



OCTRI Research Forum: Translational Science Concepts (and upcoming Funding Opportunity)

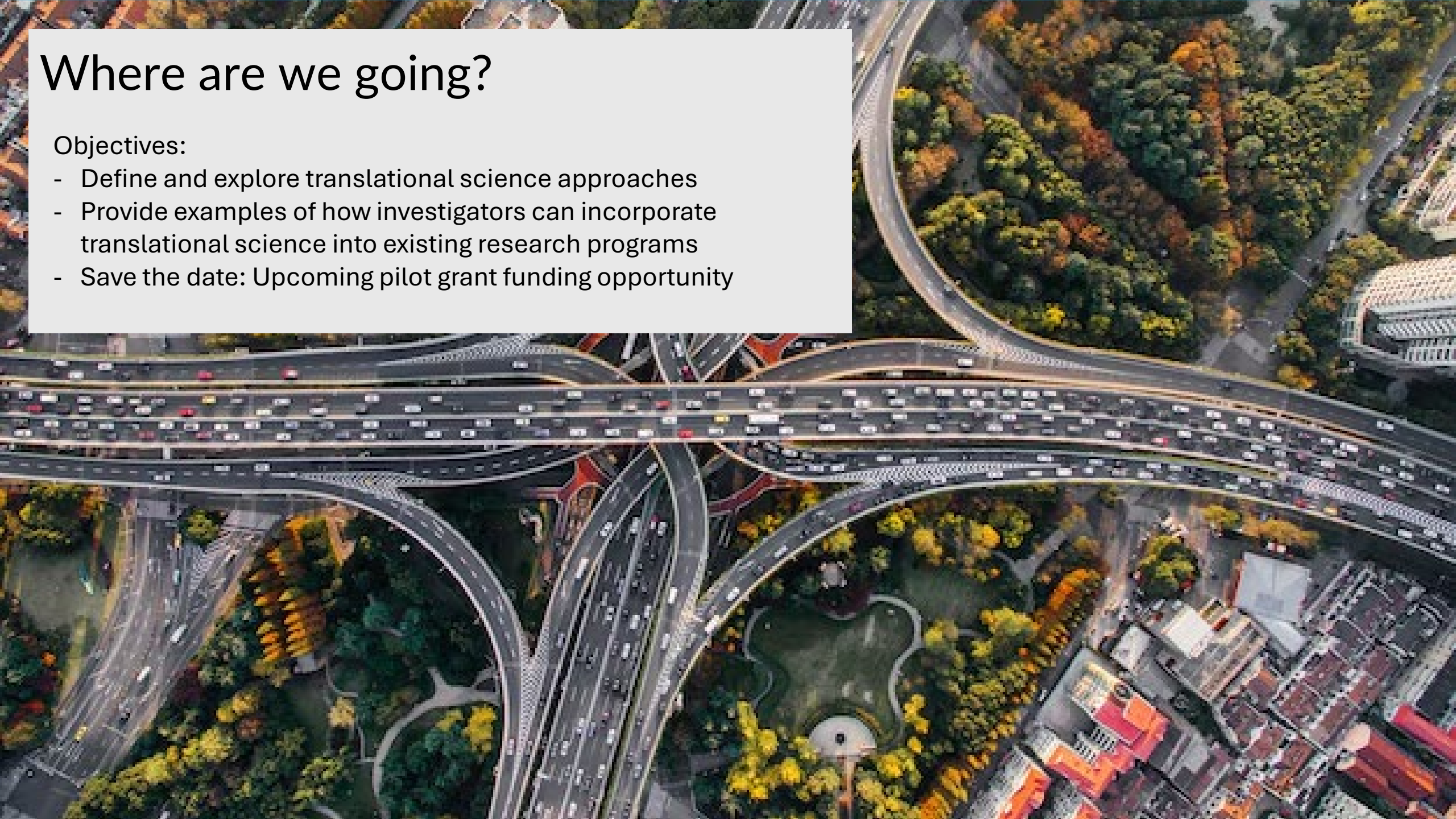
DATE: September 18, 2026
Dr. Kathryn Schuff

OREGON CLINICAL & TRANSLATIONAL
RESEARCH INSTITUTE

Where are we going?

