

**Postdoc Phase 2 Site Explorations
Final Report**



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Summary

The Postdoc Records Site Explorations were designed to help answer several questions that focused on procedural issues related to contacting an individual at academic and nonacademic institutions about postdoc positions. During the spring of 2007, The Survey Sciences Group, LLC conducted exploratory telephone interviews with 20 academic and nonacademic institutions to learn more about approaches to finding the knowledgeable contact and how information about postdocs is maintained. Key findings were:

1. Institutions are in flux with respect to postdoc policies and record-keeping. Some institutions have newly established postdoc offices, while other institutions are in the process of establishing postdoc offices, preparing to unveil formal policies, and making attempts to consolidate and streamline their record-keeping systems.
2. There is not one single “best entry point” that works across institutions. Institutions varied in their organizational structure, and the “knowledgeable contacts” were located in different offices depending on that organizational structure. Further, the knowledgeable source about postdocs is not readily known across offices in the institution.
3. Academic and non-academic institutions involve different contact protocols and varying levels of effort for reaching a knowledgeable contact about postdocs. This finding is tied to the one above on the impact of the organizational structure on record keeping practices.
4. For-profit organizations are hard to reach.
5. Don’t count out departments as best contact points. Academic institutions are characterized by extremely decentralized record-keeping which is reflected two ways: (1) different systems may be used to keep information about different kinds of postdocs and (2) departments may use title codes that are unknown to the central offices. A key finding of comparing site exploration interviews and RBS data is that departments use a variety of title codes, and that central offices typically name only a few of these when asked what title codes postdocs fall under.
6. Advanced contact letters are helpful in gaining cooperation at the institution and locating the knowledgeable contacts through local networks.
7. Knowledgeable contact persons vary by institution, but higher-level administrators often can and are willing to provide information about postdoc related policies and definitional issues.
8. A single person cannot always provide all of the postdoc information – there appeared to be a split between individuals with knowledge on the policies and definitions and individuals with the ability to provide actual counts. For this reason, it is likely that there will be a main respondent and another person designated to extract data.
9. Funding source influences postdoc position titles and where information about postdocs is stored. Postdocs are paid in a number of different ways, depending on funding source, which, in turn, affects which databases store information about them and the way these postdocs are coded in institutional databases.
10. Counts available at a point-in-time.

Site Explorations Final Report

Introduction

Study Background

The Postdoc Records Site Explorations were a series of telephone contacts with institutions from the academic and nonacademic sectors. The basic premise of the effort was to approach each institution from a variety of offices, based on knowledge gained from early background research on how postdoc data are organized in typical organizations, and to follow leads to one or more knowledgeable sources of postdoc-related data. The overarching goals were to: (1) collect information to inform methodologies to locate and recruit the best respondents within institutions and (2) further explore themes in postdoc definitions.

Hypotheses / Questions

The Postdoc Records Site Explorations were designed to help answer the following questions:

1. What is the best entry into an institution? “Best entry” can, in part, be defined as the path of least resistance or most direct route to the knowledgeable source of postdoc-related data.
2. Who is the most knowledgeable contact for providing postdoc-related data?
3. Are the postdoc counts at each of the institutions’ entry points available, and, if so, what are they?
4. Is there more than one possible knowledgeable contact for providing postdoc-related data?
5. Once the most knowledgeable contact is identified, what materials /information can we provide to best support the respondents’ efforts in gathering and reporting the postdoc-related data?

The Postdoc Records Site Explorations were part of the larger Postdoc Data Project (PDP) effort. The PDP is a multi-year project aimed at determining the feasibility of gathering more in-depth information on Ph.D. and equivalent degreed postdocs across academic and nonacademic U.S. institutions.

Methodology

We conducted exploratory interviews with a total of 30 institutions—20 institutions from the academic sector (six with a medical center and three with a veterinary school) and eight institutions from the non-academic sector (including FFRDC’s and non-profit organizations) during the spring of 2007 (See Appendix for a listing of participating institutions). We attempted interviews with for-profit organizations but were unsuccessful in gaining access to talk with an individual.

Within academic institutions, we tracked paths to the knowledgeable source of postdoc-related data from an average of five entry points. An entry point was defined as a preselected office within the institution that we thought might have knowledge about postdocs (more details on entry points below). Within non-academic institutions, we typically approached one or two entry points, depending on what we learned as we explored the organizational structure and the available contact information provided on the institutions’ websites.

Selection of Institutions

We selected institutions with intent of capturing a variety of institutional types and structures. Starting with the PDP Phase One recommendations¹, we selected institutions from non-academic employment sectors and institutions with programs / centers that may have had a focus on professional degree areas, such as medical schools and veterinary schools. For all academic institutions we included a “Foreign Affairs Office” so that we could explore postdoc counting issues related to foreign-degreed postdocs.

We further capitalized on the GSS RBS study, Phase 2 PDP background research, and other activities that had identified institutional characteristics that may complicate the process of collecting data on postdocs, and thus contribute to reporting errors. These characteristics included the type of institution, such as centralized or decentralized record keeping practices; number of postdocs employed at the institution, and availability of postdoc policies and offices.

