

# Outcomes from a Novel Genetic Counseling Intervention Using Motivational Interviewing and The Extended Parallel Process Model to Increase Cascade Cholesterol Screening

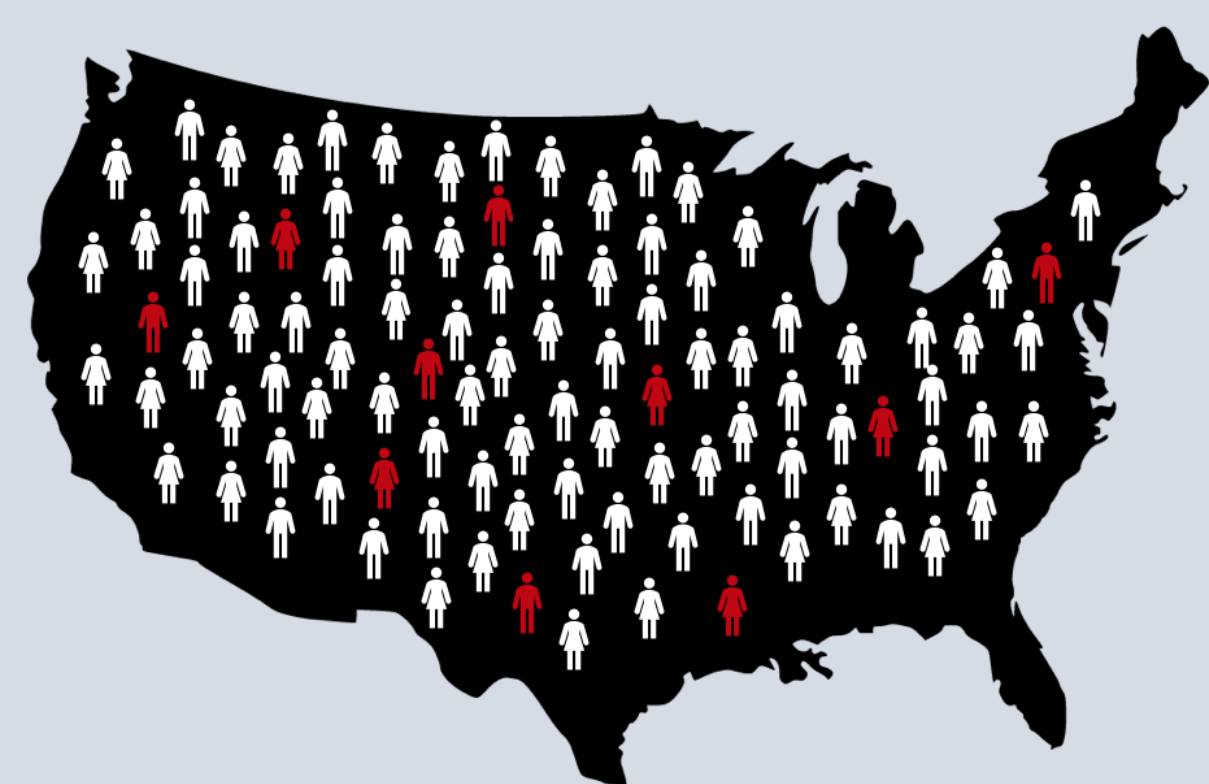
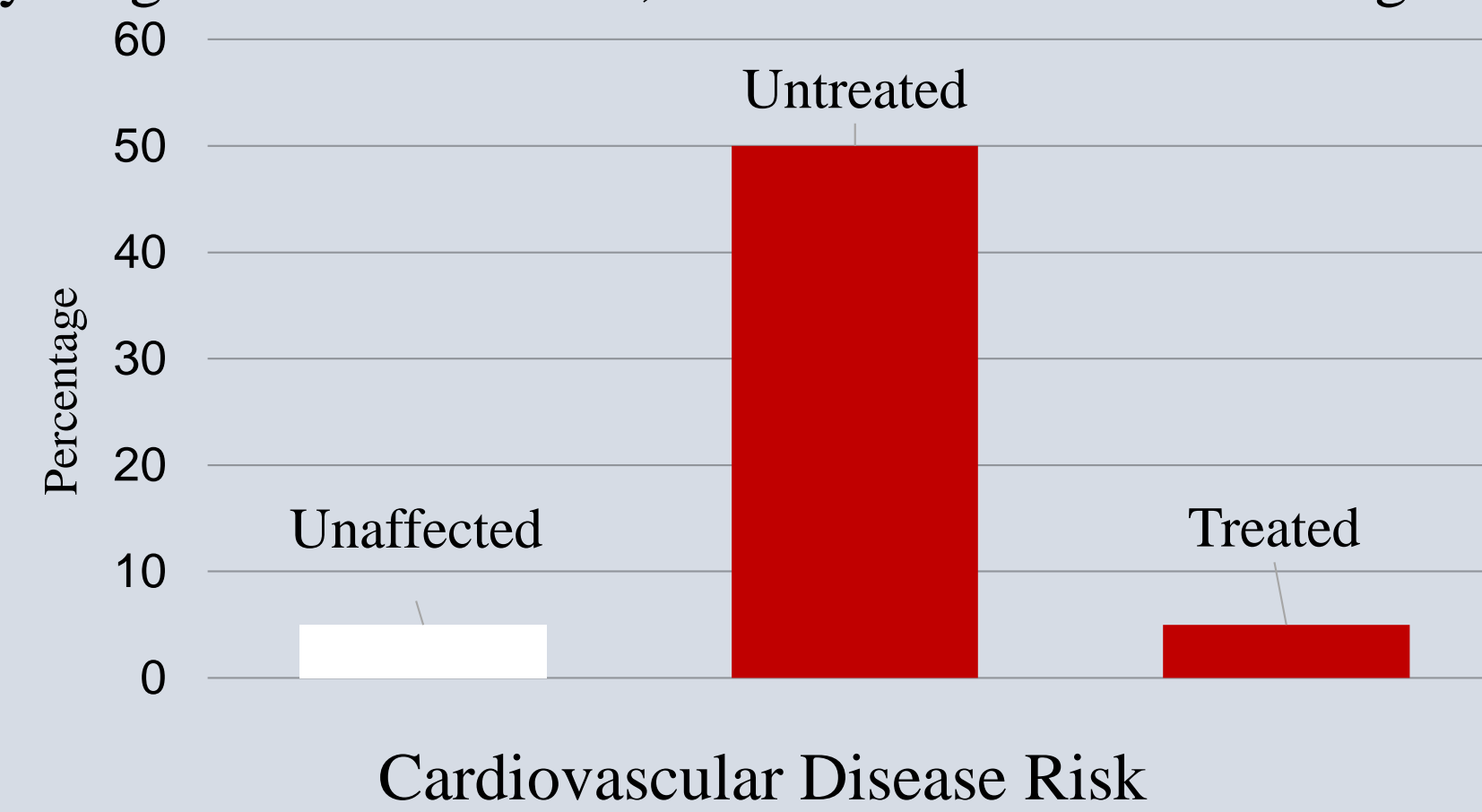
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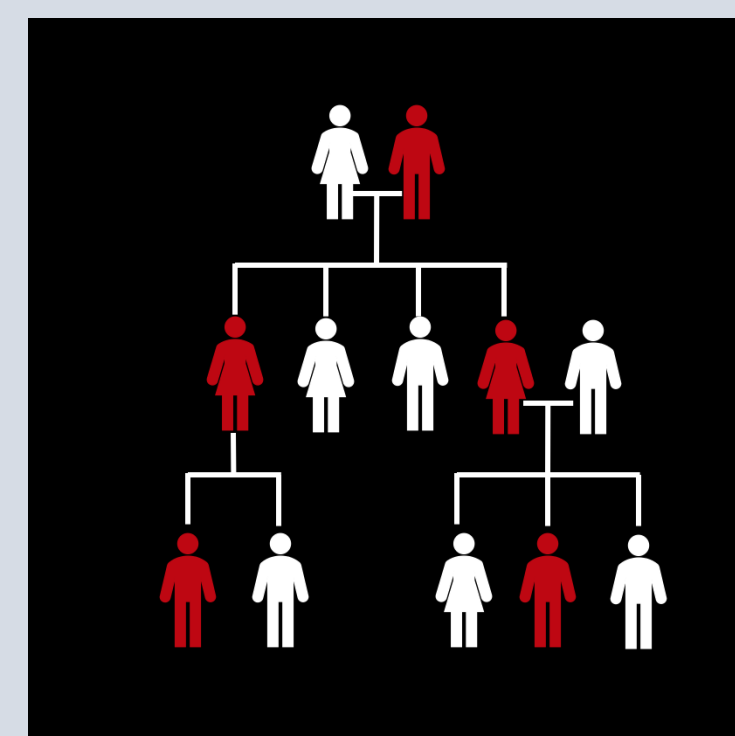
## Background

