



Integrating Community Health Workers into the Care of Children with Type 1 Diabetes

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(CHOP) Diabetes Center for Children | Aiyana Mate

Special Thanks



Mentors

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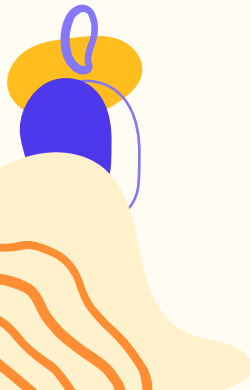

Principal Investigator



Dr. Colin P. Hawkes, MBBChB, MEd, MD, PhD

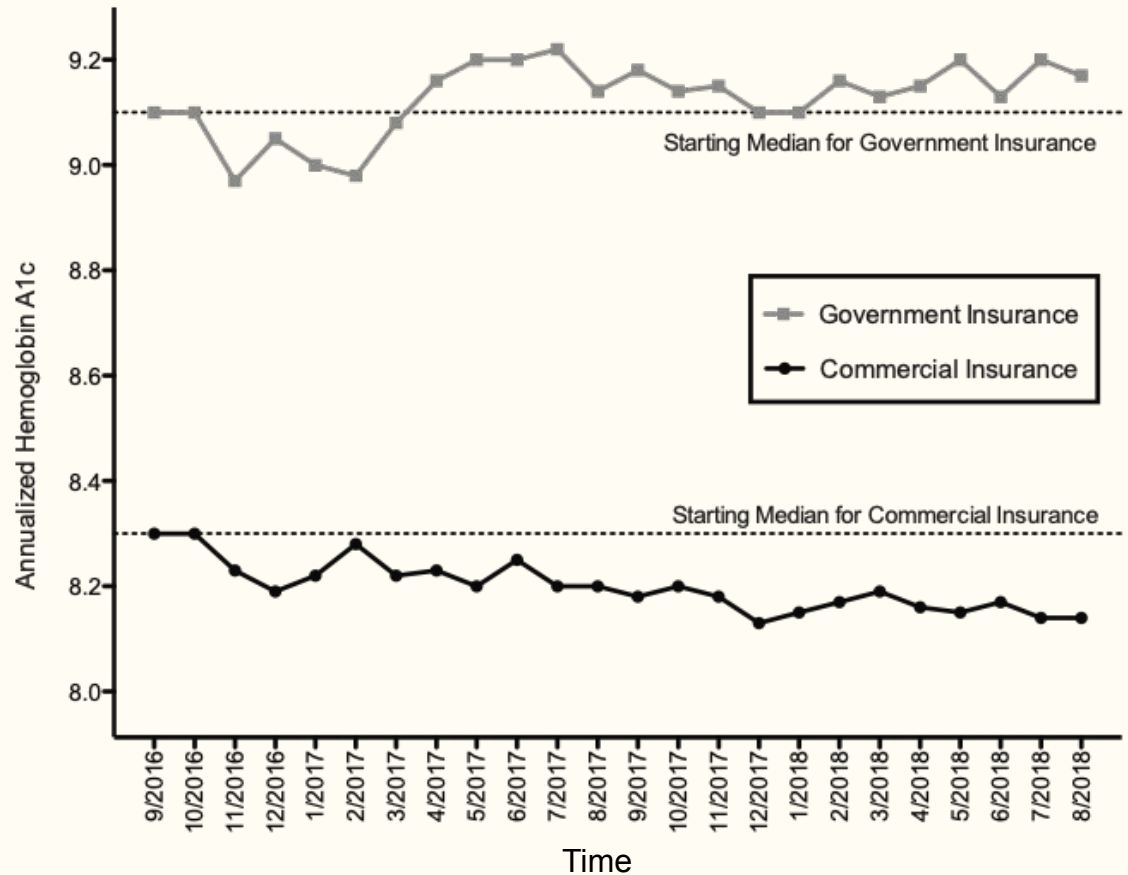


Background: Type 1 Diabetes

- Chronic condition in which the pancreas produces little or no insulin
 - Treated through management of blood glucose levels using insulin
 - Hemoglobin A1c (HbA1c) measures average blood sugar levels over a period of 2 to 3 months
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**Extensive
disparities exist
across type 1
diabetes
outcomes**

