



THE INTERSECTION OF EDUCATION & COMMUNITY ENGAGEMENT

LEVERAGING THE POWER OF RESEARCH TO IMPROVE
COMMUNITY HEALTH AND WELLNESS

APRIL 22, 2022 12:00 PM - 1:00 PM CT

HOSTED BY THE INSTITUTE OF MEDICINE OF CHICAGO

HOST



Pat Merryweather-Arges, MA

Co-Chair of the Programs Committee &
Board Director, Institute of Medicine of Chicago
Billings Society Fellow

Executive Director, Project Patient Care

TODAY'S AGENDA

Welcome & Introduction

Pat Merryweather-Arges, MA, Billings Society Fellow

Co-Chair of the Programs Committee

Board Director, Board of Governors

Program support was provided The Portes Foundation in memory of Dr. Les Sandlow, MD, Chicago Medical School

Upcoming Events

Presentation

Rosalind Franklin University Faculty

Questions & Answers

All

Upcoming Programs

Pat Merryweather-Arges, MA

Closing

Pat Merryweather-Arges, MA



TODAY'S SPEAKERS



Host: Pat Merryweather-Arges, MA, Executive Director, Project Patient Care; and Programs Committee Co-Chair, and Billings Fellow, IOMC

Moderator and Session Leader: Ronald S. Kaplan, PhD, Executive VP for Research, RFU; Vice Dean for Research, Chicago Medical School

Maureen R. Benjamins, PhD, RFU part-time faculty; Senior Research Fellow, Sinai Urban Health Institute and Fellow, IOMC

Melissa Chen, MD, Clinical Director, RFU Interprofessional Community Clinic

Robert A. Marr, PhD, Assistant Dean for Research, Chicago Medical School

Kristin L. Schneider, PhD, Associate Dean of Research, College of Health Professions

TODAY'S LEARNING OBJECTIVES



By attending to this session, you will:

- Describe how community members and organizations can be integrated into research collaborations to positively impact the health and wellbeing of a community.
- Identify how students can be involved in and impact community-centered research collaborations.
- Explain how *Joanna Briggs Institute* methods enable nurse anesthesia residents to conduct impactful, patient centered evidence synthesis and implementation research.
- Discuss the community impact of RFU's new *Innovation and Research Park /Helix 51 Incubator*, and the expected impact of the *RFU Center for Health Equity Research*

TO OBTAIN CREDIT YOU MUST



- **Complete an electronic evaluation**
- **After completing the evaluation you can generate your certificate immediately.**



In support of improving patient care, Rush University Medical Center is jointly accredited by the American Nurses Credentialing Center (ANCC), the Accreditation Council for Pharmacy Education (ACPE), and the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing education for the healthcare team.

Rush University Medical Center designates this live activity for a maximum of 1.0 *AMA PRA Category 1 Credit(s)*[™]. Physicians should claim only credit commensurate with the extent of their participation in the activity.

ANCC Credit Designation – Nurses

The maximum number of hours awarded for this CE activity is 1.0 contact hours.

This activity is being presented without bias and without commercial support.

Rush University Medical Center designates this knowledge-based CPE activity for 1.0 contact hours for pharmacists.

Rush University is an approved provider for physical therapy (216.000272), occupational therapy, respiratory therapy, social work (159.001203), nutrition, speech-audiology, and psychology by the Illinois Department of Professional Regulation.

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Rush University designates this live activity for 1.0 CE credits in psychology.

FINANCIAL DISCLOSURES



The Intersection of Education and Community Engagement:

Leveraging the power of research to improve community health and wellness



Financial Disclosures: Ronald Kaplan, Melissa Chen, Maureen Benjamins, Robert Marr, Kristin Schneider, Sandra Larson, Nancy Parsley, Archana Chatterjee, Jan Odiaga, Cheryl Rucker-Whitaker, Pat Merryweather-Arges, Tran H. Tran, and Deborah Hodges

The planners, editors, faculty and reviewers of this activity have no relevant financial relationships to disclose. This presentation was created without any commercial support.

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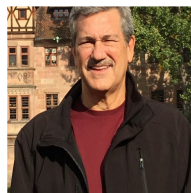
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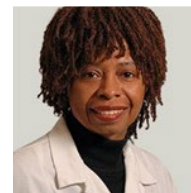
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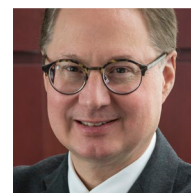
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Les Sandlow- In Memoriam



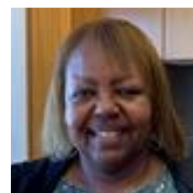
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ABOUT US



The Institute of Medicine of Chicago is an independent organization of distinguished leaders in the health field who collaborate to improve the health of the public. Drawing upon the expertise of a diverse membership and other regional leaders, the IOMC addresses critical health issues through a range of interdisciplinary approaches including education, research, communication of trusted information, and community engagement.

Upcoming Session in this Series

Final session:

April 29, 2022: Building networks to solve critical nursing workforce needs in the greater Chicago metropolitan region




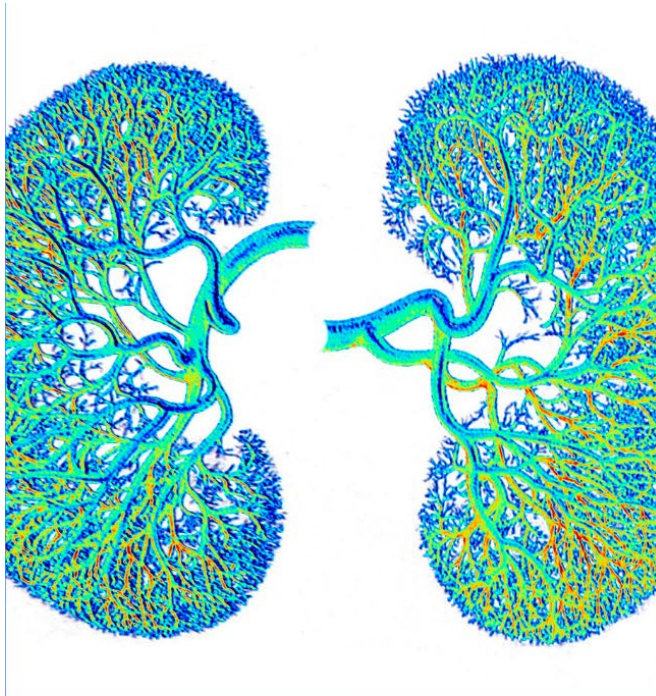


Moderator and Session Leader: Sandra Larson, PhD, Founding Dean College of Nursing, VP of Clinical Partnerships, Rosalind Franklin University of Medicine and Science

Shubnik DebBurman, PhD, Professor of Biological Sciences, Senior Director for Science Partnerships, Lake Forest College

Upcoming Virtual Session

May 6, 2022 Noon CT Virtual Session



Systemic Issues Impacting Chronic Kidney Disease & Health Equity

PAT MERRYWEATHER-ARGES, MA, EXECUTIVE DIRECTOR, PATIENT CARE, BOARD MEMBER & BILLINGS SOCIETY FELLOW, IOMC
KEN KIZER, MD, MPH., CHAIR OF NASEM ORGAN COMMITTEE; CHIEF HEALTH CARE TRANSFORMATION OFFICER & SVP FOR ATLAS RESEARCH
DENNIS WAGNER, MPA, MEMBER OF THE NASEM ORGAN COMMITTEE; PRINCIPAL & MANAGING DIRECTOR FOR YES AND LEADERSHIP
PRECIOUS MCCOWAN, PHD CANDIDATE, KIDNEY DISEASE PATIENT ADVOCATE

MAY 6, 2022 12:00 PM - 1:00 PM VIRTUAL PROGRAM

The Institute of Medicine of Chicago www.iomc.org



IOMC Annual Meeting
VenueSix 10
June 30, 2022

New Date

INSTITUTE OF MEDICINE OF CHICAGO



IOMC 2022 AWARDS

Excellence in Healthcare, Public Health and Population Health

**Nominations
Due
May 2-4, 2022***
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Intersectionality of Education and Community Engagement

April 22nd, 2022



Leveraging the Power of Research to Improve Community Health and Wellness

April 22nd, 2022

Introduction



Presentors:

Kristin L. Schneider, PhD, Associate Dean for Research, College of Health Professions
“Community Input on Research”

Melissa Chen, MD, Clinical Director, RFU Interprofessional Community Clinic
“Student Research/QI”

Maureen R. Benjamins, PhD, Part-time faculty, RFU, Senior Research Fellow, SUHI, and Fellow, IOMC
“RFU-SUHI Research Collaborations”

Robert A. Marr, PhD, Assistant Dean for Research, Chicago Medical School, RFU
“Student Involved Research in Lake County”

Ronald S. Kaplan, PhD, Exec. VP for Research, RFU, Vice Dean for Research, CMS
“RFU Innovation & Research Park, Center for Health Equity Research,
Joanne Briggs Institute - Center of Excellence – Community Impact and Engagement”

Panel Discussion

Community input on research

Kristin L. Schneider, PhD

Associate Dean for Research

College of Health Professions

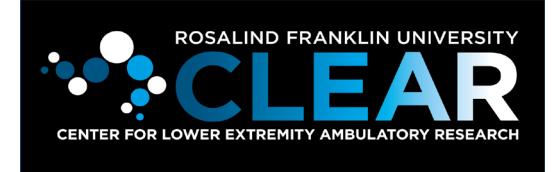
Rosalind Franklin University of Medicine & Science



- Innovations require community input on research to ensure efficacy and implementation
- Various ways to engage communities



Community input on falls research



Falls in adults with a lower limb amputation

- >1 million Americans live with a lower limb amputation
 - Population expected to double by 2050
- ~50% of people with major lower limb amputation will fall annually
 - ~50% of people with major lower limb amputation endorse having a fear of falling



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Zeigler-Graham et al 2008; CDC.2017; Neri GR et al 2020; Miller et al; 2002

COGNITIVE BEHAVIORAL THERAPY (CBT)

