

# Science Transforming Life®



## **Performance Improvement CME (PI CME) Initiative:**

A Systems-Based Educational Initiative to Improve the Team-Based Care and Health of Patients with Idiopathic Pulmonary Fibrosis at an Academic Medical Center

**Genentech: G-36867  
July 2015-February 2017**

# Educational Outcomes Summary

## 18 Month Performance Improvement CME (PI CME) Initiative

**Initiative Goal:** To enhance the team-based care and improve the health of Idiopathic Pulmonary Fibrosis (IPF) patients at National Jewish Health (NJH) by improving documentation and processes to better assess and treat patients.

**Background:** The collaborative and interdepartmental team at NJH convened to assess the current Interstitial Lung Disease (ILD) program practices related to quality indicators for best practices in IPF, and identified several gaps and areas for improvement specifically related to quality of life metrics, data tracking and transition of care.

- ✓ **8 IPF Quality Indicators identified and measured over 602 patient visits**
- ✓ **Multidisciplinary ILD team meetings and coordination**
- ✓ **Electronic Medical Record (EMR) changes and workflow sustained**
- ✓ **Focus groups: patients and nurses**
- ✓ **Patient resources developed**
- ✓ **Patient surveys**



**Jul 2015 – Sep 2015**

**PLAN**

## Stage A:

Self Assessment

**Oct 2015 – Sep 2016**

**DO**

## Stage B:

Educational  
Interventions/  
Action Plans

**Oct 2016 – Feb 2017**

**STUDY & ACT**

## Stage C:

Re-Assessment

## Initiative Aims

1. Identify quality indicators
2. Improve multidisciplinary team collaboration
3. Develop sustainable education and tools
4. Improve patient communication and care
5. Improve patient continuity of care

## Format

Plan-Do-Study-Act (PDSA) is an evidence-based model to:

- ✓ Test the change (Plan)
- ✓ Carry out the test (Do)
- ✓ Observe and learn from consequences (Study&Act)

## Program Chair

Evans R. Fernández Pérez, MD, MS

Assistant Professor Division of Pulmonary,  
Critical Care and Sleep Medicine,  
Department of Medicine  
National Jewish Health



## Participants

9 Physicians

1 PA

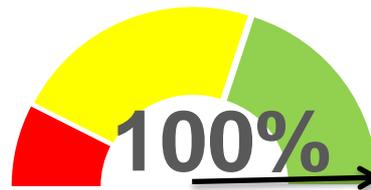
6 Nurses

2 MAs



# 94%

Patients stated  
interventions  
improved  
quality  
of life



**100% of  
physicians**  
reported the process  
changes are  
**“sustainable”** to  
“somewhat sustainable”

# 141%

Improvement in  
provider  
performance  
over **602**  
Patient Visits



# Quality Indicators Identified

## Understand/Address the Gap

Eight quality indicators were identified as best practice and measured over one year. Physician performance and patient visits measured over one year individually and as a group.

