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Relationship of Patient Self-Administered COPD Assessment Test (CAT) to Physician Standard Assessment of COPD in a Family Medicine Residency Training Program

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East Tennessee State University

Disclosures

- The authors have nothing to disclose.

Objectives

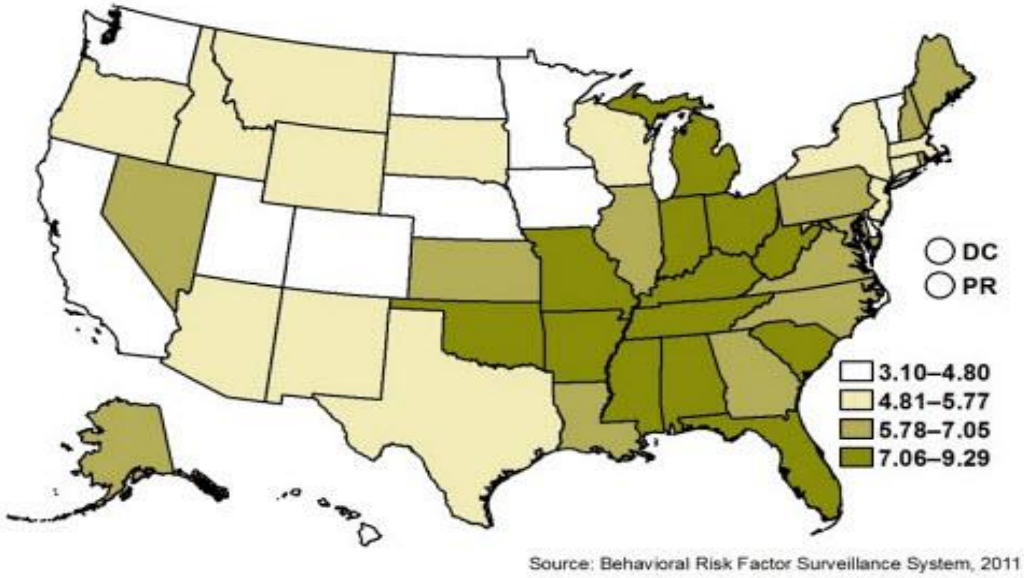
- Identify the wide variety of COPD symptoms that may impact a patient's daily life.
- Recognize the need for improved competency in COPD assessment among family medicine residents.
- Evaluate areas for COPD assessment improvement within clinical practice.

Background

- 2007: U.S. ranked 2nd in world for COPD mortality[1]
- 2010: COPD ranked 3rd leading cause of death in U.S.[2]
- COPD accounts for more lost productivity days than any other chronic condition[3]

Significance

- Frequent diagnosis in primary care
- High prevalence in TN
- How do we assess COPD?



Source: Behavioral Risk Factor Surveillance System, 2011

Purpose of Study

- To compare a patient's self-assessment of COPD impact on daily life to a physician's standard assessment