We took advantage of lists compiled for the focus group recruitment, the sample for the GSS RBS 2006 (although we avoided contacting the RBS respondent in the situations where the GSS RBS respondents reported they were the knowledgeable contacts about postdoc-related data), and a list of organizations and companies that posted job opportunities for postdoc positions on the American Association for the Advancement of Science (AAAS) careers website during the third week in March, 2007.

Within academic institutions, we approached the institutions through multiple offices and then followed the leads obtained from that entry point and subsequent contacts to the knowledgeable source for postdoc-related data. For some institutions, we were able to obtain an interview, even if we were recommended to another office; but for a majority of entry points that claimed to not be very knowledgeable, we were passed to another office without an interview.

For academic institutions, we learned from the GSS RBS and other PDP research efforts that directors or other staff members from Postdoc Offices, Offices of International Student Affairs, Offices of Institutional Research, Offices of the President, Human Resource Departments, and medical centers may be knowledgeable about postdoc-related data, and thus, potentially good entry points for the site explorations. We started with this list and searched university websites for specific contact people within such pre-designated offices. These searches often turned up additional “entry points,” such as the Office of the Vice President for Research, the Office of Research Administration, and Academic Affairs.

For nonacademic institutions, we anticipated that Human Resource departments were likely the strongest candidates for entry points. Like the academic institutions, we searched websites for the organizations or companies to find contact information for specific individuals. As the focus groups and other PDP activities took place, we incorporated information from those interviews into our selection of entry points and institutions.

Contact and Interview Procedures

We first contacted potential entry point persons within institutions with an informational letter (aka “advanced contact letter”) from NSF that gave an overview of the Postdoc Records Site Explorations study. About five to seven business days after the mailing (we quickly learned that it took time for our letters to work through both USPS and campus mail, sometimes up to 10 days), we called the entry point contact and conducted a short telephone screener to assess whether this contact was a knowledgeable

¹ APPRISE (March, 2006). *Postdoc Data Project: Design Options. Summary Report*. Technical Report submitted to the National Science Foundation Division of Science Resources Statistics.

source. If we found a knowledgeable contact at this office, we set up an appointment for an interview. If the contact person was not knowledgeable about postdoc-related data at all, we asked for a reference to another office. Leads or paths were followed until we ultimately located a knowledgeable person.

The content of the interview was developed based on Phase One recommendations, the findings from the GSS RBS², and Phase Two Background Research activities. The interview guide contained questions about the postdoc definitions, specifically, probes for the various definitions documented during background research phase (see Table 1 below), specific titles used for postdoc positions, counts of postdocs overall and by the categories in the GSS, such as by sources of financial support, degree type (PhD or professional degree equivalent), foreign-degree status, and gender; and the types of systems or databases are used to keep track of information about postdocs.

Table 1: Postdoc Definitional Elements³

	NAS	FASEB	AAU	GSS	AAMC	Sigma Xi	NPA	PSA @ UCSF	NSF/ NIH
PhD /Equivalent									
Recent degree?									
Foreign equivalent included?									
Mentorship									
Supervised									
Training focus									
Temporary									
Full-time									
Publications									
Publication credit expressed?									
Clinical fellows?									
Location									
Research focus									

The interview on average took 25 minutes to complete and an average of three call attempts per entry point (a range of 1-11 calls). No incentives were offered. The advanced contact letter, screener, and interview guidelines are provided in the Appendices of this report.

² Crawford, S.D., & Wang, R. (December, 2006). *2006 Survey of Graduate Students and Postdoctorates in Science and Engineering Postdoc Response Behavior Survey Pilot Topline Report*. Report provided to the National Science Foundation Division of Science Resources Statistics.

³ Hogan, A., *the Survey Science Group, LLC* (April, 2007). *Compilation of Postdoc Definitions*. Data provided to the National Science Foundation Division of Science Resources Statistics.

Results

Identifying and Contacting the Knowledgeable Contact

As mentioned in the Methodology Section above, we began our search of entry points for the academic institutions with a list from the GSS RBS that included Postdoc Offices, Offices of International Student Affairs, Offices of Institutional Research, the President's Office, and Human Resource Departments. During the interview stage of the project, however, we found ourselves contacting a broader range of offices. Over the course of data collection period, we contacted the following offices in academic institutions:

- Office of the Vice President for Research (OVPR)
- The Graduate Studies Office (GS)
- Research Administration
- Postdoc Association
- The Provost's Office
- Academic Personnel / Academic Affairs
- Applicant Clearinghouse
- Graduate & International Admissions Office
- Medical School - Dean's Office and Graduate Studies Office
- Veterinary School - Dean's Office and Graduate Studies Office
- Career Services
- Dean of School of Arts and Sciences
- Dean of Science, Technology, and Information Resources
- Grants and Contracts / Office of Funded Research

Referrals and failures in the paths to the knowledgeable contact were common for the academic institutions. The entry points contacted and the subsequent outcomes varied substantially from one university to the next. Referrals across offices in academic institutions more often tended to be “guesses” of who would be able to answer the questions than certainty of which departments had the knowledgeable individuals. Even in the scenario where the contact person named a department as the “right place” for the knowledgeable postdoc person, it was rare that an individual person was identified. Alternatively, some referrals to other offices that did name specific individuals appeared to have been based on the informant's co-worker network (perhaps referring us to someone s/he had worked with personally in the past), rather than the position of the person named. For example, at Rice University we were referred to the Office of Research and Graduate Studies by three out of four entry points. Interestingly, we were referred to three different individuals and each different from the initial contact person on the pre-notification letter. Nonetheless, some common themes did emerge, as we describe below, but we emphasize that knowledge about postdocs within institutions as well as across varied substantially.

