

## BACKGROUND

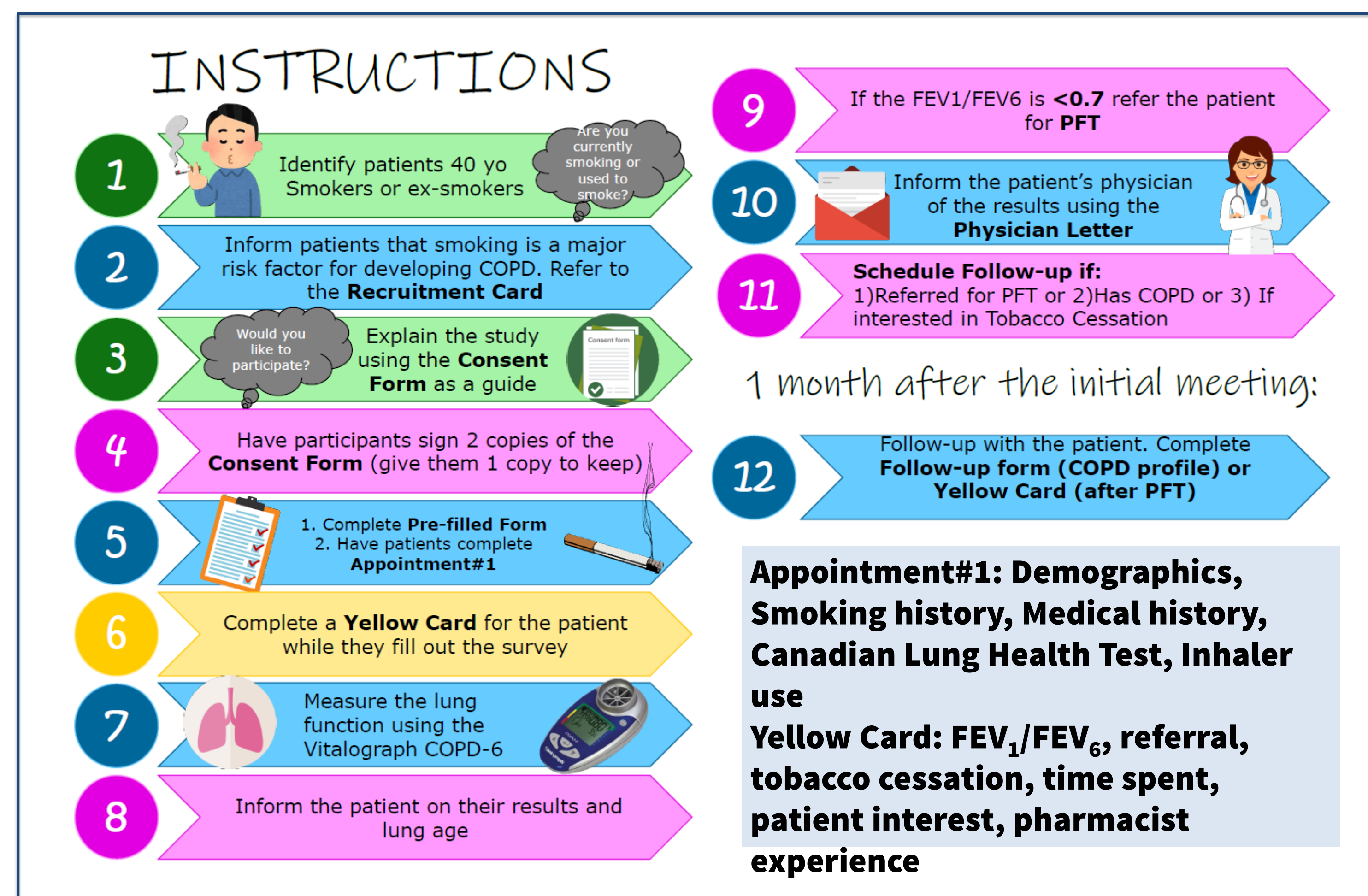
- The major gaps in COPD management include under-diagnosis, under-prescribing of appropriate pharmacotherapy, and lack of tobacco cessation (TC) services.<sup>1</sup>
- Failure to recognize the disease and to initiate timely evidence based care further increases the burden of COPD. Besides, undiagnosed COPD patients experience exacerbation-like events as frequently as those with confirmed diagnosis.<sup>2</sup>
- The estimated use of spirometry in primary care is evident in only 50-60% of cases.<sup>3-4</sup>
- Development and implementation of strategies to address the gap of under-diagnosis, and evaluation of the effectiveness of such interventions are of utmost importance.
- Pharmacists can enhance clinical services through the use of tools such as the COPD assessment test (CAT), and microspirometry.