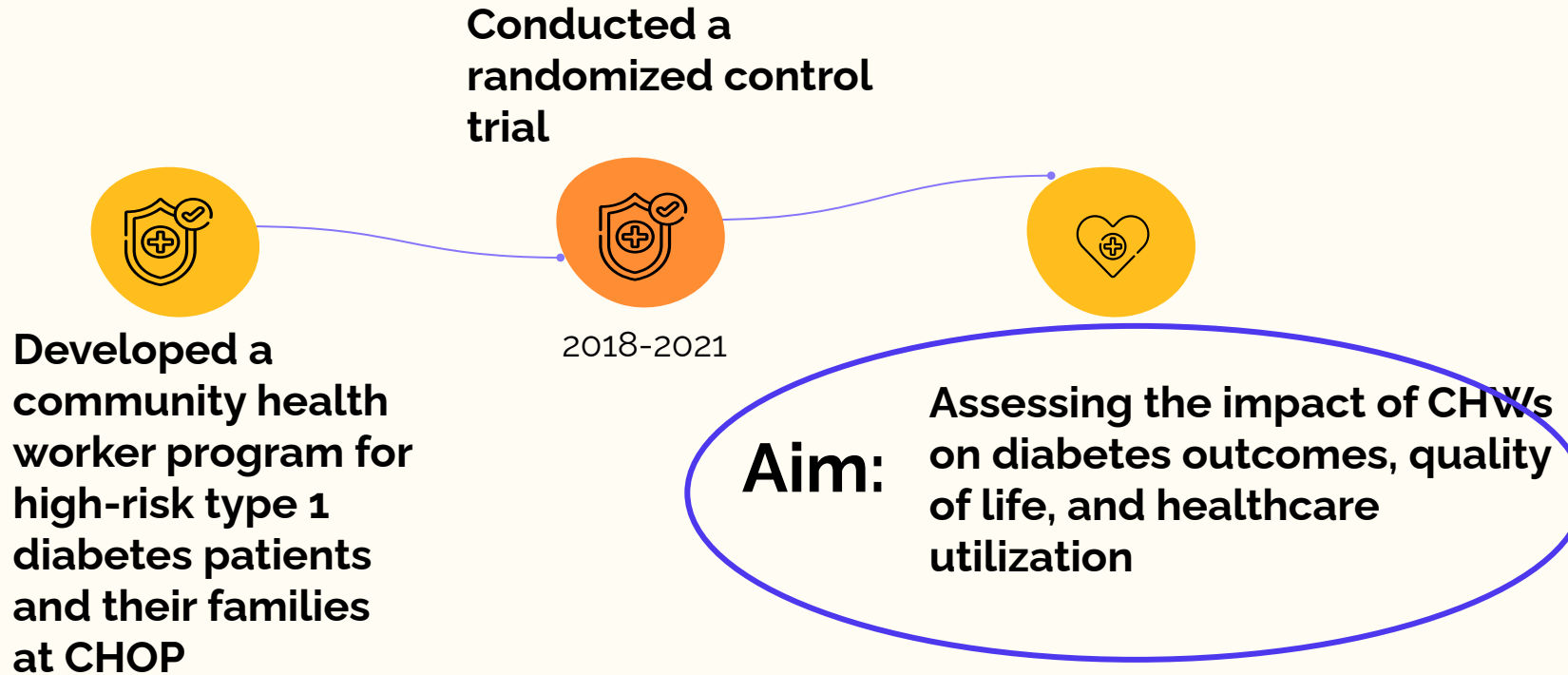
Figure 1. Annualized Hemoglobin A1c of CHOP Diabetes Patients with Government Insurance vs. Commercial Insurance



Background: Community Health Workers (CHWs)


- Provide culturally competent, patient-tailored support
 - Aid in coordination and communication between community members and healthcare providers
 - Trained on issues relating to health adherence, medication access, food and housing insecurity, and health education
 - Develop individualized goals and plans with patients and their families
- Previously associated with improved clinical outcomes in other departments at CHOP

