Evidence Summary

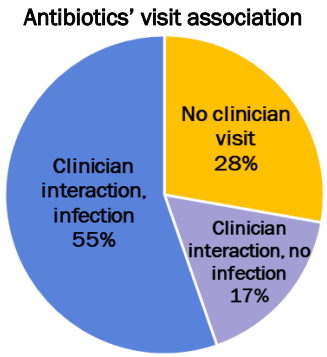
NON-VISIT-BASED ANTIBIOTIC PRESCRIBING (NVBAP)

Antibiotics are overprescribed and associated with adverse events, such as gastrointestinal, renal, and hematologic abnormalities. Antibiotic stewardship prevents antibiotic resistance and must address non-visit-based antibiotic prescribing, antibiotics that are prescribed in the absence of a face-to-face visit (e.g., over the phone, patient portal, etc.). This evidence summary provides detailed evidence on NVBAP prevalence from research conducted by leaders in NVBAP. The studies below informed the development of materials found at https://asp.nm.org/nonvisitbasedantibiotics.html to help clinicians prescribe non-visit-based antibiotics responsibly.

NVBAP with Medicaid Patients

This study measured the prevalence of NVBAP and non-infection-related antibiotic prescribing over a 10-year period (2004-2013) for vulnerable patients using Medicaid claims data.

- 298 million outpatient antibiotic prescriptions filled by a total of 53 million patients
  - 28% non-visit-based
    - Half of the 28% had claims for medical services that were not clinician encounters (most commonly laboratory testing or home services by attendants or nurses)
  - 17% not associated with an infection-related diagnosis (may indicate inappropriate prescribing or poor documentation)

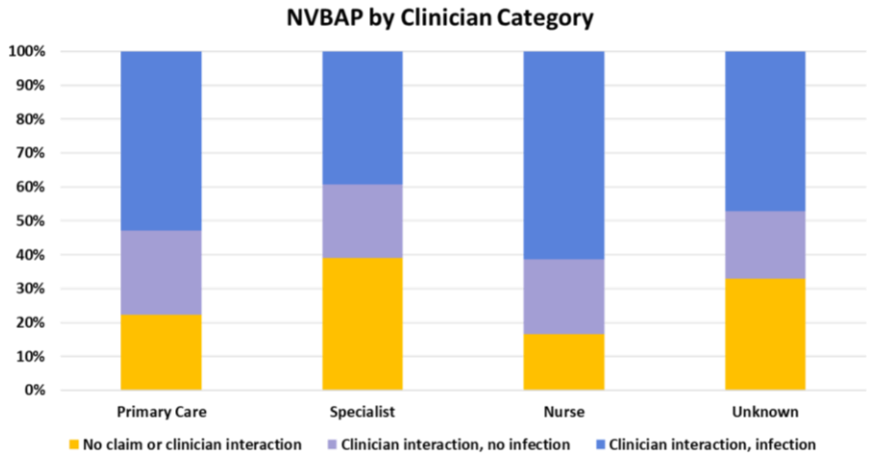


Fischer and Colleagues (Health Affairs, in press)

NVBAP Clinician Characteristics

Clinician characteristics data on NVBAP was examined using a large private US health insurance plan data over a 2-year period (2016-2018).

- 22 million outpatient antibiotic prescriptions filled by a total of 9 million patients
  - 31% non-visit-based
  - 22% not associated with an infection-related diagnosis
- NVBAP by provider type
  - Physician: 28%
  - Allied Health Provider: 33%
  - Unknown: 42%
- NVBAP by clinician category
  - Primary care: 22%
  - Medical/Surgical Specialist: 39%
  - Nurse: 17%
  - Unknown: 33%

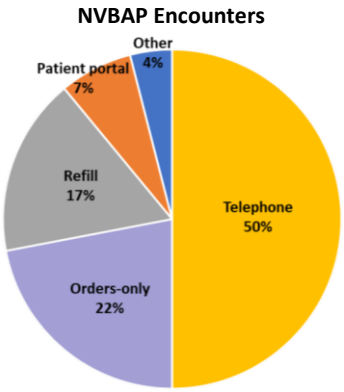


Fischer and Colleagues

NVBAP at an Integrated Health System Setting

This study measured the prevalence of NVBAP and non-infection-related antibiotic prescribing at a large integrated health system by using EHR documented visit types and categorizing antibiotics into infection-relatedness groups.

