



## Proactive Symptom Management in Myelofibrosis

## INTRODUCTION

**NCODA** developed the peer-reviewed Positive Quality Intervention (PQI) as an easy-to-use and relatable clinical guidance resource for healthcare providers. By consolidating quality standards, real-life effective practices, clinical trial results, and package insert and other guidance, PQIs equip the entire multidisciplinary care team with a comprehensive yet concise resource for managing patients receiving oral or IV oncolytics.

This PQI in Action is a follow up to the Proactive Symptom Management in Myelofibrosis PQI and explores how the medically integrated team at Cancer Specialists of North Florida (CSNF) implemented the PQI to improve the accuracy, consistency, and timeliness of symptom and risk assessments for patients living with myelofibrosis (MF). Utilizing a pharmacy-driven telehealth model, CSNF integrated structured tools like the MPN-SAF TSS and DIPSS-Plus into their workflow, empowering the clinical team to optimize treatment and engage more meaningfully with patients. This article describes CSNF's implementation journey, its impact on care coordination, and how the medically integrated pharmacy (MIP) team plays a central role in improving both workflow efficiency and patient quality of life.



[Proactive Symptom Management in Myelofibrosis](#)

## PARTICIPANTS

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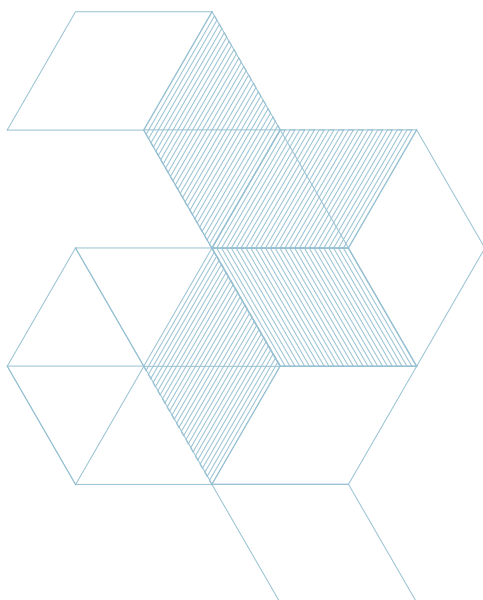
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# INTRODUCTION: MEETING THE NEEDS OF A COMPLEX DISEASE

**M**yelofibrosis is a rare and progressive BCR-ABL1-negative myeloproliferative neoplasm characterized by bone marrow fibrosis, anemia, splenomegaly, and debilitating constitutional symptoms such as fatigue, night sweats, and weight loss.<sup>1,2</sup> Although curative treatment exists in the form of allogeneic stem cell transplantation, it is rarely feasible due to patient age, comorbidities, or disease severity.<sup>1</sup> Most MF therapies instead focus on symptom control and delaying disease progression.

Yet, symptom burden can be difficult to quantify. The disease is heterogeneous,

and patient experiences vary widely. Historically, symptom assessments like the MPN-SAF TSS (Myeloproliferative Neoplasm Symptom Assessment Form Total Symptom Score) and the DIPSS-Plus (Dynamic International Prognostic Scoring System) risk score were inconsistently used in community oncology. These tools, while validated, often were performed incorrectly.<sup>4,5</sup> This led Atrium health to develop a mechanism to perform the assessments in a correct, standardized and uniform manner, and eventually led to the publication of the PQI.<sup>6</sup>

This disconnect and the corresponding PQI publication prompted CSNF to act. With pharmacist-led outreach, patients now complete MPN-SAF TSS and DIPSS-Plus assessments via phone ahead of appointments. This ensures providers have structured, actionable data before entering the exam room.

**"To have that number on it—to track it over time—is incredibly useful."**

**-Zelia Bowman, MD**

## ABOUT THE PRACTICE: CANCER SPECIALISTS OF NORTH FLORIDA

**CSNF** is the leading oncology provider in the northeast Florida region, serving a wide catchment area from St. Augustine to Jacksonville and Palm Coast. With eleven clinic sites and a centralized medi-

cally integrated pharmacy, the practice brings comprehensive cancer care into the community setting.