Project Overview



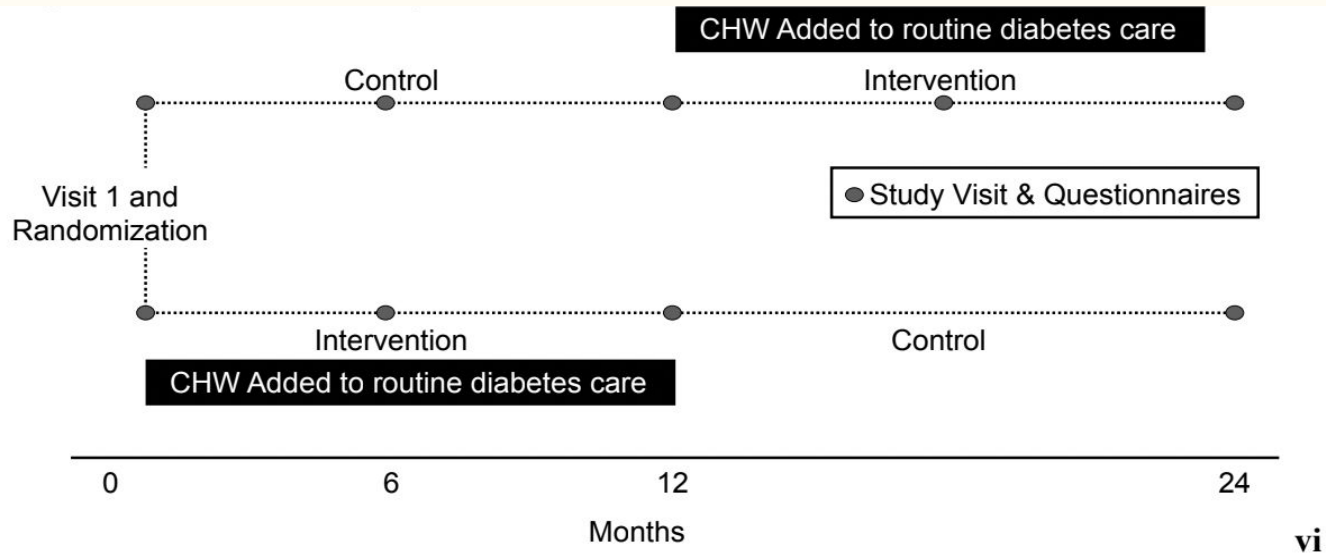
Participant Characteristics



- Patients ages 4-18 who have had a type 1 diabetes diagnosis for at least a year
 - Sum of 2 or more: diabetes-related hospitalizations, Emergency Department visits, missed visits
- OR**
- Hemoglobin A1c greater than 9.5 % at time of enrollment
- 

Methods

Figure 2. Schedule of Study Procedures.





Metrics

01

Glycemic Control

Hemoglobin A1c

03

Caregiver Satisfaction and Self-efficacy

Healthcare trust, Quality of Life, Self-efficacy questionnaires

02

Healthcare Utilization

Hospital Admissions, ED visits, No shows

04

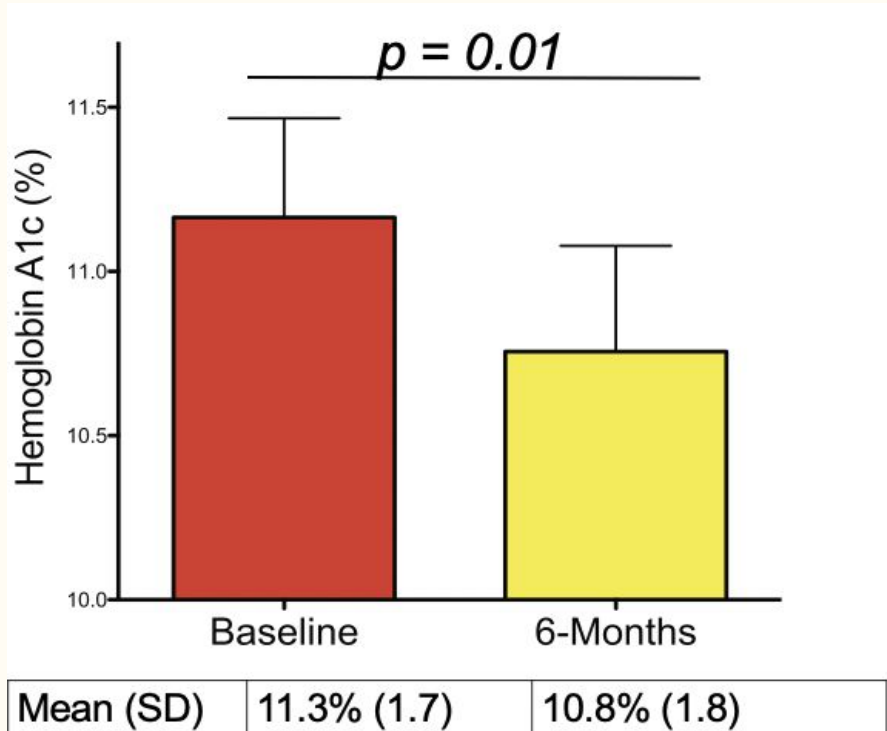
And more!

