AmerisourceBergen

Health System Specialty Pharmacies Decrease Total Cost of Care in Cancer Treatment, a Multisite Review

Background

As specialty drugs continue to dominate the pharmaceutical market, all stakeholders are faced with the challenge of demonstrating evidence-based value and outcomes. At the front lines, integrated delivery networks (IDNs), or health systems, are one of the fastest-growing segments for delivering specialty medications. Health system specialty pharmacies (HSSPs) are also uniquely positioned to review a patient's electronic medical record in real time as part of the medication dispensing process and care pathway.

In response, AmerisourceBergen (AB) has created solutions designed to help health systems meet the challenges of accessing specialty medications and effectively providing clinically coordinated care to high-risk patients.

To demonstrate the financial value of an HSSP, AB's specialty-focused pharmacy services administration organization, Accelerate Specialty Network, and Integrated Health Systems Outcomes Coalition conducted a retrospective cohort study of 25 health systems with accredited specialty pharmacies.

Previous studies have tended to be limited to individual health systems or focused primarily on adherence or impact to prescription savings.[1-3] This study was able to include a mixture of health systems across the United States (US) and review the total financial impact combined among the pharmacy and medical benefits.

Key findings associated with HSSPs

up to

32%

savings on medical care

up to

14%–38%

savings on oral oncolytic prescriptions

1. Academia EC, Mejías-De Jesús CM, Stevens JS, et al. J Manag Care Spec Pharm. 2021;27(10):1438-1446.
2. Kibbons AM, Peter M, DeClercq J, et al. *Drugs Real World Outcomes*. 2020;7(4):295-305.
3. Study shows Shields Health Solutions integrated specialty pharmacy model significantly reduces total cost of care. News release. Shields Health Solutions; April 20, 2021.

Methodology

Data source

Symphony Health's Integrated Dataverse data repository, which contains anonymized, longitudinal, patient-level medical and prescription claims from a large representative segment of the US population.

Study timeframe

January 1, 2016 — December 31, 2020

Study population

Patients aged ≥18 years who filled a prescription for an oral oncolytic agent of interest (abiraterone acetate, capecitabine, dasatinib, enzalutamide, erlotinib, everolimus, hydroxyurea, ibrutinib, imatinib mesylate, nilotinib, palbociclib, pazopanib, sunitinib malate, or temozolomide) between July 1, 2016, and June 30, 2020, were identified. The index date was the date of their first prescription claim. Patients were excluded if they filled an oncolytic agent of interest in the 6 months prior to index, they did not fill at least 2 scripts, or they did not have evidence of 6 months of follow-up data.

Patients in the final study population were categorized into 3 comparison groups based on the site of fill for their oral oncolytic prescriptions (**Figure 1**). The main comparator group was the integrated group. The outcome measures of the partially-integrated group and non-integrated group were compared to the integrated group.

Figure 1. Comparator groups

Integrated

All oral oncolytics filled by the participating HSSP

Partially integrated

Some oral oncolytics filled within the participating HSSP and the rest outside

Non-integrated

All oral oncolytics filled outside the participating HSSP

Outcomes

- Medical care charges and oral oncolytic prescription costs
- Healthcare resource utilization (HCRU)
- Duration of therapy (DoT) with the oral oncolytics

Medical care charges from all medical claims regardless of diagnosis codes during the 6-month post-index follow-up were calculated for each patient. Component charges included inpatient care and outpatient care. All medical charges were adjusted to March 2022 US dollars by the medical component of the Consumer Price Index.

Prescription costs were based on the March 2022 average wholesale price (AWP) because the prescription claims did not include cost variables. The quantity of each prescription fill was multiplied by the median AWP unit price for the oncolytic drug to estimate the cost for the prescription. The cost of all oral oncolytic prescriptions filled during the 6-month post-index follow-up was calculated for each patient. As a sensitivity analysis, the cost of oral oncolytics assessed during the full DoT was also calculated for each patient.

HCRU measures during the 6-month post-index follow-up included inpatient hospitalizations and length of stay, as well as emergency department (ED), hospital outpatient, physician office, and other outpatient visits.

The DoT for each oncolytic was calculated as the number of days between the first prescription fill date and the earliest of (1) the day before the first ≥90-day gap in supply, (2) the run-out date of the last prescription's supply, or (3) the end of the study. DoT was only calculated for those oncolytic agents for which the patient filled ≥2 prescriptions.