- Cognitive restructuring
- Behavior goal setting
- Relaxation techniques

PHYSICAL THERAPY

- Balance and Function
- Virtual Reality Games

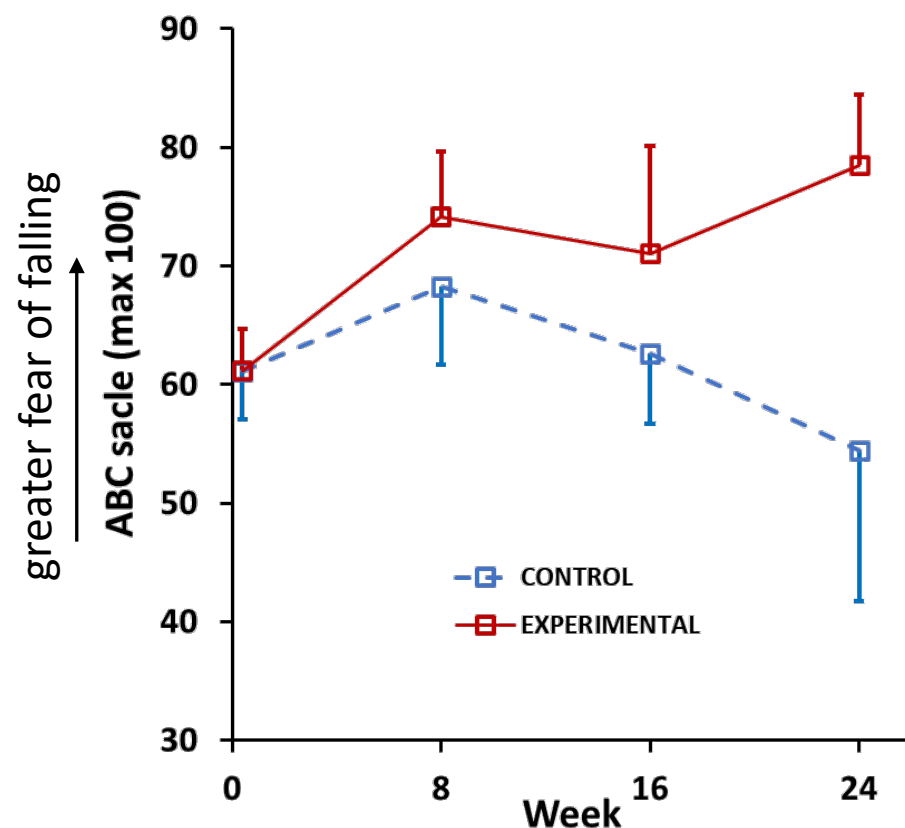
Provider expertise AND lived experience



Schneider, K.L.(chair and presenter), Rosenblatt, N. & **Heck, J.** (March, 2019). Integrating virtual reality gaming, physical therapy and psychotherapy strategies into physical activity interventions. Symposium presentation, *Society of Behavioral Medicine*, Washington, D.C.



Reducing fear of falling in a high risk population



DOD grant OP16004 (PI: Rosenblatt)

“I found they were very interesting, I never put so much thought into like what I’m thinking before I do things or while I’m doing this or how my thoughts you know hold me back when it comes to you know like my life and my walking... I never thought of these things you know, like on how my thoughts could be limiting me”



The need for HIV prevention programs for bisexual men

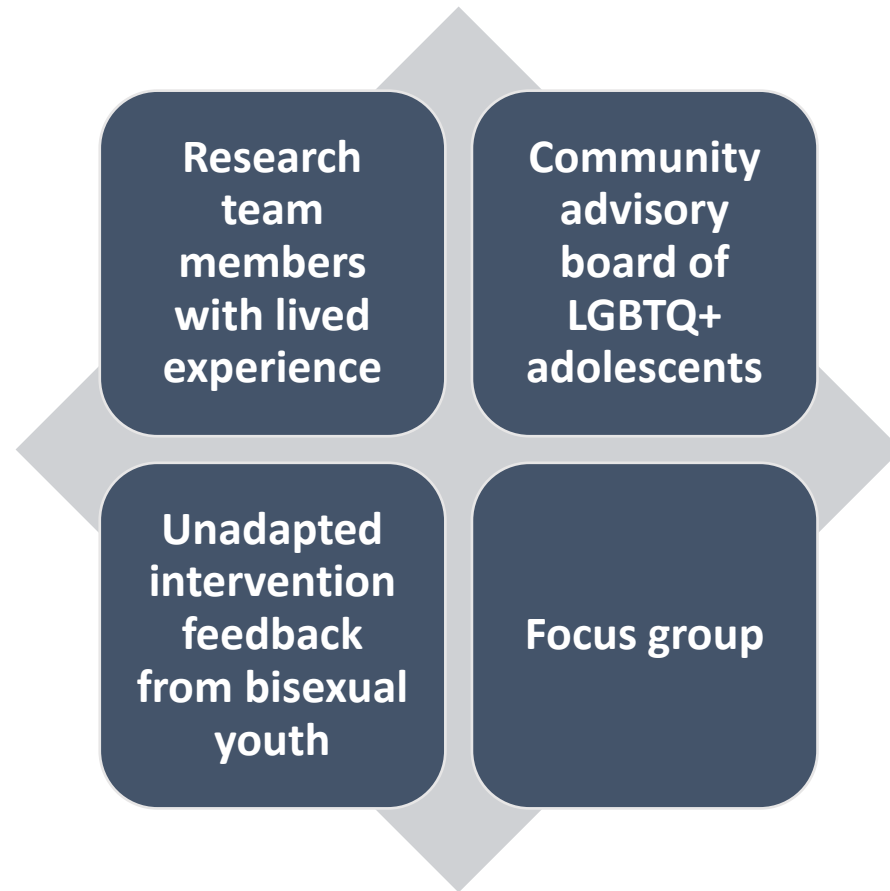
- Gay and bisexual men are both disproportionately affected by HIV compared to heterosexual men (Caceres et al., 2018; Friedman et al., 2014)
- However, bisexual men are less likely to utilize HIV prevention strategies compared to gay men (Feinstein et al., 2019; Grov et al., 2016)
- Bisexual men also experience unique stressors, which contribute to their risk for HIV (Feinstein & Dodge, 2020; Watson et al., 2019)
- There have been 7 HIV prevention trials for bisexual men; none for youth (Feinstein & Dodge, 2020)
- To address the sexual health needs of bisexual men earlier in their development, Dr. Brian Feinstein and colleagues conducted a mixed methods study to inform the development of a sexual health promotion program for bisexual youth



brian.feinstein@rosalindfranklin.edu

 @BFeinsteinPhD

Using community engagement to inform intervention development



Surveyed & interviewed 58 bisexual youth (ages 14-17)

Experiences with sexuality education:

- Varied considerably
- Were generally not inclusive of diverse sexual orientations & genders
- Came too late
- Didn't address important topics

An intervention should include information on:

- How to safely have anal sex
- How to deal with prejudice & discrimination
- How to find support related to being bisexual
- How to feel comfortable being bisexual

K08DA045575 (PI: Feinstein); Mata et al. (2021)



B*SMART is an online program designed to increase sexual health knowledge, encourage safer sex practices, and affirm bisexual identities

Covers a range of topics related to:

- Sexual health (e.g., types of sex, types of protection, HIV/STIs, getting tested)
- Healthy relationships (e.g., communication skills)
- Bisexuality (e.g., coping with prejudice, finding community)

Includes interactive activities and tools

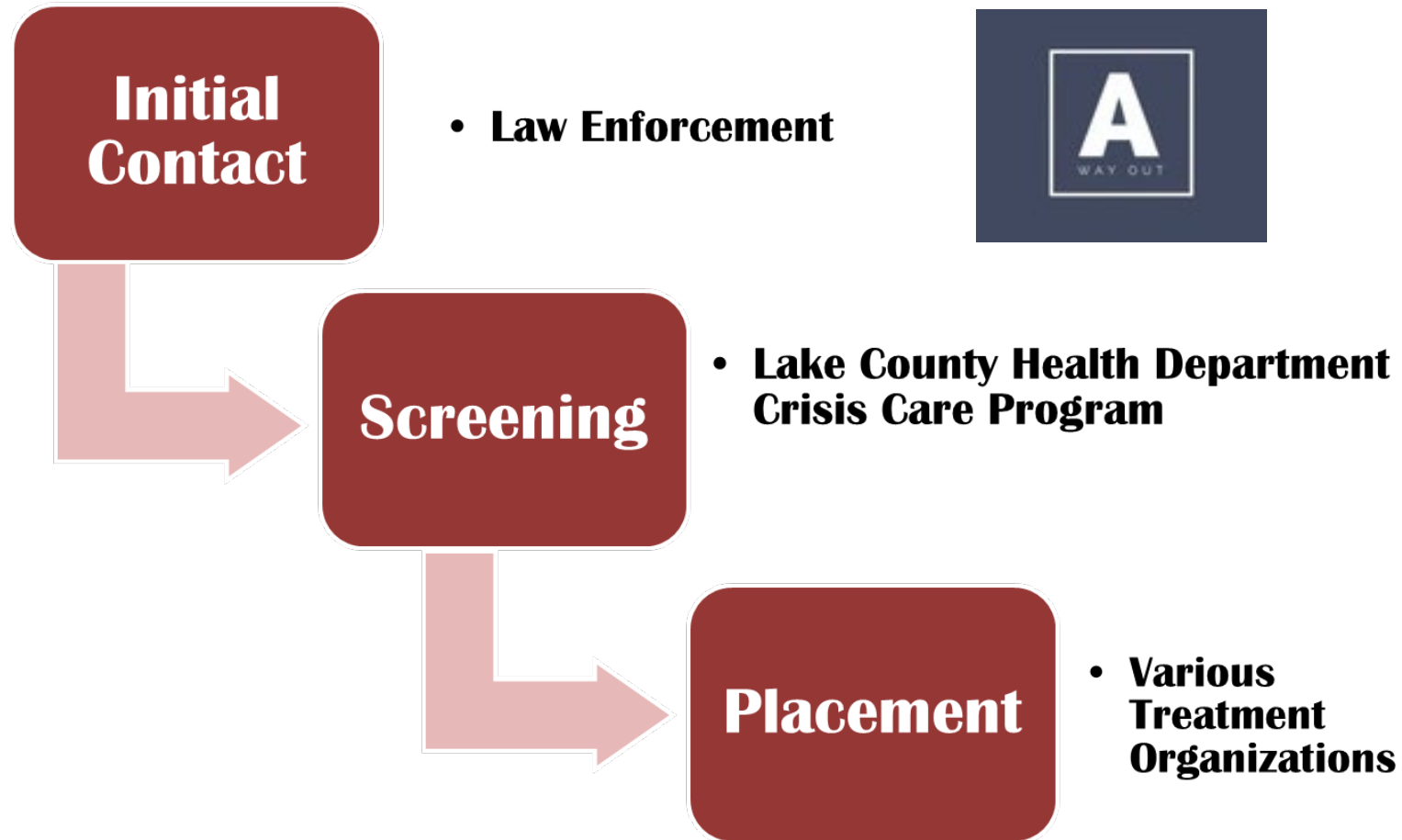
- HIV test site locator
- HIV risk calculator
- State-specific sexual health laws
- Exercises to learn and practice skills for coping with stigma

