

Eastern Michigan University

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# Michigan Childhood Lead Poisoning Prevention Program for Underserved Asian Americans

with funding support from Michigan Department of Health & Human Services Child  
Lead Exposure Elimination Commission

March 26<sup>th</sup>, 2021

# Project Team



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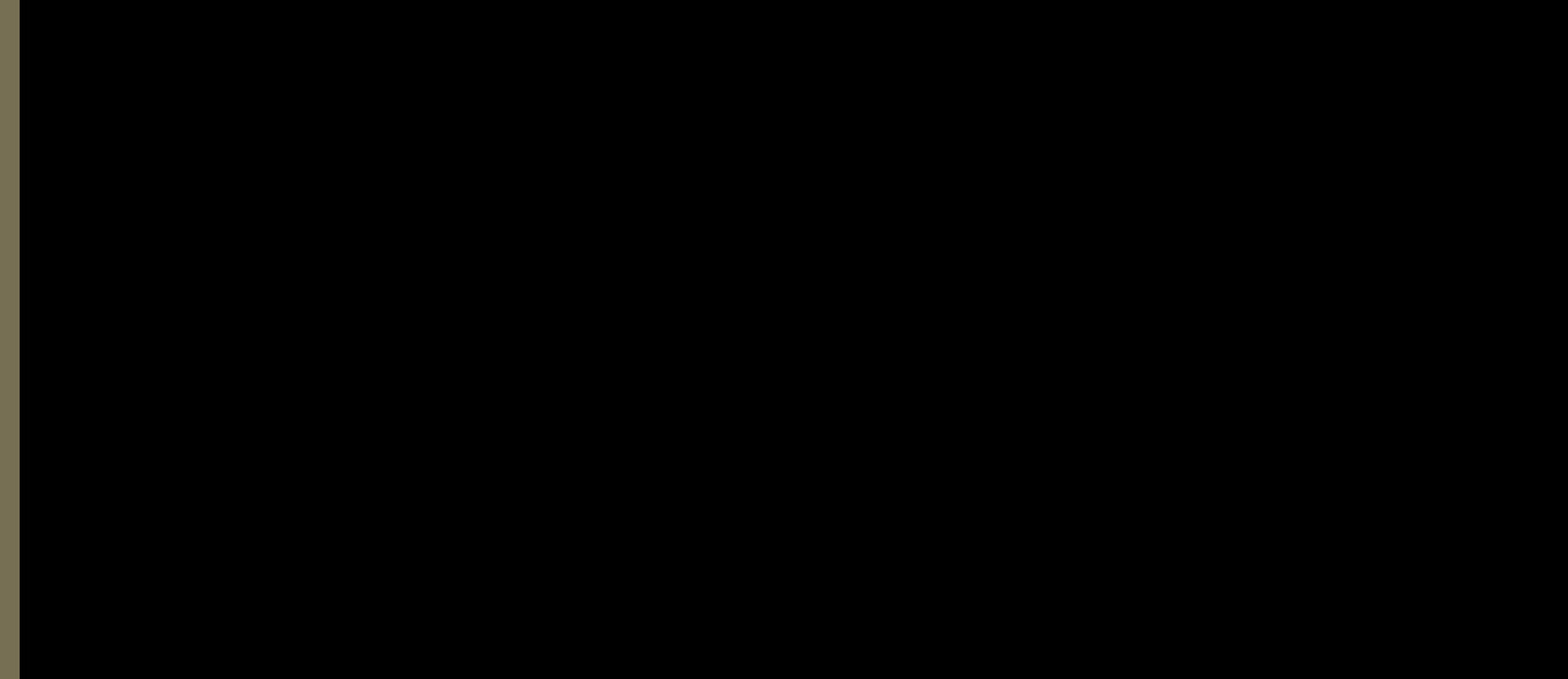
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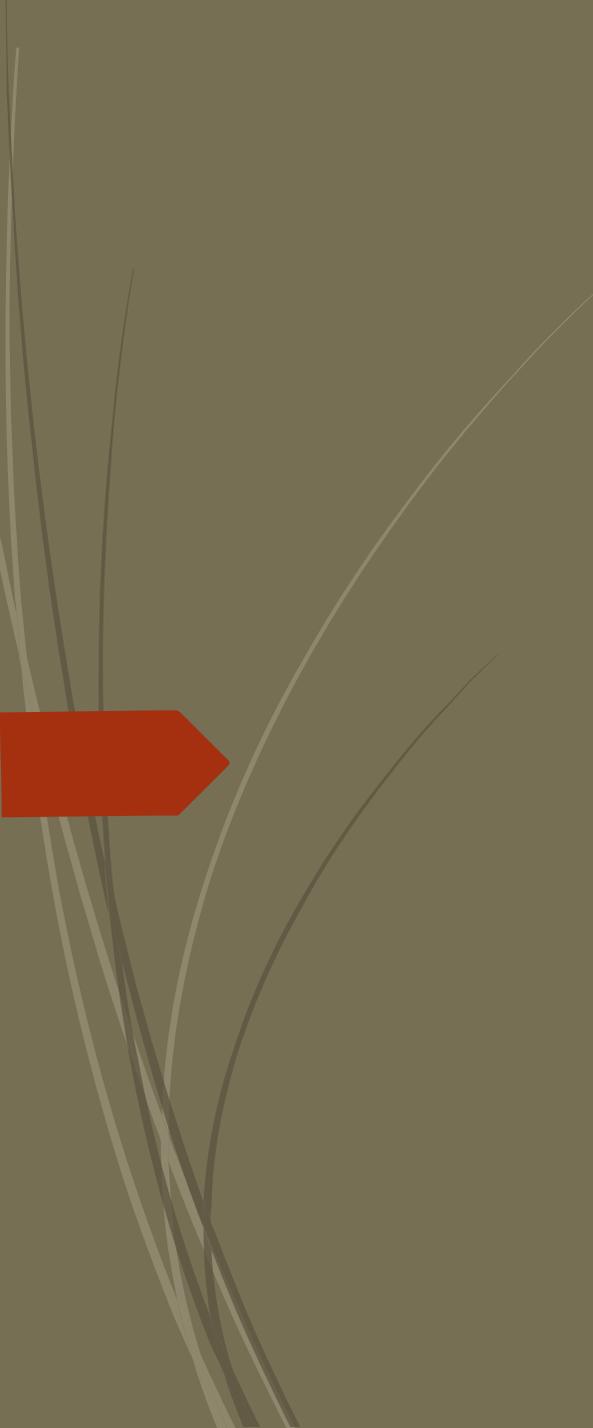


