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Assessment of Lists for Building a Sampling Frame of Academic Postdoc Employers

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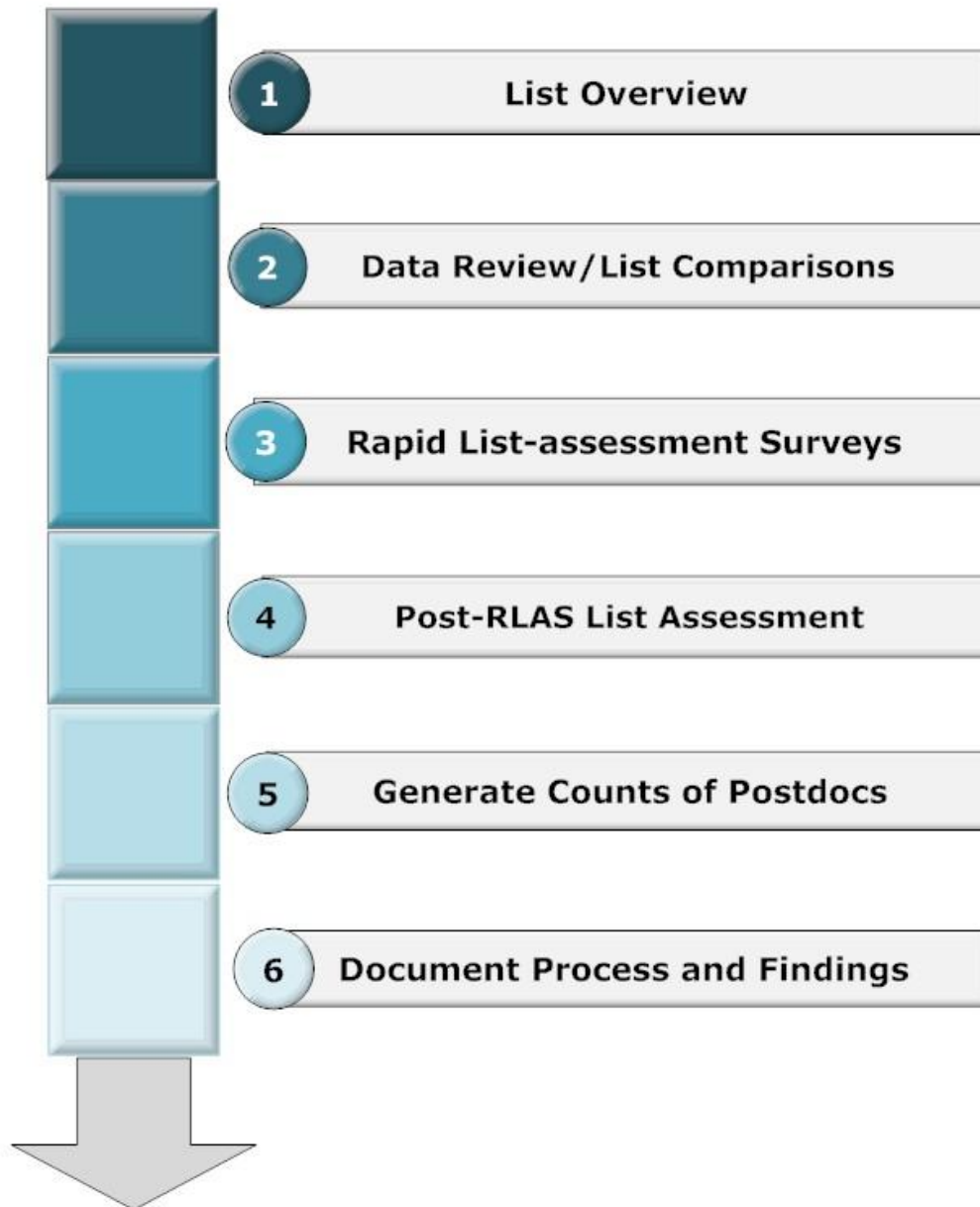


Today's Discussion

- Describe the objectives and tasks involved in the PDP list assessment protocol
- Provide a rationale for the population of interest
- Highlight an application of the list assessment protocol to developing a supplemental list of academic postdoc employers



List-Assessment Tasks



Task 1: List Overview

- Identify a potential list
- Summarize the origin of the list
- Explore the accessibility of the list: is it easy or difficult to obtain?
- Identify how the data are updated plus frequency & extent of updates
- Develop initial 'list-quality hypotheses'





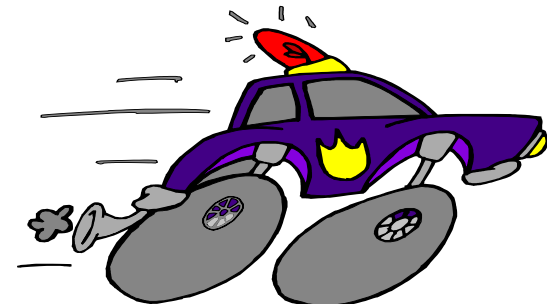
Task 2: Data Review/List Comparison

- Identify overlaps among data sources
- Document list successes and failures
 1. Costs
 2. Missing information necessary to inform coverage and eligibility
 3. Data on institutional/individual characteristics
 4. Possible sources to supplement data on the list
 5. Extent to which the file provides a unique contribution not already provided by other lists

Task 3:

Rapid List-Assessment Survey

- RLAS: **rapid** list-assessment survey
- Questionnaire and methodology **are tailored** to investigate the contributions of the list in a quick-turnaround fashion
- Purpose:
 - ▣ To further evaluate suitability of a list for obtaining postdoc data and contacting postdoc employers and postdocs





Task 3: RLAS (cont.)