## OBJECTIVES

- Characterize development and pilot testing of a COPD screening program in community pharmacies.
- Explore pharmacists' views on implementation of such program in Alberta.

## Phase I: Screening Program

### Workflow Process

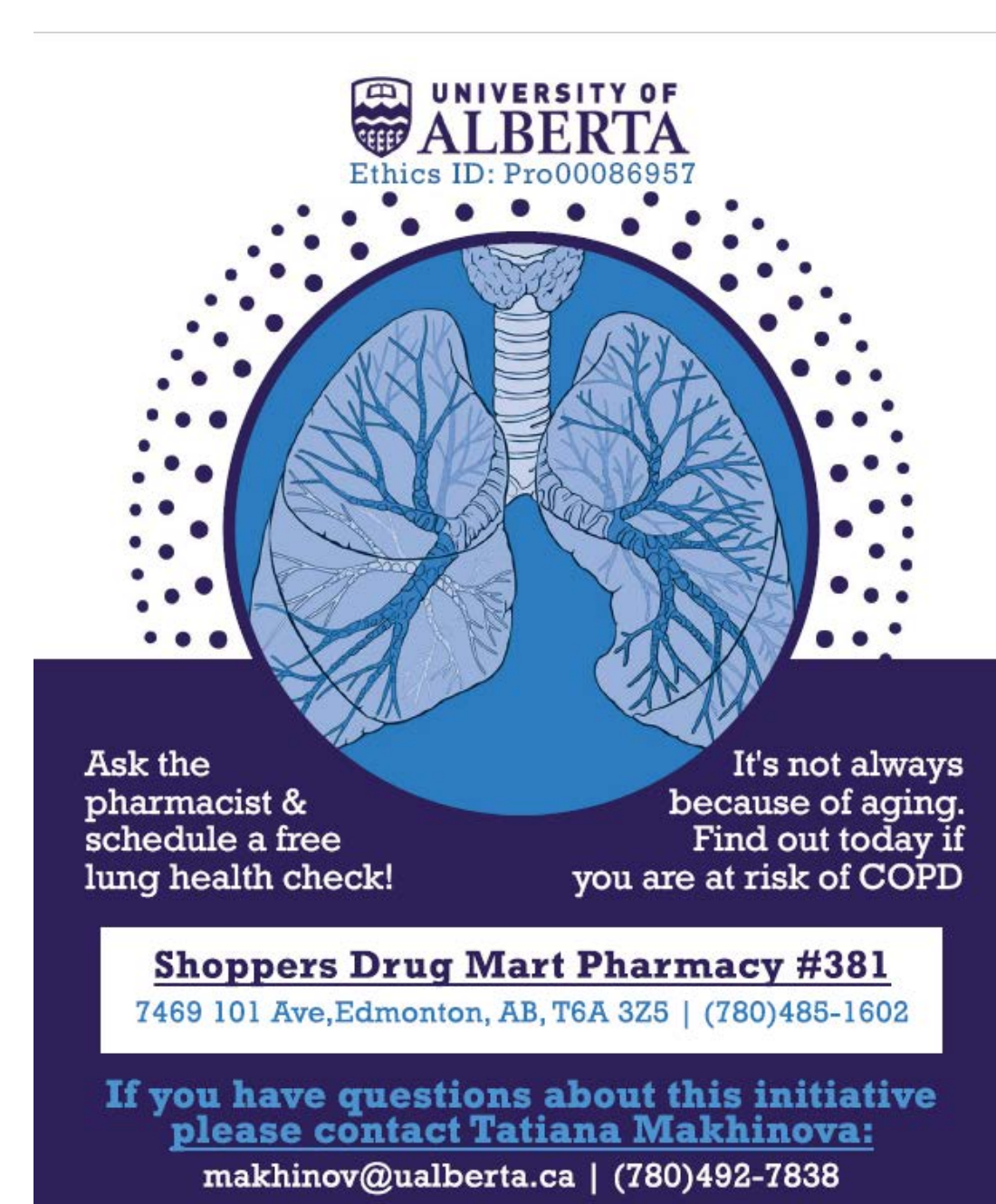


### Recruitment Strategies

- Posters
- Pharmacy social media
- Signage and screens
- Bag stuffers
- Target patients during flu shots

