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## **Identification of Potentially Preventable Complications using the Condition Onset Flag in Australia.**

### **Objective**

Documentation of Potentially Preventable Complications is now a possibility in Australia where the Condition Onset Flag indicator is mandated in all states and territories. This enables the establishment of Potentially Preventable Complications (PPC) rates and subsequent comparison to a California norm.

### **Methods**

We identified potentially preventable complications (PPC) from the diagnoses documented as arising during the admitted patient episode of care in Australia using a large sample of 803,000 admitted patient separations in 2007. Diagnoses and procedures were mapped to American ICD9CM codes and grouped with All Patient Refined DRGs (APR DRGs). 64 PPC classes were identified from all diagnoses that arose during the episode of care. Standardised complications rates were then computed adjusting for the casemix of the sample by APRDRG and subclasses of severity of illness (SOI) subclasses using the expected rates of PPCs from the State of California, 2007.

### **Results**

16,205 discharges in the Australian sample were found to harbor one or more PPCs, while 17,512 were expected if the rate was compared to a similar casemix from the California norm, the difference being -7.47%, equivalent to a standardised morbidity rate (SMR) of 0,935. The difference was much higher for medical cases with an SMR of 0,684, while the SMR for surgical cases were at 109,4. None of these differences were statistically significant at 95% confidence interval.

The rate of secondary diagnoses not present on admission was 6.66% in Australia (13,356 diagnoses) as compared to 7.68% in the California norm (950,143 diagnoses)).

### **Discussion**

Some of the differences in PPCs between Australia and California may be attributed to the relative distribution frequency of the diagnostic codes and their presence at onset. The hospital admission practices, particularly in relation to day only admissions are another point of difference between California and Australia. The differences may also be in part explained by the coding standards in each country.

### **Conclusions**

This study demonstrates the potential value of PPCs in Australia and also enables the identification of relevant issues for further investigation. These issues include documentation in the medical record, especially in relation to the condition onset flag, as well as reviewing clinical practice with the ultimate aim at improving the quality of patient care.