

CTSC Program Evaluation Core: Self-Evaluation Report

Director: Clara M. Pelfrey, PhD

Description: CTSC Program Evaluation integrates data tracking and evaluation for multiple CTSC resource cores, incorporating a utilization-focused approach. Our strategy is based on the CDC Framework for Program Evaluation and on the American Evaluation Association Program Evaluation Standards.

a. Conceptual Framework of the Evaluation Plan. Program Evaluation Core is charged to assess our CTSC's progress in achieving goals, to provide formative feedback to stakeholders, and to chronicle lessons learned. We communicate program evaluation findings to program leadership, the Executive Committee, Internal & External Advisory Committee, and other stakeholders and suggest actionable changes for improvements to the program. We organized program evaluation around the conceptual framework of the logic model framework of CIPP [Context, Input, Process, Product] adapted from the National Logic Model Evaluation Framework, using the definitions of multi-, inter-, and trans-disciplinary levels of collaboration (Stokols, D. Am J Community Psychol. 2006;38(1-2):63-77).

b. Goals and Milestones & Progress

Table 1. Progress on Program Evaluation Goals and Milestones

Goals & Milestones	Progress
1. Engage in CTSA consortium collaborative research	
a. Collaborate with other CTSA hubs	<ul style="list-style-type: none"> • Retrospective Case Studies on translational research with 7 CTSA hubs. • KL2 Program bibliometric study with Univ. North Carolina and Mayo Clinic. • Great CTSA Team Science contest study with VCU and GW Univ.
b. Present research at national meetings	<ul style="list-style-type: none"> • Dodson, S., Kukic, I., Scholl, L., Pelfrey, CM., Trochim, WA. Protocol for Retrospective Translational Science Case Studies of Health Interventions. Transforming Research conference, Bioscientifica. Oct. 15, 2020. • Clara Pelfrey, Anne Vo, Nnenia Campbell, Phung Pham, Sue Ann Sarpy, Patrick Barlow. "Evaluation in Times of Crisis: What is Our Value Proposition?" 45 min session. Evaluation 2020 (AEA) Oct. 29, 2020. • Pelfrey, CM. Goldman, A., DiazGranados, D. "What does team science look like across the CTSA Consortium? A qualitative analysis of the Great CTSA Team Science Contest results". TS 2021. Mar 30-April 2, 2021. • "Addressing the Challenges of Outcome and Impact Evaluation of Leadership Training Programs". AEA Leadership & Organizational Performance Topical Interest Group online webinar & think tank. June 22, 2021. • "Translational Science Case Studies and Cross-Case analyses: How do we speed human health advances?", 561, American Evaluation Association, Evaluation 2021 meeting. Nov. 10, 2021.
c. Publication of research on evaluation	<ul style="list-style-type: none"> • Pelfrey, C., Goldman, A., & DiazGranados, D. (2021). What does team science look like across the CTSA consortium? A qualitative analysis of the Great CTSA Team Science Contest submissions. Journal of Clinical and Translational Science, 5(1), E154. doi:10.1017/cts.2021.812 • Qua K, Yu F, Patel T, Dave G, Cornelius K, Pelfrey CM. (2021) Scholarly Productivity Evaluation of KL2 Scholars Using Bibliometrics and Federal Follow-on Funding: Cross-Institution Study. J Med Internet Res 2021;23(9):e29239. doi: 10.2196/29239. • Qua, K., Swiatkowski, S., Gurkan, U., & Pelfrey, C. (2021). A Retrospective Case Study of Successful Translational Research: Gazelle Hb Variant Point-of-Care Diagnostic Device for Sickle Cell Disease. Journal of Clinical and Translational Science, 1-22. doi:10.1017/cts.2021.871 • [Submitted] Deborah DiazGranados, Clara Pelfrey, Ann Goldman, Rebecca Moen, Damayanthi (Dayan) Ranwala, Karen Demby, Matthew Carson, Kristi Holmes, William M. Trochim. The Great CTSA Team Science Contest: An evaluation of team science activities across the CTSA consortia and lessons learned.
2. Implement SPARC Request research management system within the CTSC	
a. SPARC implementation includes: developing master list of cores & components & services; pilot testing with key stakeholders; developing training videos; training users and service providers; refine reports.	a. Completed
b. Develop reports from SPARC for each core and for overall hub.	b. Completed & ongoing
c. Data mining SPARC Request for specific research supported by hub.	c. Ongoing
d. Connect data from SPARC to CWRU Data Lake	d. Planned
3. Implementation and ongoing data collection for the NCATS Common Metrics	
a. Yearly data collection, CM-PRISM entry and Summary Report preparation.	a. Ongoing
b. CQI, show TTC improvement & report to CTSC leadership, NCATS & EAC	b. Ongoing
4. Streamline CTSC evaluation data gathering and reporting for various cores	
a. Refined quarterly metric reporting templates for QI for cores & stakeholders	a. Completed & Ongoing
b. Implementation: Flight Tracker REDCap-tracking of KL2 Scholar outcomes	b. Completed
5. National service to the CTSA Consortium and to advancing evaluation of translational research	
a. CTSA Consortium-wide	<ul style="list-style-type: none"> • External Advisory Committee (EAC) Member for Evaluation and Assessment <ul style="list-style-type: none"> ○ University of Kentucky (UK) Center for Clinical and Translational Science (CCTS). Nov. 2017 - present. ○ University of Illinois, Chicago (UIC) Center for Clinical and Translational Science (CCTS). Nov. 2017 - present. ○ University of Iowa, Clinical and Translational Science Award, Jan. 2019 - present.

