Financial Disclosures

• With respect to the following presentation, there have been no relevant (direct or indirect) financial relationship between the presenters/activity planners and any ineligible company in the past 24 months which would be considered a relevant financial relationship.

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“DASH”ing the way to health equity and chronic disease care success: Innovations and development of the DASH (Diabetes and School Health) Program

June 2023
School-Based Health Alliance Conference
Washington, DC

TIME FOR SOME QUESTIONS!!

What ONE word comes to mind when you think of type 1 diabetes care in the school setting?

Nobody has responded yet.
Hang tight! Responses are coming in.
Which of the following is the biggest challenge your team has faced with type 1 diabetes care in the school setting?

- Lack of diabetes education among school staff: 100%
- Lack of diabetes staff/resources at school: 0%
- Lack of support from school leadership/administration: 0%
- Lack of caregiver cooperation: 0%
- Other: 0%

Do you have a school program for type 1 diabetes care or other chronic disease care?

- YES: 0%
- NO: 0%
- IN PROCESS: 0%
- NOT SURE: 0%

What is your role in school health?

- Medical Provider (Physician or Advanced Practitioner): 0%
- Nurse: 0%
- Administrator: 0%
- Educator: 0%
- Social Worker, Case Worker, Dietitian, or Diabetes Educator: 0%
- School Advocate: 0%

Ask any questions or comments from our group today anytime during the presentation:

Nobody has responded yet. Hang tight! Responses are coming in.
**Presentation Outline**

1. Challenges of Diabetes Care in School
2. NCH Approach to Health Equity
3. DASH Program Structure
4. DASH Program Outcomes
5. How to structure a similar program

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**Challenges with T1D Care in Schools**

- Inequities in Care and Disparities in Outcomes
  - No Federal or State Standard of Care
  - Lack of Resources
  - Variable Education and Training
  - Complex Care Plans
“Complex patients require complex solutions”

Development of the NCH DASH Program

NCH Approach to Equity

Community Wellness
Care Connections – School Health Programs
Healthy Neighborhoods, Healthy Families (HNHF)
BC4 Teens, Ohio Better Birth Outcomes, Pediatric Vital Signs

Partners for Kids (PFK): Accountable care organization for patients with Medicaid
Care Navigation: Extension of PFK for medically complex children
**NCH School Health/Whole Child Model**

**DASH is a community-based health equity initiative**

**Aims:** Decrease acute care utilization and promote optimal glycemic control in school-aged children who are vulnerable to complications of type 1 diabetes

**Limit unnecessary healthcare utilization and increase self-efficacy, confidence, comfort, and independence for children with diabetes management**

**Streamline Patient Care**
- Establish pharmaceutical delivery service to deliver Rx, supplies
- Guide conditional vaccine management
- Standardize practices and continuation

**Provide Ongoing Support & Communication**
- Monthly and pre T1D in-person appointments at school with the DASH team
- DASH staff answer questions for school staff
- EMR enhancements to improve adjustment and diabetes in school nurse care

**Enhance Education/Advocacy**
- Educate students and families on healthy decision-making
- Provide updated educational materials
- Advocate for systemic changes

---

**NCH T1D Patient Population**

**School Age Distribution**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-7</td>
<td>131</td>
</tr>
<tr>
<td>8-10</td>
<td>204</td>
</tr>
<tr>
<td>11-13</td>
<td>407</td>
</tr>
<tr>
<td>14-16</td>
<td>551</td>
</tr>
<tr>
<td>17-19</td>
<td>506</td>
</tr>
<tr>
<td>20</td>
<td>149</td>
</tr>
</tbody>
</table>

**NCH Type 1 Diabetes Registry**

<table>
<thead>
<tr>
<th>Race</th>
<th>Total Number in Registry (% of Total)</th>
<th>Number of Students with Low Score</th>
<th>% of Students with Low Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black or African American</td>
<td>344 (17%)</td>
<td>126</td>
<td>37%</td>
</tr>
<tr>
<td>White</td>
<td>1443 (70%)</td>
<td>186</td>
<td>13%</td>
</tr>
<tr>
<td>Asian</td>
<td>40 (2%)</td>
<td>6</td>
<td>15%</td>
</tr>
<tr>
<td>Bi-racial/Multi-racial</td>
<td>100 (4%)</td>
<td>15</td>
<td>15%</td>
</tr>
<tr>
<td>Native Hawaiian and Other Pac.</td>
<td>3 (0.1%)</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>American Indian and Alaska N.</td>
<td>3 (0.1%)</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>76 (4%)</td>
<td>10</td>
<td>13%</td>
</tr>
</tbody>
</table>

Patients of color are disproportionately falling into the low score, high risk category compared to their counterparts.

