

# 2018 Hematology/Oncology Pharmacist Association Best Practices for the Management of Oral Oncolytic Therapy: Pharmacy Practice Standard

Emily Mackler, PharmD<sup>1</sup>; Eve M. Segal, PharmD<sup>2</sup>; Benyam Muluneh, PharmD<sup>3</sup>; Kate Jeffers, PharmD<sup>4</sup>; and Jenna Carmichael, PharmD<sup>5</sup>

**QUESTION ASKED:** What is the standard by which oncology pharmacists should provide care to oncology patients who are prescribed oral oncolytic therapy?

**SUMMARY ANSWER:** Pharmacists have important roles within the interprofessional oncology team in the following primary areas of oral oncolytic management: prescribing, education, dispensing and distribution, and monitoring and follow-up.

**METHODS:** The oral oncolytic pharmacy practice standard was created by the Hematology/Oncology Pharmacist Association Oral Chemotherapy Task Force. The task force reviewed primary literature, including currently published oral oncolytic guidelines and scope of work documents, with a focus on opportunities to enhance the care of patients with cancer who take oral oncolytic therapy. Hematology/Oncology Pharmacist Association membership reviewed and provided recommendations to the oral oncolytic pharmacy standard before completion. The standard provides a guide for oncology practices and pharmacists who are establishing workflows related to the care of their patients taking oral oncolytics.

**BIAS, CONFOUNDING FACTOR(S):** Creation of the oral oncolytic pharmacy practice standard was done by a group of pharmacists who have experience in creating or working in oral oncolytic management programs at their respective institutions. Pharmacy resources vary widely across the nation.

**REAL-LIFE IMPLICATIONS:** Oral oncolytic therapy management is complex given the fragmentation of care, the cost of therapy, tolerability and safety of medications, issues related to patient access, patient education, patient self-care management, and the monitoring and follow-up of this patient population. Oncology pharmacists are well positioned to partner with physicians, nurses, and other clinicians in the management of this patient population. Key areas identified for pharmacist involvement were related to ensuring safe prescribing patterns; conducting comprehensive medication reviews, given the propensity for drug–drug interactions; providing patient education; ensuring proper drug distribution and patient access; and monitoring adverse effects and medication adherence.

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## abstract

**PURPOSE** The aim of the current work was to present a pharmacy practice standard from the Hematology/Oncology Pharmacy Association (HOPA) on the management of oral oncolytic therapy.

**METHODS** The HOPA Standards Committee organized a work group of oncology pharmacist specialists to create a pharmacy practice standard for the management of oral oncolytic therapy that describes the pharmacist's role on the cancer care team, provides examples of practice tools and resources, summarizes current data related to outcomes, and discusses opportunities to enhance the care of patients with cancer who receive oral oncolytic therapy. We reviewed primary literature, including currently published oral oncolytic guidelines and HOPA's Scope of Hematology/Oncology Pharmacy Practice.

**RESULTS** Management of oral oncolytic therapy was divided into the following primary areas: prescribing, education, dispensing and distribution, and monitoring and follow-up. Pharmacists' roles were summarized in each area with a focus on interprofessional collaboration, communication, patient safety, and quality of patient care. Standards describe the best practices in each area (Table 1).

**CONCLUSION** Multiple opportunities exist for pharmacists to enhance the care of patients with cancer who receive oral oncolytics through collaboration with oncology care team members. The role of the oncology pharmacist in the care of this patient population is critical given the complexities related to cost, tolerability, and safety of oral oncolytic medications; issues of access; and the monitoring and follow-up of patients receiving this therapy.

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## INTRODUCTION

Oral oncolytics are a broad pharmacologic class that includes oral cytotoxic agents and small-molecule inhibitors that target surface proteins, tumor pathways, and receptors.<sup>1</sup> Use of oral oncolytics for the treatment of cancer has substantially increased in the past several years. Although oral oncolytics may be more convenient for patients, the shift from intravenous to oral therapy has resulted in several opportunities to improve how these drugs are prescribed, dispensed, administered, and monitored.<sup>2</sup> Oncology pharmacists are uniquely positioned to enhance the care for patients with cancer who receive oral oncolytic therapy because of their expertise in medication management, training in patient education and self-care management, and focus on the quality and safety of care.<sup>3-6</sup> This article outlines recommended standards

for pharmacists' involvement in interprofessional oncology care teams in the primary areas of oral oncolytic management, including prescribing, education, dispensing and distribution, and monitoring and follow-up (Table 1).