Familial hypercholesterolemia (FH) is an inherited form of high cholesterol resulting in increased risk of premature cardiovascular disease.<sup>1</sup>

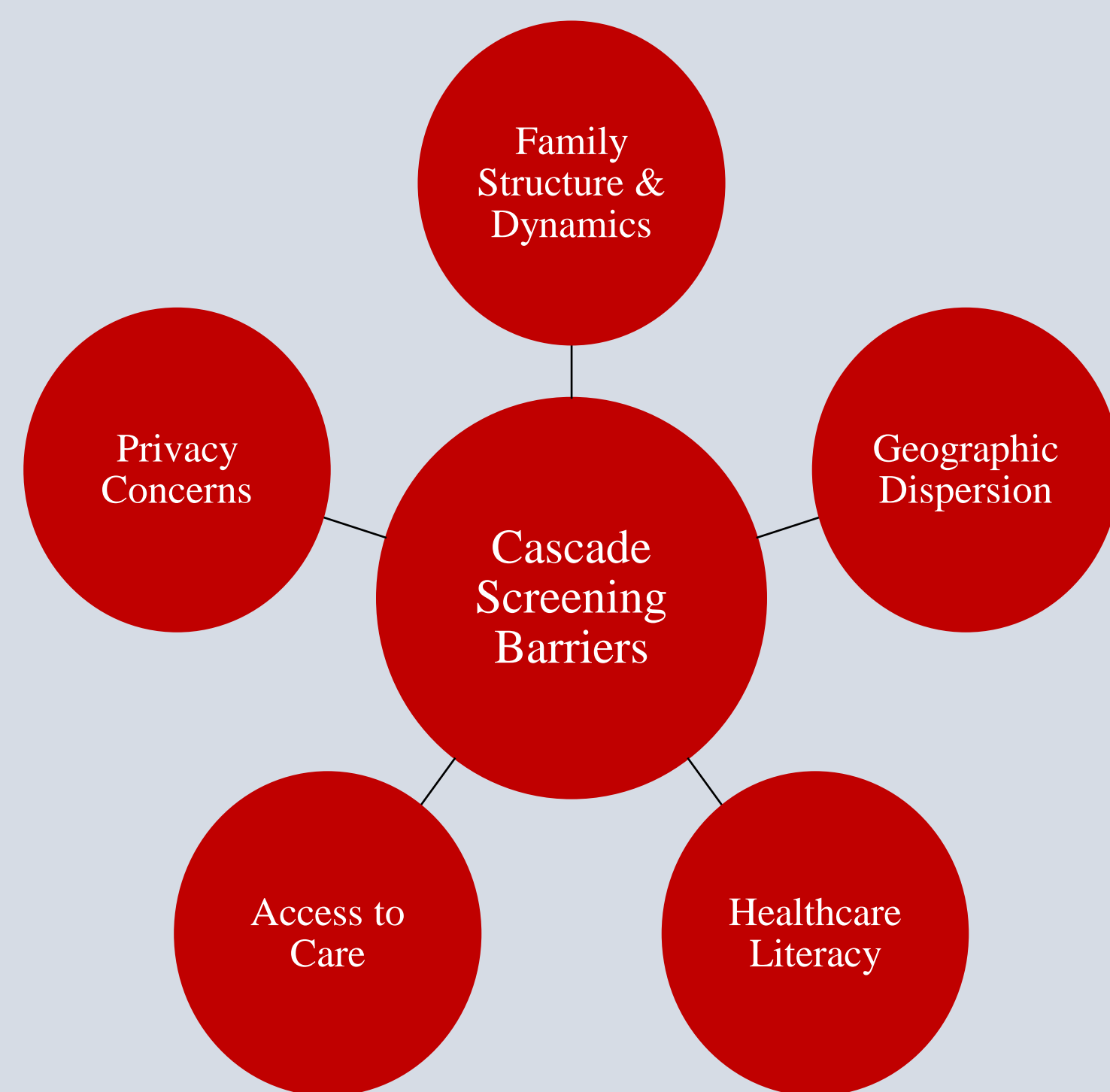
With early diagnosis & treatment, this elevated risk can be significantly reduced.<sup>2</sup>