Immunization recorded

6-minute walk test ordered

Nocturnal oximetry ordered

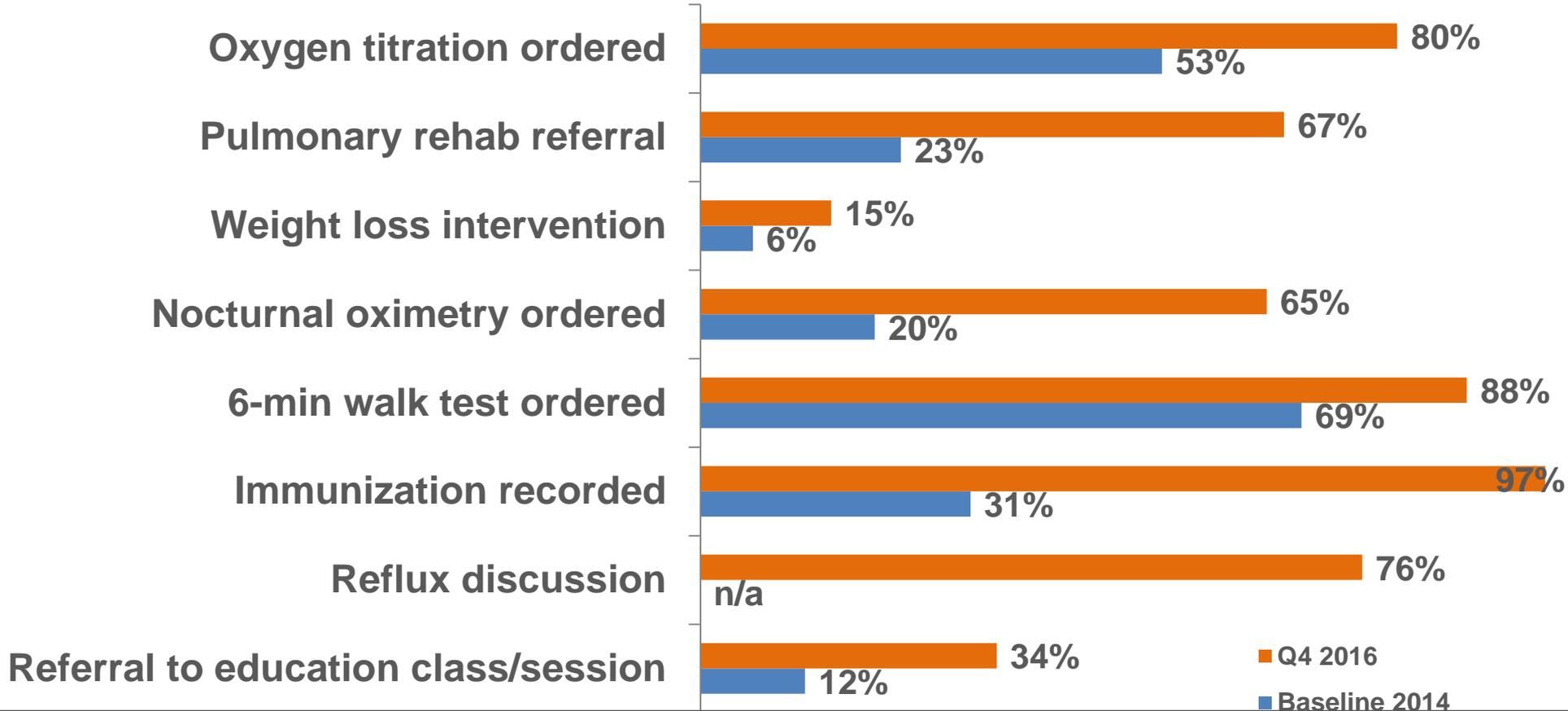
Weight loss intervention  
(nutrition consult, IPF  
education card w/ BMI scale)

