



## Hospital Funding Policies: Average Length of Stay Update

BCHeaPR Study Data Bulletin #12 (January 2013)

In April 2010, an activity-based funding (ABF) program was launched in BC, under the Health Services Purchasing Organization (HSPO). One motivation for the initiative was to create financial incentives for hospitals to operate more efficiently by reducing the incentive to restrict services in order to meet budget targets. While the program is still in its infancy, the anticipated changes in hospital activity should, if international research holds true in Canada, lead to a reduction in average length of hospital stay (1–4).

The economic argument for this change is that hospitals funded under a global budget do not see a financial benefit to shortening average length of stay (ALOS), nor in discharging patients to more appropriate settings, like outpatient or home-based care. In this bulletin, we re-examine the use of hospital beds in BC, updating data provided for previous periods (*Data Bulletin #3*).

### Impact of the Incentive

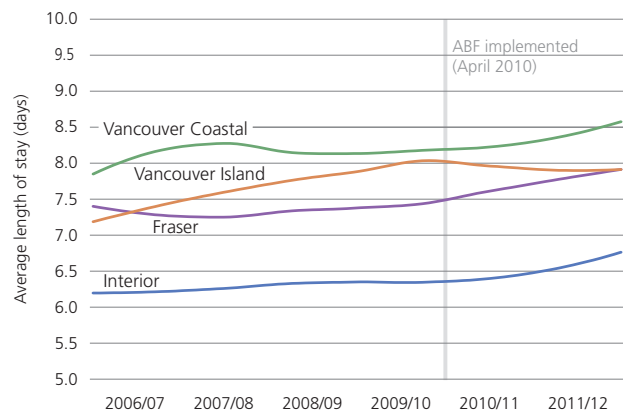
Figure 1 shows that ALOS has increased slowly over the last five years in all health authorities. Vancouver Island Health (VIH) has seen the largest increase, at 10%, followed by Vancouver Coastal Health (VCH) at 9.3%, Interior Health (IH) at 9% and Fraser Health (FH) at 6.9%. ALOS for each health authority also varies, with 2011/12 averages ranging from 6.7 days in IH to 8.6 days in VCH.

Figure 2 examines ALOS for the four largest hospitals in BC, with all four reporting an increase over time. Surrey Memorial Hospital has increased by 13%, Richmond General Hospital by 11.4%, St. Paul's Hospital by 10.2% and Vancouver General Hospital by 9.6%.

### 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.

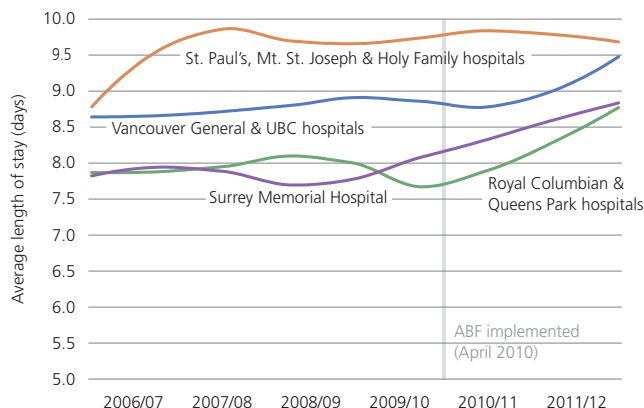
Figure 1: Average length of stay, 2006/07 to 2011/12, for hospitals beginning activity-based funding in April 2010, by health authority



Of these four large hospitals, all three located in VCH (Richmond, St. Paul's, Vancouver General) report an increase in ALOS larger than the overall increase for the health authority (9.3%). Surrey Memorial Hospital in FH reports almost double the overall increase in FH.

Continued >>

Figure 2: Average length of stay, 2006/07 to 2011/12, for four largest hospitals beginning activity-based funding in April 2010



## Conclusion

In BC, ALOS has shown a consistent, province-wide increase. This trend started before the introduction of ABF and has continued since. This runs counter to what we expected to observe, based upon reports from other jurisdictions that have introduced ABF for acute care. The potential causes for this difference in experience are not entirely known, but possible reasons include unmeasured changes in patient acuity, changes in patient mix, or changes in the type of post-hospital healthcare services (such as home care or residential care) available. It could also be that the impact of the incentive is not large enough to offset the factors behind the increasing trend.

This project will continue to calculate and report on changes in ALOS periodically.

## Technical Notes

The data source is the Discharge Abstract Database (DAD). The study population covers BC residents as well as non BC residents who received health care services in BC. The volume of cases includes both medical cases and surgical cases for inpatients. Only hospitals that

were included in the activity-based funding program are included. The sole hospital in Northern Health Authority that is using ABF is excluded.

The four largest hospitals in BC were selected according to the total inpatient cases in fiscal year 2011/12. Average length of stay (ALOS) = total number of days in hospital in a period / total number of cases in the same period.

## References

1. Duckett SJ. *Hospital payment arrangements to encourage efficiency: the case of Victoria, Australia*. Health Policy. 1995;34(2):113–34.
2. Moreno-Serra R, Wagstaff A. *System-wide impacts of hospital payment reforms, evidence from Central and Eastern Europe and Central Asia, Policy research paper 4987*. Washington, USA: World Bank; 2009.
3. Farrar S, Yi D, Sutton M, Chalkley M. *Has payment by results affected the way that English hospitals provide care? Difference-in-differences analysis*. BMJ. 2009;339:b3047.
4. O'Reilly J, Busse R, Häkkinen U, Or Z, Street A, Wiley M. *Paying for hospital care: the experience with implementing activity-based funding in five European countries*. Health economics, policy, and law. 2012;7(1):73–101.

## How to cite this material:

Sutherland J, Liu G, Repin N, Crump T. Hospital Funding Policies: Average Length of Stay Update. BCHeaPR Study Data Bulletin #12 (January 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](mailto:nrepin@chspr.ubc.ca)  
[www.healthcarefunding.ca](http://www.healthcarefunding.ca) | [www.chspr.ubc.ca](http://www.chspr.ubc.ca)