

The West Virginia Clinical and Translational Science Institute contracts the WVU Program Evaluation and Research Center to staff the WVCTSI Tracking and Evaluation Core and provide external formative and summative evaluation services pursuant to National Institutes of Health Award No. U54GM104942.

## West Virginia Clinical and Translational Science Institute (WVCTSI) Tracking and Evaluation Quarterly Report

1<sup>st</sup> Quarter of Fiscal Year 2019-2020 (Y8)

Reporting Period: July 1, 2019 – September 30, 2019

Statewide Distribution of WVCTSI Partner Organizations and Practice-Based Research Network Sites



CAMC / WVU Charleston



Marshall University



West Virginia School of  
Osteopathic Medicine



WV Veterans Affairs



National Institute for  
Occupational Safety and  
Health



West Virginia  
University



WVU Medicine



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## West Virginia Clinical Translational Science Institute

### Tracking and Evaluation Quarterly Report

(July 1, 2019 – September 30, 2019)

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## Executive Summary

This is the quarterly tracking and evaluation report of the WV Clinical and Translational Science Institute (WVCTSI) for the 1<sup>st</sup> quarter (Q1) of fiscal year 2019/2020 (Y8), which covers a reporting period from July 1<sup>st</sup>, 2019 through September 30<sup>th</sup>, 2019. The WVCTSI received Y8 renewal notice of award dated August 28, 2019 with an annual award of \$4,000,000 for the budget period from July 1, 2019 through June 30, 2020 and a total project period from August 15, 2012 through June 30, 2022.

This report prepared by WVCTSI Tracking and Evaluation Core personnel is organized by specific aim within each key component area/core plus information from partner institutions as available. This report does not describe every tracking and evaluation metric in each core, rather key elements and recommendations are summarized and readers are referred to the Quarterly Data Sheet (Excel) distributed with this report for information on all metrics for all cores and partners included. There were 10 peer-reviewed publications officially linked<sup>1</sup> to WVCTSI funding, 54 external funding proposals (\$52.6 million), and 48 funded awards (\$13.6 million) this quarter. These numbers demonstrate productivity and return on investment. The amount of external funding was up for a fourth consecutive quarter. The number of linked publications (10+5 ahead of print) is not on track for annual target, but official linking of publications lags real time so these numbers are not final.

### Overall recommendations from Tracking and Evaluation Core

- Identify Year 8 annual targets for all appropriate metrics for all cores;
- Ensure transparent and consistent utilization of iLab across cores and partners with particular emphasis on action items agreed upon at May 29, 2019 WVCTSI Steering Committee meeting;
- Work to revise core metrics such that partner activity is communicated clearly within each core;
- Continue to increase partner engagement outside of Morgantown; and
- Maintain focus on priority health areas when allocating resources and effort.

### Key Recommendations to Administrative Core

- Identify Year 8 annual targets for all appropriate metrics.
- Identify barriers to partner participation and engagement; work to increase membership and service utilization across partner sites.
- Continue to work with Tracking and Evaluation to clarify and streamline reporting of linked publications utilizing NCBI as official data source.
- Make needed adjustments to allow timely provision to TEC of all quarterly evaluation information, including core contributions to publications, proposals, and funded awards.

### Key Recommendations to Clinical Research Design, Epidemiology & Biostatistics Core

- Identify barriers and work to increase service utilization across partner sites.
- Implement and report activity related to the Appalachian Research Consortium (ARC).

### Key Recommendations to Clinical Research Resources & Facilities Core

- Review Year 8 targets for all appropriate metrics and make changes where necessary.
- Review TriNetX study activation rates and determine whether action is warranted to facilitate accepted studies being activated in a timely fashion.
- Identify appropriate metrics for Specific Aim 2 and report data on those metrics in upcoming quarterly report cycles.

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<sup>1</sup> Publications are officially linked if they appear in NCBI as published (excluding “ahead of print” status) and are associated with quarterly reporting periods based on their official NCBI publication date (not ahead of print date).

**Key Recommendations to Community Engagement & Outreach Core**

- Require iLab account creation and use of iLab for all service requests, including standard operating processes for partner institution utilization of iLab or CEO entry of iLab service requests on partners' behalf.
- Continue and expand efforts to disseminate research results through publication in high-quality journals and other outlets.

**Key Recommendations to Pilot Projects Core**

- Review Year 8 targets for all appropriate metrics and make changes where necessary.
- Identify barriers and work to increase submissions of pilot project applications from partner institutions outside of WVU.
- Specific Aim 1 includes mentored support to bring projects to completion. Consider how this mentored support and project completion could be tracked.

**Key Recommendations to Professional Development Core**

- Identify year 8 annual targets for all appropriate metrics.
- Identify barriers and work to increase engagement with partner institutions outside of WVU Morgantown.

**Key Recommendations to Technology and Resources for Core Laboratories Core**

- Consider opportunities to facilitate patentable projects.
- Continue to facilitate excellent collaborative relationships between CAMC, Marshall, MU, and WVU.

**Key Recommendations to Tracking and Evaluation Core**

- Support continued refinement of the publication reporting process, including identification of publications that should be linked to the grant
- Support continued refinement of partner dashboards and/or more integrative inclusion of partner evaluation data within appropriate core reports.
- Implement next steps for WVPBRN and ECHO evaluations.

**Key Recommendations to Marshall University, Charleston Area Medical Center, National Institute for Occupational Safety and Health, Veterans Affairs Medical Centers, and West Virginia School of Osteopathic Medicine**

- Identify year 8 annual targets for all appropriate metrics.
- Work to implement and/or increase utilization of iLab.
- Continue efforts to increase WVCTSI membership.
- Work toward increasing awareness and utilization of WVCTSI core services.
- Work with relevant cores to refine evaluation metrics and reporting within each core related to activity at specific partner institutions.