The Human Resources (HR) Department was contacted for all academic institutions and typically was the entry point with the lowest benefit-cost trade-off. It was difficult to access a “live voice” – the HR departments were often set up with automated phone tree systems. Once connected to a person, they were not very knowledgeable. Higher-level HR staff members were too busy and not interested in talking with us, and lower-level HR staff members did not feel they had the authority to participate in an interview.

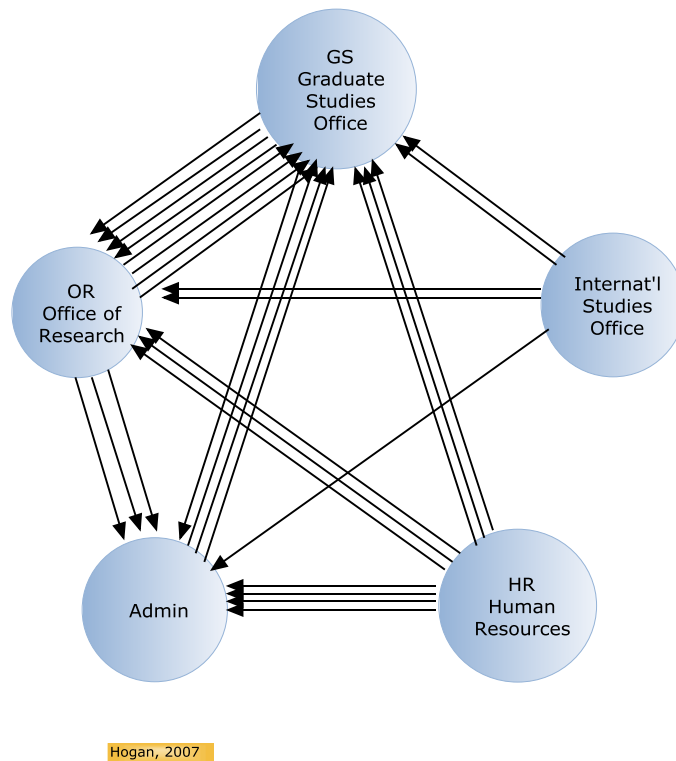
The Foreign Affairs Offices on campus were targeted for almost all institutions and interviews were attempted with all as well. Usually, we talked with either Directors or Visa Specialists in these offices. International offices, as other offices we contacted, varied widely in their amount of available information. These offices were generally able to provide information on visa status, but sometimes could make only an educated guess (based on visa information) about visa holders' potential postdoc status.

International offices also varied widely in their ability to provide detailed information by funding sources, professional degrees, and gender. Some informants in these offices mentioned that they may be able to extract the detailed postdoc count information (similar to what the GSS collects) by looking up this information on a case-by-case basis. Others mentioned that this information may be available through personnel files or other data within the department / center / program in which the visa holders worked on campus. International offices were found to generally keep very up-to-date records, due to the pressures of the SEVIS system, and so there may be less concern for data quality with these offices, but unfortunately many are simply not focused on the fields of information that are relevant in identifying and counting postdocs. Furthermore, while international offices can provide visa status information, they are often unable to provide information about the institution or country that granted the visa-holder's doctoral degree, or even the type of that degree.

We attempted to talk with individuals at postdoc associations at two of the universities. These individuals were difficult to get a hold of (our sense is that they were not at a given telephone number very often), and, not surprisingly, they did not have administrative records.

Offices of Research (for example, the Office of the Vice President for Research (OVPR)), the Graduate School, and the Postdoctoral Program Offices that were specifically charged with tracking postdocs emerged as frequent "end points" in paths to the knowledgeable contact for postdoc data. Postdoctoral Program Offices occasionally resided in the Research or Graduate School offices, but not always. The figure below shows the paths of referrals across entry points. In the figure below, for simplicity sake, we included the Postdoc Offices in the Research Office and Graduate Studies Office.

Figure 1. Winding Paths to the Knowledgeable Contact about Postdocs in Academic Institutions



The Postdoc Program Offices that we talked with were often newly established and appeared eager to talk with us about issues related to postdocs. They too were grappling with ways to identify and maintain key information about postdocs at their institutions. Many were interested in documenting position titles and compensation (including benefits) across departments / programs / centers. Others were interested in maintaining records about training activities, such as elective courses taken on grant writing or other professional development topics, and information about publications and presentations.

Within offices, reporters generally held a higher-level management position. Job titles of respondents to the interview included: Associate Vice President for Research and Graduate Studies, Vice President for Research and Graduate Studies, and Associate Dean for Graduate and Postdoctoral Studies. Other respondents had specific appointments related to postdoc programs: Manager of Postdoctoral Appointments and Graduate Funding, Graduate Fellowships, and Post-Doctoral Analyst.