Study Criteria

Inclusion Criteria

Patients

- ≥ 18 years of age
- Diagnosed with COPD
- Scheduled clinic visit

Physicians

- All clinic physicians

Exclusion Criteria

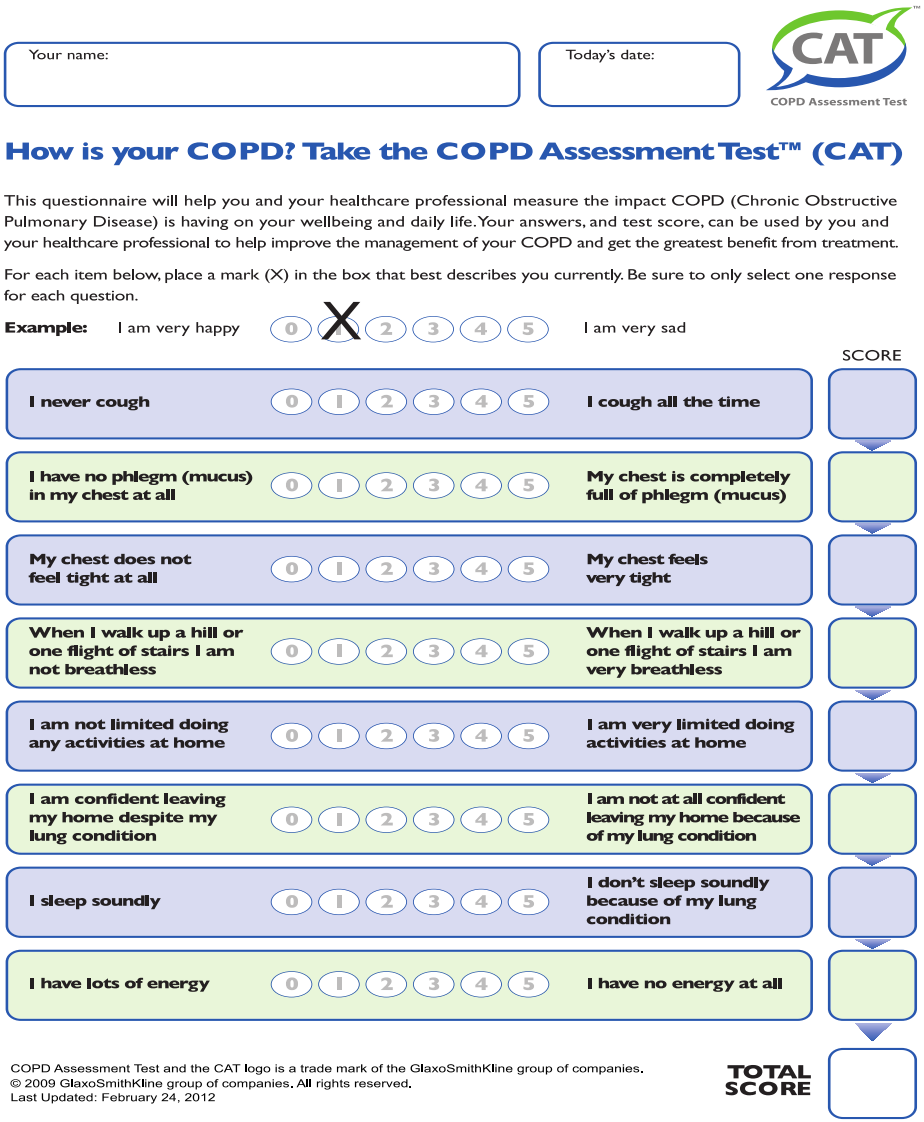
Patients

- Acute COPD exacerbation within two weeks of scheduled clinic visit

Physicians

- N/A

COPD Assessment Test (CAT)



Your name:

Today's date:

CAT
COPD Assessment Test

How is your COPD? Take the COPD Assessment Test™ (CAT)

This questionnaire will help you and your healthcare professional measure the impact COPD (Chronic Obstructive Pulmonary Disease) is having on your wellbeing and daily life. Your answers, and test score, can be used by you and your healthcare professional to help improve the management of your COPD and get the greatest benefit from treatment.

For each item below, place a mark (X) in the box that best describes you currently. Be sure to only select one response for each question.

Example: I am very happy 0 X 2 3 4 5 I am very sad

			SCORE
I never cough	0 1 2 3 4 5	I cough all the time	
I have no phlegm (mucus) in my chest at all	0 1 2 3 4 5	My chest is completely full of phlegm (mucus)	
My chest does not feel tight at all	0 1 2 3 4 5	My chest feels very tight	
When I walk up a hill or one flight of stairs I am not breathless	0 1 2 3 4 5	When I walk up a hill or one flight of stairs I am very breathless	
I am not limited doing any activities at home	0 1 2 3 4 5	I am very limited doing activities at home	
I am confident leaving my home despite my lung condition	0 1 2 3 4 5	I am not at all confident leaving my home because of my lung condition	
I sleep soundly	0 1 2 3 4 5	I don't sleep soundly because of my lung condition	
I have lots of energy	0 1 2 3 4 5	I have no energy at all	
		TOTAL SCORE	