### Quarterly Reporting Annual Timeline Targets

#### 1<sup>st</sup> quarter Reporting Period = July 1 – Sept 30

Sept 18	1 <sup>st</sup> quarter report task assigned to each KCA/Partner via email to key contacts
Oct 1	TEC begins data acquisition from repositories (e.g., iLab)
Oct 7	Quarterly data submission due from key contacts to TEC
Sept-Oct	Pre/post submission meetings (TEC and key contacts)
Oct 28	1 <sup>st</sup> quarter formative evaluation report and metric data distributed by TEC
Nov-Dec	Steering Committee discusses 1 <sup>st</sup> quarter formative evaluation

#### 2<sup>nd</sup> quarter Reporting Period = Oct 1 – Dec 31

Dec 18	2 <sup>nd</sup> quarter report task assigned to each KCA/Partner via email to key contacts
Jan 1	TEC begins data acquisition from repositories (e.g., iLab)
Jan 7	Quarterly data submission due from key contacts to TEC
Dec-Jan	Pre/post submission meetings (TEC and key contacts)
Jan 28	2 <sup>nd</sup> quarter formative evaluation report and metric data distributed by TEC
Feb-Mar	Steering Committee discusses 2 <sup>nd</sup> quarter formative evaluation

#### 3<sup>rd</sup> quarter Reporting Period = Jan 1 - Mar 31

Mar 18	3 <sup>rd</sup> quarter report task assigned to each KCA/Partner via email to key contacts
Apr 1	TEC begins data acquisition from repositories (e.g., iLab)
Apr 7	Quarterly data submission due from key contacts to TEC
Mar-Apr	Pre/post submission meetings (TEC and key contacts)
Apr 28	3 <sup>rd</sup> quarter formative evaluation report and metric data distributed by TEC
May-June	Steering Committee discusses 3 <sup>rd</sup> quarter formative evaluation

#### 4<sup>th</sup> quarter Reporting Period = Apr 1 – June 30

June 18	4 <sup>th</sup> quarter report task assigned to each KCA/Partner via email to key contacts
July 1	TEC begins data acquisition from repositories (e.g., iLab)
July 8	Quarterly report data due to TEC from each core
June-July	Pre/post submission meetings (TEC and key contacts)
July 29	4 <sup>th</sup> quarter formative evaluation report and metric data distributed by TEC
Aug-Sept	Steering Committee discusses 4 <sup>th</sup> quarter formative evaluation

### Administrative Core (Admin)

**Specific Aim 1. Implement an effective operational structure that facilitates attainment of all proposed WVCTSI Specific Aims and projects.**

There were 10 publications officially linked to the grant (with an additional 5 ahead of print), 54 external funding proposals (\$52.6 million), 48 funded awards (\$13.6 million), for Y8 Q1. Three new staff were added to the ADMIN core, totaling 43 WVCTSI staff members. There are currently 754 iLab users, an increase of 136 new users. The Administration Core did not provide requested information regarding which cores contributed to each publication.



Tracking and Evaluation Core pulled linked publications from NCBI utilizing all appropriate grant numbers to accurately identify which publications should be considered linked to the grant in this and all previous quarters (see Table 1). Table 1 displays officially linked publications associated with each quarterly reporting period. Numbers in parentheses are additional publications with a current status of “ahead of print” that are expected to be linked to the grant at some point. Figure 1 displays geographic location of first author institutional affiliation for WVCTSI linked publications from year 7 quarter 1 through year 8 quarter 1 where larger dots indicate more publications in a particular locale. Figures 2 and 3 display core contributions to external funding proposals and awards, respectively.

**Specific Aim 2. Create policies and procedures to drive performance, transparency, constructive communication and collaboration among multiple, diverse stakeholders (i.e., investigators, rural providers, community members).**

WVCTSI website traffic decreased again this quarter, by 38 average hits per day, and WVCTSI’s social media engagement continues to steadily increase: Facebook (+6 Likes), Twitter (+12 Followers), and Listserv (+126 ).

**Specific Aim 3. Provide sound fiscal and resource management, ensuring appropriate resourcing of cores, flexibility to meet changing needs and environments, and sustainability of services.**

WVCTSI supported 54 external funding proposals and 48 external awards this quarter. (see Figures 2 and 3). Percentage of NIH award expended per core ranged from 4% to 20%.

**Specific Aim 4. Recruit talented, committed investigators addressing research questions relevant to the WVCTSI priority health areas.**

No Clinical Translational investigators were reported to be hired this quarter.

### Key Recommendations to Administrative Core

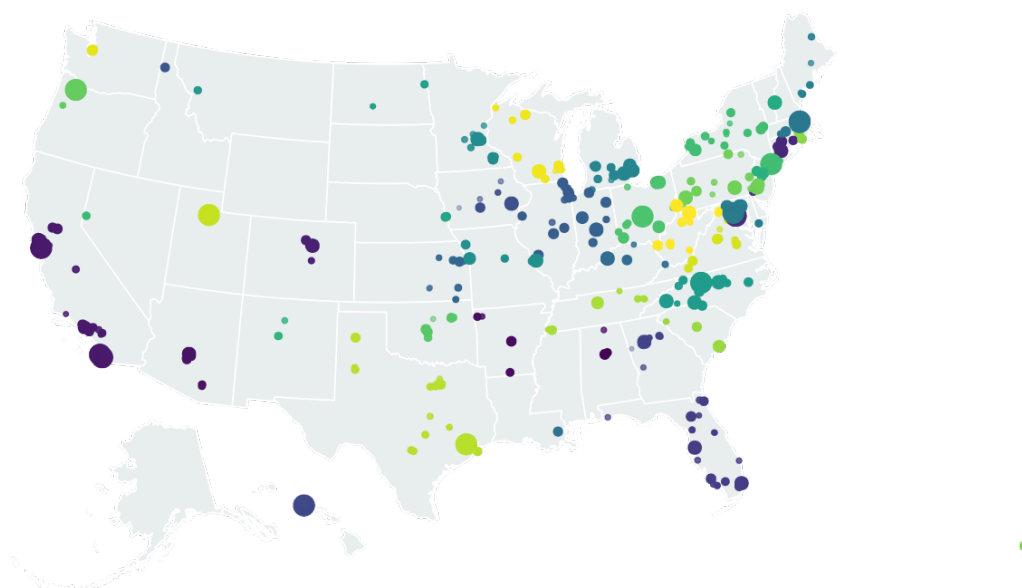
- Identify Year 8 annual targets for all appropriate metrics.
- Identify barriers to partner participation and engagement; work to increase membership and service utilization across partner sites.
- Continue to work with Tracking and Evaluation to clarify and streamline reporting of linked publications utilizing NCBI as official data source.
- Make needed adjustments to allow timely provision to TEC of all quarterly evaluation information, including core contributions to publications, proposals, and funded awards.

**Table 1. CTR-linked Publications by Year and Quarter per Official NCBI Data.**

	Q1	Q2	Q3	Q4	Totals
Years 1 – 5					682
Year 6	54	64	65 (+4)	59(+1)	243 (+5)
Year 7	49	53 (+4)	43 (+6)	31 (+1)	176 (+11)
Year 8	10 (+5)				10 (+5)
					1112 (+21)

**Note:** Numbers in parentheses are additional linked publications with a status of “ahead of print”.

## WVCTSI Year 7 to Year 8 Author Affiliation by Common Publications



Measurements taken from Quarter 1 to Quarter 1 for authors in the US only. Point sizes dependent on number of authors on a given publication.