For the non-academic institutions, we generally had just one entry point, the Human Resources Office. It was significantly more difficult to find individual contact person information. When a “postdoc coordinator” was listed, s/he tended to refer us to Human Resources. Usually, with enough searching we could find a number for Human Resources (for situations where we were not referred). Very early morning (7:00AM) is a good time to reach contacts in Human Resources. At some FFRDCs, we found an individual who solely focused on postdoc appointments and records in the HR Office. More commonly, the knowledgeable person about postdoc definitions and policies was a general HR Specialist who knew about postdocs as one category of employment at that organization. The FFRDCs were very cooperative and easy to interview, however, the for-profit industry was the most difficult and despite repeated attempts to contact them, we did not obtain any interviews from this subgroup of non-academic institutions.

Databases / Record Keeping

For academic and non-academic institutions, we noted that postdoc record-keeping was embedded in larger institutional systems. Categorizations were institutionalized with rationales that made sense in the structures in which they were embedded, but were not the easiest way to keep records on postdocs nor were they consistent across institutions.

The academic and non-academic institutions both reported that information about postdocs was in the Human Resource (HR) databases. This finding was not surprising for the non-academic institutions, given our focus with the contact procedures and experiences with identifying the knowledgeable contact. We found this an interesting observation, however, for the academic institutions, given that while various offices on academic campuses are accessing HR databases for information about postdocs, personnel in the Human Resources office were among the least likely contacts to be able to report that they can provide information about postdocs. One limitation of this finding was that HR systems often only keep information on postdocs who were paid directly by the institution, or sometimes for postdocs who were paid by grants that, while the compensation was not from the institution, it was administered through and disbursed by the institution.

While we can consider the HR database a “centralized database,” access to the database was very much a decentralized experience. Different offices within academic institutions had different “views” or access to the data, as did different groups / functions within Human Resources offices in the non-academic institutions. For practical survey operations, this may indicate that multiple individuals within a department or institution will need to provide all desired data. Further, we discovered that the non-academic and many academic institutions could provide information for a “snapshot” in time, but not over periods of time in the past.

Within the HR database for the FFRDCs, postdocs were typically considered employees that had job titles only used for postdoc positions. Information about postdoc positions could be extracted from a “pull” of records with postdoc titles. The one possible omission was “visiting scholar” – occasionally, postdocs could be under this category, but it was rare. For the other non-academic institutions, we found a mix of categorizations. Some institutions considered them “trainees” rather than “employees;” others considered them to be a different type of research associate.

Within the HR database for the academic institutions, postdocs were sometimes considered employees and other times not. This distinction was often tied to the benefits paid to these individuals. The result relevant to survey design is that these individuals may be tracked in two completely different systems, even if they work in the same lab, and even if neither is paid by the university. At Duke University, those with external, non-trainee funding were still considered employees, but with a pay-rate at zero. At the University of California at Irvine, postdocs had titles such as “postdoctoral scholars”, “postdoctoral fellows”, and “employees”. Postdoc scholars were paid directly from an agency (such as foreign institution, or pharmaceutical group). Postdoctoral fellows were paid through a stipend and not in the “employee database” but they were entered into the payroll database, without salary. Either scholars or fellows could receive supplemental funds to cover benefits, and when this was the case, they were recorded in the employee database. UC-Irvine HR then updated the Academic Personnel data base with Payroll to make sure all individuals were captured. Database was updated regularly.

In the academic institutions, the maintenance of the records in the HR database was often performed at the departmental level. Respondents frequently expressed that it was possible that terminations were not recorded in a timely manner, even if hires are precisely recorded. This was especially true in the case of postdocs who had funding external to the university, and so there was not a compelling reason to remove them from the database. One university (UT Austin) mentioned a check-out process that should remove individuals from the system, but no other university indicated a systematic way to update records. Mostly, the responsibility fell on the departments to do this (as well as, mostly, to enter info into the HR system at the time of hire). Since we did not talk with individual departments, it is hard to know how much of the time this happens, or in what way.

No one indicated that reports were automatically generated, or that information was automatically forwarded to their office, or that quality assurance or automatic updates of the database are done. Most people were not familiar with CIP codes.

Postdoc Definition

The site explorations had only a small impact on our conceptions of institutions’ use of postdoc definitions. While only the requirement of a Ph.D. or equivalent degree met with universal agreement from the institutions contacted, there is broad support (at least 14 of 17 institutions) for the components that ask about mentorship, whether the position is considered preparatory for something else, and whether the appointment is temporary. About half of the institutions reported including the expectation of publication in their definition, and a similar fraction said that their institution permits only full-time postdoc appointments. For institutions that said that publication was not officially required, several suggested that the PI almost always required this, at least in some disciplines. We conclude that publication may better be considered one of the usual aspects of a postdoctoral position, rather than an essential definitional component. Institutions that did not require their postdocs to be full-time sometimes indicated that almost all are, but that exceptions were sometimes made. Because part-time postdocs may be more likely to have special circumstances surrounding their employment (maternity leave or ill health, for example), we believe that it is undesirable to make full-time status a necessary part of the postdoc definition, as it is not consistent with many institutions definitions, and may lead to certain populations

being disproportionately excluded from counts. In general, we do not believe that institutions have difficulty understanding what we mean by “postdoc”. While institutions may vary some in requirements that are made formal versus those that are merely expected, or may have different rules about the permitted duration of a postdoctoral appointment, we do not believe that these variations compromise the ability of institutions to provide counts of postdocs that are consistent with the concept of postdoctoral researchers that NSF has.

