

SEPTEMBER 14, 2022

# Challenges and Successes in Diversity and Inclusion in Clinical Trials

## Addressing Health Disparity in Childhood Asthma: From CBPR to D&I Research

**Stanley J. Szeffler, M.D.**

Director, Pediatric Asthma Research Program,  
Breathing Institute,  
Interim Medical Director, Research Institute,  
Children's Hospital Colorado;  
Professor of Pediatrics,  
University of Colorado School of Medicine  
Aurora, Colorado



Affiliated with  
**School of Medicine**  
UNIVERSITY OF COLORADO  
ANSCHUTZ MEDICAL CAMPUS

# Disclosure

## **Grant support:**

- CDPHE Colorado Cardiovascular, Cancer and Pulmonary Disease Program
- NHLBI Disparities Elimination through Coordinated Interventions to Prevent and Control Heart and Lung Disease Risk (DECIPHeR) Alliance
- NHLBI Precision Medicine for Severe and Exacerbation Prone Asthma (PrecISE) Network
- Propeller Health

**Advisory Board Member** for Astra Zeneca, Eli Lilly, GlaxoSmithKline, Moderna, OM Pharma, Propeller Health, Regeneron and Sanofi

# ***Presentation Goals***

- Discuss the steps taken in our approach to developing a statewide school-based asthma program.
- Indicate key features in forming partnerships and collaboration essential for program engagement.
- Describe our opportunities for taking the next steps in addressing health equity for asthma care.

# ***Who Does a Child Depend on for Medical Support?***

## ***Is This Medical Support the Same for All Children?***



# *What Were the Initial Steps in Developing Our Program?*

- Form a set of goals.
- Identify a community asthma champion to work with.
- Create visibility, trust and community support.
- Provide resources to schools with personnel and structure.
- Engage school staff.
- Demonstrate improvements and build the partnership with time.

# *Ultimate Program Goals*

- **Promote Standardization** of written materials.
- **Encourage Harmonization** of asthma management.
- **Enhance Communication** from schools to providers.
- **Stimulate Collaboration** among academic centers, schools, providers, and payers.

# Donna Shocks, RN

## Denver Public Schools Nurse Manager



# Program Staff



# ***Evolution of Our Colorado School Based Asthma Approach***

**2006** - Conducted needs assessment and provided an outreach program.

**2008** - Evaluated “*Open Airways for Schools*” Asthma Education Program.

**2009** – Developed *Step Up* asthma navigator program.

**2012** – *Building Bridges Program* for school nurse care coordination.

**2015** - *Step Up* expansion with technical assistance training component.

**2018** – Combined *AsthmaCOMP* Program for implementation and dissemination to school districts in Denver Metropolitan Area.

**2019** – Added features of social determinants of health needs, telemedicine, and introduced program to regions in Colorado outside of Denver.

**2020** – NHLBI DECIPHeR implementation and dissemination research to test strategies for program expansion in rural and mid-sized urban Colorado cities.

**2021** – Work with NHLBI DECIPHeR Alliance to increase program visibility.

# ***What Are the Guiding Principles in Establishing Working Relationships?***

- Create a dialogue and long-term relationship.
- Work from a platform of mutual respect.
- Go with a “what’s in it for them approach?”
- Bring resources to the table and share the workload.
- Review results and challenges on a regular basis.
- Continue to innovate for program improvement and reach.

# Key Steps

- **Agree on importance of the work for the community**
  - Asthma is the most common chronic disease of childhood.
  - Asthma affects school performance and has lifetime implications.
  - Place emphasis on those most severely impacted.
- **Focus on health equity and reducing health disparities**
  - Select schools with high prevalence and free/reduced lunch.
  - Train staff including nurses, support staff and administrators.
  - Establish models of support and communication.
  - Address social determinants of health (SDoH) needs.
  - Apply telemedicine principles to extend reach.

# ***Agree on Program Elements That Support Students, Families and Schools***

- Identify students with asthma.
- Provide access to asthma plan and quick-relief inhalers.
- Ensure school staff are prepared to manage asthma.
- Reduce exposure to environmental triggers.
- Provide asthma self-management training.
- Coordinate care with family and providers to successfully manage asthma.

# ***Anticipate Ongoing Challenges and Look for Opportunities To Improve Your Approach***

- Expect variability in practice management.
- Address inconsistencies in work force knowledge and skills.
- Be aware of gaps in communication among health care providers.
- Expect low percent of adherence to the plan initially.
- Appreciate the limitations on school nurse time and competing priorities.
- Identify opportunities for program sustainment.

# ***Program Accomplishments: Process Outcomes***

- Increased availability of School Asthma Care Plans from 5% initially to 97%
- Increased number of RNs certified as asthma educators
- Improved school-based asthma management in 41 schools with reach of over 1,943 students with asthma
- Implementation of evidence-based program to reduce environmental triggers in all 207 DPS schools
- Asthma education and training for 2,450 school nurses, teachers, staff, families and community members

## ***Program Accomplishments: Clinical Outcomes***

- Fewer missed school days
- Improved asthma inhaler technique and self-care skills
- Reduced activity limitations due to asthma
- Improved rates of asthma control based on ACT score
- Reduced frequency of ED visits and hospitalizations



# Reducing Asthma Attacks in Disadvantaged School Children with Asthma

NHLBI Disparities Elimination through Coordinated Interventions to Prevent and Control Heart and Lung Disease Risk (DECIPHeR) Alliance



# DECIPHHeR: Purpose and NHLBI Expectations

**PURPOSE**: Develop and test implementation research strategies for optimally and sustainably delivering two or more proven-effective, evidence-based multi-level interventions to reduce or eliminate heart and/or lung disease disparities.

## Expectations

- The implementation research strategies developed should promote/improve population health and reduce/eliminate disparities in heart and/or lung disease risk in specified high-burden communities.
- Strategies developed should facilitate sustainable uptake of proven-effective interventions into routine clinical practice and community-based settings and maximize the impact on population health & health disparities.
- Strategies should test implementation outcomes rather than efficacy/effectiveness as the primary outcomes of interest.

# Where Are We Now?

## Successes:

- Identified importance of community health workers/patient navigators as culturally accepted facilitators
- Enhanced school nurse program leadership
- Innovation center in Denver Public School District
- Collaboration with Colorado Department of Education Nurse Program and RMC Health professional training program

## Next steps:

- NHLBI DECIPHeR clinical trial to test implementation strategies
- Solidify partnership of key collaborators
- Examine best ways to address social determinants of health

# Thank You!!

## AsthmaCOMP:

- Melanie Gleason, PA, Arthur McFarlane, BS and our four asthma navigators
- Denver Public School District
- Colorado Department of Education Nurse Program
- RMC Health professional training program

## DECIPHeR:

- Lisa Cicutto, PhD, RN, Amy Huebschmann as Co-MPIs
- ACCORDS and CTSI Dissemination and Implementation Staff
- Misha Brtnikova, PhD, Program Manager
- DECIPHeR Colorado Staff



# Questions/Discussion



Affiliated with  
**School of Medicine**  
UNIVERSITY OF COLORADO  
ANSCHUTZ MEDICAL CAMPUS

[Stanley.Szefler@childrenscolorado.org](mailto:Stanley.Szefler@childrenscolorado.org)