

Using the Practical, Robust Implementation and Sustainability Model (PRISM) to identify implementation determinants of a statewide diabetes learning collaborative in Kentucky

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Background

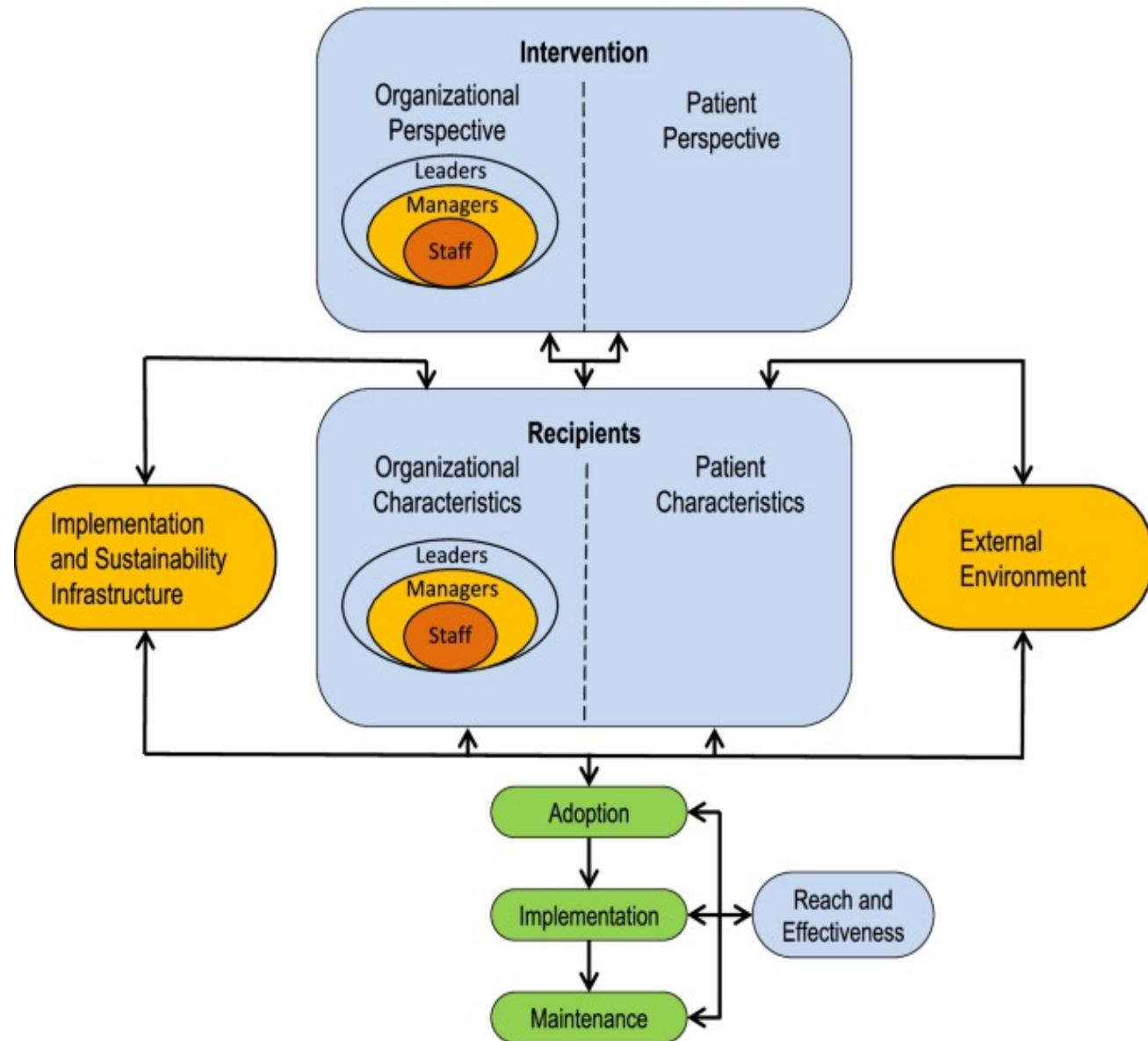
- **Diabetes self-management education and support (DSMES)** is an evidence-based, cost-effective strategy that improves outcomes for patients with T2DM, yet it remains underutilized despite being free-of-charge and available across Kentucky.
- We partnered with a statewide quality improvement advisory organization (KY Regional Extension Center; KY-REC) that has implemented multiple iterations of a diabetes learning collaborative (DLC) across Kentucky to **identify implementation determinants and explore their effects on implementation outcomes.**