Pilot RCT ($N = 60$) completed in January 2022

Data analysis underway

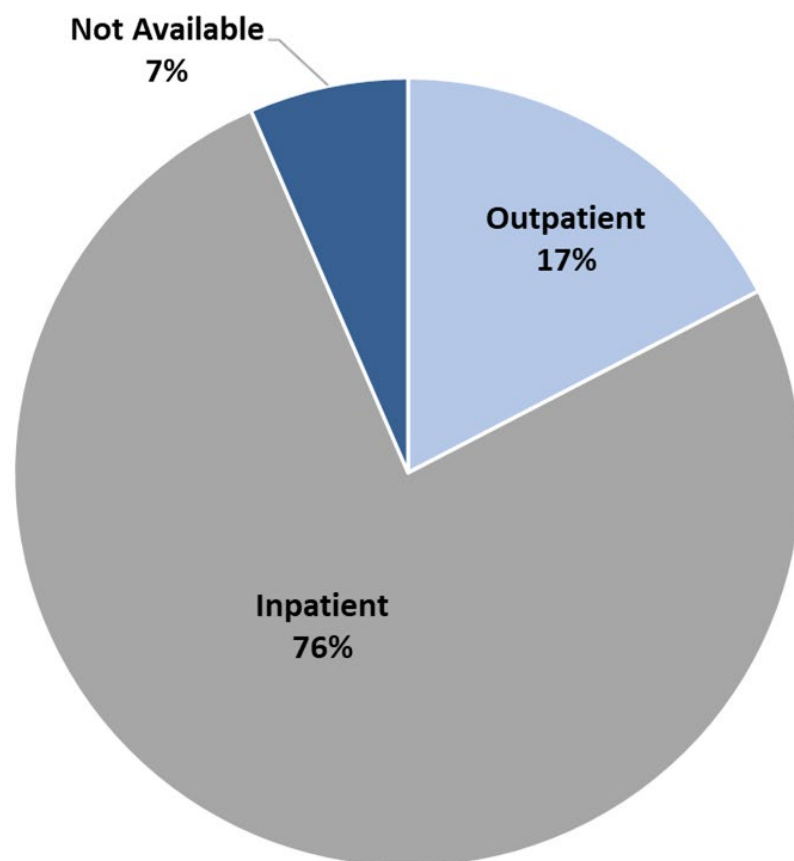
K08DA045575 (PI: Feinstein)

Community organizations seeking research expertise



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Community input on research

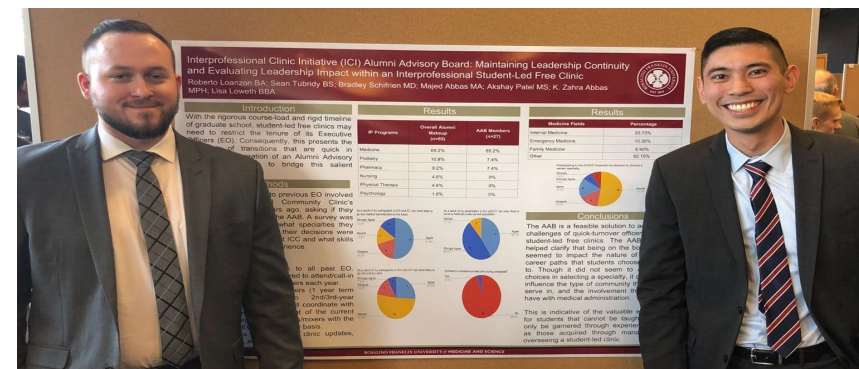


Demographics (N=136)	Number	Percentage
Gender		
Female	45	33.1
Male	91	65.9
Race, ethnicity		
Black, non-Hispanic	26	18.8
White, non-Hispanic	72	52.2
Latino/Hispanic	9	6.5
Native American/Alaska Native	1	0.7
Multiple races	3	2.2
Unavailable	27	19.6

Interprofessional Community Clinic: Student Research/QI



Melissa Chen, MD
Clinical Director
RFU Interprofessional Community Clinic



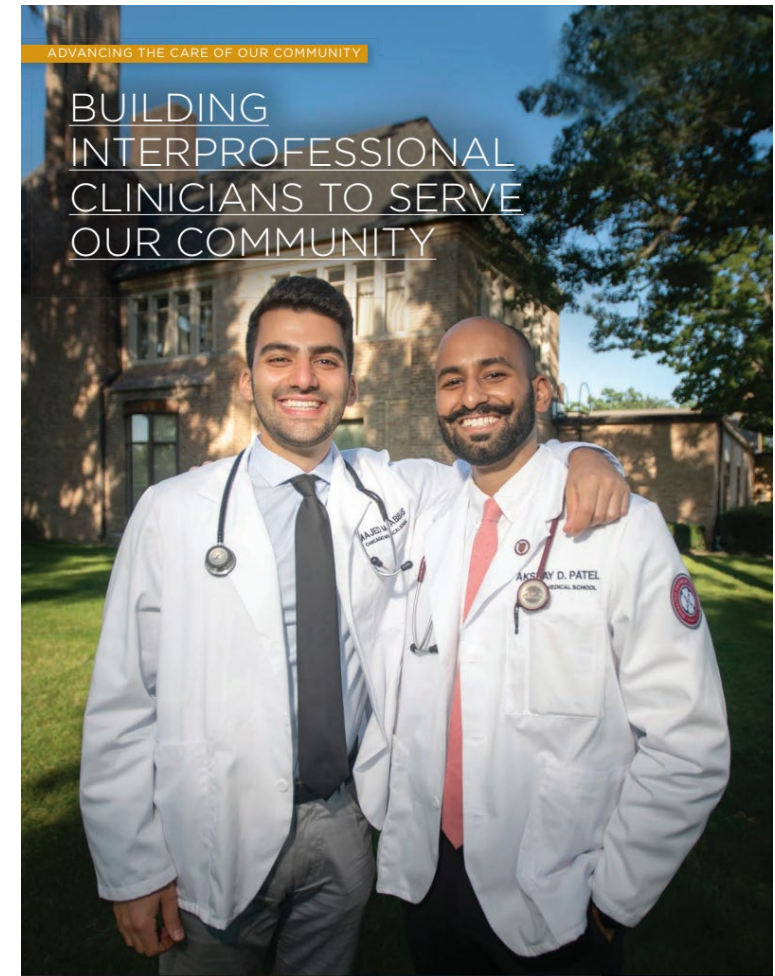
The Interprofessional Community Clinic

*The Interprofessional Community Clinic (ICC) is a **free** clinic that aims to meaningfully serve the **uninsured** population within the Lake County community by providing multi-service healthcare, educational programs, & other supportive resources.*

*The ICC **promotes equity** in clinical practice, education, research and service through collaboration among interprofessional learners, educators, and community leaders.*

Mission:

- To 1) provide accessible, quality healthcare for the uninsured persons in the Lake County community with dignity, respect, & cultural humility; and*
- 2) encourage future healthcare professionals to work in underserved communities & excel in interprofessional communication and teamwork, with an intentional emphasis on the principles of diversity, inclusion, & equity.*



Community

Northern Lake County: What We Know

Overview of Mixed-Methods Community Health Needs Assessment Process

- Conduct *quantitative* analysis using demographic data, health outcome data, and health access and utilization data
- Conduct *qualitative* analysis using community survey, focus groups, and subject matter expert interviews
- Hold community town halls to share preliminary findings and gather stakeholder perspectives



Informal Conversations as Means of Demystifying Health in Minoritized Communities

Jennifer Vu¹; Ziemowit Mazur, PhD, EdM, MS, PA-C²; Melissa Chen, M.D.¹

1. RFUMS Chicago Medical School 2. RFUMS College of Health Professions



Background

The history of socioeconomic, educational, and language disparities within minoritized communities has been well documented¹. In recognition of the need to address these inequities, this project aims to build trust in disenfranchised populations in Lake County, Illinois by improving health literacy in an informal setting.

Methods

- Framework:
 - Literature reviews and interviews with community leaders
 - 2019 Community Needs Assessment of Northern Lake County¹
 - Interviewed community members on addressable barriers, individual experiences of the historical background of the community, and anecdotal insight into ways to improve health literacy in their community.
- Community engagement through informal conversations with 5-20 community members in collaboration with community events.
- Bilingual educational resources were developed on diabetes and hypertension, which were then distributed to initiate discussions.
- Surveys were distributed to participants with >5 minutes chronic disease education.
- 3 Likert scale questions queried participants on a scale of 1-5 about their opinion on the utility, comprehensibility, and practicality of the informal conversation and material. One free-response question was included, inquiring about the most useful information gleaned from the conversation.

Results

Throughout the engagement period, approximately 65 individuals were seen and interacted with, but only 17 surveys were collected. The individuals rated the 3 Likert scale questions a 5/5 for the resources and space provided to them. Free response questions detailed participants' appreciation for the simplistic breakdown of information as well as for the opportunity to learn about these chronic conditions.