Objectives:

- Define and explore translational science approaches
- Provide examples of how investigators can incorporate translational science into existing research programs
- Save the date: Upcoming pilot grant funding opportunity



OCTRI Programs



Workforce
Development



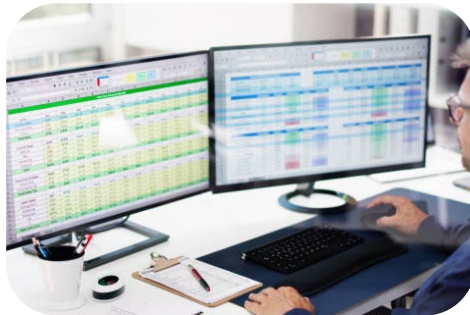
Navigator, Research
Resources



Pilot Studies,
Awards



Community
Engagement



Data Science

Health Informatics

Biostatistics



Clinical & Translational
Research Center

OCTRI is funded by... NCATS

(competitive renewal under review)



Research ▾

More Treatments for All People More Quickly

We conduct research and support activities that address long-standing challenges in translational research so that new treatments and other health solutions reach people faster.

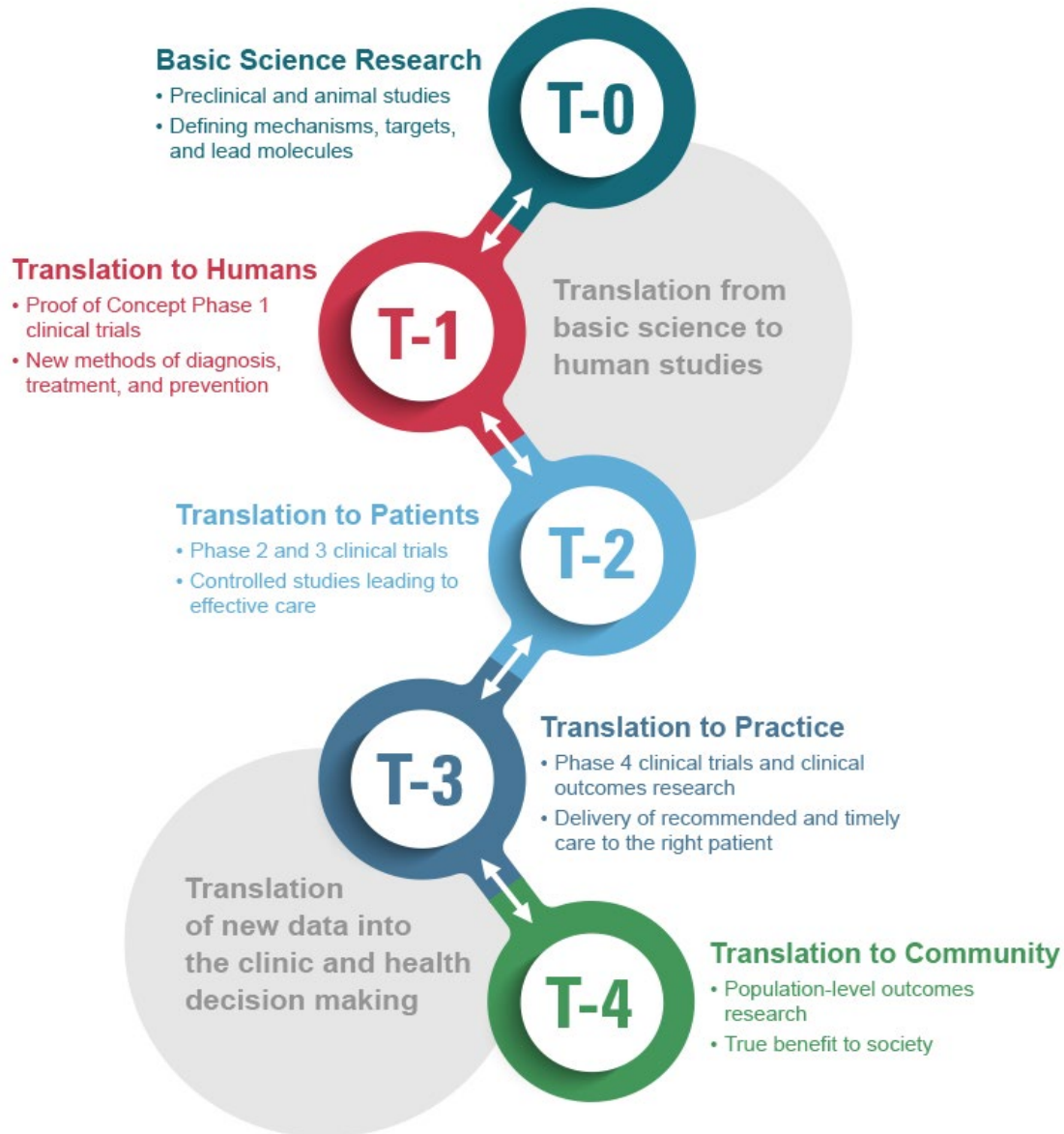
and has the mission to:

- accelerate translational research
- identify research barriers and implement solutions
- translate data science innovation into scalable research operations
- address critical Translational Science (TS) gaps in primary care research
- train scientific workforce in translational science

Translational **research** involves moving basic science discoveries into interventions to improve human health

Translational **science** focuses on innovations that overcome longstanding challenges in the translational research pipeline

- *Scientific, operational, and administrative roadblocks or barriers*
- *Innovations transform the way research is done - making it faster, more efficient, more impactful*



Drug Development Example

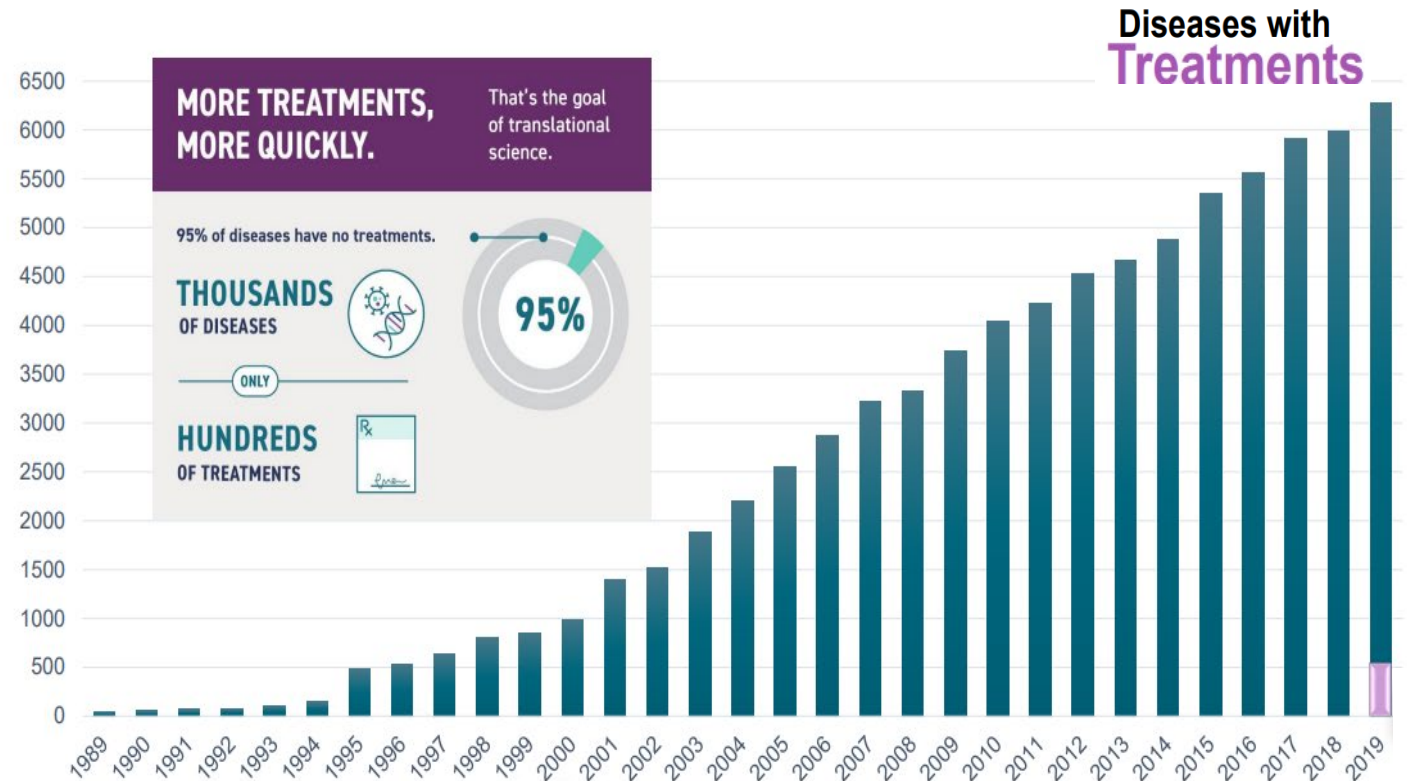
Scope of the problem...

