Best Practices in Caring for Patients with

Idiopathic Pulmonary Fibrosis

OUTCOMES SUMMARY REPORT

Live Educational Activity Series

April 27, 2016| April 28, 2016 | May 3, 2016| May 4, 2016

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Executive Summary: Activity Details

Background: With the goal of improving patient care, National Jewish Health implemented an educational initiative designed to address identified professional practice gaps and educational needs related to the diagnosis, management, and treatment of idiopathic pulmonary fibrosis (IPF).

This live, interactive dinner series consisted of four workshops featuring case-based learning, multi-media approaches, and written materials to engage participant learners.

The workshops were held April and May 2016 in Hallandale Beach (Miami), FL; Tampa, FL; Atlanta, GA and Nashville, TN.

Target Audience: Family physicians and internal medicine physicians, along with community pulmonologists that diagnose and treat idiopathic pulmonary fibrosis were the primary target audience members for this educational program. In addition, physician assistants, nurse practitioners, advanced practice nurses, respiratory therapists and pharmacists were included in our secondary audience for the educational initiative.

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Executive Summary: Activity Details

- **Program Design:** The Office of Professional Education at National Jewish Health developed the CME/CE activity in collaboration with expert faculty from National Jewish Health. An Audience Response System (ARS) was utilized in each location to facilitate active engagement by participants and maximize learning opportunities by incorporating interaction, discussion, and real-time feedback from faculty presenters.
- **Educational Outcomes Strategy:** National Jewish Health aimed at measuring knowledge, competence and performance for this activity. The success of the program was measured by the following:
  - Pre-test
  - Post-test
  - Evaluation
  - 45-day follow-up survey

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Faculty

Faculty presenters included:

- **Tristan Huie, MD**, Assistant Professor, Department of Medicine, Division of Pulmonary, Critical Care, and Sleep Medicine, National Jewish Health
- **Evans Fernández Pérez, MD, MSc,** Assistant Professor, Department of Medicine, Division of Pulmonary, Critical Care, and Sleep Medicine, National Jewish Health
- **Rebecca Keith, MD,** Assistant Professor, Department of Medicine, Division of Pulmonary, Critical Care, and Sleep Medicine, Interstitial Lung Disease Program, Sarcoidosis Program, National Jewish Health
- **Lisa Lancaster, MD,** Clinical Director Interstitial Lung Disease Program, Associate Director of Adult Cystic Fibrosis Program, Assistant Professor of Medicine, Department of Medicine, Allergy, Pulmonary, and Critical Care Medicine, Vanderbilt University Medical Center

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Faculty

Faculty presenters included (continued):

- **Amy Olson, MD, MSPH,** Assistant Professor, Department of Medicine, Division of Pulmonary, Critical Care, and Sleep Medicine, National Jewish Health

- **Josh Solomon, MD,** Assistant Professor, Department of Medicine, Division of Pulmonary, Critical Care, and Sleep Medicine, National Jewish Health

- **Zulma Yunt, MD,** Assistant Professor of Medicine, Department of Medicine, Division of Pulmonary, Critical Care, and Sleep Medicine, National Jewish Health

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Executive Summary: Certification

The four programs were each certified for:

- 2.5 *AMA PRA Category 1 Credits*™
- 2.8 Nursing Contact Hours (California Board of Registered Nursing)
- 2.5 Pharmacy Contact Hours (0.25 CEUs, Accreditation Council for Pharmacy Education)
- 2.26 Respiratory Contact Hours (American Association for Respiratory Care)

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Learning Objectives

Upon completion of this activity, participants will be able to:

1. Discuss various health-related quality of life measures that can be used to improve functional status of patients with IPF
2. Describe best practices for diagnosing IPF based on the most recent evidence-based guidelines
3. Discuss IPF key diagnostic procedures including HRCT scanning and surgical lung biopsy
4. Develop a comprehensive approach to the management of IPF based on the most recent clinical data, including both pharmacologic and non-pharmacologic therapies
5. Determine appropriate communication skills to use as tools to effectively educate patients with IPF about their disease

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Attendee Breakdown (N=227)

	Miami	Tampa	Atlanta	Nashville
Pulmonologist	2	0	0	2
IM Physician	7	14	16	10
Nurse	8	3	12	7
NP	3	3	14	5
PA	0	0	6	0
Pharmacist	8	27	28	8
RT	18	3	4	9
Other*	3	2	2	3
Total	49	52	82	44

