Self-reported adherence to oral oncolytics among a sample of Michigan oncology practices

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Disclosures

Teresa M. Salgado, Emily Mackler, Jamie Lindsay, Peter Batra, Laura Petersen, Jane Severson, Karen B. Farris declare no conflicts of interest, real or apparent, and no financial interests in any company, product, or service mentioned in this program, including grants, employment, gifts, stock holdings, and honoraria.

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Learning Objectives

• To assess self-reported adherence to oral oncolytics among patients in the Michigan Oncology Quality Consortium (MOQC).

• To identify reasons for and factors associated with non-adherence among patients in the Michigan Oncology Quality Consortium (MOQC).

Target Audience: Pharmacists

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Activity Type: Knowledge-based

The most commonly reported reason for non-adherence to oral oncolytics was:

A. Side effects
B. Cost of medications
C. Concern about long-term effects from oral oncolytics
D. Pharmacy was out-of-stock

Background

• Oral chemotherapy is becoming a common treatment modality for many cancers.

• Adherence is critical for achieving molecular responses in patients with chronic myeloid leukemia. Less than 90% adherence resulted in a significant decrease in therapeutic response. (J Clin Oncol 2010;28(14):2381-84)

• Adherence rates to oral oncolytics have been reported to range from 53% to 97%. (Pharmaco therapy 2014;34(5):481-94)

• Reasons for suboptimal adherence are likely to be multifaceted and require strategies that combine both informational and behavioral interventions.
What is MOQC?

- MOQC is the Michigan Oncology Quality Consortium
- A Collaborative Quality Initiative supported by Blue Cross Blue Shield of Michigan and coordinated by personnel at the University of Michigan Cancer Center
- Established in 2009
- Focus is on improving care provided by oncologists and their healthcare teams
- Uses American Society of Clinical Oncology (ASCO) Quality Oncology Practice Initiative (QOPI®) data to identify performance gaps and monitor improvements

ASCO’s QOPI measures for oral oncolytics

- Documented plan for oral chemotherapy:
  - Dose
  - Administration schedule
  - Lab and toxicity monitoring
  - Frequency of office visits/contacts
  - Plan provided to patient prior to start of therapy

- Oral chemotherapy education provided prior to the start of therapy:
  - Safe handling
  - Indications
  - Schedule and start date
  - Missed doses
  - Food and drug interactions
  - Side effects and toxicities
  - Clinic contact instructions

MOQC Oral Oncolytics Collaborative

Objective:
To assess adherence to oral oncolytics and to identify reasons for and factors associated with non-adherence among cancer patients whose providers participated in MOQC.

FIRST STEP ➔ PLAN

Premise of MOQC is Quality Improvement, using the Plan-Do-Check-Act (PDCA) Cycle

Plan. Recognize an opportunity and plan a change.

Do. Test the change. Carry out a small-scale study.

Check. Review the test, analyze the results and identify what you’ve learned.

Act. Take action based on what you learned in the study step:
1. Change successful: incorporate lessons learned from the test into wider changes. Plan new improvements and restart cycle.
2. Change not successful: go through the cycle again with a different plan.

Methods

Design: Cross-sectional study.

Participants: Patients currently taking oral oncolytics for at least one month in 8 practices that participate in MOQC.

Data collection: Online survey conducted between Aug-Sep 2015 to collect data on adherence and reasons for non-adherence, as well as clinical and demographic information.
Methods: Data collection

2. Reasons for non-adherence to oral oncolytics

There are many reasons people are not able to take their oral cancer medication. Thinking specifically about the oral cancer medication you take, which of following reasons for not taking your medication applies to you? (select all that apply)

- I had side effects from this medicine
- I did not have enough money to pay for the medicine
- I do not think that this medicine is working for me
- I am concerned about possible side effects from this medicine
- I am concerned about long term effects from this medicine
- I have trouble managing all of the medicines I have to take
- I would have taken it but missed it because of a busy schedule
- I would have taken it but have problems forgetting things in my daily life
- Other (please specify):