Methods

- Adapted interview protocols from previously developed protocols aligned with PRISM domains.
- Conducted 26 Zoom interviews with three discrete groups of previous DLC implementers and participants: quality improvement advisory organization members (n = 5), clinic practitioners and staff (4 focus groups, n = 13), and health department partners (n = 8) who provided DSMES services for clinic patients.
- Interviews were coded deductively in NVivo based on PRISM domains operationalized and refined for this project. Codes were then grouped into overarching themes describing cross-cutting implementation determinants.

Results

- Participants most frequently listed determinants that acted as both facilitators and barriers to implementation related to the PRISM domains of **Implementation and Sustainability Infrastructure**, **Organizational Perspective**, and **Organizational Characteristics**.
- Responding to these determinants, implementation partners utilized **multiple strategies and adaptations** throughout the implementation process that impacted outcomes..



Nodes	Clinics	HLWD	KY-REC	Total
External Environment	15	1	7	23
Implementation...ty Infrastructure	23	63	28	114
Organizational Perspective	41	31	15	87
Adoption	7	0	9	16
Effectiveness	9	1	17	27
Implementation	22	41	53	116
Maintenance	3	5	5	13
Reach	11	4	3	18
Organizational Characteristics	33	16	23	72
Patient Characteristics	16	0	22	38
Total	180	162	182	524

HLWD = “Healthy Living with Diabetes” Health Department Team

Domain	Operationalization	Themes	Exemplar
Intervention: Organizational Perspective	Implementers' overall perceptions of the DLC program; facilitators and barriers related to DLC structure	<p>A lot more work than expected, but helpful – small tests of change made it manageable</p> <p>Being guided by IHI Breakthrough Model, and being able to track quality scores across a whole year, was considered a strength of the DLC</p>	<p>“I think [experience with DLC has] been really positive. The thing that sticks out my mind is improvements that we've seen with different organizations, and the improvements they have made with their goals...and how much this has helped patients and their patient populations.”</p>

Organizational Perspective of the DLC

- Being guided by **Institute for Healthcare Improvement (IHI) Breakthrough Model**, and being able to track quality scores across a whole year, was considered a strength of the DLC
- Similarly, advisory boards with topical experts were a strength
- However, from DLC 1 to most recent DLC, as calls got larger with more people, noticeably less participation from clinics; on the other hand, more people = more available resources
- **Individualized calls** (with clinics, health departments) were more useful for sharing specific barriers, issues; clinic staff seemed to talk more “freely”

Domain	Operationalization	Themes	Exemplar
Recipients: Organizational Characteristics	Roles/description of roles for implementers; specific roles in the DLC for participating or implementing strategies; individual characteristics that helped or hindered participation	<p>Strengths included having caring, resilient staff who are willing to “go above and beyond” with patient care, having a strong clinician champion, and having a quality assurance / TA person on staff to help with data validation</p> <p>Too many partners can make the DLC sessions overwhelming, clinic participants less inclined to speak freely</p>	<p>“I think [having] a provider champion with the clinics...was really important to get the clinician level of participants in the organization involved and kind of get that buy-in from that.”</p> <p>“Sometimes it would be easier if [our] team could...just do it on our own, and just...follow our successes that we have had with other types of collaborations and collaboratives.”</p>

Characteristics of the Organization that Helped Support Implementation of the DLC

Clinics

- Consistency of staff (i.e., fewer turnovers)
- Strong **provider champion**, leadership buy-in, was considered an implementation facilitator
- Having a **quality assurance / TA person** on staff to help with data validation

Health Dept.