# A Child's Story



## Purpose of the Project

Design, plan, implement, and evaluate a culturally appropriate lead poisoning prevention program for high-risk Asian-Americans in Hamtramck and the Detroit area.



# Why the Hamtramck Area?

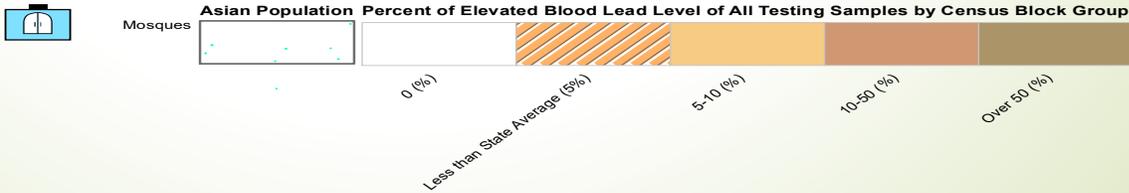
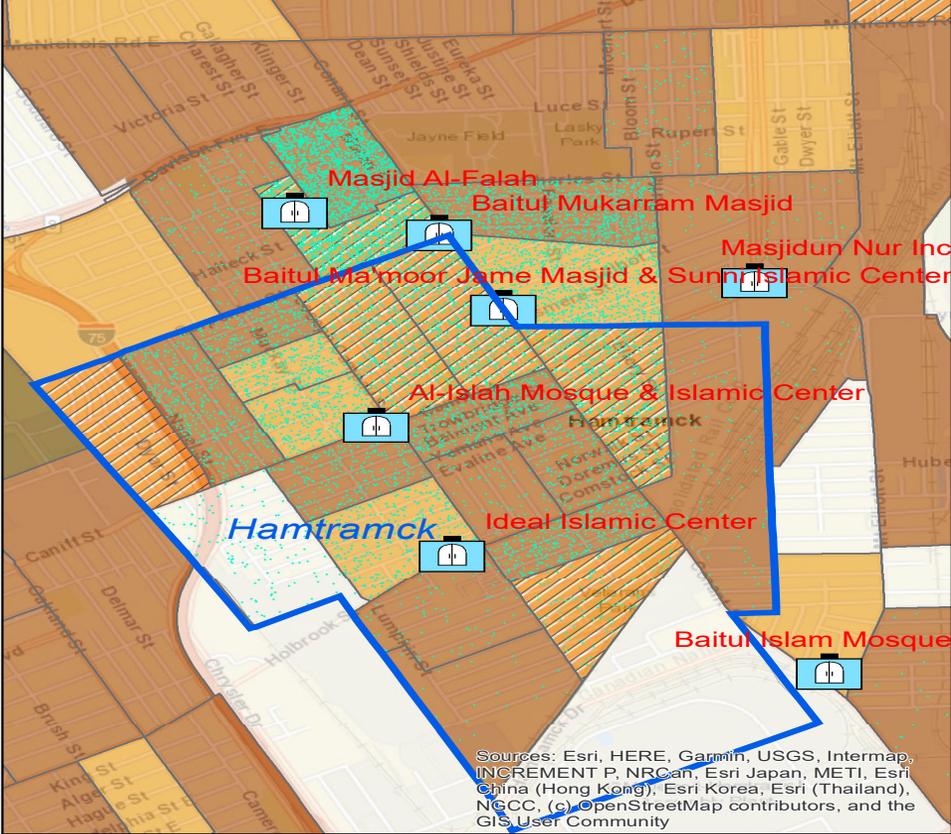
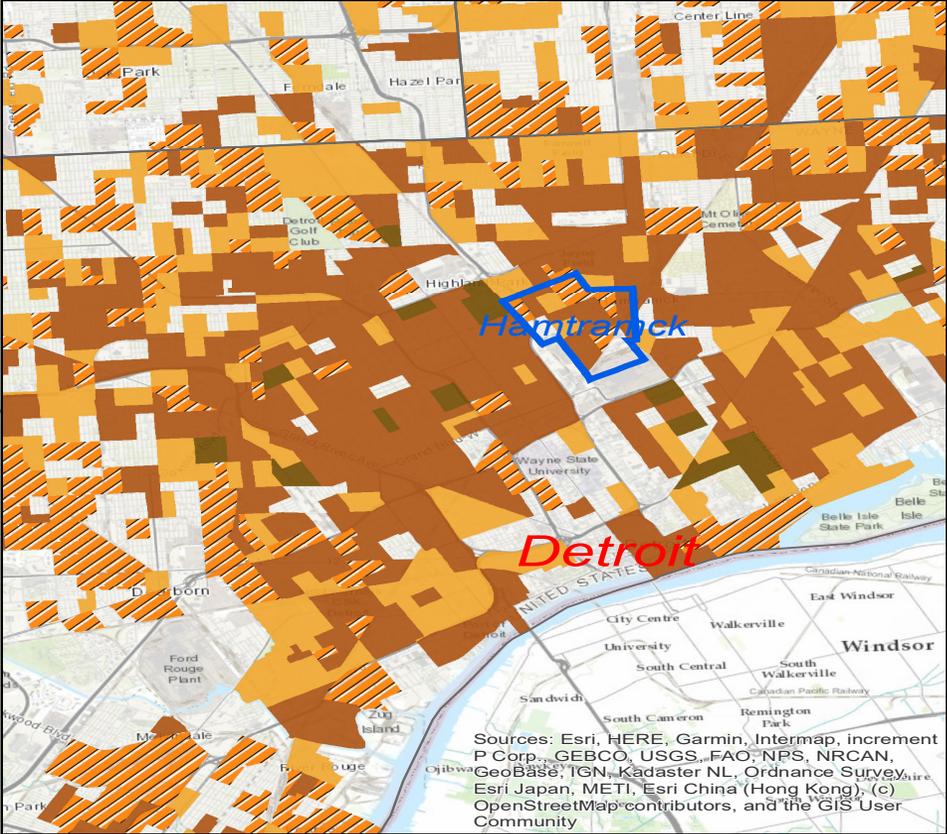
Lead is prevalent and it has the 3<sup>rd</sup> highest lead poisoning rates in MI