Universal cholesterol screening is not routinely implemented in practice.<sup>3</sup>



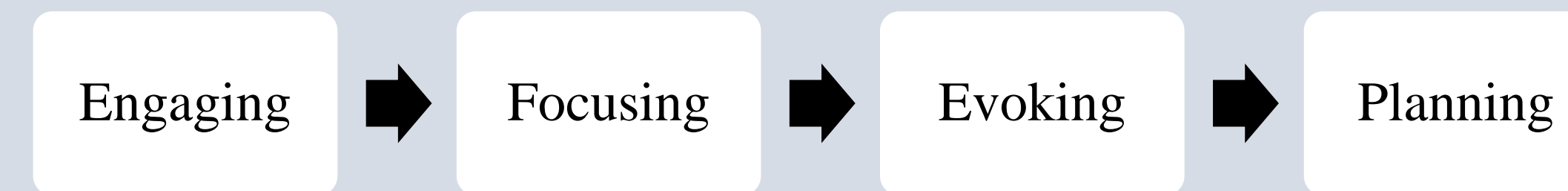
Cascade screening is more efficient, but patients report barriers to completion.<sup>4,5</sup>



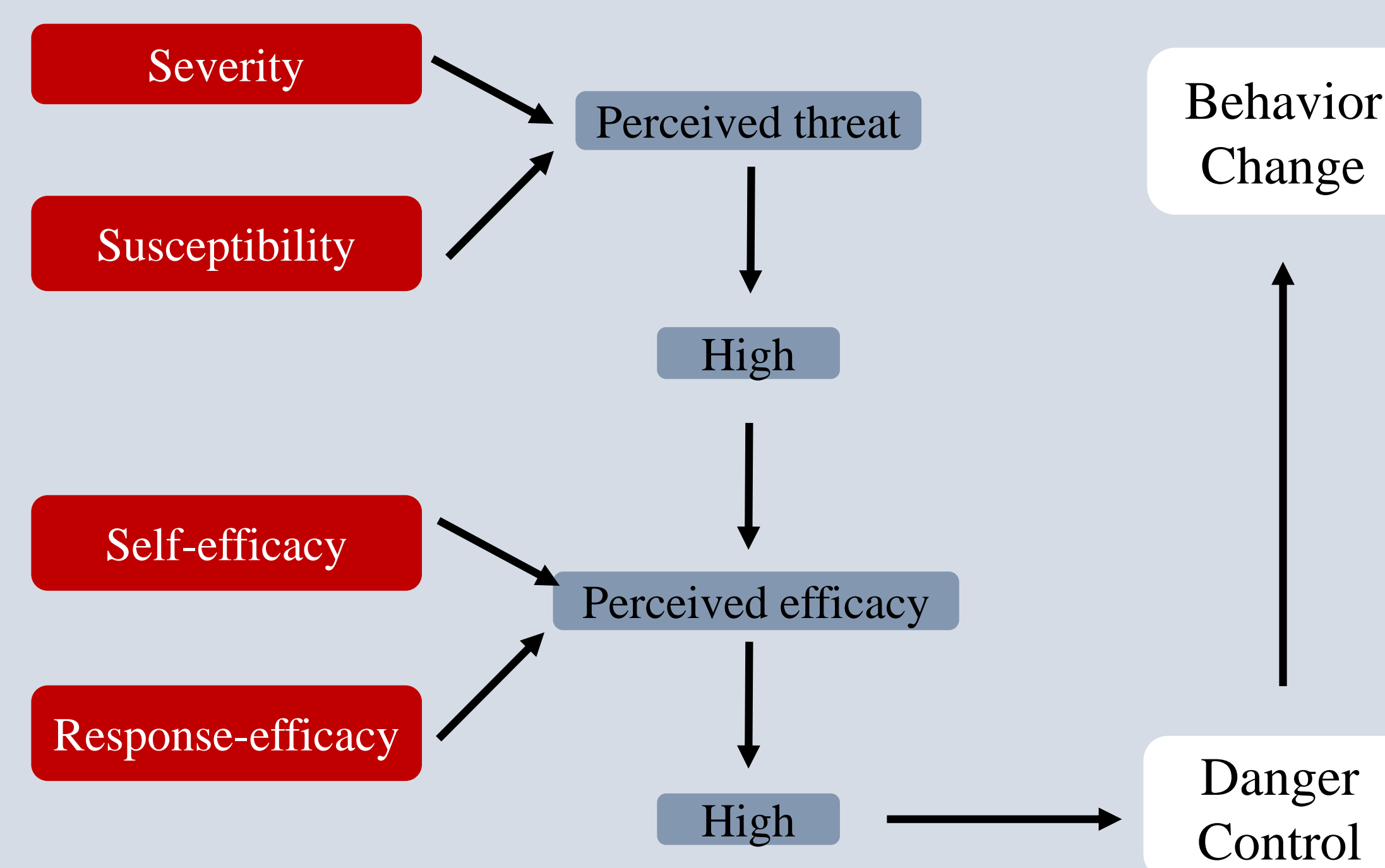
