OPTIMIZING THE MULTIDISCIPLINARY MANAGEMENT OF FIBROSING ILD: NP PERSPECTIVES ON DIAGNOSIS, EMERGING THERAPEUTICS, AND LONGITUDINAL MONITORING

AANP American Association of NURSE PRACTITIONERS®

Introduction & Gaps

Introduction: Interstitial lung disease (ILD) encompasses a broad and heterogeneous spectrum of diseases, all of which are characterized by progressive inflammatory processes and cardinal respiratory signs/symptoms, and the majority result in eventual pulmonary fibrosis. This subset of ILDs that fibrose – aptly termed fibrosing ILDs – can be further categorized as idiopathic pulmonary fibrosis (IPF), progressive pulmonary fibrosis (PPF), or a menagerie of other subtypes. IPF and PPF have been particular arenas of therapeutic evolution, driven by an increased understanding of disease pathophysiology and consequent improvements in pharmacologic targetability. Despite these advances, clinician awareness of fibrosing ILDs remains suboptimal, leading to delays in diagnosis and linkage to best practice treatments. Primary care and pulmonary nurse practitioners (NPs) are sentinel patient-facing providers in the fibrosing ILD collaborative care cascade. Therefore, to equip and empower the multidisciplinary team of NPs who help manage patients with fibrosing ILDs, adaptive educational efforts focused on evolving best practices for diagnosis, treatment, and longitudinal monitoring should be curated and expressly tailored to these NP audiences.

Knowledge Gaps

- Primary care and pulmonology NPs lack awareness of the prevalence, presentation, pathophysiology, and clinical gravity of fibrosing ILDs.
- Primary care and pulmonology NPs have limited ability to appropriately establish clinical suspicion of fibrosing ILDs and lack understanding of the current guideline-directed diagnostic pathway and recommendations for longitudinal multidisciplinary monitoring.
- Primary care and pulmonology NPs lack knowledge of the established and evolving evidentiary base for novel pharmacotherapeutics in the treatment of fibrosing ILDs.

This education was developed for primary care and pulmonary NPs. It is particularly intended for those NPs who practice at the patient interface, as it here that early recognition, timely diagnosis, and subsequent linkage to novel therapies is best achieved. Our educational goal was to equip these NPs with the requisite knowledge, confidence, and competence needed to advance the quality of care for their patients with fibrosing ILDs.

Program Information

Format: Our educational initiative was multimodal and included an accredited podcast (1.2 hours of CE with 0.4 pharmacotherapeutic contact hours) and an interactive case study module (0.75 hours of CE with 0.25 pharmacotherapeutic contact hours).

Target Audience: Nurse practitioners (NPs) working, as part of a collaborative multidisciplinary care team, in either primary care or pulmonology practice settings.

Data Collected: Changes in knowledge, confidence, competence, and self-reported knowledge gained; practice changes made, barriers to change, and patient impact; frequency of use (prior to education) and planned frequency of use (after the education).

Measurements and analysis: Outcomes questions were designed with direct linkage to learning objectives and identified educational gaps. Post-test and evaluation questions were utilized for the podcast; pre-test, post-test, and evaluation questions were used for the interactive case study module. The McNemar test was utilized to measure statistical significance (defined as $P \leq 0.05$) of pre-to-post dichotomized changes, while the Wilcoxon signed-rank test was used to quantify the overall pre/post percentage correct. Cohen's d_z was used to quantify changes across numerical scales, including matched pair odds ratios.

Learning Objectives:

- Describe the epidemiology, pathophysiology, and overarching patient burden of fibrosing interstitial lung diseases (ILDs), including cardinal symptomatology and morbidity/mortality implications.
- Recognize clinical presentation and establish clinical suspicion of fibrosing ILD as a means of achieving timely patient linkage to the guideline-directed diagnostic pathway.
- Examine current guideline recommendations for the diagnosis and longitudinal, multidisciplinary monitoring of patients with fibrosing ILDs, with a focus on IPF and PPF.
- Review the traditional IPF/PPF treatment paradigm, emphasizing the need for novelty.
- Evaluate the clinical trial evidence, guideline recommendations, and/or regulatory milestones for emerging novel pharmacotherapeutics in the treatment of IPF or PPF

Faculty:

Jessica Glennie, MSN, APRN

Nurse Practitioner
Cleveland Clinic, ILD Center
Cleveland, OH

Corinne Young, MSN, FNP-C, FCCP

Nurse Practitioner
President/Founder of APAPP
Director of Clinical Services, Colorado Springs Pulmonary Consultants
Colorado Springs, CO

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Reaching NPs Where Patient Care Happens

Patient impact estimated using response-category mid-points; Activity responses may include learners who completed both modalities

