MEDICALLY INTEGRATED PHARMACY (MIP) CORE CLAIMS

As defined by NCODA, MIPs are dispensing pharmacies within oncology centers of excellence that promote a patient-centered, multidisciplinary team approach, are outcome-based collaborative and comprehensive models involving oncology health care professionals and other stakeholders who focus on the continuity of coordinated quality care and therapies for cancer patients. The pillars of MIPs that lead to excellence in patient care are based on core activities related to abandonment, time to fill, adherence, patient satisfaction, patient education, financial, and cost avoidance & waste. Evidence to support the value of these claims is summarized in this document.

1. Abandonment
2. Time to fill
3. Adherence
4. Patient satisfaction
5. Patient education
6. Financial
7. Cost avoidance & waste

ABANDONMENT

1

Medication prescription abandonment is defined as a patient making the decision not to fill or to fill and never pick up a prescription.

2

MIPs lower the rate of oral oncolytic prescription abandonment.

ABANDONMENT: SUPPORTING EVIDENCE

1. Medication prescription abandonment is defined as a patient making the decision not to fill or to fill and never pick up a prescription.

CLAIM #	KEY EVIDENCE-BASED CLAIM	REFERENCE
1.1	Nationally, abandonment rates are reported to be at 18%.	Doshi GK, et al. JCO Oncol Pract. 2023;19(11suppl):66.
1.2	Factors related to pharmacy plan, cost-sharing amount, and concurrent prescription activity are significant drivers of oral oncolytic abandonment.	Streeter SB, et al. Am J Manag Care. 2011;17(Suppl 5): SP38-44.
1.2.1	Higher OOP costs are associated with higher rates of abandonment.	Doshi GK, et al. JCO Oncol Pract. 2023;19(11suppl):66.
1.2.2	Higher OOP costs are associated with higher rates of delayed initiation and abandonment of insurer-approved new prescriptions for novel oral oncolytics.	Doshi JA, et al. JCO. 2018;36(5):476-482. https://doi.org/10.1200/JCO.2017.74.5091
1.2.3	The likelihood of abandonment increases four-fold when OOP costs exceed $500.	From https://communityoncology.org/pdfs/fact-sheet-oral-oncolytics.pdf
1.2.4	Abandonment rates reached as high as 49% in patients with an OOP >$2,000 for a new oral oncolytic prescription.	Doshi JA, et al. JCO. 2018;36(5):476-482. https://doi.org/10.1200/JCO.2017.74.5091
1.2.5	Issues related to the prior authorization process lead to abandonment (in a 2020 survey of physicians, 78% report that PA can at least sometimes lead to abandonment).	2020 AMA Prior Authorization Physician Survey. https://www.ama-assn.org/system/files/2021-04/prior-authorization-survey.pdf.
1.2.6	Patients with ≥5 prescription claims processed within in the previous month had 50% higher likelihood of abandonment than patients with no other prescription activity	Streeter SB, et al. Am J Manag Care. 2011;17(Suppl 5): SP38-44.

2. MIPs lower the rate of oral oncolytic prescription abandonment.

CLAIM #	KEY EVIDENCE-BASED CLAIM	REFERENCE
2.1	Prescription abandonment rates can be lowered to <1% with MIP.	Doshi GK, et al. JCO Oncol Pract. 2023;19(11suppl):66.
2.2	In a study of Medicare beneficiaries, MIP dispensing resulted in an increase in percent of men filling a prescription for abiraterone and/or enzalutamide.	Hill D, et al. JNCI Cancer Spectrum. 2023;7(5): pkad062.
2.3	The MIP team lowers the rate of abandonment through coordinated activities by the pharmacy and clinical teams in integrated patient assistance activities (eg, co-pay assistance programs, charitable grant funding, manufacturer-provided free drug programs).	Doshi GK, et al. JCO Oncol Pract. 2023;19(11suppl):66. Mullangi S, et al. JCO Oncol Pract. 2024;20(5): https://doi.org/10.1200/OP.23.00691.

