EDICT: Equity in Diabetes Care & Transformation

Implementation of Social Determinants of Health Screening in Diabetes Clinic

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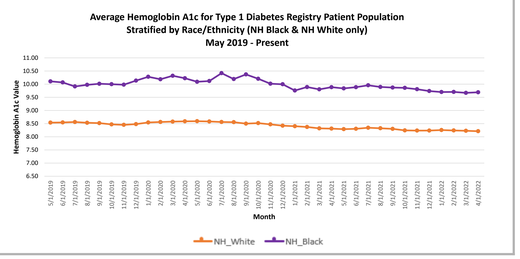
Background

Morbidity and mortality in type 1 diabetes (T1D) is grossly marred by key disparities and equity gaps compounded by social determinants of health (SDH): non-medical factors that influence health outcomes.

Nationally, SDH disproportionately burdens racial minorities and those of lower socioeconomic status (SES). Locally, Black T1D youth have higher hemoglobin A1c's (HBA1c), lower rates of diabetes technology use, and higher rates of hospitalizations. The implementation of an SDH screen provides a systematic screening tool to identify vulnerable patients no matter race or SES status.

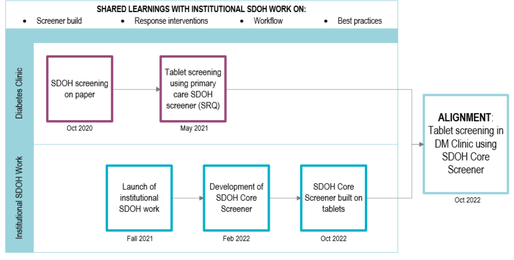
This project's aim was to increase the percent of T1D patients screened for SDH in diabetes clinic from 0% to 90% by 6/30/2022. We additionally sought to co-develop a patient-centered, collaborative SDH tool to spread hospital-wide in all healthcare conditions.



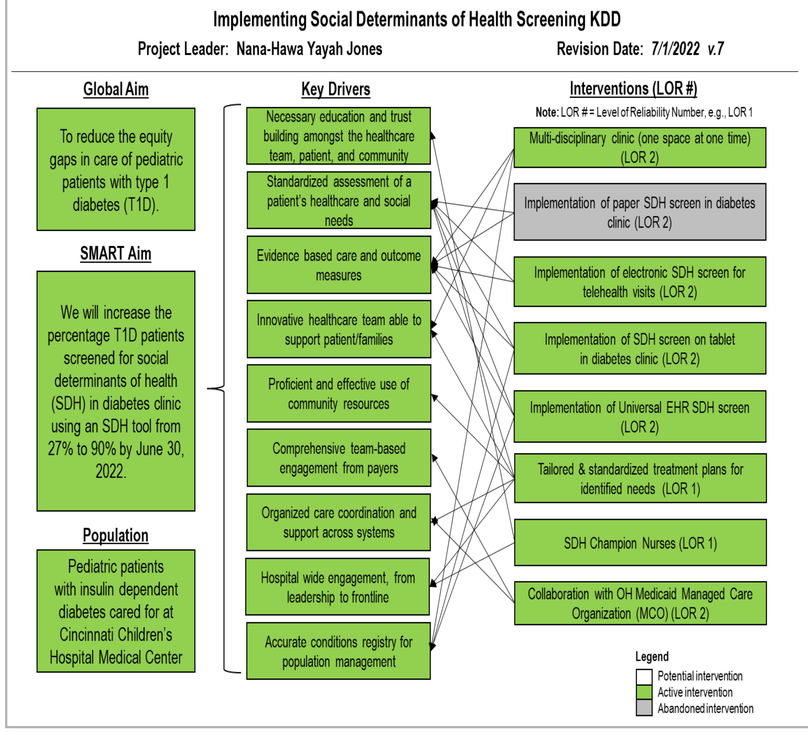
Methods

Using quality improvement (QI) methodology, a multidisciplinary diabetes team identified a SDH tool and created a system for addressing positive screens (Next Best document).

Once adapted from verbal to paper to automatic firing on electronic tablets, learnings were translated into a hospital-wide core SDH screener intended for use in all ambulatory practices of the hospital.