"This information is really helpful and easy to read. I'm glad I have something I can look at when I need to remember something"
- Community member

"Thank you for taking the time to talk to me about all this. I didn't know that these diseases could be serious. This has helped me better understand why I need to care for myself"
- Community member

"The quantity of people you help doesn't matter - it's the impact you make, and if that's one person, then you're already doing a great job"
- Guadalupe Rodriguez, NP
Community Care Connection

Discussion

The 2019 Community Needs Assessment of Northern Lake County highlighted concerns centered on the accessibility of reliable health information, and that chronic diseases have disproportionately affected Hispanic and African American communities¹. Surveys were implemented to measure the effectiveness of the informal conversations, and showed positive outcomes. Simplifying the educational component through visuals appeared to make these educational sessions more inviting. Providing individualized attention to questions and concerns increased learning. Limitations of the project includes language barriers, limited events during the pandemic, and limited evaluations due to the criteria of assessing individuals where 5 or more minutes of conversation occurred. Though outreach appeared less effective without Spanish proficiency, community members were still receptive to Spanish flyers. Active and intentional community engagement appears to be effective in building relationships and trust in the community. Language and short appointment times are barriers for many patients, thus creating an informal space for health education is important. By placing less emphasis on an academic and structured conversation and by encouraging conversations without a formal lecture component encouraged participants to learn about preventive measures against chronic diseases. Increasing health literacy in disenfranchised populations requires presenting information in a practical manner, thus doing so in the form of informal conversations and infographic-heavy flyers seemed to increase community engagement and interest in learning how to manage chronic health conditions.

In efforts to make this work sustainable, editable versions of the infographics were provided to the student organization so that the material can be updated as needed. Students are also being recruited to continue the collaboration with our community partners.

Conclusions

Providing continual and consistent presence in the community with visually engaging educational resources can be helpful in improving trust with the local community. Further investigation would be needed to evaluate the impact on community members' health literacy.

1 2 3 4 5
POOR FAIR AVERAGE GOOD EXCELLENT

HOW EASY IS IT TO UNDERSTAND?

1 2 3 4 5
NOT AT ALL A LITTLE SOME GOOD A LOT

HOW MUCH WAS LEARNED

1 2 3 4 5
NOT AT ALL A LITTLE SOME GOOD A LOT

HOW USEFUL WAS OUR TALK?

1 2 3 4 5
NOT AT ALL A LITTLE SOME GOOD A LOT

RAPID FEEDBACK FORM

What is the most helpful thing you learned?
Write comment on back.



Systems change



Effect of a pre-clinic orientation on clinic efficiency in an interprofessional student-led free clinic

Patrick King, Melissa Chen MD
Chicago Medical School, Rosalind Franklin University of Medicine & Science



Background

Inefficiencies in clinic flow can have detrimental effects on the experiences of patients and staff during office visits. Student-led clinics are particularly prone to inefficiencies because a large proportion of their staff consists of new volunteers and each volunteer may wait several weeks between shifts. This can make it difficult for volunteers to gain the familiarity with clinic flow needed to effectively perform their role, resulting in delays that negatively impact patient satisfaction.

Objectives

A pre-clinic orientation was implemented at an interprofessional student-led free clinic in April 2021 with the aim of improving clinic efficiency by familiarizing volunteers with how the clinic is run. The pre-clinic orientation involves a presentation, given the night before the clinic is held, detailing the overall clinic flow as well as the responsibilities of each position. In this poster, we investigated the effect of this pre-clinic orientation on clinic efficiency.

Methods

To evaluate the effect that the pre-clinic orientation had on clinic efficiency, data from the clinic whiteboard were used. This digital whiteboard is a living document that tracks particular time points that occur during patient appointments (e.g. patient arrival). Using data from the whiteboard makes it possible to compare the duration of aspects of clinic flow (e.g. wait time) before and after a change is implemented. The overall appointment duration and the patient wait time for office visits between 6/11/2020 and 11/18/2021 (58 appointments before and 61 after implementing the pre-clinic orientation) were gathered from the clinic whiteboard. All appointments were conducted remotely via telehealth. To determine the effectiveness of these changes, the mean duration of various aspects of clinic flow were calculated before and after each change and compared using a two sample T-test. Results were considered significant for $p < 0.05$.

References

- [1] Lawrence D, Bryant TK, Nobels TB, Dolansky MA, Singh MK. A comparative evaluation of patient satisfaction outcomes in an interprofessional student-run free clinic. *J Interprof Care*. 2015;29(5):445-450. doi:10.3109/13561820.2015.1010718
- [2] Elliott JD, Campbell JA, Gonsalves WC. Patient satisfaction in a student-run free medical clinic. *Fam Med*. 2010;42(1):16-18.
- [3] Hu T, Leung FH. An evaluation of wait-times at an interprofessional student-run free clinic. *Journal of Interprofessional Care*. 2016;30(4):532-535. doi:10.1080/13561820.2016.1181614

Results

There was no significant difference in total appointment duration (1:06+ sd=0:21 vs 1:14 sd=0:22, n=49 and 53, respectively $p=0.07$) but there was a significant increase in wait time (0:14 sd=0:13 vs 0:21 sd=0:13, n=51 and 55, respectively, $p<0.001$). A post-hoc analysis was conducted to determine the cause of this increase.

There was no significant difference in the proportion of non-English speaking patients before and after the implementation of the pre-clinic orientation, suggesting that the increase in wait time was not due to an increase in non-English speaking patients, $\chi^2(1, 55) = 1.8, p=0.18$.

To further explore this increase, the wait time was broken down into the start of the wait and the end of the wait. The start of the wait was calculated as the difference between the scheduled appointment time and the time the patient arrived. The end of the wait was calculated as the difference between the scheduled appointment time and the time the patient was seen. The mean start and end of the wait were compared before and after the implementation of the pre-clinic huddle using a two sample T-test. Wait times started earlier on average after starting pre-clinic orientation (0:04 sd=0:14 vs -0:02 sd=0:16, n=58 and 56, respectively, $p=0.008$) (a negative duration indicates arrival before the scheduled time) while there was no difference in the time that the wait ended (0:17 sd=0:14 vs 0:19 sd=0:12, n=60 and 55, respectively, $p=0.28$).

Discussion

Because wait time was calculated as the time between patient arrival and the time that the patient was seen by the care team, an increased wait time could be due to patients arriving earlier or being seen later. While a pre-clinic orientation should not affect patient arrival times at an in-person clinic, the same is not true of all virtual clinics. At this clinic, patients "arrive" after a volunteer has called the patient, asked them to gather any necessary supplies, and helped them log into the telehealth platform. If patients are called at the same time, but volunteer efficiency shortens the time between the call and "arrival", then patients will arrive sooner. Therefore, improvement in the efficiency of this process could result in earlier arrival times, and thus, longer wait times.

Results Cont.

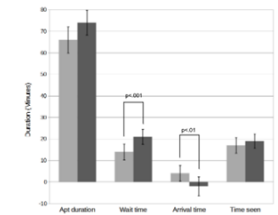


Figure 1: Average appointment time, wait time, arrival time, and time seen before and after implementation of the pre-clinic orientation.

Conclusion

The pre-clinic orientation resulted in longer patient wait times due to earlier patient arrivals. This is consistent with the hypothesis that the pre-clinic orientation improves volunteer efficiency, as arrival time is influenced by the volunteers' ability to guide the patient onto the telehealth platform and troubleshoot any problems. However, alternative explanations make causal conclusions inappropriate at this time. For example, differences between groups in volunteer experience, mental health screening, and the time patients were contacted may be responsible for the observed effect.

Although this potential improvement in volunteer efficiency is desirable, it is accompanied by a negative outcome - increased wait times. Although the wait time after implementation of the pre-clinic orientation is on par with previously reported wait times at a student-run free clinic [1], wait times have been cited in as a source of patient dissatisfaction [2-3]. Despite this, the pre-clinic orientation will tentatively remain as a part of the clinic workflow while the aforementioned alternative explanations are investigated and volunteer satisfaction is measured. While these avenues are explored, it may be prudent to address the increased wait times through changes in clinic workflow, for example delaying the time that patients are contacted.

Clinic Whiteboard

		Pre-clinic					Clinic							Post-Clinic		Care Team					How to use the clinic whiteboard		
Date	Appt. time	Patient ID	Return on New	Time Patient Contacted (Arrival)	Time Patient Answered	Pre-Huddle Start Time	Arrival Time or "No Show"	Time In with IP Team	IP Team Interview duration (Min)	Time Out with IP Team	Time in with Provider	Time out with Care Coordinator	Time out with Care Coordinator	Time Since Check-In (Min)	Time Patient Check out	Time IP Show Complete	# Dropped Calls	Voicemail Protocol Used? (Y/N)	Provider	Pharmacist	Advanced Students	Interpreter (Leave blank if Clinic Manager)	Notes
6/10/21	4:00 PM																						
	5:00 PM																						
	6:00 PM																						

ROSALIND FRANKLIN UNIVERSITY OF MEDICINE AND SCIENCE

Implementation of Care Coordinators and the Improvement of "No-Show" Rates in a Student-led Interprofessional Clinic



Amy Marr, MD Candidate 2024¹, Anna Sandler, PharmD Candidate 2023², Melissa Chen, MD¹, Roberta Dume, PharmD, BCPP²

1. Rosalind Franklin University of Medicine and Science, North Chicago, IL, Chicago Medical School
2. Rosalind Franklin University of Medicine and Science, North Chicago, IL, College of Pharmacy



Transformative clinical care



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Pharmacy and Telehealth: An Interprofessional Model at a Student-led Free Clinic

August 14, 2020

Khyati Patel, PharmD, BCACP, Danielle M. Candelario, PharmD, BCPS, Melissa Chen, MD



Journal of Student-Run Clinics
Original Study

Impact of an Additional Immunizing Pharmacist at an Interprofessional Student-led Clinic for the Underserved