Translational Science:

- **Identifying the barriers** to moving discovery of molecular basis of disease to treatments (T0 → T3/T4)

- **Developing solutions** to remove those barriers (applicable to many research areas, diseases)

Diseases with Known Molecular Basis

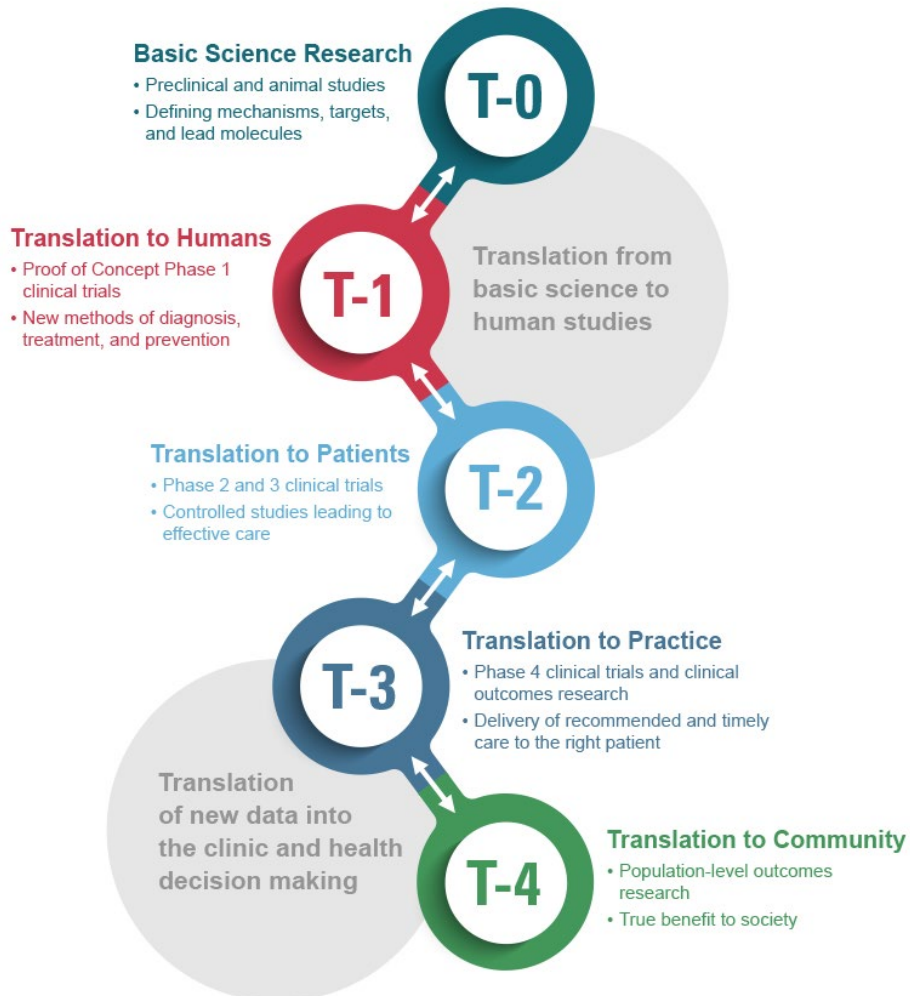


Source: Online Mendelian Inheritance in Man, Morbid Anatomy of the Human Genome



Presented by Joni Rutter, PhD
March 10, 2022 Translational
Science Education Roundtable

