Doctor Shopping: Network Analysis of Healthcare Claims Data

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Doctor shopping = obtaining controlled substances from multiple health care practitioners simultaneously, exceeding the recommended dosage (CDC, 2014)

- Common (40%); indicator of escalation and OD
- Difficult to accurately identify, but is a fundamentally social drug seeking behavior
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Specific aims of the grant:

1. Improve the specification and predictive validity of doctor shopping indicators by incorporating network measures
2. Identify characteristics of doctor shopping patients, targeted prescribers, and the point of service to inform interventions
Data: Optum Clinformatics

- All health claims from 2007-2016 (quarterly; 40 obs)
  - Medical, pharmacy, facility, labs
- About 21M patients who ever had an opioid (~40% of total)
- Nationwide coverage with zip-5 data
- Ability to link family members
- Mortality data
- SES data
Ability to create networks through unique patient, doctor, family, or facility identifiers

- **Standard one mode network**
- **Two mode affiliation network**
- **Weighted one mode affiliation network**