Many institutions reported titles that include the word “postdoc”, such as “Postdoctoral Fellow” or “Postdoctoral Research Associate.” However, some institutions use codes that are less obviously earmarked for postdocs, most commonly “Research Associate.” Additionally, some institutions, particularly those with formal policies, make title distinctions among postdocs based on funding source. Those who are on fellowship may be designated as “trainees”, while those funded by grants to PIs are often considered “employees.” These differences sometimes lead to the provision of benefits and other services to employees that are not provided to trainees, which may be a source of frustration both for postdocs and for institutions who want to provide comparable services to all postdocs. From the perspective of record-keeping, when different record-keeping procedures are used for different postdoc types, in general more detailed information is available for postdocs who are considered employees of the institution, since they are part of the payroll system. These distinctions may also mean that entirely different systems are used to keep records on different kinds of postdocs, contributing to the overall decentralization of record-keeping, which may mean that there are few individuals who are aware of all of the various systems and title codes that designate postdocs.

While some institutions reported job titles that are to be used exclusively for postdocs and under which all postdocs should be covered, there is awareness, especially at institutions without formal postdoc policies, that in some cases postdocs may be appointed to positions that are not used exclusively for postdocs. However, when asked about the term-limited nature of postdoc appointments, many institutions reported that postdocs who stay past a certain time are converted to a title code that designates a permanent staff research employee. This is useful in that we want to remove individuals who are fulfilling permanent staff responsibilities from postdoc counts, but may lead to undercounts if this is more of a formal transformation that is done for bureaucratic purposes, without changing either the tasks of the individual and the fact that s/he continues to be mentored and to consider his/her role to be preparatory.

Postdoc Counts

Once we started probing for counts of postdocs that fell into the categories of interest to the GSS, we found inconsistencies in the availability of and access to counts on funding source, foreign-degree status, gender, and professional degree status. As noted in Table 2 on the next page, differences emerged between the academic and non-academic institutions across all categories. All non-academic institutions stated that they would be able to provide the number of postdocs they employed directly from their HR databases. Perhaps the relative ease of extracting an overall count ties back to the greater specificity of job titles for postdoc positions at non-academic institutions. It may also be related to the fact that non-academic postdocs are more likely to be paid by their institution, while many academic postdocs are on fellowship support, and a smaller number are self-paid through their own grant or homeland institution. Among the academic institutions, two came to the interview prepared with numbers already pulled from their systems; others provided ranges or estimates. Some academic contacts speculated about the ability to draw such counts, while still others expressed that the task was not so simple and would require a great deal of effort.

Non-academic institutions, however, were rarely able to provide detailed category counts. Most reported that the individual labs / programs would have the CVs of the postdocs that would contain information about the postdoc’s highest degree and institution that granted the degree. The labs and programs would be able to determine the funding source for their positions. Among the academic institutions, however, there was more variability across the provision of counts by the categories of interest. The majority reported that they could provide counts of postdocs by gender and funding source, but not as many felt that information on foreign-degree status was available (in turn, nationality and citizenship could be extracted). About half reported that information about highest degree was available.

Because so few respondents were able to provide counts during the site explorations, we were unable to pursue our research goal of comparing counts provided by different entry points to each other and to the counts provided by the GSS. While this is a shortcoming at those institutions at which we were able to complete more than one interview, it was not uncommon for all of our entry points at an institution to result in a single full interview (we also sometimes conducted limited interviews with offices that had some knowledge but also referred us elsewhere). This suggests that, while the process of finding a knowledgeable respondent at the institutional level may be convoluted, we at least are unlikely to have to evaluate different offices’ competing claims that they are the correct contact for postdoc data.

Table 2. Counts for GSS Topics of Interest by Institutional Type

Postdoc Counts	Academic Institution N=16	Non-Academic Institution N=7
Overall Count	75%	100%
Count By Funding Source	75%	29%
Count By Foreign-Degree Status	25 %	29%
Count By Gender	94%	86%
Count By Professional Degree	56%	43%

SEVIS, Non-GSS Academic Institution

Because the GSS may not provide coverage of all schools that employ postdocs, we selected a school for site exploration based on observing an HR announcement that described an open postdoc position. However, contacts to the institution revealed that there were no postdocs at the institution. Determining this outcome was not straightforward; as some informants asserted that the institution *did* employ postdocs, but referred the call to other departments to collect more information. While we should be careful inferring too much from the experiences at a single institution, this may point out that some respondents are either unaware of whether their institution employs postdocs, or may be unsure what group is indicated by the term “postdoctoral researchers”, especially if the institution does not have postdoctoral researchers and therefore this is a relatively unfamiliar term. One informant to whom we were referred has responsibility for faculty records and indicated that we may have been referred to her by someone who assumed that “postdoctoral researchers” meant those researchers who had doctorate degrees – i.e., the faculty. While the problem of postdoc definitions has been discussed extensively, some attention might be paid to this more basic level of communication: among institutions that do not employ postdocs, familiarity with this term may be low. Another possible interpretation of the divergent answers about whether or not the institution employs postdocs is that postdocs *are* employed, but only sporadically. This would be consistent with reports from an HBCU that we contacted. Minimally, the

fact that an open postdoc position was posted by HR suggests that institutions that do not formally employ postdocs may still employ individuals who are in postdoc positions, perhaps due to oversight on the part of the administration, or ignorance on the part of the faculty member who writes the job description.

