

# Impact of Informational Video on Lung Cancer Screening (LCS) Perception Among Rural Veterans

Norah N. Zaza, MD; Eduardo Lopez-Gutierrez BA; Dominic J. Vitello MD; Jessica Gardner BS; Thanh-Huyen T Vu, MD PhD; Sayyed Hamidi MD; Israel Rubinstein MD; Howard S. Gordon MD; David J. Bentrem MD

Jesse Brown VA Medical Center, Department of Surgery, Northwestern University Feinberg School of Medicine

## Background

- Lung cancer is the leading cause of cancer related mortality in the United States.
- Rural populations have higher smoking rates, increased lung cancer incidence and per capita lung cancer mortality. Delays in diagnosis may play a role in increased mortality rates
- There are significant geographic, transportation, and communication barriers for rural populations.
- The need for patient education in conjunction with the shortage of health educators, especially in rural settings, has led to the utilization of informational videos

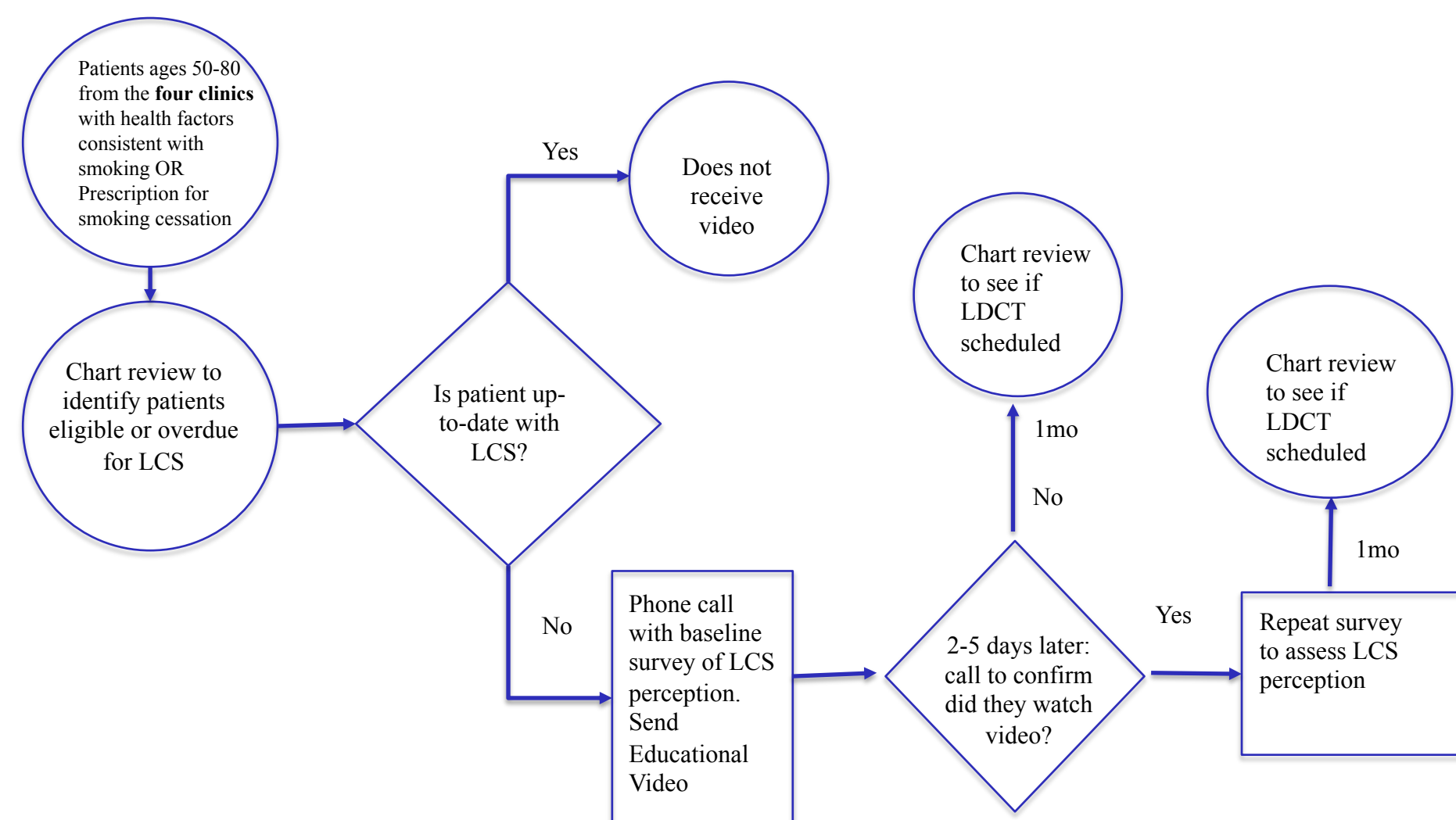
## Research Objectives

- We conducted a pilot program to assess the impact of the informational video and the effect of telephone outreach on rural Veterans' perception of LCS and their likelihood of engaging in LCS.