Pulmonary rehabilitation  
referral

Oxygen titration ordered for  
new patients

Referral to education class or  
session conducted by ILD staff

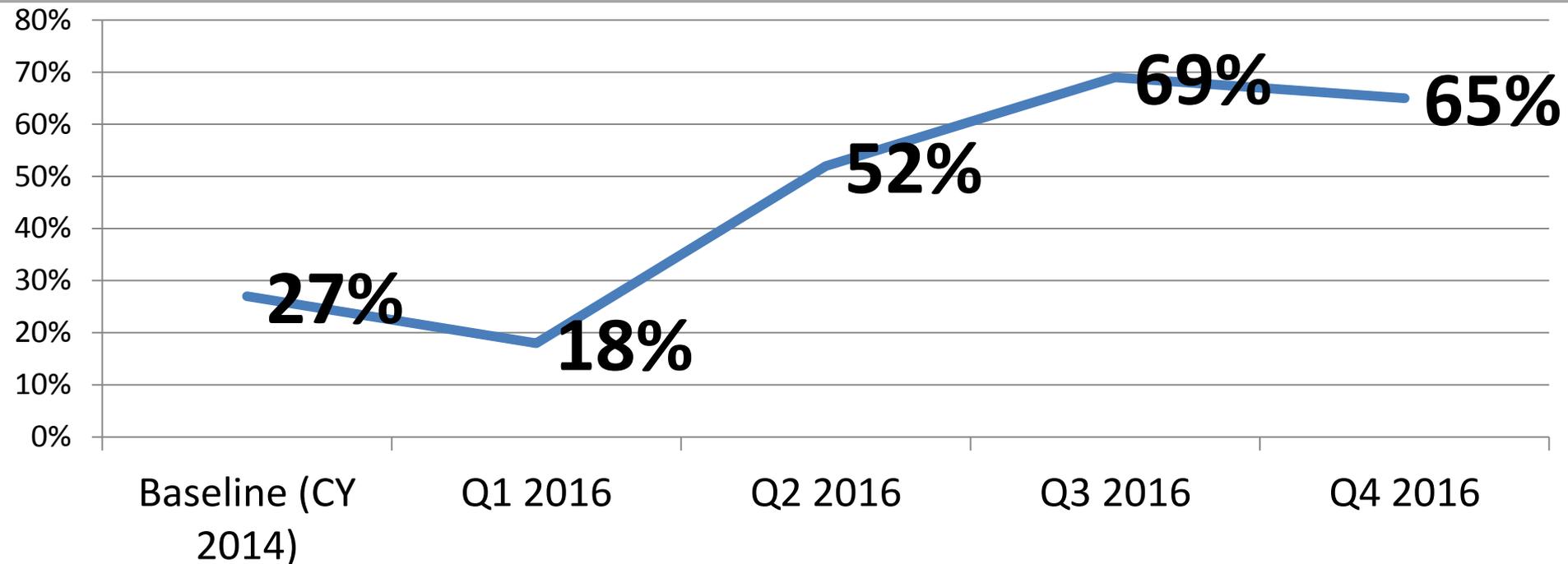
Reflux discussion



**Average relative increase of aggregate metrics from baseline to post-intervention: 141%**

**Patients' care improved over 602 Visits**

## ILD Team Physician Performance - combined group performance on (8) Quality Indicators measured



**Average relative increase of aggregate metrics from baseline to  
post-intervention: 141%**  
**Patients' care improved over 602 Visits**

| Measure   | Baseline |            | Q1 2016 |            | Q2 2016 |            | Q3 2016 |            | Q4 2016 |            | Percent Change Baseline to Q4 |
|---|----------|------------|---------|------------|---------|------------|---------|------------|---------|------------|-------------------------------|
|   | #        | %          | #       | %          | #       | %          | #       | %          | #       | %          |                               |
| IPF Patients (target population)                        | 232      |            | 152     |            | 147     |            | 145     |            | 158     |            |                               |
| -- BMI of 30 or greater only                            | 126      |            | 88      |            | 85      |            | 73      |            | 81      |            |                               |
| -- New patients   | 96       |            | 15      |            | 17      |            | 27      |            | 20      |            |                               |
| Immunization recorded                                   | 73       | <b>31%</b> | 15      | <b>10%</b> | 135     | <b>92%</b> | 133     | <b>92%</b> | 153     | <b>97%</b> | <b>66%</b>                    |
| 6-minute walk test ordered                              | 159      | <b>69%</b> | 68      | <b>45%</b> | 125     | <b>85%</b> | 128     | <b>88%</b> | 139     | <b>88%</b> | <b>19%</b>                    |
| Nocturnal oximetry ordered                              | 46       | <b>20%</b> | 23      | <b>15%</b> | 75      | <b>51%</b> | 95      | <b>66%</b> | 103     | <b>65%</b> | <b>45%</b>                    |
| Weight loss intervention                                | 8        | <b>6%</b>  | 5       | <b>6%</b>  | 12      | <b>14%</b> | 32      | <b>44%</b> | 12      | <b>15%</b> | <b>9%</b>                     |
| Pulmonary rehab referral                                | 54       | <b>23%</b> | 12      | <b>8%</b>  | 50      | <b>34%</b> | 95      | <b>66%</b> | 106     | <b>67%</b> | <b>44%</b>                    |
| Oxygen titration ordered for new patients               | 51       | <b>53%</b> | 6       | <b>40%</b> | 10      | <b>59%</b> | 21      | <b>78%</b> | 16      | <b>80%</b> | <b>27%</b>                    |
| Referral to education class/education session conducted | 27       | <b>12%</b> | 26      | <b>17%</b> | 29      | <b>20%</b> | 58      | <b>40%</b> | 54      | <b>34%</b> | <b>22%</b>                    |
| Reflux discussion                                       | n/a      | <b>n/a</b> | 2       | <b>1%</b>  | 93      | <b>63%</b> | 120     | <b>83%</b> | 120     | <b>76%</b> | <b>76%</b>                    |