Theory for Improvement



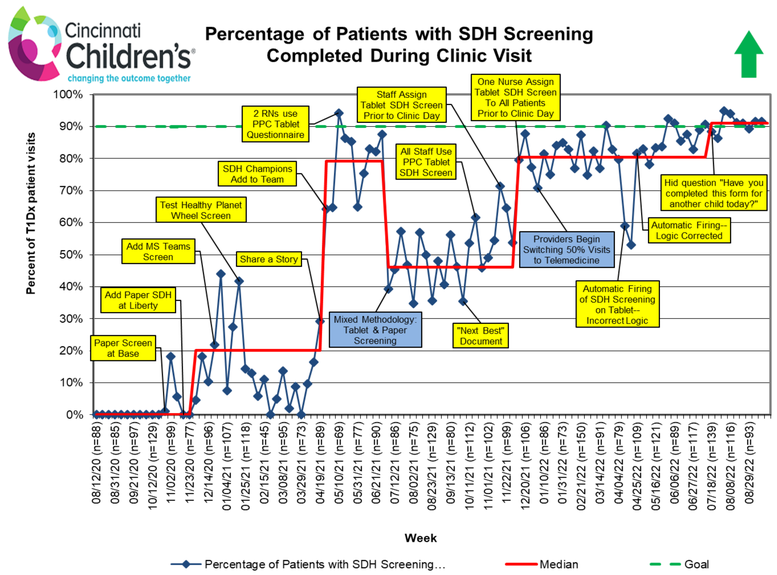
Social Risk Questionnaire

Questionnaire Question	Next Best Question	Next Best Response
Worry food would run out	Have you applied for food stamps? Are you aware of food pantries in your area?	If not applied for food stamps or not aware of food pantries-- social worker referral. If food stamp denied, delayed, or reduced-- legal aid referral
Food did not last		
Felt down, depressed or hopeless	Are you experiencing SI/HI today? Are you engaged with a therapist or would you like a list of community resources?	If yes to SI/HI-- SW consult. If they would like a list of resources-- SW consult
Felt little interest or pleasure		
Problems with WIC, SNAP... utilities	Have you contacted that program office to work through/resolve the issue?	Legal aid referral
Housing problems landlord is not helping	Have you shared your concerns with your landlord/leasing office about these issues?	Legal aid referral
Threatened with eviction or losing your home		
Trouble paying for medications	Diabetes-related medication: Have you spoken with anyone at the Diabetes Center about this?	If they have not contacted Diabetes Center yet-- clinic nurse discusses with family and assist
Trouble getting to appts or pharm	If Medicaid user: Are you aware of transportation benefits available through your Medicaid coverage?	Social work referral if needed. Rideshare options (such as Uber) can be used for emergencies only.
Bad, sad or scary happened	Would you like to speak with someone about what happened?	If yes-- social work referral. If no-- let family know we are here for them when they are ready
Would you like to speak with someone?	N/A	If yes-- Social work referral. If no-- "I see that you marked [whatever positive response], just so you are aware-- we have a social worker available to help you with that today. Would you be interested?"

Next Best document for positive screens

Results

As of September 2022: 5,400 screens have been completed
- Shifted centerline from 0 to 91%
- Up to 5% of the population identified at least one SDH per visit



Percentage of Positive Responses

Questionnaire Question	Percent with Positive Response
1. Within the past 12 months, did you/your family worry whether your **food would run out** before you got money or SNAP/food stamps to buy more?	3%
2. Within the past 12 months, did the **food you/your family bought not last** and you didn't have money to get more?	Often True- 1%; Sometimes True- 4%
3. Over the past 2 weeks, have you **felt down, depressed or hopeless**?	Several days- 2%; More than half the days- 2%
4. Over the past 2 weeks, have you **felt little interest or pleasure** in doing things?	Several days- 3%; More than half th days- 3%
5. Are you currently having any **problems with your WIC, SNAP/food stamps, daycare vouchers, medical card/insurance, SSI or utilities**?	3%
6. Are you currently having any **housing problems** (overcrowding, roaches, rodents, utilities, mold, lead) that your landlord is not helping you with?	1%
7. Are you currently being threatened with **eviction** or losing your home?	1%
8. Since your last appointment, have you had **trouble paying for medications** or have you chosen not to fill a medication due to cost?	2%
9. Do you currently have **trouble getting to doctor's appointments or to the pharmacy**?	1%
10. Has **anything bad, sad or scary** happened to you or your child since your last clinic visit?	5%
11. Would you like to **speak with someone** who may be able to help you with these issues?	3%

Key Learnings

- Identifying SDH Champions, on the ground clinic nurses, was successful in accelerating buy-in
- Sharing success stories and data was instrumental in accelerating momentum
- Rely on automation
  - LEVEL 1 Reliability: Intent, vigilance, and hard work
  - LEVEL 2 Reliability: Decision aids and reminders built into the system, and real-time identification of failures
- Patient reported outcomes (PRO's) is a more effective method for SDH screening
  - Families are more transparent and comfortable

Conclusions

- Implementation of a SDH screen in diabetes clinic can be standardized and effective in identifying barriers to healthcare needs of patients with diabetes
- SDH screening in T1D population can be readily adapted to screen other pediatric chronic disease populations in large tertiary care centers, magnifying its impact on healthcare outcomes

Future Direction

Craft *targeted* interventions for each domain of SDH:

- FOOD INSECURITY → Capital request for food pantry
- DEPRESSION → Align with Cincinnati Children's Screening to Improve Outcomes Task Force (integration of a full bundle of psychosocial screenings, e.g., SDOH, depression/suicide, & substance abuse)
- HOUSING/UTILITIES → Legal aid expansion of Cincinnati Child Health-Law Partnership (Child HeLP) and collaboration with Community Relations
- FINANCIAL → Utilization of financial counselor and innovation funding
- TRANSPORTATION → Implementation of mobile clinic unit

Co-production with schools
- EDUCATION → Adding education domain and collaboration with school nurses/administrators

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