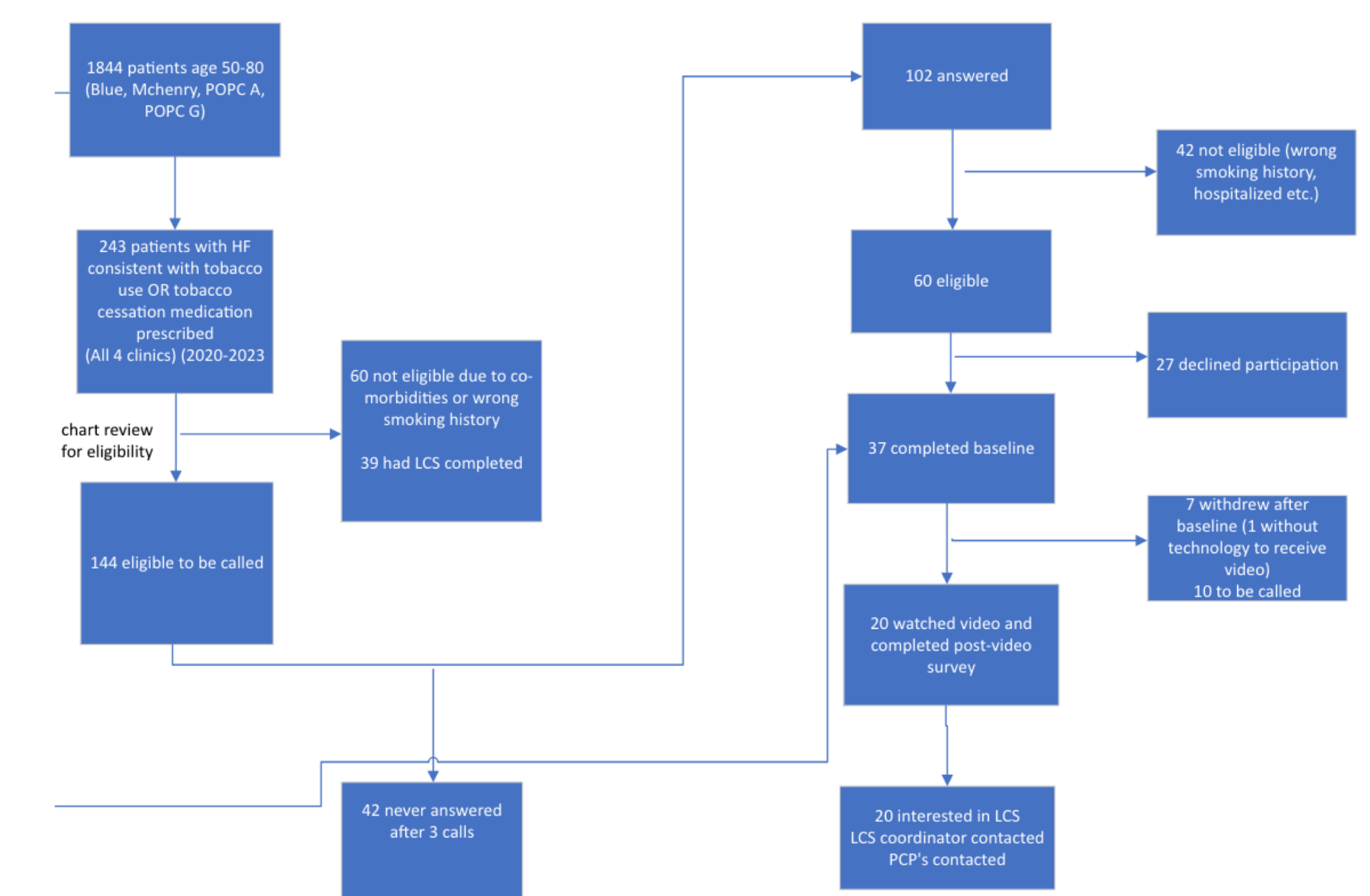
## Methods

- The Veterans Health Administration Corporate Data Warehouse was cross-sectionally queried for Veterans who met USPSTF criteria for LCS from four northern Illinois rural VA clinics.
- Eligible Veterans were then given a pre-video survey to assess psychological state of readiness, perceived benefit of LCS against perceived barriers, and likelihood of participating in LCS - developed with the Expanded Health Belief Model (HBM) framework
- Thereafter, they were sent an informational video and participated in a post-video survey.
- Outcome Metric(s):** % of ordered and completed LDCT scans among eligible patients
- Process Metric(s):** survey results, # of patients who viewed the video

## Process Map:



## Results



## Survey Results and Video Reviews

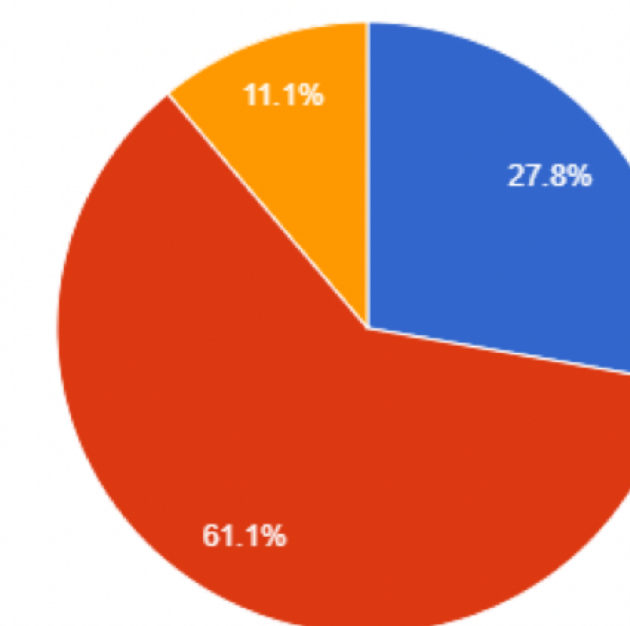
	Comparison between pre and post responses (N=20)		
Variable	Mean	Std Dev	P value*
Pre-Video Barriers	10.00	1.93	
Post-Video Barriers	9.19	2.10	
Difference	-0.81	1.11	0.008
Pre-Video Benefits	9.94	1.53	
Post-Video Benefits	9.75	1.57	
Difference	-0.19	1.05	>0.05
Pre-Video Self-Efficacy	13.13	1.86	
Post-Video Self-Efficacy	13.25	1.77	
Difference	0.13	0.96	>0.05
Pre-Video Severity	6.31	0.70	
Post-Video Severity	6.50	0.89	
Difference	0.19	0.66	>0.05
Pre-Video Susceptibility	2.94	0.68	
Post-Video Susceptibility	3.25	0.58	
Difference	0.31	0.48	0.063

"I guess it kind of brings it to your attention"

"I think I learned a little bit but I knew most of it."

"the video was great, it was very simple and explained why someone might need one, want to have one, what to do with those results."

## Method of Receiving Video



Email: 12  
Text: 6  
Unable to receive video: 2

## Limitations

- The study is limited by sampling bias; we may have been sampling a group of veterans more engaged with their health, with a greater baseline knowledge of Lung Cancer and the benefits of screening, given that participation is voluntary
- The inconsistent charting of patient's smoking history was another limitation that may have led to missed eligibility.
- Our results are preliminary and reflect a small sample size.

## Conclusions

- Our findings showed that viewing an educational video about LCS led to decreased perception of barriers to lung cancer screening.
- One hundred percent of patients who received the video and participated in the survey expressed interest in LCS, and the appropriate providers were contacted.
- The video did not affect their perception of Lung Cancer susceptibility and seriousness, or their perception of LCS benefits and self-efficacy.
- The project did however highlight the value of outreach in care coordination of rural populations.
- It also provided feedback on the video itself as a tool for LCS education in rural populations, with generally positive reviews.
- Will follow-up with the 20 eligible patients to assess how many have LCS ordered and completed.