## PRESCRIBING

Oncology pharmacists have multiple opportunities to ensure safe, effective, and consistent prescribing at the institutional and patient care levels. At the institutional level, pharmacists have an impact on drug selection through their involvement in interprofessional cancer formulary committees that evaluate clinical data, national guidelines, comparisons of same-class drugs and biosimilars, financial toxicity, and clinical cancer pathways.<sup>5,7</sup> Institutional work may also include the creation of standard ordering processes, the

## ASSOCIATED CONTENT

### Data Supplement

Author affiliations and support information (if applicable) appear at the end of this article.

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**TABLE 1.** Oral Oncolytic Management Best Practices

<b>Best Practices</b>
<b>Prescribing</b>
Patient consent, including intent of therapy, should be obtained for oral oncolytic therapy
Pharmacists should provide a comprehensive review of new oral oncolytics and determine their place in therapy via an interprofessional formulary committee
When feasible, pharmacists should support oral oncolytic prescribing on an individual patient level, taking into consideration both patient- and medication-specific characteristics
Pharmacists should be involved in the creation of oral oncolytic templates for electronic prescribing that include all required components and any standard supportive care measures or monitoring
Pharmacists should perform a comprehensive medication review at the time of prescription
Oral oncolytic safety and quality standards should be consistent with intravenous treatment standards
The oncology team should communicate the intent of oral oncolytic therapy, pertinent drug–drug interactions, and potential implications for the patient’s comorbidities and management strategies to the patient’s PCP
<b>Education</b>
Pharmacists should be involved in the development or endorsement of standardized education materials, and education should be consistent across the oncology care team
A separate education visit—in person or over the phone—should occur after the oncologist’s initial prescribing visit and before the start of oral oncolytic therapy to supplement and reiterate the information provided during the oncologist visit
Education should be comprehensive (see Education) and focus on patient self-care management of oral oncolytic adverse effects and the importance of medication adherence
An assessment of patient knowledge, confidence to manage adverse effects, and need for follow-up should occur during the education session
Patient caregiver attendance at the education session is encouraged
<b>Dispensing/distribution</b>
A dedicated medication assistance team—nonpharmacist—should prospectively screen and provide financial support for oral oncolytic medications
The dispensing pharmacy should have access to necessary information for safely filling the oral oncolytic medication, including laboratory values and progress notes
The dispensing pharmacy should have a dedicated liaison for the clinic and provide information that includes financial toxicities, refills, medication adherence, and any identified medication adverse effects
Specialty pharmacists and oncology pharmacy organizations should partner to promote the education of oncology pharmacists and optimize oncology patient care
<b>Monitoring and follow-up</b>
A consistent process with standardized tools should be used in the oncology clinic setting for monitoring and follow-up
An oncology pharmacist should be involved in the creation of monitoring and follow-up materials and, ideally, in the assessment and monitoring of a patient’s symptoms and medication adherence
Initial monitoring of symptoms and adherence, including PROs, should occur between 7 and 14 days after the start of treatment
Ongoing monitoring of symptoms and adherence, including PROs, should occur at each clinical encounter, at least before each refill
Medication reconciliation should occur at each assessment point above, ideally by a pharmacist
Adherence assessment should be user friendly, reliable, cost effective, and practical
Collaborative practice agreements, including laboratory and symptom monitoring, should exist in settings in which clinical oncology pharmacists are part of the interdisciplinary oncology care team
Communication within the oncology team and with the patient’s PCP should be ongoing
<b>Practice management</b>
Oncology practices should have an oral oncolytic program with pharmacist involvement where possible
Before oral oncolytic program development, a baseline gap assessment should be performed to assess areas for improvement and baseline performance on oral oncolytic quality measures
Pre- and postfinancial, clinical quality measures, including interprofessional and patient experience, should be assessed for continuous quality improvement
Sufficient resources should be provided to meet the above quality measures

Abbreviations: PCP, primary care physician; PRO, patient-reported outcome.

