

Oral Oncolytic Non-Adherence in Medically Integrated Dispensing Pharmacies

Case Studies and Survey Results to Understand How Medically Integrated Dispensing Pharmacies Identify and Triage Patients at High Risk for Non-Adherence and Solutions That Pharmacies Use to Optimize Adherence to Oral Oncolytics

Developed in collaboration between



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Contents

Introduction	3
Survey Overview	3
Background	3
Respondent Characteristics.....	4
Results.....	4
PRACTICE CASE STUDIES	4
Practice Overview #1: Mayo Clinic	4
Mayo Clinic Summary.....	4
Overview	5
Financial Barriers and Mitigation.....	5
Complexity of Regimen and Coordination of Care.....	5
The Clinic Pharmacist and Patient Management.....	6
Identifying Patients at High Risk of Non-Adherence.....	6
Assessing and Documenting Patient Adherence.....	6
Managing Patients at High Risk of Non-Adherence	7
The CDK4/6 Inhibitor Management Program.....	7
Dedicated, Specialized Clinic Pharmacists.....	7
Looking to the Future.....	8
Practice Overview #2: Billings Clinic	8
Billings Clinic Summary.....	8
Overview	8
Identifying Patients at High Risk of Non-Adherence.....	9
Patient Education Focus: Duration of Therapy.....	9
Coordinated and Tailored Adherence Management.....	9
Assessing and Documenting Patient Adherence.....	10
Looking to the Future	10
Discussion	11
References	12

Introduction

The challenges associated with medication adherence and the negative impacts of non-adherence have been well documented. Medication adherence affects many aspects of public health, including, but not limited to, quality of life, patient outcomes, and overall healthcare costs.¹ It is generally accepted that adherence rates of more than 80% are needed for optimal therapeutic efficacy.² However adherence rates for chronic medications are estimated to be approximately 50%, and some studies have reported adherence rates as low as 20% for patients on oral oncolytics.^{2,3} Furthermore, many adherence interventions are conducted on a reactive basis, missing an opportunity to risk-stratify patients before they start treatment. Some studies have shown that a more proactive approach might help prevent or reduce non-adherence to therapy.² Despite the knowledge surrounding the importance of adherence, it continues to be an area of unmet need in many disease states, including hematology and oncology.

For patients on oral oncolytic therapy, there is evidence that non-adherence leads to compromised treatment outcomes, increased physician visits, higher rates of hospitalizations, and longer duration of stay. Many barriers to optimal adherence with oral oncolytics have been identified. Common barriers may include⁴:

- Cost
- Complexity of regimen
- Adverse effects
- Poor understanding of the proper use of therapy
- Lack of understanding about the goals of therapy
- Cognitive/memory deficits
- Physical difficulties
- Poor communication with the healthcare team
- Language deficits
- Poor health literacy

Currently, there is no gold standard for assessing and evaluating adherence and risk of non-adherence. Both direct and indirect methods of adherence measurement exist but are often not standardized. Smart pill bottles, urine or blood level monitoring, and ingestible sensors have been discussed as technologically advanced solutions to address this healthcare problem, but implementation is challenging. More feasible options for assessing adherence often involve patient self-reporting, pill counting, and utilizing pharmacy claims data. Numerous patient self-reporting measures exist in chronic disease settings like hypertension and hyperlipidemia, but no validated patient self-reporting tool currently exists in the hematology/oncology space.⁵

NCODA/Pfizer Survey Overview

Background

The National Community Oncology Dispensing Association (NCODA), in collaboration with Pfizer Oncology, conducted an online survey of its members in May 2021 to better understand adherence risk assessment and the management of patients receiving oral oncolytic therapy. The objectives of the survey were to:

- Understand current practices to identify and/or triage patients at high risk of non-adherence
- Identify the solutions that Medically Integrated Dispensing (MID) pharmacies are utilizing to optimize patients' adherence to oral oncolytic treatment

Respondent Characteristics

98 respondents who have MID pharmacies for oral oncolytics responded to the survey. Over 80% of respondents were pharmacists or pharmacy technicians. The respondents were geographically diverse and included a mix of pharmacies with and without accreditations such as URAC, ACHC, and QOPI.

Results

Results of the survey are included in the accompanying infographic “Triaging Patients at High Risk of Non-Adherence in Medically Integrated Dispensing Pharmacies”.

As the survey results in the infographic show, there are varying approaches to identify patients at high risk of non-adherence and triaging these patients for individualized intervention. Based on this variation, NCODA and Pfizer reached out to practices with established processes for adherence risk assessment and intervention to understand their current processes along with opportunities for improvement. Additionally, NCODA and Pfizer wanted to better understand the need for a standardized assessment tool to help proactively identify patients at high risk of non-adherence and support early intervention.