Number of attended visits, changes to diabetes regimen and technology



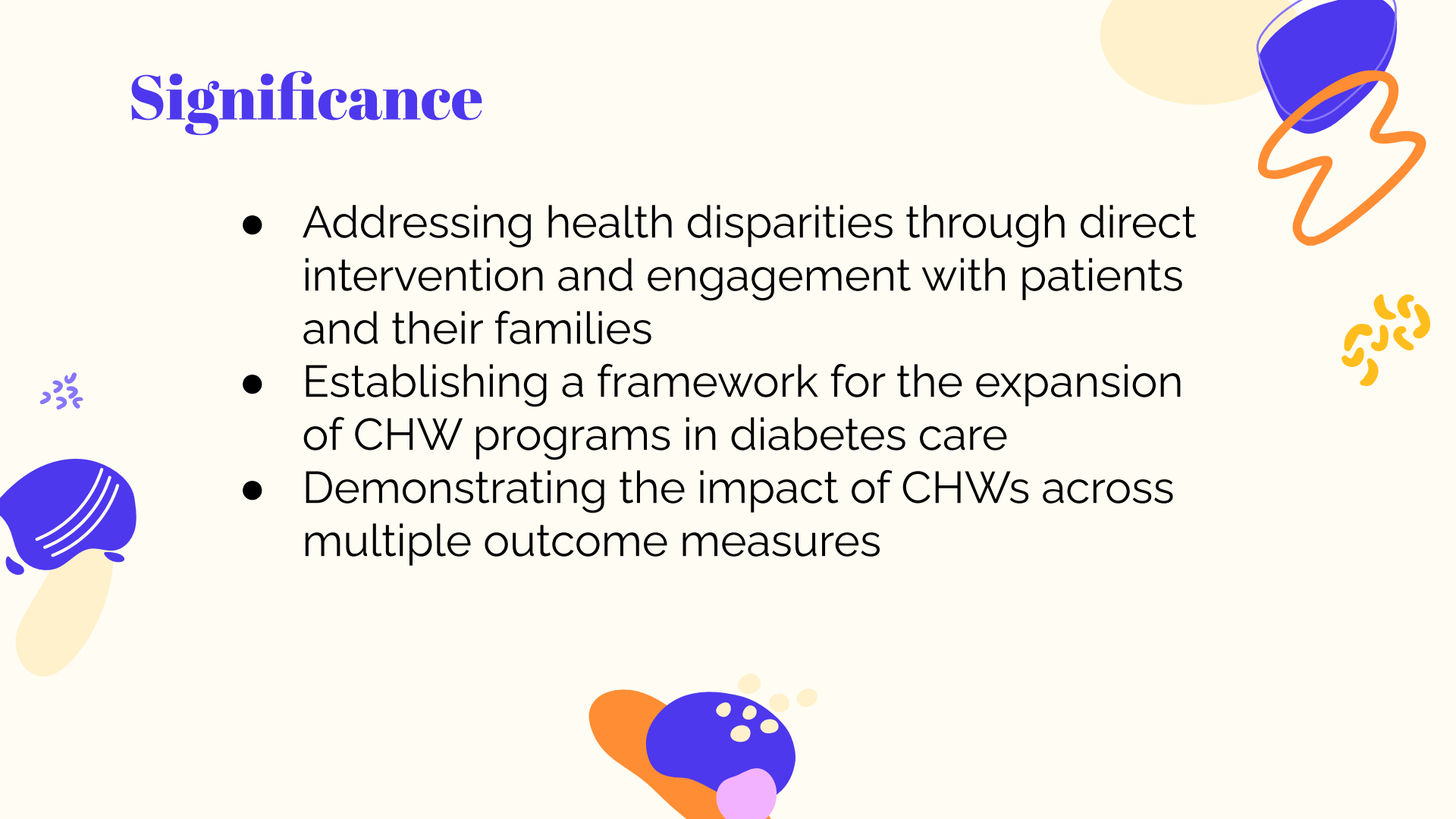
Early Results

Figure 3. Hemoglobin A1c of Intervention Group at Baseline and after 6 months with a Community Health Worker



Significance

- Addressing health disparities through direct intervention and engagement with patients and their families
- Establishing a framework for the expansion of CHW programs in diabetes care
- Demonstrating the impact of CHWs across multiple outcome measures



My Role

Chart Review and Data entry

- Entered clinical outcome values and other medical information from medical records into RedCap research database
- Cross-checked study visit dates across databases to ensure chart accuracy
- Documented healthcare utilization such as hospitalizations and visit no shows into Red Cap forms



Addressing Racial Disparities in Diabetes



Principal Investigators

- Dr. Steven Willi
- Dr. Colin Hawkes
- Dr. Terri Lipman




Project Description:

- **Caregiver Feedback:**
Obtaining caregiver perspectives on care to better understand disparities
- **Provider perspective:**
Investigating provider bias and improving provider practices to mitigate disparities
- **Data infrastructure:**
Developing an IT infrastructure to identify and reduce disparities in diabetes care



My role:

- Attended team meetings and collaborated to create study instruments
 - Generated provider-specific codes for survey administration
