The Coleridge Initiative: Enabling State Data-sharing

JULIA LANE
THE COLERIDGE INITIATIVE
Professor Julia Lane

NEW YORK UNIVERSITY

WAGNER GRADUATE SCHOOL OF PUBLIC SERVICE, AT THE NYU CENTER FOR URBAN SCIENCE AND PROGRESS

NYU PROVOSTIAL FELLOW FOR INNOVATION ANALYTICS
Context
Secure Environment
Approach: Technical and Human

**Technical**
- Create secure environment where data providers can share their data across agency and jurisdictional lines
- Census and USDA Authorization to Operate; HHS in process

**Operational**
- Link disparate data
- Analyze data

**Legal & Practical**
- Document value associated with the data linkage
  - Consistent with the agency mission
  - Useful enough to engage decision-makers
Technical Approach: Five Safes

- **Safe Projects**
  - Approved projects, consistent with agency mission

- **Safe People**
  - Approved and trained researchers

- **Safe Settings**
  - Secure environment, GovCloud, FedRamp Moderate

- **Safe Data**
  - Deidentified Data

- **Safe Outputs**
  - Disclosure reviews and export controls

≈ SAFE USE
Five Safes in Practice

Administrative Data Research Facility

Context
- Secure Environment
- Data Stewardship
- Training
- Next Steps
Training
Training Program

![Diagram of training program with steps and tools used in data management and analysis.](image)

- **Formulate Problem**: Database, Text Files, Web Scraping, APIs
- **Get Data**: Database (Athena), R
- **Store and Link Data**: Record Linkage, SQL
- **Process Data**: SQL
- **Explore Data**: R
- **Deeper Analysis (e.g., modeling)**: R, Machine Learning, Visualization
- **Evaluate**: Machine Learning, Experiment Design
- **Communicate**: Inference

**Collaboration**: “shared” folders in your project

**Privacy, Confidentiality, Security**

Context Secure Environment Data Stewardship Training Next Steps
Work in Teams
Next Steps
MultiState Education – Workforce Portal
https://kystats.ky.gov/Reports/Tableau/2021_MSPSR
Contact and more information

Website: https://coleridgeinitiative.org/

Email
○ Julia.lane@coleridgeinitiative.org
○ julia.lane@nyu.edu

GitHub organization: https://github.com/Coleridge-Initiative
George Putnam
DIRECTOR OF LABOR MARKET INFORMATION
ILLINOIS DEPARTMENT OF EMPLOYMENT SECURITY
ECONOMIC INFORMATION AND ANALYSIS DIVISION
Unemployment Dynamics: Towards an Understanding of Local Unemployment Behavior

George W. Putnam, LMI Director

IL Dept of Employment Security
March 17, 2021
MidWest Collaborative

• It is us
  – IA, IL, IN, KY, MI, MO, NJ, OH, TN
  – Eight states have established their administrative data on the Coleridge data-analytic platform (Administrative Data Research Facility, ADRF)

• It is state-driven products
  (intrastate and interstate record linkage)
  – IL is leading unemployment to reemployment pipeline
  – KY is leading postsecondary education (including career technical), migration and workforce transitions
  – Data-analytic training programs

• It is a state-driven national collaborative
  – Network of regional collaboratives that share priorities and products within the national statistical system
Creating an Evidence-Based Framework for Workforce Boards: Training Class

Project Template: Describing Unemployment Insurance Claimants in Local Labor Markets

**Overarching Questions:** How can states best produce information that can be used by local workforce boards to help inform resource allocation for unemployed workers? What information is most useful for workforce boards for strategic resource planning and efficient resource allocation? What measures are most useful to local workforce boards and how do we characterize variation in those measures?