PRACTICE CASE STUDIES

Practice Overview #1: Mayo Clinic

Scott Soefje, PharmD, MBA, BCOP, FCCP, FHOPA: Director of Pharmacy Cancer Care at Mayo Clinic
Jodi Taraba, PharmD, MSc, BCOP: Clinical Pharmacy Specialist, Breast Clinic
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Mayo Clinic Summary

- Internal analysis showed variability in financial burdens, time to treatment initiation, and adherence to laboratory monitoring among patients starting oral oncolytics, specifically CDK4/6 inhibitors, so a new service was developed for clinic pharmacists to manage patients started on these therapies.
- Patients at high risk of non-adherence are identified via informal assessments during the patient education session.
- To assess patient adherence, the clinic pharmacy team relies on patient self-reporting during follow-up phone calls.
- The specialty pharmacy team primarily assesses adherence utilizing patient-reported adherence combined with a review of the patient dispensing history from the pharmacy dispensing software.
- Clinic pharmacists with collaborative practice agreements are considered to be advanced practice providers (APP) within the Mayo Clinic Cancer Centers so they are able to adjust chemotherapy orders, leading to fewer delays in care for the patient.
- Both the clinic pharmacists and the specialty pharmacists are able to leverage Epic to document adherence issues and communicate concerns with the interdisciplinary team.

Overview

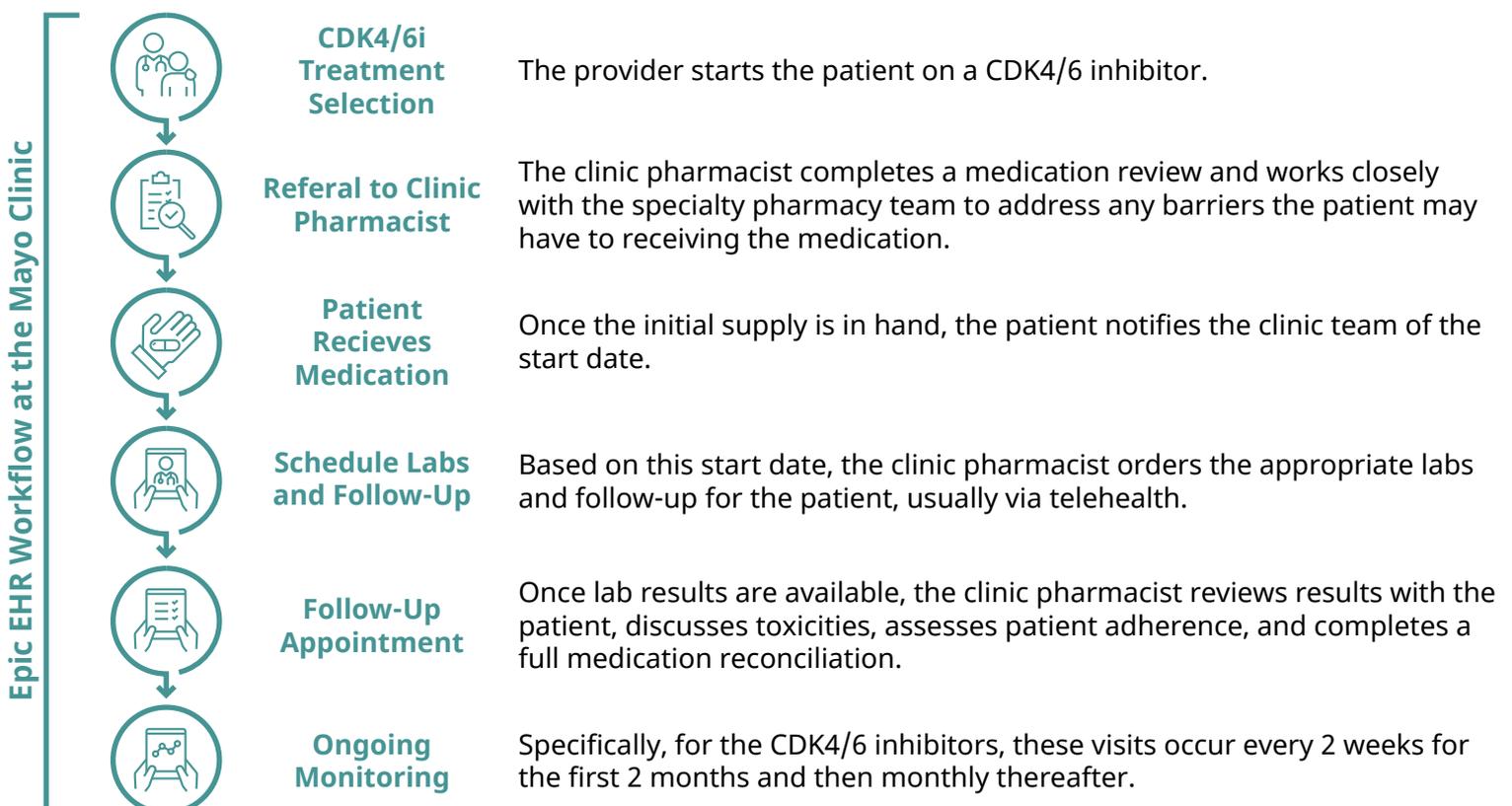
Oral oncolytic adherence management at the Mayo Clinic is a team approach. The pharmacy department utilizes both the clinic team and the specialty pharmacy team to manage patients on oral oncolytic therapy. The specialty pharmacy program originated in the 1990s through a collaboration with endocrinology to support patients receiving growth hormones and evolved into a service supporting numerous disease states, including hematology and oncology. The approval of imatinib and lenalidomide accelerated the development of the oral oncolytic program within the specialty pharmacy, and today the team includes 12 general pharmacists, 16 patient care coordinators, and 5 pharmacy technicians. Additionally, the specialty pharmacy department has a specific enrollment team dedicated to patient assistance activities for cancer patients. The specialty pharmacy is accredited by both ACHC and URAC.

