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Pilot test of a large-scale, first-hand research opportunity for medical students

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Professionalism in medicine today requires the ability to access, interrogate, and evaluate data to provide evidence-based medicine to all patients.

Secondary data increasingly available to conduct research and evaluate real-world healthcare outcomes with diverse patient populations.

Best way to learn the research process is to conduct a study from start to finish, but too few opportunities in labs and clinical research.

Medical students not trained in using such secondary datasets, and many graduate without any first-hand experience conducting research.

Background and Rationale

Therefore we incorporated TriNetX access and training into a required course for medical students, with opportunity for conducting a self-directed project

Step 1 • Students received access without having to initiate the process or be approved individually.

Step 2 • We designed & delivered several instructional sessions on TriNetX.
• Real-time and recorded demonstrations; review of a study conducted by VCU researchers using TriNetX.

Step 3 • Allowed teams to choose either the traditional research proposal or TriNetX-based project.
• We aligned the project deliverables for the two pathways to make them equitable.

Step 4 • Teams selected their own research topic and question
• We reviewed teams' initial descriptions of their intended projects, offered suggestions and guidance.

Innovative Practice

Participation was low

• 8 teams (20%) chose to conduct a study using TriNetX. All of them made use of additional faculty meeting time for help using TriNetX.

Students' TriNetX study topics

- Outcomes for patients treated with new drug for chronic Hep C
- Dietary Counseling in Patients with Cystic Fibrosis
- Improving Heart Failure Outcomes in Pediatric Populations
- Increasing Depression Rates Since the Onset of COVID-19
- Disparities in prognostic indicators of advanced HIV disease
- Smoking Cessation and Bipolar Disorder
- Effects of SGLT2i Therapy for Anthracycline Treated Neoplasms
- Apple Cider Vinegar in glucose control in patients with diabetes

Results

Students' evaluations were mixed

- “I was really excited to learn about TriNetX. I didn't know databases like that existed before I took this class. It is definitely a course component that should be included for next year's M2s.”
- “I enjoyed using TRINETX for the assignment!”
- “I think having a [full] class dedicated to TriNetX could be helpful.”
- “We should have had more sessions on how to use TriNetX.”

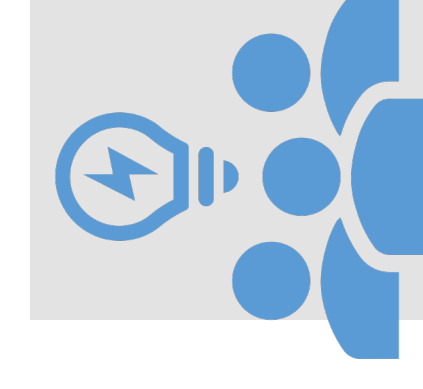
Course co-directors evaluations of implementation

- Automated access was hugely helpful and worked perfectly
- More instructional sessions would be helpful
- Encourage / facilitate hands-on test-drives by individuals or teams
- Provide template of presentation slides

Next Steps



Create and offer an elective for medical students on TriNetX



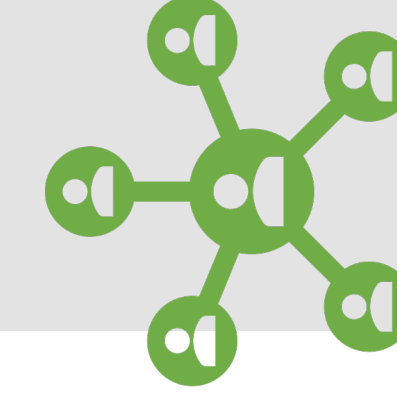
Explore ways for residents, fellows, and junior faculty to access and use TriNetX



Talk with course directors in Schools of Nursing, Pharmacy, Health Professions, Dentistry



Explore applicability to graduate and undergraduate programs on Monroe Park campus



Explore creating a TriNetX user support group, hands-on workshops, and office-hours for students, housestaff and faculty