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## **MONOGRAPH 2 – MEDICARE COST SHIFTING FOR COPD EXACERBATIONS**

*This is the second of three Monographs addressing the cost shifts that occur when Medicare delays providing or fails to provide needed durable medical equipment and supplies (DME) to beneficiaries. This Monograph addresses Chronic Obstructive Pulmonary Disease (COPD) and supplemental oxygen therapy. The 1<sup>st</sup> Monograph addressed Falls and Mobility DME. The 3<sup>rd</sup> monograph addresses Obstructive Sleep Apnea and Continuous Positive Airway Pressure (CPAP) equipment.*

When Medicare implemented the DMEPOS<sup>1</sup> competitive bidding program, beneficiaries and case managers experienced significant difficulties and delays in obtaining medically necessary durable medical equipment and supplies. The number of DME suppliers has dropped dramatically since the institution of competitive bidding, exacerbating the problem. The inability to obtain or the delay in obtaining needed DME puts beneficiaries at a greater risk for medical complications that could have otherwise been avoided.

This risk can be quantified by understanding the direct impact of the failure to timely get the needed DME to a beneficiary. For example, the lack of supplemental oxygen therapy results in untreated patients who suffer exacerbations from COPD and its comorbidities; the lack of mobility equipment results in fall-related injuries that require medical treatment; the lack of CPAP equipment results in untreated patients who suffer from sleep apnea.

When these complications occur, Medicare ends up paying substantially more for treatment of those complications than it would have spent to pay for the needed DME. DME payments are covered under Medicare Part B. When costs are shifted from prevention to treatment, the increased payment burden is shifted for the most part to Medicare Part A, with much lesser amounts shifted to Medicare Parts C and D. Not surprisingly, after a complication, Medicare still often ends up paying under Part B for the DME it initially failed to provide.

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<sup>1</sup> DMEPOS is an acronym for Durable Medical Equipment; Prothetics; Orthotics; and Supplies

## COPD –

Chronic Obstructive Pulmonary Disease is defined as a chronic condition of persistent obstruction of air flow through bronchial tubes and lungs.<sup>2</sup> COPD encompasses chronic bronchitis, asthma, and emphysema.<sup>3</sup> COPD is 2<sup>nd</sup> leading cause of disability and the 3<sup>rd</sup> leading cause of death in the United States.<sup>4</sup> The overall cost of treating medical complications caused by COPD in the U.S. in 2017 is estimated at over \$100 Billion.<sup>5</sup> Medicare payments comprise approximately 38.4% of this total, approximately \$38.6 Billion.<sup>6</sup>

Supplemental oxygen therapy is beneficial for people with severe COPD, which accounts for between ¼ to ½ of those diagnosed with COPD.<sup>7</sup> When Medicare fails to provide or delays in providing needed supplemental oxygen therapy, beneficiaries are at greater risk for exacerbations (acute worsenings of symptoms that result in a change in treatment and often hospitalization).<sup>8</sup> When an exacerbation occurs, the cost of treating it is typically covered by Medicare Part A, with lesser amounts are paid by Medicare Parts C (prescription drugs) and D (for Medicare Advantage users).

COPD is also associated with a myriad of comorbidities, including:

- heart failure, ischemic heart disease (i.e., ‘heart disease’)
- hypertension

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<sup>2</sup> Chabner, *The Language of Medicine, 9<sup>th</sup> Edition*, Chapter 12 (2010) referenced at <https://quizlet.com/20772101/the-language-of-medicine-chapter-12-flash-cards/>

<sup>3</sup> Id.