**Figure 1. Geographic location of first author institutional affiliations.**

## External Funding Proposal Amounts by Core

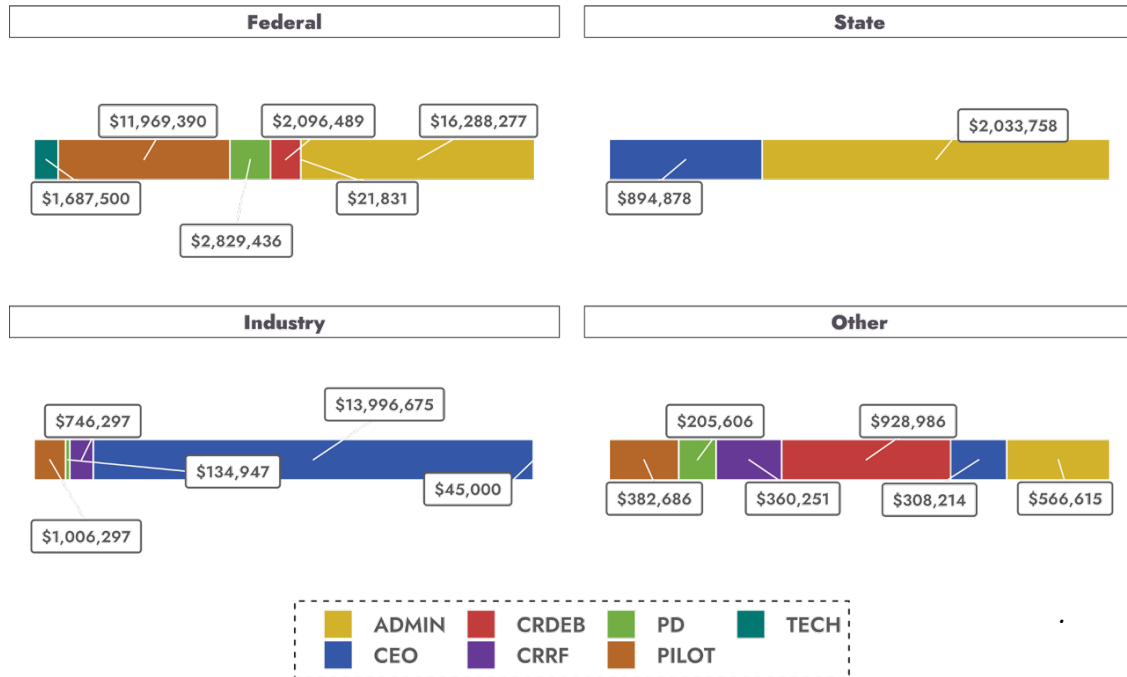


Figure 2. External funding proposals dollar amount requested and category per core.

## External Funding Award Amounts by Core

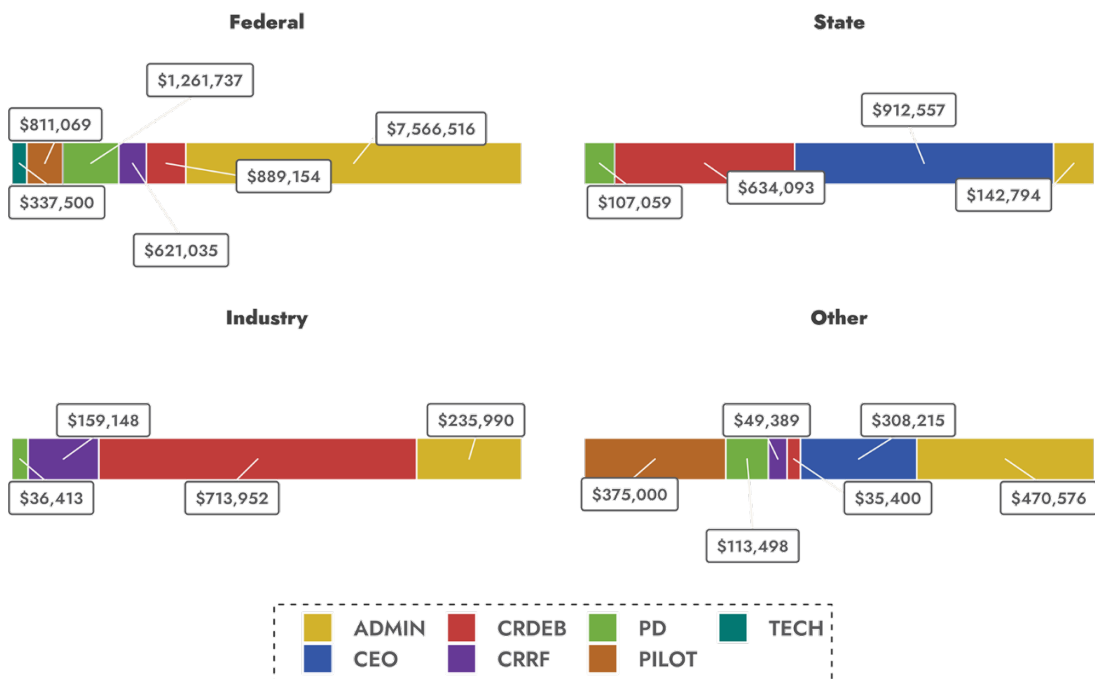


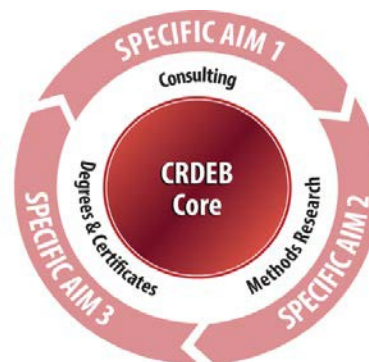
Figure 3. External funding awards dollar amount per core.



### Clinical Research Design, Epidemiology & Biostatistics Core (CRDEB)

#### Specific Aim 1. Effectively engage investigators throughout WV by providing traditional services in biostatistics and epidemiology.

Investigators engage through the CRDEB core utilizing available resources including the Integrated Data Repository (IDR), REDCap, and TriNetX. There were 83 new REDCap users in Q1 with a total of 1,721 REDCap users to date. Of the 1,721 REDCap users, 1,289 were from WVU (34 active), 15 from CAMC (4 active), 10 from WVSOM (2 active), and 407 not affiliated with the above entities (81 active).



Additionally, 1 hour was spent updating existing REDCap projects and providing project follow-up meetings in Q1. No REDCap projects were made for funded WVCTSI-investigators and 2 REDCap projects were made for non-WVCTSI funded investigators, 54 hours were spent building new REDCap projects for investigators, and no REDCap consultations were reported in Q1. There were 114 new REDCap projects/data instruments (with a total of 2106 projects/data instruments), and 97 new REDCap service inquiries. The total number of current TriNetX users was 342 in Q1 and there were 1682 new TriNetX inquiries, with 43 new TriNetX logins and 15 data set requests. CRDEB did not report professional development events in Q1. CRDEB reported 1 practice/policy changes. This change was in the reporting of REDCap users, which is now split into two categories: active and inactive.