TIME TO FILL

1
Time to fill is the time between when a prescription is written to when the patient takes their first dose

2
Use of a MIP reduces the time to fill oral oncolytic prescriptions.

TIME TO FILL: SUPPORTIVE EVIDENCE

1. Time to fill is the time between when a prescription is written to when the patient takes their first dose

CLAIM #	KEY EVIDENCE-BASED CLAIM	REFERENCE
1.1	The median number of days oral oncolytic prescription to patient receipt of the drug has been reported as 7–12 days, showing that obtaining these medications is complex and prone to unwanted delays.	Marineau A, et al. J Oncol Pharm Pract. 2023;29:1144-153.
1.2	Time to first fill within a MIP is impacted by many factors including benefits verification, prior authorization, patient financial assistance, initial shipment, and contact with the patient.	Khrystolubova N, et al. Am J Manag Care. 2022; 28(6 Spec No.):SP316-SP323.
1.3	Patient identified barriers to time to fill include communication issues, prior authorization, and cost.	Gabriel MH, et al. J Manag Care Spec Pharm. 2022 Nov; 28(11): 10.18553/jmcp.2022.28.11.1244.
1.4	An ACCC membership survey on management of oral oncolytics revealed use of mail order specialty pharmacies lead to delays for reasons including taking a long time to process the order (68%).	https://www.accc-cancer.org/docs/projects/pdf/implementing-oral-oncolytics-final.pdf?sfvrsn=274a112_0

2. Use of a MIP reduces the time to fill oral oncolytic prescriptions.

CLAIM #	KEY EVIDENCE-BASED CLAIM	REFERENCE
2.1	Time to fill is lower with MIP vs external pharmacies	Russell M, et al. J Manag Care Spec Pharm. 2024;30:352-362. Goldbach AP, et al. J Hematol Oncol Pharm. 2022;12:241-247. Academia EC, et al. J Manag Care Spec Pharm. 2021;27:1438-1446.
2.1.1	Average time to treatment initiation was 6 days shorter for patients whose specialty medications were filled at a MIP vs an external pharmacy.	Russell M, et al. J Manag Care Spec Pharm. 2024;30:352-362.
2.1.2	One study demonstrated a doubling in the total time to first fill of palbociclib (12 days vs 6 days) when patients used an external specialty pharmacy compared with a MIP.	Goldbach AP, et al. J Hematol Oncol Pharm. 2022;12:241-247.
2.1.3	Time to fill oral oncolytics was significantly lower (median, 22 days) using internal MIP vs external pharmacies.	Academia EC, et al. J Manag Care Spec Pharm. 2021;27:1438-1446.
2.1.4	The average time to first fill of dasatinib, palbociclib, and ibrutinib was 3, 4, and 4.2 days, respectively in one community MIP.	Khrystolubova N, et al. Am J Manag Care. 2022; 28(6 Spec No.):SP316-SP323.
2.2	Frequent communication and follow-up with payers are needed for the first few cycles.	Marineau A, et al. J Oncol Pharm Pract. 2023;29:1144-153.
2.3	Patients who fill their oral oncolytic prescriptions using a MIP (vs an external specialty pharmacy) have significantly shorter 4.21-day time to fill.	McCabe CC, et al. Am J Health Syst Pharm. 2020;77:1118-1127.

ADHERENCE

1

Adherence refers to the extent to which a patient takes a medication as prescribed, focusing on frequency, time ingested, and dose.

2

MIPs improve patient adherence to oral oncolytics.

3

Adherence leads to better patient outcomes.

4

Interventions from members of the MIP multidisciplinary team improve adherence to oral oncolytics.

ADHERENCE: SUPPORTIVE EVIDENCE

1. Adherence refers to the extent to which a patient takes a medication as prescribed, focusing on frequency, time ingested, and dose.

