

APPENDIX: White Bagging Dispensing

Assumptions and Methodology For National White Bagging Savings Estimates

A. Projected medical specialty drug expenditures for 2022 and 2022-31

The Centers for Medicare & Medicaid Services (CMS) projects National Prescription Drug Expenditures of approximately \$400 billion in 2022 and approximately \$5.2 trillion for the 10-year period 2022-31.¹ However, since these CMS projections do not include drugs administered in hospital outpatient departments (HOPDs) or physician offices (MD offices), other analysts have projected non-retail drug expenditures (i.e., drugs administered in HOPDs and MD offices) of about \$200 billion in 2022 and \$2.8 trillion for 2022-31.² Various sources indicate that “specialty drugs” (i.e., complex and high-cost drugs typically handled by specialty pharmacies) account for about 83% of these non-retail/medical drug expenditures.³ CMS projects a break-down of Rx drug expenditures for commercial/private insurance and Medicaid, which we extrapolated to non-retail drug spend.⁵ The majority of medical specialty Rx expenditures occur in two primary sites of care: HOPDs and MD offices.⁴ We do not include Medicare in the analysis because typical specialty pharmacy contract rates are not significantly lower than Medicare reimbursement rates for Part B drugs.⁵ These assumptions yield the following projected medical specialty Rx drug expenditures for 2022-31.

Year (\$ billions)	Projected Retail Rx Expenditures ⁵	Medical Rx Expenditures (i.e., non-retail, medical benefit) ⁶	Medical SpecialtyRx Expenditures (i.e., specialty in medical benefit) ⁷	Medical SpecialtyRx Expenditures Commercial Insurance ⁵	Medical SpecialtyRx Expenditures Medicaid ⁵	Medical SpecialtyRx Expenditures Commercial HOPD ⁸	Medical SpecialtyRx Expenditures Medicaid HOPD ⁸	Medical SpecialtyRx Expenditures Commercial MD Office ⁸	Medical SpecialtyRx Expenditures Medicaid MD Office ⁸
1 Yr: 2022	\$397	\$214	\$177	\$80	\$19	\$40	\$11	\$29	\$5
10 Yr: 2022-31	\$5,186	\$2,799	\$2,311	\$981	\$245	\$498	\$142	\$354	\$71

B. Projected white bagging savings: “Zero white bagging vs 100% white bagging”

A number of sources have cited significant cost savings associated with medical specialty drugs administered in alternate sites-of-care. One national payer states that alternate sites-of-care can save 33-52% vs HOPDs.⁶ Another regional health plan says its employer customers will see an average savings of 20% on provider-administered specialty drugs via its new white bagging program.⁷ A national actuarial firm published data that suggests alternate sites-of-care savings of 45% vs HOPDs.⁸ Another actuarial case study found specialty pharmacy savings of 46% vs HOPDs and 11% vs physician offices.⁹ We used these estimates of 46% and 11% for our analysis, summarized in the table below. This yields a potential 10-year savings of more than \$340 billion of total savings in a scenario of complete movement from MD offices and HOPDs to white bagging.

¹ [National Health Expenditure Data Projected](#). Office of the Actuary in the Centers for Medicare & Medicaid Services.

² [Projections of the Non-Retail Prescription Drug Share of NHE](#). Altarum. September 2020.

³ Average of three sources = 83%. Specialty medical costs will comprise about 63% of total medication costs under the medical benefit and about 40% of total pharmacy costs in 2019. (Source: [Commercial specialty medication research 2019 benchmark projections](#). Milliman. January 2020.) Analysis of Medicare Part B utilization for 2019 indicates approximately 89% specialty. (Source: [Medicare Part B Drug Spending Dashboard 2019](#). CMS.) Specialty comprised 96% of total Medical Pharmacy Spend in 2019. (Source: [Magellan Rx Management Medical Pharmacy Trend Report 2020](#).)

⁴ [Magellan Rx Management Medical Pharmacy Trend Report 2020](#).