The myelofibrosis PQI initiative took root under the guidance of Ashleigh Cheikellard, PharmD, in collaboration with

then-interns Lauren Carpenter and Kelli Corona, now both pharmacy fellows. At CSNF, pharmacists are embedded in every step of the care continuum, from initial teaching to toxicity management and adherence support.

**"Multidisciplinary teamwork and thoughtful coordination are essential in cancer care."**

**-Kelli Corona, PharmD**

# THE PQI EXPLAINED: TOOLS THAT GUIDE THERAPY

**THE** Proactive Symptom Management in Myelofibrosis PQI, authored by clinical pharmacists at Atrium Health, provides a clear framework for integrating MPN-SAF TSS and DIPSS-Plus into routine care. MPN-SAF TSS assesses 10 core symptoms (for example fatigue, bone pain, night sweats) on a 0–10 scale. The final score ranges from 0–100, with higher scores indicating greater burden.<sup>2</sup> DIPSS-Plus

is a dynamic risk stratification tool incorporating age, hemoglobin, white cell count, blasts, karyotype, and transfusion dependency. It predicts survival and guides treatment intensity.<sup>3</sup> While guideline-recommended, these assessments are often skipped in busy clinics. CSNF's PQI implementation removed that barrier by assigning ownership to pharmacy and building the process into pre-visit workflows.

"This is a real intervention, not just a recommendation. It's something that can improve patient care."

—Lauren Carpenter, PharmD

## ELEVATING PATIENT CARE THROUGH MEDICALLY INTEGRATED PHARMACY (MIP)

**AT** the heart of CSNF's success with the myelofibrosis PQI is its commitment to a medically integrated pharmacy (MIP) model, where pharmacists are not peripheral, but central to care delivery. MIPs enable pharmacists to play a hands-on role in clinical monitoring, documentation, medication access, patient education, and toxicity management. Rather than functioning separately from providers, CSNF's pharmacy team operates as a fully embed-

ded part of the care continuum.

Zelia Bowman, MD emphasized how this integration removes barriers for both patients and providers. "The ability to ask the pharmacist directly about delays or denials makes everything smoother. It eliminates confusion and adds a personal connection." Cheikelard echoed that sentiment: "When patients hear from the pharmacist ahead of their appointment, it lets them know we are engaged and planning ahead to make

the most of their valuable time in clinic."

The MIP model also streamlines operations behind the scenes. Pharmacists at CSNF are responsible for verifying labs, completing risk scores, flagging symptom concerns, and initiating documentation well before the clinic visit. This proactive involvement helps ensure care is timely and efficient, while supporting guideline adherence.

## MULTIDISCIPLINARY TEAM HIGHLIGHTS



### PHYSICIAN

*Leads clinical decision-making*

Oversees diagnosis, interprets risk/symptom trends, guides treatment changes



### PHARMACIST

*Ensures safe, effective medication use*

Leads telehealth assessments, completes scoring tools, flags concerns for providers



### NURSE

*Patient education and follow-up care*

Provides education and monitors patient well-being during clinical encounters



### PHARMACY TECHNICIAN

*Access, affordability, and documentation*

Coordinates workflow, confirms contact, supports adherence tracking





# Elevating Patient Care Through Medically Integrated Pharmacy (MIP) - continued

## BENEFITS OF MEDICALLY INTEGRATED PHARMACY IN MANAGING MYELOFIBROSIS:

- 01 Pre-visit symptom and risk assessments (MPN-SAF TSS & DIPSS-Plus)
- 02 Faster therapy adjustments based on real-time patient feedback
- 03 Consistent pharmacy-patient contact between visits
- 04 Embedded documentation directly into EMR before appointments
- 05 Enhanced medication safety through lab and interaction checks
- 06 Proactive education to help patients manage fatigue and other symptoms

## HOW CSNF IMPLEMENTED THE PQI: STEP-BY-STEP INTEGRATION

To move from concept to consistent practice, CSNF followed a structured, pharmacy-driven approach to implement the Proactive Symptom Management in Myelofibrosis PQI. This section details exactly how the team operationalized the intervention.

