Feeding Research Ideas to Experts to Improve Care

The aLHS Environment
The CTSI works to nurture the academic Learning Health System (aLHS) at Wake Forest. Three components of an aLHS include:
1. Intentionally and systematically translating research into practice in areas deemed priorities by the health system
2. Drawing on its embedded academic expertise in health system sciences while engaging translational diversity across the spectrum from mechanistic basic sciences to population health
3. Sharing knowledge and imparting skills necessary to advance the system internally and disseminate knowledge more broadly to advance the field.

Ideas to Innovation
- Healthcare workers who face issues and problems in their everyday work life may have ideas to improve care but do not necessarily have the experience to turn their idea into a testable hypothesis. Our Research Shark Tank-like event provides an opportunity for non-traditional researchers to work hand-in-hand with experienced researchers to bring otherwise untapped ideas to the forefront.
- The Research Shark Tank Program allows clinicians that see problems that face our healthcare system directly to submit novel aLHS project ideas.

Impact on Education
- By working hand-in-hand with Research Experts, clinicians gain access to direct mentorship and guidance on how a rigorous research project can move forward
- Clinicians acquire tools for when they see a future need on how to apply sound research principles in addition to learning how to creatively and concisely present a research proposal to improve their everyday work environment
- Knowledge and research skills are shared to targeted audiences, and teams are provided resources to move their research proposal into a rigorous research study
- This Program has shown the CTSI where gaps may exist in our process/support for taking research from idea to publication. This highlights where we can direct funding and personnel and provide additional educational offerings.

The Sharks
The “Sharks” provide specific expertise and can become a direct collaborator on projects. Focus areas include: 1) statistical methods; 2) research design; 3) implementation science; 4) clinical feasibility + operations; 5) scope of real problem + impact; and 6) informatics feasibility

Testing the Waters – The Process
- Ideas are submitted through REDCap application
- Applications are reviewed and invited to compete in virtual Research Shark Tank-like event
- Teams are given 5 minutes to pitch their idea to the Sharks, followed by 10 minutes of Q&A
- Sharks are invited experts who grade each idea on feasibility, potential impact, and resources required
- Awarded idea receives $5,000, designated expert resources, and CTSI services to ensure rigor and success

Funded Projects
Fibrosan for Predicting Liver Stiffness
- A large percentage of patients referred for HCV treatment come from underserved and/or uninsured populations who, if found to have advanced fibrosis, face the dilemma of either forgoing cancer screening or being saddled with medical debt.
- The team aims to establish a definitive study that addresses the shortcomings of previous HCV fibrosis reports, hopefully to establish a better standard of care.

High Fidelity Simulation (HFS) and Cultural Competency in Residency Programs
- This study evaluates what proportion of EM residency programs and general simulation centers with high-fidelity mannequin use HFS to teach cultural humility.
- Since minority groups face higher odds of chronic diseases, worse medical complications and outcomes, it is important for physicians in training to provide culturally sensitive care.

2021 Applicants

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<tr>
<th>Pilot</th>
<th>September 2021</th>
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<td>3 applications were recruited and asked to present.</td>
<td>13 applications were submitted and 3 were asked to present.</td>
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