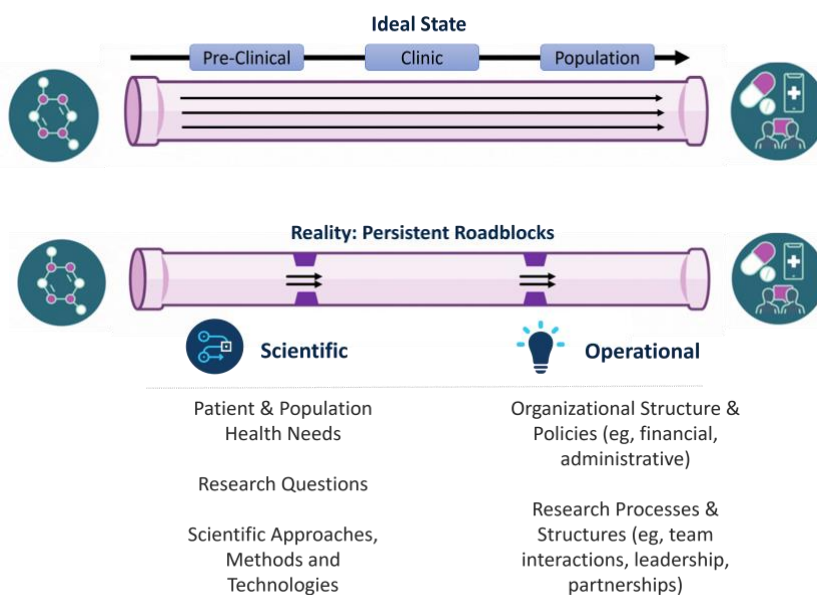


TRANSLATIONAL SCIENCE PRIMER

In alignment with the National Center for Advancing Translational Sciences (NCATS) vision of **more health solutions to all people more quickly**, MICHR is charged with helping to develop and advance the field of **translational science**. Translational science aims to identify and overcome long-standing roadblocks in the translational research pipeline, ultimately transforming the way research is done – making it faster, more efficient, and more impactful.

In an ideal state, the process of moving discoveries from the bench to the clinic, and ultimately having a positive impact on population health is fast and efficient.

Unfortunately, the translational research pipeline is fraught with deep-rooted challenges that slow the speed of research. These challenges are categorized as scientific or operational roadblocks. Some specific examples include models that fail at predicting health outcomes in people, research processes that are slow and laborious, data platforms that are not interoperable, and regulatory and administrative burdens that delay study start-up.



By examining the translational research ecosystem at a systems level, we can develop scientific and operational interventions that reduce or remove these translational barriers. This disease-agnostic approach aims to improve the efficiency and effectiveness of all translational research.

Our growing expertise in the field of translational science should also inform the **translational science principles** that, if adhered to, can accelerate the conduct of translational research.



Through scholarship and case-based studies, NCATS has identified eight initial translational science principles that are intentionally broad and apply to research anywhere along the translational continuum (see the image to the right). These principles serve as a guide for the translational enterprise to develop specific strategies that align with their unique research goals. They are also relevant to researchers and anyone who enables, facilitates, and supports translation, including those involved in administration, management, science leadership, and patient and community engagement.