PODCAST 8,900+ downloads

79%	41%	8,521
PATIENT-FACING NPs	IN PRIMARY CARE	PATIENTS IMPACTED PER WEEK
n = 3,136	n = 1,283	

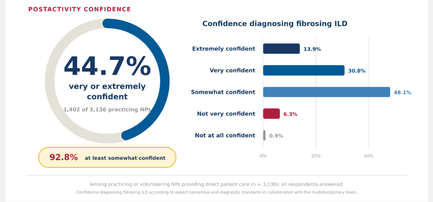
INTERACTIVE CASE STUDIES

80%	41%	5,521
PATIENT-FACING NPs	IN PRIMARY CARE	PATIENTS IMPACTED PER WEEK
n = 2,373	n = 968	

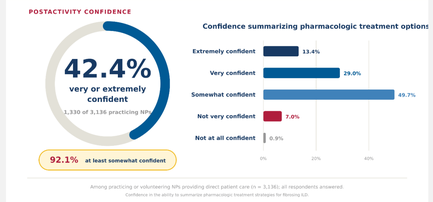
≈14,042 POTENTIAL PRIMARY CARE PATIENT ENCOUNTERS IMPACTED EACH WEEK ACROSS BOTH ACTIVITIES

Podcast Results – Post-Activity Knowledge and Confidence

Postactivity confidence diagnosing fibrosing ILD



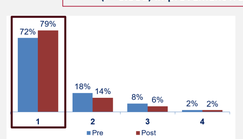
Postactivity confidence summarizing pharmacologic options



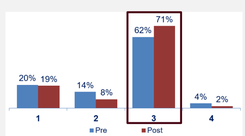
Interactive Case Results – Changes in Knowledge and Confidence

All 4 pre/post-test questions achieved statistically significant ($P<0.001$) improvement from pre-to-post-activity:

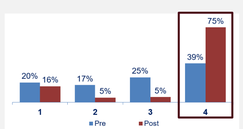
PRE/POST Q1: AVERAGE TIME TO DIAGNOSE FIBROSING ILD FROM SYMPTOM ONSET



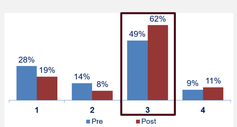
PRE/POST Q2: CLINICAL SCENARIO MOST CONSISTENT WITH FIBROSING ILD



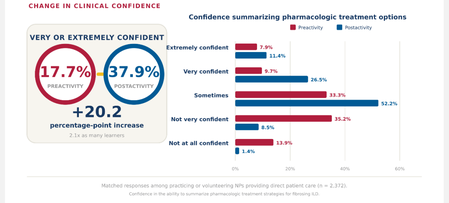
PRE/POST Q3: TREATMENT REGIMEN FDA-APPROVED FOR A PATIENT WITH PPF



PRE/POST Q4: MOA, DATA, AND FDA STATUS OF NERANDOMILAST AND TREPROSTINIL



Confidence in pharmacologic options more than doubled

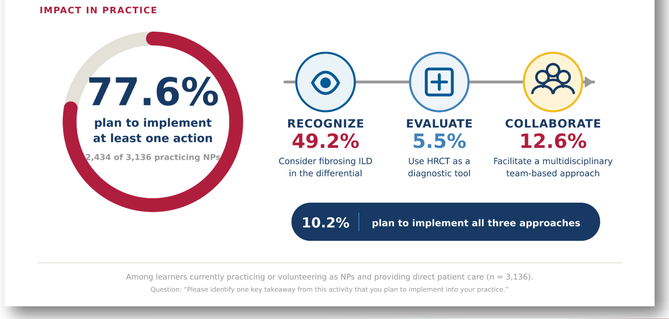


Confidence in summarizing pharmacologic options more than doubled, increasing from 17.7% to 37.9%

Planned Frequency of Use and Intended Practice Changes

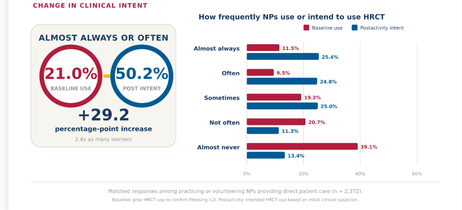
Podcast

Education translated into intended practice change

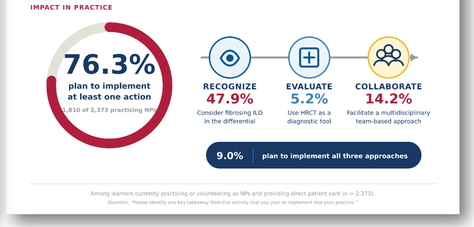


Interactive Case Studies

Education increased intended use of HRCT for diagnosis



Education translated into intended practice change



Conclusions

- The podcast and interactive case series collectively achieved 193% of the original completion goal. (Learners 6,016 and completers 6,958)
- Approximately 90% of learners reported gaining new knowledge, and both activities successfully reached practicing NPs providing direct patient care.
- The interactive case series produced significant gains in knowledge and confidence; confidence in summarizing pharmacologic options more than doubled from 17.7% to 37.9%.
- Intended frequent use of HRCT increased from 21.0% to 50.2%, while more than three-quarters of practicing NP learners identified an action they planned to implement.

Extending educational impact into clinical practice

EDUCATION • PRACTICE • PATIENTS

6,958
ACTIVITY COMPLETIONS
Across two accredited learning modalities

MORE THAN **3 IN 4**
practicing NPs identified an action they plan to implement

39,123
PATIENTS POTENTIALLY IMPACTED EACH WEEK

High-reach education translated into intended practice change and potential patient impact.

Activity completions are summed across modalities and may include learners who completed both. Potential patient impact is estimated from learner-reported patient reach.