CLAIM #	KEY EVIDENCE-BASED CLAIM	REFERENCE
1.1	Persistence relates to the time over which a patient continues treatment.	Menditto E, et al. Int J Environ Res Public Health. 2021;18:4872.
1.2	Primary nonadherence is the rate of a new prescription being issued but not filled within an acceptable time.	Zuckerman A, et al. J Manag Care Spec Pharm. 2023 Jul; 29(7): 10.18553/jmcp.2023.29.7.740.
1.3	Secondary nonadherence refers to medication not being taken as prescribed once the prescription is filled.	Lam WY and Fresco P. Biomed Res Int. 2015;2015:217047.
1.4	Nonadherence to oral oncolytics includes over adherence (intentionally or unintentionally taking too much medication in a prescribed period, which can lead to increased toxicity) or under adherence (taking an inadequate amount of prescribed medication).	Akerley A and Karl C. J Oncol Nav Survivorship. 2021;12:6. https://www.jons-online.com/issues/2021/june-2021-vol-12-no-6/3808-call-back-using-the-phone-to-promote-adherence-to-oral-antineoplastic-agents
1.5	A substantial proportion of patients struggle to adhere to oral oncolytics as prescribed	Greer JA, et al. Oncologist. 2016;21:354-76.
1.5.1	Reasons for non-adherence in one study included patient decision (25%), medication not approved by insurance (13%), intentional delays based on provider/patient request (13%), medication changed (12%), clinical decline (12%), death (12%), no longer appropriate (7%), or unaffordable copay (7%).	Zuckerman A, et al. J Manag Care Spec Pharm. 2023 Jul; 29(7): 10.18553/jmcp.2023.29.7.740.
1.5.2	Impactful factors identified as affecting compliance to oral oncolytics are patient's confidence, health literacy, perception of treatment, quality of life, social support, and complexity of chemotherapy regimen.	Signorelli J, et al. J Oncol Pharm Pract. 2023. https://doi.org/10.1177/10781552231208442.

2. MIPs improve patient adherence to oral oncolytics.

CLAIM #	KEY EVIDENCE-BASED CLAIM	REFERENCE
2.1	Patients who fill their oral oncolytic prescriptions using a MIP (vs an external specialty pharmacy) have significantly higher adherence (in one study as measured by MPR and PDC).	McCabe CC, et al. Am J Health Syst Pharm. 2020;77:1118-1127.
2.2	The rate of non-adherence with newly prescribed oral oncolytics from MIPs is low (11% in one study).	Zuckerman A, et al. J Manag Care Spec Pharm. 2023 Jul; 29(7): 10.18553/jmcp.2023.29.7.740.
2.3	Adherence rates with MIP are higher than with specialty pharmacies.	Leach JW, et al. J Clin Oncol. 2022;40(16 suppl):e18645.

3. Adherence leads to better outcomes.

CLAIM #	KEY EVIDENCE-BASED CLAIM	REFERENCE
3.1	Poor adherence to oral oncolytics can impede treatment efficacy and decrease response rates.	Marineau A, et al. J Oncol Pharm Pract. 2023;29:1144-153.
3.2	Nonadherence is associated with myriad adverse consequences increase in physician visits, increased hospitalization rates, longer hospital stays, decreased patient satisfaction, poor patient-provider relationships, and compromised disease outcomes (eg decreased time to relapse, decreased survival)	D'Amato. Oncology Issues. 2008. https://www.accc-cancer.org/docs/Documents/oncology-issues/articles/2003-2016/2008/JA08/ja08-improving-patient-adherence-with-oral-chemotherapy

4. Interventions from members of the MIP multidisciplinary team improve adherence to oral oncolytics.

CLAIM #	KEY EVIDENCE-BASED CLAIM	REFERENCE
4.1	Interventions to improve adherence include use of reminder systems, management of side effects, discussing misconceptions on disease or medication efficacy, dosing and administration instructions, strategies for accessing the medication, and referral for cognitive behavioral therapy if needed.	Greer JA, et al. Oncologist. 2016;21:354-76.
4.2	A multi-institution study of patients with chronic myelogenous leukemia found that an initial education session and follow-up as needed related to adverse effects, drug interactions, and adherence significantly increased MPR.	Lam MS, et al. J Oncol Pharm Pract. 2016;22:741-748.
4.3	In a multiple-institution case-control study that provided an initial education session with a pharmacist and ongoing counseling, daily adherence was significantly improved.	Simons S, et al. Support Care Cancer. 2011;19:1009-1018.
4.4	In a case-control study, pharmacist education regarding adverse events and ongoing adherence counseling resulted in increased detection of drug-related errors, and adherence (MPR > 90%).	Ribed A, et al. Int J Clin Pharm. 2016;38:280-288.
4.5	Nurse-led weekly telephone interventions positively impacted oral adherence (100% in 7 pts)	Akerley A and Karl C. J Oncol Nav Survivorship. 2021;12:6. https://www.jons-online.com/issues/2021/june-2021-vol-12-no-6/3808-call-back-using-the-phone-to-promote-adherence-to-oral-antineoplastic-agents

