Healthcare Delivery Science in LA: Addressing Patient and Healthcare System Priorities with Cross-Sector Research Infrastructure

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INTRODUCTION

- The translation of research findings into clinical care is often inefficient & ineffective
- To bridge the research-policy-practice gap, CTSA hubs in Los Angeles partnered with LA County Department of Health Services (LAC-DHS), the nation's 2nd largest public healthcare system, to initiate a novel program to improve healthcare for underserved populations
- Foundational elements include research cores, a Research Oversight Board, a pilot funding program, service & consultations, coursework, & cross-CTSA collaborations

IMPACT & GOALS

Impact

- Effective healthcare interventions can improve access, quality of care, & health outcomes for underserved, high-disparity populations

Objectives/goals

- Continue our successful public-academic partnership to develop & evaluate health system interventions to enhance health for underserved communities
- Disseminate effective interventions to other health systems
- Develop healthcare delivery science workforce

METHODS/STUDY POPULATION

In partnership with LAC-DHS, the 2 LA-based CTSA hubs at USC & UCLA established critical infrastructure for effective cross-sector translational research:
(1) New funding mechanisms to evaluate healthcare system interventions across LAC-DHS
(2) Specialized research service cores (Safety-Net Health Innovation, Clinical Research Informatics, and Healthcare Delivery Science)
(3) Training & mentorship programs tailored for healthcare delivery scientists
(4) Collaborations with other CTSIs nationally who partner with Departments of Public Health or Healthcare

TEAM

Experts in Healthcare Delivery Science, Implementation Science and Community Engagement from two CTSA hubs; CTSA Directors; Administrative Staff; Clinician Scientists; LAC-DHS Chief Medical Officer; LAC-DHS Operational Leaders

RESULTS

Impact on Healthcare and Health Outcomes

Significant impact on health outcomes from 6 funded projects* emphasizing bi-directional partnerships:

1. Reduced time to treatment for alcohol withdrawal in Los Angeles County jails from 66 to 33 minutes & eliminated decompensated withdrawal
2. Lowered A1c levels from 10.2 to 9.3% (p=0.003) in diabetic patients through a Lifestyle Redesign® occupational therapy-based program
3. Reduced high-level amputations (16.4% to 11.7%, p = 0.03) and LOS (10.1 to 8.9, p = 0.02) for patients with diabetic foot ulcers
4. Improved the quality of family meetings in the ICU, and reduced intensity and duration of ICU treatments (LOS decreased 24.9%)
5. Increased clinician confidence and competency in using acupressure and Tai Chi to improve chronic pain.
6. Reduced prescription of post-operative opioid medications across DHS and improved guideline adherence from 43% to 68%

Studies underway include:

1) Group telehealth clinics for headache—this project will serve as a model for group telehealth across the county health system
2) Behavioral science approach to reduce inappropriate antibiotic use in acute care settings

Service and Consultations

- Research service and consultations have been provided to dozens of investigators for research projects coordinated across sites in LAC-DHS to ensure research is aligned with DHS priorities and operations & key stakeholders are engaged
- Researchers have been linked with operational leaders across LAC-DHS

Curriculum

Free multidisciplinary courses on:

1. D&I
2. Systems Engineering
3. Behavioral Economics
4. Informatics
5. Team Science
6. Community Engagement
7. Healthcare Delivery Science

Additional modules will include Leadership and Quality Improvement

Four-City Collaboration

- Initiated a collaboration with 7 CTSA hubs in LA, Miami, Chicago & San Francisco
- In 2020, we published a "synergy paper" examining common themes of academic-public partnerships
- Set up a CTSA Discussion Forum: CTSA Partnerships with Public Departments of Health and Healthcare and will first focus on the impact of the pandemic on public-academic partnerships

COVID-19 Research Policies

- Collaboratively & rapidly developed & disseminated research policies during the pandemic through the LAC-DHS Research Oversight Board, which includes LAC-DHS leadership, representatives from each of the 4 LAC-DHS hospitals & the DHS ambulatory care network & 2 CTSAs

DISCUSSION

- Our sustainable infrastructure is effectively bridging research-policy-practice gaps in Los Angeles by addressing patients' and healthcare system priorities.
- New & expanding relationships with similar academic/public partnerships in other cities, along with freely available coursework on Healthcare Delivery Science, will enable dissemination of promising practices & broader health & healthcare improvements.

REFERENCES

*Principal Investigators: Lello Tesema, MD, MPH; Elizabeth Pyatak, PhD; David Armstrong, DPM; Dong Chang, MD; Emiley Chang, MD, MPH, MS; Daniel DeUgarte, MD, MS

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