*Other: AAS, AD, AS, BS, DHSc, MA, Med, and MSW

Average number of attendees per dinner: **57**

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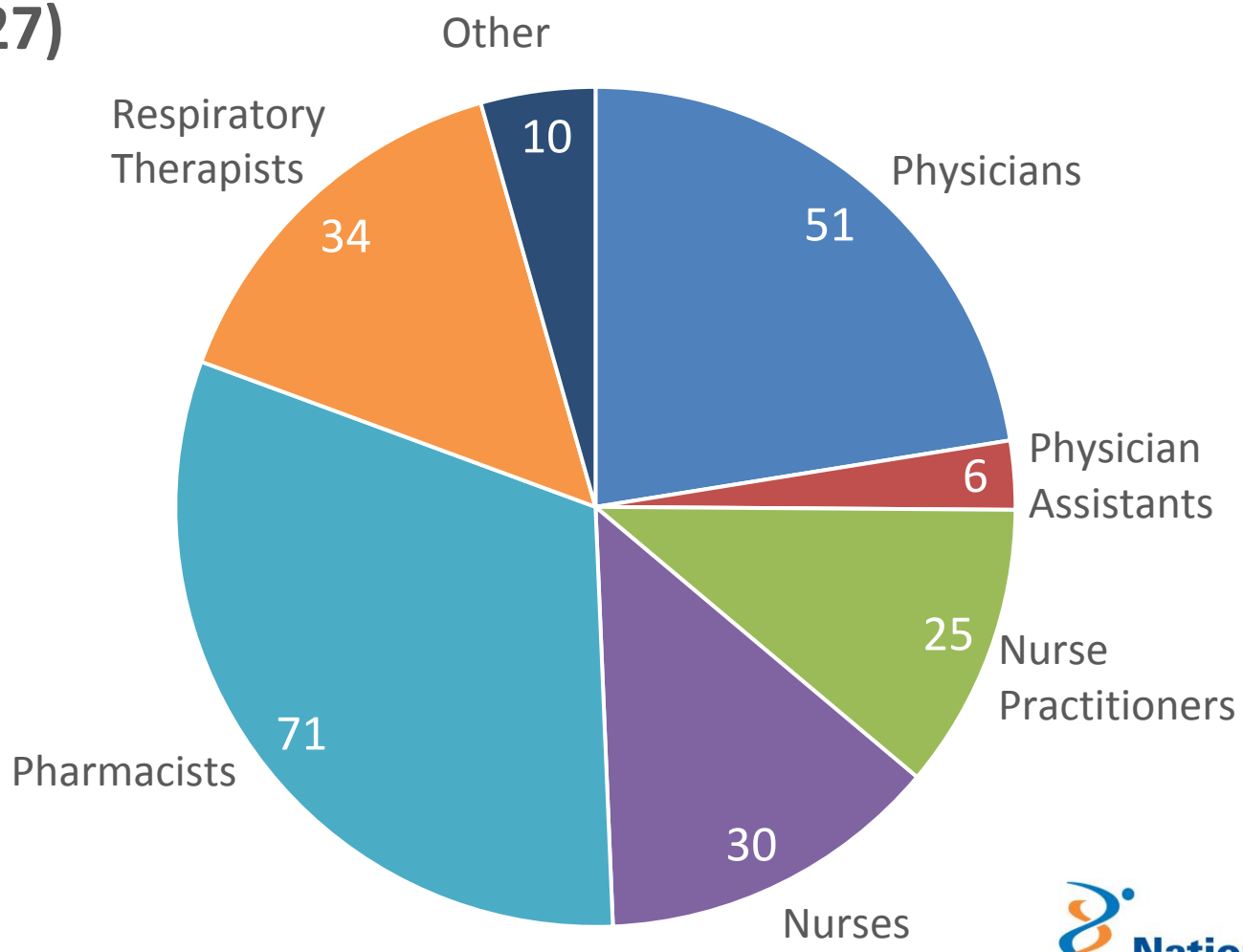
Level 1 Outcomes: Participation

(N=227)



OTHER:

AAS
AD
AS
BS
DHSc
MA
MEd
MSW

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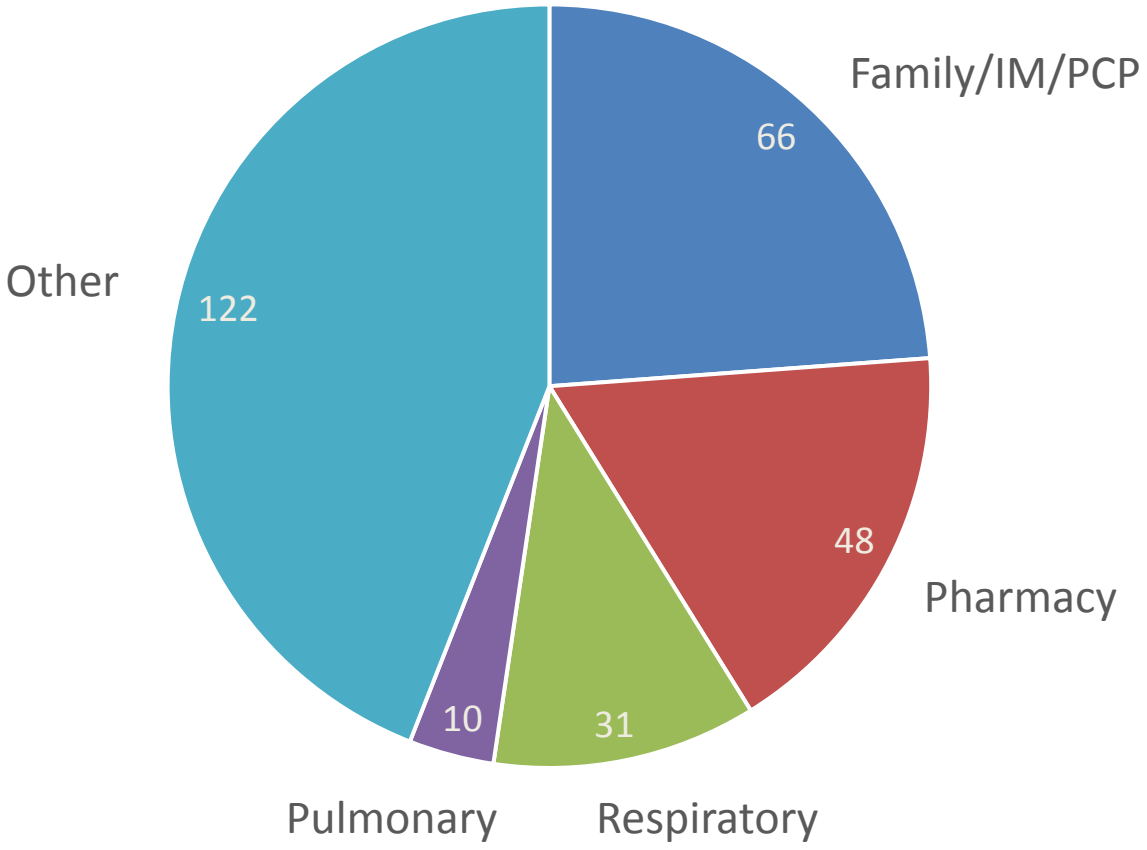
Level 1 Outcomes: Participation

Specialties



OTHER:

Adult Care
Case Management
Critical Care
Emergency
Geriatrics
Hospitalist
ICU
ILD
Interventional Rad
LTC
NICU
Nuclear Medicine
Surgery

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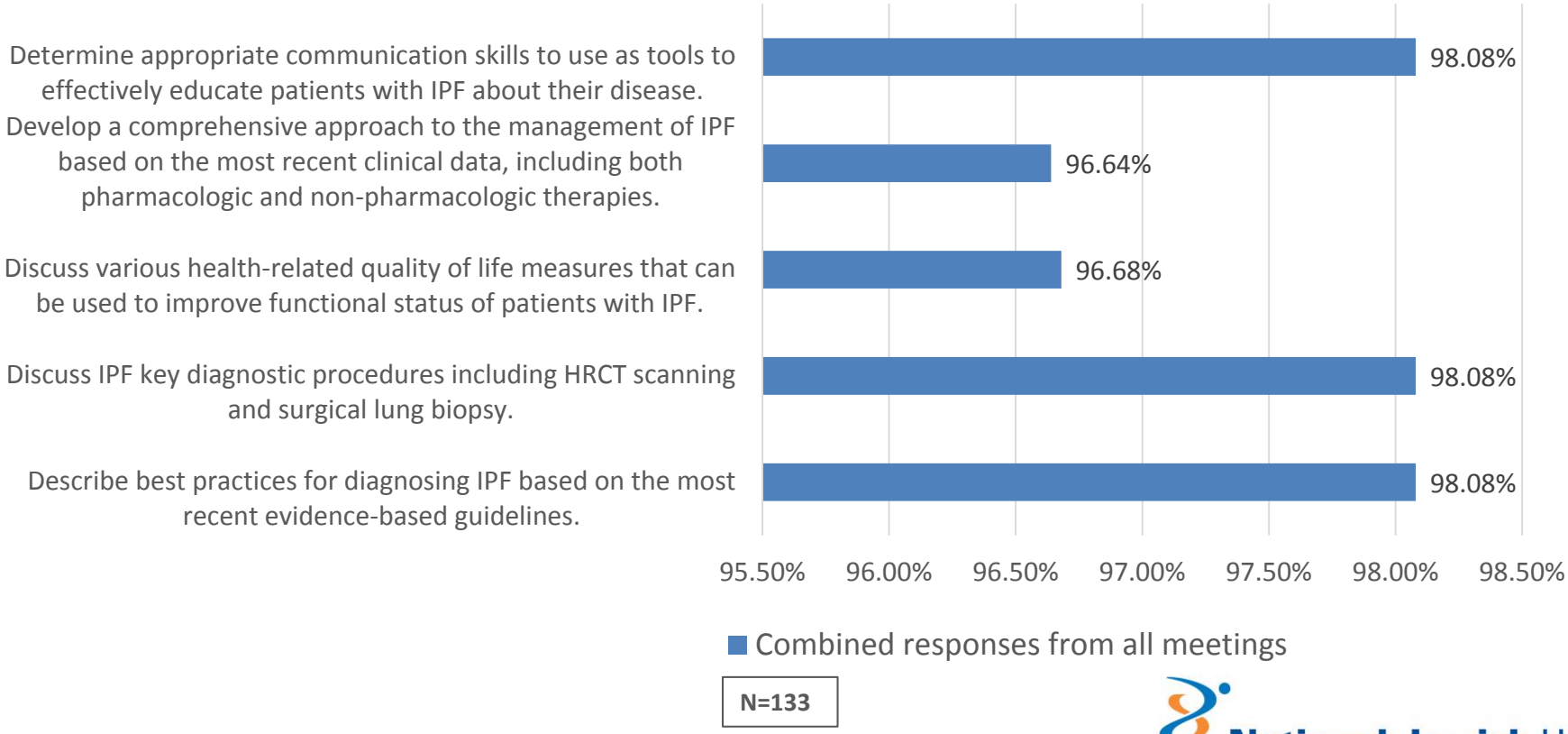
Level 2 and 3 Outcomes: Satisfaction and Learning

