

The Framing Effect and its Influence on Surrogate Decision Making in the Setting of Neurological Disease

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ABSTRACT:

Introduction

The Framing Effect is a cognitive bias in which the way information is framed influences the outcome of the decision. Surrogate Decision Makers (SDMs) are those individuals designated to make decisions on behalf of incapacitated patients. They are supposed to make decisions which align with what they believe the patient would have chosen for themselves. This study will look at how neurology patients' SDMs are influenced by framing and also at how well their decisions align with the patients' choices.

Methods

Survey-based, single-center cross-sectional study comparing responses between surrogate decision makers (SDMs) receiving positively-framed information and negatively-framed information regarding important healthcare decisions as CPR vs. DNR and tracheostomy vs. no tracheostomy. Additional data on individual characteristics of SDMs and patients collected to determine association with decision making.

Results

The trends in the data show positive framing led to a higher concordance between SDMs and patients for both CPR and tracheostomy decisions. It also showed that concordance was more likely if patients and SDMs had conversations about their wishes in the past.

Conclusion

Health care providers may hold influence over how SDMs make decisions for their loved ones based on how they frame the choices. The overall ability of SDMs to accurately predict their loved one's wishes is likely dependent on whether they have had conversations about those wishes in the past.

INTRODUCTION:

The Framing Effect is a well-known cognitive bias that occurs in everyday decision making in which the way the information is framed influences the outcome of the decision. Tversky and Kahneman first described the phenomenon in 1981 when they noted that individuals made risk-averse decisions when presented with positively-framed information, and that they made risk-seeking decisions when presented with equivalent but negatively-framed information.⁴ Interestingly, when the framing effect has been studied with regard to medical decisions, the opposite effect has been found. Some studies have shown that negatively-framed messages are more helpful in getting patients to take up risk-averse actions like preventative screening, whereas positively-framed messages are more helpful in getting patients to undergo more risk-prone actions like surgery or a novel pharmaceutical intervention.⁵ Equivalent information, such as 30% mortality and 70% survival have been shown to be interpreted differently, which has far-reaching implications for communication between clinicians and patients.⁶ Physicians imparting information about a treatment option or inquiring about a patient's wishes for their own medical care may be unduly influencing those choices by the phrasing of their words. Our aim in this study is to measure the possible influence of the framing effect on certain medical decisions.

SDMs are individuals who are designated to make medical decisions for a patient should the patient become incapacitated. In general, SDMs are asked to make judgments based either on the patient's previously expressed wishes (usually in the form of an advanced directive), or on a substituted judgment standard, meaning they should choose what the patient *would* choose if they were able to make the decision for themselves.³ The use of SDMs in clinical medicine is thought to extend the patient's autonomy and ability for self-determination. Some studies have shown that surrogate decision makers may feel significant distress at making these types of decisions, especially if they are not entirely confident that the decision they made was the "right" one.² Other studies have shown that SDMs are not necessarily accurate in their predictions of what the patient would have wanted.³ Therefore, another aim of the current study is to examine how closely SDMs' decisions lined up with the ones those patients would have made for themselves.

Routinely in the course of serious disease, patients or their SDMs must make choices about their wishes for life-sustaining treatment. For those with stroke and other serious neurological disease, these decisions include whether or not to initiate CPR and whether or not to place a surgical airway (tracheostomy). In this study, we asked neurology clinic patients and their SDMs their wishes with regard to both CPR and tracheostomy in order to assess 1) whether the way these issues are posed to the decision-maker (either positively or negatively framed) has any influence on the outcome of their decision; and 2) whether surrogates can accurately predict the wishes of their loved ones and the factors influencing their level of concordance.

METHODS :

Study Design: Survey-based, single-center cross-sectional study comparing responses between surrogate decision makers (SDMs) receiving positively-framed information and negatively-framed information regarding important healthcare decisions as CPR vs. DNR and tracheostomy vs. no tracheostomy. Also compared responses within pair (SDM and patient) to determine concordance of decisions.