## Division meetings with ILD team

- ✓ Discuss development of patient education activation card
- ✓ Gain feedback on new division process for educating patients

## Electronic Medical Record (EMR) edits:

- ✓ Order sets specific to ILD divisions for prioritization of best care practices for IPF patients
  - Consolidated list of key quality indicators identified by the team
  - All education classes available and appropriate to IPF patients at National Jewish Health
- ✓ Addition of dictated note to serve as a reminder for the ILD team provider to document all appropriate conversations, recommendations, and actions taken with the patient regarding the eight metrics
- ✓ Generation of referring provider letter to improve communication regarding IPF patients

## Order set from EMR

|                          |   |
|--------------------------|---|
| <input type="checkbox"/> | IPF QI  |
| <input type="checkbox"/> | *ILD Research Classification                    |
| <input type="checkbox"/> | A- Adult Consult Nutrition                      |
| <input type="checkbox"/> | A- Off Grounds Consult/Procedure                |
| <input type="checkbox"/> | C- Echo Routine                                 |
| <input type="checkbox"/> | C- Echo Routine and Agitated Saline             |
| <input type="checkbox"/> | Discuss/Call Referring MD (Plan of Care)        |
| <input type="checkbox"/> | DME- Nocturnal Oximetry (off grounds)           |
| <input type="checkbox"/> | IM- CT Chest W/O HRCT/Extend                    |
| <input type="checkbox"/> | P- Oxygen Titration                             |
| <input type="checkbox"/> | P- ABG + Oxygen Titration                       |
| <input type="checkbox"/> | R- Pulmonary Rehab Comprehensive                |
| <input type="checkbox"/> | R- Six Minute Walk                              |
| <input type="checkbox"/> | RF- QuitLine Smoking Cessation                  |
| <input type="checkbox"/> | RF- Weight Management Handout                   |
| <input type="checkbox"/> | IPF QI Education                                |
| <input type="checkbox"/> | E-A: All About Sleep Apnea                      |
| <input type="checkbox"/> | E-A: Intimacy and the Person with Lung Disease  |
| <input type="checkbox"/> | E-A: Living with Chronic Disease                |
| <input type="checkbox"/> | E-A: Managing Your Energy Everyday              |
| <input type="checkbox"/> | E-A: Managing Your Lung Disease                 |
| <input type="checkbox"/> | E-A: Nutrition and Heart Health                 |
| <input type="checkbox"/> | E-A: Nutrition and the Person with Lung Disease |
| <input type="checkbox"/> | E-A: On the Go with Oxygen                      |
| <input type="checkbox"/> | E-A: Respiratory Medications                    |
| <input type="checkbox"/> | E-A: Stress Management & Relaxation             |
| <input type="checkbox"/> | E-A: Tools for Fitness                          |
| <input type="checkbox"/> | E-A: Understanding Your Lung Disease & Testing  |
| <input type="checkbox"/> | E-AP: Tools for Giving Up Smoking               |

# Key Interventions

## Understand/ Address the Gap Practice/ Extend the Solution

### Develop patient education activation card

- ✓ Prompt for healthcare professional discussion of best care practices with patients
- ✓ Including BMI chart for weight management discussion