Analysis of Participants' Responses Related to Learning Objectives

How well did the content presented address the stated learning objectives:



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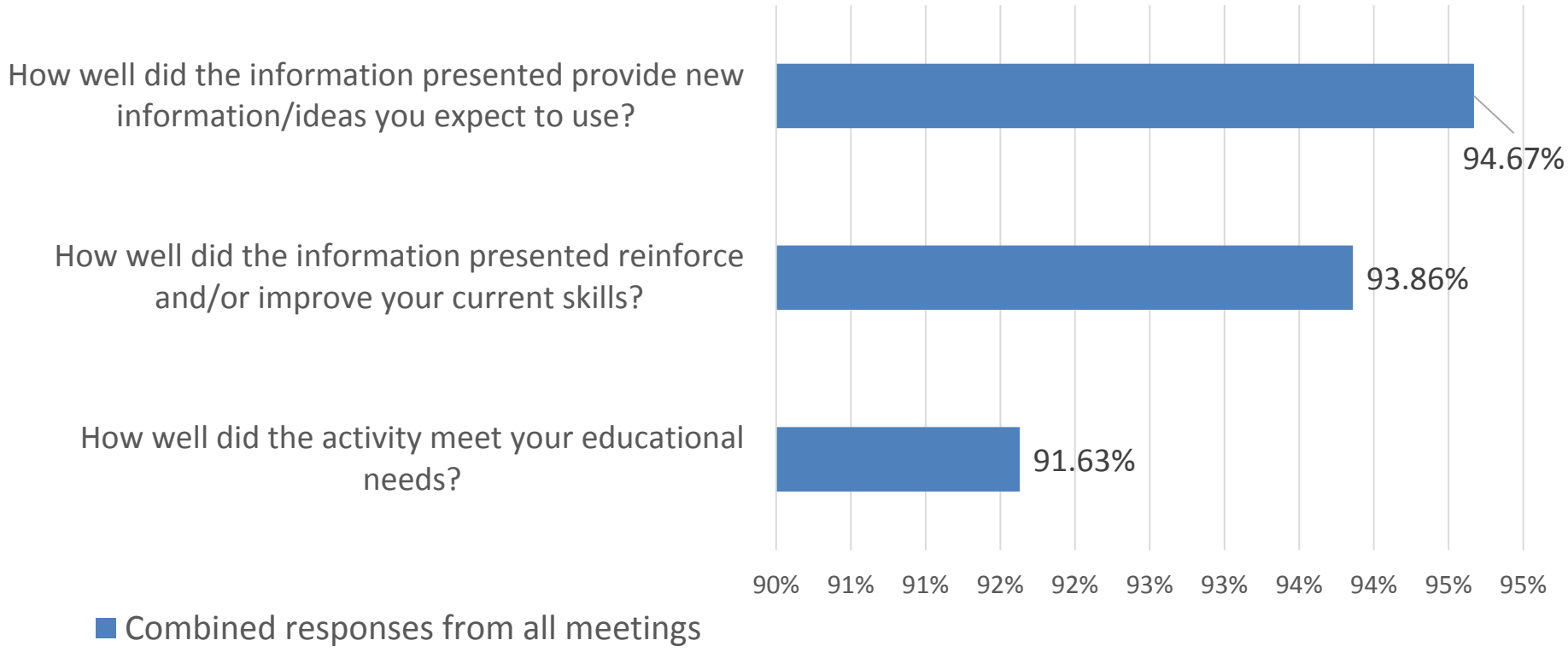
Level 2 and 3 Outcomes: Satisfaction and Learning

