



RAPS Seed Grant Program: Request for Proposals *Establishing Pittsburgh as a Tech Hub for Developing Autonomous Patient Safety Solutions*

To establish Pittsburgh as a global tech hub for developing autonomous patient safety technologies, the Jewish Healthcare Foundation (JHF) and Pittsburgh Regional Health Initiative (PRHI) created the [Regional Autonomous Patient Safety \(RAPS\) initiative](#) in 2022.

As part of the RAPS initiative, JHF and PRHI designed the [Seed Grant Program](#) to support *multidisciplinary* Research & Development (R&D) teams, start-ups, or tech entrepreneurs in the Pittsburgh region that are in the *earliest stages* of developing, testing, and promoting autonomous, technology-enabled solutions to prevent harm in health care.

Background

Today, health care is at a tipping point. The industry is facing workforce shortages, which partially explain a rise in adverse safety events and medical errors. Reports from the [Office of the Inspector General](#) and [Bates et al.](#) found a 25% rate of injury/harm in hospitals prior to COVID-19. During the pandemic, the CDC and CMS observed a substantial spike in preventable patient safety incidents, including a 28% increase in central line infections, a 17.4% increase in falls in skilled nursing facilities, and a 41.8% increase in pressure ulcers.

The increase in medical errors is compounded by COVID-19's impact on worker burnout, retirements, and turnover, leading to serious workforce shortages. Through the [American Nurses Foundation's 2022 Workplace Survey](#), 55% of nurses in acute care hospitals indicated that less than half the time their unit does not have the necessary number of staff to provide quality care, and 27% of nurses responded that ancillary staff is seldom or never available to adequately support safety.

Shockingly, in Pittsburgh, 93% of hospital workers indicated they were thinking of leaving the profession in 2021. The former workers who completed the [Pittsburgh Hospital Workers Survey](#) indicated they left due to understaffing (73%), mental and emotional demands (69%), and being unable to deliver quality care (52%).

Not surprisingly, trust in our healthcare systems is weakening. Given this triple crisis, the need for new approaches to creating safer healthcare systems without putting additional strain on frontline clinical teams is great. As in other high risk, complex industries, health care could benefit from autonomous, technology-enabled safety solutions and a heavy dose of human-factors engineering. The goal is to build a better work environment to achieve safe, optimal care.

The Pittsburgh region could become a leader in creating these solutions by deploying its regional assets in robotics, AI, machine learning, advanced analytics and informatics, engineering, life sciences, clinical research, and education.

Seed Grant RFP Timeline

RAPS Seed Grant RFP Announcement: Thursday, June 29, 2023

Application deadline: Monday, October 16, 2023

Funding Amounts

Total funding available to be awarded: \$300,000

Award ceilings and categories:

1. Up to \$25,000 for start-ups and innovators who are developing ideas for tech-enabled patient safety solutions
2. Up to \$50,000 for a healthcare organization to pilot test or implement technology-enabled solutions from a tech start-up, tech company, or university-based research teams in the Pittsburgh region
3. Up to \$50,000 for multi-disciplinary research and development (R&D) teams that are in the early stages of developing ideas for patient safety tech-enabled solutions

Eligibility Criteria

The lead applicant must be a **501(c)(3) non-profit** in the **greater Pittsburgh region** (Allegheny County, Armstrong County, Beaver County, Bulter country, Fayette County, Washington County, and Westmoreland County). **New start-ups and innovators** may apply under a fiscal sponsor that is a 501(c)(3) non-profit. For the second award category, the non-profit health care organization would be the recipient of the Seed Grant funds.

The Seed Grant application must address potential harm(s) to patients due to medical care or care in a healthcare setting, which may also include home-based care. For a specific definition and list of patient harm events, please see Exhibit H in the [OIGs' Patient Safety Report](https://oig.hhs.gov/oei/reports/OEI-06-18-00400.pdf) (<https://oig.hhs.gov/oei/reports/OEI-06-18-00400.pdf>). This Exhibit categorizes harm events in the following clinical categories:

- Medication-related patient harm and injury
- Complications during patient care resulting in harm
- Complications during procedures and surgeries resulting in harm
- Harms related to healthcare-associated infections

The Seed Grant application must involve technology-enabled solution(s) to prevent patient harm events. These solutions are meant to augment and support the work of clinicians and caregivers.

Application

Please submit a proposal with the following headings to Lisa Boyd, JHF Administrative Associate, at Boyd@JHF.org with the subject line "RAPS Seed Grant Application _ NAME OF APPLICANT."

Under a section heading, "**Applicant**," include the name of the eligible applicant, its address, and the contact information for a key contact. (Please refer to the "Eligibility Criteria" in this RFP.)

Under a section heading, "**Seed Grant Award Category**," indicate the Award category for which you are applying. (Please refer to the "Funding Amounts" in this RFP.)

Under a section heading, "**Patient Safety Problem**," describe what harm(s) in what healthcare setting(s) you intend to prevent, including relevant data about the pre-cursors to and causes of the harm(s). (Please refer to the "Eligibility Criteria" in this RFP for a definition of patient safety.)

Under a section heading, "**Patient Safety Solution**," include information about the idea for the tech-enabled patient safety solution or the existing solution, including how it is aligned with the needs of the end-user (e.g., providers, staff, or patients). If the purpose of the Seed Grant application is to develop ideas for solutions within one or more of the harm categories, then please describe how you will learn about the needs of the end-users as part of this early-stage work.

Under a section heading, "**Early-Stage Work**," describe the Seed Grant Team's goals and activities to develop ideas for the tech-enabled patient safety solutions or to pilot test or implement a solution in response to the "Patient Safety Problem."

Under a section heading, "**Seed Grant Team**," please describe the team or start-up innovator(s) that will carry out the "Early-Stage Work," including their disciplines and relevant experience.

Under a section heading, "**Budget**," include an estimated budget in a table format to show how the Seed Grant Award will be used to support the "Early-Stage Work." Please use traditional budget categories, such as personnel, consultants, sub-contractors, equipment, supplies, travel, and other costs. A budget narrative or justification is not needed.

The applications are intended to be about four to five pages; however, there are no page limits. Supplemental information may also be included.

Evaluation Criteria

If the Seed Grant application meets the Eligibility Category, the application will be evaluated by the RAPS program staff and Advisory Group Members based on the extent to which:

- The proposed “**Early-Stage Work**” will put in place the structures and processes to position the Seed Grant team to further develop a start-up idea, pilot test or implement a new technology solution in a healthcare setting, or apply for federal grants.
- The “**Seed Grant Team**” has the experience to carry out the proposed activities.
- The idea for the “**Patient Safety Solution**” and “**Early-Stage Work**” is feasible and is aligned (or will be aligned) with what providers, staff, or patients need to prevent harm in health care.
- The “**Budget**” is aligned with the “Early-Stage Work” and within the RFP’s Award Ceilings.

Questions

Please email any questions about the RAPS Seed Grant Program and RFP to Lisa Boyd at Boyd@JHF.org.