Key interests from RLAS data:

- **Eligibility**
- Level of **effort** required to identify and count postdocs
- Comprehension of the term '**postdoc**'
- **Quality** of the list
- Ability to **acquire lists** of individual postdocs (for institutional lists)



Tasks 4 & 5:

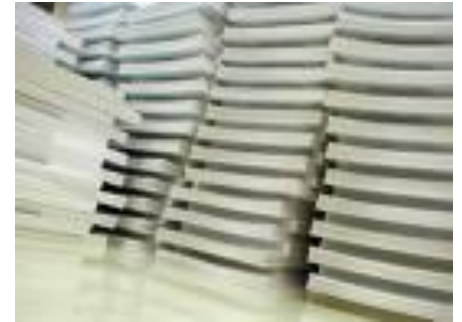
Post-RLAS List Assessment & Counts

- Revisit lists with new data provided by the RLAS
- Generate counts for each list:
 - Total count and counts by postdoc characteristics
 - Comparison counts to a “gold standard” list (a list considered most comprehensive for a given employment sector)
 - Comparison counts to other lists

Task 6: Document the Process and Findings

Document:

- (a) The assessment process
- (b) Quality of data
- (c) Provision of contact information
- (d) Gaps and overlaps with other lists
- (e) Unique challenges to working with the list
- (f) Unique contributions of the list
- (g) Counts of postdocs





Postdoc Academic Employer Sampling Frame

- Primary list of academic employers:
 - The Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS)
 - GSS 2006 reported 49,201 postdocs
- Why consider a supplemental frame?
 - Aim to enhance the counts of postdocs
 - Anecdotal evidence suggests that the count of postdocs from the GSS could be 20 – 40,000
 - Missing whole institutions?
 - Missing centers/schools/labs within institutions?



Supplemental List of Postdoc Academic Employers: List Overview

- Identified nearly 30 lists
- Examples of lists:
 - Student and Exchange Visitor Information System (SEVIS)
 - Labor Conditions Application (LCA)
 - American Association for the Advancement of Science (AAAS), membership list
 - Association of American Medical Colleges (AAMC) MD-PhD Programs
 - University Affiliated Research Centers (UARCs)



Supplemental List of Postdoc Academic Employers: List Overview

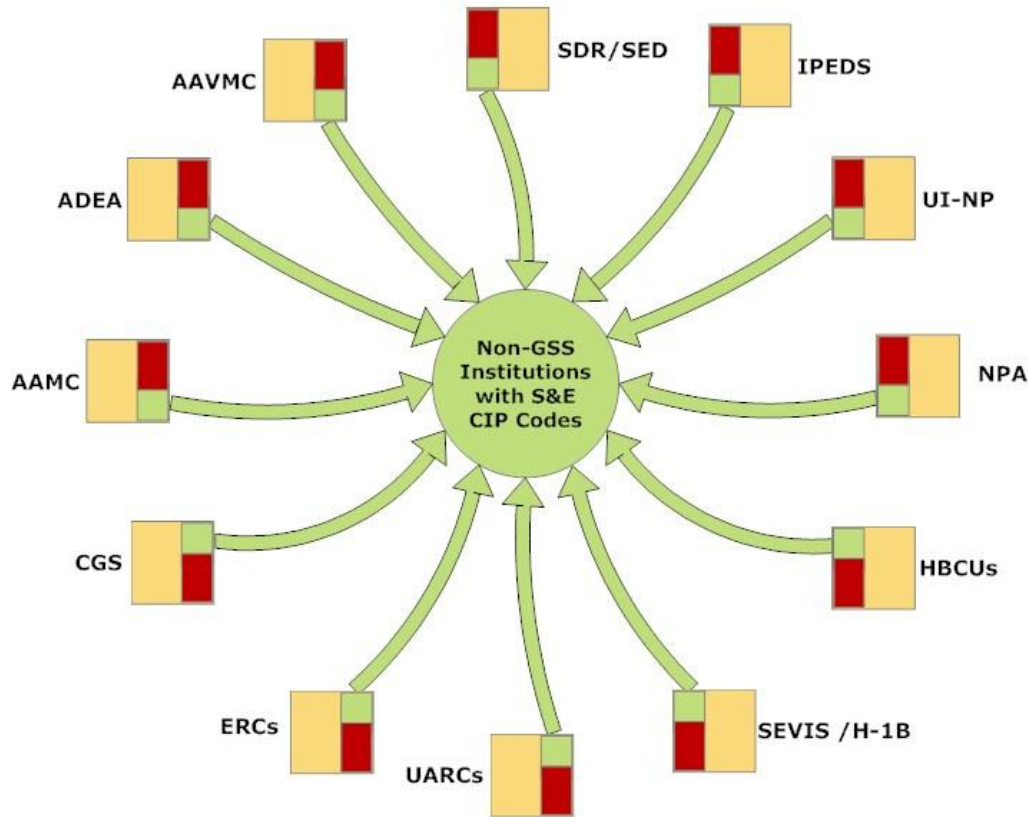
- Finds:
 - Considered a wide range of non-traditional data sources
 - Found a large number of possible lists
 - Many lists were easily accessible
- Challenges:
 - Lists that fill key gaps were more difficult to access or expensive
 - Lists maintained and updated in vastly different ways
 - Lists often had incomplete institutional information which required supplementing data from other sources (when possible)