Analysis of Participants' Responses Related to Educational Needs



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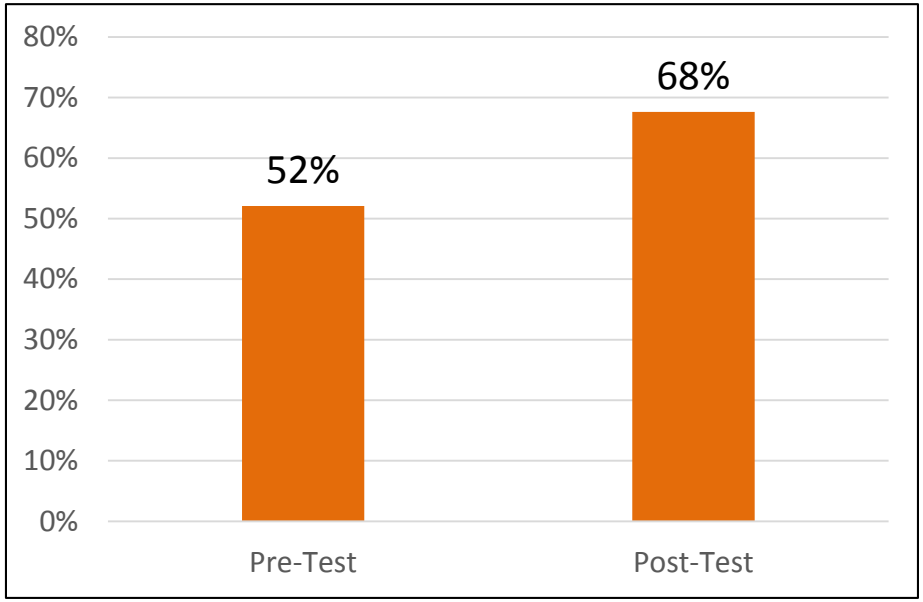
Level 3 and 4 Outcomes: Learning (Knowledge and Competence)

Level 3 and 4 outcomes were measured by comparing participants' pre- and post-test answers. The attendees' responses to these questions demonstrated that **participants gained knowledge as a result of the activity.** Responses to the pre-test at each activity location were communicated to faculty presenters so that they were aware of gaps in knowledge for the specific learner audience.

Overall, participants demonstrated an average 31% increase in declarative and procedural knowledge and competence as a result of this activity.

Measured in %

N = 133



Overall increase in knowledge: **31% from baseline to post-test.**

Knowledge gain was marked by an increase in correct responses from pre- to post-activity.

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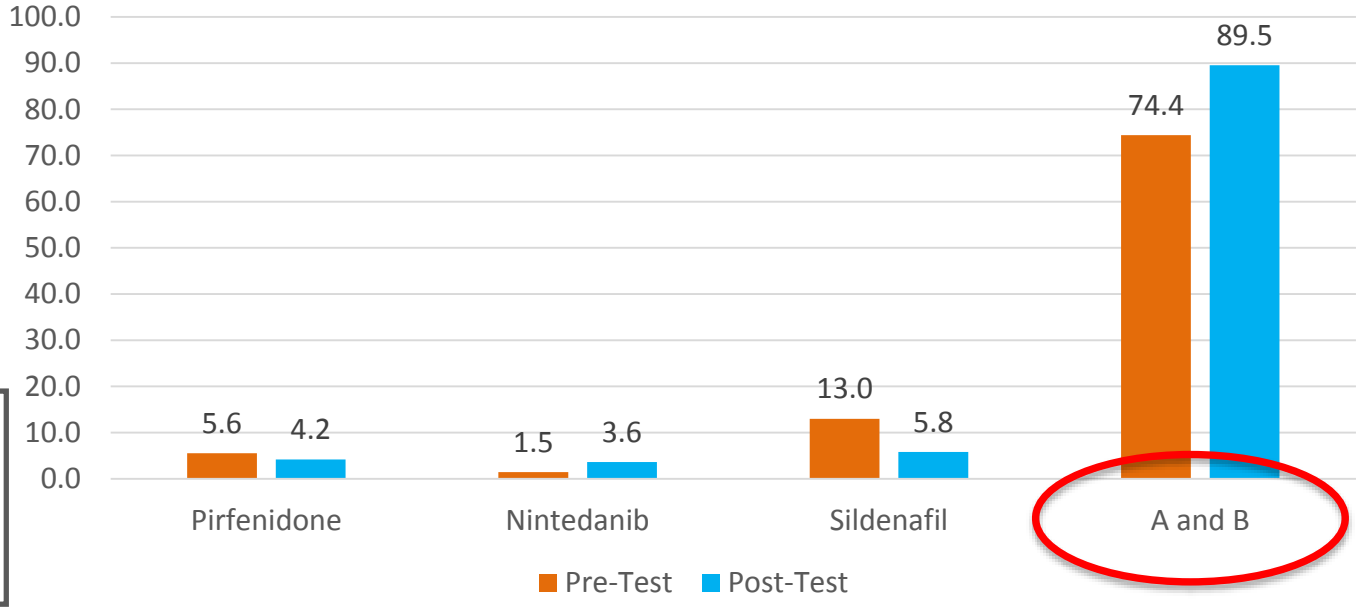
Pre/Post Test Comparison:
Question Example (Addresses Learning Objectives 2&4)

Question: A 62 year-old man has stable IPF. Which of the following therapies is FDA-approved to treat IPF in this patient?