implementation of safety checks and other workflows that decrease the likelihood of medication errors, and the development of symptom management protocols. Safe ordering processes for oral oncolytics have been previously addressed by recommendations incorporated into the ASCO/Oncology Nursing Society safety standards and the American Society of Health-System Pharmacists Guidelines on Preventing Medication Errors With Chemotherapy and Biotherapy.<sup>8,9</sup> Standardized templates for medication ordering exist that incorporate proper dosing, dosage forms, and laboratory testing that are consistent with the previously mentioned guidelines. In practices in which clinical pharmacists are imbedded in the clinic, pharmacists support prescribing by evaluating several patient-specific factors—for example, comorbid conditions, concomitant medications, dosing schedules, insurance, and adverse effect profiles—that affect drug selection and planned monitoring.<sup>5</sup> Because of the multiple drug–drug and drug–food interactions that can occur with oral oncolytic therapy, comprehensive medication reviews are a particularly important component of patient care that should involve pharmacists' participation.<sup>10-13</sup> A discussion between the ordering oncologist, pharmacist, and nurse should occur to discuss any identified concerns to ensure that the dosing and timing of the order and concomitant medications is appropriate and to finalize a patient-specific monitoring plan. Comorbid conditions and their treatments should be carefully reviewed because of their potential to affect or be affected by the oral oncolytic therapy. Care coordination among the oncology pharmacist, members of the oncology team, dispensing pharmacy, and primary care providers is integral to ensuring patient safety during cancer treatment.<sup>14-17</sup> Finally, involvement in an interprofessional team with a focus on precision medicine is becoming more relevant as genetic testing and targeted drug therapies become more available.<sup>18,19</sup>

## EDUCATION

To make informed decisions about treatment, patients and caregivers must receive education on expected outcomes, adverse effects, costs of therapy, administration, and monitoring of the oral oncolytic. National guidelines recommend the use of verbal and written information on the basis of the patient's learning needs, abilities, preferences, and readiness to learn.<sup>8</sup>

Education should occur before the initiation of therapy, ideally in visits separate from the oncologist, and should be continually reinforced throughout treatment. As the medication experts, pharmacists are well suited to provide education during these visits. Ideally, the pharmacist will have a designated space and scheduling support for these visits. If pharmacists are unable to be involved in the day-to-day education of patients, they should be involved in the creation and endorsement of standardized education materials. Materials should be created to accommodate

patients' varying health literacy and should be translated to the patients' preferred language whenever possible. Materials may include a combination of written and audiovisual elements.<sup>20</sup>

Identifying the patient's or caregiver's goals for the education session and concerns regarding treatment can aid in individualizing the content and make possible a more informative visit.<sup>20</sup> Creating standardized content and processes for teaching helps the interprofessional team communicate consistent information about expected outcomes and adverse effects and also ensures that appropriate self-management strategies are provided.<sup>21</sup> One potential source of patient education is oral chemotherapy education documents produced via the partnership of several national oncology organizations.<sup>22</sup>

Although there is not one clear, best way to provide education, topics covered should be consistent from patient to patient. Patient education sessions should follow the chemotherapy standards created by American Society of Health-System Pharmacists and ASCO/Oncology Nursing Society. These sessions should cover diagnosis; goals of treatment; duration of treatment; schedule of treatment administration; drug–drug and drug–food interactions; adverse effects, including frequently reported, rare adverse effects and the potential for the oral oncolytic to affect sexuality and fertility, and self-management strategies; when to contact the health care team or seek immediate attention; safe handling and disposal of medications; and plans for follow-up.<sup>8,9</sup> Patients should be provided information about drug acquisition, including the role of the specialty pharmacy and financial assistance, when applicable. It is also imperative that education sessions include a comprehensive medication review performed by a pharmacist that covers prescription medications, herbal and other supplements, and vitamins, with a particular focus on drug interactions between current therapies and the new oral oncolytic and supportive medications. Any potential drug–drug interactions identified by the pharmacist should be reviewed with the ordering physician and the patient so that adjustments to therapy, including monitoring, are implemented before therapy initiation.