### Implementation Assistance

- Pharmacy students were involved in patient identification and patient recruitment



## Phase II: Pilot Study

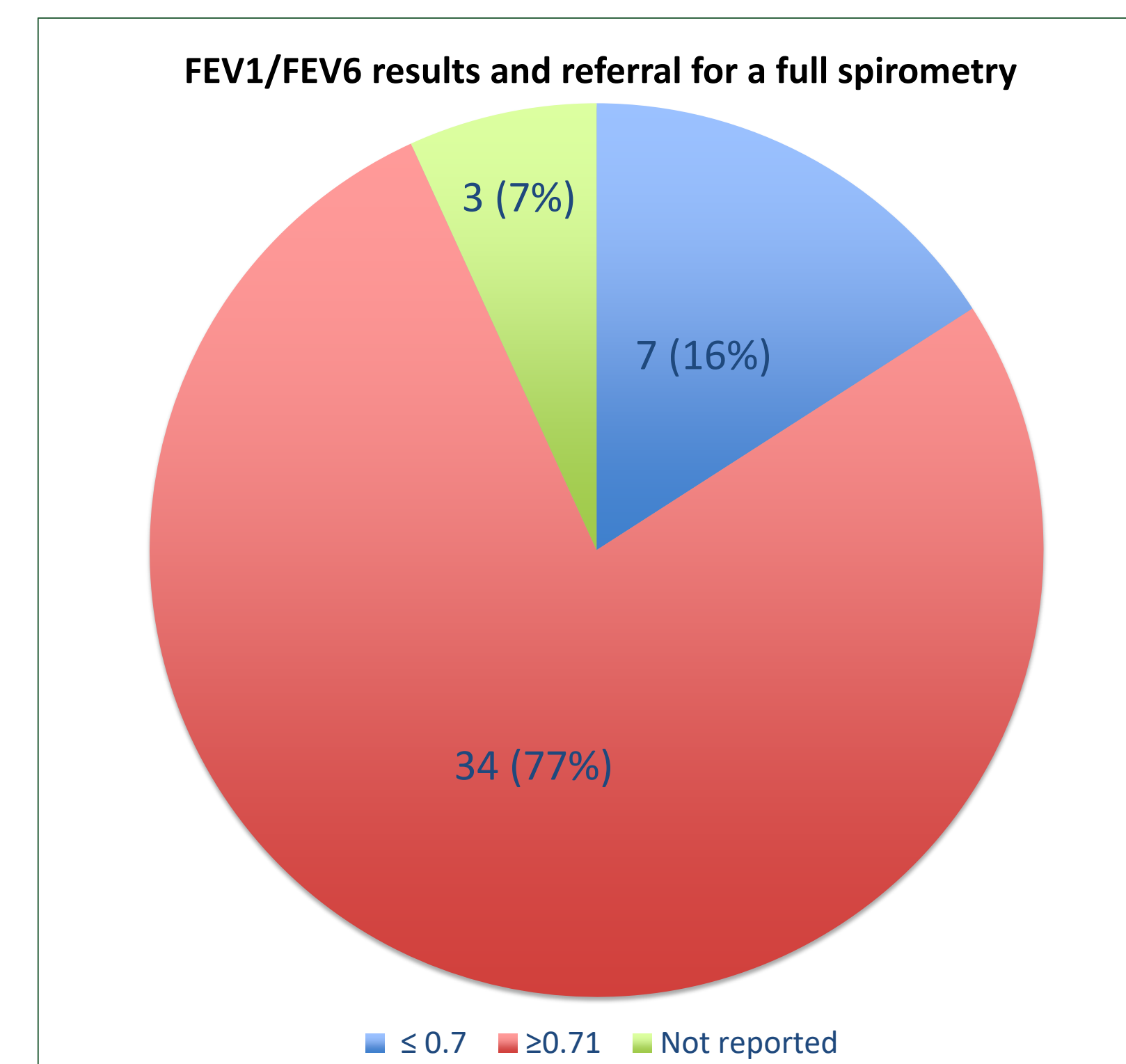
