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# EVALUATING THE INDIRECT EFFECTS OF A COMMUNITY-BASED CHILD OBESITY PREVENTION PROGRAM ON ADULT HEALTH BEHAVIORS

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## BACKGROUND

- Community-based intervention (CBI) programs aim to change individuals' behaviors to reduce the risk of chronic disease, often by addressing factors that contribute to obesity
- In Franklin and Grand Isle (FGI) Counties, childhood extreme obesity decreased where a two year CBI based on the EPODE model (figure 1) for preventing child obesity was implemented<sup>4</sup>
- Child-targeted programs may have an indirect effect on parent health/body mass index (BMI)<sup>3,7</sup>

## PURPOSE

- Determine if there were any indirect effects of the CBI on adults in the FGI community (e.g. BMI, physical activity, fruit/vegetable intake, and general health)
- Determine if these effects may have been influenced by the intensity of the interventions
- Provide recommendations for future programmatic planning

## RATIONALE

- Program evaluation is needed to provide information for improving and prioritizing interventions and allocating resources<sup>6</sup>
- Understanding effects of community health status on healthcare costs is essential for determining the feasibility of the program<sup>1,5</sup>

## METHODS

- Using 2016-2018 data from the Behavioral Risk Factor Surveillance System (BRFSS), health behaviors and outcomes (e.g., BMI, physical activity, fruit/vegetable intake, and general health) in FGI adults were analyzed using SPSS statistics version 28
- A general linear model adjusted for covariates was used to compare BMI, and a multinomial logistic regression adjusted for demographics was used for comparing physical activity and general health
- BMI, physical activity and general health were compared between adults with and without children
- Community program programmatic intensity (CPPI) scores were previously calculated.<sup>4</sup> These scores take into account the strategy, duration and reach of the intervention – each assigned a numerical value and then averaged for an overall score that quantifies the strength of the intervention
- Non-research determination from IRB

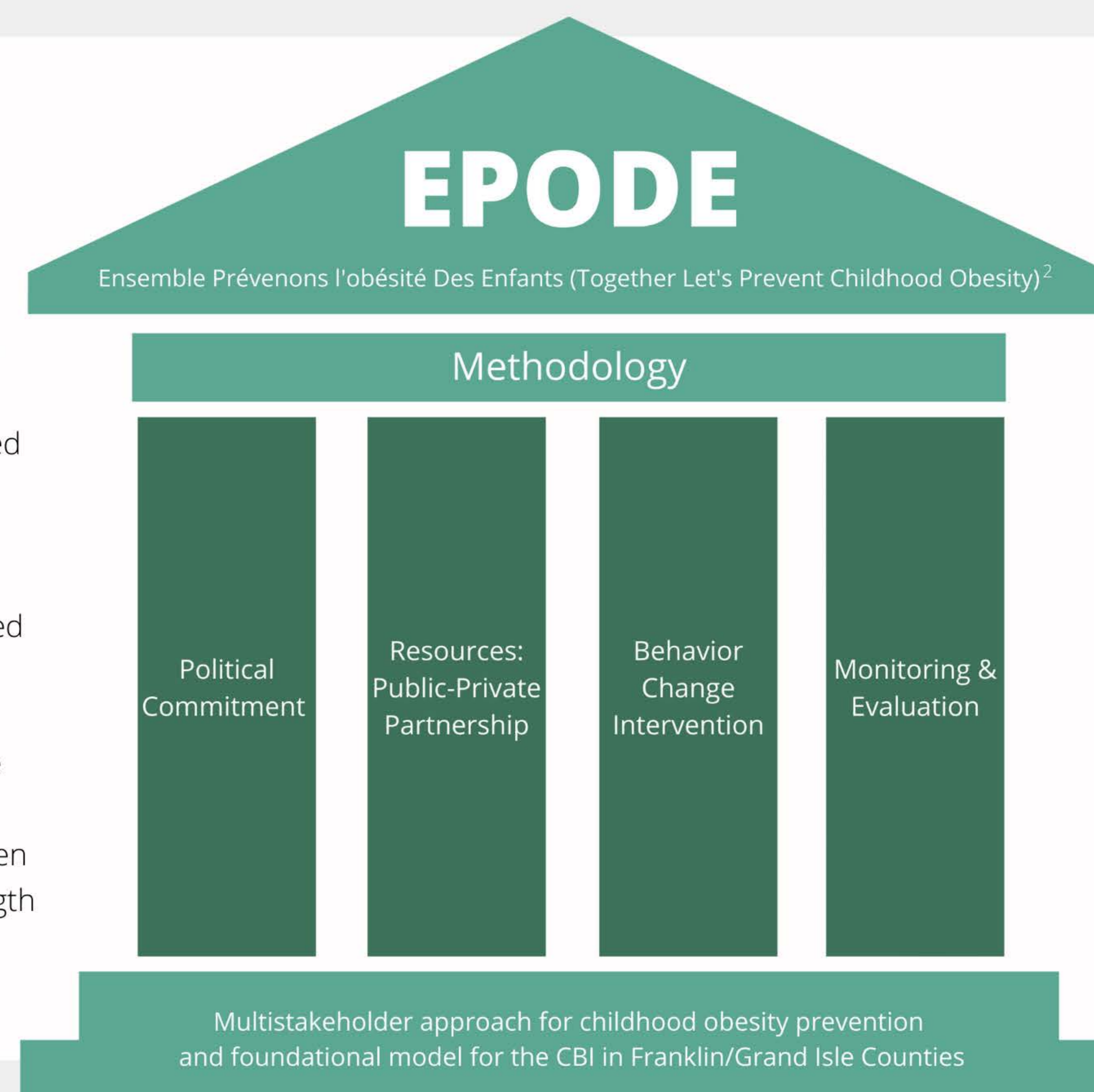


Figure 1

## RESULTS

- 24.4% of adults had a child under 18 in their household
- 66.8% of adults had either overweight or obesity
- No statistically significant difference in BMI ( $p=0.64$ ) or physical activity ( $p=0.287$ ) in adults from 2016-2018 was found, therefore the relationship between intervention intensity and change in health behaviors/outcomes could not be assessed
- Adults with children were 1.2 times more likely to participate in leisure time physical activity than those without, however this was not statistically significant ( $p=0.23$ )
- No significant difference in BMI between adults with and without children ( $p=0.647$ )
- Fruit and vegetable intake could not be analyzed since this data was not collected each year

### Adults without children:

- 2.8 times more likely to report "excellent" health ( $p=0.017$ )
- 2.7 times more likely to report "very good" health ( $p=0.022$ )
- 2.8 times more likely to report "good" health ( $p=0.016$ )

## LIMITATIONS

- BRFSS data is self-reported resulting in potential bias in responses
- Data regarding particular health behaviors is not collected annually
- BRFSS data collection is conducted via random selection year to year and may not be a representative sample of the adults with children who are impacted by this CBI

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## CONCLUSIONS AND NEXT STEPS

- BRFSS data may not be the most effective way to evaluate the indirect effects of a child-targeted CBI on adult health behaviors due to sampling methods and low representation of adults with children
- Recommended next steps include extending the evaluation period to include a pre-implementation year, a control sample, and targeted data collection of parental BMI and health behaviors
- Future programs should consider including interventions that aim to improve the health and well-being of parents, particularly stress reduction