Financial Barriers and Mitigation

Consistent with the survey results, the Mayo Clinic team identified financial concerns as one of the biggest perceived barriers to oral oncolytic adherence. The pharmacy team at Mayo Clinic addresses this concern through their specialty pharmacy program. Each patient referred to the specialty pharmacy undergoes a comprehensive review and evaluation to determine their medical benefits and the assistance programs available to them. The specialty pharmacy team will help the patient or caregiver through the financial assistance process and ensure that the patient is able to receive their treatment at the lowest cost available to them. Unfortunately, if the oral oncolytic prescription must be filled outside of the MID pharmacy at the Mayo Clinic, the financial assistance process is left up to the individual clinics with help from an e-health assistant, if available. External specialty pharmacies may provide some support in obtaining patient assistance, but approaches and level of support vary. To address this gap in care, the pharmacy department is in the early stages of trying to bring the full patient assistance process under the pharmacy umbrella for both oral and infusion products, regardless of dispensing location.

Complexity of Regimen and Coordination of Care

In addition to financial concerns, complexity of the treatment regimen can factor heavily into the patient's risk for non-adherence. The Mayo Clinic pharmacy team identified gaps in care for patients on oral oncolytics requiring quick laboratory follow-up, like CDK4/6 inhibitors, and implemented a solution using their clinic pharmacists.



The Clinic Pharmacist and Patient Management

While insurance coverage can dictate the path of an oral oncolytic prescription and ultimately require filling outside of the Mayo Clinic specialty pharmacy, the clinic pharmacist will follow any patient referred to them, regardless of dispensing location. Within the breast cancer clinic, specifically, the providers and nursing staff will refer patients to the clinic pharmacist service to ensure they have thorough management when starting an oral oncolytic, especially if a patient is identified as being at high risk of non-adherence.

Screening Patients at High Risk of Non-Adherence

Patients at high risk of non-adherence are identified via informal assessments during the patient education session. The pharmacist relies on several pieces of information from the patient to estimate the patient's risk of non-adherence, such as their medication history, their baseline understanding of their current treatment, and their perceived health literacy. Once identified, the Mayo Clinic team can utilize the clinic pharmacist to closely monitor the patient during the first few months of therapy. This allows the clinic pharmacist to form a relationship with the patient and identify patients who are struggling with adherence early on. While Mayo has a template for how they typically follow patients, they often customize based on patient needs. If a patient is noted to be at risk for non-adherence or needs additional toxicity management, the clinic pharmacist can increase the frequency of follow-up visits with that patient.

Assessing and Documenting Patient Adherence

To assess patient adherence, the clinic pharmacy team relies on patient self-reporting during follow-up phone calls. The clinic pharmacist touches base with the patient every 2 weeks at the start of treatment, and the specialty pharmacy team follows up about a week ahead of the refill due date. The pharmacy team feels that the frequency and consistency of these calls has helped with their adherence efforts. In an effort to continue to evolve this process they have developed an app where the patient can report adherence. This customizable app, released in December 2021, has the ability to set medication reminders, prompt patients to report issues, and allow the patient to communicate with their team.

