

**All of Us Research Program**  
**Genetic Counseling Resource (GCR) Funding Opportunity (FO)**  
**Webinar**  
**Questions & Answers (Q&A)**  
**December 10, 2018**

**Program/Procedures**

**Question:** Has there been any thought about requiring the Genetic Counseling Resource (GCR) to be located at an enrollment site?

**Answer (Dr. Ozenberger):** No. Many enrollment sites are located within large regional medical centers that have their own genetic counselors. The program does not work with these centers' health provider systems directly. The program works with participants and assists in directing them to appropriate resources.

**Question:** Assuming there are multiple Genetic Counseling Resource awardees, comment on how participants will be distributed across the GCR sites and whether there will be an expectation that multiple GCRs will use a common approach, versus separate approaches for the different geographic areas selected by the participants.

**Answer (Dr. Ozenberger):** The funding opportunity invites applications to be the sole Genetic Counseling Resource. The program will determine whether having more than one awardee makes sense from a business and operations perspective. There is no expectation, however, that the program will make more than one award.

**Application Process**

**Question:** When will you begin accepting submissions?

**Answer (Ms. Fleisher):** NIH is accepting submissions now.

**Question:** Explain whether applications can include multiple institutions.

**Answer (Dr. Ozenberger):** The funding opportunity says an organization can submit only one application. Investigators and institutions can be on multiple applications. But *All of Us* can receive only one application from a primary submitting institution.

**Question:** As a follow-up, if an organization applies as a lead, does that preclude the principal investigator (PI) from being a co-PI on a multiple-PI application—that is, lead PI on one application and co-PI (nonlead) on a different application?

**Answer (Dr. Ozenberger):** Investigators are allowed to be listed as co-PIs on multiple applications. An organization can be primary on only one application.

**Question:** The FOA states that applications must be submitted via the NIH electronic Research Administration (eRA) Application Submission System & Interface for Submission Tracking (ASSIST) system. Is an institutional system-to-system (S2S) solution to prepare and submit an application an option?

**Answer (Ms. Fleisher):** The submission through ASSIST for Other Transaction Authorities (OTAs) is custom-designed to bypass Grants.gov. This Grants.gov bypass is not currently available for S2S providers. The new OTA system bypasses Grants.gov and thereby reduces the registration burden on the applicants. In addition, OTA submissions do not currently use any of the Research & Related Budget (R&R) or PHS forms supported by S2S providers.

## **Budget**

**Question:** How are indirect costs handled in the budget? For example, should the hourly rate for the genetic counseling encounter include the International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD) code, or should the encounter be counted as a clinical care cost, with no ICD code?

**Answer (Ms. Fleisher):** ICD code use depends on an institution's policy. However, in most cases, genetic counseling would not be considered a clinical care cost, because the Genetic Counseling Resource is not providing clinical care. From the budget perspective, budget maximums are written at a direct cost level. Use an approved facilities and administrative rate, if available, in the application. If an approved facilities and administrative rate is not available, suggest an indirect cost rate for NIH review and consideration.

**Question:** May the budget include genetic counselor licensure costs?

**Answer (Dr. Ozenberger):** Yes, licensure can be included in the budget, which should cover all direct costs.

**Question:** The *All of Us* Research Program Genetic Counseling Resource will be responsible for providing initial genetic counseling services to participants who are found to have medically actionable variants in their genome sequencing results as part of the research protocol. Will the government indemnify the awardees providing these services against any malpractice claims, or is the government expecting the awardee to have market malpractice insurance to cover staff?

**Answer (Dr. Ozenberger):** The awardee(s) will be responsible for professional insurance costs and may include these costs in the budget.

**Question:** The cost proposal states, "should include hourly rates for professional services ... Cost models can include elements of cost-sharing, fixed-price, or adjustable (cost-reimbursable) agreements or a hybrid agreement" (page 4).

Can you clarify if this means that the cost proposal can be a case rate or fixed price and that hourly rates should be included for ancillary services but do not need to be part of the core cost structure?

Can you provide any examples of cost-adjustable, hybrid, or sharing models?

**Answer (Ms. Fleisher):** The case cost structure should include an indication of average hourly rates to help us analyze the budget.

Cost Adjustable	Means that you have an average price but that it alters as needed based on the situation.
Fixed Price	Is the predetermined amount of money paid to cover the cost of the services proposed.
Hybrid	A budget in which there are some fixed-price services and others that are cost-adjustable.
Cost Share	The amount of funding support provided in-kind or voluntarily to the award; not required but can be proposed for NIH review and consideration.

### Regulatory/ELSI Compliance

**Question:** May applicants with international investors apply? May an applicant organization majority-owned by international investors apply?

**Answer (Ms. Fleisher):** The question is difficult to answer without knowing the level of involvement. Contact the *All of Us* program ([PMICPFOAInquiries@mail.nih.gov](mailto:PMICPFOAInquiries@mail.nih.gov)) to discuss international investors and eligibility.

**Question:** Discuss ethical, legal, and social implications (ELSI) research and feedback on genetic counseling and return of results during the course of the program.