Khyati Patel, PharmD¹; Danielle Candelario, PharmD¹; Ateequr Rahman, PhD, MBA¹; Melissa Chen, MD²

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Published: April 6, 2022



Being the change



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Interprofessional
Community Clinic



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edu



ICC: What we learn



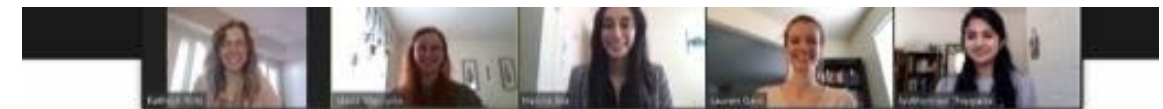
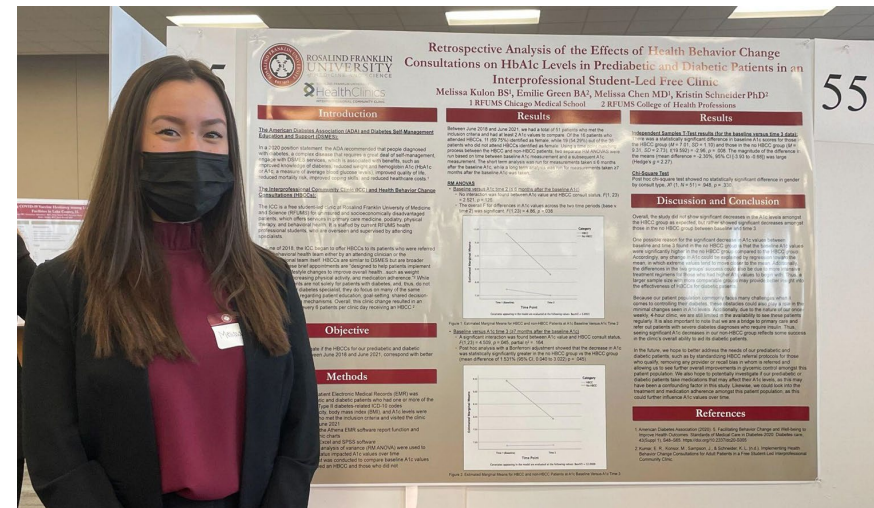
- Community
 - Who they/we are
 - Power of collaboration
- Systems thinking
- Transformative clinical care

ICC: Research

National conferences

19 posters / oral presentations
accepted at national
conferences in 2022
Over 50 since 2018

- SSFRCC
- SRFCFA
- NCEAS
- NMF



Peer Directed Advocacy Education: Embedding Anti-Racism into Leadership Training at a Student-Led Free Clinic

Maria Mercurio, Lauren Gard, Jyothi Thippiana, Kathryn Fritz, Henna Ata,
Dr. Melissa Chen



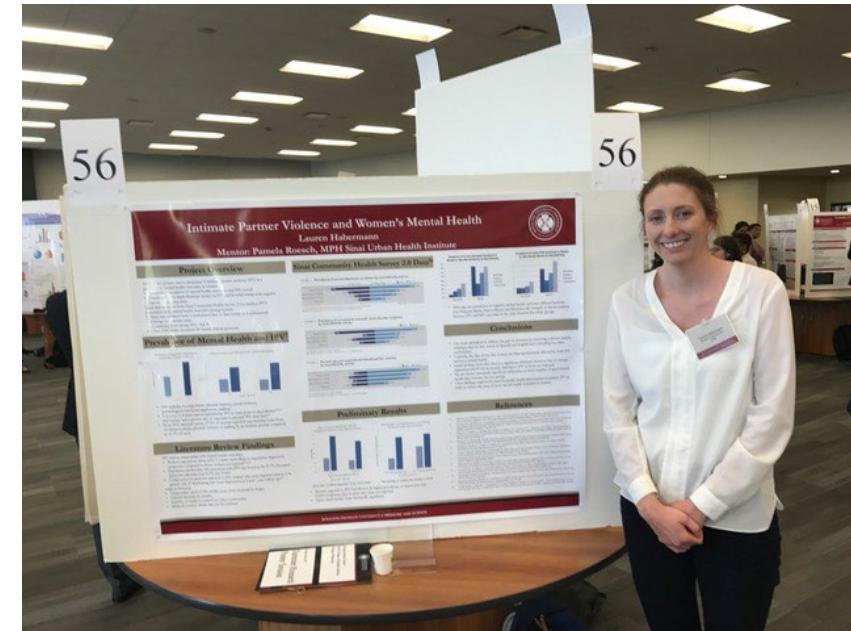
RFU-SUHI Research Collaborations

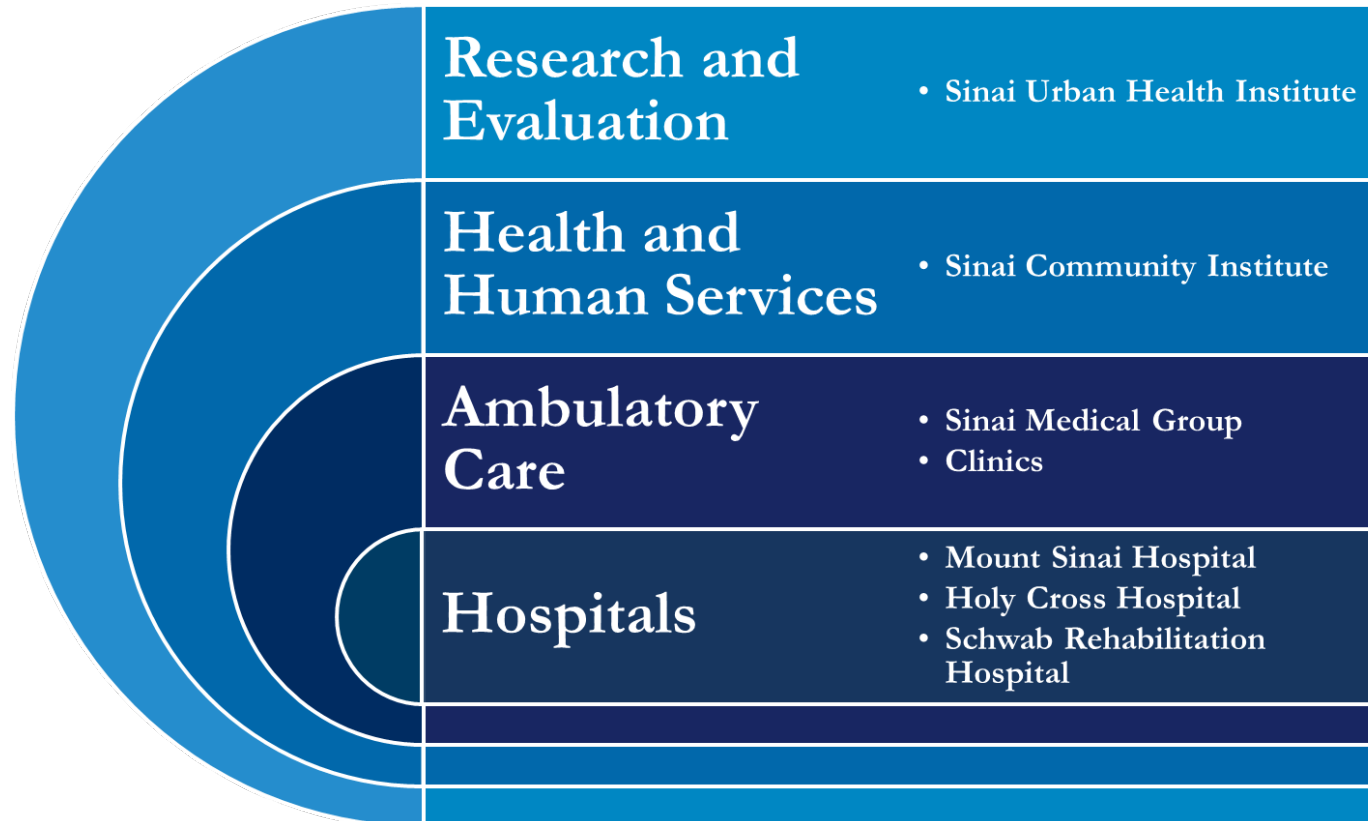
Maureen R. Benjamins, PhD

Part-time faculty, RFU

Senior Research Fellow

Sinai Urban Health Institute





- To achieve health equity through:
 - Epidemiological research
 - Community-centered interventions
 - Evaluation
 - Collaboration



Internship Program

- Partners with RFU for 20+ years
- Teaching/consulting/partnering
- Internships (now in 10th year)
 - 15 medical students in summer
 - 3-6 during the academic year



Summer Internships

- Seminars and workshops
- Group projects
- Book and film discussion series



Seminar Topics

- Health inequities
- Social determinants of health
- Advocacy
- Managed care
- Racism and discrimination
- Positionality
- Cultural humility
- Health literacy
- Violence prevention
- Research methods



Example Projects



Black-White Inequities in Kidney Disease Mortality Across the 30 Most Populous US Cities

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OBJECTIVES: To examine city-level kidney disease mortality rates and Black/White racial inequities for the USA and its largest cities, and to determine if these measures changed over the past decade.

METHODS: We used National Vital Statistics System mortality data and American Community Survey population estimates to calculate age-standardized kidney disease mortality rates for the non-Hispanic Black (Black), non-Hispanic White (White), and total populations for the USA and the 30 most populous US cities. We examined two time points, 2008-2013 (T1) and 2014-2018 (T2), and assessed changes in rates and inequities over time. Racial inequities were measured with Black/White mortality rate ratios and rate differences.

RESULTS: Kidney disease mortality rates varied from 2.5 (per 100,000) in San Diego to 24.6 in Houston at T2. The Black kidney disease mortality rate was higher than the White rate in the USA and all cities studied at both time points. In T2, the Black mortality rate ranged from 7.9 in New York to 45.4 in Charlotte, while the White mortality rate ranged from 2.0 in San Diego to 18.6 in Indianapolis. At T2, the Black/White rate ratio ranged from 1.79 (95% CI 1.62-1.99) in Philadelphia to 5.25 (95% CI 3.40-8.10) in Washington, DC, compared to the US rate ratio of 2.28 (95% CI 2.25-2.30). Between T1 and T2, only one city (Nashville) saw a significant decrease in the Black/White mortality gap.