Increase in knowledge: 20% from baseline to post-test.

Best Answer: The best answer is **d. A and B (Pirfenidone and nintedanib).** 74.4% of participants that responded selected the correct answer during the pre-test, compared to 89.5% in the post-test.

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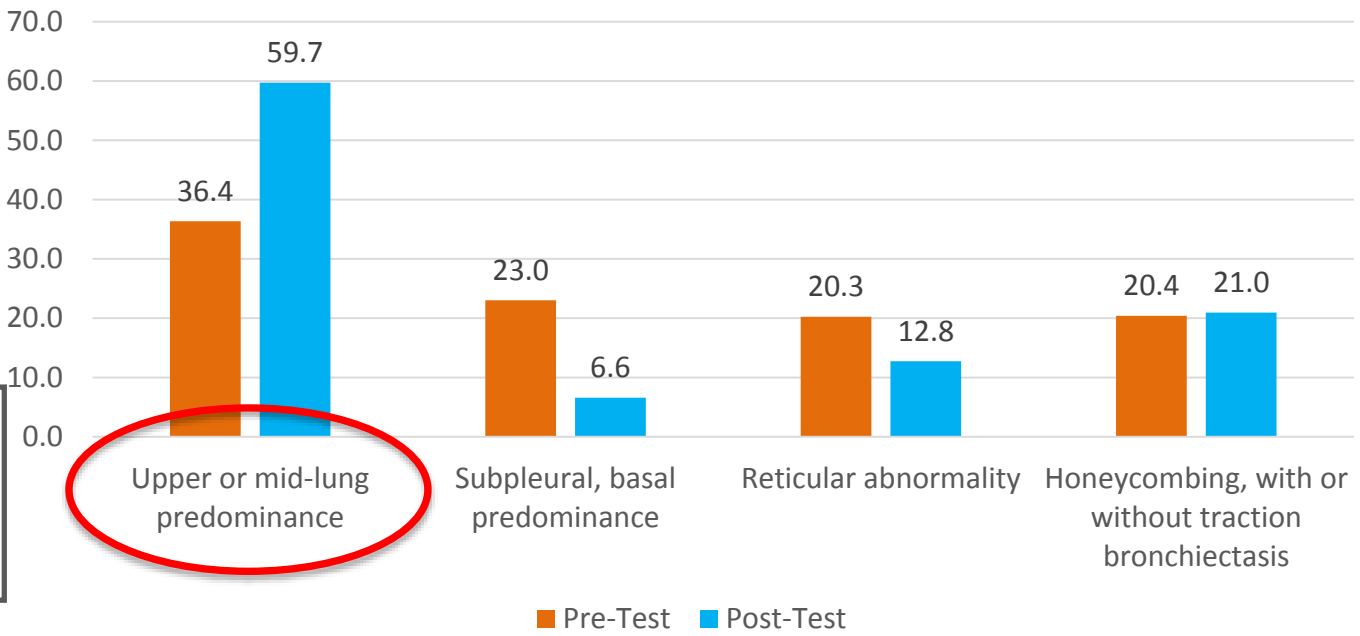
Pre/Post Test Comparison:
Question Example (Addresses Learning Objective 3)

Question: Which of the following is not a feature of the UIP pattern on high-resolution chest CT scan:



Increase in knowledge: 64% from baseline to post-test.

Best Answer: The best answer is **a. Upper or mid-lung predominance.** 36.4% of participants that responded selected the correct answer during the pre-test, compared to 59.7% in the post-test.