## Methods

Motivational interviewing (MI) is a counseling strategy that can be used to overcome obstacles.

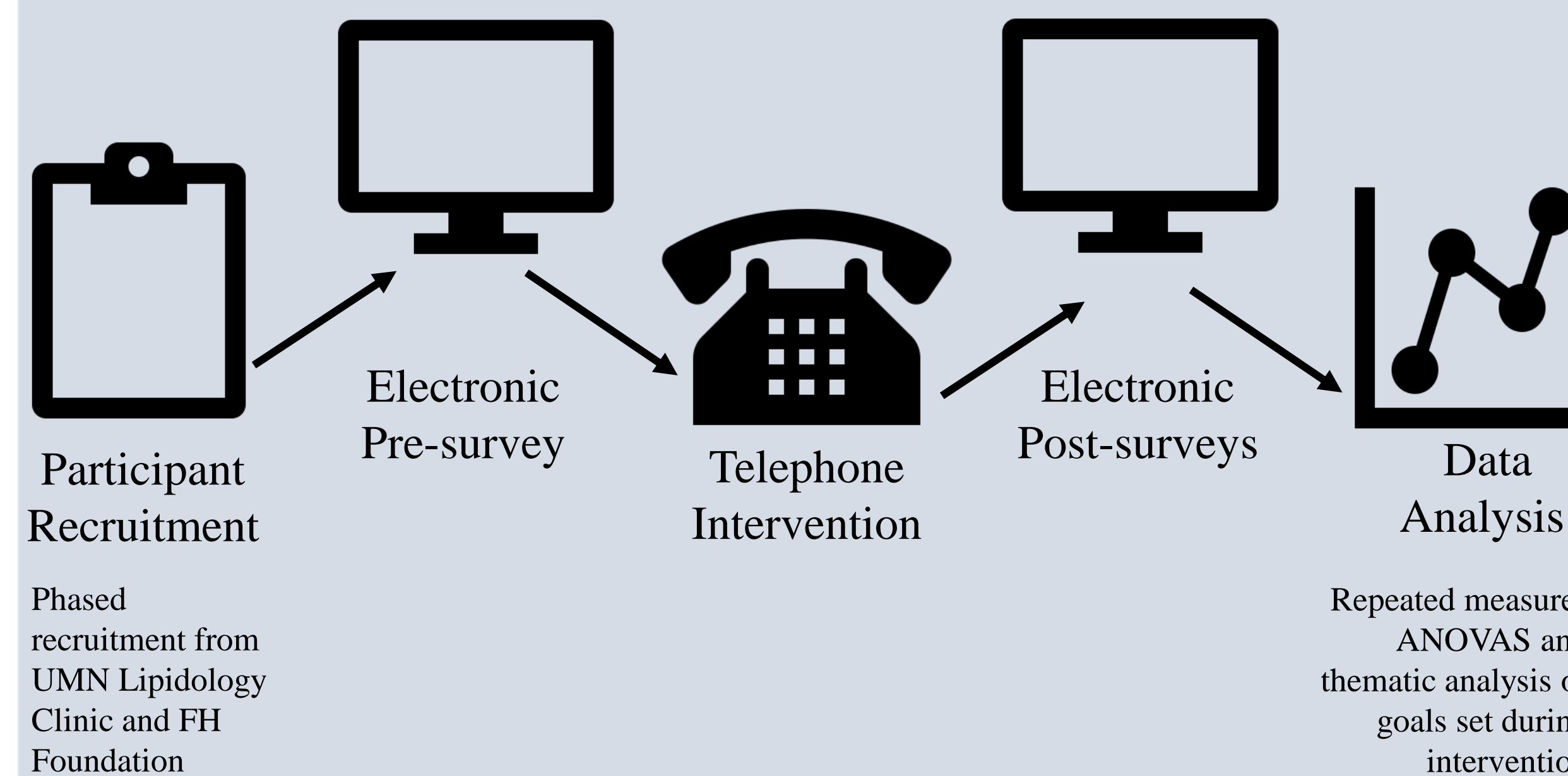
Using MI processes allows genetic counselors to help patients strengthen personal motivation for and commitment to a specific goal.<sup>6</sup>