- Introduced in 2009 by GlaxoSmithKline
- Validated measure of disease impact
- Score range 0 – 40
  - < 10 = Low impact
  - 10 – 20 = Medium impact
  - 21 – 30 = High impact
  - > 30 = Very high impact
- Minimum clinically important difference = 2 points

COPD Assessment Test: The User Guide for Healthcare Professionals. Available at: http://catestonline.org. Accessed April 20, 2017

COPD Assessment Test (CAT)

- Possible benefits
  - Open dialogue between patients and providers
  - Provide consistency in measuring disease impact
  - Identify more obscure symptoms of COPD
  - Monitor disease progress over time
  - Validated in multiple languages
- Current issues
  - Not currently universally available in the US
  - GSK ownership → CAT Governance Board

Governance Board for COPD Assessment Test Press Release. Available at: http://www.gsk.com/en-gb/media/press-releases/gsk-gold-and-the-copd-foundation-announce-formation-of-a-new-external-expert-governance-board-for-the-copd-assessment-test-cat/. Accessed April 20, 2017.

Patient Demographic Form

Relationship of patient self-administered COPD Assessment Test to physician standard assessment of COPD in a family residency-training program

Enrollment Number: _____

Instructions: Please answer the following questions to the best of your ability. You may choose not to answer a question if you prefer not to respond.

Age: _____ (please do NOT provide full date of birth)

Gender (check one):

_____ Male
_____ Female
_____ Choose not to identify

Smoking history (check one):

_____ Everyday smoker
_____ Sometimes smoker
_____ Former smoker
_____ Never a smoker

Have you needed steroids or antibiotics for your COPD, emphysema, or chronic bronchitis in the last three months?

_____ Yes
_____ No
_____ I don't know

Physician Assessment Form

Relationship of patient self-administered COPD Assessment Test to physician standard assessment of COPD in a family residency-training program

Enrollment Number: _____

Physician Instructions: Please fill out this form AFTER you have completed this patient encounter and the patient has left the room. Return this form to XXXX when complete.

How would you rate the impact of COPD on this patient's wellbeing and quality of daily life? (select one)

_____ Low impact

_____ Medium impact

_____ High impact

_____ Very high impact

Please indicate your current position within the program:

_____ PGY1
_____ PGY2
_____ PGY3
_____ Faculty physician

Gender:

_____ Male
_____ Female
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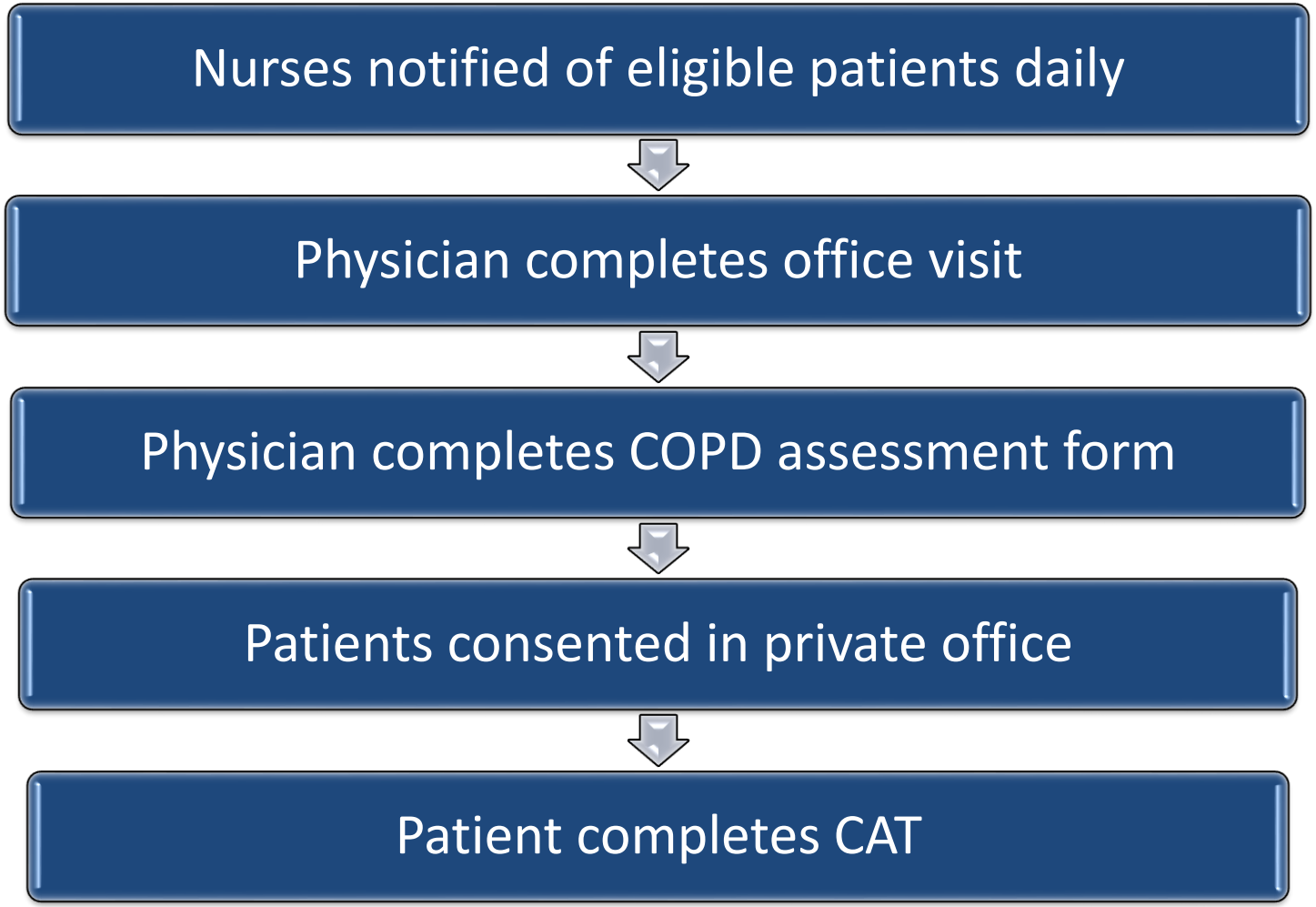
Daily Clinic Flow