PATIENT SATISFACTION

1
MIP leads to better patient satisfaction.

2
Patient satisfaction can lead to better patient adherence

3
Patient satisfaction surveys are critical tools in identifying and addressing opportunities for improvement.

PATIENT SATISFACTION: SUPPORTIVE EVIDENCE

1. MIP activities lead to better patient satisfaction.

CLAIM #	KEY EVIDENCE-BASED CLAIM	REFERENCE
1.1	Patients prefer to receive their medications through MIP.	Hanna K. AJMC. 2019;25(6):SP193-SP194.
1.2	High satisfaction ratings can be attributed to personalized experience patients receive through MIP	Bagwell A, et al. J Manag Care Spec Pharm. 2017 Aug; 23(8): 10.18553/jmcp.2017.23.8.815.
1.2.1	In terms of pure satisfaction, MIP services rank high amongst patients looking for well managed and vigilant care with their provider and pharmacy staff.	From https://www.ncoda.org/wp-content/uploads/2020/03/NCODA-Patient-Satisfaction-Surveys-within-Medically-Integrated-Practice.pdf.
1.2.2	Patient-centered programs, such as centralizing prior authorizations, integrating therapy management into specialty clinics, and creating health coaching options, increase patient satisfaction.	Donovan and Cha. Pharmacy Times. 2023. https://www.pharmacytimes.com/view/key-metrics-that-support-the-integrated-specialty-pharmacy-model
1.3	Satisfaction survey data indicate high patient satisfaction with MIP	https://www.primetherapeutics.com/news/integratedrx-earns-95-satisfaction-rating/. Doshi G, et al. J Clin Oncol. 2018;36(30 suppl):140. Khrystolubova et al. AJMC. 2022; 28(6 Spec No.):SP405-SP406.
1.3.1	NCODA's Patient Satisfaction Survey results demonstrate an average 86.2 NPS for MIPs, and 97% of patients would prefer to fill their oral oncology and/or supportive care medications at the MIP versus an external mail order specialty pharmacy.	https://www.primetherapeutics.com/news/integratedrx-earns-95-satisfaction-rating/.
1.3.2	Patient satisfaction surveys at Texas Oncology and Florida Cancer Specialists reveal 94%-96% satisfaction with MIP.	Doshi G, et al. J Clin Oncol. 2018;36(30 suppl):140. Khrystolubova et al. AJMC. 2022; 28(6 Spec No.):SP405-SP406.
1.3.3	Patients enrolled in a pharmacist-led oral chemotherapy program who received their oral TKI from MIP were more likely to be satisfied with the care they received than patients not in the program.	Dennison T, et al. J Adv Pract Oncol. 2021;12:148-157.

2. Patient satisfaction can lead to better patient adherence.

CLAIM #	KEY EVIDENCE-BASED CLAIM	REFERENCE
2.1	Patients with high satisfaction rates have higher adherence rates to oral oncolytics	
2.1.1	CML patients with high satisfaction rates after interactions with their treating doctor about disease information have higher adherence rates to their oral chemotherapy	Geissler J, et al. J Cancer Res Clin Oncol. 2017;143:1167–1176.

3. Patient satisfaction surveys are critical tools in identifying and addressing opportunities for improvement

CLAIM #	KEY EVIDENCE-BASED CLAIM	REFERENCE
3.1	Patient satisfaction surveys provide critical feedback to the MIP providers.	Khrystolubova et al. AJMC. 2022; 28(6 Spec No.):SP405-SP406.

PATIENT EDUCATION

1
A multidisciplinary approach to patient education is a critical step in the MIP dispensing process.

2
Patient education enhances understanding of and adherence to oral oncolytics.

3
Patient education improves safety and toxicity of oral oncolytics.

PATIENT EDUCATION: SUPPORTIVE EVIDENCE

1. A multidisciplinary approach to patient education is a critical step in the MIP dispensing process.

CLAIM #	KEY EVIDENCE-BASED CLAIM	REFERENCE
1.1	A comprehensive and multifaceted approach to education is essential in helping patients better understand how to take and manage their oral oncolytic agents.	Lin M, et al. J Oncol Pharm Pract. 2021;27:1409–1421.
1.2	In an AUA and NCODA survey of MIPs in urologic oncology care, 68% of respondents within a MIP gave printed patient education at the time of any new therapy initiation vs 35% not affiliated with a MIP (using a mail order pharmacy), and 91% educated patients on oral oncolytics prior to initiation (vs 49%).	https://www.auanet.org/documents/practices-resources/quality/quality-improvement-library/Integration-in-Action-Medically-Integrated-Dispensing.pdf