Patients of color are facing significantly more barriers to traditional care impacting health outcomes.

School health programs, which bring care to where the patient is located, have shown success in closing the gap on providing equitable care.

---

*Source: T1D registry patients with a composite score (current state as of 07/07/2020)*

*Ages 6 to 20*
Monitoring Outcomes

Objective measures of diabetes care
- Hemoglobin A1C
- Diabetes Composite Score
- Utilization of diabetes technology
- Acute care utilization

Assessment tool for skill & mastery
- Subjective data for education
- Self-efficacy measures

Student

School Nurses

Parents

Pre- and post-survey distribution
- Assessment of educational improvements & progress in self-care
- Assessment on confidence in diabetes management
- Assessment of School staff comfort
- Assessment of parental attitudes, concerns and assessment of child’s skills

Monitoring Outcomes

Healthcare utilization & medication adherence
- Diabetes Composite Scores & HbA1c levels
- Missed school days and admissions for diabetes complications
- Self-efficacy & knowledge of diabetes management (graduation rate, survey results, etc.)
- Quality of Life metrics - depression, stress & social functioning
- US News Quality Metrics (4 or more outpatient clinic visits, DNE touchpoints, A1C values, etc.)

DASH Program: Initial Cohort

- Receive T1D care at Nationwide Children’s Hospital
- Lives < 45 miles of main campus
- Diabetes Composite score < 10
- 50-75 students

Pilot Baseline Demographics (2021-2022)

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Students</td>
<td>56</td>
</tr>
<tr>
<td>Age Range</td>
<td>5-18</td>
</tr>
<tr>
<td>Ethnic minority</td>
<td>69%</td>
</tr>
<tr>
<td>Primary language other than English</td>
<td>16%</td>
</tr>
<tr>
<td>Gender Diverse</td>
<td>5%</td>
</tr>
</tbody>
</table>

Patient Distribution by Composite Score

Diabetes Composite Score

- High Risk < 10
- Intermediate Risk 10-14
- Low Risk 15-18
**DASH Program: Improved Outcomes**

- Median A1C *improved from 12.4% to 11.9%*
- Median Endocrinology Clinic appointment attendance *increased by 4.6 visits*
- Median Diabetes Composite Score values *improved from 9 to 12 indicative of decreased risk of complications (high to intermediate risk)*

**Initial Evaluation (Fall 2021)**

- 50% Never Used CGM
- 34% Have Used in the Past
- 16% Currently Using Regularly (>80%)

**Spring 2023**

- 66% Never Used CGM
- 28% Have Used in the Past
- 6% Currently Using Regularly (>80%)

**Composite Score Improvement**

- Baseline Fall 2021: 50%
- Spring 2023: 66%

n = 44
Educational, Psychological & Systemic Outcomes

DASH Program Expansion Model

**Complexities of Diabetes Care**

- Medical Care
- Relationship with Families, School, and Medical Team
- Adolescence and Autonomy of Care
- Social Determinants of Health in Chronic Disease Care

**Case Vignettes**

Small groups will work through real challenges in T1D care in schools, DASH team will share effective strategies and lessons learned.
Building a chronic disease school health program

Identifying challenges, partnerships, and implementation strategies

**Program Development**

<table>
<thead>
<tr>
<th>Needs Assessment</th>
<th>Resources, Feasibility and Support</th>
<th>Program Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Understand district and school policies, nursing legislation, local SHBC’s</td>
<td>- School Staff Availability</td>
<td>- Admin, legal/consents, marketing, finances</td>
</tr>
<tr>
<td>- Identify areas of opportunity and gaps (schools, clinics, families)</td>
<td>- Clinic Staff Outreach Availability</td>
<td>- Training for personnel</td>
</tr>
<tr>
<td>- Collaborate with local clinics to understand patient needs (focus groups, survey data, etc...)</td>
<td>- Funding for additional resources</td>
<td>- Data collection and outcomes assessment</td>
</tr>
</tbody>
</table>

**Program Development**

**Needs Assessment**

**Resources, Feasibility and Support**

**Program Development**

**NCH DASH Program QI Framework**

**Aim**

- Our aim is to utilize a school-based health program to support patients with type 1 diabetes at high risk for complications and their school staff, in order to decrease acute care utilization by 25%, increase average HbA1c composite scores by 2%, increase school staff comfort with management of T1DM by 50%, and increase self-efficacy of diabetes skills by 50% from baseline by 6/30/2023.

