

## Introduction

- Lead exposure is a persistent, yet altogether preventable threat to child development.<sup>1</sup> In Oakland County alone, 204 (1.3%) of 15,784 samples for children under the age of 6 were positive for elevated blood lead levels in 2017.<sup>2</sup>
- A large body of research consistently supports that primary prevention is the most effective method of addressing elevated blood lead levels in children.<sup>3</sup> A key component is equipping families with the resources to recognize and eliminate sources of lead.
- This project sought to explore Oakland County community members' knowledge and beliefs about lead exposure, gauge their perceptions of existing lead education materials, and identify areas of improvement.
- The data were collected and analyzed through the lens of the Health Belief Model. The central advantage of the Health Belief Model is its utility as a well-established, extensively studied theory formulated to effectively explain preventive health behaviors.<sup>4</sup>

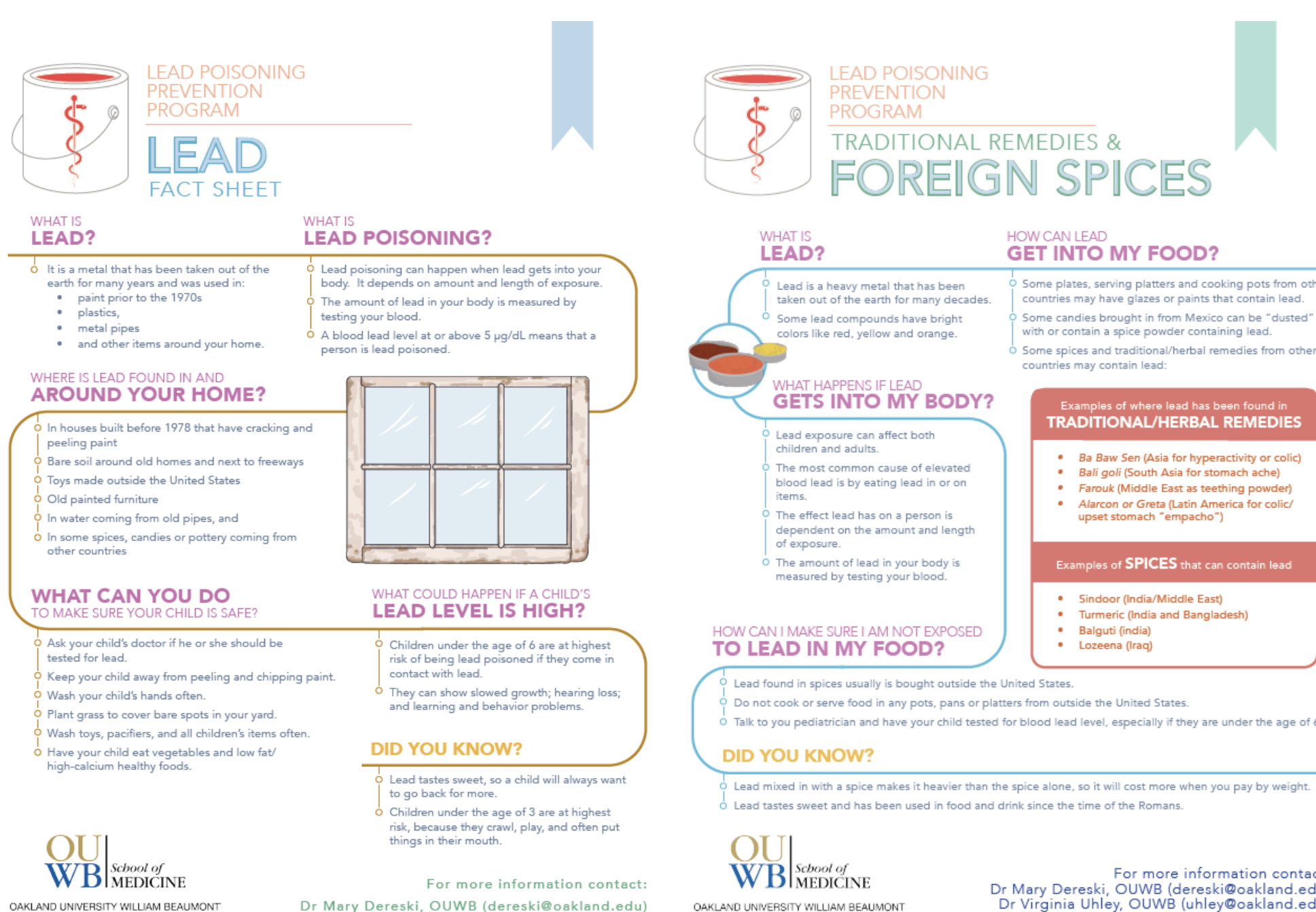
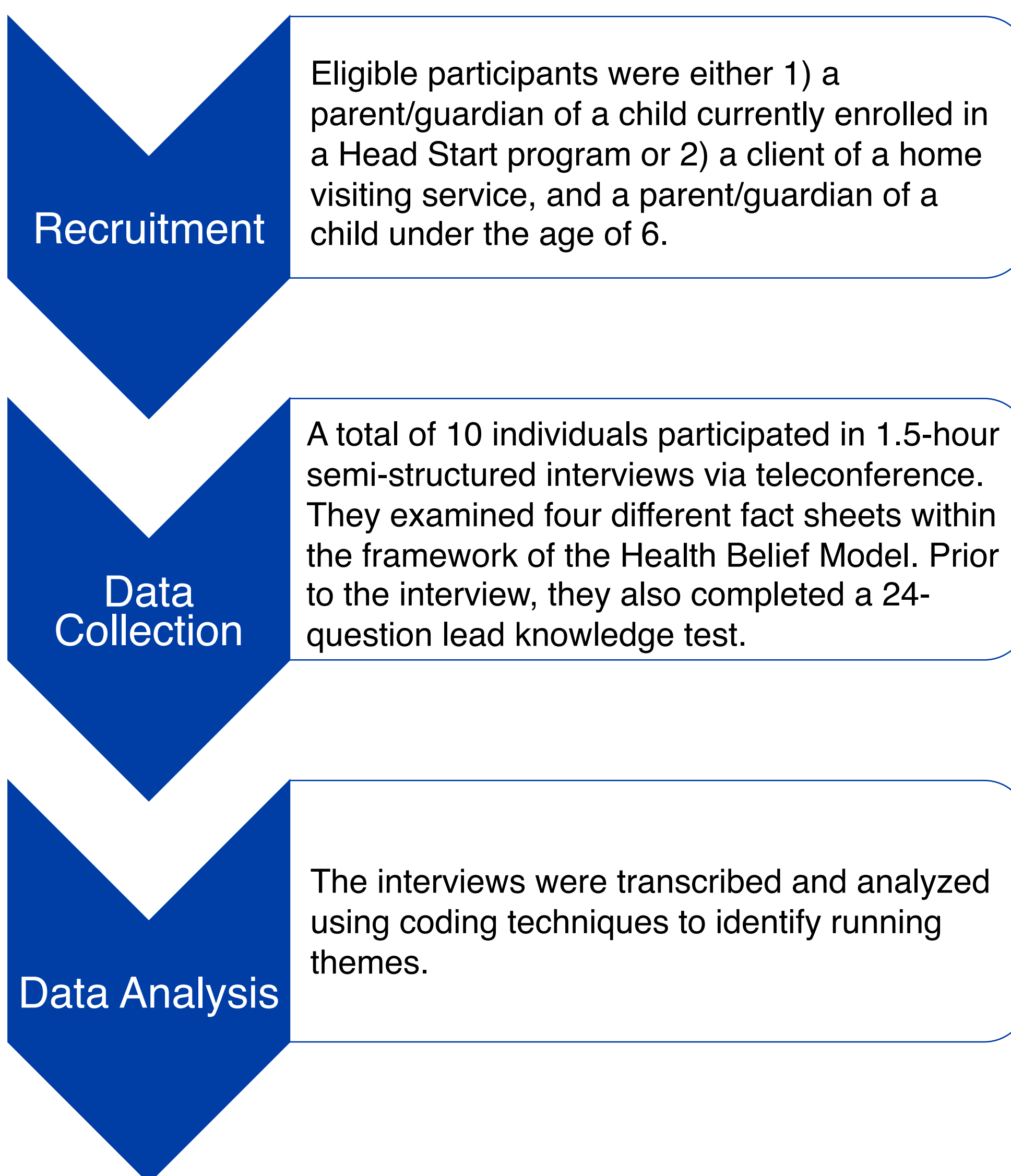
## Aims and Objectives