Federal Health Sciences University

We had one site exploration referral from the focus group recruitment effort that did not readily fit into the academic / non-academic institution distinction. This referral was from the Uniformed Services University of the Health Sciences (USUHS), a medical school under federal government oversight. They work with the Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc. (HJF), which helps to support research and educational activities at USUHS, including support and a fellowship program. The USUHS is a small school, employing 300 faculty members – 170 of whom are military employees. While students typically do not pay for their educations but owe time in the military after graduation, postdocs are supported by the HJF and are thus considered “foundation employees” and “civilian”. Interestingly, postdocs are not required to hold a doctoral degree or doctoral degree equivalent; USUHS has some postdocs with MPH terminal degree.

The postdoc position at USUHS is very much considered a training experience aimed at widening the research portfolio and preparing individuals for academic positions or research positions in for-profit industry. The parameters for the position time frame and research focus is set by the grant that funds the position.

What We Can Learn by Looking at Site Exploration Results along with the RBS Data?

By looking at the responses of the same institutions to RBS and site exploration (SE) questions, we can get some sense of how consistent academic institutions are across different levels of response. While RBS respondents tend to be employed at the department or center level, SE respondents are usually centralized administrators. Therefore, comparing the responses of these two groups of respondents on comparable items provides insight into whether centralized respondents are adequately capturing the nuance of departmental behavior, as well as whether centralized practices and policies appear to have been implemented at the departmental level.

Are Definitions a Problem or Aren't They?

The definitional components asked of SE and RBS respondents are not strictly comparable. Therefore, we throw out SE respondents' answers to questions about whether recent conferral of a graduate degree is a requirement, and similarly discard RBS respondents' responses to whether publication is considered part of the postdoc definition. SE respondents were asked about whether “mentorship” was part of the postdoc definition, whereas RBS respondents were asked about “supervision.” Here we treat these components as if they were the same, although it is an imperfect match.

We also notice that institution-wide definitions don't seem to have a large impact on the share of departments that report having postdoc definitions. When institutions have a definition, about 74% of departmental respondents indicate that the department has a definition, compared to 64% when the institution does not have a formal definition. The vast majority of departments believe that their own definitions are consistent with the institutional definition, regardless of whether the definition given by SE respondents matches that of the RBS department. Assuming that the institutional definition given by the SE respondents is correct, we find that 91% of consistent departments believe themselves to be consistent and 81% of inconsistent departments do, too. Given the difficulty of finding a knowledgeable informant at some institutions during the site explorations, this may indicate that some SE respondents are not fully

knowledgeable about the institutional definitions, or that RBS respondents are ignorant of institution-wide definitions. It is especially hard to interpret these results at institutions that don't have formal postdoc definitions: in these cases SE respondents will be responding based on their perception of definitions, and so conflicts with this by department are not necessarily significant.

While some differences both across institutions and within institutions emerge with respect to how to define postdocs, we suspect that these differences largely reflect differences in whether an individual component is part of the "essence" of being a postdoc, or merely something that many postdocs do. That is, some departments may consider definitional an aspect that other departments consider coincidental. In any case, we believe that the RBS and SE data together, while they reveal heterogeneity of definitions, do not reveal *problematic* differences in definitions: respondents appear to understand well what is meant by a postdoc. There may be individuals who are considered postdocs at one institution but would not be considered a postdoc at another institution (for example, because the postdoc is in her 4th year, while another institution limits postdocs to three years), but we do not believe that this means that the individual does not fulfill the role of postdoc at her home institution.

Knowledge of Resources

Knowledge about whether or not a postdoc office exists at an institution is low at the departmental level. Regardless of whether or not a postdoc office exists at the institutional level, about 30% of departments report that a postdoc office exists. Some of the over-reporting of offices may be due to the presence of school-specific (usually in medicine or biomedical fields) postdoc offices that serve a portion of the postdoc population. In this case, RBS respondents are not making an error. Some of the error may also be due to the lag time between the RBS and the site exploration interviews: it is possible that some schools who had postdoc offices at the time of the site explorations did not when the RBS was administered.

Although postdoc offices seem like an ideal source for centralized information about postdocs, the general level of ignorance of these offices on the part of departments suggests that postdoc offices may not always be supplied with full information from departments. Additionally, the presence of school or subdivision postdoc offices may be a useful source of information, but care should be taken in assessing what subsets of the postdoc population these offices serve.

