Vascular Access and Infections from Dialysis Claims

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Introduction
- Vascular access infections are a common issue for patients receiving hemodialysis (HD).
- Until recently, the tracking of vascular access use was limited to data from the CMS-2728 Medical Evidence form, which indicates the vascular access used at initiation.
- Starting in July of 2010, outpatient (OP) dialysis claims indicate the vascular access used for dialysis, and whether or not there was a dialysis vascular access infection.

Methods
- Using the USRDS database, we identified HD patients who had OP dialysis claims during July through December of 2010 (the study period).
- Patients were classified as “incident” if day 91 of ESRD occurred during the study period, otherwise they were classified as “prevalent.”
- HCPCs modifier codes were used to identify vascular access and infection during the study period:
  - V5 = Catheter
  - V6 = Arteriovenous Fistula (AVF)
  - V7 = Arteriovenous Graft (AVG)
  - V8 = Vascular Access Infection

Results
- The study cohort included 177,875 prevalent patients and 11,290 incident patients.
- Among prevalent patients, only 10% used only a catheter, but over 7% of these patients experienced a vascular access infection. Approximately three-fourths of patients used only an internal access, with less than 1% of these patients experiencing a vascular access infection.
- Among incident patients, catheters were more common (33% of patients) than internal accesses (23%), but vascular access infections were more common among catheter patients (6%) than those with internal accesses (1.6%).
- After adjusting for other factors, patients with a catheter had significantly higher odds of a vascular access infection.

Conclusions
- This is the first opportunity to track vascular access use for chronic hemodialysis patients in the U.S.
- As expected, catheters are common among incident patients, while internal accesses are more common in patients who have been on dialysis longer.
- Vascular access infections occurred more frequently in those using catheters for part or all of the period.