Healthy Home, Healthy Child:
The Westside Children's Asthma Partnership

HEALTHY HOME, HEALTHY CHILD
The Westside Children's Asthma Partnership

12th Annual ACCP Community Asthma and COPD Coalitions Symposium

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Outline

- Let Data Guide the Program
  - Epidemiology of Asthma
  - Local-level Data – *Sinai's Improving Community Health Survey*
- Start Small to Get Big: Pediatric Asthma Interventions
  - Sinai's Pediatric Asthma Intervention – 1 (PAI-1)
  - Sinai's Pediatric Asthma Intervention – 2 (PAI-2)
  - Controlling Pediatric Asthma through Collaboration and Education (CPATCE)
  - Healthy Home, Healthy Child: The Westside Children's Asthma Partnership
- Sustaining the system

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Let Data Guide the Program: Epidemiology of Asthma

- Asthma is the most common chronic condition of childhood in the U.S., leading to more school days missed than any other disease
  - 10 million children (13.5% of children <18 yrs) in the U.S. have asthma (NHIS 2006)
- In the U.S., disparities are known to exist
  - Prevalence highest among Puerto Rican (31%) and Black (17%) children. Lowest among Mexican children (10%)
  - Black children 5.6 times more likely to die from asthma and 3.5 times more likely to visit an ED for asthma than White children
- The annual economic cost of asthma is $19.7 billion

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Let Data Guide the Program:

Sinai Health System's Improving Community Health Survey

Pediatric Asthma In Chicago

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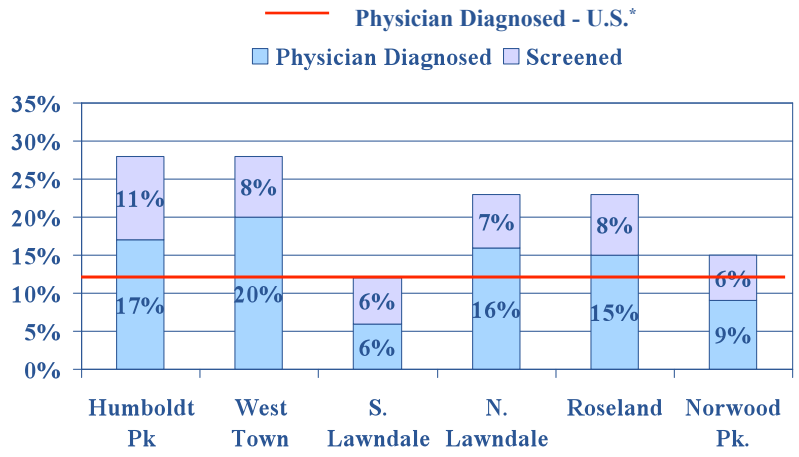
Proportion of Children with Physician Diagnosed and Screened Asthma by Community Area



*Source of comparison data: National Health Interview Survey, 2003

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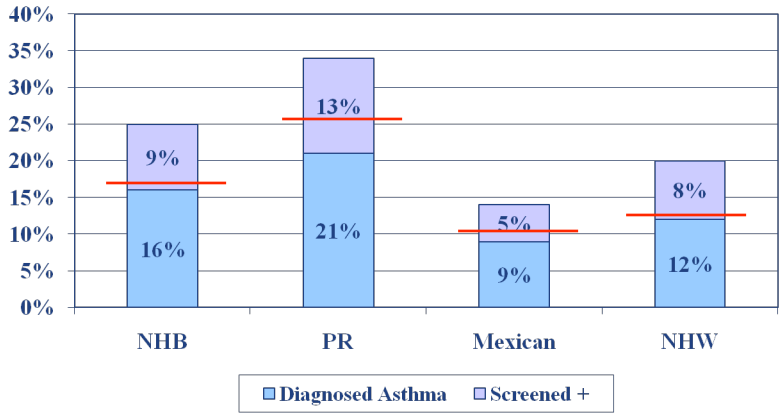
Proportion of Children with Physician Diagnosed and Screened Asthma by Race/Ethnicity



*Source of comparison data: Lara M, et al. *Pediatrics* 2006; 117: 43-53.

