

The NRSA Payback Requirement

Peter A. Hecker

J. Reuben Clark Law School, Brigham Young University, Provo, UT 84602, USA.

Email: phecker@byulaw.net

Disclaimer : The views expressed here are solely those of the author in his private capacity and do not in any way represent the views of the Journal of Postdoctoral Research or any of its affiliates

Abstract

The Ruth L. Kirschstein National Research Service Award program was created by Congress in 1974, and has successfully funded thousands of postdocs. The program includes a requirement for postdocs who receive funding from the program to sign a payback agreement. This obligates postdocs to continue performing health-related research or teaching for up to a year after receiving funds, or else pay back the stipend money they received. Economic and other concerns lead me to conclude that the payback requirement should be abandoned. Until that happens, the NIH, the NRSA Payback Service Center, training program directors, and university professors can take measures in administering NRSA to ensure the fair treatment of postdocs.

Keywords: Biomedical research funding, NRSA program, T32 training grant, F32 postdoctoral fellowship, Payback obligation

The Ruth L. Kirschstein National Research Service Award (NRSA) program funds roughly 7,000 of the estimated 37,000–68,000 U.S. postdoctoral fellows (postdocs) (ACB Workforce 2012). This program was created by Congress in 1974 to be administered by the NIH, and has successfully funded over 160,000 students and postdocs via T32 training grants and F32 fellowships (NRC 2011).

An issue with the NRSA program is that it comes with a payback requirement that obligates recipient postdocs to engage in up to a year of additional health-related research or teaching, one month for each month of the first year that they receive NRSA funds (NGPS 2015). Those who do not fulfill this obligation must pay back the stipend and training money they receive. Only postdocs who receive NRSA funding are subject to this requirement. All other U.S. postdocs receive stipends without any payback obligation.

As part of the NRSA program, the payback requirement is embedded in U.S. law (42 U.S.C. § 288). Congress's purpose in creating the requirement was to avoid wasting resources and prevent abuses of funding by trainees who did not plan to pursue research careers. However, as described below, it is unlikely that the requirement fulfills either of these goals, and Congress should abandon the requirement without a strong justification for maintaining it. Until Congress abandons the requirement, the NIH, university departments that maintain training grants, and professors who employ postdocs can take measures, as indicated below, to administer the payback requirement in ways that promote the fair treatment of postdocs.

1. Congress should re-evaluate the payback requirement

Although the payback requirement has been in force for over 40 years, there is a dearth of information about whether Congress's goals

have actually been met. For example, the most relevant study was performed over 30 years ago and the information it obtained was very limited (Davis & Kelley 1982). The data from that study indicated that the payback requirement may disincentivize some people who would otherwise become successful researchers from choosing research careers. Of 516 successful clinical researchers who began their research careers before the payback requirement was instituted, 156 fulfilled military requirements by undergoing research training and 22% of those said they would not have chosen to pursue careers in research if they had been subject to a payback requirement when they underwent research training. This study by Davis and Kelley provides the only information that I am aware of that quantitatively attempts to address whether the payback requirement affects NRSA-trainees' career decisions.

Davis and Kelley (1982) concluded that a payback requirement was a relatively minor factor in the decision-making process, but they stated that they were not confident in their results. Regardless, that 1 in 5 successful clinical researchers said they would have been deterred is consequential rather than negligible. It should also be noted that the study was not designed to determine whether the payback requirement accomplishes Congress's goal of deterring uncommitted researchers who might abuse the NRSA program from accepting funds. To make such a determination, in-depth prospective studies should be performed.

Congress has not adequately supported the rationale that the payback requirement is necessary for deterring postdocs who are not committed to research from accepting NRSA training funds. Conversely, serious researchers may make career changes due to unforeseen

circumstances. Of the same 516 successful researchers cited above, 34% reported that they did not decide to stay in their careers until they were already in their fellowship training or residencies (Davis & Kelley 1982). Thus, not every successful professor initially decides to pursue research as a career, and one might also say that not every committed postdoc knows if he or she will really continue researching in the future.