The specialty pharmacy team primarily assesses adherence utilizing patient-reported adherence combined with a review of the patient dispensing history from the pharmacy dispensing software. This allows them to compare the patient's perceived adherence with what the claims data suggests their adherence should be and resolve any discrepancies. Pharmacists also have access to a medication possession ratio (MPR) report that they may reference to help assess oral oncolytic adherence. However, in the oncology patient population, it can be difficult to differentiate between actual non-adherence and planned treatment holds from the provider, dose changes, or cycled therapy with planned days off therapy.

Assessing for non-adherence to oral oncolytics can often require a much deeper dive into the patient case to determine if the reported MPR is accurate and meaningful. This manual review process is not unique to the Mayo Clinic as it can impact MID pharmacies around the country. The time and effort required to review an MPR report and determine the patients that are truly non-adherent versus those who are following provider guidance can be cumbersome and may not add value.

For eligible patients, the specialty pharmacy team utilizes refill follow-up calls in addition to smart forms and electronic portal questionnaires in Epic to assess and document patient adherence. Responses on these smart forms and portal questionnaires are reviewed by the specialty pharmacist to assess if any additional support is needed.

Additionally, the clinic and specialty pharmacy teams can quickly communicate via instant message on time-sensitive issues that need to be addressed. In addition to patient visits and follow-up from the clinic pharmacist, the Mayo Clinic specialty pharmacy team also provides support to the patient for prescriptions filled at their pharmacy. For these patients, they offer medication education, reinforce what the clinic pharmacist reviewed with the patient, and assess any additional needs the patient

may have. These activities are documented in the EHR. The layered support system between the clinic pharmacist and the specialty pharmacist ensures that every patient on oral oncolytics has multiple touchpoints to assist with questions and issues during their treatment.

Managing Patients at High Risk of Non-Adherence

If a patient is identified as high risk for non-adherence prior to starting therapy or they are identified as being non-adherent during follow-up assessments, the specialty pharmacy designates these patients as high risk in their patient profile. Additional electronic messaging and surveys may be done through the EHR for these patients. This is especially useful if they haven't been able to reach a patient through telephone calls. Depending on the situation, the specialty pharmacy team may also directly communicate these gaps in care to the clinical team.

The CDK4/6 Inhibitor Management Program

One of the ways the Mayo Clinic addresses gaps in adherence management and metrics is to proactively build in additional pharmacy touchpoints for their patients. A prime example of increased pharmacy involvement is their CDK4/6 inhibitor program. During the 2018-2019 residency year, the Mayo Clinic pharmacy team worked to gather baseline information on CDK4/6 inhibitor utilization within their breast cancer clinic. Through two different quality improvement projects, the team identified two challenges facing breast cancer patients.

Their internal analysis found that breast cancer patients commonly faced high out-of-pocket costs requiring financial assistance support from their specialty pharmacy. Also, the time to dispensing these high-cost medications was twice as long when a breast cancer patient was required to fill through an external mail order pharmacy compared to the Mayo Clinic Specialty Pharmacy (12 days versus 6 days, respectively.) Additionally, patients would have lab work done at outside facilities and the results wouldn't be interpreted or sent back to the provider in a timely manner.

There was no standardized model for managing these patients which was frustrating to providers. As a result of this finding, the pharmacy team implemented a CDK4/6 inhibitor management program where they provide individualized management of labs and toxicities while working closely with the specialty pharmacy to ensure their patients can access treatments and are adherent to therapy.

Dedicated, Specialized Clinic Pharmacists

With clinic pharmacists established in GI, lung, GU/endocrine, and breast cancer clinics, the Mayo Clinic pharmacy department is considering expansion into clinics like melanoma, pancreatic/neuroendocrine, and gynecologic oncology. Clinic pharmacists with collaborative practice agreements are considered to be advanced practice providers (APP) within the Mayo Clinic Cancer Centers. Therefore, these pharmacists have the ability to adjust chemotherapy and/or write new orders within the parameters of their agreement. Through this process, the pharmacists can quickly address issues and limit delays in care for the patient.

The development of these roles and increase in pharmacy involvement have been evolving since 2017. According to Scott Soefje, Director of Pharmacy Cancer Care, justification of these positions was a matter of demonstrating a pharmacist's impact on the cancer center's bottom line, and this approach has allowed them to continue to enhance the outpatient clinical pharmacy model. The Mayo Clinic found that their pharmacists quickly paid for themselves once imbedded into the clinic workflow.

