A t the confluence of the Ohio River into the Allegheny and Monongahela sits the city of Pittsburgh. It has gone by alternate monikers such as the “Steel City” and the “City of Bridges”.

Pittsburgh’s sports teams – the Steelers, Pirates, and Penguins – have brought the city a great deal of pride, combining for 18 championships while sharing the same colors (black and gold).

It is also a city known for its plethora of major medical discoveries. At the University of Pittsburgh, Jonas Salk developed the polio vaccine that came into use in 1955. That was followed by other major developments such as transplants and the advent of modern CPR.

Stephen Z. Frabitore, MD, said UPMC has a storied history across the nation. Dr. Frabitore is the Co-Director of Innovation Education at the University of Pittsburgh, where he also is in the UPMC Department of Anesthesiology and Perioperative Medicine.

Somewhere along the line, medical red tape has equated to a red light on innovation, particularly in the rapidly upgrading field of anesthesiology.

COVID hit, throwing another curve ball, and Dr. Frabitore felt the frustration personally.

“A team of us invented an airway device,” he said. “We ran into a lot of roadblocks. After nine months, we ran out of support, with one already being tested on humans.

“The point was: Why couldn’t we get from Point A to Point B, if we are sitting in the middle of a proverbial stew of medical innovation and resources? I didn’t get it.”

In the “City of Bridges,” he set about building a few of his own. Hence, the seeds for what would become the PITTrack Innovation and Technology Track were sown.

PITT Innovation and Technology Track
“I wound up sort of calling the innovation groups in town,” said Dr. Frabitore. “I was asking, ‘What do you do? How can we do it, too?’”

Next came a catalogue of resources that can be given to physicians on how to follow up with their ideas – from construction to testing to marketing to patenting to all steps in between. These resources were used to supercharge a pre-existing “one-month innovation boot camp” elective that had successfully seen three residents through the medical device innovation process.

“Doctors need to be a part of the innovation process, yet few do it,” he said. There are four major reasons why:

1. Not enough time in the day, 2) education, 3) support, and 4) money.”

The net result was that two of the three residents had devices patented with grant support, with one already being tested on humans.

“Even with a modicum of available time, energy and resources, physicians can learn and apply innovation concepts through to marketing,” he said.

But the success stories are lost in a wilderness of those that never see the light of day. There are billions of dollars that get lost every year in investment in medical devices, because ideas – often good ones – die on the vine (asamonitor.pub/YmIvYm).

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The PITTrack project deals with these roadblocks with didactic, team-based, and multi-disciplinary education.

Breaking down barriers to innovation
“We’re empowering physicians by not only providing needed resources, but by systematically addressing the four main barriers to physician innovation.”

In essence, the effort is designed to change medicine from within, as opposed to having medicine change without us.

“Our specialty is especially dependent upon technology in today’s day and age,” said Dr. Frabitore. “We have an interwoven reliance on technology in ways to affect human physiology, and these things change.”

The ongoing goal is to get involved with physician-led solutions, or physician-consulted solutions, to bridge awesome ideas from the outside.

“As medicine changes, and as surgical needs change, so does the material that we need to use to adapt to those changes,” said Dr. Frabitore. “All physicians need are the barriers knocked down and the tools in their tool belt to get it done.”

He believes the “next step” is combining with anesthesiology fellowship programs, such as chronic pain and obstetrics, that are easily addressed through innovation. They plan to expand the program to any other interested facilities.

Future vision
As for the future of the PITTrack, say five to 10 years from now, Dr. Frabitore has an exciting vision.

“I would hope that we emerge as a national leader in anesthesia innovation and education, with a very smooth program that is providing resident physicians with the education, time, funding and departmental support to change medicine,” he said. “We hope to be attracting and graduating innovators in the medical sphere. Innovation is not limited to one place, program, or region. It is within all our grasp. We just have to beat those four barriers. We have hopefully found a way to do this.”

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