Drug Development Examples:



Translational research (T0–T4)

- Discovery of novel pathogenic mutation and drug target (T0)
- Phase I trial new drug compound (T1)
- Improve representative enrollment in clinical trial with recruitment material in multiple languages (T2-3)
- EHR-based study of real world drug utilization (T4)

One at a time approach is not efficient

Drug Development Examples:

Translational science

Barriers

Solutions

Rare diseases lack strong monetary incentive for drug development

- Develop multi-disease programs to incentivize and leverage rare disease research
- Develop platforms for multi-disease/compound testing

Animal models fail to address toxicity/efficacy

- Create new methods for preclinical work toxicity/efficacy (such as organoids)
- Improve models for predicting an individual's response (pharmacogenomics)

Clinical trial efficacy is not seen when new drugs in general use

- Develop models and tested methods to engage community and widen representation in clinical trial enrollment

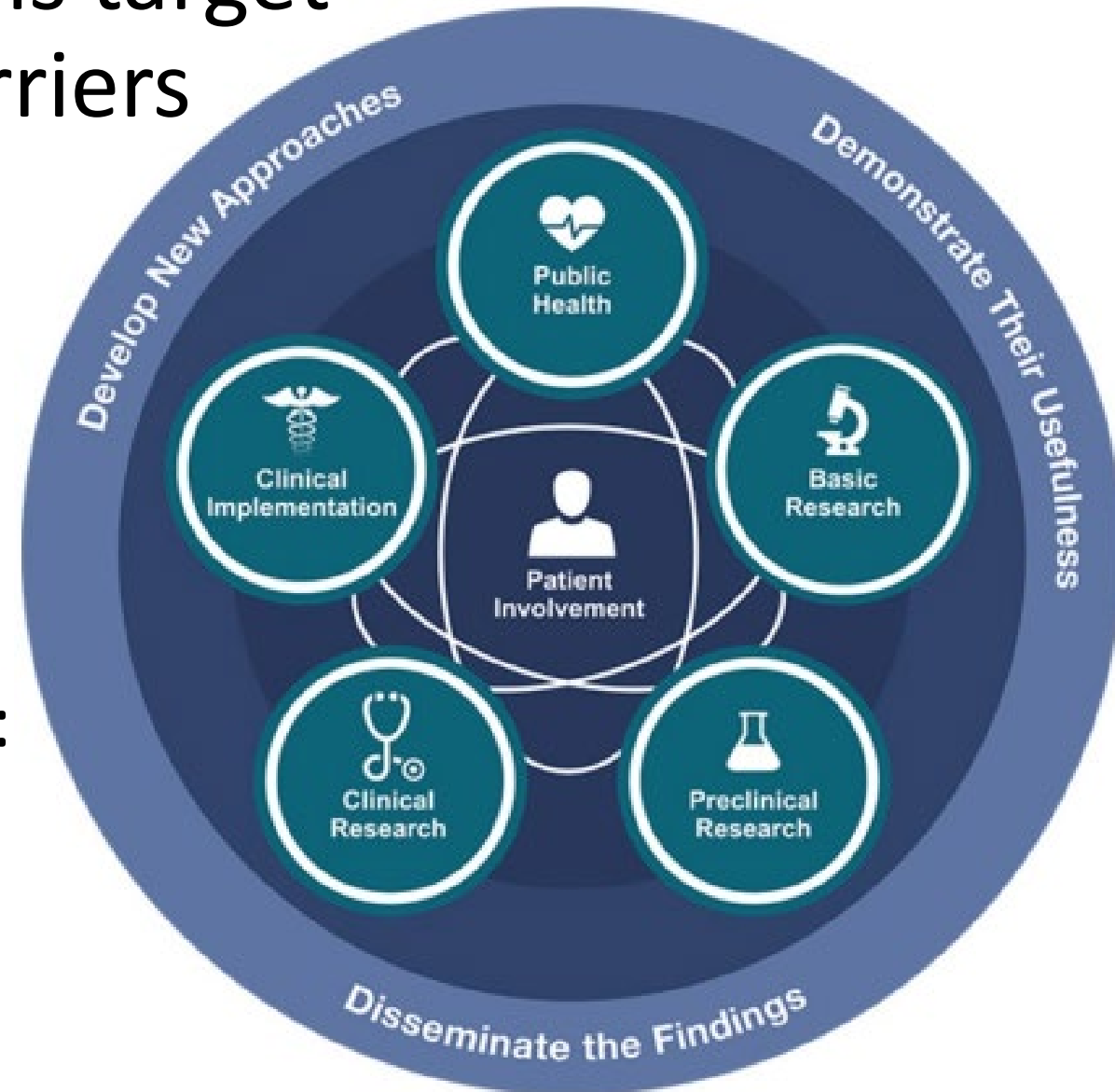
Translational Science solutions target scientific and operational barriers