## Lead Poisoning Risk and the Hamtramck Area

- Many homes were built before 1978
- Children in Hamtramck are more than two times more likely to have elevated lead levels in their blood.



# Project Work Plan



## Bangladeshis and Risk for Elevated Blood Lead Level

Bangladeshis accounts for nearly 12% of the total population of Hamtramck

- Immigrants and children of immigrants
- Low-income
- Low English Proficiency





# Project Goals

- A. Connect high-risk children and pregnant women with lead testing and prevention services
  - B. Provide healthcare professionals and providers with education related to lead testing and elevated blood lead level treatment
  - C. Create a primary prevention program to increase awareness and connect the community to resources
- 



## Goal A:

Increase lead-testing and enhance the linkage to services for high-risk children and pregnant women.

***Obj 1: Provide technical support and expertise for community stakeholders***

**Act:** Convene a community advisory board with 9 members

**Outcome:**

- ▶ 2 CAB meetings and 15 meetings with multiple stakeholders

***Obj 2: Collaborate with community stakeholders to create an action plan***

**Act:** Organize regular meetings to develop an action plan

**Outcome:**

- ▶ Collaborated with BAPAC, HAAP, Detroit Health Department, Wayne County Health Department, MDHHS Region 10, Macomb County, CAB members, Institution of Population Health, J&E Community Relief, community organizations



## Goal A:

Increase lead-testing and enhance the linkage to services for high-risk children and pregnant women.

### ***Obj. 3 Conduct education and outreach***

**Act:** Develop Language- and culturally appropriate education materials and disseminate

**Outcome:**

- Multiple education and resource fliers, brochures and videos were produced
  - Materials developed: Lead Overview, Nutrition, Home Safety, Lead Education, HCP Resource List, Lead PowerPoint presentation, Lead education video.
  - Translated into Bengali with voice over provided for videos
  - Channels of dissemination: social media, group and individual education sessions

# Nutrition

TO PREVENT LEAD POISONING AND REDUCE LEAD LEVELS

## FOODS WITH VITAMIN C



Oranges, Grapefruit, Strawberries, and Melon



Potatoes



Tomatoes and Bell Peppers



Lean Red Meats, Fish, Poultry

## Well Fed, Less Lead

Good nutrition is one way to protect your family from lead. For children and adults, three key nutrients can play a role in protecting the body from the harmful effects of lead: **calcium, iron, and vitamin C.** These nutrients help the body absorb less lead and are part of a healthy diet. Choose a variety of food daily.

## FOODS WITH IRON



Legumes (Beans, Peas, Lentils)

## FOODS WITH CALCIUM



Milk, Cheese, Yogurt



Calcium-fortified orange juice



Broccoli, Dark Leafy Greens  
(Also contain Iron and Vitamin C)



Iron-Fortified Cereals

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Made possible from funding by the MDHHS and CLEEC

