

## BIAS INTRODUCED BY HOSPITALIZATION EVENTS WHEN ANALYZING EPO DOSING PATTERNS

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Inpatient (IP) hospitalization events, which can reflect declining health status or acute events are common among Medicare beneficiaries. Studies designed to evaluate outpatient (OP) care must attempt to address the influence of these inter-current hospitalization events that can introduce bias, particularly information bias, since data normally collected from OP claims (e.g., injectable medications) are not captured from the IP setting. Therefore, it is necessary to consider this bias when using Medicare data.

This analysis uses the subset of Medicare patients receiving regular hemodialysis (HD), who experience frequent hospitalization events and receive consistent OP care to examine the influence of information bias.

We identified 199,532 prevalent HD patients as of January 1, 2004. Over 65% had at least one hospitalization during that year with an average length of stay of 7.3 days. To compare OP claims data during periods with a hospitalization to periods without one, we identified a subset of 8,481 patients who had no hospitalization events from January to March of 2004, but at least one hospitalization in April. We tracked hemoglobin (Hb) levels and EPO doses during these months as obtained from OP claims. As expected, Hb levels and total monthly EPO doses dropped during the month of the hospitalization (by 20.1% from the month before), yet EPO dose per administration did not (increased by 2%). This difference highlights the loss of information attributable to the IP stay when EPO dose is assessed monthly rather than per administration.

The occurrence of hospitalizations within this population results in missed information relating to EPO since administrations within an IP visit are not captured. Ignoring this bias can result in exposure misclassification. Possible remedies include using different data measures (like dose per administration) or imputing missing data.