### By the Numbers: Clinical Research Design, Epidemiology and Biostatistics Core Services

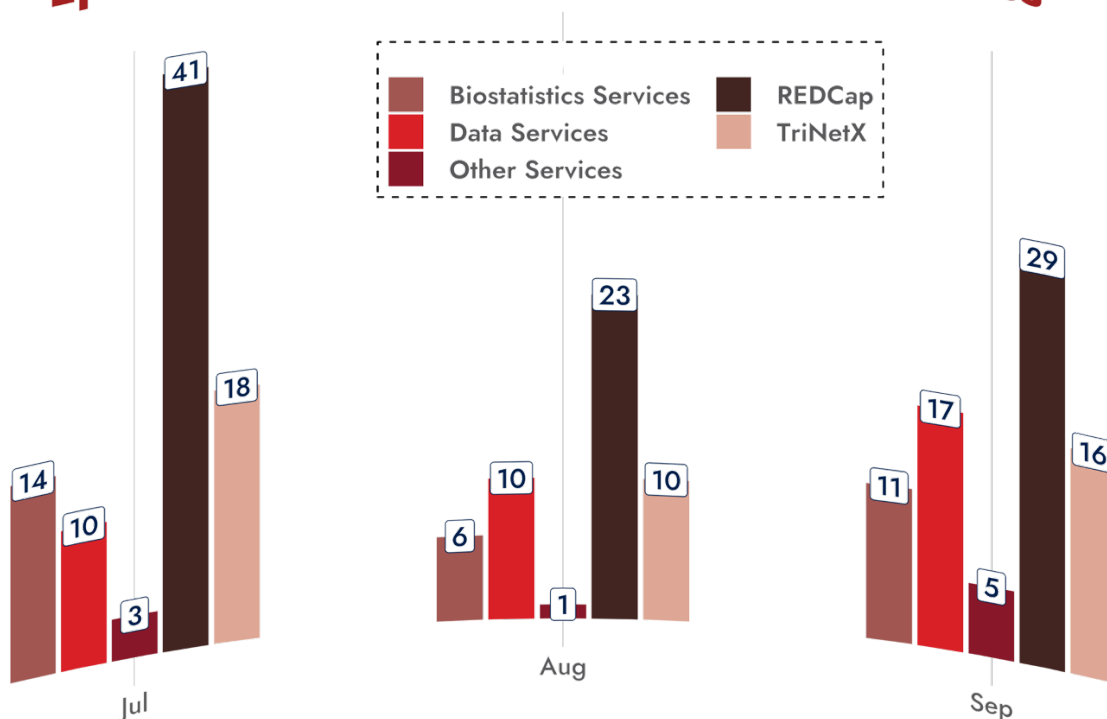


Figure 4. CRDEB iLab Core Management System services logged by month and service type.

**Specific Aim 2. Implement cutting-edge tools and methods in biostatistics and epidemiology, with a particular focus on the needs of WV researchers.**

CRDEB reported 83 BMIR-related inquiries, 6 sample size/power consultations, 12 new statistical analysis consultations, and 11 new clinical study design consultations in Q1. Additionally, 269.25 hours were dedicated to biostatistics consultations. 1 GIS analysis consultation was reported for Q1.

**Specific Aim 3. Disseminate current and classical information in biostatistics and epidemiology.**

CRDEB had 9 supported external funding proposals in Q1 (totaling over \$3M), 2 of which were a joint effort; 1 with Pilots and 1 with Admin and PD. Additionally, there was 8 externally funded awards (over \$2.2M), one of which was a collaborative effort with CRRF. CRDEB reported one presentation supported by CTR Award done in collaboration with PD and Admin.

**Specific Aim 4<sup>2</sup>. Leverage the newly enhanced Integrated Data Repository (IDR2) and partnership through the Appalachian Research Consortium (ARC) to facilitate outcomes research, predictive modeling, and geospatial analysis.**

In Q1 there were 22 new custom IDR dataset requests, 3 requests for updates to previous IDR datasets, and 15 IDR projects reported as completed. There were 493 hours spent on new data requests, 14.25 hours on updates to previous data sets, and 51.25 hours on data request consultation. CRDEB did not report any activity related to the Appalachian Research Consortium (ARC).

**Key Recommendations to Clinical Research Design, Epidemiology & Biostatistics Core**

- Identify barriers and work to increase service utilization across partner sites.
- Implement and report activity related to the Appalachian Research Consortium (ARC).

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<sup>2</sup>CRDEB Specific Aim 4 was previously CRRF Specific Aim 2. This revision was specified by letter to NIH dated November 27, 2017 and subsequently approved.

### Clinical Research Resources & Facilities Core (CRRF)

CRRF contributed 2 external funding proposals (over \$1.1 M), including 1 collaboration with Pilots Core. CRRF received 5 external funded awards (over \$829,000), 3 of which were in collaboration with Admin (2 awards) and PD (1 award) Cores.

**Specific Aim 1. Create a Clinical Trials Center of Excellence (CTCOE) with connection to rural communities and practitioners, thereby providing access to cutting-edge trials addressing health disparities affecting West Virginians.**

CTCOE provided 102 unique instances of support to non-CTSI studies in the form of regulatory, study coordination, accounting, or quality assurance assistance in Q1. Additionally, CRRF completed 1 quality audits and supported 2 new Early Stage PI's with industry or CTSI-initiated funding in Q1. A total of 92 participants were recruited, with 49 completing a study in Q1. CRRF had 17 TriNetX study offers and 4 accepted offers, no studies were activated this quarter.