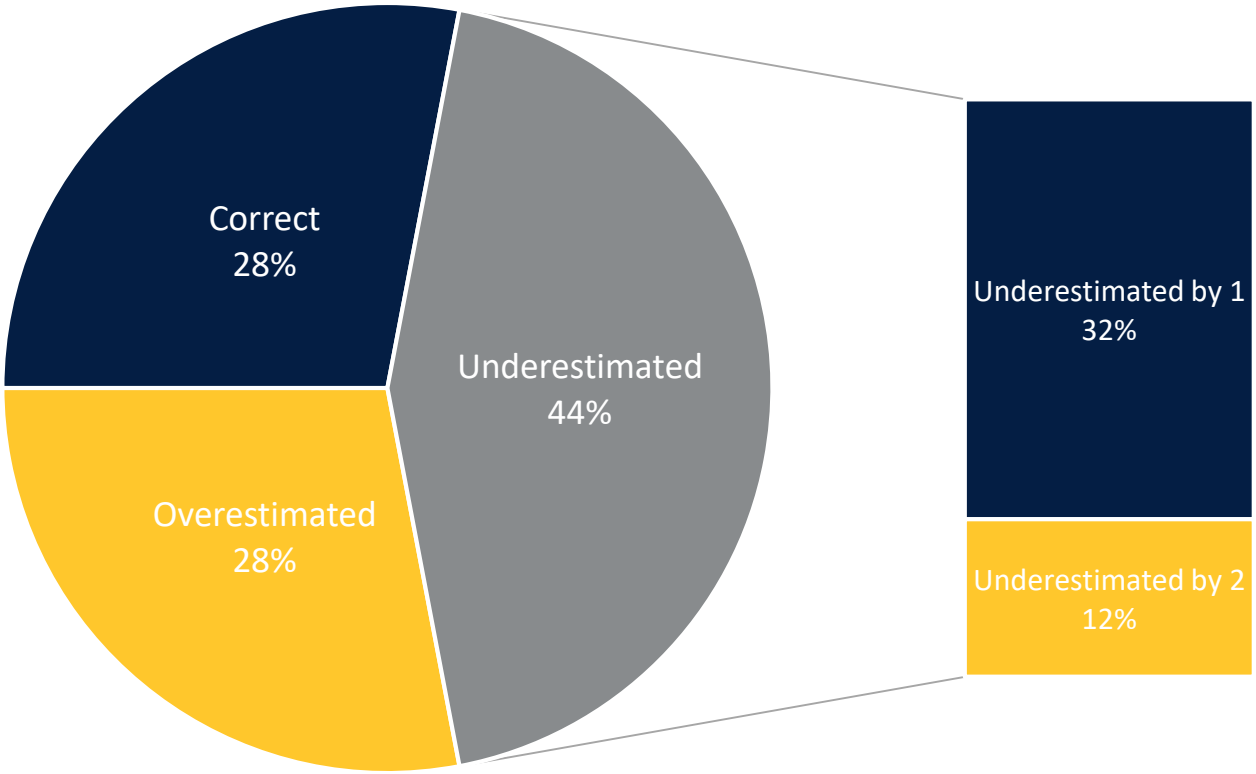
Methods

- Institutional Review Board approved – December 2016
- Project presentation to faculty and staff
- Physician consent obtained
- Weekly list of scheduled patients with COPD obtained from EHR
- List reviewed for inclusion and exclusion criteria
- Physician assessment and CAT coded for matched comparison
- Nurses notified daily of scheduled eligible patients
- Nurse rooms the patient and places physician rating form in exam room door. Matching coded CAT given to social health specialist

Methods Cont.

