Declining Utilization of IVC Filters: 
State Level Commercial Claims Perspectives from 2009-2015

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Background: IVC Filter Utilization

- In August 2010, the FDA issued a statement urging clinicians to remove retrievable IVC filters as soon as patients no longer required protection from pulmonary embolism.

- This was amidst a series of high-profile lawsuits aimed at manufacturers and physicians.

- These events contributed to an increased level of scrutiny on the appropriate use of IVC filters.
Background: Previous Research

- Aggregate national Medicare claims data have typically been used in radiology literature to track changing utilization.

- But, these provide information of limited generalizability because they:
  - Do not consider geographic variation
  - Provide no information about the many Americans covered by non-Medicare insurance.
Objectives

- To study recent changes in IVC filter utilization at the state level using commercial claims

- To compare these trends those of the national Medicare population
Methods

- A large national sample (~25 million 2015 beneficiaries) of commercial payer claims (the Truven Health MarketScan® Research Databases) was used.

- IVC filter placement procedures billed between 2009 through 2015 were identified for the 40 states (plus DC) allowed in our data use agreement.

- State level utilization rates were calculated using enrollment data.

- Medicare Physician and Other Supplier Procedure Summary Master Files and Medicare enrollment data (~34 million 2015 beneficiaries) were used to calculate national Medicare fee-for-service utilization rates and compound adjusted growth rates (CAGR).
Results: IVC filter placement procedures

- In the commercial insurance population, IVC filter placement utilization ranges were:
  - In 2009, a low of 8.3 per 100,000 covered person-years (ND) to a high of 73.0 (MI)
  - In 2015, a low of 0 (HI) to 48.1 (MI)

- In contrast, Medicare utilization rates nationwide were **198.6 in 2009 and 128.9 in 2015** (per 100,000 beneficiaries)
Results: Utilization Rates CAGR

- Between 2009 and 2015, state level utilization rates declined in 37 states and increased in 4, with CAGR lowest in HI (-100.0%) and highest in ND (+14.5%), with a national mean -7.7%

- For Medicare, the overall national CAGR declined 6.9%
Conclusions

- Utilization of IVC filters in the commercially insured population varies considerably across the US, **but overall is substantially lower than in the Medicare population.**

- As the appropriate use of IVC filters gains increased attention, further research must consider non-Medicare payer data and geographic variation.