## By the Numbers: Clinical Research Resources Facilities

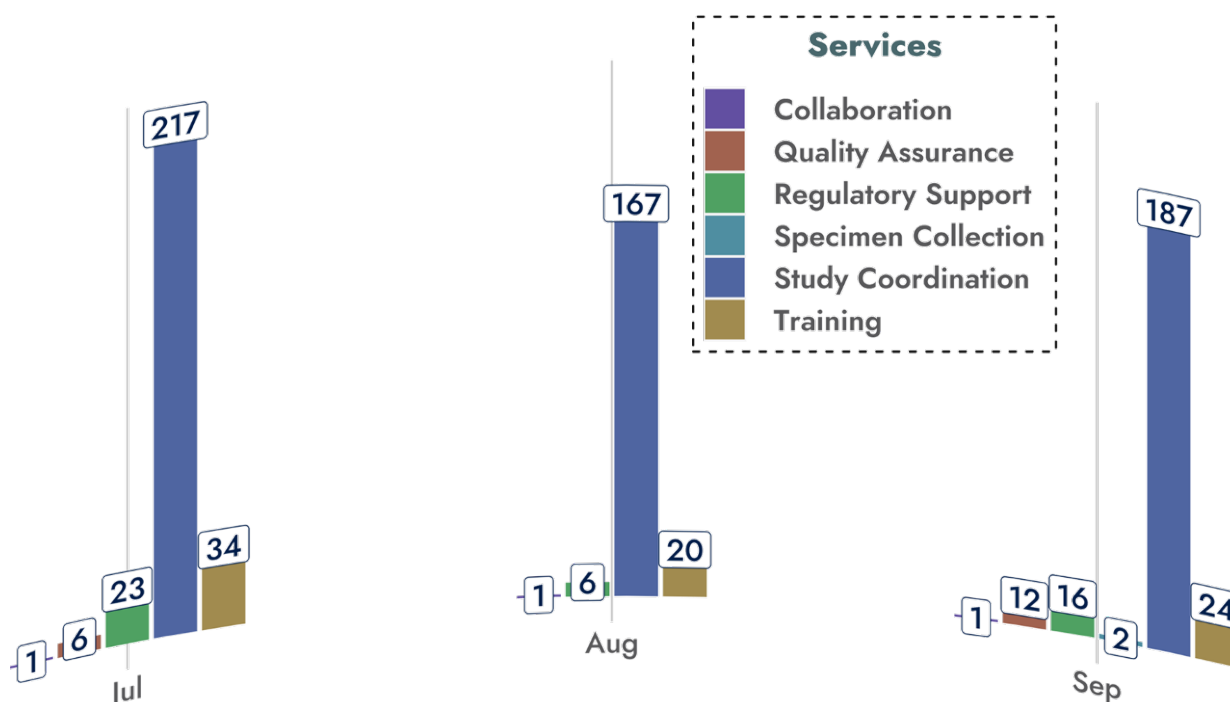


Figure 5. CRRF iLab Core Management System services logged by month and service type.

**Specific Aim 2. Establish the Environmental Exposures Unit to stimulate environmental health research in collaboration with the National Institute for Occupational Safety and Health (NIOSH).**

While there has been some activity with NIOSH personnel, there have been no data reported on the Environmental Exposures Unit since the beginning of this funding cycle (2016).

**Key Recommendations to Clinical Research Resources & Facilities Core**

- Review Year 8 targets for all appropriate metrics and make changes where necessary.
- Review TriNetX study activation rates and determine whether action is warranted to facilitate accepted studies being activated in a timely fashion.
- Identify appropriate metrics for Specific Aim 2 and report data on those metrics in upcoming quarterly report cycles.

## Community Engagement & Outreach Core (CEO)

### Specific Aim 1. Actively engage patients and other community stakeholders as research partners.

There were 107 WVPBRN and 121 ECHO sites reported in Q1. This included 13 new ECHO sites: Cardinal Pediatrics, Coalfield Health Center, Cody Regional Health, JC Lewis Primary Health Care Center, Lincoln Memorial University, Logan Mingo Area Mental Health Inc., Novartis, Pocahontas Memorial Hospital, Valley HealthCare System, Virtual Surgical Group, Wayne Memorial Hospital, WV Highmark, and WVU Public Administration. Additionally, there were 10 sites listed that had been previously unreported: Braxton County Memorial Hospital, Endless Mountain Health System, Harpers Ferry Family Medicine, Indiana University Health Arnett, Martinsburg Institute, Polaris Emergency Specialists LLC., Ritchie Regional Health Center, Robert C Byrd Clinic, Stroudwater Associates, and WV Violence and Injury Prevention Program. There were 3 new partner organizations reported: WVU Extension, University of North Carolina- Chapel Hill, and Maureen Reynolds. There were no CEO (non-ECHO) sites reported.



During Q1, there were 4 networking opportunities: Rural Health Fair, Viral Hepatitis Conference, Allegheny Health Network Addiction Medicine Meeting, and Novartis. Additionally, there were 4 Community Advisory Board meetings, and 9 mentored investigators were reported for Q1.

## By the Numbers: Community Engagement Core

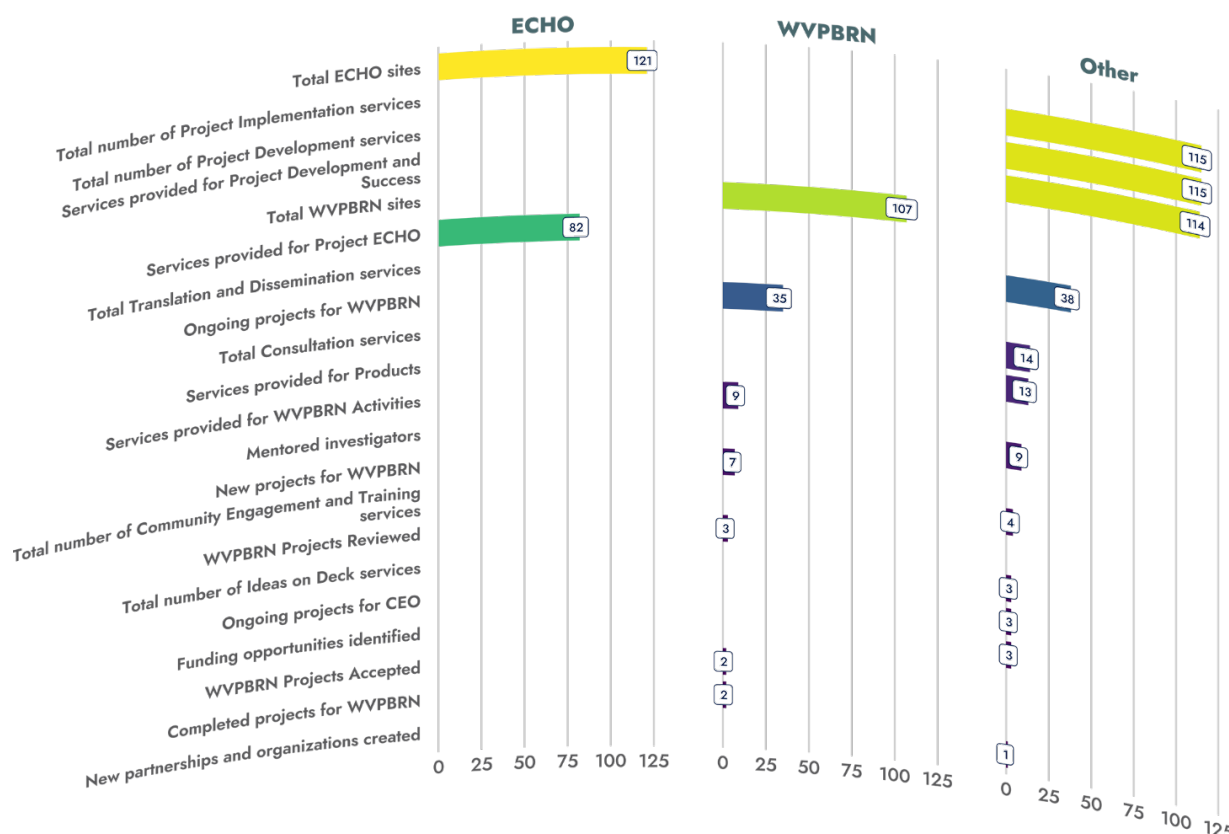


Figure 6. CEO core services logged by service type.