The Extended Parallel Process Model (EPPM) is a framework used to predict how people respond to messages attempting to persuade them to change their behavior.<sup>7</sup>

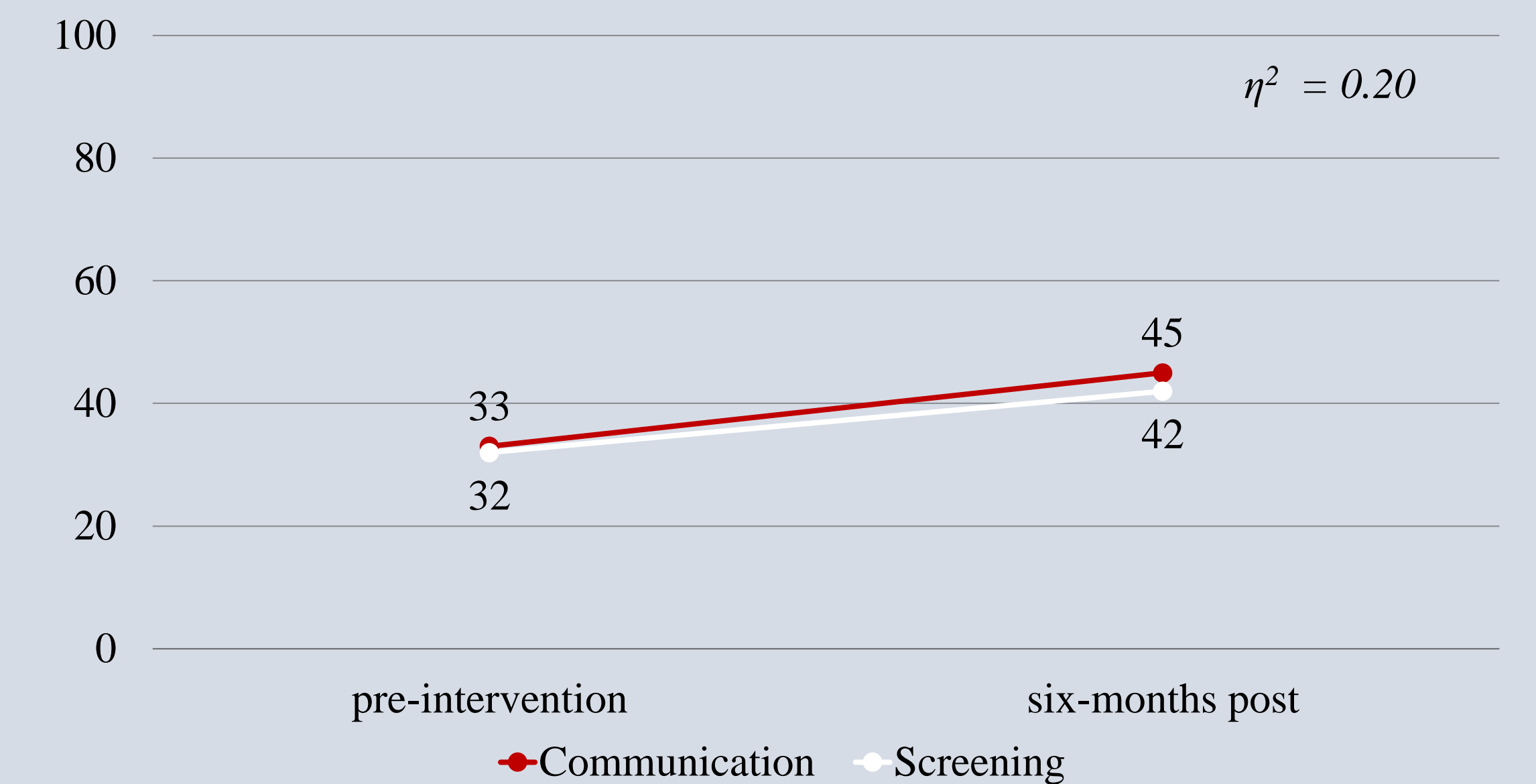


We created a combined MI/EPPM intervention delivered by a genetic counselor in order to increase