ONLINE DATA SUPPLEMENT

Long-Term Trends in Home Respiratory Medical Equipment among US Medicare Patients, 2013-2019

Kevin I. Duan, Edwin S. Wong, Joshua M. Liao, Amber K. Sabbatini, David H. Au

Table E1: All respiratory durable medical equipment included in the CBP (excluding accessories such as masks, tubing and filters)

HCPCS Code	Description
E0424	Stationary gaseous oxygen system
E0431	Portable gaseous oxygen
E0434	Portable liquid oxygen system
E0439	Stationary liquid oxygen system
E0442	Stationary oxygen contents, liquid, 1 month's supply
E0443	Portable oxygen contents, gaseous, 1 month's supply
E0444	Portable oxygen contents, liquid, 1 month's supply
E0470	Respiratory assist device, bi-level pressure capability, without backup rate feature, used with noninvasive interface
E0471	Respiratory assist device, bi-level pressure capability, with back-up rate feature, used with noninvasive interface
E0472	Respiratory assist device, bi-level pressure capability, with backup rate feature, used with invasive interface
E0565	Compressor, air power source for equipment (nebulizer)
E0570	Nebulizer, with compressor
E0572	Aerosol compressor, adjustable pressure, light duty for intermittent use (nebulizer)
E0585	Nebulizer, with compressor and heater
E0601	Continuous positive airway pressure (CPAP)
E1390	Stationary oxygen concentrator, single delivery port
E1391	Stationary oxygen concentrator, dual delivery port
E1392	Portable oxygen concentrator
K0738	Portable gaseous oxygen, with compressor for home refilling

Abbreviation: HCPCS = Healthcare Common Procedure Coding System

Table E2: Trends in outcomes of all respiratory durable medical equipment included in the Competitive Bidding Program, sorted in descending order of number of 2019 claims

	scending order of number of 2019 claims					Outcome	es			
DME item	2019 claims	Number of DME suppliers			Claims per DME supplier			Percentage of Medicare beneficiaries using DME *		
		2013	2019	% change	2013	2019	% change	2013	2019	% change
Stationary oxygen concentrator, single delivery port	6,378,499	7,488	4,656	-38%	1,147	1,370	19%	3.21	2.32	-28%
Continuous positive airway pressure (CPAP)	4,505,470	7,197	4,947	-31%	408	911	123%	1.43	2.05	43%
Portable gaseous oxygen †	2,750,958	7,107	4,321	-39%	521	637	22%	1.54	1.12	-28%
Nebulizer, with compressor	2,323,429	13,200	7,652	-42%	290	304	5%	1.77	1.07	-39%
Portable oxygen concentrator	1,346,045	4,074	3,337	-18%	144	403	181%	0.23	0.49	115%
Respiratory assist device, bi-level pressure capability, without backup rate feature, used with noninvasive interface	683,622	6,202	4,409	-29%	85	155	83%	0.26	0.32	21%
Portable gaseous oxygen with compressor for home refilling †	599,660	3,250	2,306	-29%	194	260	34%	0.27	0.24	-11%
Portable oxygen contents, gaseous, 1 month's supply ‡	305,101	5,114	2,877	-44%	131	106	-19%	0.31	0.16	-50%
Respiratory assist device, bi-level pressure capability, with back-up rate feature, used with noninvasive interface	207,332	4,257	3,396	-20%	37	61	67%	0.08	0.09	21%
Stationary oxygen contents, liquid, 1 month's supply ‡	37,664	2,109	782	-63%	92	48	-48%	0.06	0.01	-81%
Portable liquid oxygen system	34,785	2,819	839	-70%	87	41	-52%	0.09	0.01	-86%
Portable oxygen contents, liquid, 1 month's supply ‡	34,334	2,336	800	-66%	85	43	-49%	0.07	0.01	-83%
Compressor, air power source for equipment (nebulizer)	22,105	1,840	1,223	-34%	16	18	16%	0.02	0.01	-25%
Stationary liquid oxygen system	21,879	2,491	685	-73%	78	32	-59%	0.07	0.01	-89%
Stationary gaseous oxygen system	1,224	194	80	-59%	10	15	48%	0.0011	0.0007	-34%
Stationary oxygen concentrator, dual delivery port	281	95	16	-83%	19	18	-6%	0.0006	0.0001	-77%
Nebulizer, with compressor and heater	242	34	28	-18%	8	9	4%	0.00019	0.00015	-25%
Respiratory assist device, bi-level pressure capability, with backup rate feature, used with invasive interface	120	19	6	-68%	14	20	43%	0.00011	0.00009	-23%
Aerosol compressor, adjustable pressure, light duty for intermittent use (nebulizer)	62	13	8	-38%	14	8	-45%	0.00010	0.00004	-58%

^{*} The total number of fee-for-service Medicare beneficiaries was 37,613,096 in 2013 and 38,577,012 in 2016 (1).

[†] HCPCS items E0431 and K0738 both refer to portable gaseous oxygen systems that include portable containers, regulators, flowmeters, humidifiers, cannulae/masks and tubing. However, K0738 is used when the portable system also includes a home compressor for refilling the portable containers.

[‡] Non-rental item

Note: HCPCS item E0433 (portable liquid oxygen system) in Table E1 was excluded since no beneficiaries claimed this item 2019 Abbreviation: DME = durable medical equipment, HCPCS = Healthcare Common Procedure Coding System

References

1. CMS Program Statistics. Centers for Medicare & Medicaid Services at