**Policy relevance: context of the analytical question**
The severity of the Covid-19 pandemic for the dislocation of workers is without precedent. The volume of claims filed for Illinois unemployment benefits in the first three weeks of the pandemic outstripped all of 2019. Moreover, the number of claims for benefits during the first five months of Covid-19 exceeded the combined annual total of the previous four years. Monthly job and labor force estimates, two well-known indicators of labor market conditions, underscore the economic implications of the pandemic effect. Between January (peak) and April (trough) 2020, Illinois employers reported 810,900 fewer jobs (a record decline of 13.2%) and 293,900 fewer participants in the labor force (a record decline of 4.5%). The extent of recovery to date from the April trough has been somewhat muted, only 45.7% of the job loss and 5.0% of labor force drop have been recovered.
States Participating in ADA Class
UI Portal Product Development

- Information gaps
  - Economic impact: local labor market and economy
  - Demographic, industry and occupation composition: Training programs
  - Reemployment dynamics: same or different employer/Industry

- Lessons learned from USDOL/ETA data analytic training
  - Goal: effective UI claimant intervention strategies and remediation
  - Understand the behavioral dynamic of unemployment to reemployment
    - Unemployment claims → individual claimant
    - Weekly cross-section of claims → weekly flows of claimants
Towards an Understanding of Local Unemployment Behavior

Requirement: evidence that is relevant, timely, and actionable

Requirement: integrated framework of unemployment, the labor market, and benefit program participation
Evidence on **Local Unemployment Behavior:** relevant, timely, and actionable

- **Person-based relevance**
  - What is the behavior of the claimant while collecting unemployment benefits?
  - Time stamp: benefit week when a claimant files a new initial claim
  - Context: cohort of claimants who share the same benefit year start/end date

- **Geographic relevance**
  - Local workforce boards are charged to remediate local unemployment
Evidence on **Local** Unemployment Behavior: relevant, **timely**, and actionable (2)

- High frequency indicators for regional economic conditions
  - Daily data
    - Employment (Homebase)
    - Consumer spending (Opportunity Insights)
  - Weekly data
    - Housing market (Redfin)
  - Bi-weekly data
    - Household pulse survey (US Bureau of Census)

- Propose: High frequency indicators for local unemployment dynamics
  - Weekly data
    - UI claims (USDOL/ETA)
Evidence on Local Unemployment Behavior: relevant, timely, and actionable (3)

• UI Claimant populations
  – Youth (<25 yrs old)
    • prior to Covid 4% of claimants, covid peak 12%, end of January 2021 11%
  – Disabled
    • prior to Covid 1.2% of claimants, covid peak 1.4%, end of January 2021 1.6%

• UI Claimant populations within industry
  – African-Americans within Admin/Support Services
    • prior to Covid 21% of Admin/Support (e.g., temp help) industry claimants, covid peak 31%, end of January 2021 37%
  – Health technicians within Health/Social Assistance
    • prior to Covid 21% of Health industry claimants, covid peak 36%, end of January 2021 24%
Evidence on Local Unemployment Behavior: relevant, timely and actionable (4)

• Understanding local unemployment behavior (relevant and timely)
  – Short-term spells; repeated spells; long-term spells
    • Requires person-based measures in cohort context articulated to local geography
    • Need weekly periodicity to benchmark relative to trends

• Implementing effective intervention strategies for remediation (actionable)
  – Local UI claimants
    • Highest impact subgroups in your local area?
    • How are interventions aligned with highest impact subgroups?
Towards an Understanding of Local Unemployment Behavior

Requirement: evidence that is relevant, timely, and actionable

Requirement: integrated framework of unemployment, the labor market, and benefit program participation
Local Unemployment Dynamics: Unemployment Behavior

• UI claimant persistence/attrition profile
  – Weekly progression based on benefit account depletion

• Potential measures
  – Weekly progression (duration) and proximity to exhaustion
  – Continuous (short-term, long-term) vs discontinuous unemployment spells

• Program implication: Trust Fund solvency forecasts
  – Benefits paid solvency forecast challenge
    • Weeks paid- UI claimant transition from state to federal unemployment assistance
    • Average weekly benefit amount- cohort composition
Local Unemployment Dynamics: Labor Market Behavior

- UI Claimant job attachment and earnings profile
  - Labor market outcomes prior to separation
  - Receipt of reemployment services and WIOA training within the weekly progression of unemployment
  - Labor market outcomes reemployment

- Potential measures
  - Multiple jobholding, job stability, full-quarter earnings
  - Wage replacement and geographic economic impact
    - Pre-separation wage/weekly benefit amount/reemployed wage