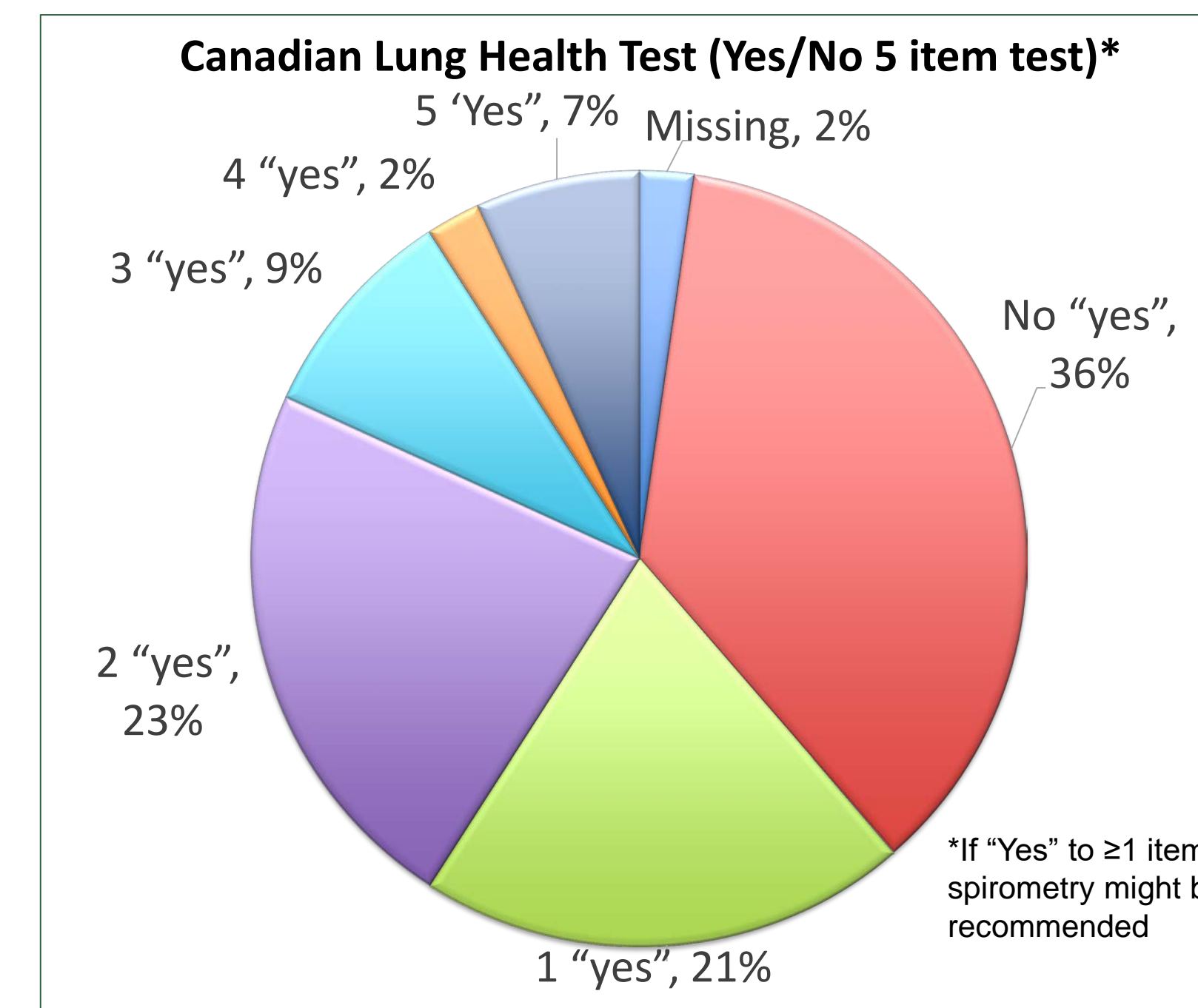
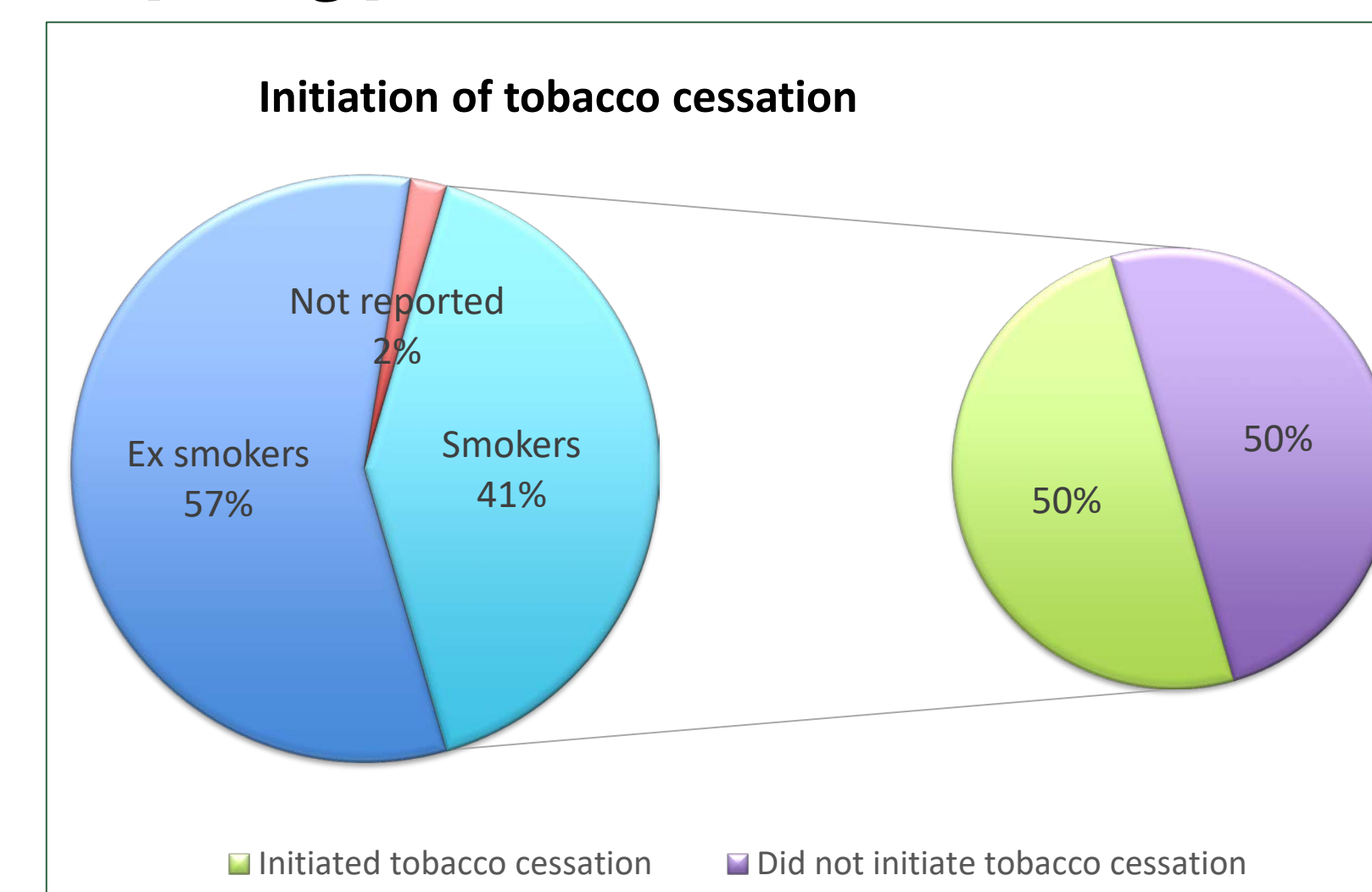
### METHODS