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Other Survey Findings

- Large proportion of children have asthma that's poorly controlled
  - 54% in HP; 44% in SL; 39% in Roseland; 34% in NL
- Two-thirds of children with an asthma diagnosis were not using a controller medication
- In several of the communities, approximately half of children with asthma were living with someone who smokes
  - 61% in Roseland; 47% in NL; 48% in HP

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Key Driver:
Engage your community 'where it lives'

- CHWs are recruited from the local community and have a personal connection to asthma
- They don't need any prior experience as they are trained by the program
  - Sinai Asthma Education Training Institute
- CHWs:
  - Make home visits
  - Conduct asthma education both on the medical management of asthma and trigger reeducation in the home environment
  - Encourage visits with participants' Primary Care Physician
- Community-wide education
  - Presentations on asthma basics to schools, parent groups, clinics, community organizations, etc.

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Start Small to Get Big:
Pediatric Asthma Interventions

- **Pediatric Asthma Intervention-1, 2000 - 2002**
  - Compared three pediatric asthma interventions with increasing intensities of asthma education (w/ or w/o case management) for their impact on improving the health status of inner-city children with asthma and in achieving cost savings
  - Intervention took place in clinic setting and over the phone
  - Any intervention made a positive difference
  - The more intense the intervention, the larger the impact

Publication: Karnick P, Margellos-Anast H, Seals G, et al. *Journal of Asthma* 2007; 44: 39-44.

Start Small to Get Big:
Pediatric Asthma Interventions

- **Pediatric Asthma Intervention-2, 2004 - 2006**
  - African American children (2-16 yrs) with severe asthma living in Westside Chicago communities
  - Utilized Community Health Workers (CHW) from target communities
  - 3-4 home visits over a 6 month period
  - 70 children enrolled
    - 58 (83%) completed 6-month intervention period
    - 50 (71%) completed 12-month data collection period
  - Significant improvement in all outcomes assessed
    - 74% decrease in ED visits
    - 71% decrease in hospitalizations
    - 0.8 increase in caregiver quality of life score (clinically and statistically significant)

Start Small to Get Big:
Pediatric Asthma Interventions

- **Controlling Pediatric Asthma Through Collaboration and Education, 2006 - 2008**
  - Initiative of IDPH to improve asthma management among high risk children in Illinois
  - Expanded Sinai's PAI-2 model to six target areas throughout Illinois
  - 455 children enrolled statewide
    - 236 at Sinai (41% NH Black, 49% Latino, 10% Mixed)
    - 219 at other sites (75% NH Black, 3% H Black, 14% NH White, 3% Latino, 5% Mixed)
  - Findings substantiate PAI-2 results and conclusions

Getting Results:
Evaluating the System

Sinai Pediatric Asthma Program: Intervention Results

	PAI-1	PAI-2	CPATCE (Sinai)	CPACTE (Sinai, CAC & Decatur)
Asthma ED Visits	64% decline*	73.5% decline*	47.6% decline*	62.3% decline*
Asthma Hospitalizations	81.0% decline*	71.4% decline*	50.0% decline*	59.0% decline*
Urgent Health Resource Utilization^	67.6% decline*	69.3% decline*	50.0% decline*	66.0% decline*
Nighttime Asthma Symptoms	-	51.6% decline*	63.6% decline*	50.4% decline*
Quality of Life	-	Increased by 0.8* ¥	Increased by 0.43*	Increased by 0.68* ¥
Cost-savings/$ spent on the program∞	$13.35	$5.58	$4.18**	-

*Statistically significant p<0.05
ED = Emergency Department
^ Sum of ED visits, hospitalizations, and urgent clinic visits
¥An increase of 0.5 is clinically significant
∞ Cost Savings per $ spent = Healthcare Cost Savings/Cost of Program
** Preliminary analysis. Subject to change.

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Healthy Home, Healthy Child (HHHC):
The Westside Children's Asthma Partnership

October 2008 – September 2011

Sinai Children's Hospital
Chicago Asthma Consortium
SCI Sinai Community Institute
A proud member of Sinai Health System
HDA
METROPOLITAN TENANTS ORGANIZATION

HHHC: Overview

- CDC Translational Research Grant
- Participants: families with children 2-14 years old who have **poorly controlled asthma**
  - Live in North Lawndale, East or West Garfield Park, or Austin
- Individualized education via Home Visits with substantially greater attention devoted to the identification and reduction/elimination of asthma triggers
- Evaluation – Process and Outcome

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Conduct Needs-Based Planning: Seek input from the community

- A Community Advisory Board (CAB) helps to ensures that HHHC receives vital insight into its community.
- The CAB engages the community, guides the program's design and helps to foster sustained asthma care improvements.
- CAB members include:
  - parents and caregivers of children with asthma, leaders of community-based organizations, representatives from faith-based groups, business owners and other stakeholders.