After the initiation of therapy, the actual start date should be confirmed with the patient and recorded in the electronic medical record. Depending on the practice setting, patients may initiate treatment as early as the day of the education visit. A follow-up phone call to the patient should be made within 2 weeks of starting treatment to assess the patient's adherence to and tolerance of the medication and provide education reinforcement.<sup>23-25</sup>

## DISPENSING AND DISTRIBUTION

The uniqueness of the specialty pharmacy model compared with a retail pharmacy model has been well described.<sup>26</sup> Specialty pharmacies can generally be categorized

as practice based—associated with a health system or clinic—or independent and can exist onsite or separate from the oncology practice. Currently, the patient's medication insurance and limited distribution models primarily determine where a prescription for an oral oncolytic will be filled.

Key services that specialty pharmacies should provide include financial support services, medication education that complements education received from the oncology provider, resources for measuring and promoting adherence, symptom assessment, and a direct flow of information between the oncology provider and pharmacy.<sup>5,27</sup> All patients should be screened by the specialty pharmacy to detect financial barriers, and dedicated resources should exist to assist patients in navigating available assistance programs and insurance requirements. Adherence assessments can be completed via a number of methodologies, as outlined below. Regardless of the specialty pharmacy model, a partnership between the pharmacy and oncology practice that facilitates the flow of patient information is critical. This would include information from the practice related to the navigation of insurance for financial support, changes in dose or medication, and patient tolerance, as well as information from the pharmacy regarding the start date of therapy, patient adherence, monthly reports of patient-specific dispensing and pick-up confirmation, and identified financial barriers. Communication between the pharmacy and oncology practice can be enhanced by the designation of a specific contact or a concierge service. Ideally, the pharmacy will have access to key parts of the patient's medical record, including progress notes, recent laboratories, cytogenetics and mutation profiles, and height and weight data, to perform an adequate chemotherapy double check.<sup>8,9</sup> A benefit of onsite pharmacies is that they may have easier access to pertinent patient data and direct communication with the patient's primary oncologist.

Given the rapid surge in the use of oral oncolytics, continuing education of the specialty pharmacy team is essential and should occur on a routine basis. HOPA advocates that organizations have on staff one or more pharmacists with clinical expertise in oncology and board certification as a board-certified oncology pharmacist or certified specialty pharmacist. These individuals should be involved with practice management and quality improvement, serve as content experts, and provide continuing education for staff.<sup>5</sup> Involvement with national and regional oncology and managed care organizations provides an avenue for specialty pharmacists to receive current oncology education. Therefore, it is considered a best practice for each oral oncolytic prescription to be filled at an accredited pharmacy by a pharmacist who has access to current and relevant information regarding oncology treatment and management.

## MONITORING AND FOLLOW-UP

### Symptom Management

Symptoms as a result of underlying malignancy and its corresponding treatment can be significant and persistent.<sup>28</sup> Oral oncolytics are associated with a wide array of adverse effects, and data indicate that patients who receive these treatments frequently experience moderate-to-severe symptoms.<sup>29</sup> To mitigate these and other adverse effects, it is imperative that providers diligently monitor patients who receive oral oncolytic therapy. For example, in a recent clinical trial, 766 patients were randomly assigned to use either a Web-based tool that enabled them to report adverse effects or standard-of-care reporting methods. Patients with metastatic cancer who used the tool while receiving treatment lived a median of 5 months longer than those who did not use the tool.<sup>30</sup> Use of patient-reported outcomes (PROs) in patients who receive oral oncolytic therapy is in the early phases of development, but one can assume that the benefits would be similar to those for patients who receive intravenous chemotherapy.<sup>29,31</sup>

Pharmacists are well suited to provide symptom management to oncology patients via collaborative practice agreements. Collaborative practice agreements enable pharmacists to provide drug therapy management, such as ordering relevant laboratory tests and supportive medications, under the direction of licensed physicians.<sup>32,33</sup> As a result, pharmacists in the outpatient setting have established a variety of effective clinical models to enhance oncology patient care, such as clinics for supportive care, oral oncolytic management, pain and palliative care, and anticoagulation.<sup>27,34-36</sup>