2. Patient education enhances understanding of and adherence to oral oncolytics.

CLAIM #	KEY EVIDENCE-BASED CLAIM	REFERENCE
2.1	A multi-institution study of patients with chronic myelogenous leukemia found that an initial education session and follow-up as needed related to adverse effects, drug interactions, and adherence significantly increased MPR.	Lam MS, et al. J Oncol Pharm Pract. 2016;22:741-748.
2.2	In a multiple-institution case-control study that provided an initial education session with a pharmacist and ongoing counseling, daily adherence was significantly improved.	Simons S, et al. Support Care Cancer. 2011;19:1009-1018.
2.3	In a case-control study, pharmacist education regarding adverse events and ongoing adherence counseling resulted in increased detection of drug-related errors, and adherence (MPR > 90%).	Ribed A, et al. Int J Clin Pharm. 2016;38:280-288.
2.4	In pilot study of integrated multidisciplinary follow-up with supplemental informational tools for patients on oral oncolytics, 100% of patients (n=80) reported adequate understanding of their medication.	Lin M, et al. J Oncol Pharm Pract. 2021;27(6):1409-1421.
2.5	A comparative study assessing the effect of an app (vs traditional follow-up) on drug safety, adherence, and quality of life in patients receiving oral oncolytics demonstrated significant improvements in adherence to treatment ($p=0.02$), QoL ($p<0.001$), and drug safety ($p=0.01$) in patients who used the app	Collado-Borrell R, et al. MIR mHealth and uHealth 2020;8(10):e20480

3. Patient education improves safety and toxicity of oral oncolytics.

CLAIM #	KEY EVIDENCE-BASED CLAIM	REFERENCE
3.1	Patient education and phone calls by nurses using toxicity algorithms within the first week of treatment and ongoing thereafter reduced toxic effects, improved quality of life, and reduced inpatient hospitalization.	Molassiotis A, et al. J Clin Oncol. 2009;27:6191-6198.
3.2	Results of a prospective cohort study demonstrated the benefit of a clinical pharmacist education program on safety of ibrutinib. Patients in the intervention group had fewer grade 3 or higher adverse events than patients in the usual care group (8% vs 15%).	Zerbit J, et al. Ann Hematol. 2020;99:1615-1625.
3.3	Results of a retrospective study demonstrated positive benefits of a multidisciplinary consultation program on safety of oral oncolytics. Patients in the consultation program (vs control group) had fewer adverse events in general (41 vs 109, p=0.048 and fewer digestive AEs (6 vs 29, p=0.007)	Feral A, et al. J Oncol Pharm Pract. 2022; 28(7):1543-1551.
3.4	In a randomized, controlled trial of nurse-led telephone follow-up versus standard of care in 183 patients receiving oral oncolytics, grade 3 adverse events were significantly lower (p=0.03) in patients who received adverse event advice in follow-up calls	Bouleftour W, et al. Support Care Cancer. 2021;29:4257-4267.
3.5	A phase 3 trial evaluating the addition of a nurse navigator-led follow-up and a mobile app to usual care in 559 patients treated with oral oncolytics demonstrated significant improvements in relative dose intensity (93% vs 89%, p=0.04), and grade ≥3 toxicities (28% vs 37%, p=0.02) with remote monitoring vs usual care alone.	Mir O, et al. Nature Medicine 2022;28(6):1224-31.