**Answer (Dr. Ozenberger):** The funding opportunity does not discuss ELSI research as an objective. The first priority is delivery of services. The opportunity discusses innovation—such as using a chatbot or artificial intelligence—related to service delivery. An application may include additional innovation and address additional research questions, if the budget allows and all other objectives stated in the funding opportunity are met.

**Question:** Is informed consent part of the Genetic Counseling Resource proposal, or is informed consent completed by another method prior to counseling?

**Answer (Dr. Ozenberger):** Participants are consented for general return of medically actionable results. However, a participant may change his or her mind and may not want specific information being offered, so genetic counselors must confirm participants want this information. Applicants should describe how they will handle this confirmation.

### Technical Approach

**Question:** What are the requirements for artificial intelligence (AI) or chatbot approaches?

**Answer (Dr. Ozenberger):** The funding opportunity states, “To serve the scale and diversity of *All of Us* (with limited availability of genetic counselors) and to reduce costs, development of robust approaches for artificial intelligence (AI) or chat bot mediated counseling will be required.” Program leadership believes that serving the program’s scale and diversity requires technology-based solutions. However, applicants are not required to provide development of artificial intelligence, specifically, as an aim. Rather, applicants must describe how they will serve the scale and diversity of *All of Us*.

**Question:** Is it important for a Genetic Counseling Resource to be independent of affiliation with genome center awardees?

**Answer (Dr. Ozenberger):** There is no preference or bias toward the Genetic Counseling Resource being affiliated or not affiliated with current awardees.

**Question:** Is there a requested level of medical referral? For example, if a participant is positive for a hereditary cancer predisposition variant, is a general genetics referral preferred, or does the program want a cancer geneticist for such a participant?

**Answer (Dr. Ozenberger):** A referral to a specific provider isn't necessary. Rather, the Genetic Counseling Resource must have community resources that can take over cases and transition participants to medical care.

**Question:** For objective 1, what do you expect that participants without actionable findings will want?

**Answer (Dr. Ozenberger):** The program has chosen to return pharmacogenomics results in year one to provide some early return of value from genome analysis to all participants. Studies show that people are often disappointed with genome analysis results because they did not learn much about their clinical course. The program has emphasized return of pharmacogenomic results because it can give potentially useful information to almost every participant, even if the results do not have meaning right away.

**Question:** Does the program expect study of innovations or launch within the program without evidence?

**Answer (Dr. Ozenberger):** Not many organizations can handle the program's scale. The successful applicant will likely have significant infrastructure already built. There will be an opportunity for innovation. The successful organization's application will provide a solution for providing genetic counseling services before the end of 2019.

**Question:** Should the Genetic Counseling Resource build to 50 live calls per day? If so, what is a live call? Does it involve actual counseling or any contact?

**Answer (Dr. Ozenberger):** A call would involve any informational contact. The *All of Us* Support Center awardee provides live, trained personnel to answer participant questions. The Genetic Counseling Resource will likely work closely with this support center. The center will direct questions about genetic testing and results to the Genetic Counseling Resource.

**Question:** Will NIH hold all the intellectual property (IP) rights to software of the selected Genetic Counseling Resource? Will having the award impact the Genetic Counseling Resource's future commercialization of IP beyond *All of Us*?

**Answer (Dr. Ozenberger, Ms. Fleisher):** The funding opportunity statements about IP are specific to those developed with NIH funding, as part of *All of Us*. *All of Us* has no rights to IP that the Genetic Counseling Resource already owns. (Dr. Ozenberger) NIH has the right to ownership to IP developed by an awardee, but that is an area for negotiation. IP developed prior to the award would remain proprietary. Any IP or educational material developed with funds from the program would be publicly available. (Ms. Fleisher)

## Genetic Counseling Resource

**Question:** Has *All of Us* considered cascade testing for families of participants with ACMG 59 findings, the variants in any of 59 genes the American College of Medical Genetics and Genomics recommends be reported to individuals because of their potential high medical importance and actionability?

**Answer (Dr. Ozenberger):** The program is considering such cascade testing. However, applicants should address only the casework described in the funding opportunity. *All of Us* will develop cascade testing policies after making awards.

**Question:** Is there an estimate of how many people will need genetic counseling consults prior to participating in the research program?

**Answer (Dr. Ozenberger):** The program expects few of these people relative to the numbers of active participants seeking answers.

**Question:** Comment on the documentation, if any, that participants will receive.

**Answer (Dr. Ozenberger):** All written interaction with participants regarding ACMG variant findings will occur through the Participant Portal. Participants will receive reports on ACMG variants after speaking to genetic counselors.

**Question:** Are there any requirements for documentation of outcomes? What elements should be documented?

**Answer (Dr. Ozenberger):** “Applicants should describe the full extent of the genetic counseling case work flow, from medical history research prior to the counseling encounter through the counseling session and the recording of outcomes” (page 10).

**Question:** How will results be delivered to participants? By what method will participants receive raw data versus pathogenic findings? When will each of these results be delivered? At what point in the workflow?

**Answer (Dr. Ozenberger):** Participants will receive multiple genome reports during the course of the program. Those participants who have consented for return of genomic results will be notified each time a new report is available. The exception is pathogenic ACMG 59 variants, which will be communicated by a genetic counselor before the report is released to the participant.