

Factors Associated with Screening Completion Among High-risk and Underserved Population in an Early Detection Lung Cancer Screening Program in Los Angeles County, California



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Background

- Lung cancer is the leading cause of cancer death in the U.S. in both men and women.
- Socioeconomically disadvantaged and underserved population experience **disproportionately higher risk** for developing and dying from lung cancer
 - Persistently high smoking rates
 - Low involvement in screening
 - Late-stage diagnosis of lung cancer
- They are **more than 2 times as likely to have incomplete screening appointments** after initial recruitment
 - Practical and emotional barriers
 - Potential financial burden with follow-up care

Methodology and Data

- Identification and recruitment were facilitated by five partnering community clinics in the LAC
 - Underserved population** in LA and **high-risk** Category I or II, according to the National Comprehensive Cancer Network eligibility criteria
- Outcome variable: screening completion
 - Complete Status:** Showed up for scheduled appointment and completed the screening exam (LDCT)
 - Incomplete Status:** Failure to complete the appointment (No shows, declined screening, unable to reach, etc.)
- Analysis Plan:** Descriptive statistic and multivariate analysis using logistic regression. Odds ratios with 95% confidence intervals were reported.

Results

Figure 1. Overall Descriptive Statistics by Proportions (N=92)

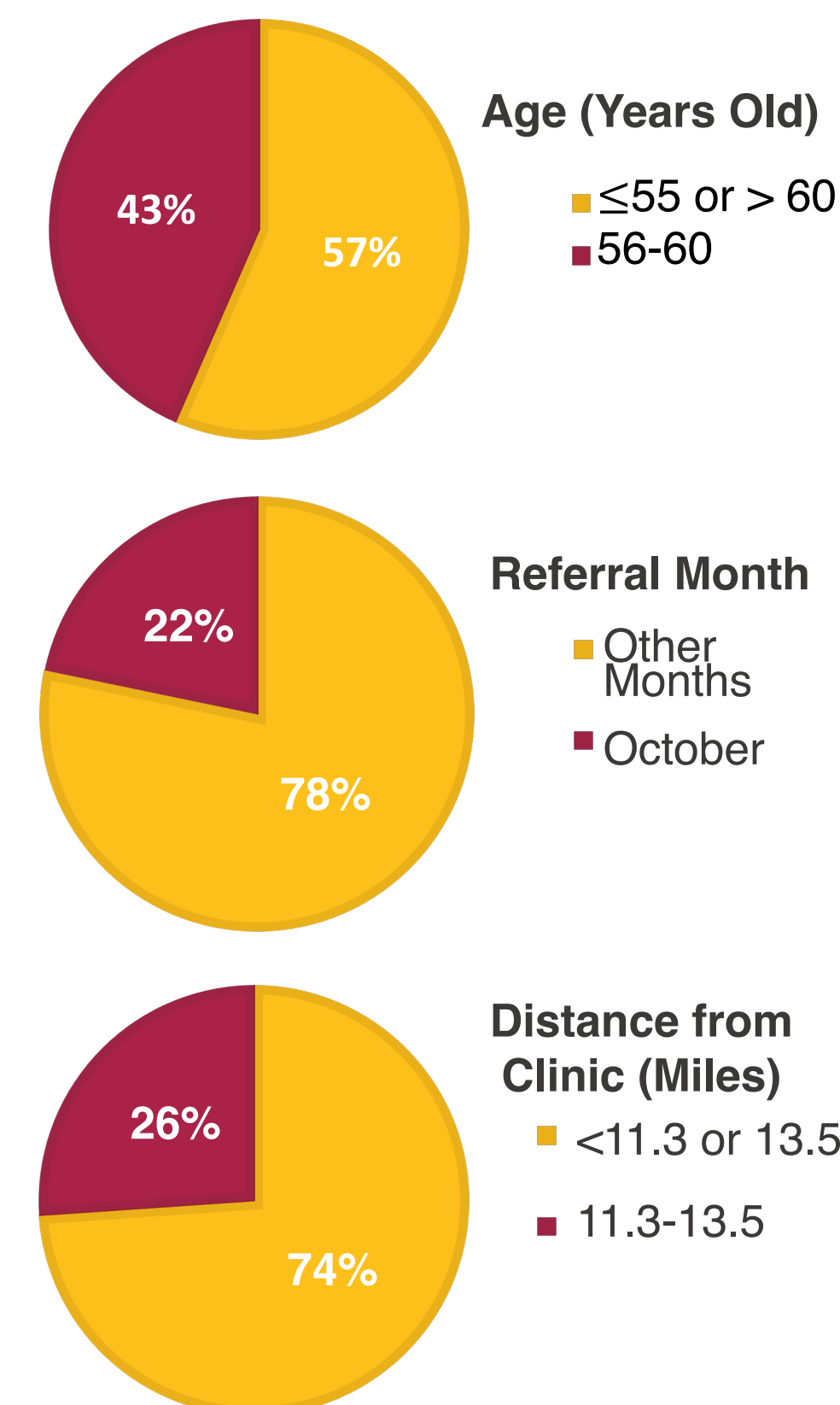


Figure 2. Descriptive Univariate Statistics Comparing Recruitment Completeness Among Participants Referred to the Lung Cancer Screening Program (N=92)