Further, postdocs who change careers while still in their NRSA fellowships may spare NRSA funds by not fulfilling their payback obligations. NRSA fellowships typically last for 2–3 years. Payback is only required for the first year, and thus, completing a second year of an NRSA fellowship satisfies the payback requirement (NGPS 2015). Because most postdocs fulfill the payback requirement by accepting NRSA funding for a second year, those who decide not to continue in research beyond the first year could spare NRSA resources by leaving their fellowships early. Instead, because they are required to perform payback service, they are motivated to remain as NRSA fellows for the second year of funding.

Those who stay in research for the second year merely to fulfill the payback obligation are probably less productive than they otherwise would be. It seems less likely that these postdocs would be as intrinsically motivated once they decide they want to leave research. Intrinsic motivation affects creative output, and employees are less motivated when their employers act in controlling ways (Amabile 1983, Eghrari 1994, Gagné & Deci 2005).

Note that my concerns here may be incorrect. The payback requirement may actually increase the amount of funds available to postdocs who stay in research, and it may be strongly justified. However, Congress has not clearly shown the

effects of the payback requirement or provided a strong justification for its maintenance. Until Congress demonstrates that the payback requirement is justified or at least meets its goals of reducing abuses and saving funds, I posit that they should refrain from restricting a postdoc's ability to choose his or her career path for the year after performing NRSA-funded research.

2. The NIH should more clearly define acceptable payback service

Congress delegated authority to the NIH to define the terms of the payback requirement (42 U.S.C. § 288). Accordingly, health-related "incorporates a broad range of activities related to the description, diagnosis, prevention, or treatment of disease from the most basic biomedical or behavioral research to the most applied or clinical research" (NGPS 2015). Research is defined as "an activity that involves designing experiments, developing protocols, and collecting and interpreting data," and teaching is defined as "an instructional activity that takes place in an organized educational or other instructional environment." The NIH's definitions also contain additional language that broaden the definitions' scopes.

Although the NIH defines health-related research and teaching broadly (NGPS 2015), it does not clearly indicate whether positions such as biotechnology business consulting, patent law, or science journalism satisfy the payback requirement. Such positions might be considered health-related research, but it remains unclear whether these careers would satisfy the requirement. Thus, the NIH should define the terms more clearly.

Also, postdocs can call the NRSA Payback (Service Center) to informally ask whether a certain future position will fulfill the payback

requirement, but there is no guarantee of consistency within the Service Center. The lack of any visible formal process for addressing postdoc inquiries regarding their payback obligations is disconcerting. Establishing a more formal process or a link on the Service Center's webpage to past answers and questions by previous postdocs would allow future postdocs to more confidently understand the payback system and what careers could satisfy their payback obligations if they left their NRSA fellowships early.

3. Universities should provide upfront information on the payback requirement

Postdocs may not be aware of the payback requirement, and problems arise when they are not informed about it early. For example, Thomas Klumpp was a medical graduate who moved to Boston to start an NRSA fellowship (Klumpp 1990). It was not until after he arrived that he learned of the payback requirement and decided not to pursue the fellowship because he thought it was not worth the financial risk to his family.

In another example, a postdoc who had moved to accept a position later learned that it was funded by an NRSA T32 training grant (Benderly 2015). He accepted the position despite the payback requirement to remain professionally active and because "having moved to a new city without any other prospect of earning an income, he saw no choice but to agree to terms he would never have willingly accepted had anyone told him about them beforehand." Note that although the NRSA-trainee in this situation knowingly signed the payback agreement, he was placed in a difficult situation by the university. Postdocs should not have to navigate a contractual mine-field, and universities should be more frank about telling postdocs about the

present requirements. Note further that although these anecdotes do not provide information about how often such difficulties occur, they are evidence that problems do occur.