CONCLUSIONS: The largest US cities experience widely varying kidney disease mortality rates and widespread racial inequities. These local data on racial inequities in kidney disease mortality can be used by city leaders and health stakeholders to increase awareness, guide the allocation of limited resources, monitor trends over time, and support targeted population health strategies.

KEY WORDS: kidney disease; mortality; race; racial inequity; structural racism; health disparities; city; place; nephrology.

J Gen Intern Med
DOI: 10.1007/s11366-022-07444-1
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Received September 30, 2021
Accepted February 1, 2022

Published online: 09 March 2022

INTRODUCTION

Kidney disease is the eighth leading cause of death in the USA.¹ Chronic kidney disease (CKD) is defined by decreased glomerular filtration rate (GFR) and/or increased urine albumin excretion. Approximately 15% of the US population, or 37 million people, have CKD; unfortunately, the vast majority (88%) are unaware of their diagnosis, presenting challenges to treatment.² Medicare spends an estimated \$130 billion annually on kidney disease care, nearly 25% of the total Medicare budget.³ The total economic burden is undoubtedly much higher, many patients rely on uncompensated family caregivers, 71% are unemployed, and the average annual cost of care is \$24,300-\$65,000.⁴ Kidney disease is a leading cause of health crisis, and health crises are a leading cause of health crisis, and health crises are a leading cause of health crisis.

While not consistently documented, kidney disease prevalence is higher in Black individuals than in White individuals. In the USA, the Black/White prevalence ratio of kidney disease is 1.79 (95% CI 1.62-1.99) in Philadelphia to 5.25 (95% CI 3.40-8.10) in Washington, DC, compared to the US rate ratio of 2.28 (95% CI 2.25-2.30). Between T1 and T2, only one city (Nashville) saw a significant decrease in the Black/White mortality gap.

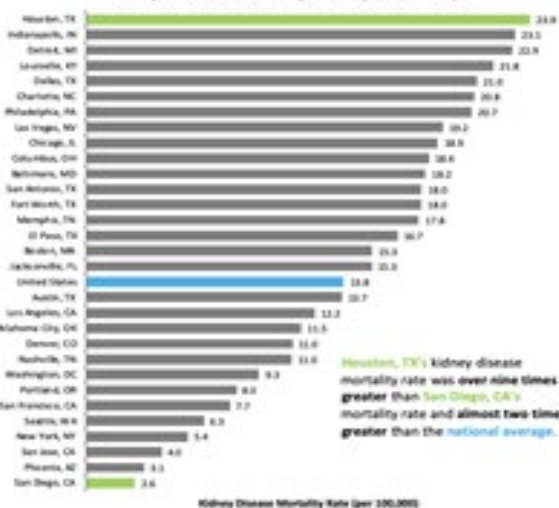
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Results

Kidney Disease Mortality Rates (2013-2017)



Developing a Behavioral Health Training Module for Community Health Workers

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Objectives

- Gain a better understanding of the current knowledge community health workers have regarding behavioral health
- Understand what behavioral health situations that community health workers encounter
- To create a behavioral health training module that
 - is unique to the needs of community health workers when working with patients
 - Discusses actions that community health workers can take
 - Provides information on the importance of self-care

Background

- Racial and ethnic disparities are present in the use and access to behavioral health care.
 - Racial and ethnic disparities in access to mental health care and substance use disorder treatment changed little between 2008 and 2012. Black and Latino adults were significantly less likely to receive treatment for depression¹.
 - Racial and ethnic minorities who received treatment for alcohol and drugs, did not have their treatment needs met adequately².
 - Though the Affordable Care Act expanded access to behavioral health care, many reform initiatives failed to consider racial and ethnic disparities, therefore not eliminating these disparities^{3,4}.

Background

- At SUHI, community health workers currently assist patients in the management of asthma, diabetes, breast health, and most recently COVID-19 and many more social needs.
- Studies have shown that the use of community health workers leads to better health outcomes in patients than traditional healthcare models.^{5,6}
- Community health workers are effective in increasing access to care and the effectiveness of services provided.^{5,6}
- Providing CHWs the tools to address behavioral health and provide necessary resources to their patients, may also lead to better mental health outcomes in patients and address mental health disparities.¹¹

Methods

- We knew we wanted to implement this module using the *Popular Education Model*.^{12,13}
- We developed a behavioral health survey to:
 - Determine what CHW's already know about Behavioral Health
 - Ask CHW's what would be most beneficial to them to learn
 - Understand what CHW's commonly encounter in regards to behavioral health when working with their patients
 - Know what resources they have provided to their patients

Sample Survey Questions:

If applicable, can you describe a specific situation in which you felt that training in behavioral health may have been helpful? What do you think would be most helpful for you to learn regarding behavioral health? If you observed your patient was actively in a crisis, how did you respond?

Results

- Common Responses from Survey:**
 - Wishing they had awareness that their patient might have been experiencing mental illness along with their chronic condition they're receiving help for
 - How to be helpful while their patient is attending therapy
 - How to provide compassionate responses
 - Having skills to cope with stressors and self-care
- CHW Familiarity of Common Mental Health Disorders**
 - Responses ranged from 2 to 5 (1 = not confident, 5 = very confident)

Disorder	Average Response
Schizophrenia	3.5
Anxiety	3.8
Depression	3.8
PTSD	3.8
Substance Use Disorder	3.8
Suicidal Thoughts or Behaviors	3.8

Development of Module

- Discuss the most common mental health conditions that community health workers may experience
- Include simple assessment tools that they can use to help their patients
- Strategies on how to speak to individuals experiencing trauma¹⁴
- Discuss self-care habits to maintain a healthy work-life balance
- Provide a list of resources that can be helpful for patients
- Future Directions:**
 - Present the module to community health workers
 - Provide a 2nd follow-up survey to determine if the module addressed topics, and find ways to improve

Citations

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PLOS ONE

COVID-19 health inequities and association with mechanical ventilation and prolonged length of stay at an urban safety-net health system in Chicago

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Abstract

Millions of Americans have been infected with COVID-19 and communities of color have been disproportionately burdened. We investigated the relationship between demographic characteristics and COVID-19 positivity, and comorbidities and severe COVID-19 illness (use of mechanical ventilation and length of stay) within a racial/ethnic minority population. Patients tested for COVID-19 between March 2020 and January 2021 (N = 1417) were 49.9% (n = 707) female; 50.1% (n = 710) non-Hispanic Black; 33.2% (n = 469) Hispanic; and 16.8% (n = 238) White. Overall COVID-19 positivity was 16.1% (n = 228). Compared to females, males were 1.1 times more likely to test positive (p = 0.014). Compared to non-Hispanic Whites, non-Hispanic Black and Hispanic persons were 1.4 (p = 0.003) and 2.4 (p < 0.001) times more likely, respectively, to test positive. Compared to persons ages 18-24, the odds of testing positive were statistically significantly higher for every age group except 25-34, and those aged 65+ were 2.8 times more likely to test positive (p < 0.001). Adjusted for race, sex, and age, COVID-positive patients with chronic obstructive pulmonary disease were 1.9 times more likely to require a ventilator compared to those without chronic obstructive pulmonary disease (p = 0.001). Length of stay was not statistically significantly associated with any of the comorbidity variables. Our findings emphasize the importance of documenting COVID-19 disparities in marginalized populations.

Introduction

As of April 5, 2021, there have been over 30.5 million cases of COVID-19 and over 550,000 COVID-19 associated deaths reported in the United States (US) [1]. The clinical manifestation of COVID-19 is variable ranging from asymptomatic to life-threatening [2]. Yet, thus far,

Engagement of Community

- Planning
 - CHW feedback on syllabus
- Teaching
 - Inclusion of CHWs as teachers and mentors
 - Relevant sessions
 - CHW panel
 - Community engagement
 - History of North and South Lawndale
 - Tours and volunteering



Student Involved Research in Lake County

*Robert A. Marr, PhD
Assistant Dean for Research
Chicago Medical School
Rosalind Franklin University of Medicine & Science*

The Lake County Health Department



Dr. Sana Ahmed

LCHD - Medical Epidemiologist & Medical Director of the Tuberculosis Clinic

CMS – Faculty (Instructor)

RFUMS / CMS - Alumnus

Evaluation of Test to Stay Strategy on Secondary and Tertiary Transmission of SARS-CoV-2 in K–12 Schools — Lake County, Illinois, August 9–October 29, 2021

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Background

- The COVID-19 pandemic has resulted in school closures and reduction of in-person learning, adversely affecting students
- COVID-19 transmission within K–12 schools can remain low with implementation of multiple, concurrent prevention strategies
- Test to Stay (TTS) strategy, whereby unvaccinated students, teachers, and staff members with certain school-related COVID-19 exposures could remain in school and participate in school-related extracurricular activities.

Study Design

- Questions: can TTS maintain safety and allow students / staff to remain at school?
- LCHD permitted kindergarten through grade 12 (K–12) schools in Lake County to implement TTS; 90 schools, representing 31 school districts in Lake County, implemented TTS during August 9–October 29, 2021.
- Eligibility
 - 1) the exposure occurred while both the persons were masked
 - 2) the close contact remained asymptomatic, practiced consistent mask wearing, and maintained physical distancing
 - 3) the close contact underwent COVID-19 testing on days 1, 3, 5, and 7 after exposure

Data

TABLE 1. Demographic characteristics of Test to Stay participants by SARS-CoV-2 test results — Lake County, Illinois, August 9–October 29, 2021

Characteristic	Test results of close contacts		
	Positive* (n = 16)	Negative (n = 1,019)	Total (N = 1,035)
Student age, yrs, median (range)	11 (5–16)	10 (3–18)	10 (3–18)
Gender, no. (column %)			
Female	5 (31.3)	467 (45.8)	472 (45.6)
Male	11 (68.8)	493 (48.4)	504 (48.7)
Unknown	0 (—)	59 (5.8)	59 (5.7)
Race, no. (column %)			
Black	2 (12.5)	35 (3.4)	37 (3.6)
White	14 (87.5)	662 (64.9)	676 (65.3)
Asian	0 (—)	71 (7.0)	71 (6.9)
American Indian or Alaska Native	0 (—)	7 (0.7)	7 (0.7)
Other	0 (—)	136 (13.4)	136 (13.1)
Unknown	0 (—)	108 (10.6)	108 (10.4)
Ethnicity, no. (column %)			
Hispanic/Latino	1 (6.3)	104 (10.2)	105 (10.1)
Not Hispanic/Latino	15 (93.8)	611 (60.0)	626 (60.5)
Other	0 (—)	117 (11.5)	117 (11.3)
Unknown	0 (—)	187 (18.3)	187 (18.1)

* This group represents secondary cases.