A P value ≤0.05 indicated a statistically significant difference.

Results

Final study population

36,816

patients

Integrated

986

(2.7%)

Partially integrated

1,822

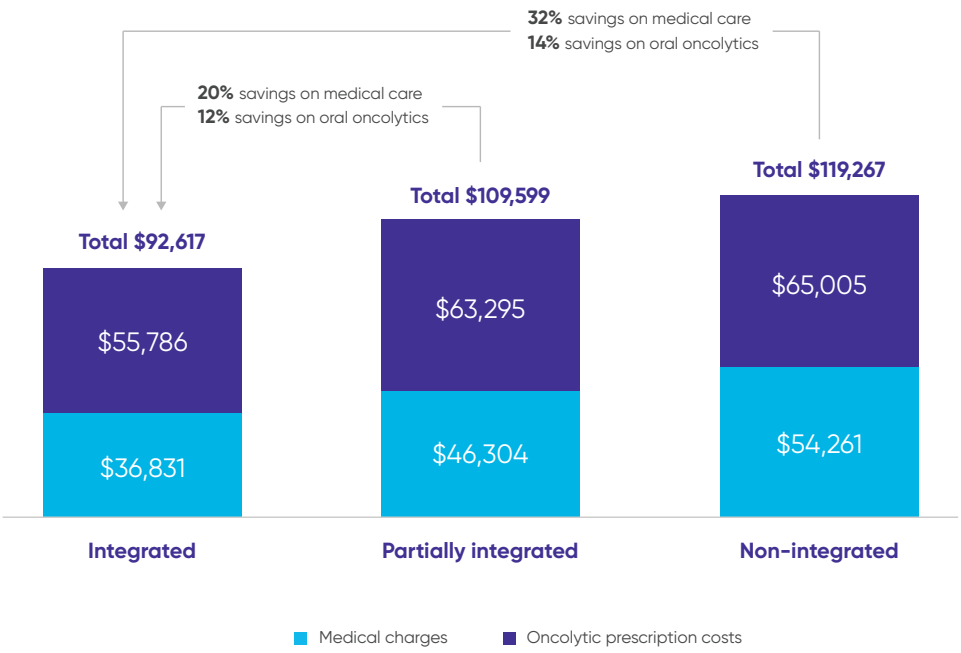
(4.9%)

Non-integrated

34,008

(92.4%)

Figure 2. Medical charges and oncolytic prescription costs for 6 months



The final study population included 36,816 patients, with 986 patients (2.7%) in the integrated group, 1,822 (4.9%) in the partially integrated group, and 34,008 (92.4%) in the non-integrated group. The integrated group was significantly older (63.9 years) than both the partially integrated (57.5 years, P<0.001) and non-integrated (62.5 years, P<0.001) groups. The gender distribution was similar in all groups with about 50% females. The majority of patients (78%) did not have metastatic cancer.

The integrated group realized savings both in terms of medical charges and prescription costs compared to the other 2 groups (**Figure 2**). The mean 6-month medical charge for the integrated group ($36,831) was 20% lower than for the partially integrated group ($46,304; P=0.053) and 32% lower than for the non-integrated group ($54,261; P<0.001). The mean 6-month oncolytic prescription cost for the integrated group ($55,786) was 12% lower than for the partially integrated group ($63,295; P=0.071) and 14% lower than for the non-integrated group ($65,005; P=0.004).