**Specific Aim 2. Transform community-identified research questions into externally-funded projects that improve health outcomes in WVCTSI health priority areas.**

There were 7 new, 35 ongoing, and 2 completed WVPBRN projects in Q1. There were 114 Project Development and Success services, 115 Project Implementation services, 4 Community Engagement and Training services, 3 Ideas on Deck services, 82 ECHO services, 14 Consultation services, 9 services for WVPBRN Activities, and 13 services for products were reported during Q1.

CEO identified 3 funding opportunities and reviewed 3 WVPBRN projects, 2 of which were accepted. CEO also contributed to 8 external funding proposals (totaling over \$15.2M), none of which were in collaboration with other cores, and 7 externally funded projects (totaling over \$1.2 M) in Q1.

**Specific Aim 3. Translate and disseminate research results to inform West Virginia health policy and practice.**

In Q1 there were 38 Research Translation and Dissemination services provided. No CEO Project Policy Briefs were reported.

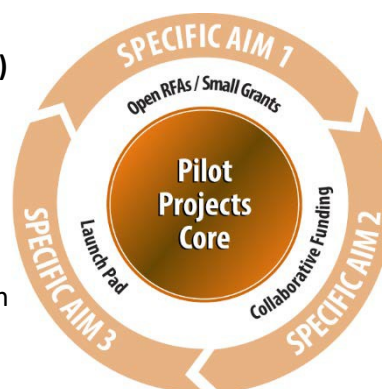
**Key Recommendations to Community Engagement & Outreach Core**

- Require iLab account creation and use of iLab for all service requests, including standard operating processes for partner institution utilization of iLab or CEO entry of iLab service requests on partners' behalf.
- Continue and expand efforts to disseminate research results through publication in high-quality journals and other outlets.

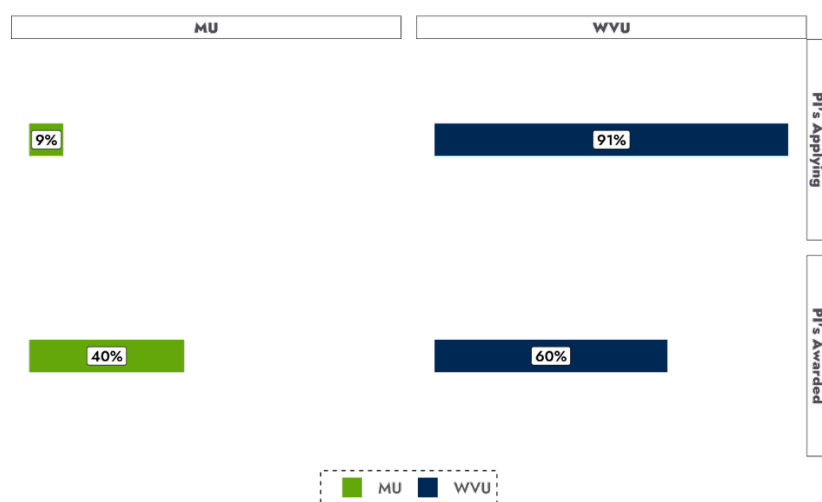
## Pilot Projects Core (Pilot)

**Specific Aim 1. Provide infrastructure supporting competitive pilot funding opportunities for early stage (ESI) and new investigators (NI) with subsequent mentored progression to project completion, publication, and external funding application.**

Total number of pilot grant applications received in Y8 Q1 was 43 (41 Open, 2 Launch), with ESIs on 23. The total number of Pilot grants awarded this quarter was 5 (3 launch, 2 collaborative), with ESIs on 3. The distribution of PIs from WVCTSI partner institutions is displayed in Figure 7. Pilot provided 3 workshops and 30 consultations. Pilot reported one policy change related to Just-In-Time processes to help align Pilot's practices with and orient awardees toward NIH approval processes.



### Funding Activities by Institution



**Figure 7. Distribution of Y8 Pilot Awardees and Applicants by PI WVCTSI Partner Institution**

**Specific Aim 2. Advance collaborative research endeavors to address WVCTSI priority health areas within WV as well as throughout the Appalachian region.**

The Pilot Projects Core reported funding 3 projects in Y8 Q1 that addressed critical health issues in Neuroscience, Addiction, and Cardiovascular health. The Pilot Core contributed to over \$13.3 million in external grant proposals, and over \$1.18 million in external grants awarded for Y8 Q1.

**Specific Aim 3. Implement the Launch Pad Pilot Program to maximize opportunities for commercialization of novel science.**

Pilots provided funding for 3 Launch Pad projects in Y8 Q1; 2 PIs were from WVU, 1 from MU, and 2 were ESIs.

## Key Recommendations to Pilot Projects Core

- Review Year 8 targets for all appropriate metrics and make changes where necessary.
- Identify barriers and work to increase submissions of pilot project applications from partner institutions outside of WVU.
- Specific Aim 1 includes mentored support to bring projects to completion. Consider how this mentored support and project completion could be tracked.

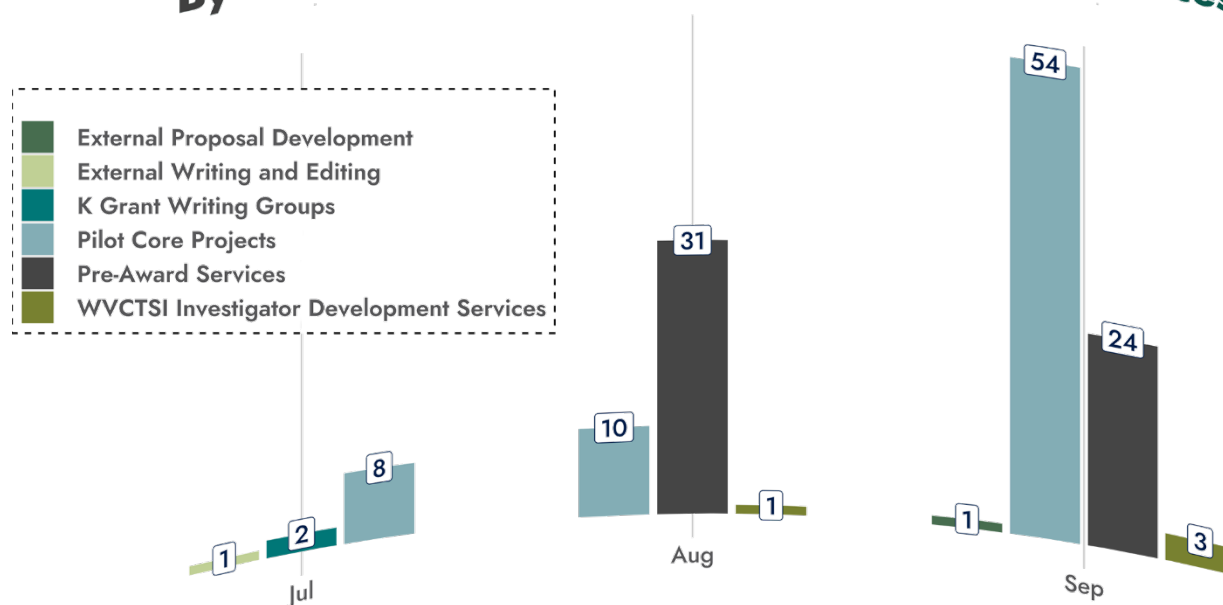
### Professional Development Core (PD)