- Program implication: WIOA performance indicators
  - Program evaluation of reemployment services and WIOA training programs
Local Unemployment Dynamics: Benefit Co-Enrollment Behavior

• UI Claimant benefit profile
  – Links to other public benefit programs
  – Situate claimant in context of household

• Potential measures
  – Benefit program cost savings/expenditures matrix
    • Rows represent unemployment/labor market behavior
    • Columns represent benefit program behavior

• Program implication
  – Cost saving/expenditures due to unemployment behavior exhaustion of UI benefits by unemployed household adult
    • SNAP/TANF, State Medical Assistance Program
  – Cost saving/expenditures due to labor market behavior reemployment of unemployed household adult
    • SNAP/TANF, State Medical Assistance Program, Child-care subsidies
Robert McGough
DEPUTY STATE CHIEF DATA OFFICER, DATA WAREHOUSE LEAD
ARKANSAS DEPARTMENT OF TRANSFORMATION AND SHARED SERVICES
DIVISION OF INFORMATION SYSTEMS
Arkansas Unemployment Claims
Resource Planning Dashboard

ROBERT MCGOUGH
DEPUTY STATE CHIEF DATA OFFICER
DOL ETA Project

Goals
Provide workforce boards with measures that can be implemented for timely, actionable resource planning and allocation in a dynamic environment.

Arkansas Workforce Board Survey

- Agreed that:
  - Comparing existing workforce experience to more current demand projections would be beneficial
  - Analyzing the work history and demographics of the most vulnerable cohort would be helpful in resource planning
  - Analyzing both together would help establish local pipelines, business outreach strategies, and resource planning

- Added
  - The importance of real-time skills gaps analysis
  - Metro/city level data
  - Mapping of local programs and services to push the analysis towards additional resources
Arkansas DOL ETA Project Goals

- Aid Workforce Boards in identifying
  - What populations are at most risk of exhausting benefits?
  - Which industries/occupations/regions have more pre-exhaustion exiters?
  - Which industries/occupations/regions have more exhausted exiters?

- Evaluate additional claimant-level attributes
  - Exhaustion Status
  - Continuous / Discontinuous Spells
  - Weeks Paid / Remaining
  - Weeks Claimed / Unclaimed
  - Weeks Since Non-Exhausted Exit
  - Wage Replacement Rate

- Present risk in relation to programs and actionable strategies to inform resource allocation
Longitudinal View of Claimants

1) Select claimants by activity or remaining benefits in week

2) Calculate longitudinal metrics and variables based on benefit year start
Workforce Strategy Alignment

- Exhaustion Risk Indicators
  - Based on longitudinal analysis of evolving exhaustion and reemployment trends
  - Statewide and regional industry and occupation risk (at-risk industries)
  - Claimant characteristic risk (at-risk cohorts)
  - Risk by weeks remaining and spell characteristics
  - Composite subcohort risk (industry, occupation, claimant characteristic risk)

- Presentation
  - Program-aligned subcohort groupings (Youth, Adult, Older Individual/SCSEP)
  - Risk-ranked subcohort selection by weeks remaining (still actionable)
  - Allows for program and strategy-specific resource planning and prioritization by current risk and length to spell
  - Example: Job matching and business outreach for low risk early in spell versus cohort-tailored resourcing (Youth, Title I, SCSEP), employer-driven strategies, and in-demand program alignment for higher risk or closer to exhaustion
National Convening on Jobs Data for Evidence-Based Policy and Practice

• Hosted by Coleridge Initiative and NASWA
• 42 Arkansas Participants (Departments, Senate, Governor’s Office, Universities)
• Arkansas Breakout Sessions Input (Next Steps)
  • Smaller regions (Zip, Census, Opportunity Zone)
  • Add program participation (WIOA, SNAP, TANF, etc.)
  • Additional competencies and credentials (CIP) beyond highest level of education
  • Add family/household composition (single parents, kids in the home)
  • Add re-entering offender indicator
  • Substance abuse, literacy, homeless
  • Multi-state border connections
Questions?

ROBERT MCGOUGH
DEPUTY STATE CHIEF DATA OFFICER
ROBERT.MCGOUGH@ARKANSAS.GOV