Using a stepwise approach, they first demonstrated that a patient coming into the clinic and staying within the Mayo Clinic for cancer treatment equated to "\$X" amount of new revenue. Next, they evaluated what the financial impact would be if adding a pharmacist would allow an oncologist to see just one more new patient every day. They found that if the oncologist saw just one more new patient because of a pharmacist's help, the return on investment to staff the pharmacist was 5 to 1. The pharmacy department has demonstrated this value repeatedly over the last few years and is now able to request new positions without further justification as long as they meet expected new patient visits.

Looking to the Future

The Mayo Clinic pharmacy team would like to continue growth into all solid tumor clinics, ideally having a pharmacist on every care team within the cancer center. Additionally, they would like to apply their CDK4/6 inhibitor model to other agents, both oral and infused. Lastly, there are ongoing discussions to decentralize outpatient pharmacy in the same way that the inpatient pharmacy was years ago. With a decentralized structure, the specialty pharmacy team and the infusion pharmacy team may be able to supplement the clinic staff in the future. According to Dr. Soefje, there is an opportunity to elevate the role of the pharmacist as part of the treatment team by using technology to help eliminate some of their current responsibilities. If the pharmacist's role can be elevated then it will enable them to better address and close treatment gaps.

Practice Overview #2: Billings Clinic

Marie Sirek, PharmD, BCACP, CPP: Oncology Clinical Pharmacy Specialist

Billings Clinic Summary

- The oncolytic dispensing process is largely centered around the Billings Clinic Specialty Pharmacy (BCSP), a dual accredited (ACHC and URAC), integrated specialty pharmacy.
- All patients starting an oral oncolytic at Billings Clinic Cancer Center undergo a visit with the oral oncology pharmacist prior to starting therapy.
- Areas of focus when evaluating risk of non-adherence include assessing adherence to other medications, understanding how the patient takes other medications, assessing their understanding of treatment importance, ensuring the patient understands the treatment duration of the oral oncolytic, and identifying barriers to adherence.
- Any adherence concerns and recommendations are documented as part of the oral oncology clinical pharmacist's progress note in the EHR, Cerner.
- Metrics like MPR and proportion of days covered (PDC) are used to measure patient adherence, but there are limitations to the utilization of these measures in the oncology population.

Overview

Billings Clinic is an integrated, non-profit healthcare organization serving residents of Montana, Wyoming, and the Western Dakotas. Billings Clinic has 6 medical oncologists and hematologists and 4 gynecologic oncologists. The clinic provides oncology services to many rural communities by way of outreach clinics and telemedicine. The oncolytic dispensing process is largely centered around the Billings Clinic Specialty Pharmacy (BCSP), a dual accredited (ACHC and URAC), integrated specialty pharmacy. All prescriptions for oral oncolytics are reviewed and undergo benefits investigation by this team. This team then ensures patients receive medication at an affordable cost in a reasonable timeframe, whether from the internal specialty pharmacy or an outside specialty pharmacy. When able to dispense, BCSP provides patient medication through a MID pharmacy with the oral oncology clinical pharmacist providing patient education at that time.

Identifying Patients at High Risk of Non-Adherence

Adherence monitoring is managed primarily by two groups: BCSP and the oral oncology pharmacist. All patients starting an oral oncolytic at Billings Clinic Cancer Center undergo a visit with the oral oncology pharmacist prior to starting therapy. This visit includes an evaluation of adherence and adherence concerns. This process involves a clinical evaluation by the pharmacy provider and is not currently directed by a standardized and defined set of questions. The patient's general understanding of other medications they take gives the oral oncology pharmacist a good baseline for identifying their risk of non-adherence. Other factors, such as how invested the patient is in their care, the amount of social support they have, and their understanding of the goals of care also serve as indicators of the risk of non-adherence.

Areas of focus when evaluating risk of non-adherence include:

- Assessing adherence to other medications
- Understanding how the patient takes other medications
- Assessing their understanding of treatment importance
- Ensuring the patient understands the treatment duration of the oral oncolytic
- Identifying barriers to adherence. This can include cognitive, physical or motivational barriers.

Any concerns or adherence recommendations are then documented as part of the oral oncology clinical pharmacist's progress note in their Cerner EHR.

Patient Education Focus: Duration of Therapy

The Billings Clinic Pharmacy Team has identified that the patient's understanding of the duration of treatment with an oral oncolytic is a common area of confusion, and the pharmacy team often spends time reiterating the planned treatment duration. The team feels that ensuring the patient understands the intended treatment duration is important for long-term adherence since often times the intent is to treat with the specific regimen until unmanageable toxicity or disease progression occurs.