FINANCIAL

1
Financial burden and high out-of-pocket expenses for prescriptions are functional barriers to care.

2
MIPs seamlessly coordinate financial assistance for patients.

3
MIPs lead to cost savings.

FINANCIAL: SUPPORTIVE EVIDENCE

1. Financial burden and high out-of-pocket expenses for prescriptions are functional barriers to care.

CLAIM #	KEY EVIDENCE-BASED CLAIM	REFERENCE
1.1	Cost, prior authorizations, and financial assistance are barriers to oral oncolytic initiation.	Gabriel MH, et al. J Manag Care Spec Pharm. 2022 Nov; 28(11): 10.18553/jmcp.2022.28.11.1244.
1.1.1	In an AUA and NCODA survey of MIPs in urologic oncology care, 73% of respondents associated with MIPs reported challenges with prior authorization and benefit verification, 55% reported challenges with payer constraints on ability to fill in-house, and 49% reported challenges with PBMs directing patient care to their preferred pharmacies.	https://www.auanet.org/documents/practices-resources/quality/quality-improvement-library/Integration-in-Action-Medically-Integrated-Dispensing.pdf
1.2	Financial assistance programs, including copay cards, foundation grants, and manufacturer patient assistance programs, can decrease financial burden.	Hung A, et al. J Manag Care Spec Pharm. 2021;27:10.18553/jmcp.2021.27.7.924.

2. MIPs seamlessly coordinate financial assistance for patients.

CLAIM #	KEY EVIDENCE-BASED CLAIM	REFERENCE
2.1	Pharmacists and pharmacy technicians within a MIP can perform benefits investigations, assess patient out-of-pocket responsibility, and enroll patients in assistance programs to alleviate the high cost burden of oral oncolytic agents and prevent therapy abandonment.	Farano JL, et al. J Manag Care Spec Pharm. 2019; 25:10.18553/jmcp.2019.25.7.765.
2.1.1	In one study, 18.6% of patients filling their oral oncolytics within a MIP received a patient assistance program. One in 3 patients was enrolled in a financial assistance program, with cost savings ranging from $5 to over $13,000 per prescription claim.	Farano JL, et al. J Manag Care Spec Pharm. 2019; 25:10.18553/jmcp.2019.25.7.765.
2.2	MIPs offer patients and insurance providers a single point of contact, reducing the paperwork and correspondence among multiple parties	Wyatt H, et al. J Hematol Oncol Pharm. 2020;10(4):198-205.
2.3	Employers and insurers should consider investment in MIPs for clinical management of cancer patients to improve outcomes and reduce costs	Tschida SJ, et al. Pharm Benefits. 2012;4(4):165-74
2.4	An ACCC membership survey on management of oral oncolytics revealed use of mail order specialty pharmacies lead to delays for reasons including denials from health insurance (58%) or lack of documented prior authorization (35%).	https://www.accc-cancer.org/docs/projects/pdf/implementing-oral-oncolytics-final.pdf?sfvrsn=274a112_0

3. MIPs lead to cost savings for patients.

CLAIM #	KEY EVIDENCE-BASED CLAIM	REFERENCE
3.1	MIPs allow for increased pharmacy oversight, which leads to increased cost avoidance and reduced waste for patients.	Darling JO, et al. JCO Oncol Pract. 2022 Jul; 18(7): e1225–e1230.
3.1.1	The net cost avoidance of oral oncolytics from ~50 MIPs nationwide was $6,510,971.28 vs $546,082.45 for external mail-order pharmacies,	Darling JO, et al. JCO Oncol Pract. 2022 Jul; 18(7): e1225–e1230.
3.2	Pharmacist intervention within a MIP lead to substantial cost savings.	
3.2.1	An estimated annualized cost avoidance associated with one MIP would be greater than $3.5 million in hematologic/oncologic medications.	Langkford C, et al. J Manag Care Spec Pharm. 2021 Mar; 27(3): 10.18553/jmcp.2021.27.3.379.
3.2.2	In one study MIP pharmacist clinical review and postponement of refill renewal requests until after a scheduled follow-up resulted in an estimated cost avoidance of up to $750,000 (AWP-20%) in 12 months.	Looney B, et al. J Manag Care Spec Pharm. 2024;30:465-474.
3.3	In-office dispensing of oral chemotherapy provides significant cost savings to third-party payers compared to mail-order pharmacy dispensing as evidenced by a net cost avoidance annually of $1,730,416 in one study.	Howard A, et al. J Oncol Pharm Pract. 2018;25(7): https://doi.org/10.1177/1078155218799853.
3.4	A real-world study of MIP (vs specialty pharmacies) demonstrated the potential of MIP to save ~$1.1 million from wasted medications through dose change.	Jackson SK, et al. Presented at Academy of Managed Care Pharmacy (AMCP) Annual Meeting, March 21–24, 2023, San Antonio, TX.
3.5	MIP dispensing of oral oncolytics was associated with a $5,672 reduction in medical spending vs non-MIP.	Urick B, et al. J Clin Oncol. 2024;42(16 suppl): e23098.
3.6	Point-of-sale prices paid for oral oncolytics were 1.12% lower at MIPs vs other pharmacies.	Kakani P, et al. JAMA Network Open.2024;7(2):e2356592.