Methods: Data collection

3. Factors associated with non-adherence to oral oncolytics

- Age
- Sex
- Education level (high school, some college, college, post-graduate)
- Health literacy (adequate, inadequate)
- Number of medications taken daily
- Length of therapy (months)
- Oral oncolytic currently taking (traditional antineoplastic, TK inhibitors, immunomodulating agents, other)
- Type of cancer (hematology, oncology, other)
- Health status: In general, compared to other people of your age, would you say your health is: excellent, very good, good, fair or poor? (excellent + very good / good / fair + poor)

Data analyses: Frequencies for each variable were calculated. Statistical differences were examined using:

- t-tests (age, number of medications, length of therapy)
- chi-squared tests (sex, education level, health literacy, oral oncolytic taken, type of cancer, health status)

Participants characteristics

Sample size: n = 125

Age: mean (SD) = 66.2 (13.6) years (range 23-96)

Sex: 57.7% Female

Race: 95.1% Caucasian

Health Status

Participant characteristics

Number of medications: mean (SD) = 5.9 (3.2)

Length of therapy: mean (SD) = 12.9 (13.8) months

Diagnosis (Type of cancer)

Oral Oncolytics

Results
Results

1. Self-reported adherence to oral oncolytics

- Excellent: 11.2%
- Very Good: 17.6%
- Good or Fair: 71.2%

2. Reasons for non-adherence to oral oncolytics

<table>
<thead>
<tr>
<th>Reason for non-adherence</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I had side effects from this medicine</td>
<td>10 (8)</td>
</tr>
<tr>
<td>I would have taken it but simply missed it</td>
<td>3 (2.4)</td>
</tr>
<tr>
<td>I am concerned about possible side effects from this medicine</td>
<td>2 (1.6)</td>
</tr>
<tr>
<td>I am concerned about the long-term effects from this medicine</td>
<td>2 (1.6)</td>
</tr>
<tr>
<td>I would have taken it but have problems forgetting things in my daily life</td>
<td>2 (1.6)</td>
</tr>
<tr>
<td>I do not think that this medicine is working for me</td>
<td>1 (0.8)</td>
</tr>
<tr>
<td>I have trouble managing all the medicines I have to take</td>
<td>1 (0.8)</td>
</tr>
<tr>
<td>I would have taken it but missed it because of a busy schedule</td>
<td>1 (0.8)</td>
</tr>
<tr>
<td>I did not have money to pay for this medication</td>
<td>0</td>
</tr>
<tr>
<td>I do not think that I need this medicine anymore</td>
<td>0</td>
</tr>
<tr>
<td>I did not have the medicine because the pharmacy was out of this medicine</td>
<td>0</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>93 (74.4)</td>
</tr>
</tbody>
</table>

3. Factors associated with non-adherence to oral oncolytics

- Age
- Sex
- Education level
- Health Literacy
- Number of medications
- Length of therapy
- Oral oncolytic currently taking
- Type of cancer
- Health status

None of these factors was found to be associated with non-adherence to oral oncolytics.

Discussion

1. The percentage of non-adherence found in our study is consistent with that reported in the literature (between 53-97% for self-report).
2. Experiencing side effects was reported as a reason for non-adherence to oral oncolytics in a systematic review.
3. Previous systematic reviews showed that:
   - older (≥85) and younger (≤45) age
   - females
   - low education level (non significant)
   - longer duration of therapy (conflicting evidence)

   were associated with non-adherence.

   (Cancer Treatment Reviews (2013); 39(6):610-21; Cancer Epidemiology (2014);38(3):214-26)

   • Limitation: generalizability of the results (convenience sample 8 practices)

Key Points

- Approximately 30% respondents reported some level of non-adherence to oral oncolytics.
- The shift from IV to oral therapy for cancer patients requires a focus on strategies to improve patient self-care management.
- Medication adherence is clearly an important component of this, as is adequate symptom identification and management.
- MOQC is focusing efforts on education and intervention strategies in the next couple years to improve these components of patient self-care.
The most commonly reported reason for non-adherence to oral oncolytics was:

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B. Cost of medications  
C. Concern about long-term effects from oral oncolytics  
D. Pharmacy was out-of-stock

Q & A

Improving Adherence to Oral Cancer Therapy in Clinical Practice

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