Scientific:

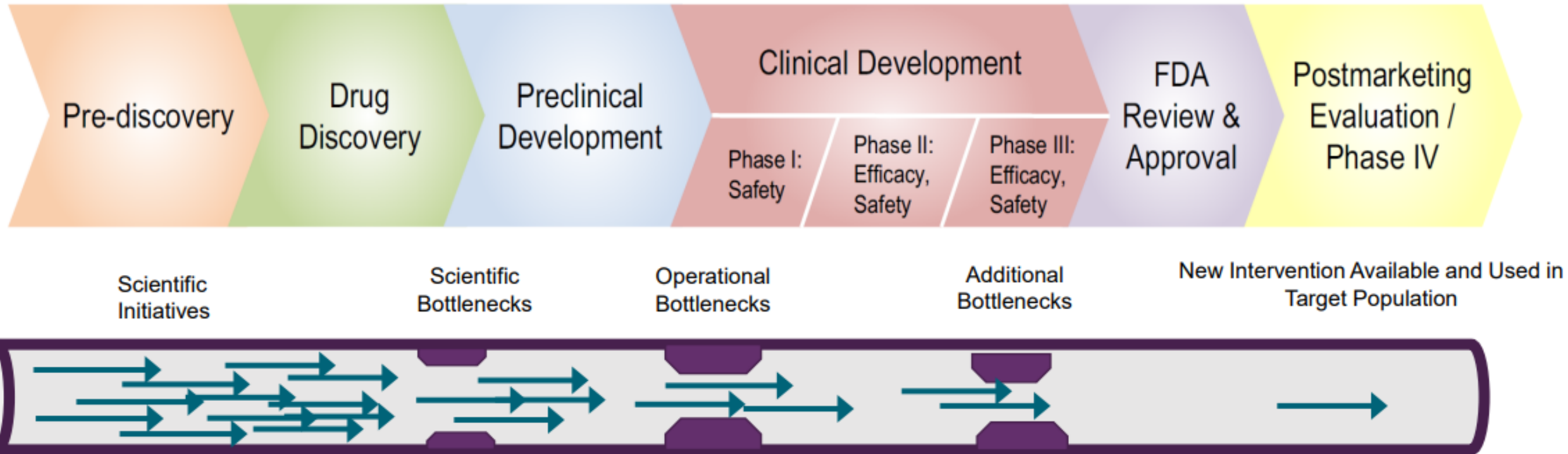
- Selection of research questions
- Research approaches
- Research methods

Operational (facilitates the science):

- How team functions
- Organizational environment
- Culture of science influences the research



What are your scientific and operational barriers?



Scientific?

Operational?

Example:

Community
Recruitment

Barrier: Recruiting a diverse population into clinical trials of chronic disease is difficult and often not accomplished successfully.

Project: Develop a model for patient-driven recruitment, to enhance the speed and diversity of recruitment in a common condition like administration of flu vaccine.

Translational Science: Development of a model for recruitment that can be applied to many other disease conditions and study types.