TABLE 2. Grade level and exposure site characteristics of Test to Stay participants by SARS-CoV-2 test results — Lake County, Illinois, August 9–October 29, 2021

Characteristic	Test results of close contacts		
	Positive (n = 16)	Negative (n = 1,019)	Total (N = 1,035)
Grade level/Staff members, no. (row %)			
Teachers/Staff members	0 (—)	2 (100)	2
Elementary school students (grades K–5)	7 (1.1)	620 (98.9)	627
Middle school students (grades 6–8)	4 (1.3)	299 (98.7)	303
High school students (grades 9–12)	5 (4.9)	98 (95.1)	103
Location of exposure,* no. (row %)			
Classroom [†]	2 (0.6)	333 (99.4)	335
School bus	9 (1.5)	574 (98.5)	583
School-sanctioned sport	5 (6.5)	72 (93.5)	77
Extracurricular activity [‡]	0 (—)	6 (100)	6
Unknown	0 (—)	34 (100)	34

* Exposure locations are mutually exclusive. School nurses reported one exposure site per close contact.

[†] Classroom exposures include academic classes, indoor recess, physical education class, and staff meetings.

[‡] Extracurricular activities include drama club and band.

Summary of findings

- Among 1,035 students and staff members enrolled in TTS (exposed), the secondary attack risk (number of close contacts who received a positive SARS-CoV-2 test result within 14 days after exposure to an index patient, divided by total number of close contacts) was only **1.5%** (16 of 1,035).
- All 16 secondary positive participants were students.
- **No tertiary transmission at the schools.**
- Assuming a maximum of 8 missed school days for every 10-day quarantine period, **up to 8,152 in-person learning days were saved** among TTS participants.
- TTS limited further spread of SARS-CoV-2 within K–12 schools and allowed students to safely sustain in-person learning.
- **Study was mentioned during a White House press briefing by the CDC**

The Lake County Health Department



Dr. Leslie Zun

LCHD - Medical Director

RFUMS - Director of Clinical Faculty Development

Assessment of Factors Influencing Diabetes Control: QI in the Clinics

Sean Hormozian¹, B.S.; Robert Marr², PhD; Judy Potashkin³, PhD; Carl White⁴, PhD; Leslie Zun^{5,6}, MD, MBA

Sean Hormozian

- Third year Medical student at the Chicago Medical School
- Project done as part of his Medical Degree with Distinction in Research (MDDR) Certificate

Introduction and study design

- Case-control study 3,618 patients with type-2 diabetes mellitus
- Two categories based on HbA1c levels:
 - $\leq 9\%$ or $> 9\%$ (poor control).

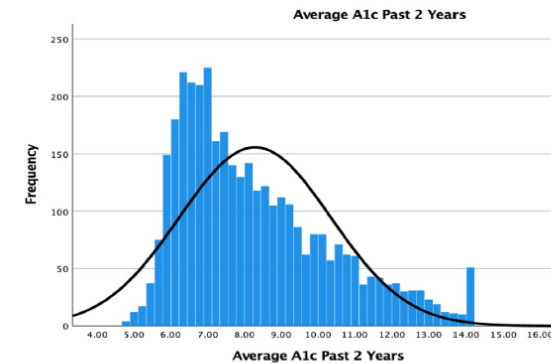


Figure 1. Average HbA1c across the Population
Average A1c across 3,618 LCHD patients from April 2019 – April 2021. Population average A1c is 8.28% with a standard deviation of 2. Histogram displays a slight right skew deviation.

- Independent variables:
 - Social determinants
 - Patient care
 - Comorbidities

Table 1. Social Determinants of Health

Raw data for each social determinant studied. Split into independent categories and significance values for the associated chi-square or crosstabulations tests. Categories are divided by metrics run through LCHD analytics. Significance is set at $p = 0.05$.

	Total	≤ 9%	>9%	Significance
Age Groups				9.743×10^{-18}
18-45	860	525	335	
46-64	1987	1344	643	
65+	771	624	147	
Sex				0.012
Male	1589	1060	529	
Female	2029	1433	596	
Ethnicity				0.000047
Not Hispanic or Latino	726	545	181	
Hispanic or Latino	2273	1524	749	
Race				7.5×10^{-5}
White	1640	1092	548	
Black	478	334	144	
Asian	199	161	38	
American Indian	13	6	7	
Pacific Islander	12	10	2	
More than 1 Race	728	524	204	
BMI Groups				8.73×10^{-4}
≤ 24.9 kg/m ²	404	249	155	
25-29.9 kg/m ²	1112	759	353	
≥ 30 kg/m ²	2073	1470	603	
Insurance				0.016
Grants	27	19	8	
Managed Care	944	704	240	
Commercial	161	120	41	
Medicare	285	241	44	
BCBS	94	68	26	
Medicaid	113	86	27	
Smoking/Illicit Substance/Alcohol				
Yes, Smoker	140	107	33	0.050
Yes, Illicit Substance use	126	76	50	0.021
Yes, Alcohol use	169	119	50	0.664
Employment Status				1.469×10^{-7}
Employed	1366	869	497	
Not Employed	2160	1556	604	
≥ 3 Diabetic Medications				2.294×10^{-12}
Yes	899	361	538	
No	2719	2132	587	
≥ 3 Daily Medications				9.477×10^{-10}
Yes	3206	2155	1051	
No	412	338	74	
Alert: Low Health Literacy				0.944
Yes	710	490	220	
No	2908	2003	905	
Alert: No Shows				1.579×10^{-15}
Yes	2960	1954	1006	
No	658	539	119	
Preferred Language				0.003
English	1388	998	390	
Spanish	2156	1440	716	
Other	74	55	19	
Nutritional Encounters (≥ 1)				1.333×10^{-23}
Yes	1572	945	627	
No	2046	1548	498	
Number of Medical Visits Past 2 Years				0.059
Average	6.53	6.48	6.58	
Number of Billable Visits Past 2 Years				.068
Average	22.34	15.14	14.39	

Data

Table 2. Patient Care Defined by Standard Practice Guidelines

Raw data for each standard practice guideline. Significance values reported for the associated chi-square test. Significance is set at $p = 0.05$.

	Total	≤ 9%	>9%	Significance
Annual Eye Exam				0.552
Completed	383	269	114	
Not Completed	3235	2224	1011	
Annual Lipid Panel				0.003
Completed	1980	1406	574	
Not Completed	1638	1087	551	
Annual Metabolic Panel				1.0×10^{-5}
Completed	2007	1444	563	
Not Completed	1611	1049	562	
Semi-annual A1c Measurement				0.091
Completed	984	699	285	
Not Completed	2634	1794	840	
Annual Microalbumin Test				0.092
Completed	1314	928	386	
Not Completed	2304	1565	739	
≥ 1 Standard Practice Guideline Met				4×10^{-6}
Completed	2113	1522	591	
Not Completed	1505	971	534	

Table 3. Comorbidities: Cognitive

Raw data for each cognitive comorbidity studied. Split into independent categories (psychosocial vs. neurocognitive) and significance values for the associated chi-square or crosstabulations tests. Significance is set at $p = 0.05$.

	Total	≤ 9%	>9%	Significance
Psychosocial				
<i>Anxiety</i>				0.141
Yes	539	386	153	
No	3079	2107	972	
<i>Depression</i>				0.148
Yes	852	570	282	
No	2766	1923	843	
Neurocognitive				
<i>Alzheimer's</i>				0.564
Yes	2	1	1	
No	3616	2488	1124	
<i>Parkinson's</i>				0.179
Yes	4	4	0	
No	3614	2489	1125	
<i>Vascular Dementia</i>				0.502
Yes	1	1	0	
No	3617	2492	1125	

Summary of findings

Increased risk of A1c > 9 (not controlled)

- Latinx
- Male
- White
- Illicit substance use
- Employed

Increased likelihood of A1c ≤ 9 (controlled)

- Annual lipid panel
- Annual metabolic panel
- Asian
- Medicare



Dr. Ricardo Senno

Assistant Professor, Department of Physical
Medicine & Rehabilitation
Rosalind Franklin University of Medicine and
Science / the Chicago Medical School

Nine years of research involving CMS students.

- 50 Students.
- 15 Scientific Posters.
- 3 Published Articles.
- 5 National Presentations.
- 3 International Presentation.

Much of this research has been done at the
Silverado Assisted Living Centers

Polypharmacy and Use of Psychotherapeutic Agents Leading to Falls in Patients with Dementia: Proof of Relationship

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Background

- After the diagnosis of dementia, patients' conditions can worsen for several reasons such as a high number of falls or polypharmacy (6 + medications).
- Is there a link of falls with polypharmacy?