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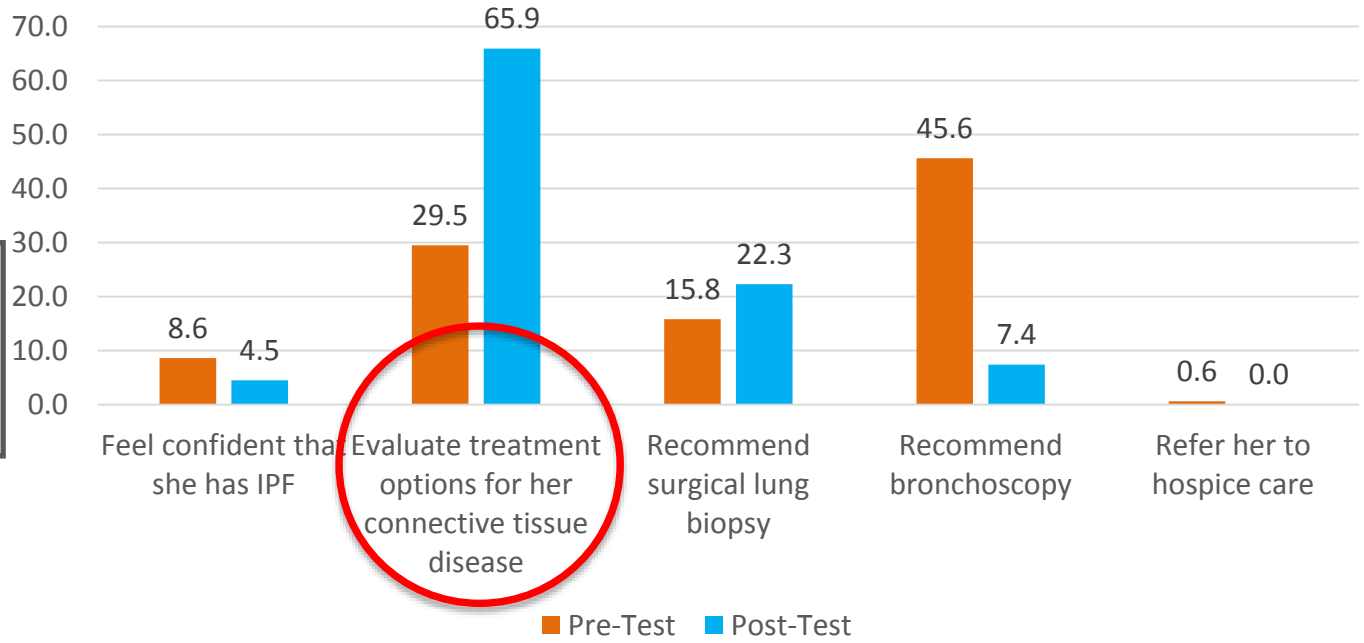
Pre/Post Test Comparison:
Question Example (Addresses Learning Objective 4)

Question: A 58 year-old woman presents with 6 months of symmetric pain and stiffness in her fingers, fatigue, mild dyspnea, and a positive rheumatoid factor. Her high-resolution chest CT scan shows only ground glass abnormality. There are no significant environmental, occupational, or drug exposures. There are no contraindications to bronchoscopy or chest surgery. At this point, you would:

Increase in knowledge: 123% from baseline to post-test.



Best Answer: The best answer is **b. Evaluate treatment options for her connective tissue disease.** 29.5% of participants that responded selected the correct answer during the pre-test, compared to 65.9% in the post-test.

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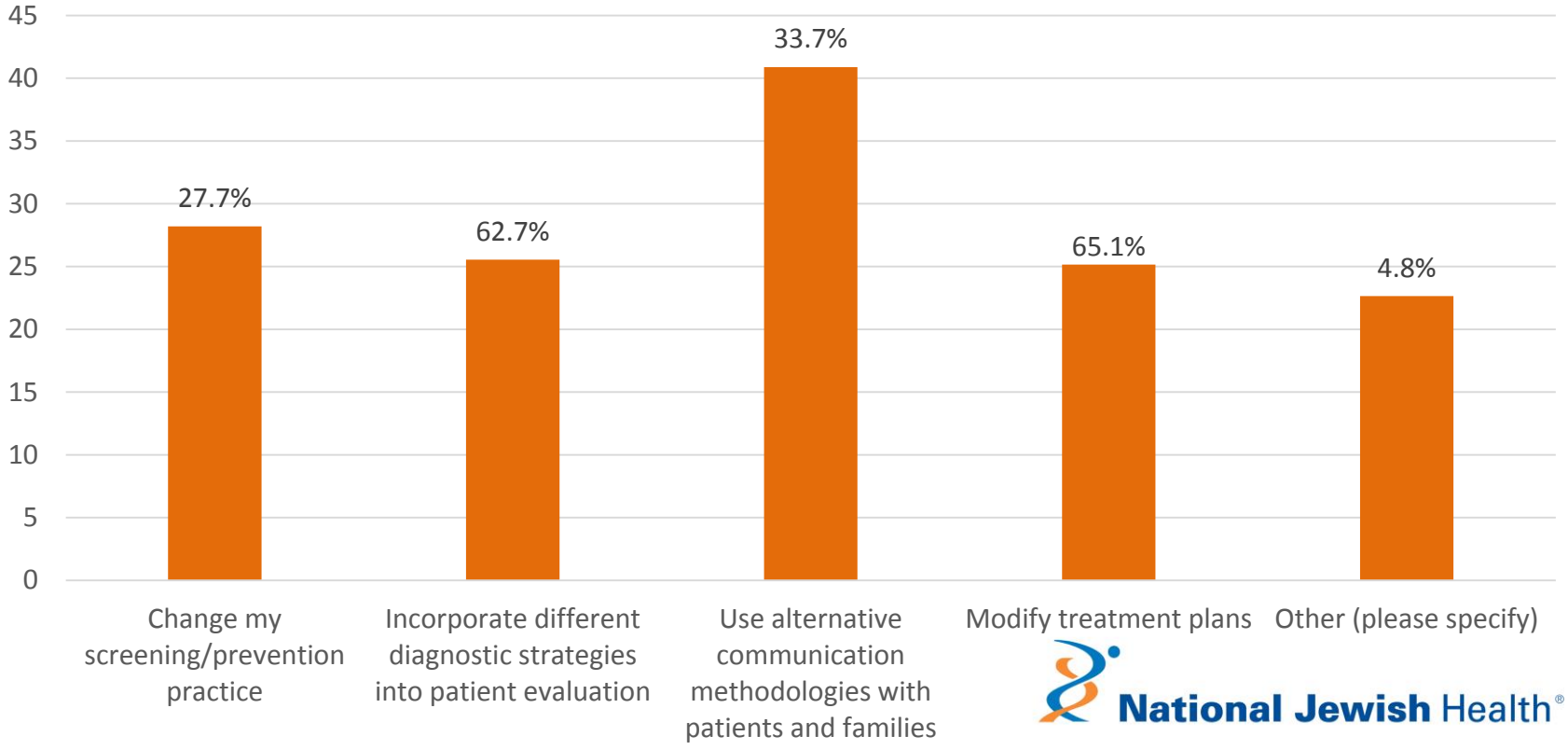
Level 4 Outcomes: Competence (Intent to Change)