cascade cholesterol screening in families of children with FH.

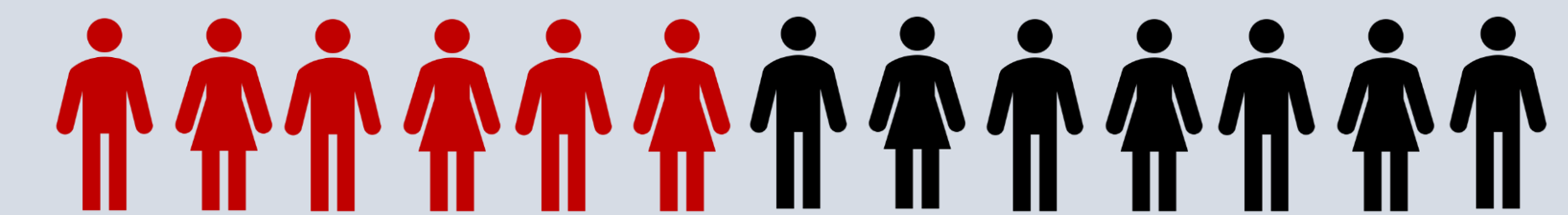


## Results

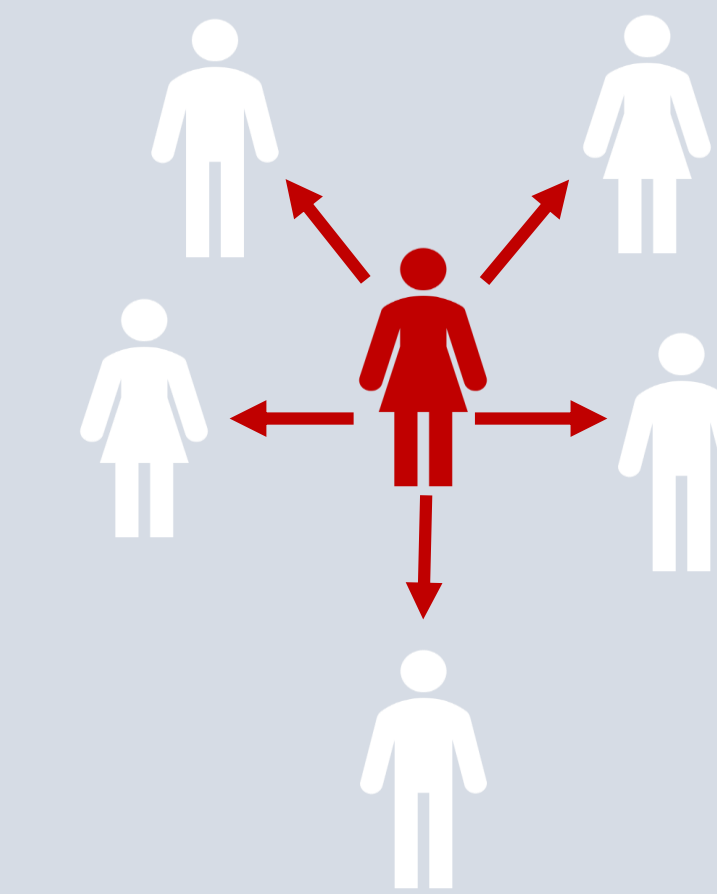
The percentage of relatives notified & screened increased over time



46% of participants (n=6) reported contacting and/or screening additional relatives.