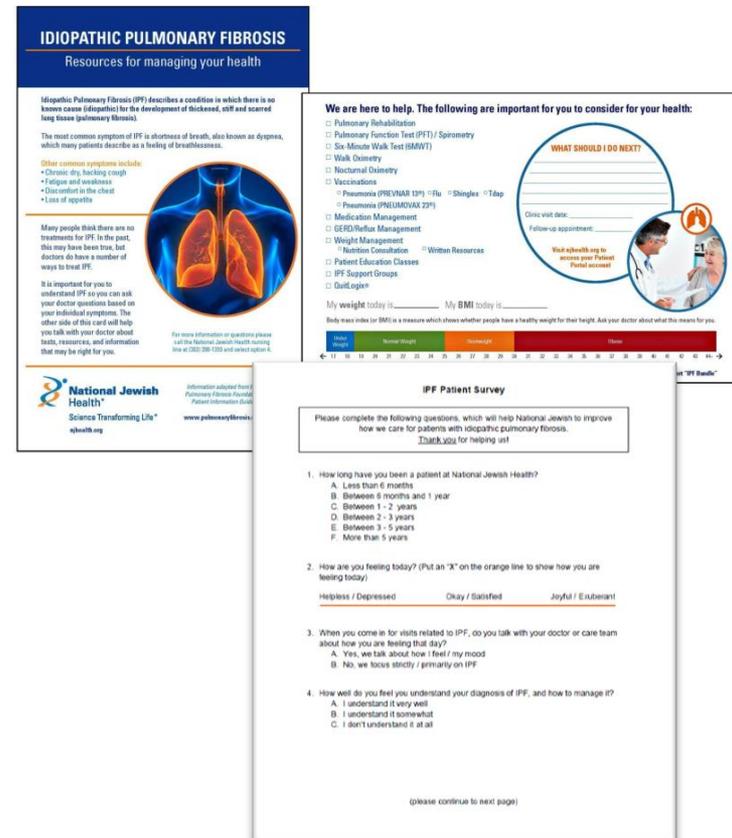
### Focus groups

- ✓ Patient focus groups to assess patient's baseline IPF knowledge
- ✓ ILD team nurses (patient navigators) to understand effectiveness of initiative's educational and informational approach

### Patient Surveys

- ✓ Survey of IPF patients to understand how new approaches were perceived

### Patient Activation Card & Survey



**IDIOPATHIC PULMONARY FIBROSIS**  
Resources for managing your health

Idiopathic Pulmonary Fibrosis (IPF) describes a condition in which there is no known cause (idiopathic) for the development of thickened, stiff and scarred lung tissue (pulmonary fibrosis).

The most common symptom of IPF is shortness of breath, also known as dyspnea, which many patients describe as a feeling of breathlessness.

**Other common symptoms include:**

- Chronic dry hacking cough
- Fatigue and weakness
- Discomfort in the chest
- Loss of appetite

Many people think there are no treatments for IPF. In the past, this may have been true. But doctors do have a number of ways to treat IPF.

It is important for you to understand IPF so you can ask your doctor questions based on your individual symptoms. The other side of this card will help you talk with your doctor about tests, resources, and information that may be right for you.

For more information or questions please call the National Jewish Health nursing line at 303.239.1333 and select option 4.

**We are here to help. The following are important for you to consider for your health:**

- Pulmonary Rehabilitation
- Pulmonary Function Test (PFT) / Spirometry
- Six-Minute Walk Test (6MWT)
- Walk Diemetry
- Nutritional Dietitery
- Vaccinations
  - Pneumonia (PREVNAIR 13<sup>®</sup>)
  - Flu
  - Shingles
  - Tdap
  - Pneumonia (PNEUMOVAX 23<sup>®</sup>)
- Medication Management
- GERD/Reflux Management
- Weight Management
- Nutrition Consultation
- Written Resources
- Patient Education Classes
- IPF Support Groups
- Oxitropium

WHAT SHOULD I DO NEXT?

Check with your doctor at your next appointment.

Visit us online for more patient health resources.

My weight today is \_\_\_\_\_ My BMI today is \_\_\_\_\_

Body mass index (or BMI) is a measure which shows whether people have a healthy weight for their height. Ask your doctor about what this means for you.