82% of participants that completed the evaluation stated that they are somewhat to extremely likely to make a **change to their practice based on the content presented**.

Other: Explore transtracheal O2, Communicate with patients, focus on better lung exam

The changes I intend to make in my practice include:



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Evaluation Results

The attendees' responses to evaluation questions demonstrated the following, averaged across the four locations:

- **82%** of participants stated that they are extremely or somewhat likely to make a change to their practice based on the information presented.
  - Intended changes in practice included using alternative communication methodologies with patients and families (40.9% of respondents) and changing screening/prevention practice (28.2% of respondents).
- **98%** of participants indicated that the materials were presented objectively and free of commercial bias.
- **100%** indicated that the content was evidence-based and clinically relevant.

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Evaluation Results

What is the most important take-away for you from this activity?
[Learner responses including linkage to learning objectives (LO)]

- New medications in the pipeline **LO 4**
- IPF has been misdiagnosed for many years **LO 2**
- Communication with patients and families **LO 5**
- That IPF is one type of ILD with an important need for correct diagnosis in order to drive the appropriate work up and therapy recommendations **LO 2**
- Lung biopsy is the only way to get a definite diagnosis **LO 3**
- Correct diagnosis is key patient care **LO 2**
- No prednisone for treatment of IPF unless pneumonia **LO 4**
- Lifestyle changes for improving quality of life with pulmonary fibrosis **LO 1**
- Signs and symptoms of IPF **LO 2**
- Improve quality of life for patients with disease **LO 1**
- The importance of pulmonary rehabilitation program for these patients, the knowledge of IPF comorbidity and the criteria for confirmation of the diagnosis for this disease. It is also interesting to know that the research for management of this condition is still ongoing knowing how poor the prognosis has shown **LO 1**

***See slide 7 for the list of learning objectives**

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Level 5 Outcomes: Self-Reported Performance (45-Day Survey Results)

- **75%** of respondents (n=83) indicated that this CME activity provided new ideas or information they have used in practice. The majority of respondents report seeing 1-5 patients with IPF per week.
- **92%** of respondents indicated that their patients have benefited from the information learned during this CME activity.
- The top three changes respondents have made or intend to make (for those that had not seen any IPF patients within the 45-day time period) are:
  1. Change my screening/prevention practice
  2. Incorporate different diagnostic strategies into patient evaluation
  3. Use alternative communication methodologies with patients and families

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Educational Needs

Learner responses to ARS questions presented at each activity location indicated further education would be beneficial in the following areas:

- Different types of Interstitial Lung Diseases that exist.
- Prominence of Pulmonary Fibrosis in men versus women.
- Appropriate treatment options for initial diagnosis of Idiopathic Pulmonary Fibrosis.

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Summary

This educational activity series effectively addressed performance gaps among providers and allied health professionals in the diagnosis, treatment and management of patients with IPF.

Learner comments:

- “Well rounded content of IPF.”
- “It was a fair and balanced program.”
- “I felt this was an awesome presentation. I enjoyed it a lot. I learned a lot. ”
- “Everything was excellent!”

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