**Specific Aim 1. Create the Scientific and Career Success (SACS) program to provide access to formal mentoring for C/T researchers of all career stages.**

There are a total of 754 iLab users, with a total of 66 members using iLab to request services. There were 23 new investigator development service requests through iLab. There were 10 orientations or consultations provided to investigators new to WVCTSI. Additionally, there were 12 external active members in the SACS program in Q1, as well as 5 female clinician scientists being mentored. There were 4 special events/programs for women in science in Q1, which included a Steering Committee Meeting and 3 seminars: Rigor and Reproducibility, Crafting a Compelling Biosketch, and Crafting a Compelling BioSketch Part 2.



### By the Numbers: Investigator Development Services



**Figure 8. Investigator development services per service category as logged in iLab.**



**Specific Aim 2. Develop formal programs that serve as “on-ramps” to introduce C/T research to early or new investigators and trainees at different career stages.**

The core reported mentoring 5 unique fellows/residents, 5 graduate students, 4 undergraduate students, and 2 full team meetings, as well as 5 professional development sessions: (1) Crafting a Compelling Biosketch, (2) Crafting a Compelling Biosketch 2, (3) Navigating NIH Systems, (4) Rigor and Reproducibility, and (5) a breakout session.

There was 1 CTS Certificate application received and 8 CTS PhD students enrolled at WVU in Q1 (MU enrollment was not reported). Education programming reported no new academic courses, 1 workshops/short course titled Crafting a Compelling Biosketch, and 11 C/T research seminars: (1) Five things I wish I knew at your career stage, (2) Developing and Refining your Elevator Pitch, (3) Navigating Research- Early Stage Investigator Perspectives, (4) Reverse Translational Research- persistently trusting your instincts, (5) Presenting your Research Poster, (6) Capstone: Journey as a Physician Scientist, (7) Summer 2019 K Writing Group, (8) Summer 2019 R03 Grant Writing Group, (9) Radiology Resident Series, (10) Navigating NIH Systems, (11) Rigor and Reproducibility.

**Specific Aim 3. Develop educational opportunities to support and retain externally funded C/T researchers statewide.**

The Professional Development core contributed to 8 external funding proposals (over \$3.1 M total; 1 of which was in collaboration with Admin and CRDEB) and 12 externally funded awards totaling over \$1.5M, 3 of which were in collaboration with other cores. The Professional Development core reported 4 presentations supported by CTR Award, of which 1 was in collaboration with CRDEB and Admin.

**Key Recommendations to Professional Development Core**

- Identify year 8 annual targets for all appropriate metrics.
- Identify barriers and work to increase engagement with partner institutions outside of WVU Morgantown.

## Technology and Resources for Core Laboratories Core (TRCL)

The Technology and Resources for Core Laboratories core contributed to external funding proposals totaling over \$1.5 million, and externally awarded funds totaling over \$300k during Y8 Q1.

**Specific Aim 1. To establish a statewide biospecimen repository that collects patient and study participant samples in WVCTSI priority health areas (addiction and resultant emerging epidemics, cancer, cardiovascular disease, and chronic lung disease).**

TRCL reported 3 WVCTSI-supported projects, with 8 new projects, and 62 total open projects this quarter. This marks the first quarter in which Biospecimen sample collection and utilization is fully collaborative. Biospecimen samples and utilization were reported for each affiliate institution: WVU, MU, and CAMC. One administrative change was reported – the appointment of Dr. Michael Hu as the Director of WVU Bioinformatics Core.

**Specific Aim 2. To establish a statewide West Virginia University (WVU) - Marshall University (MU) genomics shared research facility for the efficient generation of genomic and related data for C/T studies that address WVCTSI priority health areas.**

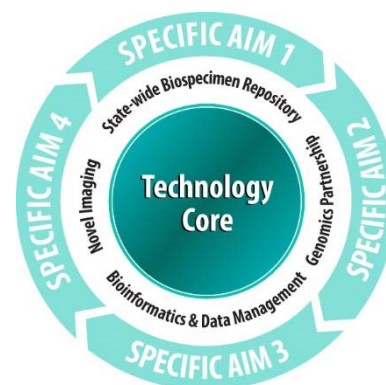
There were 2 genomics studies, 9 Illumina projects, and 23 total Illumina runs reported by WVU and MU this quarter. Three educational sessions with 8 total attendees were provided.

**Specific Aim 3. To establish a statewide WVU-MU shared Bioinformatics and Data Management (BDM) Facility for C/T studies that address WVCTSI priority health areas.**

Three educational sessions with 8 total attendees were provided this quarter.

**Specific Aim 4. To establish state-of-the-art imaging in support of biologically relevant modeling of disease.**

Progress was made this quarter towards each of the annual targets for Imaging, with the exception of numbers of patents (0), disclosures (0), and MRI projects (0). However, the annual target for investigators served was almost met in this single quarter (18 out of 20), and good progress was made for other targets such as projects for MicroCT (4 out of 10), educational sessions provided (17 out of 45), and number of total attendees (11 out of 20).



## Key Recommendations to Technology and Resources for Core Laboratories Core

- Consider opportunities to facilitate patentable projects.
- Continue to facilitate excellent collaborative relationships between CAMC, Marshall, MU, and WVU.

## Tracking and Evaluation Core (TEC)

**Specific Aim 1. Develop Investigator Tracking and Support System (ITSS) utilizing quantitative and qualitative approaches to identify factors contributing to success or providing barriers to productivity.**

TEC continued its efforts in communicating with key contacts to refine metrics for increased accuracy in reporting, with PD having the most significant updates. TEC was successful in identifying all publications linked to the WVCTSI grant number directly from NCBI. TEC tested a new process of identifying publications potentially associated with the WVCTSI grant number. This process will continue to be refined and expanded over future quarters. TEC continues to refine Social Network Analysis visualizations to show collaboration among authors on linked publications. TEC in coordination with the Administration Core continued with the development of a WVCTSI-wide Awareness Survey, which is expected to be implemented Y8 Q2.