- Often have **limited (or no) support staff** to assist with DSMES
- As a result, makes it difficult to offer as many services as they would like due to focus on administrative tasks (registering people, making multiple calls, etc.)

Characteristics of the Organization that Helped Support Implementation of the DLC

KY-REC

- **Rapport** having been built up over years with clinics helps facilitate partnerships with clinics in DLC
- Individuals who bring unique strengths that complement each other, but are still able to work together as a team
- Able to provide **technical assistance** (e.g., data validation, EHR help) as well as **practical assistance** (e.g., keeping things moving during staff turnover, helping with the initial application to DLC) to clinics

Domain	Operationalization	Themes	Exemplar
External Environment	Facilitators and barriers related to external factors at regional, state, or federal level	Mandated reporting (e.g., Uniform Data System [UDS], Healthcare Effectiveness Data and Information Set [HEDIS] measures) helped guide metrics selection for clinics, DLC was most successful when activities aligned with clinic priorities	“Maybe they're [selecting secondary metrics] for...HEDIS measures or something like that.”

External Environment

- Quality measures (UDC, MIPS, HEDIS, etc.) helped enforce / incentivize DLC activities for clinics
- One clinic was able to use available “double dollars” to the farmers market to incentivize patients to buy healthier food
- Sometimes in-person DSMES is less available in rural areas, which is potentially an external (e.g., state) issue
- Overall, DLC was most successful when it **aligned with clinic priorities**, often related to their **quality measures**

Domain	Operationalization	Themes	Exemplar
Implementation & Sustainability Infrastructure	Facilitators and barriers related to resources/support (or lack thereof); how this support affected activities to support implementation of DLC initiatives	<p>Staffing issues (esp. with smaller organizations)</p> <p>Technological limitations (e.g., on-site EHR IT support > external support)</p> <p>More front-end TA work = greater readiness to participate in the DLC</p>	<p>“[If] it's a small organization, you know, the ability to commit staff to do the work that was needed necessary and if they're a small organization, of course, that was challenging.”</p> <p>“If they have a large IT department, they can handle those [EHR] requests or reporting fixes to get the reports. But when you have the manager that's trying to do everything, and then has to contact the vendor and external representative and wait for them, or do it on their own by reading a manual how to create a report, that's a little bit more tricky.”</p> <p>“I think the more work that you do on the front end in preparation is key... So then...you can work on your data, your reporting [and] get your goals in place [before] the collaborative actually starts.”</p>

Implementation & Sustainability Infrastructure

Clinics

- More **buy-in from the top** (e.g., CEOs, practitioners) = stronger involvement, better success
- **EHR issues** can be a barrier – data validation can be time-consuming, and sometimes things aren't always documented consistently (which can also be a person issue, not always an infrastructure issue)
- Smaller clinics may **struggle to find time** to participate in DLC due to staffing needs or competing priorities
- To sustain, clinics need to **integrate DSMES referral into standard workflow**; cannot rely on a project champion or passionate clinic staff for sustainability

Implementation & Sustainability Infrastructure

KY-REC

- Important to have a good data plan and data infrastructure in place *before* the DLC starts
- In general, **pre-work is necessary** as not to detract from DLC activities: KHIE, data validation, clarity on the referral process
- Clinics that had someone on staff to handle IT support (rather than having to submit a ticket to the vendor) were able to handle EHR issues more effectively – often took months for those who had to submit tickets