Titles

The RBS data received from departments almost invariably reveals many more titles that are used for postdocs than are revealed by the site explorations, even at institutions that appear to have a high level of organization around postdocs and that have formal definitions and policies in place. The total RBS respondents for a school report an average of over 3 times as many distinct titles as do SE respondents. This difference is not due to individual departments reporting more titles on the RBS, but rather to the fact that different departments provide different titles. Furthermore, departments tend to report titles that less clearly mark postdocs: research associates, visiting scholars, instructors, senior research scientists, etc. Finally, the small variations in the titles used by different departments at the same institution, or sometimes by a single department (research fellow vs. postdoctoral research fellow vs. postdoctoral fellow) suggests either a proliferation of job codes or that some departments may be reporting intradepartmental titles that are used, rather than formal HR job codes that would be relevant if a database query were performed to count postdocs.

Titles pose a significant problem in the collection of accurate postdoc counts. While we have spent time highlighting the problems in relying on decentralized departments for information about postdocs, the discrepancies about titles reveal that a centralized office may be unaware of the correct title codes to

search for when generating a count of postdocs. The potential for under-counting and over-counting may be serious if departmental informants are not consulted about the correct codes to examine. More work would have to be done to determine if even that would be sufficient: departments may use codes for postdocs that are also used for non-postdocs, and it may be that only departments have access to the (perhaps informal) information that allows disambiguation.

Good Contacts and Record-Keeping

About sixty percent of the RBS respondents in this sample feel that they are the best respondents. This suggests that many departments / institutions have effective processes in place for getting the GSS to the most knowledgeable respondent. Among respondents who believe that someone else would be the most knowledgeable respondent, about 40% mention someone else at the departmental level, while 60% mention someone at the institutional level. However, over 60% of the RBS respondents say that the department has responsibility for maintaining postdoc records. Therefore, departments should not be counted out as a source of postdoc information.

Conclusions and Recommendations

The Postdoc Records Site Explorations were designed to help answer several questions that focused on procedural issues related to contacting an individual at academic and nonacademic institutions about postdoc positions. This section summarizes the findings discussed earlier into recommendations for best entry points into an institution (research question 1), most knowledgeable contact for providing postdoc-related data (research question 2) and whether only one exists (research question 4), availability of counts (research question 3) and materials / protocols that would help support institutions in their efforts to provide postdoc-related data (research question 5).

1. **Institutions are in flux with respect to postdoc policies and record-keeping.** We were surprised by the number of centralized offices in academic institutions who reported to us that they were in the midst of some sort of transition with respect to postdocs: some institutions are in the process of establishing postdoc offices, others are preparing to unveil formal policies, and others are making attempts to consolidate and streamline their record-keeping systems. This may contribute to the discrepancies that appear between the definitions and title codes used by departments and those reported by central offices, as well as the apparent ignorance by departments of the existence of postdoc offices.
2. **There is not one “best entry point”.** We found in our experiences with the academic institutions, that there is not one place to go for information about postdocs. Institutions varied in their organizational structure, and the “knowledgeable contacts” were located in different offices depending on that organizational structure. Further, the knowledgeable source about postdocs is not readily known across offices in the institution. The road to finding that person is roundabout, and the data collection protocols should allow for recording multiple contacts (for process analysis at a later point in time) and the schedule should allow for enough time to accommodate such burdensome contact processes. Build into the data collection protocols ample time for working through a number of individuals to contact about postdocs at any given institution.

Having made the point above, we could offer some good candidates for the knowledgeable postdoc informant. When contacting academic institutions about postdocs, the most likely offices to prioritize are the: (1) Postdoc Office, (2) The Graduate Studies Office (GS), (3) Office of the Vice President for Research (OVPR). When contacting nonacademic institutions about postdocs, the most likely office to prioritize is the Human Resource Office.

3. **Academic and non-academic institutions involve different data collection protocols.** As alluded to above, contact procedures for academic institutions and non-academic institutions emerged as different experiences in the site explorations (and, we noted availability of data points about postdocs likewise were different). A data collection that includes both types of institutions needs to build in procedures and systems for accommodating the differences.
4. **For-profit organizations are hard to reach.** We were not successful in our attempts to make contact or conduct interviews with for-profit organizations. Rarely could we make it through the phone-tree system, and in the scenarios where we found a contact name on a website, we were unsuccessful in getting past voice mail. More investigative efforts are needed to determine how to capture the attention and interest of for-profit companies for postdoc studies.
5. **Don't count out departments as best contact points.** Contacting centralized offices within institutions, rather than individual departments, for counts of postdocs has certain benefits. When postdoc offices exist, they may keep more detailed records on postdocs, and a report from a centralized office may be able to make sure that all departments are counted (preventing undercounts when new departments are added) and remove duplicates (resulting in overcounts if a single postdoc holds appointments in multiple departments).

However, there are also some drawbacks of using a single institutional contact. Institutions are characterized by extremely decentralized record-keeping procedures. This manifests itself in two ways: (1) Different systems may be used to keep information about different kinds of postdocs. Sometimes these systems can be accessed by a single query, but in other cases they require the work of multiple individuals. If this occurs, there is no problem. However, our fear is that a single contact may simply provide the counts from the system that s/he is responsible for, without being aware of the necessity of enlisting the help of others. (2) Departments may use title codes that are unknown to the central offices. A key finding of comparing site exploration and RBS information is that departments use a variety of title codes, and that central offices typically name only a few of these when asked what title codes postdocs fall under. This will lead to an undercount of postdocs. Although some institutions may find it most suitable to have a single respondent provide responses for all departments (just as some departments handle the GSS this way), it may be beneficial to leave this decision to institutions and allow them to distribute the respondent tasks as they see fit.

