



## QI: Health Maintenance with Low Dose CT Scans

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### Background

- Lung cancer is the third most common cancer as well as the leading cause of cancer death in the United States. Early detection is one of the leading prognostic factors for lung cancer, as the size of the cancer can drastically alter the treatment modality.
- The most important risk factor for lung cancer is smoking, as it accounts for approximately 80-90% of all lung cancer cases in the United States. [1] A low dose CT scan (LDCT) has a high sensitivity and acceptable specificity for lung cancer and is the recommended test for screening. During the National Lung Screening Trial (NLST), the case showed that LDCT's reduced lung cancer mortality by 16% as well as all-cause mortality by 6.7%. [2]
- We determined that there were many Family Medicine patient's in our clinics that were not being properly screened for lung cancer by LDCT scans. We determined that we needed to raise awareness of LDCT scans and the patients that were at high risk, which includes, smokers between the age of 55 and 80 and with a greater than 30 pack year history of smoking, who are currently smoking, or have stopped within the last 15 years.

### Aim Statement

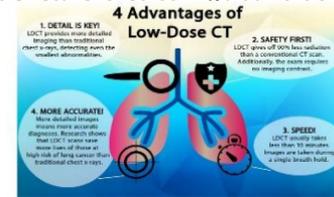
- The goal of this project is to define who needs low dose CT Scan. Our intervention included a presentation during our residency didactic session regarding the benefits of LDCT scan and screens for lung cancer. This was followed by a collection of data points including the number of LDCT scan orders placed before and after our presentation.
- Our aim was to determine if one presentation and informational session would be sufficient in increasing the screening in our family medicine clinic population, or if further intervention would be necessary.

### References:

- 1: Cui JW, Li W, Han FJ, Liu YD. Screening for lung cancer using low-dose computed tomography: concerns about the application in low-risk individuals. *Transl Lung Cancer Res.* 2015;4(3):275-286. doi:10.3978/j.issn.2218-6751.2015.02.05
- 2: Chiles C. Lung cancer screening with low-dose computed tomography. *Radiol Clin North Am.* 2014;52(1):27-46. doi:10.1016/j.rcl.2013.08.006

### Methods

- The project took place at the Family Medicine clinics which include the physicians office building (POB), Healthcare center (HCC), and East Gate (EG).
- Educational information was given in the form of a PowerPoint presentation with residents and attendings present during the family medicine didactics. We then used computer tracking to collect data before and after the presentation for the number of low dose CT scans for screening that were ordered. We collected data for three months



### Results

- Before intervention, in our 3 clinics, HCC/Eastgate/POB, and it showed that 14 LDCT scans were ordered.
- After intervention and education between the 3 clinics, after 3 months we had a total of 27 LDCT scans were ordered, which was an increase of 93% from prior.

### Conclusion

- Our QI project and education helped improve the rate the residents in our clinics to appropriately screen and order LDCT scans for their patients.

### Next Steps

- Create a system within the clinic for better identification and monitoring of those patient's that need and would benefit from low dose CT screening to further increase the number of screening opportunities in our clinic.
- Create specific EPIC dot phrases/reminders to continue to aid in monitoring and capture for LDCT scan ordering.