<ul style="list-style-type: none"> ○ University of Utah CCTS, Nov. 2020 -present. ○ University of Florida, Jan 2021 – present. ● American Eval. Assoc., AEA, Translational Research Evaluation Topical Interest Group Past-Chair 2020-2021. ● Assoc. Clinical and Translational Science (ACTS) Special Interest Group (SIG) member. 2014-present. ● Pilot test CM-PRISM REDCap project (new database for Common Metrics data) for CLIC.
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c. Type of data collected

Table 2. Type of data collected to provide context, input, process, and outcome data

2A. Type of Data	Component	2B. Type of Data	Component
Budget & HR data by core	Governance	Career development tracking	KL2 and TL2; Evaluation
CTSC membership data	Governance	Participation in educational training programs	KL2 & TL2; BERD; Informatics; Community & Collaboration
Service provided & used	SPARC Request (all cores)	Pilot award applicants, awardees, progress	Pilot Program
PIs, grants, pubs	All cores	User satisfaction; needs assessment	Evaluation
Regulatory process improvement	Regulatory Support Core	Case studies; Success stories	Evaluation; Governance
Mentoring and teaching activ.	KL2 and TL1 Programs	Key informant interview data	Evaluation

d. Summary of findings, changes and future timelines.

The following table (Table 3) summarizes our evaluation domains, the improvement plan and the timelines for implementation and the desired outcome of the change. We have designed a high-level over-arching scheme for evaluation that cuts across all components of the CTSC. The metrics consist of items in several broad categories that encompass the most important areas on which we gather evidence of success. The cross-cutting domains are *quality, efficiency, utilization, and impact, scholarship, collaboration*.

Table 3. Evaluation domains and specific areas for improvement with plan & timeline for implementation and outcomes.

Domain	Desired outcomes	Area for improvement	Improvement Plan & Timeline	Outcomes (by Oct. 2021)
Efficiency	Expand/ strengthen resources for CTS research	Expand use of Service Request System	Market to investigators. Feb 1-5, 2021 Sign Up Day, Ongoing all 2021	Over 700 unique users; 23 institutions served
Efficiency, Utilization	Expand/ strengthen resources for CTS research	Expand use of Service Request System	Develop summary reports of usage for leadership. Quarters 1&2, 2021	Summary and high-level reports created monthly
Efficiency	Expand/ strengthen resources for CTS research	Tracking scholar & trainee success	Install Flight Tracker. Quarters 1&2, 2021	Flight tracker fully installed and implemented.
Collaboration	Expand communication & collaboration	CTSC Priority Evaluation Questions	Collaborative development of priority evaluation metrics mapped to CTSC major goals. Ongoing all 2021.	Created summary spreadsheets to show data over time.
Quality	Expand/improve research data quality & capacity	Pilot Program Database	Migrate Pilot Program data to InfoReady. Ongoing, 2021	Undergoing implementation.
Impact	Expand/improve research capacity to measure impact	Pilot program publication rate for CM	Track publications of Pilot awardees via InfoReady. Start 2021 & all 2022	Undergoing implementation.
Efficiency, Utilization	Expand/improve research capacity	Improve access to services	SPARC expansion & Develop summary reports. All of 2021.	Summary reports developed & disseminated monthly.
Quality	Strengthen CTS through education & career devel.	KL2 Seminar Series improvements	KL2 Focus groups & Exit interviews. All 2021.	KL2 reports delivered to KL2 steering committee.
Impact	Expand/ strengthen resources for CTS research	KL2 bibliometrics and outcome data	Compare outcome metrics on KL2 Scholars to KL2 at other CTSA hubs. 1 st and 2 nd quarter, 2021.	Publication completed: J Med Internet Res 2021; doi: 10.2196/29239
Impact, Scholarship	Communication of Research Findings	Retrospective Case Study collaboration	Present at meetings: ACTS and AEA; submit manuscripts. All 2021.	Presentations given at AEA and ACTS in 2020-21.
Collaboration	Expand collaboration	Retrospective Case Study collaboration	Expand on protocol; Develop cross-case analysis. All of 2021.	Pub. complete, JCTS 2021 doi: 10.1017/cts.2021.871

Table 4. CTSC Common Metric data for 2016-2020 with CTSA Consortium data for benchmarks.

Common Metric	CTSC 2016	CTSC 2017	CTSC 2018	CTSC 2019	CTSC 2020	CTSA Consortium 2020
TL1 careers in CTR, % engaged in research	64	86	88	88	94	91
TL1 careers, % URM engaged in research	0	8	7	14 *	0	13
TL1 careers, % women engaged in research	14	25	36	50	31.2	52
KL2 careers in CTR, % engaged in research	96	97	97	92	88.6	100
KL2 careers, %URM engaged in research	15	13	13	14 *	11.3	12
KL2 careers, % women engaged in research	48	45	44	44	43.1	54