6. **Advanced contact letters helpful in reaching knowledgeable contacts.** Many site exploration respondents acknowledged the advanced contact letter during the interview, but even more important, some contacted us to set up an appointment or to let us know who should be contacted (rather than them). Our recommendations are to send an advanced contact letter to the respondents by mail, on NSF letterhead, for future contacts of establishments for postdoc research. In the advanced contact letter, include both telephone number and email address for someone to contact about the study.
7. **Knowledgeable contact persons.** Who the knowledgeable contacts are about postdoc related data depends on the organizational structure and local culture surrounding postdocs at that institution. One perspective is when contacting academic institutions about postdocs, target an individual in a high-level administrative role, such as Vice President for Research, or Dean of Graduate Studies. S/he will have an understanding of the issues and complexities for their institution and have the authority to respond. Postdoc issues are becoming increasingly important at institutions nationwide, so individuals in these positions have "cause" or interest to respond. The site explorations were very successful in this respect. When contacting non-academic

institutions, focus on the Human Resources Department and target an HR staff person who is an “HR Specialist” or “HR Manager”. Having a name for the contact person becomes important as general telephone numbers may not lead you to a live person.

8. **A single person cannot always provide all of the postdoc information.** While the higher-level administrators will have the motivation to respond and the background on postdoc definitional / policy issues, they may not be able to provide the detailed count information. For this reason, it is likely that there will be a main respondent and another person designated to “pull numbers”. The survey design should include a function that facilitates the sharing of the instrument so that others could directly input the data into the survey form.
9. **Funding source influences postdoc position title.** Some institutions considered postdocs as “trainees” while others considered postdocs as “employees”. The designation largely reflects how the postdocs are paid and what type of benefits they receive. To collect information about all postdocs at an institution, it should be made clear upfront that we are interested in both categories. This may mean that individuals are coded differently in a “centralized database” or that they may be recorded in different databases altogether.
10. **Counts available at a point-in-time.** From our interviews, counts of postdocs over a specified period of time, such as an academic year, were not available. Design questions to focus on a current snapshot in time.

Appendix A

Participating Institutions

Brown University, Main Campus and Division of Biology and Medicine
Duke University
Johns Hopkins University, Main Campus and Medical School
Ohio State University
Purdue University, Main Campus and Veterinary School
Rice University
Texas A&M University
Tufts University, Main Campus and Medical School
University of California, Davis, Main Campus, Veterinary School
University of California, Irvine, Main Campus and Medical School
University of Georgia, Main Campus, Veterinary School
University of Indiana
University of Pennsylvania
University of Texas, Austin
University of Utah, Main Campus and Medical School
University of Virginia, Main Campus and Medical School
University of Wisconsin
Uniformed Services University of the Health Sciences
Tuskegee University
California State University, Monterey Bay
Argonne National Laboratory
Lawrence Livermore National Laboratory (LLNL)
National Renewable Energy Laboratory (NREL)
Oak Ridge National Laboratory (ORNL)
The Mayo Clinic
Mount Sinai
The Scripps Research Institute
Seattle Biomedical Research Institute

Appendix B

Referenced PDP Projects

This list represents related studies that were used in support of development of the design and protocols for the PDP Records Site Explorations.

Report Title	Topic
Postdoc Data Project: Design Options Summary Report (March 23, 2006)	Summary of Phase 1 activities on the PDP.
2006 Survey of Graduate Students and Postdoctorates in Science and Engineering Postdoc Response Behavior Survey Pilot: Topline Report (December 13, 2006-SSG)	Summary of the GSS RBS goals, methodology, findings, and recommendations for future related efforts.
Subtask 11: NSF/SRS Postdoc Data Project Workshop Final Report (May, 2005)	summary of methodology and findings from the workshops where representatives from a range of organizations and institutions with interests in postdoc training and funding met to discuss currently available data on postdocs, uptake or use of such data, and needed, but unavailable data.
Postdoc Data Project GREAT Group Postdoctorate Leaders Meeting (October 6, 2006)	Overview of the Postdoc Data Project (PDP) and how the record keeping study and site explorations fit into the broader goals of the PDP.
EIA Recording Keeping Proposal Plan (July 25 th , Revised Aug 9) Notification of a recordkeeping study under generic clearance (October 26, 2006)	Memo regarding OMB clearance for the record keeping study
Survey of Graduate Students and Postdoctorates in Science and Engineering: Site Visit Report (October 3, 2006 – RTI)	Report detailing the 29 site visits conducted by RTI. Addresses current practices of the GSS coordinator, data sources, timeline, and definitions used to produce GSS data, and an assessment of web survey functionality. This document further discusses feasibility of using CIP coding in the GSS.
FFRDC Notes	Summary of the telephone interviews conducted March to June 2005. List of FFRDCs gathered as part of GSS 2003-2005.
AAMC	Membership list of AAMC schools.

Appendix C

Advanced Contact (Informational) Letter

Appendix D

Telephone Screener for Knowledgeable Contact about Postdoc-Related Data

Appendix E

Interview Guidelines