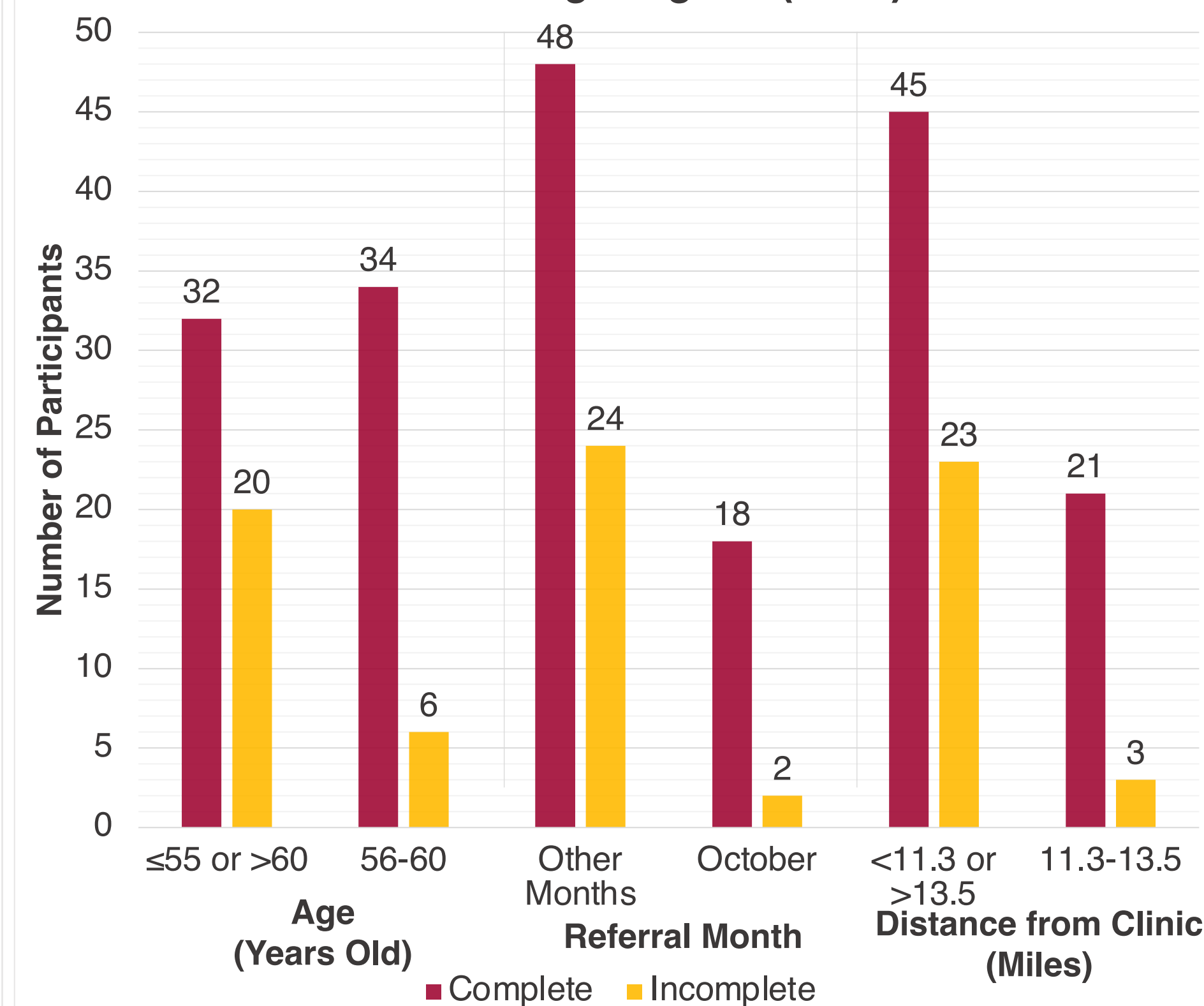


Table 1. Odds Ratios for Recruitment Completeness Among Participants Referred to the Lung Cancer Screening Program and Age, Referred Month, and Distance (N=92)

Variable	Odds Ratios	95% CI	p-value	
Intercept	0.856	(0.430, 1.704)	0.658	
Age	Reference Group			
	≤55 or >60			
	56-60	4.304	(1.453, 12.75)	0.008
Distance (miles)	Reference Group			
	Less than 11.3 or more than 13.5			
	Between 11.3 and 13.5	4.103	(1.041, 16.18)	0.044
Referral Month	Reference Group			
	Other Months			
	October	4.908	(0.995, 24.22)	0.050

- Odds ratios and p-values obtained through multivariate logistic regression.

Discussion

- Significant associations (p<0.05) :
 - Ages 56 to 60** are **4.3 times** as likely to have completed screenings than others
 - Perceived susceptibility
 - Referral month of October** are **4.9 times** as likely to have completed screenings than others
 - Scheduling conflicts due to holidays
 - Distance from Clinic between 11.3 to 13.5 miles** are **4.1 times** as likely to have completed screenings than others
 - Transportation services
- Limitations**
 - Lack of statistical power to detect additional significant associations due to small sample size (n = 92)
 - Results may only be generalizable to additional participants of the same program

Conclusions

- The same analysis could be conducted after the conclusion of this program in March 2021.
- Important to identify factors affecting recruitment completeness.
 - Provide recommendations to improve screening success rates for future programs
 - Decrease health disparity in lung cancer mortality rates among underserved population