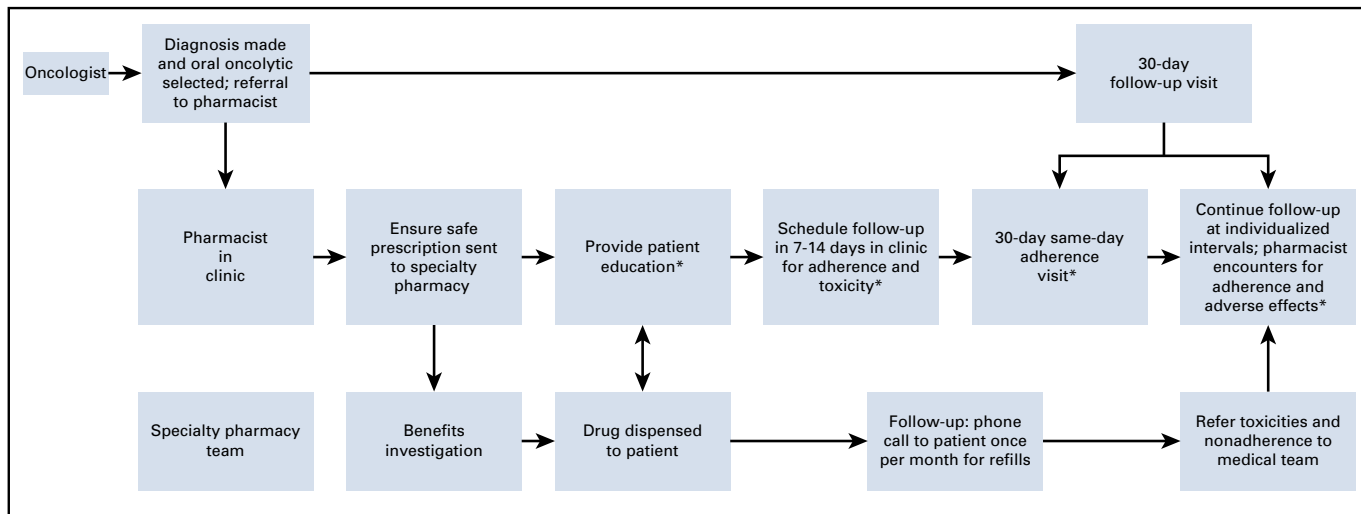
A best practice for managing toxicities for patients who receive oral oncolytic therapy is the inclusion of scheduled symptom-monitoring evaluations—for example, evaluation via PROs—and assessment of patients' confidence in using self-care management. Pharmacists, along with other members of the oncology care team, have an opportunity to improve patients' knowledge and tolerance of oral oncolytic therapy by establishing a model in which reporting and management of symptoms is a part of routine care. Patients should also be assessed routinely for any new concomitant therapies that may have been initiated while taking their oral oncolytic so that the oncology care team can manage and monitor any potential drug-drug interactions. In light of data that support the finding that the development of symptoms from oral oncolytic therapy occurs within 2 weeks of initiation, we also recommend that one of the first points of contact take place within the first 2 weeks of therapy.<sup>25</sup>

The pharmacist, along with the prescriber, has a professional responsibility to ensure that patients are continuously monitored for any adverse effects throughout the duration of their oral oncolytic therapy. Pharmacists play a crucial role in the prevention, detection, and reporting of