Domain	Operationalization	Themes	Exemplar
RE-AIM: Implementation	<p>People who selected, and process of selecting, primary and secondary metrics in DLC; strategies that supported initial and ongoing implementation of DLC initiatives; adaptations — timing, decision process, perceived outcomes of adaptations</p>	<p><u>Strategies:</u> Integrating progress toward selected DLC goals into morning huddles to help decide where to focus efforts; primer from clinics for DSMES scheduling</p> <p><u>Adaptations:</u> Shift to virtual format because of COVID; Early data validation before first DLC session to make sure clinics were all reporting similarly and using standard methodology; addition of monthly TA calls for clinics, which allowed clinics to speak on their own specific issues they may not discuss on larger calls</p>	<p>“I think we've done extremely well, going virtually. And I think it's been helpful, actually, in a lot of different aspects.”</p> <p>“We found that if we could get your data validation, your baseline reporting...before you start the first learning session, that is always better.”</p>

Implementation – Strategies

Clinics

- 1-on-1 health coaching
- Remote patient monitoring (e.g., weight, BP, pulse ox, glucose)
- Integrating progress toward selected DLC goals into morning huddles to help decide where to focus efforts
- Having diabetes educator call “no show” patients to get them rescheduled

Implementation – Strategies

Health Dept

- **Primer from clinics** – many patients did not know that HLWD would be calling them, made it difficult to schedule (multiple calls, letters, etc.)
- More “front-end” support from clinics to determine patient needs for DSMES (e.g., format – in-person vs. Zoom)

KY-REC

- Support for clinic DLC activities, e.g., storyboarding, PDSA cycles, provision of supplies (pamphlets, signage, etc.)
- Use of polling features, on-screen annotations, human centered design for Zoom-based DLC
- Helping clinics determine goals / measures – helping them determine if they were SMART and reasonable targets

Implementation – Adaptations

Clinics

- Shift from community health workers to medical assistants/providers leading DSMES referrals – due to patient preference/response
- Development of **provider workflow** (“appointment agenda”): checklist in EHR for provider to make sure they’re quickly able to order A1c test, foot exam, etc. – this was developed because referrals weren’t happening or being followed through with consistently

Implementation – Adaptations

Health Dept

- **Hybrid in-person/remote DSMES** in partnership with other health departments that did not have a certified diabetes educator. Certified educator would Zoom in and the non-certified educator at the health dept would facilitate the activities in-person
- **Shift from in-person to Zoom** DSMES during COVID – bigger participation has allowed for continuation of Zoom, often scheduled during lunch hours to facilitate ability to participate

Implementation – Adaptations

KY-REC

- **Shift from in-person to virtual DLC** – overall considered a positive switch
- **Early data validation** to make sure clinics were all reporting similarly and using standard methodology
- **Extended the data reporting period** to account for longitudinal measures that may not be available at specific reporting timepoints and/or due to clinic limitations
- Addition of **monthly TA calls for clinics**, which allowed clinics to speak on their own specific issues they may not discuss on larger calls
- Move from clinics being assigned a single DSMES partner to a primary and **secondary DMSES partner** – accommodates different patient needs/schedules, health department limitations

Summary and Suggestions

- Obtain strong clinic leadership buy-in for DLC participation, and if possible, have a **provider champion** who can participate in at least most of the DLC
 - Develop a mechanism, if possible, to **involve other clinic staff and providers** throughout the course of the DLC. If the clinic team is led by a strong provider champion and that provider moves to another clinic, it is a barrier to continuing DLC activities
- **Emphasize alignment with existing clinic quality measures** (e.g., UDS) to increase buy-in
- Though some clinics expressed that a hybrid DLC format would be useful, small clinics in particular – as well as providers – said that in-person would not be feasible for their participation. All said that Zoom was acceptable.

Plans Moving Forward

- This identification of implementation determinants and their effects on outcomes will be used to refine a DSMES-focused DLC that incorporates the adaptations and effective strategies identified in this planning phase and which will be **implemented throughout 2024**.
- We will evaluate the adapted collaborative's pragmatic implementability by assessing feasibility, acceptability, and sustainability via stakeholder and participant surveys, as well as through administrative and interview data.

Questions?

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