**Aim I:** Explore community members' knowledge and beliefs about lead exposure and lead poisoning prevention.

**Aim II:** Analyze how existing education materials on lead poisoning prevention fulfill or fail to fulfill three of the six dimensions of the Health Belief Model - perceived susceptibility, perceived barriers, and cues to action.

**Aim III:** Gather recommendations for conceptualizing and disseminating future education materials on lead poisoning prevention for the Oakland County community.

## Methods



Figures 1 and 2. Two of the four different fact sheets that were examined during interviews.

## Results

Demographic	N (%)
Male	1 (10%)
Female	9 (90%)
White	4 (40%)
Black	3 (30%)
Asian	1 (10%)
Middle Eastern	2 (20%)
High School Diploma	2 (20%)
Some College	1 (10%)
Vocational/Trade/Technical School Diploma	2 (20%)
Bachelor's Degree	4 (40%)
Master's Degree	1 (10%)
Age	Mean (SD) 33.4 (5.25)

The mean score on the Chicago Lead Knowledge Test was 14 (SD, 4.35) out of a possible 24 points. Questions about lead in general and lead exposure were more often answered correctly than questions about diet or prevention.

### Perceived Susceptibility

- Participants identified their children as having little to no perceived susceptibility to lead exposure, prior to reading the fact sheets.
- Listing both well-known and lesser known lead exposure risks contributed to an increase in perceived susceptibility.

### Perceived Barriers

- The most commonly cited barriers to lead poisoning prevention included a lack of lead education, financial resources, institutional initiative, and transportation, prior to reading the fact sheets.
- The fact sheets did not adequately address the perceived lack of financial resources in minimizing water-specific lead exposure risks.

### Cues to Action

- Participants identified the Flint Water Crisis as a cue to action, prior to reading the fact sheets.
- The fact sheets can serve as a potential cue to action to implement inexpensive, efficient behavioral changes related to increased vigilance.

## Conclusions

- Community members of Oakland County have variable levels of knowledge about lead exposure and lead poisoning prevention.
- There are both effective features and unanticipated shortcomings within existing lead education materials that can be further refined for the intended audience.
- These findings will inform primary prevention efforts in re-envisioning future education and outreach strategies for the Oakland County community.

## References

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