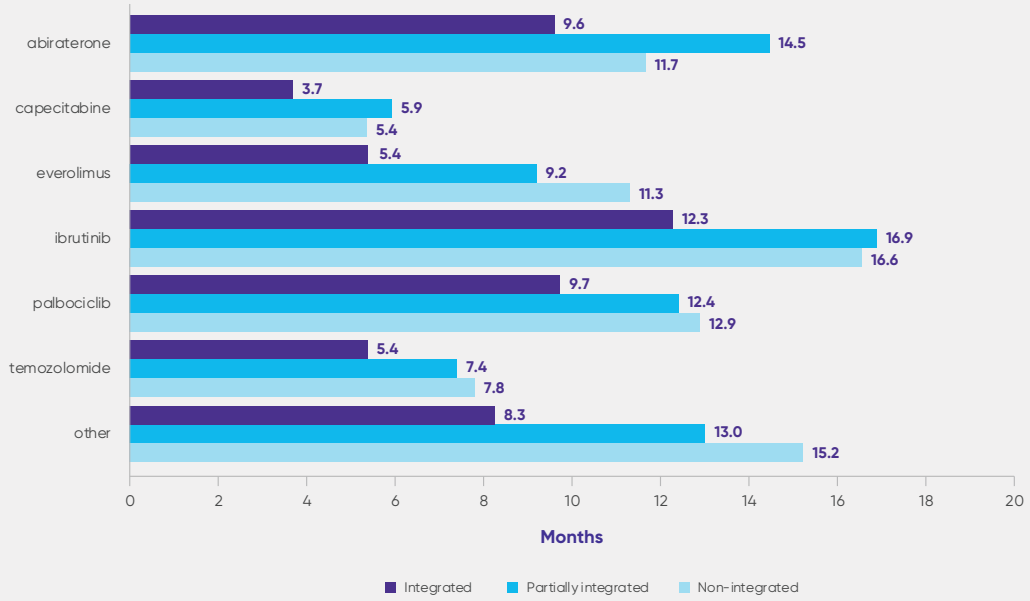
During the full DoT, the mean oncolytic prescription cost for the integrated group ($97,290) was 34% lower than for the partially integrated group ($147,146; P<0.001) and 38% lower than for the non-integrated group ($158,453; P<0.001).

Outpatient charges comprised over 90% of the total medical charge in each group, and the integrated group had 21% (P=0.045) lower 6-month outpatient charges compared to the partially integrated group and 31% (P<0.001) lower charges compared to the non-integrated group. Inpatient charges made up less than 10% of the total medical charge in each group, and the integrated group had 15% (P=0.710) lower charges compared to the partially integrated group and 47% (P=0.025) lower charges compared to the non-integrated group.

In every HCRU category, except for ED visits, the integrated group had the lowest percentage of patients utilizing medical care relative to the other 2 groups. Based on average 6-month utilization, integrated patients had fewer physician office visits (1.6) than partially integrated patients (1.9) and non-integrated patients (3.6), and fewer other outpatient visits (1.25 vs 1.34 and 2.24, respectively). Integrated patients had fewer hospital outpatient visits (4.8) than partially integrated patients (5.8), and slightly more than non-integrated patients (4.3). Integrated patients had fewer ED visits (0.16) than non-integrated patients (0.23), and slightly more than partially integrated patients (0.15). For patients with ≥1 inpatient admission, the per-admission length of stay in the integrated group (3.5 days) was shorter than in the partially integrated group (4.9 days) and the non-integrated group (4.1 days).

The DoT was significantly lower on average by about 3 months in the integrated vs the non-integrated group likely due to the integrated group's vision and use of the patient medical record review prior to dispensing (**Figure 3**).

Figure 3. Duration of therapy with oral oncolytics



Note: The other category includes oral oncolytics with low sample sizes (n<50) in the integrated group, including dasatinib, enzalutamide, erlotinib, hydroxyurea, imatinib mesylate, nilotinib, pazopanib, and sunitinib.

Discussions

IDNs and their associated HSSPs not only help to remove barriers to care for cancer patients, providers, and payers but can also generate significant cost savings. In this study, several outcome measures related to medical charges, pharmacy costs, and HCRU in the integrated group were significantly lower than those in the partially integrated and non-integrated groups. While the cost measures do not reflect actual reimbursed amounts, the trends in savings highlight the role of IDNs and their HSSPs: up to 32% savings on medical care and up to 14% savings on oral oncolytic prescriptions in a 6-month follow-up timeframe, and up to 38% savings on oncolytic prescriptions during the full DoT.

IDNs and their HSSPs generated

up to

32%

savings on medical care in a 6-month follow-up

up to

14%

savings on oral oncolytic prescriptions in a 6-month follow-up

up to

38%

savings on oral oncolytic prescriptions during the full DoT

About Accelerate Specialty Network

Accelerate Specialty Network is a specialty-focused pharmacy services administrative organization (PSAO) that helps specialty pharmacies maximize their managed care strategies while reducing the administrative burden associated with the specialty reimbursement process. Representing a vast network of accredited and clinically integrated specialty pharmacies, Accelerate helps improve access to commercial specialty payer contracts by forging innovative agreements with health plans and PBMs that support pathways to lowering the total cost of care.

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