### Step 1: Identifying Eligible Patients

Pharmacist and Interns reviewed clinic schedules and diagnosis codes to identify patients with a confirmed diagnosis of myelofibrosis. Once identified, the PQI workflow was initiated.

### Step 2: Adding Patients to the Assessment Tracker

The pharmacy team maintained a shared Excel-based tracker to log new consults, last assessment dates, preferred contact methods, and scheduled

provider appointments. Each patient was assigned a reassessment frequency (typically 3, 6, or 12 months) based on scheduled appointments.

### Step 3: Conducting Telehealth Consults

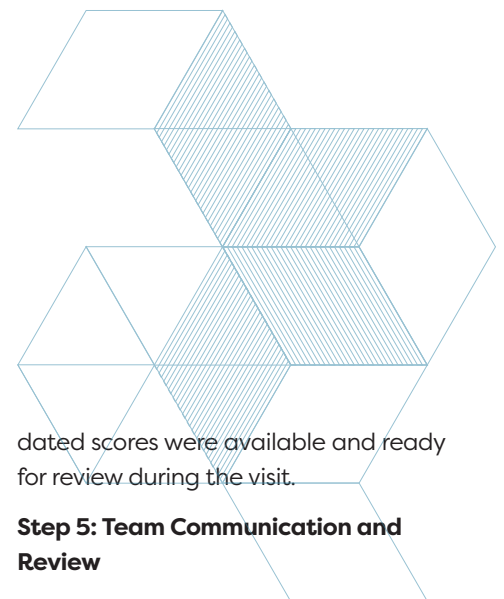
Within 7-10 days of the patient's upcoming appointment, a pharmacist or trained intern called the patient to conduct the MPN-SAF TSS symptom assessment. With patient consent, responses were recorded and scored. Concurrently, the pharmacy team reviewed the EMR for recent labs and karyotype results to complete the DIPSS-Plus risk score.

### Step 4: Documentation and Notification

Completed assessments were documented in a standardized note template within the EMR. The pharmacy team then sent a brief email message to the provider, alerting them that up-

“It’s huge...having direct contact with people who have the same interests at heart, our patients.”

-Zelia Bowman, MD



dated scores were available and ready for review during the visit.

### Step 5: Team Communication and Review

The pharmacy team remained available during clinic hours for follow-up questions or clarification. If the assessment revealed new or worsening symptoms, they flagged the issue proactively to prompt same-day intervention or early follow-up scheduling.

### Step 6: Ongoing Tracking and Follow-Up

Each patient remained in the assessment queue, with future touchpoints scheduled based on their reassessment interval. The pharmacy team helped monitor the tracker weekly, ensuring patients were contacted on time and no one was missed.

## Elevating Patient Care Through Medically Integrated Pharmacy (MIP) - continued

### BUILT FOR SCALE AND CONSISTENCY

The team emphasized that standardization was essential. Each component of the process was designed to minimize variation and maintain quality as more patients were added.

“Putting the PQI into action allowed us to refine our existing processes and more deeply integrate the pharmacy team, ultimately making care delivery more efficient and responsive for both patients and providers.”

- Ashleigh Cheikelard, PharmD



## PATIENT EDUCATION AND ENGAGEMENT

**PATIENT** education played a key role in the success of the myelofibrosis PQI at CSNF. From the very first call, the team aimed not only to collect data, but to inform and empower patients about their disease, their care plan, and what to expect from treatment.

### FRAMING THE TELEHEALTH CONSULT

The team explained the purpose of the MPN-SAF TSS and DIPSS-Plus assessments clearly: to provide the physician with structured information in advance of the appointment. This helped patients understand that their participation had a direct impact on their care and ensured they were more engaged during the in-person visit.

### USE OF EDUCATION TOOLS

When applicable, CSNF provided patients with an NCODA-led Patient Education Sheet related to their myelofi-

brosis treatment. These sheets included administration tips, storage guidance, missed dose instructions, and information about common side effects. The team used these tools during counseling and reinforced points during refill check-ins.