**IPF Patient Survey**

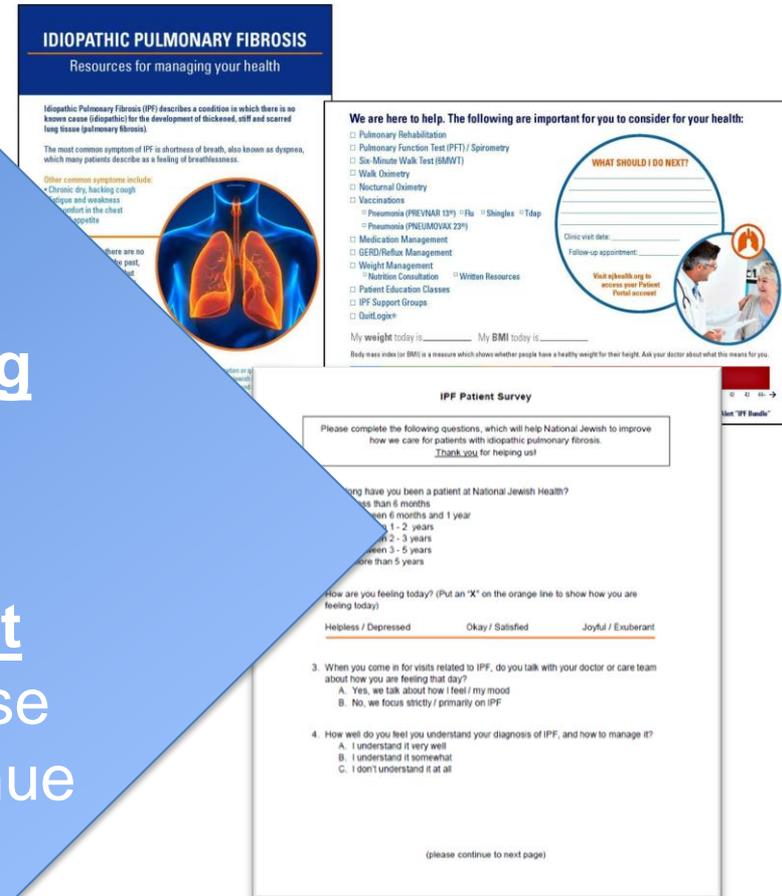
Please complete the following questions, which will help National Jewish to improve how we care for patients with idiopathic pulmonary fibrosis. Thank you for helping us!

- How long have you been a patient at National Jewish Health?
  - A. Less than 6 months
  - B. Between 6 months and 1 year
  - C. Between 1 - 2 years
  - D. Between 2 - 3 years
  - E. Between 3 - 5 years
  - F. More than 5 years
- How are you feeling today? (Put an "X" on the orange line to show how you are feeling today)
 

Helpless / Depressed      Okay / Satisfied      Joyful / Excited
- When you come in for visits related to IPF, do you talk with your doctor or care team about how you are feeling that day?
  - A. Yes, we talk about how I feel / my mood
  - B. No, we focus strictly / primarily on IPF
- How well do you feel you understand your diagnosis of IPF, and how to manage it?
  - A. I understand it very well
  - B. I understand it somewhat
  - C. I don't understand it at all

(please continue to next page)

- Patient focus group analysis indicated the patient activation card developed in this initiative was considered helpful for understanding and managing the IPF diagnosis.
- Similarly, nurse focus group feedback demonstrated The patient activation card was critical, because it allowed them to approach or continue important conversations at the appropriate time for the patient



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The most common symptom of IPF is shortness of breath, also known as dyspnea, which many patients describe as a feeling of breathlessness.

Other common symptoms include:

- Chronic dry, hacking cough
- Weight loss and weakness
- Crackles in the chest
- Smoking cigarettes

There are no...

My weight today is \_\_\_\_\_ My BMI today is \_\_\_\_\_

Body mass index (BMI) is a measure which shows whether people have a healthy weight for their height. Ask your doctor about what this means for you.

**We are here to help. The following are important for you to consider for your health:**

- Pulmonary Rehabilitation
- Pulmonary Function Test (PFT) / Spirometry
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- Walk Oimetry
- Nocturnal Oximetry
- Vaccinations
  - Pneumonia (PNEUMAR 23®)  Shingles  Tdap
  - Pneumonia (PNEUMOVAX 23®)
- Medication Management
- GERD/Reflux Management
- Weight Management
- Nutrition Consultation  Written Resources
- Patient Education Classes
- IPF Support Groups
- DailiLogin®

**WHAT SHOULD I DO NEXT?**

Clinic visit date: \_\_\_\_\_

Follow-up appointment: \_\_\_\_\_

Visit [njhealth.org](http://njhealth.org) to access your Patient Portal account

**IPF Patient Survey**

Please complete the following questions, which will help National Jewish to improve how we care for patients with idiopathic pulmonary fibrosis. Thank you for helping us!

