Measuring the impact of pay-for-performance in general practice

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A recent article by Jessica Greene ‘An examination of Pay-for-Performance in general practice in Australia’, reports a complex study of the effectiveness of the PIP program in improving care provided by GPs for asthma, diabetes and cervical screening. The study used a mixed methods approach, and multiple complex statistical tests were undertaken. One of the diabetes testing outcome measures caught our attention because the data used renders it invalid—the measure is the number of Medicare claims for HbA1c and microalbumin tests generated by GPs.

Medicare claims data do not accurately represent the pathology tests ordered by GPs. First, there is not a Medicare item number for each test type. Tests ordered by GPs are grouped by the pathologist for claiming purposes into their appropriate Medicare test item number, and many of these item numbers have labels such as ‘any one of the following…’, ‘any two of…’, ‘any three of….’ etc.

HbA1c and microalbumin tests are among the few tests that have their own item number, so theoretically one might think there should be a pathologist’s Medicare claim for each HbA1c test and microalbumin test ordered by a GP. This was clearly Greene’s assumption.

However, the Medicare funding system also incorporates an ‘episode cone’ whereby payment to pathologists for Medicare test items generated by each episode of GP-ordering is limited to the three most expensive items (after classifying each of the tests ordered into its correct Medicare item). In 2010, the Australian Association of Pathology Practices used data from pathology practices to investigate the extent to which tests conducted were ‘coned out’ of Medicare data. Overall, more than 30% of tests ordered by GPs had been ‘coned out’ and therefore did not have a footprint in Medicare claims data. The effect differed for individual tests—39–64% of HbA1c tests and 11-22% of microalbumin tests were coned out. Therefore Medicare data only partially represent these tests ordered by GPs.

The more tests/batteries of tests ordered and conducted per testing episode, the higher the chance that tests will be coned out of the claim. The BEACH (Bettering the Evaluation and Care of Health) program has shown that between the years covered by Greene’s paper (2001 to 2010), the average number of pathology tests/batteries of tests ordered in the management of diabetes per occasion of testing increased from 2.4 to 2.9 test/batteries—a 21% rise. The HbA1c and microalbumin items are relatively cheap compared many other MBS pathology items so it is likely that their test items will frequently be coned out of the pathologist’s claim and therefore not be recorded in the Medicare claims data. Further, it is highly likely that over the study period increasing numbers of these tests were coned out of the claims from pathologists to Medicare.

Greene found that there was an overall increase in GPs’ diabetes testing (HbA1c and microalbumin testing), but that there was no long term impact among a sample of GPs who took part in the PIP program. Specifically she found that after the introduction of the PIP payment for diabetes management, testing initially increased then levelled out. It is likely that coning explains this result, as the PIP payment for a 12-month diabetes cycle of care requires the GP to order multiple tests (i.e. HbA1c, microalbumin, total cholesterol, HDL cholesterol, and triglycerides)—the number of HbA1c and microalbumin tests claimed from Medicare would have increased initially.
and then levelled as the number of tests per order increased, leading to more tests being coned out.

Greene also incorrectly assumes that any claim for microalbumin tests was for the management of diabetes. While Medicare funds HbA1c tests only for patients with diabetes, microalbumin tests are not similarly limited. Medicare claims for albumin tests can be ordered in the management of many morbidities—a major limitation that should have been noted in Greene’s paper.

This is another example of the need to have a solid understanding of the limitation of administrative data collection systems such as the Medicare claims before using the data as a measure of effectiveness of a Government intervention.

For the benefit of readers interested in GPs’ ordering of HbA1c and microalbumin tests for Type 2 diabetes, Figures 1 and 2 describe the changes measured in the BEACH program since the 2001 introduction of the PIP incentives for GPs’ management of diabetes.

![Figure 1: GPs’ orders for HbA1c tests per 100 Type 2 diabetes management occasions, BEACH data 2000–01 to 2011–12 (with 95% confidence intervals and trendline)](image-url)
Figure 2: GPs’ orders for microalbumin tests per 100 Type 2 diabetes management occasions, BEACH data 2000–01 to 2011–12 (with 95% confidence intervals and trendline)

Suggested citation

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References