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# পুষ্টিবিজ্ঞান

সীসা (লেড) বিষাক্ততা রোধ, এবং এর মাত্রা হ্রাস করতে যা করা  
প্রয়োজন

## ভিটামিন সি যুক্ত খাবার



কমলা, জাম্বুরা, স্ট্রবেরি, এবং মেলন



আলু



টমেটো এবং বেল মরিচ



আয়রন যুক্ত সিরিয়াল



Made possible from funding by the MDHHS and CLEEC

## প্রয়োজন

## ভাল খাবার, কম সীসা (লেড)

আপনার পরিবারকে সীসা থেকে বাঁচানোর একটি উপায় হল পুষ্টিগত খাবার। শিশু এবং বড়দের সীসা(লেড) ক্ষতিকর প্রভাব থেকে বাঁচানোর জন্য, তিনটি পুষ্টিগত উপাদান বিশেষ ভূমিকা পালন করে: ক্যালসিয়াম, আয়রন, এবং ভিটামিন সি। এই তিনটি পুষ্টিগত উপাদান শরীরে সীসা(লেড) শুষনের পরিমাণ কমিয়ে দেয়, এবং এরা সুস্থ খাবারের অন্তর্ভুক্ত প্রতিদিন বিভিন্ন রকমের খাবার খাবেন।

## আয়রন যুক্ত খাবার



অল্প চর্বিযুক্ত মাংস, মাছ, হাঁস-মুরগি

সীসা (লেড) পরিষ্কার  
সম্পর্কে আরও জানতে  
আপনার ডাক্তারের  
সাথে যোগাযোগ করুন।

## ক্যালসিয়াম যুক্ত খাবার



দুধ, পনির, দই



ক্যালসিয়াম যুক্ত কমলার রস



ব্রকলি, গাঢ় সবুজ শাক  
(এছাড়াও আয়রন এবং ভিটামিন  
সি রয়েছে)



শিম বা মটর জাতীয় বীজ  
(মটরশুঁটি, কলাই, ডাল)

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## Goal A (Cont.)

Increase lead-testing and enhance the linkage to services for high-risk children and pregnant women.

**Obj. 4 Connect lead-exposed pregnant women and children to services**

**Act:** Develop and disseminate a list of resources/services

**Outcome:**

- 3,323 people reached through all modes of communication.
- 189 high-risk children and women completed blood lead testing.
- 9 individuals with EBLL followed by team
- Navigator trained to assist community moving forward



## Goal A (Cont.)

Increase lead-testing and enhance the linkage to services for high-risk children and pregnant women.

### ***Obj. 5: Train bilingual navigators to promote services***

**Act:** Provide training to bilingual navigators for their outreach to high-risk child and pregnant women

**Outcome:**

- Bilingual Navigator provided one-on-one education, multiple education sessions with nurse educator,

### ***Obj. 6. Maintain collaborative relationships with community stakeholders***

**Act:** Convene biannual meetings with community stakeholders to address priority, challenges and opportunities

**Outcome:**

- Two community meetings (wellness events): Wellness expo. Oct. 2019 & Drive-thru in Aug. 2020



## Goal B:

Strengthening workforce to improve competency regarding lead testing and elevated blood lead level management among health professionals and providers caring for children

**Obj. B-1. Develop and implement lead poisoning education modules/materials to health professionals and licensed providers that take care of children and pregnant women in community of focus.**

### **ACT:**

1. Identify health providers that take care of high-risk children and pregnant women in the community of focus.
2. Develop and disseminate education modules/materials to community health providers.

### **Outcome:**

- Established relationships with 15 health care providers on provider list (Pediatric, Family and OB), visited three focus offices visit to health care providers that provide care to a large population of Bengali clients
- Connected and partnered with Hamtramck pediatrician to capture lead testing data



## Goal B

Strengthening workforce to improve competency regarding lead testing and elevated blood lead level management among health professionals and providers caring for children

### **Obj. B-2. Strengthen lead education content in Nursing curriculum with BSN, RN-BSN, and NP students**

#### **Act:**

1. Assess current lead content in community, pediatric and/or maternity nursing courses.
2. Based on assessment develop lead education modules and course activities.
3. Implement lead education modules and course activities in appropriate courses

#### **Outcome:**

- Implemented CDC lead module to community health nursing classes. Developed pre and post tests to assess lead knowledge for nursing students.
- 190 nursing students completed lead module and course; After the education, students reported 80-95% accuracy in various knowledge areas and increase 26% of confidence in their clinical care for lead treatment and prevent lead exposure.