This was a pilot study of case-finding services provided to patients over 40 years old who were current or former smokers. All consented participants were invited to complete a 5-item respiratory screening questionnaire and microspirometry using a Vitalograph® COPD-6™. Pharmacists informed patient's physician if FEV<sub>1</sub>/FEV<sub>6</sub> was <0.75 and that the patient is recommended to be referred for a spirometry. Pharmacists provided tobacco cessation counseling for current smokers with intention to quit. Descriptive analyses were conducted to characterize patients, outcomes and services provided.

### RESULTS

#### Characteristics of participants from the six participating pharmacies

CHARACTERISTIC	N=44
Age, mean (SD)	65 (10.2)
Ethnicity n, (%)	
Aboriginal	2 (4.5%)
Black	1 (2.3%)
White (Caucasian)	39 (88.6%)
Asian	1 (2.3%)
Not reported	1 (2.3%)
Education n, (%)	
Some high school	9 (20.5%)
High school degree	13 (29.5%)
Some college/university	5 (11.4%)
College/University degree	12 (27.3%)
Other	5 (11.4%)
Employment n, (%)	
Employed	16 (36.4%)
Unable to work due to illness/disability	3 (6.8%)
Retired	21 (47.7%)
Not employed	4 (9.1%)
Occupational Hazard Exposure n, (%)	
Yes	28 (63.6%)
No	12 (27.3%)
Not reported	4 (9.1%)
Medical Conditions n, (%)	
Diabetes	12 (27.3%)
High blood pressure	16 (36.4%)
Depression	8 (18.2%)
Anxiety	11 (25%)
Sleep apnea	6 (13.6%)
Heart Disease	4 (9.1%)
Osteoporosis	3 (6.8%)
Obesity	9 (20.5%)
Acid Reflux	9 (20.5%)
Musculoskeletal disorder	6 (13.6%)
Asthma	7 (15.9%)
Dyslipidemia	4 (9.1%)
Arthritis	5 (11.4%)
Other	9 (20.5%)
Current smoking status n, (%)	
Yes	18 (40.9%)
No	25 (56.8%)
Not reported	1 (2.3%)
Current health status n, (%)	
Poor	3 (6.8%)
Fair	18 (40.9%)
Good	15 (34.1%)
Excellent	4 (9.1%)
Do you normally get the flu vaccination? n, (%)	
Yes, I try to get it every year	22 (50%)
Yes, but I only get it some years	10 (22.7%)
No, I never get flu shots	7 (15.9%)
Other	1 (2.3%)
Have you had the Pneumococcal Vaccine (if over 65)? n, (%)	
Yes	8 (18.2%)
No	13 (29.5%)
Not applicable	20 (45.5%)
Not reported	3 (6.8%)
Do you have a family history of chronic bronchitis, COPD? n, (%)	
Yes	10 (22.7%)
No	20 (45.5%)
Unsure	11 (25%)
Not reported	3 (6.8%)
Are you a regular purchaser of cough medicine? n, (%)	
Yes	7 (15.9%)
No	32 (72.7%)
Other	1 (2.3%)
Not reported	4 (9.1%)



- 7 out of 36 patients with available data were referred for a full spirometry, including 4 with FEV<sub>1</sub>/FEV<sub>6</sub> ≥0.7.
- 3 more participants were recommended to discuss lung assessment with a physician

## Implementation

- On average, pharmacist-provided screening session took 23(SD 7.6) min
- Patients were interested in provided service and their experience was overall positive (RPh reported)
- Post-phase II we conducted four semi-structured interviews with pharmacists who took part in the study.

### 9 main themes identified from pharmacist interviews

- Theme 1: Baseline COPD Interventions
- Theme 2: Program Training
- Theme 3: Patient Recruitment & Promotional Tools
- Theme 4: Program Tools
- Theme 5: Program Implementation
- Theme 6: Collaboration with other Healthcare Providers
- Theme 7: Patient Reactions
- Theme 8: Effect of COVID-19 Pandemic
- Theme 9: Future Considerations

**"I found that you usually need a team mentality to get initiatives going because if it's one person...it can become a bit of a burden on that one person...having someone on the team who can be almost a cheerleader and get everybody [involved], kind of reminding them, and that kind of thing?"**

### Program Positives

- Well designed and thorough
- Beneficial to patients
- Pharmacists motivated to provide service

### Program Negatives

- Lack of time
- Lack of staff and managerial support
- Implementation challenges posed by COVID-19

## ACKNOWLEDGEMENT

- The research was supported by the internal University of Alberta fund (start-up)
  - We appreciate all the involved pharmacists, pharmacy students and patients in this research
- Note: References available by request