### LINKING EDUCATION TO ADHERENCE

Because the MPN-SAF TSS includes questions about fatigue, appetite, and general well-being, the assessment itself served as an indirect check on medication adherence. If patients reported worsening symptoms or confusion about how they should be feeling, the team could probe further and address barriers to consistent therapy.

### TAILORING TO INDIVIDUAL NEEDS

The team also made sure education was personalized. “We always ask if patients have someone else helping

them with medications. If so, we involve that caregiver, when possible,” said Carpenter. The team also confirmed the patient’s preferred language and documented any education gaps noted during the call.

### REINFORCING CARE TEAM CONNECTION

Perhaps most importantly, the outreach served as a reminder that patients weren’t managing this disease alone. “Even if they didn’t have questions that day, they felt comforted knowing someone was checking in,” said Cheikelard.

“Education isn’t a one-time handout. It’s a conversation that builds trust, one call at a time.”

-Kelli Corona, PharmD



# PROVIDER AND PATIENT IMPACT

**THE** implementation of this PQI had a meaningful impact across multiple facets of patient care and team operations. One of the most powerful benefits was the ability to deliver individualized support to patients navigating vague or variable symptom experiences. The team reported that patients appreciated the pre-visit calls, not just for completing assessments, but for having a trusted point of contact between appointments. Patients commented that the check-ins helped them feel more connected to the care team and prepared for their visits. Patients

reported the process “saved time” and helped avoid confusion about symptom interpretation.

From the provider perspective, Dr. Bowman found value in having structured, documented symptom data prior to visits. “Myelofibrosis symptoms can be very nonspecific. Fatigue alone is hard to track. These tools help anchor the conversation,” she said. Additionally, the team documented tangible examples of therapy changes made because of pharmacist-conducted assessments. In one case, a patient experiencing

severe leg discomfort was found to have a significant MPN-SAF score change, prompting an earlier-than-planned appointment and a therapy adjustment.

**“It’s especially helpful when symptoms are hard to quantify. The tools give us a place to start the conversation.”**

—Zelia Bowman, MD

## CHALLENGES AND LESSONS LEARNED

**LIKE** any new initiative, implementing the PQI came with early challenges. From workflow logistics to patient engagement, the CSNF team identified several key learning moments that shaped their success.

### SCHEDULING & CONTACT LOGISTICS

One of the first hurdles was ensuring that patients were reachable ahead of appointments. “Patients may not feel comfortable answering phone numbers that are not familiar to them, or they may prefer that all communication be completed with their caregiver,” said Cheikelard. To address this, the pharmacy team began confirming contact preferences in patient profiles. Documentation templates were also updated to include patient-preferred communication methods.

### DOCUMENTING WITHIN THE EMR

Initially, documentation workflows were inconsistent. The team had to determine the best method to upload assessments into the EMR and notify providers without causing alert fatigue. Over time, a standardized note template and inbox message format were adopted, making it easier for physicians to locate the assessment during appointments.

### MAINTAINING ASSESSMENT TIMELINES

Tracking patient-specific intervals for follow-up assessments required a sustainable system. The team created a centralized spreadsheet with flags for reassessment timing, reducing the risk of delays or duplication. “We now know exactly when each patient is due for another call, it is built into our weekly workflow,” noted Corona.

### PATIENT UNDERSTANDING & BUY-IN

While most patients were receptive, some needed additional context to understand the purpose of the assessments. The team developed a simple patient-facing script to explain the value of symptom scoring and how it would impact their treatment. This short educational step improved participation and built trust.

### BALANCING TIME & RESOURCES

Finally, as the service scaled, maintaining adequate staff time for assessments was a concern. CSNF leveraged pharmacy interns to ensure continuity. “We made it a shared responsibility, not just one person’s task,” said Carpenter.

