



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

BCHeaPR Study Data Bulletin #17 (June 2013)

In April 2010, an activity-based funding (ABF) program was launched in BC under the direction of the Health Services Purchasing Organization (HSPO). One motivation of the initiative was to create financial incentives for hospitals to operate more efficiently by allocating funding based on the type and volume of services provided—thus reducing the incentive to restrict services in order to meet budget targets.

It has been argued that the financial incentives created by ABF could, perversely, motivate hospitals to skimp on services to individual patients in order to increase volume overall, to the point that quality of care could suffer. Currently, empirical evidence does not support this hypothesis, though the quality of hospital care should be carefully monitored during the implementation period of new incentives (1–3).

One measure of hospital quality is the rate of adverse events associated with nursing care for surgical patients. These events include urinary tract infections, pressure ulcers, in-hospital fractures and pneumonia. Across Canada, the rate of nursing-sensitive adverse events is approximately 36 per 1,000 surgical patients (4).

While ABF as currently implemented in BC does not provide any direct incentives for improving quality of care, any noticeable decline in quality (such as increased instances of nursing-related adverse events) would be cause for concern.

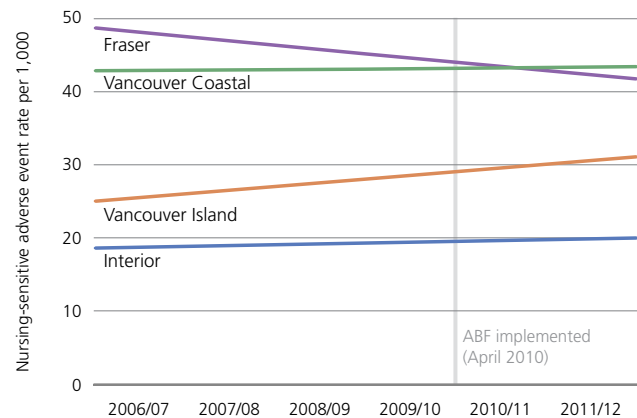
### Impact of the Incentive

Figure 1 shows the rate of nursing-sensitive adverse events per 1,000 for surgical patients across BC health authorities.

### 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](http://www.healthcarefunding.ca) for updates and policy implications.

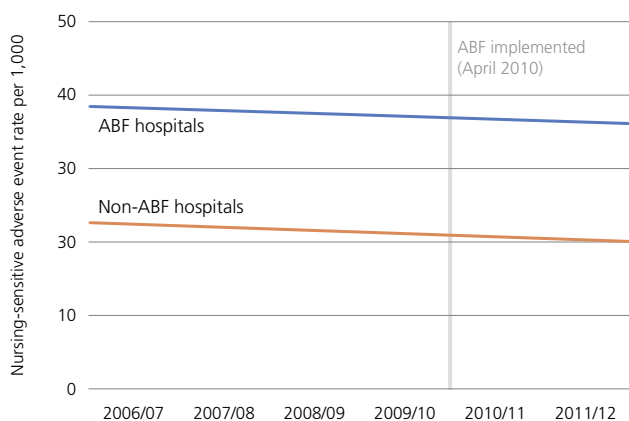
Figure 1: Nursing-sensitive adverse event rate for surgical patients, 2009/10 to 2011/12, for hospitals beginning activity-based funding in April 2010, by health authority



There does not appear to be a trend associated with the introduction of ABF. In all health authorities except Fraser Health, the rate of these adverse events has increased over the past three years. Vancouver Island Health saw the largest increase, from 25.1 to 31.1 events per 1,000. Vancouver Coastal Health and Interior Health saw small increases, from 43.0 to 43.5 and 18.7 to 20.1, respectively.

Figure 2 shows the rate of nursing-sensitive adverse events for surgical patients for those BC hospitals participating in the ABF program and those not. While instances of nursing-sensitive adverse events are declining in all hospitals, the rate of adverse events per 1,000 is much higher in ABF hospitals, at 36.1 per 1,000 compared to 20.0 per 1,000.

**Figure 2: Nursing-sensitive adverse event rate for surgical patients, 2009/10 to 2011/12, for hospitals beginning vs. not beginning activity-based funding in April 2010**



## Conclusion

In BC, the data do not support an association between the introduction of ABF and a change in rates of nursing-sensitive adverse events for surgical patients. The difference between rates for ABF and non-ABF hospitals should be further explored.

This project will continue to calculate and report on changes in nursing-sensitive adverse events for surgical patients on a periodic basis.

## Technical Notes

Hospital data are from the *Canadian Hospital Reporting Project (CHRP)*. Nursing-sensitive adverse events include urinary tract infections, pressure ulcers, in-hospital fractures and pneumonia. Rates were estimated using a latent variable analysis method, based on the observed hospital data. Hospitals with missing values were excluded from the analysis. St. Paul's Hospital and its affiliated facilities, an ABF hospital in Vancouver, BC, was not a CHRP project hospital; thus, it was not included in this analysis.

## References

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