Coordinated and Tailored Adherence Management

Billings Clinic patients who are able to fill through BCSP have an additional layer of adherence support since the specialty pharmacy team can identify refill non-adherence and have adherence discussions with patients during refill calls. The specialty pharmacy team and the oncology clinic pharmacist will work together to provide adherence support, which may include treatment calendars, increased phone follow-up between visits, and other education or adherence methods. If the patient is getting their medication through BCSP, they also have the ability to limit the amount of medication dispensed to the patient and closely manage the refill dates.

After initial education and adherence evaluation, patient-reported adherence is evaluated at each follow-up visit. For patients followed by the oral oncology pharmacist, adherence support is tailored to the patient's individual needs. Some patients require more frequent adherence checks or extra support with treatment calendars, whereas others may only require adherence evaluation at follow-up visits. Patients on more complex treatment regimens often receive closer follow-up for treatment understanding and adherence. Examples of complex treatment regimens at Billings Clinic may include combination regimens using an IV and an oral treatment, or regimens containing multiple oral agents. Patients having trouble with adverse effects may receive closer follow-up, leading to additional touchpoints to assess adherence.

In cases where the patient is not receiving medication through BCSP and not being followed by the oral oncology pharmacist, adherence monitoring is typically done on a visit-by-visit basis with the provider. In these scenarios, adherence assessments are often reactive and based on patient reporting.

Assessing and Documenting Patient Adherence

Patients continue to self-report treatment administration and cycle timing as long as concerns or discrepancies are not identified. If issues are identified, patients may be asked to use a treatment calendar to log adherence or physically bring medication bottles with them for pill counts at visits. Adherence evaluations are done in an open-ended question format, ensuring the patient can correctly verbalize exact dose, frequency, and administration techniques. Adherence is tracked in the EHR and by the BCSP through follow-up call tracking. Patient treatment cycles are followed and documented closely in the EHR. If concerns are identified related to adherence, they are documented in the oral oncology pharmacist's progress note and also communicated internally with the oncology office via the patient's EHR.

Looking to the Future

While the Billings Clinic Cancer Center and Specialty Pharmacy both offer robust services for their oral oncolytic patients, they would love to see their program continue to grow. A validated adherence risk-assessment tool for oral oncolytic adherence doesn't exist at this time but could be beneficial in enabling more proactive intervention and more efficient use of practice resources. The pharmacy team currently utilizes metrics like medication possession ratio (MPR) and proportion of days covered (PDC) to measure patient adherence, but they note the limitations of these measures in the oncology population. Additionally, refill data and adherence issues for patients who must use outside mail order pharmacies are difficult to track. This often leads to reactive adherence interventions by the clinic staff. In an ideal world, Billings Clinic would like all patients to be able to fill their oral oncolytics through their MID pharmacy to allow for increased visibility and tracking of patient adherence to therapy.

Discussion

Several key issues were identified when reviewing survey results and interviewing pharmacy staff. The first, and most notable, was the lack of a proactive, standardized, and validated risk assessment tool for teams to utilize when assessing for patients at high risk of non-adherence when starting an oral oncolytic. The second, and most mentioned during practice site interviews, was the lack of pharmacy resources dedicated to this process. Across the country, the widespread shortage of pharmacy technicians is leading to increased demands on pharmacy staff, decreased ability to expand services, and potentially longer dispensing turnaround times.⁶ Other issues identified in interviews included limitations with available metrics related to oral oncolytic adherence (e.g., MPR, PDC),⁷ the lack of strong technology platforms to help manage patients on oral oncolytics, and suboptimal technology to support the financial assistance process (e.g., real-time benefits tools).

Adherence Challenges for Practices

1. Lack of proactive, standardized and validated risk assessment tool
2. Lack of pharmacy resources dedicated to the process

Both practices had ideas when they were asked about what could be done to help address these issues. The Mayo Clinic team was quick to reinforce that the shortage of resources is not likely to improve any time soon. Pharmacists will need to leverage technology and advanced AI to free up time to allow them to offer innovative and value-added services in the clinic. The Mayo Clinic pharmacy team feels it is important to work as a profession to push the regulatory landscape to address these challenges. In the future, physician shortages are likely to play a role in the oncology space, and they believe pharmacists are in a prime position to step up and help, if they stay ahead of the curve. The CDK4/6 inhibitor program at Mayo Clinic was one of the first steps toward recognizing the value pharmacists can bring, especially when they see the patient face-to-face. They hope to continue to demonstrate the value that pharmacists add to patient care and cement the pharmacist's role in the clinic setting. Ultimately, they hope to push more pharmacists out of their traditional dispensing roles and into more patient-facing ambulatory positions.