- 474,673 ambulatory, oral antibacterial antimicrobial prescriptions in a 3-year period
  - 19% associated with non-visit-based encounters
    - 50% telephone
    - 22% orders-only
    - 17% refill
    - 7% patient portal
    - 4% other (clinical support, EpicOnHand Encounter, outpatient testing, pharmacy consult, and letter)

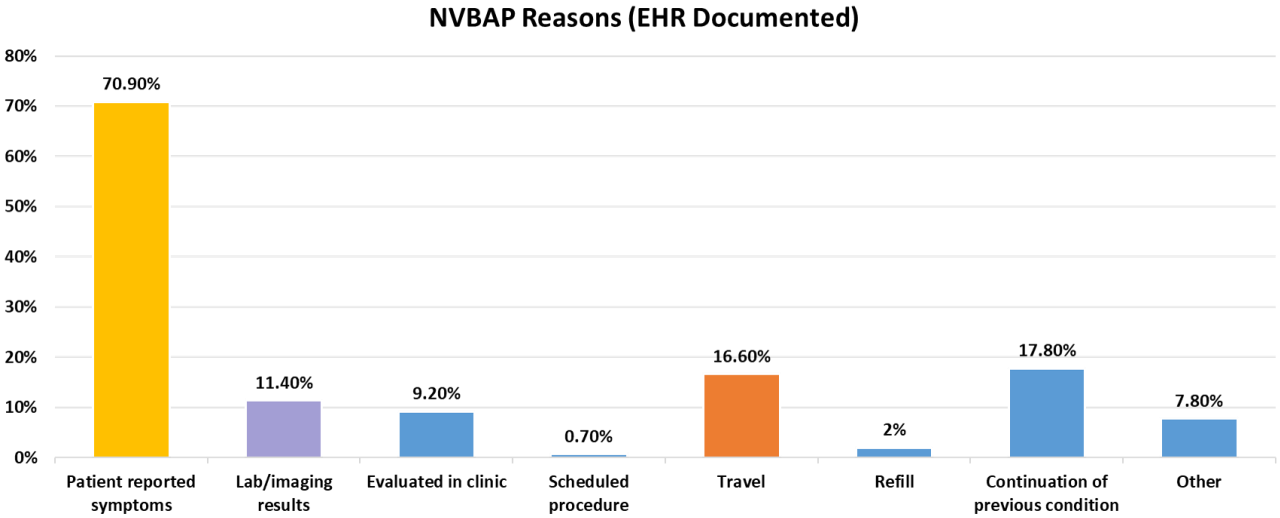


Brown and Colleagues

NVBAP Reasons

The reasons clinicians prescribe NVBAP vary greatly. The most common reasons documented in the EHR were patient reported symptoms, continuation of previous condition, and travel. When no EHR documentation was available, clinicians reported most common reasons for NVBAP relating to travel and family member prescriptions. The portion of appropriate vs inappropriate prescriptions is not known. Further research is need to learn about appropriateness and how inappropriate prescriptions can be reduced.

- EHR documentation of NVBAP reasons



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- EHR documentation absent of NVBAP reason
  - 19% related to travel
  - 19% related to order being for a family member
  - 18% the clinician made a diagnosis, but did not document it in the EHR

Brown and Colleagues

Visit https://asp.nm.org/nonvisitbasedantibiotics.html for educational materials to help clinicians prescribe non-visit-based antibiotics responsibly.