**TABLE 2.** Adherence Tools Used in Oncology

<b>Tool</b>	<b>Function(s)</b>	<b>Advantage(s)</b>	<b>Disadvantage(s)</b>
Reminder Triggers <sup>43</sup>			
Pill diaries	Patient's medication-taking behavior	Helps to correct for poor recall	Can be altered by the patient
Pill counts	Patient's medication-taking behavior	Objective	Data can be altered by the patient (eg, pill dumping)
		Quantifiable	
		Easy to perform	
Electronic medication monitors	Patient's medication-taking behavior	Precise	Expensive
		Easily quantifiable results	Requires return visits for downloading data from medication vials
		Tracks patterns of taking medication	
Cellular phones/alarms/applications	Patient's medication-taking behavior	Precise	Remains untested at this time
		Easily quantifiable results	Requires smartphones
		Tracks patterns of taking medication	
Indirect Adherence Measurements <sup>43</sup>			
Prescription refill rates	Patient's medication-taking behavior	Objective	Prescription refill does not equate to ingestion of medication
		Easy to obtain data	May require a closed pharmacy system to be more effective
Direct Adherence Measurements <sup>43</sup>			
Directly observed therapy	Patient's medication-taking behavior	Most accurate	Patient can hide pills in his or her mouth and discard them
			Impractical for routine use
Biological assays	Patient's medication-taking behavior	Objective	Intrusive
			Costly to administer
			Can give a false impression of adherence
<b>Questionnaire and Scales</b>	<b>Function(s)</b>	<b>Advantages</b>	<b>Disadvantage(s)</b>
Adherence Questionnaires and Scales <sup>44-50</sup>			
Brief Medication Questionnaire	Patient's medication-taking behavior	Self-administration	Time consuming
		Barrier to adherence	Evaluate multidrug regimens
			Reduces practitioner time/training
Morisky Medication Adherence Scale-8	Patient's medication-taking behavior	Higher validity and reliability in patients with chronic diseases	Time consuming
		Barrier to adherence	
Basel Assessment of Adherence Scale	Patient's medication-taking behavior	Quick to administer	Lower validity than other scales
		Barrier to adherence	Simple scoring
Medication Adherence Report Scale	Barriers to adherence	Simple scoring	Limited generalizability
		Beliefs about adherence	





**FIG 1.** Oral Oncolytic Management - Example Workflow. (\*) Encounters may be completed via telephone or an in-clinic encounter.

adverse drug reactions.<sup>37</sup> If the patient reports a serious, potentially fatal or permanently disabling adverse event or an adverse event that requires hospitalization or an intervention to prevent permanent impairment or damage, the pharmacist should report this event to the US Food and Drug Administration's MedWatch program and alert the care team accordingly.

### Adherence

Current reports suggest that adherence and persistence rates for taking oral oncolytics vary widely from 50% to nearly 100%.<sup>38</sup> To maximize the effectiveness of oral oncolytic therapy, it is imperative that patients adhere to their treatment. For example, in a study of imatinib in patients with chronic myeloid leukemia, adherence to therapy—more than 90%—was associated with a significantly better probability of achieving both major and complete molecular responses.<sup>39</sup> Unfortunately, many barriers to adherence exist, including low health literacy, limited patient knowledge, complex administration instructions, challenging adverse effects, and high out-of-pocket costs.<sup>40</sup> Patient- and drug-related factors should be addressed before the initiation of therapy and on a continued basis to ensure ongoing successful treatment (Data Supplement).<sup>41</sup> The necessity for increased vigilance and standardization of oral oncolytic adherence is widely recognized and has been added to ASCO's Quality Oncology Practice Initiative as a quality measure.<sup>42</sup>

Multiple methods to monitor drug adherence have been evaluated in clinical trials. These methods include patient self-report, patient diaries, prescription refill history, pill counts, monitoring of drug plasma levels, medication event monitoring systems, and smartphone applications. Each adherence monitoring method has advantages and disadvantages (Table 2). It is especially challenging for practitioners to identify which strategies should be used to

measure adherence in the oncology population given that the majority of the data applies to research settings and may not be practical in routine practice. Ideally, a medication adherence measure will be cost effective, user friendly, easy to administer, highly reliable, flexible, and practical.<sup>50,51</sup> No single measure outlined above can meet all these objectives.

In addition to quantitative methods to monitor adherence, certain qualitative measures should be included in the continuing monitoring process. It is imperative that providers evaluate a patient's social support network before providing education on an oral oncolytic. It has been demonstrated that greater adherence to medications is associated with patients who had a greater deal of social support.<sup>52,53</sup> Other considerations of which one should be mindful are personal and cultural beliefs and language barriers.<sup>54,55</sup> All patients should be provided with clinical contact information and, if necessary, translator support. Last, if a patient doesn't seem to have a certain anticipated adverse drug reaction commonly associated with a specific oral oncolytic—for example, neutropenia—it is critical that the oncologist and pharmacist assess the patient's adherence. Reports on refill history are a helpful tool to identify nonadherence if not identified via patient report.