**Specific Aim 2. Create and implement systematic set of tools and measurements to drive continuous quality improvement and demonstrate impact of community stakeholder participation and engagement.**

During Q1, TEC continued to work with CEO and ECHO on the ECHO “SuperHub” evaluation plan. TEC continued to work with CEO related to WVPBRN network evaluation.

**Specific Aim 3. Build focused research and evaluation demonstrating WVCTSI impacts on health outcomes in West Virginia.**

The Tracking and Evaluation Report for the 4<sup>th</sup> Quarter of Y7 was disseminated in Q1 of Y8. Additionally, a TEC core member contributed to an NIH supplement designed with the following two specific aims: 1) describe community attitudes toward opioid use disorder and harm reduction services including syringe exchange, and 2) understand the multilevel syndemic factors that may contribute to development of opioid use disorder among young women for the purposes of informing future intervention studies. In Q1, TEC’s qualitative specialist continued to collect interviews and process of developing a scheme for qualitative data analysis. The ECHO research evaluation plan when completed will demonstrate impact on health outcomes.

## Key Recommendations to Tracking and Evaluation Core

- Support continued refinement of the publication reporting process, including identification of publications that should be linked to the grant
- Support continued refinement of partner dashboards and/or more integrative inclusion of partner evaluation data within appropriate core reports.
- Implement next steps for WVPBRN and ECHO evaluations.

**Marshall University (MU)**

MU, located in Huntington, WV in Cabell County, partners with the WVCTSI and is engaged in activities primarily related to research and investigator development. The Joan C. Edwards School of Medicine at MU is a community-based,



Veterans Affairs-affiliated medical school dedicated to providing high quality medical education and postgraduate training programs to foster a skilled physician workforce to meet the unique healthcare needs of West Virginia and Central Appalachia. The Joan C. Edwards School of Medicine focuses on developing centers of excellence in clinical care, including primary care in rural underserved areas, focused and responsive programs of biomedical science graduate study, biomedical and clinical science research, academic scholarship, and public service outreach. MU houses WVCTSI Associate Director, Dr. Gary Rankin.

For Q1, MU reported 1 peer-reviewed publication. MU submitted 10 external funding proposals and had 2 funded. MU worked collaboratively with many WVCTSI cores in Q1. Camille Charlier, Pilot Grant Coordinator, visited Marshall University to discuss Pilot RFA's and other WVCTSI services. The Pilot core provided 4 consultations to MU this quarter, including 1 fall 2019 RFA discussion and 2 Pilot Kick-off Meetings. TRCL core reported 145 biospecimen samples used by MU, as well as 124 biospecimen samples collected. MU reported 8 Illumina projects, and 16 runs (Illumina sequencing lanes). MU currently has 40 WVCTSI members.

**West Virginia School of Osteopathic Medicine (WVSOM)**

WVSOM, located in Lewisburg, WV in Greenbrier County, partners with the WVCTSI in activities related to research and community engagement. WVSOM focuses on educating students as lifelong learners in osteopathic medicine and complementary health related programs, supporting graduate medical education training, advancing scientific knowledge through academic, clinical, and basic science research, and promoting patient-centered, evidence-based medicine.



In Q1, WVSOM reported 1 peer-reviewed publication. There was no funding proposals or funding awards for Q1. WVSOM recruited 2 investigators and has 2 WVCTSI funded pilot projects. The Pilot core held 1 Pilot Kick-off session with WVSOM this quarter. No ESI's accessed WVCTSI services this quarter. In relation to the PD Core, WVSOM attended 12 workshops/courses/seminars/retreats and 8 posters/exhibits/promotional events in Q1. WVSOM provided 6 student opportunities for C/T research and had 6 students participate in summer research projects during Q1. During Q1 WVSOM had 1 community participatory research projects, 10 trainees in community-engaged research curriculum, 6 open collaborative CTS projects outside the WVPBRN and 1 current alliance CTS collaborations across the state. WVSOM initiated 1 research project. At the end of Y7 WVSOM housed 10 REDCap users (2 active).

### Charleston Area Medical Center (CAMC)

CAMC is a nonprofit, 908-bed, regional referral and academic medical center of four hospitals and home to one of the largest cardiac programs in the US, the only kidney transplant center in WV, and a level I trauma center. The CAMC Health Education and



Research Institute (CHERI) provides continuing medical education and research support to physicians and allied medical professionals. CHERI operates a nurse anesthesia school with MU as well as 13 graduate medical education residency/fellowship programs. CAMC sponsors pharmacy residency programs and psychology internships.

CAMC received 4 Biostatistics consults, attended 4 journal clubs and delivered 7 workshops/courses/seminars/retreats. CAMC had 18 students in summer research projects. At the end of Y7 CAMC had 10 REDCap users (2 active users) and 4 iLab users.

### Veteran Affairs Medical Centers (VAMC)

Addition of the VHA in WV as a partner in the WVCTSI is critical to improving health outcomes throughout the state. VHA operated medical centers (Clarksburg, Huntington, and Martinsburg) participate in the WVCTSI.



WV has one of the highest per capita percentages of veterans with over 9% of residents having served in the US Armed Forces, making this partnership even more significant.

The West Virginia Veterans Medical Centers continue to disseminate information related to WVCTSI to increase engagement and collaboration between Veteran Affairs Medical Centers (VAMC) and WVCTSI. Email communication with local VAMC personnel continue to be used to increase awareness. To date, VAMC has 6 WVCTSI members but have not yet requested services.

Dr. Abdul Haji, Chief of Cardiology at Martinsburg VAMC, continued his role on Early Stage Investigator Advisory Board. WVCTSI staff, NIH Program Director, WVU-Eastern Division Dean, and NVAMC staff toured the Martinsburg VA Facility and discussed future projects.

### National Institute for Occupational Safety and Health (NIOSH)

National Institute for Occupational Safety and Health (NIOSH) did not report any quarterly evaluation data this cycle.

### Key Recommendations to Marshall University, West Virginia School of Osteopathic Medicine, Charleston Area Medical Center, National Institute for Occupational Safety and Health, and Veterans Affairs Medical Centers

- Identify year 8 annual targets for all appropriate metrics.
- Work to implement and/or increase utilization of iLab.
- Continue efforts to increase WVCTSI membership.
- Work toward increasing awareness and utilization of WVCTSI core services.
- Work with relevant cores to refine evaluation metrics and reporting within each core related to activity at specific partner institutions.