from 72.0 to 87.9 per cent, with a NSW average of 84.2 per cent.

Incident Information Management System (IIMS) notifications The number of IIMS notifications which enable the follow-up of hospital incidents has increased each year since the system was established in July 2005. There is substantial variation in IIMS reporting rates across local health districts.

Medication Safety Self Assessment (MSSA) Program The MSSA program provides a framework to ensure the safe use of medicines. As at June 2012, 80.3 per cent of eligible NSW public hospitals were participating in the program. The lowest rates of participation are recorded for Illawarra Shoalhaven, while all eligible public hospitals in the Mid North Coast, Northern NSW and Far West Local Health Districts participated.

Sepsis During period August 2009 to August 2012, a total of 3851 sepsis cases were examined in 58 facilities across NSW local health districts. Patients with sepsis ranged from 3 days to 104 years old with 63 per cent of patients aged 65 years or older. Patients were triaged to all categories with 88 per cent receiving a triage category of 2 or 3. The time from triage or sepsis recognition to administration of the first intravenous antibiotics is measured over time and per facility. In summary, median time has steadily decreased from a maximum of 150 minutes in early 2011 (pre pathway) to 67 minutes in August 2012. The mean time to antibiotics has decreased from 242 minutes to 107 minutes in the same period.

Quality Systems Assessment (QSA)

- **Sepsis** Across NSW, at the clinical unit level more than 80 per cent of respondents treat or manage patients at risk of sepsis (often, sometimes or rarely). On average in NSW 73 per cent of facilities having a standardised approach to sepsis management and it varies across LHDs. About 60 per cent of departments/clinical units reported that they have developed guidelines/ protocols for the management of sepsis patients.
- **Delirium** The QSA 2011 survey revealed that across NSW 16 per cent of departments/clinical units managed delirium patients optimally and remaining 84 per cent needed improvement. More than half of the departments/clinical units indicated that they have developed guidelines/protocols in place for the safe management of delirium and nearly a third of the facilities had no guidelines at all. Two thirds of the departments/clinical units reported that there was a geriatric assessment team in their facility and 47.7 per cent of them were guided by a consultant geriatrician, this rate widely varies across LHDs.
- **Mental health** Across NSW, 73 per cent of departments/clinical units indicated the management of suicide risk could be improved. Almost half (51 per cent) of the NSW facilities reported

for having a standardised screening tool utilised when conducting a suicide risk assessment and this rate was higher in rural & regional based LHDs. About 36 per cent of facilities reported that staff skills required to manage suicidal patients was reviewed and this rates in metropolitan LHDs were below the state average. On average 51 per cent facilities have reported a comprehensive care plan was developed before discharge /transition of care and this rate was quite lower in rural LHDs.

- **Paediatric** More than three quarter (77.3 per cent) of NSW facilities either 'strongly agreed' or 'agreed' that overall the Between the Flag (BTF) program has benefitted patient safety in their facilities. Across NSW, 64.8 per cent of departments/clinical units agreed that the 'blue zone' and more than 74 per cent of the facilities agreed that both 'yellow' and 'red' zone on the BTF chart has also assisted earlier detection or rapid response to manage of patients at risk of deteriorating.

Healthcare Associated Infections (HAI)

- **Central Line Associated Bloodstream Infection (CLABSI) in Intensive Care Units (ICU)** During the study period, adult ICU associated with CLAB infection rates dropped from 1.1 per 1000 line-days in January 2009 to 0.5 per 1000 line-days in December 2012. The annual CLAB infection rate also dropped from 1.4 per 1000 line-days in 2008 to 0.30 per 1000 line-days in 2012 (absolute number of annual infections dropped from 125 cases in 2008 to 26 cases in 2012).
- **Staphylococcus Aureus Bloodstream (SAB) infections** During the period 2009-2012, the annual rate of SAB infection rate dropped from 1.5 per 10,000 occupied bed days in 2009 to 1.0 per 10,000

occupied bed days in 2012. Overall SAB infections rates in NSW were consistently below the Council of Australian Governments (COAG) agreed benchmark of 2.0 per 10,000 occupied bed days.

- **Methicillin-Resistant Staphylococcus Aureus (MRSA) infections** The rate of MRSA infection in NSW has declined from 0.56 per 10,000 occupied bed days in 2009 to 0.30 per 10,000 occupied bed days in 2012, the rates fluctuated by months.
- **Methicillin-Sensitive Staphylococcus Aureus (MSSA) infections** The rate of MSSA infection in NSW has declined from 0.92 per 10,000 occupied bed days in 2009 to 0.71 per 10,000 occupied bed days in 2012, MSSA caused more than 60 per cent of SAB infection episodes. **Sepsis** Across NSW, at the clinical unit level more than 80 per cent of respondents treat or manage patients at risk of sepsis (often, sometimes or rarely). On average in NSW 73 per cent of facilities having a standardised approach to sepsis management and it varies across LHDs. About 60 per cent of departments/clinical units reported that they have developed guidelines/ protocols for the management of sepsis patients.

Patient Based Care The overall participation rate on the number of nominated strategies within the Challenge that local health districts (LHDs) are working on is high. Up to June 2013, 13 (out of 15) NSW LHDs, and 2 (out of 3) specialty networks have formally signed up to The Patient Based Care Challenge and have identified key areas of focus for 2013/14.

Falls-related hospitalisations In NSW, falls-related hospitalisations for those aged over 65 increased from 5,409 per 100,000 population in 2009 to 6,038 in 2011. The rate of falls-related hospitalisations for females was higher than males and the rates varied across NSW local health districts.