Unfortunately, strategies to enhance adherence to oral oncolytic therapy are not well established. Nonadherence is often a result of symptom burden in this patient population. It seems that interventions that are aimed at improving symptom reporting may be more useful than those aimed at improving nonadherence as a result of other reasons—for example, reminder systems used to address nonadherence as a result of forgetfulness.<sup>31,56</sup>

Pharmacists can partner with the care team and provide ongoing adherence assessments. A major component of pharmacists' training is focused on adherence; therefore, pharmacists are well equipped to assess and respond to

nonadherence in the oncology patient population by providing appropriate education. A recent study that evaluated the effectiveness of an integrated oral chemotherapy program concluded that patients who were called twice a month to discuss their oral oncolytic had better adherence rates to their therapy than did patients who were not pre-emptively contacted.<sup>57</sup>

## PRACTICE MANAGEMENT

Currently, limited evidence-based data exist on the benefits of oral oncolytic management (OOM) programs. An OOM program may be based on one of several models. Some OOM programs use telepharmacy, in which pharmacists engage with patients about their treatment via telephone. Other programs use a hybrid model that adds in-person encounters for education and continued monitoring visits. Models that include pharmacists at the initiation of therapy allow for the verification of safe prescribing and proactive education on the importance of adherence and self-management of adverse effects.<sup>58</sup> Addition of face-to-face encounters has also been found to contribute to enhanced pharmacist–patient relationships<sup>59,60</sup> and provider satisfaction.<sup>23,61</sup> Documentation of care in the patient's medical record is critical to communicate findings and interventions to the interprofessional team<sup>58,61,62</sup> (Fig 1).

To ensure that an OOM is successful, it is critical to identify and track program metrics to justify the dedication of additional resources and to expand clinical services. Possible metrics that can be used for these ends include clinical, economic, and satisfaction outcomes collected at baseline and at various time points to demonstrate the impact of the program. Metrics can also help to assess the impact of patient education and changes in patient behavior; however, regardless of their exact use, it is imperative that patient-related metrics be tracked at baseline and after the implementation of an OOM program. These patient-related metrics should include measurements of patient understanding, adherence, and patient satisfaction. In addition, capturing PROs can be an effective strategy for prioritizing and tracking pharmacists' interventions.

Identifying and tracking metrics, of course, can be challenging, and barriers to capturing data efficiently and routinely may exist. Ideally, however, programs will build features into the electronic medical record to capture pharmacists' interventions—for example, the number of encounters, drug–drug interactions identified, adverse reactions managed, time spent on patient care, provider time saved, and risks avoided. Recording these interventions illustrates the multitude of ways in which pharmacists can have an impact on patient outcomes. Data can show program sustainability, program growth, improved PROs, and support the need for additional clinical services and expansion into new clinical areas.

Financial justification of clinical pharmacist positions can be relatively straightforward if an institutionally affiliated specialty pharmacy (IASP) exists. The clinical pharmacist can ensure prescription flow from oncology clinics to the IASP, which could lead to a significant increase in revenue for the institution.<sup>23</sup> Incorporation of pharmacy students and residents can be a strategic way to pilot innovative practice.<sup>58</sup> Subsequently, these models could be used to justify the allocation of additional resources, such as clinical pharmacists in new clinics or medication assistance specialists who may be brought on to expedite drug access. Because of the obvious challenges in establishing an IASP, it may be necessary to explore other financial justification mechanisms—for example, tracking provider time saved. Having pharmacists who are able to manage patients on oral oncolytics allows physicians and other advanced practitioners to see a higher volume of patients at the facility.<sup>63</sup>

Pharmacists have many opportunities to improve the care of patients with cancer who receive oral oncolytics. The shift from primarily intravenous therapy to oral oncolytic therapy has greatly expanded the armamentarium of available treatment options for patients. In addition to self-administering their therapy at home, patients are also receiving therapy for longer periods of time, even indefinitely. This necessitates evolving workflows to address the safe prescribing and distribution of medications and education, monitoring, and follow-up of patients via an interprofessional model.

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## AUTHORS' DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST AND DATA AVAILABILITY STATEMENT

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## AUTHOR CONTRIBUTIONS

**Conception and design:** All authors

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**Accountable for all aspects of the work:** All authors



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**AUTHORS' DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST**

**2018 Hematology/Oncology Pharmacist Association Best Practices for the Management of Oral Oncolytic Therapy: Pharmacy Practice Standard**

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