In addition to implementing clinical pharmacy services like Mayo Clinic, Billings Clinic suggests smaller changes may also help in the efficient allocation of resources. The oncology clinical pharmacy team at Billings Clinic believes a standardized assessment tool to identify patients at high risk of non-adherence could allow them to proactively identify the patients to focus their limited resources upfront instead of trying to reactively manage non-adherence when it is already a problem. This sentiment is further supported by the results of the survey. Over 90% of survey respondents strongly or somewhat agreed that an adherence triage tool would benefit patients and their practice by helping to maximize patient benefit from therapy and the use of key practice resources. With an increasing emphasis on value-based care and rising demands on health care staff, the development of tools and resources to simplify complex issues, like adherence, is crucial to providing quality care to oncology patients.

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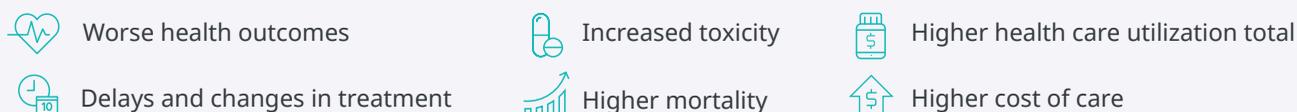


Triaging Patients at High Risk of Non-Adherence in Medically Integrated Dispensing Pharmacies

Survey Results to Understand How Medically Integrated Dispensing Pharmacies Identify and Triage Patients at High Risk for Non-Adherence and Solutions That Pharmacies Use to Optimize Adherence to Oral Oncolytics

Impact of Non-Adherence to Oral Chemotherapy

Patient adherence is a key challenge in oral chemotherapy administration. Recent studies show that anywhere from 20% to more than 40% of patients receiving oral chemotherapy have poor adherence. Issues with adherence can negatively impact patients and health care systems in the following ways¹:



This infographic will show current approaches used by medically integrated dispensing (MID)* pharmacies to identify and triage patients at high risk for non-adherence. Additionally, this infographic will display the variation in current processes and interventions that MID's are using when identifying and triaging patients at high risk of non-adherence.

*MID: A dispensing pharmacy within an oncology center of excellence that promotes a patient-centered, multidisciplinary team approach.

Survey Design and Objectives

NCODA, in collaboration with Pfizer Oncology, developed a survey that was shared with its member organizations. The objectives of the survey were to:

- Understand current practices to identify and/or triage patients at high risk of non-adherence
- Identify the solutions MID pharmacies are utilizing to optimize patients' adherence to oral oncolytic treatment

Results are based on a survey of 98 respondents who have medically integrated dispensing pharmacies for oral oncolytics. Over 80% of respondents were pharmacists or pharmacy technicians. Most respondents managed <500 patients at any given time. Respondents were geographically diverse and included a mix of pharmacies with and without accreditations (URAC, ACHC, and QOPI).

Adherence Risk Assessment[†]

Over 90% of respondents strongly agree or somewhat agree that an adherence triage tool would benefit patients and the practice

An adherence triage tool would bring value to patients and the practice by helping to:



[†]Respondents were asked how likely they were to agree that an adherence triage tool could maximize patient benefit to therapy and could help maximize the use of practice resources.

Proactive Identification of Patients at High Risk for Non-Adherence

86% of respondents agree that proactively identifying patients at high risk for non-adherence prior to starting therapy is a key priority for their practice[‡]



[‡]Respondents were asked how likely they were to agree that identifying patients at high risk for non-adherence prior to starting therapy is a key priority for their practice.

[§]Respondents were asked if their practices proactively identify patients at high risk for non-adherence prior to starting treatment.

[¶]Respondents who answered yes to proactively identifying patients were asked how they are proactively identifying patients.

