A formative evaluation of a pilot project to implement clinical workflows for patients who have been identified by an automated algorithm for potentially undiagnosed prediabetes, diabetes, or hypertension

Project Background:

Health information technology can be leveraged to improve diagnosis of chronic conditions, but few studies have evaluated implementation in real-world settings. Using a population health management platform, the Queen's Health System, Queen's Clinically Integrated Physician Network (QCIPN) partnered with the Department of Health (DOH) to develop an automated algorithm to identify patients with probable undiagnosed **prediabetes, diabetes, or hypertension** based on routine laboratory and clinical measures from electronic medical records. Health system leaders collaboratively developed clinical workflows for following up with identified patients for proper care and management. The clinical workflows were implemented in three pilot primary care clinics. We conducted a formative evaluation during the early implementation stage to understand the implementation process and identify barriers and facilitators.

Evaluation Objectives:

- Describe perspectives and experiences of leaders and clinical staff involved in workflows.
- Identify barriers and facilitators to implementation.

Methods:

To learn more about early implementation efforts, the University of Hawai'i (UH) Healthy Hawai'i Initiative Evaluation Team (HHIET) conducted a formative evaluation using qualitative methods.

1. The UH Evaluation Team conducted semi-structured interviews in October and November 2020. Eleven people with varied roles in the workflows were interviewed.
2. Interviews were recorded and transcribed.
3. Two members of the UH Evaluation Team summarized each interview by topical domains.
4. Matrix analysis methods were then used to generate themes based on the key domains (Hamilton, 2013).

Findings:

Implementation of the clinical workflows was impacted by the demands of the COVID-19 pandemic on the healthcare system, as well as turnover in key frontline staff positions. Despite limited experience with actual implementation of the workflows, participants perceived the workflows as a valuable way to proactively outreach to patients who may have "fallen through the cracks." The project also aligned with value-based payment programs and the nurse care coordinators' desire to work "at the top of their licenses" on chronic disease management. Participants identified the need for additional implementation training and support to address limited staff resources and increase provider awareness.

Evaluation Deliverables:

- *An evaluation summary report was provided to DOH and QCIPN.*
- *Evaluation findings are being presented in a poster presentation at the 14th Annual Conference on the Science of Dissemination and Implementation in Health.*

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