Care Outcomes in Long-Term Care Facilities in British Columbia, Canada Does Ownership Matter?

**Background:** Publicly funded, long-term care in Canada is delivered through a widely variable mix of for-profit and not-for-profit facilities, with for-profit delivery accounting for 52% of long-term care facilities in Ontario and 15% in Manitoba. Previous studies have suggested that for-profit long-term care facilities perform less well in terms of quality of care, with 37 of 38 studies in one meta-analysis originating from the United States. Canadian experience suggests that non-profit facilities offer more nursing hours per patient but outcome information is sparse. This study from British Columbia investigates differences in hospital admission and mortality rates comparing for-profit and not-for-profit facilities.

**Objectives:** To compare health outcomes for residents of long-term care facilities in the Province of British Columbia, by facility ownership type.

**Methods:** Using data from April ‘96 to August ‘99 from the BC Linked Health Database, including hospital and vital statistics records, this retrospective cohort study examines six diagnoses (falls, pneumonia, anemia, dehydration, urinary tract infections, decubitus ulcers) considered to be reflective of quality of care. Facilities were classified on an annual basis as being not-for-profit or for-profit based on registered legal name and corporate registration. Non-profit facilities were further classified (hospital attached; regional health authority amalgamated; multi-site; single-site), as were for-profit facilities (chains, multi-site, single-site). Crude rates were calculated for hospital admission and mortality, overall and by facility type. Survival analysis, using Cox proportional hazard regression analyses, was used to estimate the risk ratio and 95% confidence intervals for each outcome of interest associated with ownership status. All rates were adjusted for key covariates, including age, gender, length of stay, hospitalization within the previous 30 days, and facility size.

**Results:** Characteristics on admission were similar for patients entering for-profit and not-for-profit facilities, except for extended care residents (highest level of care) who were more than twice as likely to be admitted to not-for-profit facilities. Crude hospitalization rates for each of the six diagnoses were considerably higher in for-profit as opposed to not-for-profit facilities. Crude mortality rates were higher in non-profit facilities, as expected due to the higher proportion of extended care residents. More importantly, adjusted hospital admission rates for pneumonia, anemia, and dehydration were significantly higher at for-profit versus not-for-profit facilities attached to hospitals, with risk ratios up to two-fold higher. Adjusted mortality rates did not differ by ownership status, despite a higher proportion of extended care residents in not-for-profit facilities.

**Limitations:** This is a retrospective study using administrative data and, compared to a prospective study, is at greater risk of confounding, even though efforts were made to reduce this
possibility. Bias may have been introduced based on characterization and geography of facilities selected. Misclassification of ownership status is also possible.

**Conclusions:** Ownership of facilities matters because it influences behavior, some of which may influence outcomes. Non-profit facilities are less likely to send patients to hospital for admission, particularly if they are connected to a hospital or part of a regional network. Although this paper does not explain why this occurs, work from these and other authors suggests that reduced hospitalization for non-profits may be a function of improved staffing ratios in not-for-profit facilities, as compared to for-profit facilities, where a proportion of revenues needs to be directed to profit rather than to care. Higher hospital admission rates from for-profit facilities may also be motivated by the need to preserve profit by cost-shifting higher need, and therefore more expensive, patients into hospitals should the cost of their care exceed the private payment for their care.

**Relevance:** Canadian evidence suggests that public investment in not-for-profit, long-term care facilities results in less need for hospitalization than would otherwise occur with for-profit facilities. As we have seen with acute care, for-profit long-term care is neither less expensive nor of better quality.