Top Drivers of Non-Adherence**

Respondents identified patient financial concerns and complexity of chemotherapy regimen as the top drivers for non-adherence



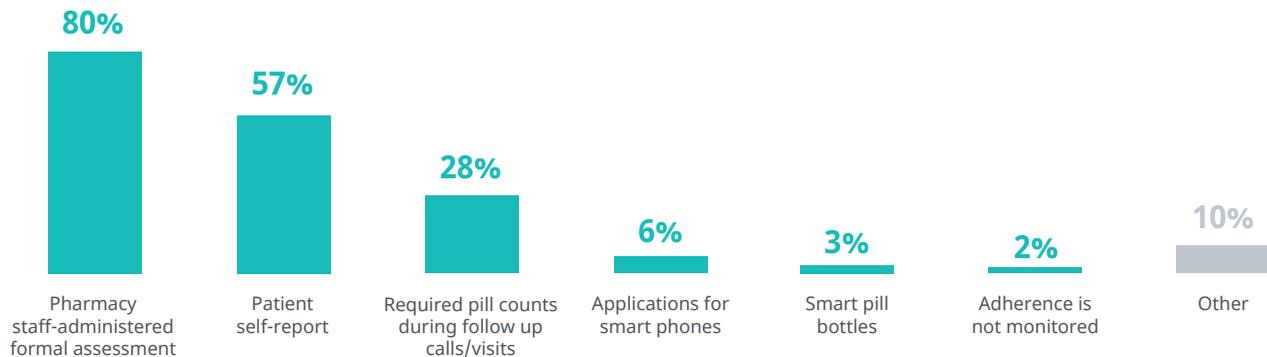
Other Factors Include:

- Actual or perceived toxicity of the regimen (45)(n=45)
- Social support for the patient (45)(n=45)
- Type of insurance (45)(n=45)
- Socioeconomic status (43)(n=43)
- High psychosocial distress (42)(n=42)
- Health literacy (39)(n=39)
- Baseline understanding of goals of care (32)(n=32)
- Language barriers (31)(n=31)
- Number of acuity of comorbidities (31)(n=31)

**Respondents scored potential drivers of non-adherence from 1 (non-driver) to 11 (extremely significant driver). The count of scores rated 9, 10, or 11 are shown above.

How Respondents Monitor Patient Adherence††

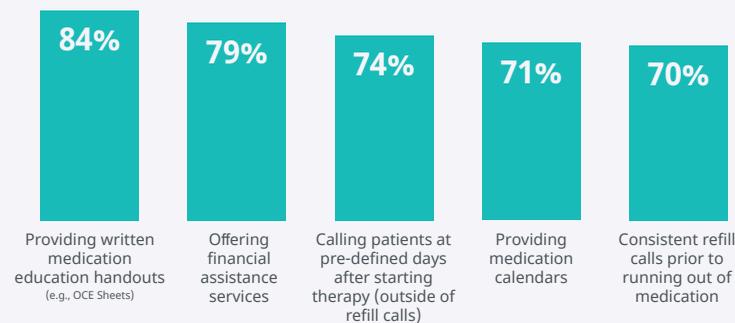
80% of respondents monitor patient adherence using pharmacy staff-administered formal assessments



††Respondents were asked to indicate all of the methods used to track patient adherence.

Methods Used to Optimize Adherence**

Written medication handouts were the top method identified by respondents



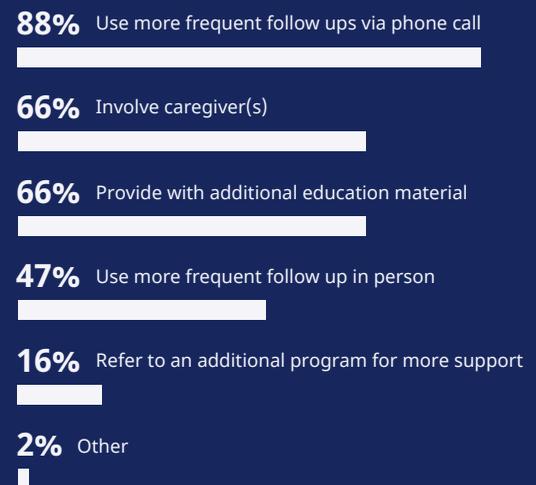
Other Methods Include:

- Supplying the patient with a treatment support kit at the start of therapy (59%)
- Referring the patient for an additional service or education session (45%)
- Utilizing smart bottles or caps (7%)
- Other (4%)

**Respondents were asked to indicate all relevant choices.

Altering Care for High Risk Patients^{§§}

100% of respondents altered care for patients at high risk of non-adherence (n=64)



^{§§}Respondents were asked to identify how care is altered for patients identified as being at high risk of non-adherence.

1. Oncology Care Model. Supporting Oral Chemotherapy Adherence. Learning System Case Study #3. NCODA.org. Updated October 10, 2017. Accessed November 1, 2021. <https://www.ncoda.org/wp-content/uploads/bp-attachments/7204/oralsupportoralchemotherapyadherence.pdf>