Study Design

- 3 freestanding assisted living memory-care facilities in Illinois.
- A total of 153 residents with dementia were studied, 51 of whom were men and 102 of whom were women.
- Participants' ages ranged from 65 to 99 years.
- Observed for 90 days including MMSE

Data

Table1. Contingency Table Test 1 (Observed Values)

	Typical Medication [0-6]	High Medication [7-10]	Severe Medication [≥11]	Total
<2 Falls	17	46	37	100 (N1)
≥2 Falls	9	15	29	53 (N2)
Total	26	61	66	153 (N)

Table2. Expected Values for Chi Squared Test 1

X ²	Typical Medication [0-6]	High Medication [7-10]	Severe Medication [≥11]
<2 Falls	≈16.99	≈39.87	≈43.14
≥2 Falls	≈9.007	≈21.13	≈22.86

Table3. Contingency Table Test 2 (Observed Values)

	0 or 1 Fall (Obvious Falling)	2,3, or 4 Falls (Regular Falling)	5 or more (Chronic Falling)	Total
Use of Psychotherapeutic Agents	41	18	12	71
No Use of Psychotherapeutic Agents	59	19	4	82
Total	100	37	16	153

Table4. Expected Values for Chi Squared Test 2

X ²	Typical Medication [0-6]	High Medication [7-10]	Severe Medication [≥11]
Use of Psychotherapeutic Agents	≈46.41	≈17.17	≈7.42
No Use of Psychotherapeutic Agents	≈53.59	≈19.83	≈8.58

Summary of findings

- A p-value of 0.0727 was obtained from a Pearson's Chi Squared Test of Independence for Number of Medications and Number of Falls. A p-value of 0.0385 was obtained from a Chi Squared Test of Independence for Use of Psychotherapeutic Agents and Number of Falls.
- Participants taking excess amounts of medications, termed polypharmacy, may be at a greater risk of experiencing falls. Furthermore, those participants using psychotherapeutic agents seem to be at a particularly greater risk to fall.

Community Impact and Engagement

Ronald S. Kaplan, PhD

Executive VP for Research, RFU

Vice Dean for Research, CMS



Michael Rosen, Managing Director of the IRP

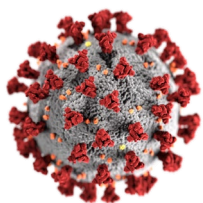


Connie Cleary, Director Innovation & Industry Relations





GI Surgical
Infections



Virus
Detection

Covira
Surgical

BLR
Bio

Fibrotic
Diseases



Everyplace
Labs

Targacell

Cardiac
Infarction
Repair

Cell
Therapy

Artec
Bio

Resuscitation
Therapeutics

Sudden
Cardiac Arrest



Cancer
vaccines

Instil
Bio

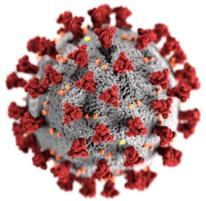
Enzyme-By-
Design

Cancer

Innovation and Research Park



Allergen &
Pathogen
detection



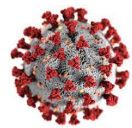
Covid-
19
Testing



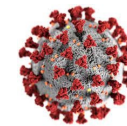
Healthcare Testing Infrastructure



- One of 7 state-wide Covid testing sites
- Covid testing site for Lake and northern Cook counties
- Capacity for 10,000 – 13,000 covid tests/day
- Building up to run 3 shifts/day
- Future capability for other types of disease testing
- Part of Univ. of Illinois





- Covid testing kiosk for “Essential Workers” (companies, schools, hospitals)
- Platform for other disease testing
- Quick on-site results
- Cost-effective



- Allergen & pathogen testing sensor
- Use in homes, offices and hospitals
- Initial focus: mold
- Applications for covid testing



Regional Job Creation and Training

PROGRAM	TODAY	12-24 MONTHS
	<ul style="list-style-type: none"> • 8 companies • 16 direct jobs • 32 indirect jobs • 48 TOTAL JOBS 	<ul style="list-style-type: none"> • 16 companies • 32 direct jobs • 64 indirect jobs • 96 TOTAL JOBS
<p>IRP</p> 	<ul style="list-style-type: none"> • 2 companies • 33 direct jobs • 99 indirect jobs • 132 TOTAL JOBS 	<ul style="list-style-type: none"> • 7 companies • ~100 direct jobs • ~300 indirect jobs • ~400 total jobs
<p>INTERNSHIP PROGRAM</p>	<ul style="list-style-type: none"> • 6-8 interns/year • “Waukegan- to-College” • Chicago Medical School • College of Pharmacy • Kent School of Law 	<ul style="list-style-type: none"> • 10-12 interns/year • Same sources • Lake Forest College • DePaul College • Lab & business interns

Regional Economic Impact (Lake County)



*“Economic Impact of Phase I (first building)
of RFU IRP ~ \$120 million”*

- Lake County Partners



New RFU Center for Health Equity Research

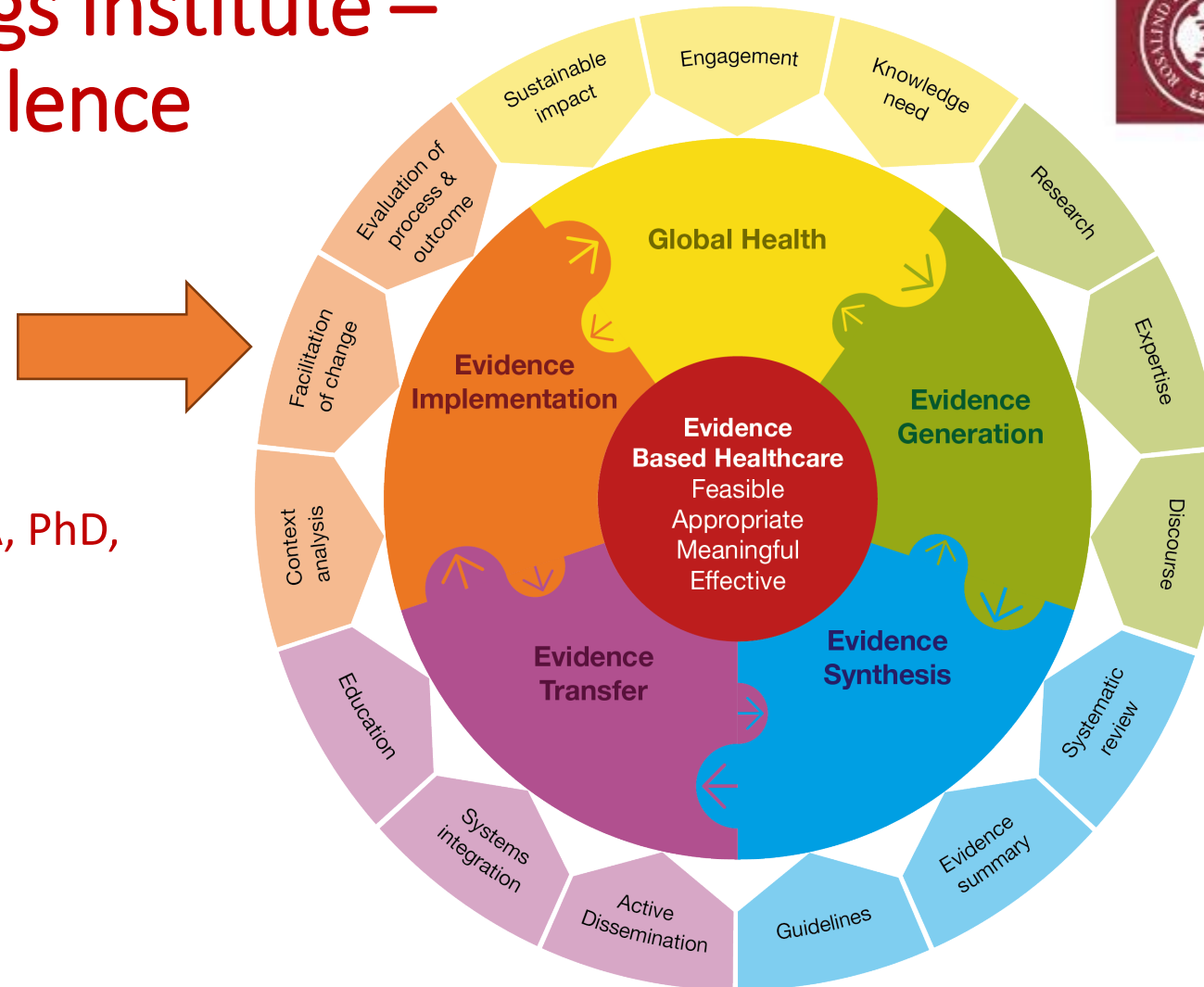
Mission

To develop robust **research programs** in health equity that are focused on the **interests and well-being of underserved Lake County communities**, including an **emphasis on the identification, elimination, and prevention of health and healthcare disparities.**

RFU Joanna Briggs Institute – Center of Excellence



**Jennifer Greenwood, CRNA, PhD,
Director**



Overarching principles

Culture - Capacity - Communication - Collaboration

Implementation to benefit communities

- Management of OB hemorrhage
 - Reduce maternal mortality
 - Increase confidence of the RNs
- Management of patients with implantable devices
 - Reduce wait times and cancelations
 - On time discharge
 - Patient safety
- Reduce unintended pregnancy
- Identify patients at risk for OSA
 - Referral for CPAP prior to surgery
- Enhanced recovery (ERAS) for urology and abdominal surgery
 - Reduce LOS
 - Reduce opioid use
 - Reduce post-op pain
 - Reduce ileus



Panel Discussion Questions



- 1. How do you ensure that community voices are incorporated in the planning and implementation of research initiatives? What lessons have you learned related to community engagement?**
- 2. What do projects gain when they engage community members and community partners in the project? How can the Innovation and Research Park/Helix 51 Incubator benefit the local community?**
- 3. What challenges emerge when working with community partners? How can these challenges be addressed?**
- 4. In what ways has student involvement in these projects facilitated their development as healthcare providers and researchers? What are the most impactful student outcomes from community-engaged projects?**
- 5. How has the work conducted by RFU and its partners laid the foundation for the RFU Center for Health Equity Research? How will the local community be involved in the development of this center?**

QUESTIONS

Please use the Chat Box or the Questions Box to submit questions and comments.



The Institute of Medicine of Chicago

INSTITUTE OF MEDICINE OF CHICAGO



IOMC 2022 AWARDS

Excellence in Healthcare, Public Health and Population Health

**Nominations
Due
May 2-4, 2022***
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IOMC Annual Meeting
VenueSix 10
June 30, 2022

New Date

Thank you for attending this virtual program



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THANK YOU

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Thank you for attending today's session.

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