Not knowing about the payback agreement can also place postdocs in awkward situations with their principle investigators (PIs). Eighty percent of postdoctoral NRSA-recipients are on T32 training grants (ACB Workforce 2012), and it is typical for a PI to ask an existing or incoming postdoc to be funded by a training grant if the postdoc is a U.S. citizen. When a postdoc receives T32 or F32 funding, the PI is no longer responsible for the postdoc's salary. This incentivizes PIs to have their postdocs accept NRSA fellowships. If a postdoc does not learn about the payback requirement until after agreeing with his or her PI to be on the training grant, the postdoc is placed in an unfair situation of having to accept the payback obligation or risk losing his or her position, or irritating his or her PI by backing out at the last minute. This puts considerable pressure on the postdoc and can strain a relationship with a PI.

Overall, to ensure that postdocs do not encounter difficulties due to a lack of knowledge about the payback requirement, those administering NRSA funding at the university level should inform postdocs early in the process. Moreover, training program directors should have frank discussions with postdocs and PIs about the risks and benefits of NRSA funding, with the payback obligation in mind. Finally, PIs should be responsible when they ask their postdocs to accept NRSA funding.

Conclusion

While the NRSA program has certainly achieved its goal of ensuring that a "highly trained workforce is available to assume leadership roles

related to the Nation's biomedical, behavioral and clinical research agenda" (NGPS 2015, NRC 2011), I believe it can do so without subjecting its trainees to a payback requirement. If Congress maintains the payback requirement, they should at least provide the public with up-to-date information about how the program accomplishes its goals. Unless and until Congress discontinues the requirement, the NIH should take measures to provide better information to postdocs about how to fulfill their payback obligations. Universities and professors should also take care to ensure that their postdocs accept NRSA fellowships only with full knowledge of the requirement and without coercion.

Conflict of interest statement

The author declares no conflict of interest.

References

- 42 U.S.C. § 288 (2016). <http://uscode.house.gov>
- [ACB Workforce] ACB Biomedical Workforce Working Group data. 2012. https://report.nih.gov/investigators_and_trainees/ACD_B_WF/Phd_Graduate_info.aspx
- Amabile TM. 1983. The social psychology of creativity: A componential conceptualization. *Journal of Personality and Social Psychology* 45: 357–376. <http://dx.doi.org/10.1037/0022-3514.45.2.357>
- Benderly BL. 2015. When funding is a costly booby trap. *Science*. www.sciencemag.org/careers/2015/09/when-funding-costly-booby-trap
- Davis WK, Kelley WN. 1982. Factors influencing decisions to enter careers in clinical

investigation. *Journal of Medical Education* 57: 275–281. <http://dx.doi.org/10.1097/00001888-198204000-00001>
PMID:7062322

Deci EL, Eghrari H, Patrick BC, Leone DR. 1994. Facilitating internalization: The self-determination theory perspective. *Journal of Personality and Social Psychology* 62: 119–142. <http://dx.doi.org/10.1111/j.1467-6494.1994.tb00797.x> PMID:8169757

Gagné M, Deci EL. 2005. Self-determination theory and work motivation. *Journal of Organizational Behavior* 26: 331–362. <http://dx.doi.org/10.1002/job.322>

Klumpp TR. 1990. Effect on physician-scientists of the low funding rate of NIH grant applications. Correspondence. *New England Journal of Medicine* 323: 1283–1284. <http://www.nejm.org/doi/full/10.1056/NEJM199011013231817> PMID:2215613

[NGPS] NIH Grants Policy Statement. 2015. <http://grants.nih.gov/grants/policy/nihgps/nihgps.pdf>

[NRC] National Research Council. 2011. Research training in the biomedical, behavioral, and clinical research sciences. The National Academies Press. <http://www.nap.edu/catalog/12983/research-training-in-the-bio-medical-behavioral-and-clinical-research-sciences>