



Hospital Funding Policies: Hospital Quality and Nursing-Sensitive Adverse Events II

BCHeaPR Study Data Bulletin #21 (October 2013)

In April 2010, the activity-based funding (ABF) program was launched in BC, under the direction of the Health Services Purchasing Organization. One motivation of the initiative was to create financial incentives for hospitals to operate more efficiently and reduce the incentive to restrict services in order to meet budget targets.

A reoccurring theme for many opponents of ABF is that the financial incentives created by ABF could potentially motivate some hospitals to skimp on services to the point that quality of patient care suffers. Currently, empirical evidence from the literature and our analyses do not support this hypothesis, though the quality of hospital care should be monitored during the time when new incentives are being implemented (1–3).

One measure of hospital quality is the rate of adverse events associated with nursing care for medical patients. These events include urinary tract infections, pressure ulcers, in-hospital fractures and pneumonia. Across Canada, approximately 70,000 adverse events occur annually in hospitals (4).

ABF as currently implemented in BC does not provide direct incentives for improving quality of care, but any noticeable decline in quality (such as increased instances of adverse nursing-related events) would be cause for concern. The analysis that follows is conducted using data from the Canadian Hospital Reporting Project (CHRP).

Impact of the Incentive

Figure 1 shows the rate per 1,000 of nursing-sensitive adverse events for medical patients. There does not

What is this research about?

The CIHR-funded *BC Hospitals: examination and assessment of Payment Reform (BCHeaPR)* study examines the impact of activity-based funding on acute care hospitals and related services in BC. Over time, the study team will release analyses on the effects of the change in funding policies. Check www.healthcarefunding.ca for updates and policy implications.

appear to be a trend associated with the introduction of ABF in BC. In all health authorities except Vancouver Coastal Health (VCH), the rate of adverse events has increased over the three year study period. Fraser Health (FH) shows the largest increase, from 41.7 to 46 events per 1,000. Island Health and Interior Health show small increases, from 21.3 to 24.6 and 11.7 to 12.3, respectively.

Figure 1: Nursing-sensitive adverse event rate for medical patients, 2009/10 to 2011/12, for hospitals beginning activity-based funding in April 2010, by health authority

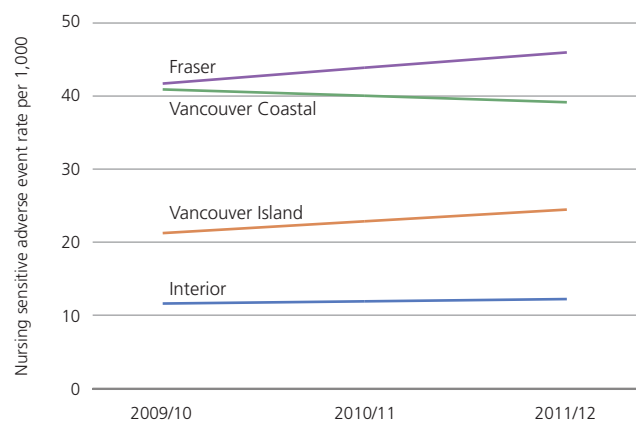


Figure 2 shows the rate of nursing-sensitive adverse events for medical patients for two BC ABF hospitals and two Ontario hospitals. Hospitals of the same size and classification have been randomly chosen from the CHRP for comparison. Each hospital is a large community hospital in an urban setting. In general, the selected Ontario hospitals (Grand River and Southlake Regional Health Centre) have higher rates of nursing-sensitive adverse events for medical patients than the BC hospitals. For 2011/12, Grand River has the highest rate of nursing sensitive adverse events for medical patients, at 42.9 per 1,000 patients. This is followed by Southlake Regional Health Centre with 32.8 per 1,000, Abbotsford Regional with 21.3 per 1,000 and Nanaimo Regional with 23.5 per 1,000.

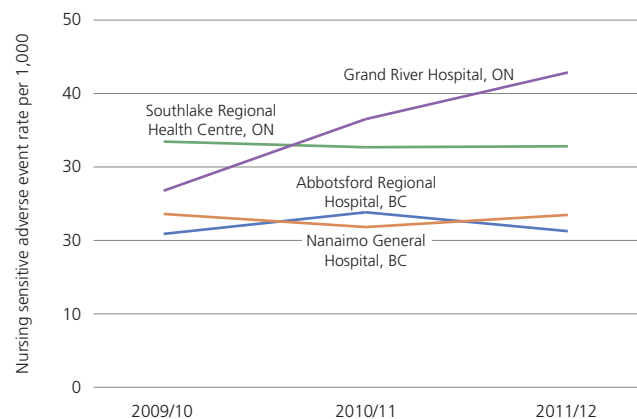
Conclusion

In BC, descriptive analyses of the data do not support an association between the introduction of ABF and a change in rates of nursing-sensitive adverse events for medical patients. While rates have been increasing in most hospitals and health authorities and should be monitored, these findings may mask effects attributable to complex cases or underlying differences in patient case mix. This project will continue to calculate and report on changes in nursing-sensitive adverse events for medical patients on a periodic basis.

Technical Notes

Hospital data are from the *Canadian Hospital Reporting Project* (CHRP). CHRP *technical notes* are available. Hospitals with missing values were excluded from the analysis. St. Paul's Hospital and affiliated facilities are excluded from CHRP.

Figure 2: Nursing-sensitive adverse event rate for medical patients, 2009/10 to 2011/12, select large, urban community hospitals in BC and Ontario



References

1. Busse R, Geissler A, Quentin W, Wiley M. *Diagnosis-Related Groups in Europe: Moving towards transparency, efficiency and quality in hospitals*. 1st ed. Maidenhead: Open University Press; 2011.
2. Keeler EB. *What proportion of hospital cost differences is justifiable?* J Health Econ. 1990 Nov;9(3):359-65.
3. Kahn KL, Rubenstein LV, Draper D, Kosecoff J, Rogers WH, Keeler EB, et al. *The effects of the DRG-based prospective payment system on quality of care for hospitalized Medicare patients. An introduction to the series*. JAMA. 1990 Oct 17;264(15):1953-5.
4. Baker GR, Norton PG, Flintoft V, Blais R, Brown A, Cox J, et al. *The Canadian Adverse Events Study: the incidence of adverse events among hospital patients in Canada*. CMAJ. 2004 May 25;170(11):1678-86.

How to cite this material:

Sutherland J, Liu G, Repin N, Crump T. Hospital Funding Policies: Hospital Quality and Nursing Sensitive Adverse Events II. BCHeaPR Study Data Bulletin #21 (October 2013). Vancouver: UBC Centre for Health Services and Policy Research; 2013.

Contact: Nadya Repin
 Centre for Health Services and Policy Research
 University of British Columbia
nrepin@chspr.ubc.ca
www.healthcarefunding.ca | www.chspr.ubc.ca