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## The Economic Impacts of ICD-9 to ICD-10 Health Indicator Coding System Transition in the Calgary Region

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### Introduction

Coded data serves a critical part in the process of identifying the resource allocation required for each department in a hospital and for research purposes. This paper attempts a cost-benefit analysis of the transition from ICD-9 health indicator coding system to ICD-10 coding system and quantify the economic impacts.

### Objectives and Approach

The hypothesis adopted by this paper is that the transition from ICD-9 to ICD-10 has been beneficial for the health system due better disease management, resulting in cost savings and facilitation of high quality health research. Analyzing the inflation-adjusted costs compared with the benefits accrued from implementing the new coding system would enable informed decision making for the stakeholders at government and other levels of health provision.

The methodology involves constructing 'benefit scenarios' via analysis of existing literature and interviewing coding managers; costs are evaluated using data collected on re-training coders and productivity losses during the transition phase.

### Results

An example of a benefit scenario would take the form of cost savings associated with correctly identifying people with diabetes (due to coded charts), hence resulting in a decline in blood sugar (HbA1c) levels via better disease management. This in turn may cause reductions in other high blood-sugar related diseases and thus increase efficiency for government funding in the health care sector. Improved data quality in ICD-10 is expected to have resulted in gains from specificity due to increased sensitivity of data classification and grouping. Actual cost of re-training of coders and ICD-10 software provider fees are expected to be higher than the costs anticipated before ICD-10 implementation. Productivity losses in the transition phase are expected to have declined as coders became more adept at coding.

### Conclusion/Implications

An economic evaluation proves to be a vital part of eliciting whether the transition to the newer method of coding, ICD-10, has been beneficial to the end users of the data. It is important to understand the efficiency of resource allocation to healthcare and the financial implications such investments entail.