How long have you been a patient at National Jewish Health?

- Less than 6 months
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- Between 3 - 5 years
- More than 5 years

How are you feeling today? (Put an 'X' on the orange line to show how you are feeling today)

Helpless / Depressed \_\_\_\_\_ Okay / Satisfied \_\_\_\_\_ Joyful / Exuberant \_\_\_\_\_

3. When you come in for visits related to IPF, do you talk with your doctor or care team about how you are feeling that day?

- A. Yes, we talk about how I feel / my mood
- B. No, we focus strictly / primarily on IPF

4. How well do you feel you understand your diagnosis of IPF, and how to manage it?

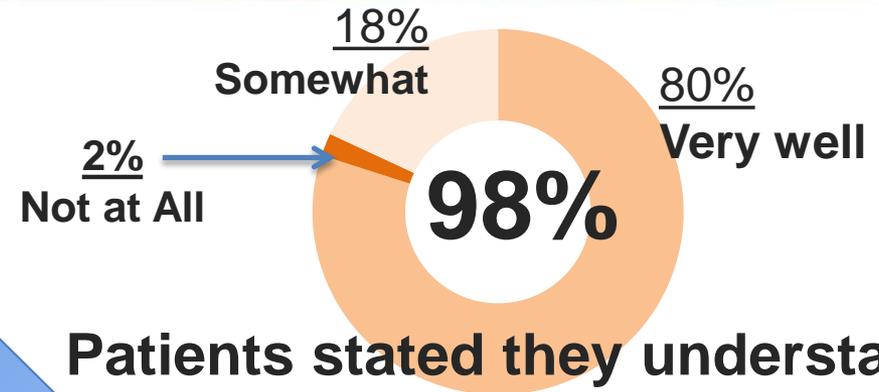
- A. I understand it very well
- B. I understand it somewhat
- C. I don't understand it at all

(please continue to next page)

Patients treated at NJH during the measurement period indicated **they understand their diagnosis.**

Supporting focus group findings, patient survey responses related to **quality of life:**

**96% of Patients stated understanding their diagnosis of IPF and how to manage it has improved their quality of life**  
(N=49)



**Patients stated they understand their IPF diagnosis and how to manage it**



**Patients stated understanding their diagnosis of IPF and how to manage it has improved their quality of life**

**Revised clinic workflow in ILD division  
for improved assessment,  
documentation impacting best patient  
care**

## Processes sustained

- Structured Order sets for best practice approach to IPF patients
- Discussion with patients to increase understanding of disease and management expectations