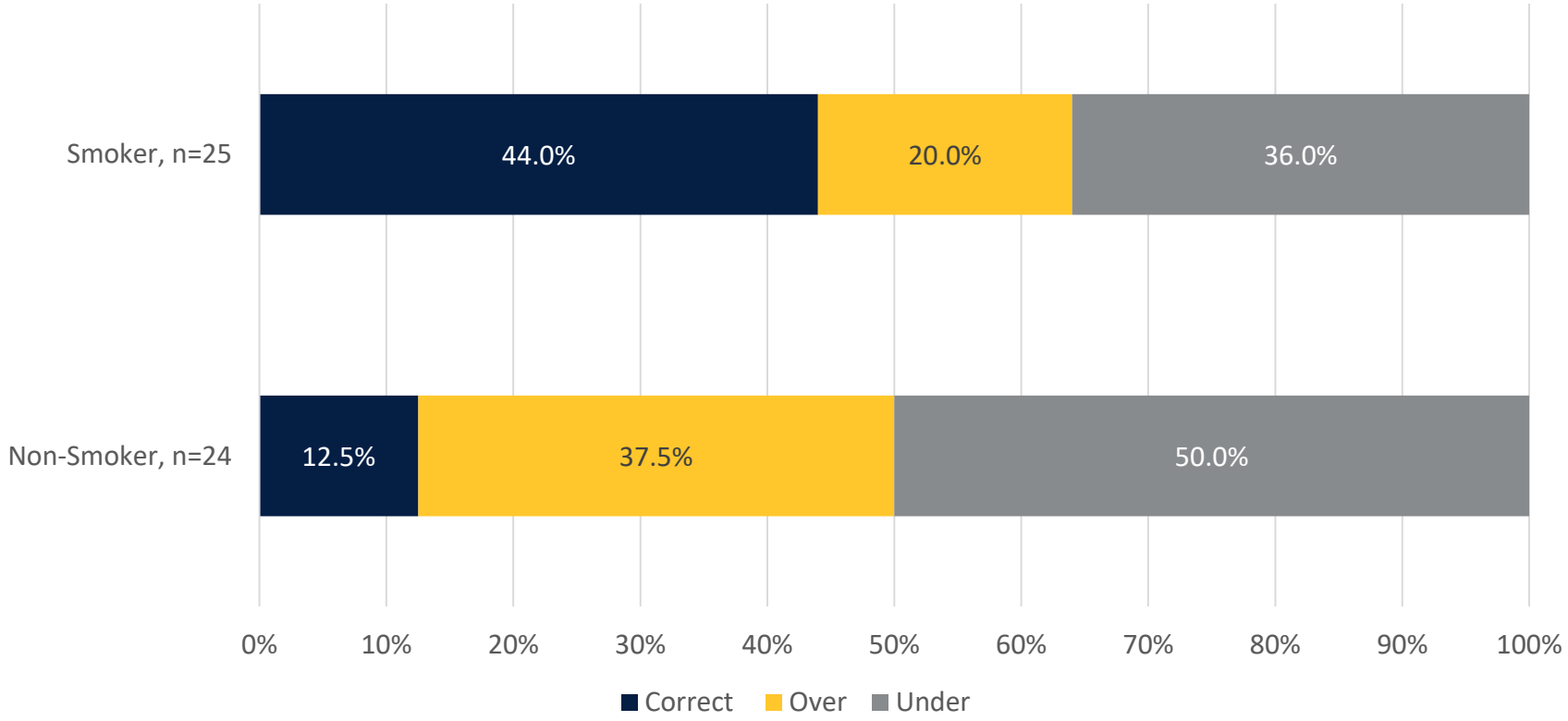
- Physician completes the office visit for the scheduled problem and completes the assessment of impact of COPD on the patient's daily life
- Patients who are willing to participate escorted to a private office
- Patient's consent obtained
- Patient completes the CAT
- Coded physician assessment and matching coded CAT paired together
- CAT scored
- *Goal: 50 patient/physician pairs OR three months*