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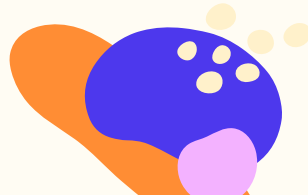
The Role of Grit in Determining Outcomes among Teens with Type 1 Diabetes




Principal Investigators:

- Dr. Steven Willi
- Dr. Herodes Guzman

Project Description:

- Evaluating the effect the personality trait Grit, measured by questionnaires, on glycemic control, measured by HbA1c
- 

My role:

- Medical Record Review to Screen for Eligible Participants
 - Approaching eligible patients and their caregivers in clinic
 - Review of informed consent form and administration of survey
- 

Depression Scores and Suicide Attempt History are Independently Associated with Elevated Hemoglobin A1c in Adolescents and Young Adults with Type 1 Diabetes

Principal Investigator:

- Dr. Julie Gettings

Project Description:

- Evaluating associations between patient depression scores, suicide attempt history, and glycemic control

My role:


- Conducted a literature review for manuscript development

Lessons Learned



Using Epic #01

Navigating electronic health records for recruitment and data collection



Using RedCap#02

Survey administration, survey design, and data entry


Different Research Perspectives

#03

Answering a research question multiple ways

Patient- Family Interaction#04

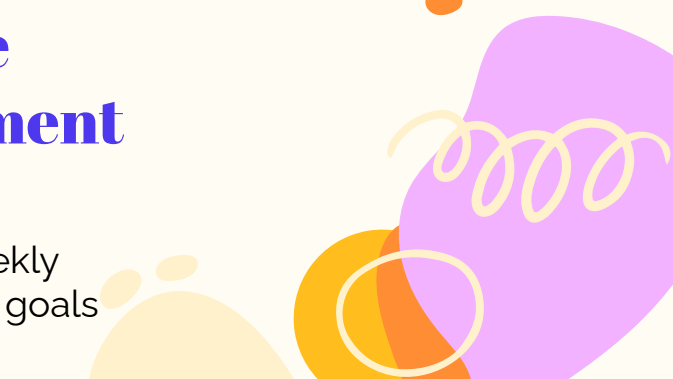
Approaching patients and caregivers in clinic



Time Management

#05

Creating weekly schedules and goals





Thanks!

Any questions?

