“Be a Fighter, Put Down the Lighter”

A Multi-Model Initiative in a Residents’ Clinic

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Background

- Every 3.3 minutes, one individual dies from lung cancer.[4]
- Cigarette smoking is the leading preventable cause of death in the United States.[1]
- Smoking accounts for about 90% of all lung cancer cases, with a 5-year survival rate of 21.7% in the United States and 19.3% in Georgia.[7, 3]
- Lung cancer mortality is decreased by 20% with implementation of low-dose computed tomography (LDCT).[9, 8]
- One study found that only 1 out of 8 adults who were eligible for screening reported receiving lung cancer screening.[6]
- Lung cancer screening detects cancer at an early stage, when surgical cure is still possible.[5]
- Individuals who meet lung cancer screening criteria are 50-80 years old, currently smoke or have quit in the last 15 years, and have at least a 20 pack-year history.[10]
- Lung cancer screening is costly, averaging approximately $300 for self-pay patients in Georgia.[2]

Methods

Step 1: Identify Barrier to Care

- A survey was sent out to residents to identify the barriers to adhering to lung cancer screening guidelines.
- Five barriers were identified and addressed: 1) lack of knowledge, 2) no reminders, 3) financial burden, 4) lack of educational material, 5) lack of smoking cessation resources

Step 2: Identify Patients for Care

- Inclusion criteria was any patient over 18 years old with a smoking history presenting for a follow-up or a visit to establish care.
- Exclusion criteria were any patient presenting for a sick or transition of care visit under 18 years old.
- Data was retrospectively analyzed from electronic medical records (EMRs) of smokers between August 2020 and November 2020 for pre-intervention baseline.

Step 3: Address Barriers to Care

- Educational sessions were held for residents for 6 weeks.
- A reminder on the EMR was added for patients’ eligibility of LDCT.
- Grant covers the diagnostic workup and treatment of patients if abnormalities are discovered through the LDCT.
- Educational materials regarding cessation were provided for physicians and patients.
- Nicotine products and cessation clinic were made available to patients and encouraged by residents.
- Data was analyzed from EMR records post-intervention to determine effectiveness of intervention methods.

Results

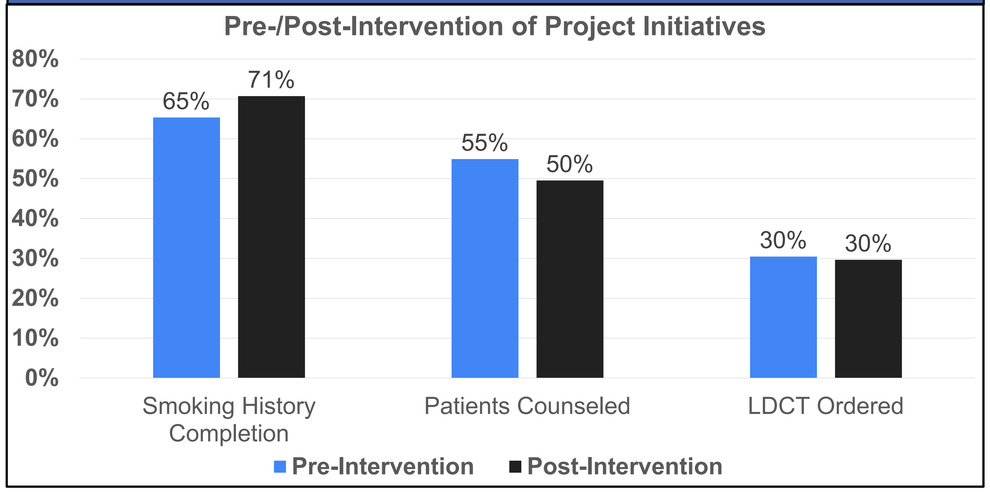

Figure 1. *Smoking and lung cancer screening metrics of pre- and post-intervention. Statistically significant increase in smoking history completion after intervention (P< 0.05). Statistically nonsignificant decrease counseling and CT scan orders.*

Results From Resident Survey

Survey Question	Response
I assess smoking status and counsel smokers.	54% Every visit 46% Intermittently
I am aware of Georgia Tobacco Quit Line services.	51% No 49% Yes
In the past 3 months, I discussed lung cancer screening with this amount of patients.	57% 0-1 patients 34% 2-5 patients
I think some of the barriers to smoking cessation counseling are: (choose all that apply)	57% Lack of patient’s interest 66% Lack of time during visit 20% Lack of resources to support patients

Figure 2. *Responses from resident survey regarding practice of lung cancer screening*

Discussion

- Pre-intervention, only 65% of patients with a reported history of smoking had a completed smoking history in the chart.
- Only 54% of patients eligible of cessation counseling were counseled, and 30% of patients eligible for LDCT had a scan ordered.
- During the three months post-intervention, 71% of patients had a complete smoking history recorded.
- 50% of eligible patients were counseled and 29.6% received LDCT orders.
- To compare results, we used a STATA/IC proportion test calculator which showed statistically significant increase in smoking history completion post-intervention.
- There was no statistically significant difference found in the proportion of cessation counseling or cancer screening.

Conclusion

- Providers have misconceptions about patients’ willingness to stop smoking, and this misconception is common among resident physicians.
- Feasible interventions increase the accuracy of smoking history.
- For future research we plan to use a larger sample size by extending the data collection time period.
- There are also plans to revive the smoking cessation clinic with the new pharmacist.

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