Comparison of Physician Assessment vs Patient CAT Self-Assessment



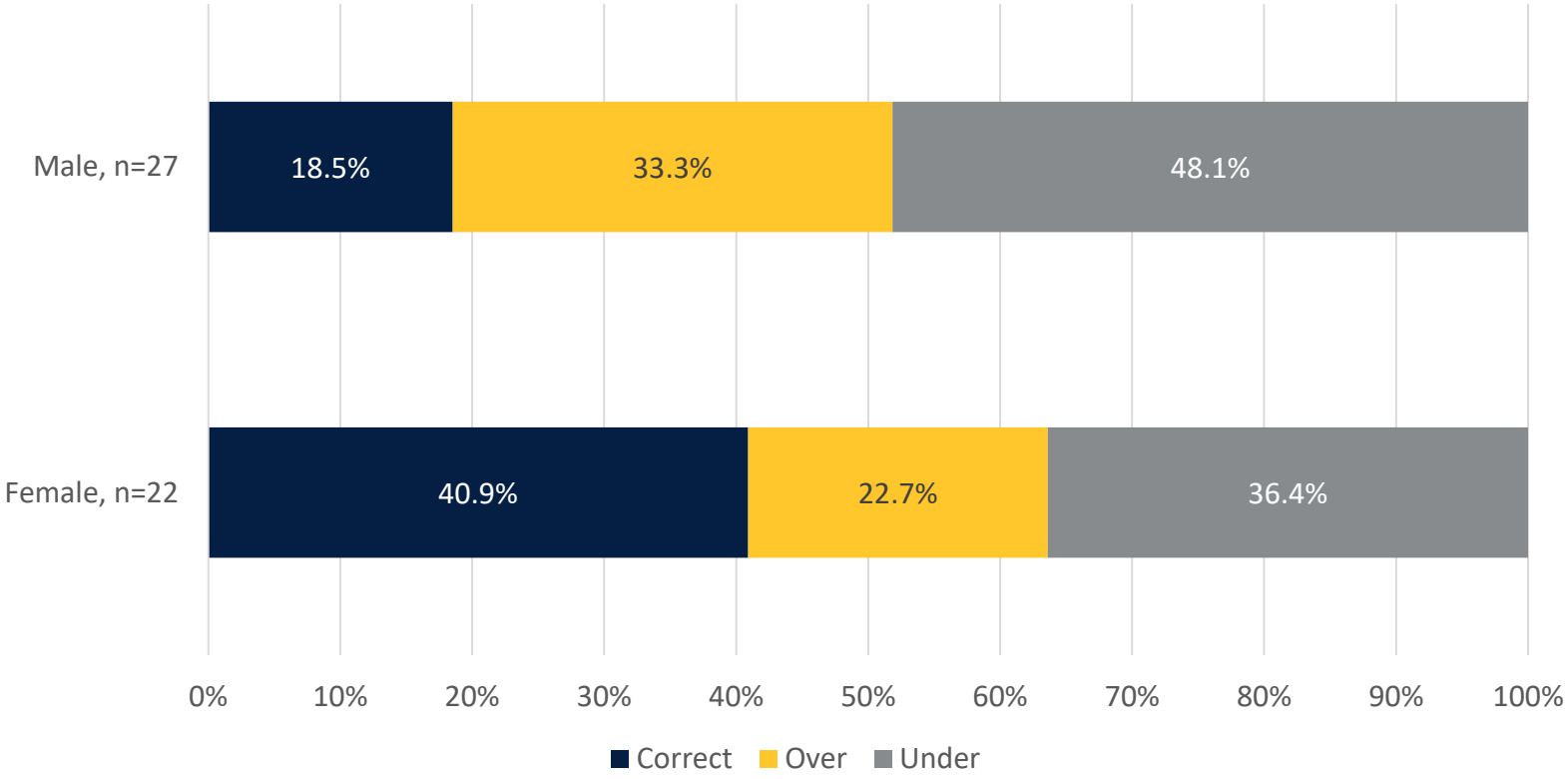
$\chi^2 = 11$, $p=.012$

Patient Smoking Status and Physician Assessment Outcome



$\chi^2 = 6.13$, $p=.047$

Physician Gender and Assessment Outcome



$\chi^2 = 2.98$, $p = .084$

Limitations

- Small sample size (convenience sample)
- Impossible to eliminate all physician bias once study began
- Unable to assess familiarity of physician with patient
- Categorical assessment for physicians vs continuous data assessment for patients

Conclusions

- Discrepancy in physician and patient ratings of the impact COPD has on patients' daily lives
- Highlight the need for a more formalized patient self-assessment process
- Patient assessment can create discussion between providers and patients
- Curricular implications include the need for additional COPD assessment training as well as integration of the CAT into resident training.

References

1. National Hearth Lung and Blood Institute. Morbidity and Mortality: Chart Book on Cardiovascular, Lung, and Blood Disease. 2009.

2. Centers for Disease and Prevention. National Center for Health Statistics. National Vital Statistics Report. “Deaths: Final Data for 2010.” May 2013; 61(04).

3.“Chronic Obstructive Pulmonary Disease and Social Security Disability.” Disability Benefits Help.

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