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HHHC: Intervention

- CHWs make 6 home visits over the course of the 12-month intervention period
- Comprehensive, individualized asthma education focuses on improving medical management (e.g., recognizing and responding to attacks, medications) and reducing exposure to home triggers
- CHWs work with family after each visit to develop/update Asthma Improvement Plan

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HHHC: Intervention (cont.)

- Tailored Environmental Interventions
  - Educate care teams to deliver environmental trigger assessment and management
  - Home Environmental Assessment at 2 week visit, 6 month visit and 12 month visit
  - A thorough check of the home for asthma triggers
- Healthy Homes resources such as green cleaning kits and/or supplies to control pests, dust mites, mold, etc. are provided to families

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HHHC: Intervention (cont.)

- Referrals to Metropolitan Tenants Organization and Health & Disability Advocates to address more serious issues
  - E.g., mold/moisture, pests, insufficient heat, eviction, landlord retaliation
- CHW also serves as liaison between family and medical community
- Assistance in obtaining asthma medications and devices, school 504 plans, etc.

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HHHC: Recruitment and Data

- 266 children enrolled between 2/1/09 and 7/31/10
  - Recruited from Sinai's ED/inpatient units and via referrals from physicians, community organizations and community residents
- Participant Characteristics:
  - 96% Black
  - 91% Medicaid
  - 91% of caregivers are mothers, 70% of which are single
  - 66.5% report a household income of <$20,000
  - 34% have less than a high school education

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HHHC: Data (cont.)

- In year prior to enrollment, average child had 3.5 ED visits and missed 9 days of school due to asthma
- Environmental Issues:
  - 58% of children live with a smoker
  - 36% have pest issues
  - 23% have mold/moisture issues

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Lessons Learned & Challenges

- Community Health Workers
  - Quickly and effectively establish relationships of trust with the families that they serve
  - Appropriate supervision/mentoring of CHWs is vital to success
  - Hire CHWs for skills only they can bring (cultural sensitivity, community connections, etc.). May need support in other areas (e.g., paperwork, managing a case load, computers)
  - Reimbursement and sustainability of programs an on-going challenge

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Lessons Learned & Challenges

- Participants
  - Economic hardship and competing priorities
  - Move often and may live with family/friends with little control over their environment
  - Multiple caregivers - important to reach all of them
- Legal, Housing and Social Service Referrals
  - Need for legal, housing and social service referrals exceeded our expectations
  - MTO and HDA well received, but many issues have been beyond the scope of the project

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Sustaining the System: Promoting institutional change for sustainability

- From the start not at the end:
  - The partnership from the start has sought funding for sustainability from grants, foundations and the community
- Sustain the message not just the program
  - making effective asthma self-management and environmental controls top priorities for all community-based leaders
- Everyone's responsibility:
  - Key partners have focused on ways to sustain their contributions to the program from within their organizations

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Sustaining the System: Promoting institutional change for sustainability

- **COMMITTED LEADERS AND CHAMPIONS — CREATE PROGRAM CHAMPIONS**
  - CEO of Sinai Health System supports the program's efforts, proclaiming its accolades within the hospital and the community
  - He has led efforts to integrate the program into the hospital's system by building relationships with the SCH, the Emergency Department, and the Pharmacy Department

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Conclusion

- Asthma exerts an excessive burden on children living in certain communities
  - Short-term and long-term effects
- Community-based interventions to address disparities are ***imperative!***
- We do not know how to prevent children from acquiring asthma, but we do know how to help them control their disease so that they can live full and productive lives

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It takes a village…

Acknowledgements

- **Sinai Team:** Jeanette Avila, Aisha Barnes, Jamie Campbell, DeShuna Dickens, Sheena Freeman, Melissa Gutierrez, Rhonda Lay, Helen Margellos-Anast, Pat Perkins, Gloria Seals, Dennis Vickers, Steve Whitman
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- **Community Advisory Board**
- **Participants and their families**

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For more information:

www.suhichicago.org

www.asthmacommunitynetwork.org

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