



## Hospital Funding Policies: Length of Stay for Cardiac Patients

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In April 2010, a patient-focused funding (PFF) program was launched in BC under the direction of the Health Services Purchasing Organization. A key element of the PFF program is activity-based funding (ABF), where a portion of hospital funding is tied to the volume and type of procedures conducted.

One objective of the ABF initiative is to create financial incentives for hospitals to operate more efficiently. If international experience holds true in BC, the program should be associated with a reduction in hospital's average lengths of stay (ALOS) (1–4). The economic argument for this change is that hospitals funded under a global budget do not see a financial benefit to shortening lengths of stay since empty beds will be filled with new, and more costly, patients (5).

Cardiac services are not targeted under the PFF program, but have long been funded by a similar ABF program administered by the Provincial Health Services Authority. Changes in parts of the funding system may have unintended consequences in other aspects of the system, and these should be monitored for negative changes that may be associated with the introduction of ABF. Thus, we examine the effects of ABF on length of stay for people with cardiac conditions. We present this data for two different age groups, to examine any differences in length of stay for patients age 65 and over and patients under 65.

### Impact of the Incentive

Figure 1 shows that ALOS for patients with cardiac conditions in Vancouver Coastal Health (VCH) has increased

### 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.

since 2006 and that this trend is consistent across age. ALOS for seniors is almost two days longer than for patients under 65, a gap which remains roughly constant over time. There is no clear change in ALOS associated with the introduction of ABF for either age group.

Figure 1: Average length of stay for cardiac patients, 2006/07 to 2011/12, for hospitals beginning activity-based funding in April 2010, Vancouver Coastal Health

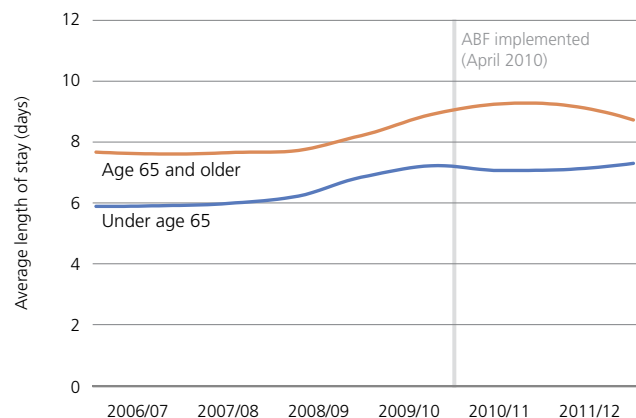
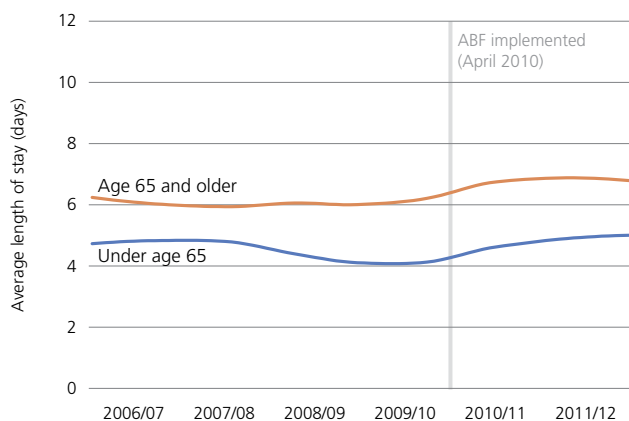


Figure 2 examines ALOS for patients with cardiac conditions in Vancouver Island Health Authority (VIHA). ALOS was quite stable until 2010, when it began to increase in both age groups. However, this increase seems to have begun before the introduction of ABF. As in VCH, seniors have an ALOS about two days longer than patients under age 65.

**Figure 2: Average length of stay for cardiac patients, 2006/07 to 2011/12, for hospitals beginning activity-based funding in April 2010, Vancouver Island Health**



## Conclusion

In BC, ALOS for patients with cardiac conditions is increasing. This trend began before the introduction of ABF. ABF has had no noticeable impact on ALOS for any age group, and differences between ALOS for these groups appear to be relatively consistent. This runs counter to what we expected to observe, based upon reports from other jurisdictions. The potential causes for this difference in experience are not entirely known.

Possible reasons for this increase in ALOS may include unmeasured changes in acuity of patients, changes in patient mix or changes in the type of post-acute health-care services available. The impact of the incentive may not be large enough to offset the factors behind the increasing trend.

## Technical Notes

The data source is the Discharge Abstract Database (DAD). The study population covers BC residents as well as non-residents who received health care services in BC. Patients who died were excluded from the analysis.

Only hospitals that were included in the activity-based funding program are included in the study. The Interior and Northern health authorities are not included because there were too few cardiac cases.

Average Length of Stay (ALOS) includes both the Acute Care Days (Ar\_Days) and the Alternate Level of Care Days (ALL Days) in hospital.

Cardiac patients were identified by CMG codes 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 175, 176, and 179 (ICD-10-CA).

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