Example:

Mobile
Technology

Widespread access to smart phones allow access to health data collected in patient's homes, yet collecting data can be difficult.

Barriers: Custom apps are difficult to use; poor bandwidth in rural areas; lack of widespread use of devices like BP monitors.

Aim 1. Develop a reliable, flexible, and scalable platform to collect remote data from study participants, including functionality for sharing images, video and audio files, and health-related data such as FitBits, BP monitors, indoor environment monitors.

Aim 2. Test the platform by recruiting and observing a cohort using remote devices, such as individuals in pregnancy monitored for weight and BP for early detection of preeclampsia.

Translational Science: Applicable to many other projects using mobile technology

Example:

Challenging
Sample
Collection

Barriers: Research studies on cervical cancer screening in individuals who have experienced intimate partner violence are difficult because of lower participation in screening in general.

Aim 1. Develop self-collection methodology for cervical cancer screening.

Aim 2. Develop regulatory framework for issues related to sample self-collection.

Aim 3. Demonstrate that cervical sample self-collection is acceptable and feasible among individuals with a history of intimate partner violence.

Translational Science: Removal of this barrier to participation is applicable to other projects for cervical cancer screening, and resolving regulatory issues in sample self-collection is applicable to other types of samples.

Example: Informatics

Barrier: Measuring social determinants of health is not standardized which limits the use of real-world data (RWD)

- **Project 1.** Develop, implement, and evaluate a hands-on course and data support structures to increase use of data from large national RWD sets.
- **Project 2.** RWD often uses area-based social deprivation indices. Use machine learning approaches to apply US Census tract data to test for bias in social deprivation indices.
- **Project 3.** Using the PRIDE study, apply lessons learned in data collection, curation and harmonization to renovate the architecture of PRIDE to incorporate new types of data to improve understanding of underrepresented and vulnerable communities.

Translational Science: Technologic tools that are developed and optimized by assessing for bias can then be applied to future studies.

Example:

Community Engagement

Barrier: Communities and researchers may not share priorities for research agendas.

To set shared priorities, translational researchers and communities need to collaborate to identify health inequities and potential underlying causes, to identify solutions and track progress.

Aim 1. Engage a range of community partners to co-create a statewide system of health measures and analyses (map).

Aim 2. Disseminate the system and then support stakeholders: researchers, care teams, policymakers, and learners – in using this statewide system to develop strategies to reduce inequities.

Aim 3. Demonstrate that use of the system increases research, changes care, and affects policy to address equity statewide.

Translational Science: Will facilitate implementation of multiple future research projects in community

What types of projects can you design?

Improving the methodology of basic science to first in human studies

Drug and device research design

Innovative research design (adaptive, decentralized, platform) that accelerate start-up, recruitment, conduct

Innovative approaches to informatics or data management

Method/processes to integrate data from multiple sources

Regulatory operations such as obtaining consent, IRB approval

Research to optimize methods for effective community engagement

Methods to increase and/or accelerate recruitment, improve retention

Processes to collect specimens and outcome data from remote populations

Novel biostatistical analytic methods

And many more....

OCTRI Translational Science Pilot Awards – RFA coming

Anticipate funding 2 awards of \$30,000 each

Projects MUST be completed in approx. 9 months (10/1/2027–7/31/2028)

Anticipated timeline:

3/1/2027: Letter of intent due – description of Translational Science barrier or challenge and proposed solution

5/1/2027: Full applications due from those invited to submit

6/1/2027: Awardees notified, assisted with developing IRB protocol (if needed), obtaining IRB approval and NCATS prior approval.

10/1/2027: Anticipated pilot start date

7/31/2028: Pilot project hard end date – no carry-over allowed

(pending OCTRI competitive renewal being funded)

Final thoughts

- Turning basic research into real health solutions takes too long, fails too often
- Translation Science looks for solutions to improve how we do research:
 - Accelerating the process
 - Improving the chance of meaningful outcomes
- On the ground research staff often have the best insight on research barriers
- The upcoming RFA will be open to the broad range of research challenges
- More info: Research Town Hall – Monday, January 11, 2027 – 1:00 PM