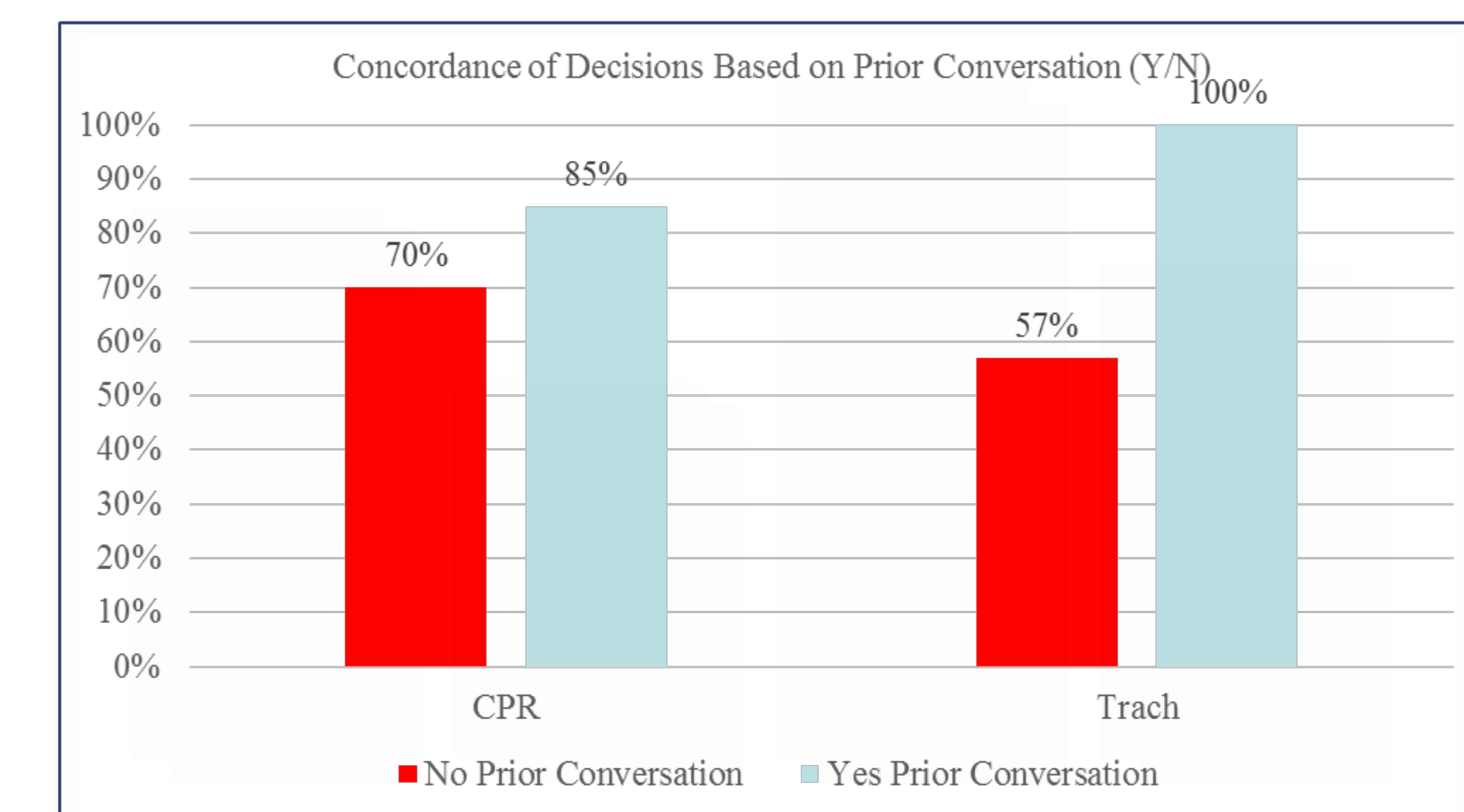
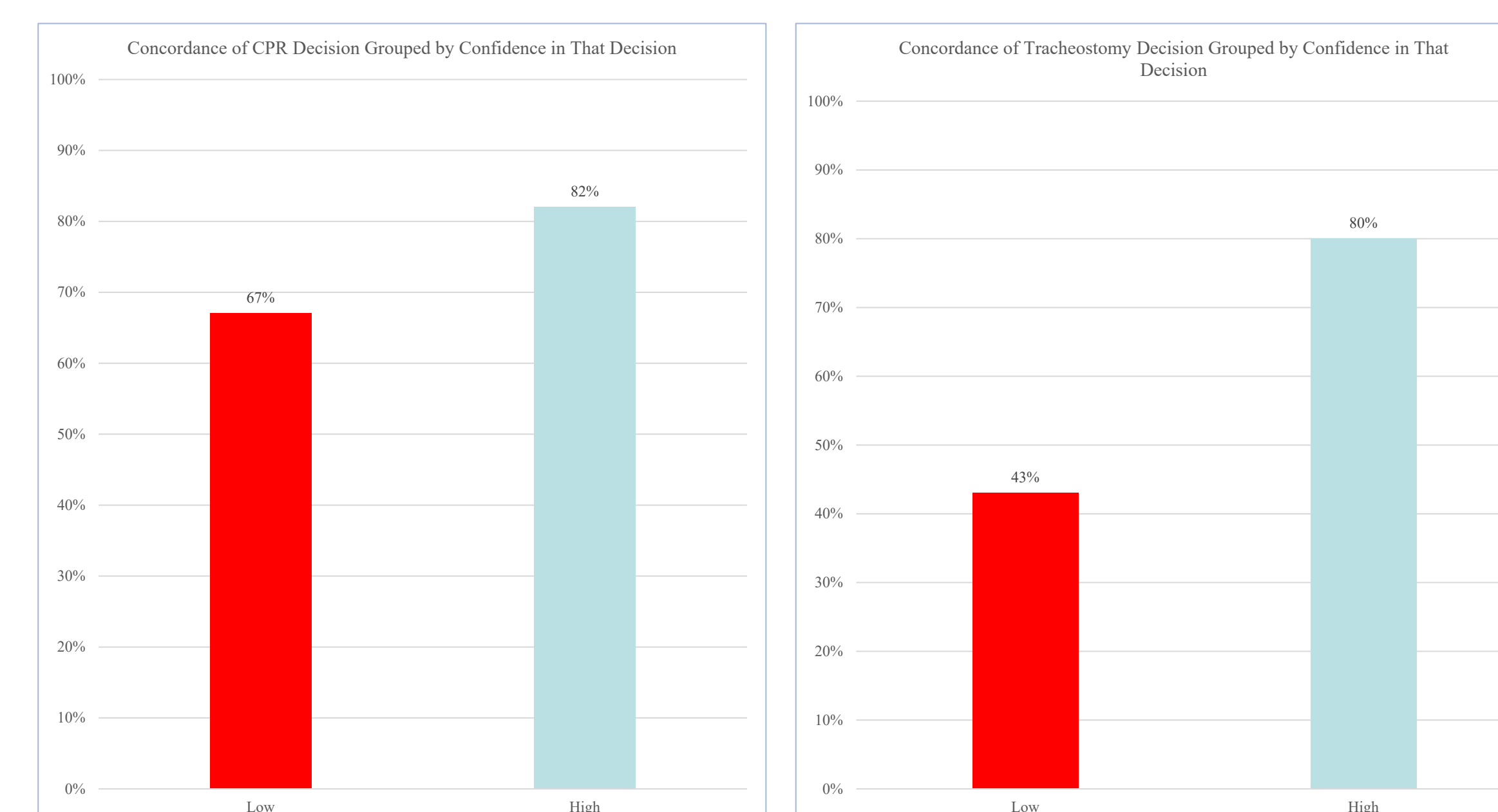
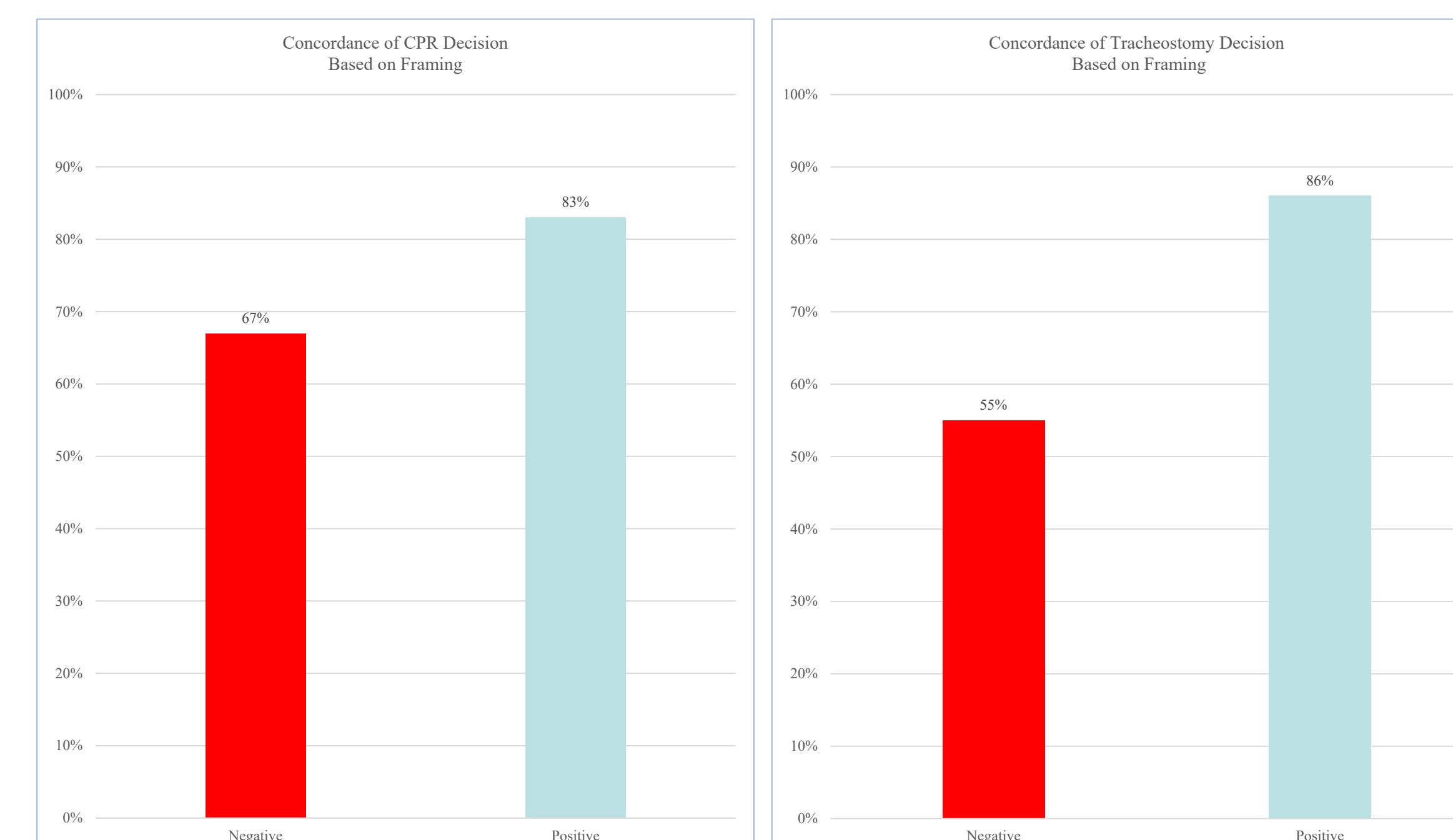
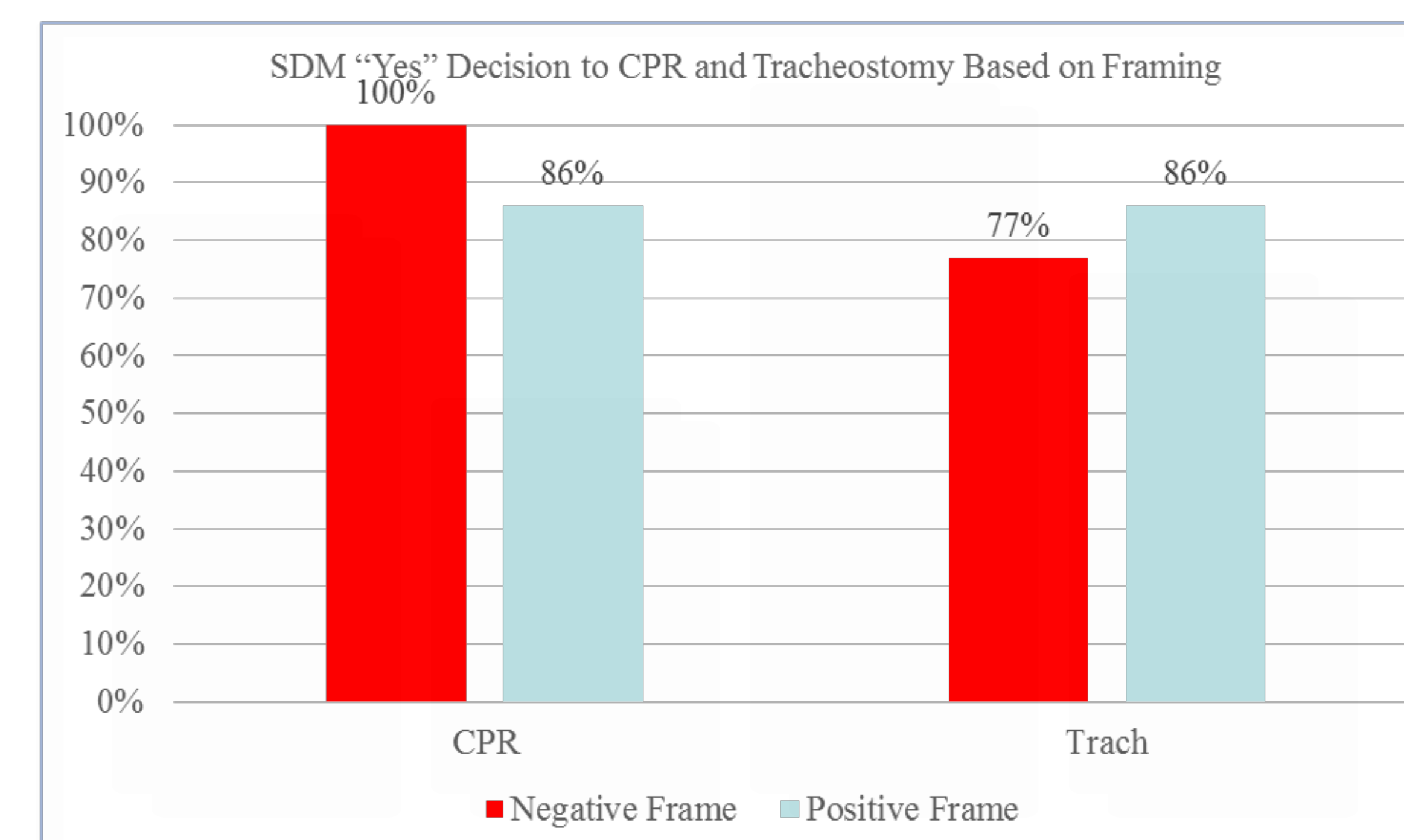
Participants: Neurology clinic patients and the SDMs involved in medical decision making for them at University of Maryland Medical Center (UMMC) were enrolled. They were approached in the clinic waiting room. Informed consent was obtained at that time and they each completed an anonymous paper-based survey.

