CUSHR announces a Call for the new Human Factors Engineering Research Investment Initiative seed grant.

**Purpose** | Human Factors Engineering holds great promise to improve the processes and experience of giving and receiving care, and to improve patient and provider safety, health, and wellness outcomes. This area of health research is emerging as a synergistic collaboration between Prisma Health and Clemson University. A strategic focus on the application of Human Factors Engineering (HFE) solutions to challenges in clinical operations requires collaboration between universities and health systems and will prove to be mutually beneficial and a tremendous resource for the state.

The Human Factors Engineering Research Investment Initiative (HFE-RII) facilitates collaborative pilot research and scholarly activities supporting HFE projects that address improvements in clinical processes, operations, ergonomics, patient safety, provider burnout, and job satisfaction. Topics addressed by proposals may include, but are not limited to:

1. Usability, human-centered design, and ergonomics improvements of healthcare technologies such as medical imaging devices, patient monitors, electronic medical records, or other patient care devices;
2. Workplace interventions addressing improvements in worker physical/cognitive performance, health and/or safety;
3. Mapping of complex and large-scale health system processes to established HFE system-level frameworks that help in developing targeted process improvement initiatives;
4. Development of training materials/guidelines to aid with better technology adoption, clinical performance, patient-provider communication, reduction in medical errors, and/or patient safety.

HFE-RII recipients are required to disseminate their work locally, regionally, and/or nationally. Funded investigators are expected to subsequently submit an extramural grant application informed by seed grant study findings.

**Key Dates**

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<td>RFA Release</td>
<td>October 15, 2023</td>
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<td>Applications Due (by 4:30 pm)</td>
<td>December 10, 2023</td>
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<td>Recommendation for Funding Notification</td>
<td>January 6, 2024</td>
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<td>Earliest Possible Start</td>
<td>February 1, 2024</td>
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Funding | HFE-RII are supported through funding from Clemson University and Prisma Health (up to 4 will be awarded). Applicants may request a funding amount of up to $50,000.

Eligibility | All applications must include an investigative partnership between Clemson University and a clinical collaborator from Prisma Health (Upstate and/or Midlands). The clinical collaborator should be included as either a co-Principal Investigator or Co-Investigator. Investigators are encouraged to include trainees on their research teams. Trainees may include graduate or undergraduate students or post doctoral scholars.

Applicant Agreement | Principal Investigators accepting HFE-RII agree to the following:
- Secure Institutional Review Board (IRB) approval (or exemption) prior to award project set-up,
- Spend award dollars only on the proposed research-related activities specified in the budget.
- Complete a status report form at 6 months and then submit a final report within 30 days of project end date.
- Provide a presentation to the CU / PH HFE Strategic Coordination Group if requested.
- Disseminate findings, with at least one manuscript submitted to a peer-reviewed journal.
- Apply to present a poster at the Prisma Health Education and Research Institute Showcase and/or Clemson Research Symposium (Spring 2025).
- Submit an extramural grant application informed by the findings within 9 months of completing the project.

Period of Support | The committee will award support for a maximum of 12 months. One six month no cost extension will be allowed.

Allowable Expenditures | Allowable expenditures include participant incentives, equipment, project supplies, pilot data collection, research-related travel (up to 10% of total budget), publication fees, contract, and user fees. Travel funding may be used to facilitate meetings between primary academic partner collaborators. Applicants must fully justify requests for electronic equipment and travel to conferences and presentations. This award does not support indirect costs or full-time faculty salary; however, applicants may use funds for consultants, research staff, post-doctoral fellowships, or other research assistant support from primary academic partner institutions (e.g., undergraduate students and graduate students). The proposed budget should not include items departments typically support for active researchers, travel unrelated to project execution, or a request to bridge a funding gap between existing awarded grant funding.

Selection Process | The HFE-RII applications will be reviewed by the HFE Executive Committee composed of Clemson University and Prisma Health representatives. Additional Prisma Health team members may be consulted to verify clinical relevance. Only complete applications compliant with submission guidelines will be considered for funding.

Scoring Criteria for applications will be evaluated in the following categories:

- **Significance**: Does the project address an important opportunity for improvement in clinical operations, patient safety, and/or provider health/well-being?
- **Innovation**: Does the application challenge and seek to shift current practice paradigms by utilizing novel HFE approaches or methodologies, instrumentation, or interventions?
- **Approach and Feasibility**: Are the overall strategy, methodology and analyses well-reasoned and appropriate to accomplish the specific aims of the project?
• Investigators: Does the investigative team have the requisite background, training, and relationship and access, to advance the project goals? Does the team have depth of collaborative experience or potential to advance the project?
• Overall impact: What is the likelihood that the project will have a sustained powerful influence on the Prisma Health area involved?

Projects that involve Prisma Health data will require a Data Use Agreement between Prisma and Clemson. For data approval, investigators should meet with the Prisma Health Data Support Core. (Budgetary Note: some data extraction may require additional funding.)

Application, Formatting, and Submission Instructions | The submission deadline for applications is December 10, 2023, at 4:30pm (EST). Applications should be processed through college OSP pre-award offices per standard operating procedures. Applications received by the college pre-award office by the due date and that are compliant with guidelines will be forwarded by the OSP college pre-award office to CUSHR for consideration after internal processing through infoEd. Completed applications sent to CUSHR@clemson.edu should have the following in the subject line: HFA PI Last Name.

Applicants will submit one pdf document that includes following sections:

• Background and Significance statement, aim(s), and methods using single-spacing and 12-point Calibri font with 1-inch margins (3 pages).
• Literature Cited (if applicable – does not count toward page limit).
• Timeline (in table format) and plan for extramural grant applications, publication, dissemination, and/or implementation of findings (1 page).
• Biographical Sketch of all investigators (3 page maximum for each investigator).
• Completed Budget and Budget Justification utilizing your college pre-award office budget template.

Virtual Information Sessions for Questions Related to Proposals | CUSHR is providing two Zoom drop-in sessions for questions related to this request for proposals. The dates and times of the sessions, along with the Zoom links, are as follows:

• October 31st, 9 a.m. -10 a.m., https://clemson.zoom.us/j/3776395299
• November 7th, 4 p.m. -5 p.m., https://clemson.zoom.us/j/3776395299