IOWA HEALTH PROFESSIONS INVENTORY

— Integrated Tracking —

Shared Data Fields

Physicians

Physician Assistants

Dentists

Advance Practice Nurses

Physician Assistants

Advance Practice Nurses

Pharmacists

Pharmacists
IOWA PHYSICIAN INFORMATION SYSTEM

• Continuous inventory
• All Iowa physicians (MD/DO)
• Purposes:
  – characterize physician population
  – monitor trends
  – support and evaluate programs
  – conduct research
  – inform policy
  – produce data products/services
DATA FIELDS

• Name and practice address
• Degree (MD/DO)
• Unique ID numbers (3)
• Gender
• Birthdate
• Birthstate
• Medical college
• Specialty/subspecialty
• Residency/fellowship training
DATA FIELDS (cont.)

- Certification and recertification
- Professional activity
- Practice arrangement/relationships
- Worksites (principal/VCCs/satellites)
- History (temporal/dates of events)
- Clinical teaching/appointments
- Demographics: community/county
Why do doctors leave Iowa?

Can we actively change attrition? (personnel leaving)

• Can we find a ‘determining’ characteristic related to attrition?
• Maybe work environment?
• Or another controllable characteristic?
## View of data

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How do we quantify attrition in this data set? (or predict it)

• If it was a cross-section (i.e. single point in time), could think of logistic regression.

• Since we have information across time, perhaps we could think of this as a survival analysis…
Survival analysis

• Studies time to event (often, death)

• Subjects may not all join study at the same time.

• Censoring is an issue to consider...
**Right censoring**: know time of event is greater than some value, but do not know exact value.
• Let’s consider, ‘LEAVE IOWA’ = DEATH

• Now, we’re studying time until leave Iowa as a survival analysis.

• Kaplan-Meier estimator for survivor function...
About 51% leave by 15 years out.