Inclusion criteria: English-speaking, non-pregnant people over age 18 service as a SDM for a patient in the neurology clinic and patients belonging with these SDMs.

Positive Frame	Negative Frame	Patient Survey
There is a 10% chance of survival to discharge from the hospital if CPR is performed on your loved one. Would you want us to perform CPR?	There is a 90% chance of death before discharge from the hospital if CPR is performed on your loved one. Would you want us to perform CPR?	If hospitalized, would you want health care providers to do CPR? Yes / No
Yes / No	Yes / No	
There is a greater chance of effective long-term airway maintenance if a tracheostomy is performed on your loved one. Would you want us to perform a tracheostomy?	There is a small chance of serious complications if a tracheostomy for long-term airway maintenance is performed on your loved one. Do you want us to perform a tracheostomy?	If hospitalized, would you want health care providers to perform a tracheostomy for long-term airway maintenance? Yes / No
Yes / No	Yes / No	
Additional Questions		
Are you aware of a current advanced directive or MOLST order for your loved one? Yes/No		
Have you and your loved one had a prior discussion of what he or she would prefer about CPR? Yes / No		
Have you and your loved one had a prior discussion of what he or she would prefer about tracheostomy? Yes / No		
Have you ever had to make decisions about CPR or tracheostomy for a loved one in the past? Yes/No		
How confident are you in the CPR decision you made today? (9 point Likert scale)		
How confident are you in the tracheostomy decision you made today? (9 point Likert scale)		
How involved do you like to be in decision-making? (9 point Likert scale)		
How much do you think physicians should help you with decisions about CPR? (9 point Likert scale)		
How much do you think physicians should help you with decisions about tracheostomy? (9 point Likert scale)		
How much do you prefer to think about important decisions? (9 point Likert scale)		
How well do you think your decision about CPR matches with your loved one's decision? (9 point Likert scale)		
How well do you think your decision about tracheostomy matches with your loved one's decision? (9 point Likert scale)		
How much information do you generally like to have before you make an important decision? (9 point Likert scale)		

PRELIMINARY RESULTS:

17 pairs of SDMs and patients have been enrolled so far. 7 SDMs received the positive framing, and 11 SDMs received the negative framing.



CONCLUSIONS:

1. The framing of important life-altering decisions by health care providers may influence the way people make choices.
2. The overall accuracy of SDMs choices is also likely influenced by framing.
3. Having conversations with loved ones about what they would want likely improves the accuracy of SDM decision-making.

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