

the study surveys NIH Director's Pioneer and Keck Foundation Awardees (2018–2021) to assess perceptions of autonomy, competition, and institutional support. This study examines how NIH-funded researchers adapt grant strategies to shifting NIH priorities while preserving autonomy. **RESULTS/ANTICIPATED RESULTS:** Of 24 respondents, most were White and male, with varied project portfolios and funding levels. Many described their fields as resource-intensive, with typical projects lasting 3–5 years. Primary funding sources were generally flexible, though stability and administrative burdens were concerns. Most researchers reported shifts in research aims driven by field developments rather than institutional pressures, with limited involvement in commercialization. Collaborations with global and industry leaders were common and largely stable. Overall, findings suggest US researchers adapt strategically to funding realities while balancing autonomy, collaboration, and institutional support. **DISCUSSION/SIGNIFICANCE OF IMPACT:** This study demonstrates how US researchers balance autonomy with demands from funders and institutions within a “negotiated space.” Funding is flexible but administratively burdensome. Findings highlight the tension between innovation and external directives shaping research agendas.

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Enriching recruitment via implementation science: Opportunities to build capacity for recruitment science among learners at the University of Wisconsin–Madison
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OBJECTIVES/GOALS: Implementation strategies to improve clinical trial recruitment exist yet training opportunities for successful recruitment are limited. Using the translational science promotion and research capacity (T-SPARC) framework, we developed and evaluated an educational intervention to increase use of recruitment science in translational research. **METHODS/STUDY POPULATION:** We conducted focus groups with investigators and trainees (n=10) involved in CTSA programming at the University of Wisconsin–Madison. Focus groups explored participants' experiences with study recruitment and their perceptions of recruitment strategies associated with implementation science. Data analysis was organized around identifying themes to inform a capacity-building recruitment science short course. The short course development was aligned with T-SPARC and featured interactive sessions on applying implementation science to successful recruitment, with real-world examples and community expert input. Following the course, we collected and analyzed post-survey data from attendees (n=168) regarding their changes in recruitment science knowledge due to participation in the short course. **RESULTS/ANTICIPATED RESULTS:** Most focus group participants were unfamiliar with recruitment science, though some described applying related concepts such as partnering with community members in research. All participants expressed a need for ongoing support and training in recruitment science, including workshops, mentoring,

and consultation. This indicated a need for training in translational science, specifically recruitment science, as the mechanism of change. Following the short course that was developed based on these focus group findings, attendees showed a significant increase in how to use recruitment science strategies ($Z = -4.87$, $p < .001$) and understanding of how implementation science can promote effective recruitment of research participants ($Z = -4.45$, $p < .001$). **DISCUSSION/SIGNIFICANCE OF IMPACT:** There is need and interest in capacity-building for effective recruitment and implementation science strategies among investigators, and these needs can be met through activities like the implementation science short course. Building capacity in this area enhances research rigor, collaboration, and the translational impact of clinical trials.

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Implementation of personalized statistical prediction models: Uptake as a function of potential risk/benefit
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OBJECTIVES/GOALS: Multivariable statistical models are commonly used as clinical decision aids. However, more research examining real-world implementation of models is needed. The goal of this mixed methods study is to explore to what degree clinician uptake of risk models is influenced by perceptions of the potential risks and benefits of taking action on model output. **METHODS/STUDY POPULATION:** Mixed qualitative and quantitative data for the 'low-risk/low-reward' scenario arise from an implementation trial of a electronic medical records-based (EMR) model to alert primary care providers of potential cognitive problems in patients ages 65 and older. We evaluated adoption of the EMR model based on provider actions (cognitive screening/referrals/medications/diagnoses) following Epic best practice alert (BPA), and acceptability of the models through semi-structured qualitative interviews. Data for the 'high-risk/high-reward' scenario will be gathered from clinical notes documenting the use of statistical models to support elective surgical decision-making in scenarios where such models have been regularly used at our institution. Mixed methods analyses will be holistic. **RESULTS/ANTICIPATED RESULTS:** Early quantitative analyses following implementation indicated that primary care providers largely did not adopt the BPA, but did take action (referrals, diagnoses, medications) when automated cognitive screening was performed in preparation for the appointment. Qualitative analyses of interview data to understand provider perspectives are ongoing. In the high-risk/high-reward scenario, we expect that providers will more frequently utilize statistical models for decision-making and report positive attitudes regarding their use, when compared to the low-risk/low-reward scenario. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Though used in practice with increasing frequency, the implementation of personalized statistical prediction models has not been widely studied. Understanding in what scenarios providers feel risk models are useful and actionable can guide decision-making for the development and implementation of future models.