⁵ PBM reimbursement rates for specialty pharmacy average AWP-19%. (Source: Trends In Drug Benefit Design. PBMI 2019). Medicare reimburses Part B drugs ASP-22.5% if 340B, or ASP+6% if non-340B (Source: [Hospital Outpatient Prospective Payment System Final Rule CY 2021 - Issue Brief](#), ASHP December 2020). Median ASP = AWP-21%. (Source: [Medicaid Drug Price Comparison: ASP to AWP](#). HHS Office of Inspector General 2005.)

⁶ [Administering Specialty Drugs Outside Hospitals Can Improve Care and Reduce Costs by \\$4 Billion Each Year](#). UnitedHealth Group 2019.

⁷ [Experts Vary on Challenges, Benefits of White Bagging](#). AIS Health. March 2020.

⁸ Analysis of data on top 10 medical specialty drugs shows alternate site-of-care savings of 45% vs HOPD. [Commercial specialty medication research 2019 benchmark projections](#). Milliman. January 2020.

⁹ [Site of Service and Cost Dispersion of Infused Drugs](#). Milliman. December 2019.



What if White Bagging Goes from Zero to 100%?

Billions \$	White Bag Savings vs HOPD (If 0% => 100%)			White Bag Savings vs MD Office (If 0% => 100%)			Total Savings: HOPD & MD Office (If 0% => 100%)		
Savings assumptions if zero white bag use rose to 100% white bag ¹³									
Savings =	46%	46%	46%	11%	11%	11%			
Year (\$ billions)	Savings vs HOPD w/ Commercial Insurance	Savings vs HOPD w/ Medicaid	Savings vs HOPD Commercial + Medicaid	Savings vs MD Office w/ Commercial Insurance	Savings vs MD Office w/ Medicaid	Savings vs MD Office Commercial + Medicaid	TOTAL Savings w/ Commercial Insurance	TOTAL Savings w/ Medicaid	TOTAL Savings Commercial + Medicaid
1 Yr: 2022	\$18.7	\$5.1	\$23.8	\$3.1	\$0.6	\$3.7	\$21.9	\$5.7	\$27.5
10 Yr: 2022-31	\$231	\$66	\$297	\$38	\$8	\$46	\$269	\$73	\$343

C. Projected white bagging savings “if current use of white bagging DOUBLES”

The analysis above estimates hypothetical savings for 100% white bagging vs zero white bagging. But what if we estimate “incremental savings” associated with an increase in the current level of white bagging that is in the market today? One market analyst estimates that white bagging is currently being done for 35% of oncology HOPDs, 18% of oncology MD offices,¹⁰ 31% of non-oncology HOPDs and 43% of non-oncology MD offices patients.¹¹ Based on these estimates of current levels of white bagging, we project that a DOUBLING of white bagging could save more than \$100 billion nationally over the next 10 years. Similarly, eliminating or prohibiting the use of white bagging could increase drug expenditures by more than \$100 billion.

What if White Bagging Use DOUBLES?

Billions \$	White Bag Savings vs HOPD (If use doubled)			White Bag Savings vs MD Office (If use doubled)			Total Savings: HOPD & MD Office (If use doubled)		
Savings assumptions if current white bag use doubles ¹⁴									
Savings =	15%	15%	15%	3%	3%	3%			
Year (\$ billions)	Savings vs HOPD w/ Commercial Insurance	Savings vs HOPD w/ Medicaid	Savings vs HOPD Commercial + Medicaid	Savings vs MD Office w/ Commercial Insurance	Savings vs MD Office w/ Medicaid	Savings vs MD Office Commercial + Medicaid	TOTAL Savings w/ Commercial Insurance	TOTAL Savings w/ Medicaid	TOTAL Savings Commercial + Medicaid
1 Yr: 2022	\$6.2	\$1.7	\$7.9	\$1.0	\$0.2	\$1.1	\$7.1	\$1.9	\$9.0
10 Yr: 2022-31	\$76	\$22	\$98	\$12	\$2	\$14	\$88	\$24	\$112

D. Savings estimates for individual states

Table 1 lists state-by-state breakdowns for the potential savings if white bagging were DOUBLED in the commercial/private insurance and Medicaid populations. Projected national outpatient drug expenditures were calculated for each state based on state-by-state enrollment estimates for commercial fully insured, commercial self-insured, direct purchase, Medicare, and Medicaid based on a number of published references.^{12,13,14,15,16,17,18,19,20}