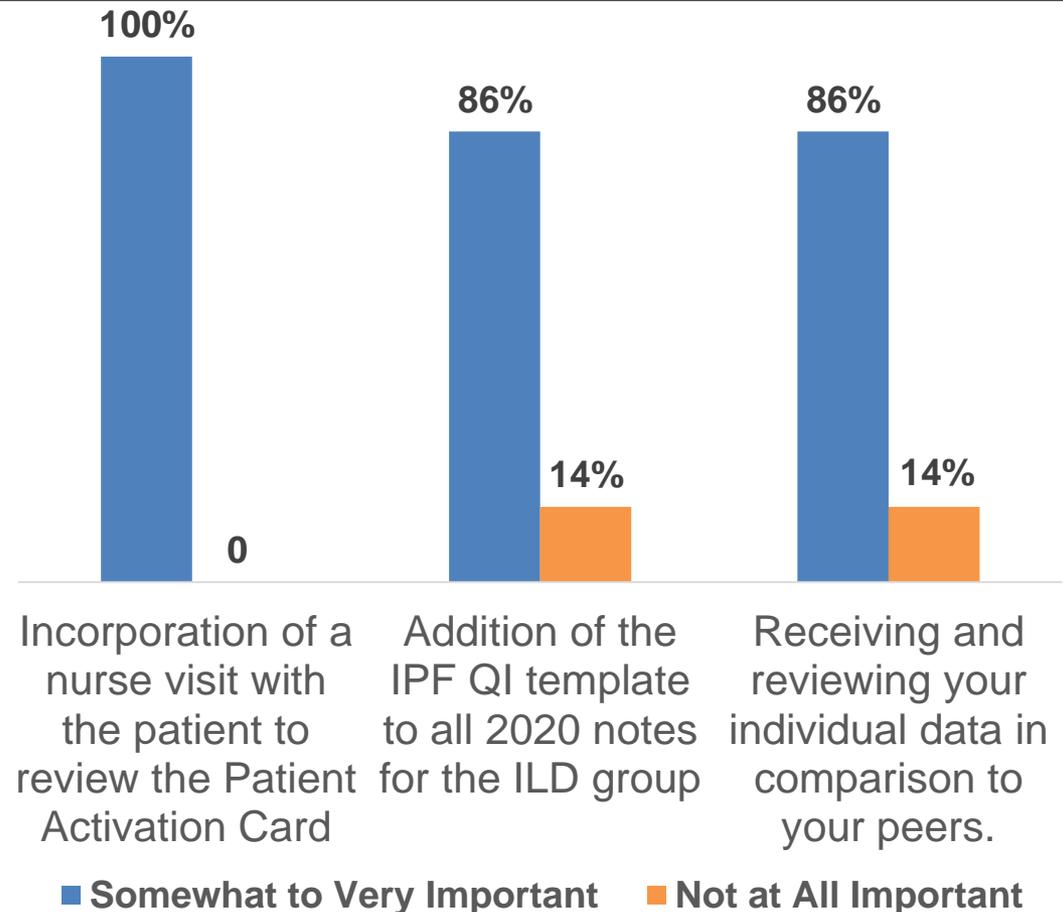
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**100%** of participating providers (N=7) report that they believe the process changes are “sustainable” to “somewhat sustainable” as a result of the activity

**Providers report that the activity motivated them to do the following:**

- Involve the ILD nurses more intentionally in the IPF patient visit **(100%)**
- Recognize the benefit of addressing related topics such as weight management and GERD with your IPF patients **(71%)**
- Talk about and/or refer to organizational support tools/resources with your IPF patients **(57%)**

*Provider report on the importance of the following interventions*



1. Identify quality indicators
  - ✓ **Eight quality indicators identified as best practice, measured over one year. Physician performance and patient visits measured individually and as a group.**
2. Improve multidisciplinary team collaboration
  - ✓ **100% of the physician participants reported activity motivated them to involve the ILD nurses more intentionally in the IPF patient visit.**
3. Develop sustainable education and tools
  - ✓ **Patient activation card was developed with the ILD team and patient input-validated by the nursing and patient focus groups.**
4. Improve patient communication and care
  - ✓ **Performance/patient care improved 141%. The patient activation card is provided to the patient, reinforced by ILD team, and allows the patient to initiate conversations after initial diagnosis when they are able to better absorb information.**
5. Improve patient continuity of care
  - ✓ **New referring provider letter to improve communication regarding IPF patients was implemented.**

The initiative was **successful in improving implementation of best care practices**, and adjustments to the EMR to document these quality indicators **supports sustainability**. The initiative helped identify critical needs for **improving our IPF patients' care** as well as their understanding and management of the disease.

## Lessons Learned as a result of this initiative

- Streamlining processes for the entire team aids in improving implementations of best practices overall
- Time to allow patient education is limited, so engaging the team can both address the barrier and empower clinical team members
- We understand now that providing take away resources and incorporating conversations at variable times as dictated by the patient, rather than upon initial NJH ILD visit, is critical for success.

## Accreditation

National Jewish Health is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians and by the California Board of Registered Nursing to provide nursing contact hours for nurses.



National Jewish Health designated this initiative for:  
**20 AMA PRA Category 1 Credit(s)™**  
for participating physicians

## About NJH

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- ✓ Largest pulmonary division in the world and the only hospital whose principal focus is respiratory and related diseases.
- ✓ #1 or #2 ranking in Pulmonology category by U.S. News & World Report (since category was added in 1997).
- ✓ Top 7 percent of institutions funded by the National Institutes of Health, an extraordinary achievement for an institution of NJH's size.
- ✓ Designated as a Specialized Center of Research for ILD by The National Institute of Health.
- ✓ 30 doctors named to “America's Top Doctors” in 2015.