## Challenges and Lessons Learned - continued

CHALLENGE	CSNF SOLUTION
Reaching Patients Ahead of Appointments	Verified contact preferences at visits, and documented best time/method to call.
Uploading Assessments into EMR Efficiently	Created a standardized documentation note and email message format to alert providers without overwhelming them.
Tracking Timely Reassessments	Developed a centralized Excel-based tracker that flags when patients are due for reassessment at 3, 6, or 12-month intervals.
Helping Patients Understand the Purpose	Introduced a one-minute script to explain symptom/risk assessments and how they impact treatment decisions.
Sustaining the Workflow Long-Term	Leveraged pharmacy interns to share responsibility and prevent burnout.

## REFLECTIONS ON A SUCCESSFUL PILOT

The Proactive Symptom Management in Myelofibrosis PQI at CSNF was designed as a focused pilot program, and it achieved what it set out to do. By developing a pharmacy-led telehealth workflow, the team successfully embedded structured symptom and risk assessments into patient care, resulting in more informed provider visits and greater patient engagement.

### EMPOWERING PHARMACISTS AND INTERNS

One of the highlights of this initiative

was the hands-on involvement of both practicing pharmacists and pharmacy interns. Interns were trained to complete MPN-SAF TSS assessments, helping build future workforce capacity while ensuring timely, proactive symptom monitoring for patients.

### STANDARDIZED DOCUMENTATION AND COMMUNICATION

Through use of shared trackers and note templates, the pilot created a repeatable model that others can learn from. The emphasis on clear, structured

communication ensured that providers received assessments in time to act on them.

### CLINICAL IMPACT IN A SHORT TIMEFRAME

Although this PQI pilot was time-limited, it delivered tangible value. This included empowering clinical decision-making, strengthening team communication, and supporting guideline-concordant care for patients with myelofibrosis.





## Sustainability and Future Expansion - continued

### A MODEL FOR THE FUTURE

The success of this pilot offers a strong foundation for others considering similar efforts. Whether applied to other disease states or replicated in different care settings, CSNF's experience demonstrates how a short-term initiative can produce meaningful, patient-centered results.

**"As a pilot, this showed the difference a structured, team-driven process can make."**

**-Lauren Carpenter, PharmD**

## CONCLUSION

**THE** implementation of the Proactive Symptom Management in Myelofibrosis PQI at Cancer Specialists of North Florida demonstrates how a pharmacy-led pilot can create meaningful improvements in patient care. This initiative successfully introduced a structured process that enhanced clinical decision-making, strengthened communication among care team members, and brought

greater visibility to patients' symptom burdens.

Through the use of pre-visit telehealth assessments, standardized documentation, and team-based follow-up, pharmacists and pharmacy interns played a central role in elevating care for patients with myelofibrosis. Providers were equipped with real-time, patient-reported outcomes that informed treatment planning. Patients felt heard

and supported ahead of each visit.

This project highlights the value of NCODA's Positive Quality Interventions (PQIs) as practical, scalable tools that empower the medically integrated team. By aligning clinical practice with guideline-based care and enhancing the patient experience, PQIs support oncology professionals in delivering timely, patient-centered interventions that truly make a difference.

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*Practice panelist's comments reflect their experiences and opinions and should not be used as a substitute for medical judgment.*

Important notice: NCODA has developed this Positive Quality Intervention in Action platform. This platform represents a brief summary of medication uses and therapy options derived from information provided by the drug manufacturer and other resources. This platform is intended as an educational aid and does not provide individual medical advice and does not substitute for the advice of a qualified healthcare professional. This platform does not cover all existing information related to the possible uses, directions, doses, precautions, warning, interactions, adverse effects, or risks associated with the medication discussed in the platform and is not intended as a substitute for the advice of a qualified healthcare professional. The materials contained in this platform are for informational purposes only and do not constitute or imply endorsement, recommendation, or favoring of this medication by NCODA, which assumes no liability for and does not ensure the accuracy of the information presented. NCODA does not make any representations with respect to the medications whatsoever, and any and all decisions, with respect to such medications, are at the sole risk of the individual consuming the medication. All decisions related to taking this medication should be made with the guidance and under the direction of a qualified healthcare professional.