On average 4.83 new relatives were contacted and 5.33 were screened, per participant who reported reaching out to their family.



Thematic analysis revealed that despite the open-ended nature of the goal-setting process, participant goals fell into two categories.



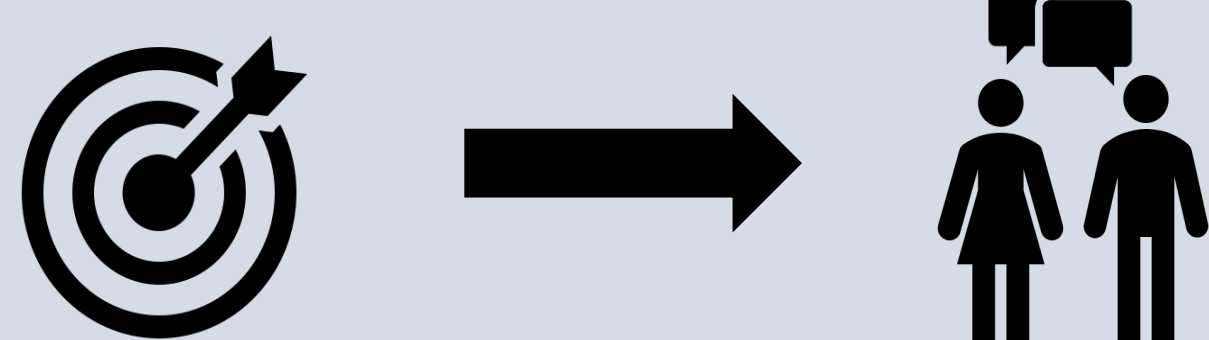
Those who set cascade-oriented goals (n=9) reported contacting and/or screening additional relatives (n=6) while those set management-oriented goals did not (n=4).

## Limitations

The small sample size (n=13) precluded use of a control group and prevented meaningful interpretation of statistical significance.

Some participants (n=6) were not diagnosed with FH themselves. In these cases, communication about FH risk needed to occur with the extended family of the child's other biological parent.

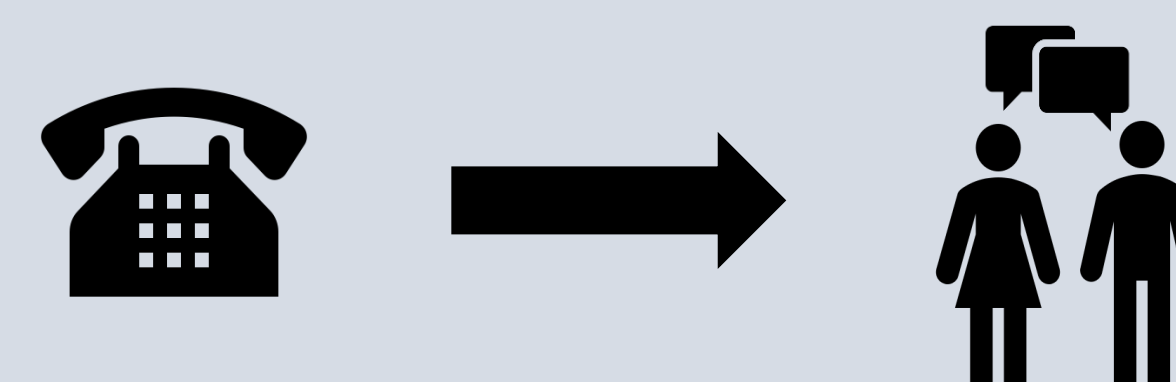
Further exploration might incorporate goal setting into the intervention, given the association between goal type and completion of cascade screening.



## Conclusions

To our knowledge, this is one of the first studies to conduct a MI-based genetic counseling intervention to improve cascade screening rates.

The average number of relatives contacted, screened, and reached as a result of this project is higher or equivalent to previously reported research<sup>8</sup>, suggesting this intervention may be a useful tool to increase cascade screening.



With further evaluation of the genetic counseling processes and validation of the strategies used, interventions like this one may help identify individuals affected by FH and allow them to receive early, life-saving treatment.

## Acknowledgments and References

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Our deepest gratitude to the families who participated in this study. Your dedication helps us work towards improving identification of individuals with FH.

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