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Trauma Care in Nigeria and Recommendations for Sustainable Improvement to Nigeria's Trauma Care System: A Systematic Literature Review

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ABSTRACT IMPACT: This work highlights the significant burden of Trauma in Nigeria and will help inform policy decisions on improving Nigeri's current Trauma care system **OBJECTIVES/GOALS:** To evaluate trauma care delivery at the pre-hospital, hospital and health systems level in Nigeria in order to identify the burden of trauma, gaps in the delivery of trauma care, and interventions, implemented or recommended, to improve upon the limitations to trauma care delivery. **METHODS/STUDY POPULATION:** A two-concept search - one being trauma and the other being Nigeria - of the Pubmed (Medline) and Embase databases, in addition to Global Index Medicus and grey literature was performed between September 2018 and September 2019. The search yielded 3,970 articles that underwent title screening and 331 articles that underwent abstract screening. 101 articles were identified for full text screening and the majority were extracted for inclusion into the review. The extracted literature was grouped into 4 categories - articles outlining the burden of trauma in Nigeria, and articles outlining the delivery of trauma care at the pre-hospital, hospital and health systems level. **RESULTS/ANTICIPATED RESULTS:** Results were classified as an identified challenge or an intervention, recommended or implemented, to address Nigeria's trauma care system. There was a highlighted need for pre-hospital infrastructure, training of frontline providers, continued competency assessments of frontline providers, in-hospital diagnostic resources, and trauma care surveillance systems to guide health policy. **DISCUSSION/SIGNIFICANCE OF FINDINGS:** There is a significant burden of trauma in Nigeria. Coordinated interventions and policies at the pre-hospital level, the hospital level, as well as the health systems level are needed in order to address the gaps in Nigeria's current trauma care system.

Education/Mentoring/Professional and Career Development

11509

Data visualization of scholarly productivity data to evaluate the KL2 training programs

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ABSTRACT IMPACT: This work will help assess the effectiveness of the mentored career development programs. **OBJECTIVES/GOALS:** There is increased attention on assessing the impact of the CTSA in building a research workforce through mentored career development programs. We propose using data visualization to assess and communicate the impact of the programs on the scholars career development. **METHODS/STUDY POPULATION:** Evaluators from two CTSA's collaborated to visualize the KL2 data such as demographics, scholarly productivity (publications, grants, intellectual property), and time to promotion that is already tracked through REDCap at their institutions. Excel, Tableau, and

Microsoft PowerBi were then used to generate trends in scholarly productivity over time. The goal was to compare how different tools can be used to visualize bibliometric data, based on what is available at the respective institutions. **RESULTS/ANTICIPATED RESULTS:** Longitudinal visual summary reports were produced for the entire program as well individual scholar progress. These reports can be used to identify trends such as how long after program completion do participants achieve their next milestone, what type of milestones are achieved, when in their career is their scholarly productivity the highest, etc. Answers to these questions could tell a story of the effectiveness of a mentored development program in the participants' career. It can also highlight gaps and areas of opportunities that the program must address, either by adapting their curriculum or clarifying their intended outcomes. **DISCUSSION/SIGNIFICANCE OF FINDINGS:** Data visualization provides better understanding of the impact of the training programs on the scholars career development. Such insights are otherwise missing when evaluations are only focused on the percentage of scholars who were still engaged in research after completion of the program.

37889

Taking a pragmatic approach to evaluate Miami Clinical and Translational Science Institute's Programs using two models.

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ABSTRACT IMPACT: Practical evaluation approaches using case studies and success stories present a chain of evidence to demonstrate to stakeholders that resources are being used as required and producing desired results and effectively document the impact of clinical and translational research. **OBJECTIVES/GOALS:** This project describes the overall evaluation plan of the Miami CTSI by combining the Translational Sciences Benefits Model (TSBM) and the Kirkpatrick Model to evaluate scientific outcomes and impact of CTSI-supported research, and education and training programs developed by the CTSI. **METHODS/STUDY POPULATION:** Using case studies, the TSBM framework will be applied to CTSI-supported projects to evaluate scientific outcomes and impact on domains that include: clinical and medical; community and public health; economic; legislative and policy. We will apply the framework to projects that have received funding through CTSI's Pilot and Translational Studies and Mentored Translational Scholars KL2 Programs, and that have at least one publication. Application of the Kirkpatrick model will be demonstrated by using the four levels of evaluation - reaction, learning, behavior, and results - to assess training outcomes and impact of the KL2 and the I-Corps Programs. **RESULTS/ANTICIPATED RESULTS:** About 20 pilot projects and 8 KL2 research projects will be assessed using the TSBM framework. We anticipate that all projects will show potential or demonstrated benefits in at least two of the four domains of the model. KL2 Program evaluation was conducted by collecting data on all the four levels of the Kirkpatrick model. Reaction and learning were assessed through feedback from KL2 scholars. Behavior was assessed using semi-annual updates on research and training progress of the scholars and the program. Results were measured using indicators such as program graduates that continue to engage in clinical and translational research and their transition to research independence. **DISCUSSION/SIGNIFICANCE OF FINDINGS:** Our evaluation approach using the two models is well aligned with overall CTSI aims and its three focus areas - infrastructure, education and