## Goal C

Develop, Implement and Evaluate a Primary Prevention Program for underserved Bangladesh American population in Hamtramck.

**Obj C1-3: Create, Develop and Implement a primary prevention program.**

**Act:**

1. Discuss community needs, priority, challenges and opportunities related to lead poisoning prevention with multi-sector key stakeholders and use input for program development and dissemination
2. Implement primary prevention program for high-risk population in Hamtramck
3. Include EMU school of nursing students in education and dissemination plan.

**Outcome:**

- ▶ As results of this programs, more than 3,000 benefited from primary prevention program via bilingual navigator's one-on-one education, group education sessions, lead prevention education through social media and 2 community wellness events
- ▶ 26 student volunteers from EMU BSN and MSN Nursing programs and U of M medical school staffed the two community wellness events



## Goal C

Develop, Implement  
and Evaluate a  
Primary Prevention  
Program for  
underserved  
Bangladesh  
American population  
in Hamtramck.

**Obj. C4: Maintain collaborative relationships.**

**ACT:** Convene biannual meetings with community stakeholders

**Outcome:**

- ▶ Bilingual Navigator and his team trained to continue lead outreach and education in the community

# Things That Worked and Didn't Work

## Areas of Excellence

1. Community Navigator
2. Face-to-Face education
3. Volunteers/interpreters
4. Vetting of translated materials
5. Drive thru lead and wellness event

## Challenges

1. COVID-19
2. Connecting with healthcare providers
3. Time for buy-in from religious organizations



# Insights and Findings

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Need for cultural competence

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Work with multi-sector stakeholders

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Community involvement and  
engagement

Thank you!

Q&A



# CHDIS Developed Lead Education Documents

- ▶ Brochures

- ▶ Lead Nutrition
- ▶ Lead Education and CHDIS Lead Program Overview
- ▶ My Child Has High Blood Lead Levels, What Next?

- ▶ Single Page Fliers

- ▶ Lead Education (English & Bengali)
- ▶ Lead Nutrition (English & Bengali)
- ▶ Lead Home Safety (English & Bengali)
- ▶ Lead Resource List (English & Bengali)
- ▶ CHDIS Lead Program Overview (English & Bengali)
- ▶ What Healthcare Providers Need to Know About the Bengali Community and Lead (English)

# What Healthcare Providers Need to Know About the Bangladesh Community and Lead

## Lead Poisoning Risk Factors

- Many homes before 1978 were painted with lead-based paint and built with lead products
- Immigrants and children of immigrants are at an increased risk of having elevated blood lead levels
- Low-income people have an increased risk for elevated blood lead levels
- Low English proficiency (LEP) creates barriers to receiving optimal medical care:
  - Increased difficulty in accessing medical resources
  - Increased communication errors
  - Decreased patient satisfaction
  - Increased risk adverse outcomes
  - Increased health disparities in the community
  - Prescription drug complications

## Bangladesh Community Risk Factors

- Hamtramck has the third largest Bangladeshi population outside of New York and Miami
- 70% of homes in Hamtramck were built before 1950
  - 69% of homes built before 1960 are contaminated with lead
- Children in Hamtramck are two times more likely to have elevated blood lead level
  - 30% of the Bangladeshi children in Hamtramck are between the ages of 0-6 years old
- 81% of the Bangladeshi living in Hamtramck are foreign-born
- 39% of the Bangladeshi living in Hamtramck live at the poverty level
- 47% of foreign-born Bangladeshi have LEP



## How Can Health Care Providers Help?

- Have all pregnant women and children between the ages of 0-6 years old tested for lead
- Provide interpreter services for all Bangladeshi speaking patients
  - Interpreter Services must be utilized to people with low English proficiency (LEP) under Title VI of the Civil Rights Acts.

## Benefits of Interpreter Services

- Improved quality of healthcare for patients with low English proficiency
- Decreased communication errors
- Increased adherence to treatment plan
- Increased patient positive outcomes and satisfaction

## More Information to Come!

- Educational modules related to lead poisoning prevention in high-risk children and pregnant women are being developed
- Electronic, easy to use and complete!



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