¹⁰ Drug Channels Update: Buy and Bill Market Trends, Drug Channels Institute Webinar. September 24, 2021.
¹¹ Specialty Pharmacy Keeps Disrupting Buy-and-Bill—and COVID-19 Will Accelerate It. Drug Channels. September 2020.
¹² US Census, State Population Totals and Components of Change.
¹³ US Census - Health Insurance in the United States: Number and Percentage of People Without Health Insurance Coverage by State
¹⁴ Percent of private-sector enrollees that are enrolled in self-insured plans at establishments that offer health insurance by firm size and state. AHRQ Medical Expenditure Panel Survey.
¹⁵ 2020 employer health benefits survey. Kaiser Family Foundation.
¹⁶ Marketplace Enrollment. Kaiser Family Foundation.
¹⁷ Medicare Advantage/Part D Contract and Enrollment Data - Monthly Enrollment By State. Kaiser Family Foundation.
¹⁸ Medicaid Enrollment: Monthly Medicaid and CHIP Application, Eligibility Determination, and Enrollment Reports, from Medicaid.gov.
¹⁹ Medicaid Gross Spending for Drugs by Delivery System and Brand or Generic Status, from MACPAC.gov.
²⁰ Dual Eligibles as a Percent of Total Medicare Beneficiaries. Kaiser Family Foundation.



Table 1: Potential Savings By State If White Bagging DOUBLED, 2022-31 (\$ millions)

State	Commercial/ Private Insurance	Medicaid	Commercial + Medicaid
United States	\$87,917	\$24,019	\$111,936
Alabama	\$1,370	\$276	\$1,646
Alaska	\$157	\$77	\$234
Arizona	\$1,769	\$606	\$2,375
Arkansas	\$728	\$263	\$991
California	\$10,014	\$3,811	\$13,824
Colorado	\$1,517	\$482	\$1,999
Connecticut	\$1,006	\$257	\$1,264
Delaware	\$245	\$79	\$323
District of Columbia	\$195	\$79	\$274
Florida	\$5,632	\$1,132	\$6,764
Georgia	\$2,962	\$603	\$3,566
Hawaii	\$370	\$122	\$492
Idaho	\$486	\$116	\$603
Illinois	\$3,537	\$989	\$4,527
Indiana	\$1,722	\$547	\$2,269
Iowa	\$889	\$230	\$1,120
Kansas	\$917	\$127	\$1,044
Kentucky	\$969	\$472	\$1,441
Louisiana	\$982	\$513	\$1,495
Maine	\$357	\$78	\$435
Maryland	\$1,806	\$457	\$2,263
Massachusetts	\$2,091	\$494	\$2,585
Michigan	\$2,463	\$812	\$3,274
Minnesota	\$1,719	\$358	\$2,077
Mississippi	\$785	\$180	\$965
Missouri	\$1,803	\$297	\$2,101
Montana	\$269	\$87	\$356
Nebraska	\$608	\$94	\$701
Nevada	\$796	\$240	\$1,035
New Hampshire	\$427	\$63	\$489
New Jersey	\$2,538	\$586	\$3,123
New Mexico	\$396	\$249	\$645
New York	\$4,791	\$1,997	\$6,787
North Carolina	\$2,915	\$577	\$3,493
North Dakota	\$245	\$32	\$278
Ohio	\$3,070	\$897	\$3,967
Oklahoma	\$1,023	\$258	\$1,280
Oregon	\$1,079	\$354	\$1,433
Pennsylvania	\$3,424	\$966	\$4,390
Rhode Island	\$272	\$98	\$370
South Carolina	\$1,342	\$329	\$1,671
South Dakota	\$263	\$36	\$299
Tennessee	\$1,824	\$450	\$2,275
Texas	\$7,900	\$1,428	\$9,328
Utah	\$1,120	\$125	\$1,244
Vermont	\$164	\$50	\$214
Virginia	\$2,514	\$504	\$3,018
Washington	\$2,150	\$594	\$2,743
West Virginia	\$406	\$167	\$574
Wisconsin	\$1,704	\$364	\$2,068
Wyoming	\$186	\$19	\$205