EVALUATION OF THE IMPLEMENTATION OF A FOOD SAFETY INTERVENTION FOR FOOD PANTRIES

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*The contents of this presentation are my own and do not necessarily represent the views of the U.S. Department of Agriculture or the United States Government.
For 2015, ERS found that approx. 13.4% of Americans are food insecure (Coleman-Jensen et al., 2016)

USDA programs can help:
- Supplemental Nutrition Assistance Program (SNAP)
- Women Infants and Children program (WIC)
- The Emergency Food Assistance Program (TEFAP)
- Various school meals programs (National School Lunch Program, Summer Food Service Program, Special Breakfast Program)

Yet, this assistance can be insufficient for many families.
IN NORTH CAROLINA

• In North Carolina, the rates* are even higher:
  - Overall food insecurity rate: 19.3%
  - Child food insecurity rate: 27.3%
  - Emergency food providers in NC: 2,500+

*Data from Feeding America, 2011
EACH YEAR,

an estimated 48 million Americans contract foodborne illness (Scallan, 2011). To scale, that is more than 300,000 North Carolinians.
THE POLICY PROBLEM

There’s no policy, no regulation, for donated foods in North Carolina.
RESEARCH QUESTION

• Does the provision of food safety guidelines written for food pantries result in less risky operating procedures?
SAMPLING AND DATA COLLECTION
SURVEY INSTRUMENT

• Interviews and observations
• Pantries scored using a modified Food Establishment Inspection Report (based on 2009 Food Code)
GUIDELINES CREATION

- General food safety information
- Time-temperature control
- Handwashing
- Cross-contamination
- Assistance with written SOPs
- Food dating and the safety of using past-date foods
- Unsafe packaging
- Access to food recall information
INTERVENTION DESIGN

- Randomized intervention study
- Only includes pantries that distribute perishable and non-perishable food and store on-site (n=79)
- Links provided by email to those randomly selected
- Low likelihood of “spillover”
- Guidelines since provided to all participating managers
- Evaluation based on demerited points from Food Establishment Inspection Report (n=60)
EMPIRICAL STRATEGY

- Difference-in-difference model

\[ \gamma_{it} = \beta_0 + \beta_1 post_t + \beta_2 treat_i + \beta_3 (treat_i \times post_t) + Z_{it} \theta + \epsilon_{it} \]

- \( \gamma_{it} \) estimates the average effect of the modified Food Establishment Inspection Report scores of pantry \( i \) in round \( t \)

- \( post_t \) is a dummy variable equal to 1 for the period after the intervention has been distributed and 0 before distribution

- \( treat_i \) is a dummy variable equal to 1 for the pantries who received the intervention

- \( (treat_i \times post_t) \) is a dummy variable equal to 1 for second-round pantries that received the intervention
EMPIRICAL RESULTS

- Overall effect of guidelines on individual questions is null
- Statistically significant *Post* variables
- Food bank partnership matters
- Categorizing by theme
- When summed, overall scores lessened—but the intervention variable lacks statistical significance
- Lowered scores for pantries who self-reported video-watching: improved handwashing, clean surfaces, thermometer use, proper disposition of food, proper labels, less bare hand contact with RTE foods
SIGNIFICANCE + POLICY IMPLICATIONS

• Guidelines not reasonable means for improved behavior?
• Online might not be best venue for distribution
• No incentive to watch, learn, or implement guidelines
• Uncertain whether private charity has incentive to take precaution
• Continued risky actions without operational change
• Do we need a different system?
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