**Primary Drivers**

- Effective utilization of resources
- Increase Time in Range
- Reduce Acute Care Utilization
- Increase Support and Education for School Staff
- Improve Quality of Life

**Secondary Drivers**

- School Health and Care Connections
- DASH Team
- Schools and School Staff
- Patients and Families

**Patient Care Model**

**Care Coordination**

**APN, Diabetes Nurse Educator, Pharmacist, Pharmacy Tech**

- Liaison for school nurses, physicians, and students
- 1:1 appointments with patients
- Care coordination
- Track outcomes
- Oversee prescriptions

**DASH Staff**

- APN, Diabetes Nurse Educator, Pharmacist, Pharmacy Tech
- Liaison for school nurses, physicians, and students
- 1:1 appointments with patients
- Care coordination
- Track outcomes
- Oversee prescriptions

*CareLink is a tool for school nurses that provides real-time view of EMR access to integrate school nurse with care team*
Patient Care Model

Care Coordination

School Nurse
- Help identify student candidates
- Follow standard regimen
- Use CareLink* to view medical records
- Assist with patient education, communication between staff, families and NCH staff

Care Coordination

Parent/Guardian
- Enrollment, consent
- Communication
- Ensure child has all tools for success in diabetes care at school
- Biannual meeting with school clinic team

Endocrinology Clinic
- Primary T1D care
- Referrals
- Assist with patient education
- Communication
- Collaboration
- Provide final approval for graduation

DASH Pharmacy Service

Initial Set-up
- Register schools with board of pharmacy
- Meetings with Pharmacy Benefit Management

School Preparation
- Enroll child determined in June/July
- Process prescriptions & insurance authorizations
- Determine transportation

Monitoring
- Pharm tech will continue to check supplies
- Continual insurance review

Medication & Supplies
- Short & long-acting insulin
- Glucagon
- Blood glucose & ketone strips
- Pen caps & needles
- Pump & CGM supplies
- Lancets & syringes

*CareLink is a tool for school nurses that provides real-time access to medical records for school nurses to integrate school nurse with families.

Anticipated enrollment for students with poor management = 2 - 3 years

Anticipated enrollment for students with poor management ≥ 3 years

NCH DASH Pharmacy delivers medications & supplies to home & school

Pilot/Year 1
- Pharm Techn and Pharmacist
Describe Needs and Health Disparities in the School Population

Identify Advocates
• School staff and leadership, local medical staff

Create/Build working group
• Create partnerships, workflows, and policies

Provide a framework to present to interested stakeholders

Ongoing Program Evaluation

Special Thanks:
Collaborating Schools and Districts, Families and Students
Mary Kay Irwin: Senior Director, School Health
Matt Moore, Priya Gandhi, Myra Weller: Community Wellness
Dr. Kajal Gandhi: DASH Co-Medical Director
Dr. Aurelia Wood: DASH Co-Medical Director
Amy Moffett, MSN, APRN, CPNP-PC: DASH APN
Becca Clino, Kathryn Simms: DASH Diabetes Nurse Educators
Terri Dachenhaus: Clinical Leader Community Wellness
Natasha Geno: Administrative Support, Community Wellness
Adrian Jones, Alex Swick, Ashley Broughton: DASH Pharmacy Marketing, Design, Legal, Risk Management Teams
Alyssa Kramer, Cody Caudill: Decision Support Senior Analysts
NCH Endocrinology Team

Thank You for Your Time & Attention!
In support of improving patient care, this activity has been planned and implemented by the School-Based Health Alliance and Moses/Weitzman Health System, Inc. and its Weitzman Institute and is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Through Joint Accreditation, credits are also available under the following bodies:
- American Academy of PAs (AAPA)
- American Dental Association’s Continuing Education Recognition Program (ADA CERP)
- American Psychological Association (APA)
- Association of Social Work Boards (ASWB)
- Commission on Dietetic Registration (CDR)

Resources

- ADDRESSING framework of cultural identity: https://thinkculturalhealth.hhs.gov/
- CDC School Health Profiles Profiles Overview | DASH | CDC
- Research Brief: Addressing the Needs of Students with Chronic Health Conditions: Strategies for Schools (cdc.gov)
- School Health Services | Healthy Schools | CDC
- Whole School, Whole Community, Whole Child (WSCC) | Healthy Schools | CDC
- Home – ETR

Questions/Discussion