

# Addressing Systemic Errors on a State-wide Basis

## NSW Health Deployment Details

Version:	AIMS3
Database software:	Microsoft SQL Server
Hardware:	Dual Xeon processors, 8 GB RAM
Incident Notification via:	Web Form for all incident types, Call Centre for Complaints, paper forms in limited use
Data sets collected:	Complaints, patient incidents, staff/contractor/visitor incidents
Potential incident notifiers:	108,000 (all NSW Health staff)
Staff with incident management responsibility:	30,000

**The Challenge** - achieve systemic improvements to clinical quality and safety across the New South Wales (Australia) public health system.

## The Solution

In 2004, recognizing the importance of systemic improvements to clinical quality, the NSW Government established the NSW Patient Safety and Clinical Quality Program. Under the Program all 220 NSW public hospitals are required to report to the NSW Department of Health serious incidents, mishaps or events resulting in preventable harm.

The Clinical Excellence Commission (CEC) is a major component of the NSW Patient Safety and Clinical Quality Program and was established in 2004 to build on the work of the Institute for Clinical Excellence in promoting clinical excellence in the NSW health system. The CEC core mission is to identify issues of a systemic nature that affect patient safety and clinical quality in the NSW health system and develop and advise upon implementation strategies to address these issues. Further detail on the functions of the CEC can be found at [www.cec.health.nsw.gov.au](http://www.cec.health.nsw.gov.au)

## NSW Health Profile

Population served:	6.7 million
Area:	312,500 square miles
Patient Interactions: (out-patient)	24 million annually
Admissions: (hospitals & facilities)	1.5 million annually
Total staff:	108,000
Sites:	880
Hospitals:	220
Comprised of:	8 Area Health Services the Ambulance Service of NSW the Children's Hospital at Westmead Justice Health

## Objectives

One key objective of the Patient Safety and Clinical Quality Program is to achieve notification and review of all incidents, so that appropriate management, education and remedial action can be applied across the NSW health system. Within this framework, related objectives include:

- All incidents classified into four levels: Severity Assessment Code (SAC) 1 to 4. Root Cause Analysis (RCA) conducted on all SAC1 (serious incidents)
- Develop a culture of openness in which incidents are recognized and reported
- Prevent re-occurrence of preventable incidents
- Increase the rate of notification of incidents
- Apply a bottom up/top down approach to improvement

## NSW Health Patient Safety and Clinical Quality Program

At the heart of the Patient Safety and Clinical Quality Program is the NSW Incident Information Management System (IIMS). The software tool used by IIMS for incident collection, classification, management and analysis is AIMS, from Patient Safety International.

All staff (108,000) received basic training on recognizing incidents and how to report the different types (patient/staff/contractor/visitor/complaints) in AIMS. Employees with responsibilities beyond initial incident notification were assigned additional on-line training according to their particular roles. Thirty thousand employees received training in incident management and over 3,500 staff received specialized incident investigation training known as Root Cause Analysis (RCA). Emphasis was placed on appreciating and understanding the systemic nature of many problems. Training was delivered in a variety of ways including on-line, CD-ROM and by video and face to face presentation.

Grouping incidents by severity is an important part of the way NSW Health approaches and rationalizes incident management. Since 2004 NSW Health has advanced its understanding of the causes of incidents by performing Root Cause Analysis of all SAC1 incidents.

## Analysis and Feedback

During the six-month rollout, from limited through to full deployment in June 2005, monthly notifications increased steadily. Notifications have now stabilized at around 9,000-12,000 per month.

This growing body of data has great value for characterizing rare and complex incidents and as well as getting a more accurate picture of the frequency and nature of common incidents. The CEC has completed analysis across the full data collection and makes monthly reports that include information on principal incident type and severity. The CEC also uses AIMS data to provide advice back to the Area Health Services. Along these lines, a small number of clustered events have been identified by the CEC; these events have been referred back to Area Health Services for further investigation.

Findings from analysis of the first six months of AIMS data show:

- Falls incidents are the most prevalent incidents reported
- Medication incidents are significant and that there is a pattern of occurrence coinciding with particular times of the day
- Clinical Management Incidents are the most prevalent when risk adjusted by severity

## AIMS - Product Overview

The AIMS software, for incident and risk management, is a tool that provides practical and actionable knowledge on which to base corrective strategies. AIMS is used by 54% of the Australian public health system, with sites in the US and New Zealand, and incorporates a structured classification system recognized by the US Institute of Medicine and the World Health Organisation.

## Adverse Events - Sizing the Problem

Applying research data, the approximate cost in bed days, of adverse events in NSW is 1.065 million additional bed days annually. As approximately 50% of adverse events are considered preventable, potential annual savings are in the order of \$US197 million. A tool like AIMS that brings together information about clinical incidents, staff incidents, complaints and risks for coordinated management and analysis of underlying causal factors is one very important part of developing corrective strategies to reduce avoidable harm.

## References:

Wilson RM, Runciman WB, Gibberd RW, Harrison BT, Hamilton JD. **Quality in Australian Health Care Study**, Med J Aust 1995; 163 (9):458-71

**Patient Safety and Clinical Quality Program: first report on incident management in the NSW public health system 2003-2004.** NSW Department of Health. January 2005.

**Patient Safety and Clinical Quality Program: second report on incident management in the NSW public health system 2004-2005.** NSW Department of Health. November 2005.

For more information about NSW Health or the CEC:



### NSW Health Patient Safety and Clinical Quality Program

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### NSW Clinical Excellence Commission

web: [www.cec.health.nsw.gov.au](http://www.cec.health.nsw.gov.au)