COST AVOIDANCE & WASTE

1
MIPs provide waste mitigation strategies that lead to cost savings and cost avoidance.

2
Interventions by the MIP team lead to cost savings and cost avoidance.

COST AVOIDANCE & WASTE: SUPPORTIVE EVIDENCE

1. MIPs provide waste mitigation strategies that lead to cost savings and cost avoidance.

CLAIM #	KEY EVIDENCE-BASED CLAIM	REFERENCE
1.1	MIPs allow for increased pharmacy oversight, which leads to increased cost avoidance and reduced waste for third-party payers.	Darling JO, et al. JCO Oncol Pract. 2022 Jul; 18(7): e1225–e1230.
1.1.1	Using NCODA's Cost Avoidance and Waste Tracker tool, net cost avoidance of oral oncolytics from ~50 MIPs nationwide was determined to be $6,510,971.28 vs $546,082.45 for external mail-order pharmacies.	Darling JO, et al. JCO Oncol Pract. 2022 Jul; 18(7): e1225–e1230.
1.2	Drug repository programs that collect drug donations and redispense medications are associated with decreased healthcare costs and cost savings to poor, uninsured, and underinsured patients.	Stanz L, et al. JCO Oncol Pract. 2021;17:e426-e432.
1.3	Real-world pharmacy claims data demonstrate that MID (vs specialty pharmacy dispensing) was associated with significantly lower waste (29% vs 50%) and expense (specialty pharmacy associated with additional dose change cost of $1796).	Leach JW, et al. J Clin Oncol. 2022;40(suppl 16):e18645.
1.4	A 68% waste reduction and net annual cost savings was seen in an interventional study by redispensing unused medications originally provided in sealed packaging and returned to the pharmacy if unused.	Smale EM, et al. JAMA Oncol. 2024; 10:87.
1.5	Individualized dispensing of oral oncolytics reduced unused unit doses by 34%, leading to cost savings and waste reduction.	Smale EM, et al. JCO Oncol Pract. 2023;19:e618-e629.
1.6	Payers for patients who received their oral oncolytics via a split fill program had significant medication savings per covered month ($2,147.60 at 1 month) and less waste.	Staskon FC, et al. JCO Oncol Pract. 2019;15:e856-e862.

2. Interventions by the MIP team lead to cost savings and cost avoidance.

CLAIM #	KEY EVIDENCE-BASED CLAIM	REFERENCE
2.1	sMIP pharmacist clinical review and postponement of refill renewal requests until after a scheduled follow-up led to an estimated cost avoidance of up to $750,000 (average wholesale price minus 20%) in 12 months.	Looney B, et al. J Manag Care Spec Pharm. 2024;30(5):465-474.
2.2	Pharmacist interventions in an oral chemotherapy clinic led to total cost saving and cost avoidance of $2,245,856 in a 9-month period.	Nguyen A. J Clin Oncol. 2022;40 (16 suppl): e18839.
2.3	Clinical pharmacist interventions within a MIP were associated with significant cost avoidance of $1,508,131 during a 5-month study period.	Lankford C, et al. J Manag Care Spec Pharm. 2021;27:379-384.
2.4	Pharmacist interventions in an outpatient cancer center were associated with a net benefit of $753,150 per year.	Trinidad DM, Patel PR. J Adv Pract Oncol. 2022;13:673-682.
2.5	Interventions made by a pharmacist for patients on an oral oncolytic at a community oncology center were associated with an average cost savings of $12,058 per intervention.	Rees M, et al. AMCP 2024 Annual Meeting.
2.6	Oncology nurse interventions before a refill of an oral oncolytic at a MIP were associated with $1,994,629.88 saved in waste and cost avoidance in 2023.	Weinberg T. J Clin Oncol. 2024;42(suppl 16):e23207.