Supplemental List of Postdoc Academic Employers: Data Review

- Compared each list to the GSS and to each other to determine degree of overlap and unique contribution
- Selected institutions relevant to the study using CIP codes in science and engineering
- Used traditional data-management techniques to merge lists:
 - Standardized the unit of analysis
 - Created a common variable to merge data records
 - Appended lists and de-duplicated entries

S&E Institutions



Categories of Institutions in Each List	
	Not in GSS: no S&E CIP Codes
	Included in GSS
	Not in GSS: S&E CIP Codes
SED:	Survey of Earned Doctorates (SRS)
SDR:	Survey of Doctorate Recipients (SRS)
IPEDS:	Integrated Postsecondary Education System
UI-NP:	Urban Institute Nonprofit Organizations (Academic)
NPA:	National Postdoc Association
HBCUs:	Historically Black Colleges and Universities
SEVIS:	Student and Exchange Visitor Information System
H-1B:	H-1B Visa Type Information
UARCs:	University Affiliated Research Centers
ERCs:	Engineering Research Centers
CGS:	Council of Graduate Schools
AAMC:	Association of American Medical Colleges
ADEA:	American Dental Education Association
AAVMC:	Association of American Veterinary Medical Colleges

*This diagram is intended to illustrate a methodological principle and not to accurately represent the proportion of institutional categories within each list.



Supplemental List of Postdoc Academic Employers: Data Review

- At the institutional level:
 - Found strong proportion of institutions in most lists already represented in the GSS 2005 frame
 - However, SEVIS and IPEDS provided significant number of institutions not in the GSS 2005 frame
- At the 'departmental' level:
 - Research centers and professional-degree schools showed mixed-representation in GSS 2005 frame whereby some lists not represented at all



Supplemental List of Postdoc Academic Employers: RLAS

- Conducted RLAS with lists of academic institutions and with lists that *included* academic institutions
- RLAS protocol tailored to list attributes:
 - Mixed mode approach
 - Networking through referrals to find the knowledgeable contact
 - Broadly defined postdocs to capture varying ways to identify postdocs
 - Queried institutions about quality dimensions



Supplemental List of Postdoc Academic Employers: RLAS

- Were the academic institutions on the lists eligible for the postdoc employer frame?
 - 52% (n=61) of the SEVIS institutions reported employing postdocs
 - 88% (n=40) of the AAVMC institutions reported employing postdocs
- Institutions that did not report employing postdocs: did they employ early career scientists with postdoc characteristics?
 - SEVIS: no
 - AAVMC: yes



Supplemental List of Postdoc Academic Employers: RLAS

- Did we identify a knowledgeable contact about postdocs?
 - SEVIS institutions and AAVMC schools had different starting points
 - In SEVIS, started with Office of the President
 - In AAVMC, started with Dean's Office, Veterinary School
 - Networking and referrals through survey contacts
 - Resulted in a knowledgeable contact about postdoc definitional and policy issues



Supplemental List of Postdoc Academic Employers: RLAS

- What did we learn about the quality of the data on the list?
 - Second contact who can tell specifics about the database maintenance and contents
- Able to provide postdoc counts?
 - Overall postdoc counts reported; counts by specific characteristics not reported
- Able to provide lists of individual postdocs?
 - 47% (n=61) of SEVIS and 46% (n=40) of AAVMC reported they could provide lists



Supplemental List of Postdoc Academic Employers: Bringing the Tasks Together

- RLAS provided additional information...
 - About eligible and ineligible institutions in the SEVIS list
 - Level of effort to reach a contact knowledgeable about postdoc-related data
 - Need to consider more than one knowledgeable person: one for definitions /postdoc policies, training issues, etc. and another contact to access detailed count data for postdoc demographics and funding
 - About the term “postdoc” and importance of providing alternative ways to define a postdoc in order to capture all eligible institutions



Take Away

- For the academic employers, tailoring works
 - Gained information about the lists that we would not typically learn until the screening stage of a survey