<sup>4</sup> Englander et al, *Economic Dimensions of Slip and Fall Injuries*, *Journal of Forensic Science* 41(5) (1996) [https://www.astm.org/DIGITAL\\_LIBRARY/JOURNALS/FORENSIC/PAGES/JFS13991J.htm](https://www.astm.org/DIGITAL_LIBRARY/JOURNALS/FORENSIC/PAGES/JFS13991J.htm) (abstract only)

<sup>5</sup> Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey , Table 3: Total Expenses and Percent Distribution for Selected Conditions by Type of Service: United States (2014) [https://meps.ahrq.gov/mepsweb/data\\_stats/tables\\_compendia\\_hh\\_interactive.jsp?\\_SERVICE=MEPSSocket0&\\_PROGRAM=MEPSPGM.TC.SAS&File=HCFY2014&Table=HCFY2014\\_CNDXP\\_C&\\_Debug=](https://meps.ahrq.gov/mepsweb/data_stats/tables_compendia_hh_interactive.jsp?_SERVICE=MEPSSocket0&_PROGRAM=MEPSPGM.TC.SAS&File=HCFY2014&Table=HCFY2014_CNDXP_C&_Debug=), adjusted to 2017 using Healthcare CPI and CMS population data.

<sup>6</sup> Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey , Table 4: Total Expenses and Percent Distribution for Selected Conditions by Source of Payment: United States (2014) [https://meps.ahrq.gov/data\\_stats/tables\\_compendia\\_hh\\_interactive.jsp?\\_SERVICE=MEPSSocket0&\\_PROGRAM=MEPSPGM.TC.SAS&File=HCFY2014&Table=HCFY2014\\_CNDXP\\_D&\\_Debug=](https://meps.ahrq.gov/data_stats/tables_compendia_hh_interactive.jsp?_SERVICE=MEPSSocket0&_PROGRAM=MEPSPGM.TC.SAS&File=HCFY2014&Table=HCFY2014_CNDXP_D&_Debug=), adjusted to 2017 using Healthcare CPI and CMS population data.

<sup>7</sup> *COPD severity differs by severity system used*, GlobalData Healthcare (2017) <https://www.pharmaceutical-technology.com/comment/commentcopd-severity-differs-by-severity-system-used-5852521/>

<sup>8</sup> Blanchette et al., *Rising Costs of COPD and the Potential for Maintenance Therapy to Slow the Trend*, *American Health and Drug Benefits*, Vol. 7, No. 2 (April 2014) <http://www.ahdonline.com/issues/2014/april-2014-vol-7-no-2/1739-rising-costs-of-copd-and-the-potential-for-maintenance-therapy-to-slow-the-trend>

- diabetes
- depression
- other potential comorbidities, including osteoporosis; anxiety; sleep apnea; rheumatic disease; cancer; rhinitis; stroke; dementia and anemia.<sup>9</sup>

This means that exacerbations could and often do involve one or more of those comorbidities. Medicare not only pays for the cost of treating COPD and comorbidity exacerbations but also typically ends up paying for the supplemental oxygen therapy it initially failed to provide. The cost to treat COPD exacerbations dramatically exceeds the cost of the DME that could have avoided the exacerbation in the first place.<sup>10</sup>

- In 2017, approximately 16.3 million U.S. adults were diagnosed with COPD<sup>11</sup>
- 6.1 million of those diagnosed were age 65 or over<sup>12</sup>
- Between 1.2 to 2.6 million Medicare beneficiaries suffer from severe COPD<sup>13</sup>

The cost of treating COPD for Medicare beneficiaries is substantial.

- In the year following an exacerbation, the incremental cost of treating COPD-related issues for Medicare beneficiaries with severe exacerbations is \$14,350.<sup>14</sup>

<sup>9</sup> Ställberg et al., *The prevalence of comorbidities in COPD patients, and their impact on health status and COPD symptoms in primary care patients: a protocol for an UNLOCK study from the IPCRG*, npj Primary Care Respiratory Medicine, Volume 26, Article #: 16069 (2016) <https://www.nature.com/articles/npjpcrm201669>

<sup>10</sup> Leitten, *The Case for Medicare Investment in DME – 2014 Update*, <http://www.vgmdclink.com/uploads/Document-Library/d1306dfcd9db67830ba14d4cd5b3be8c.pdf>

<sup>11</sup> *Employment and Activity Limitations Among Adults with Chronic Obstructive Pulmonary Disease – United States, 2013*, Morbidity and Mortality Weekly Report, CDC (March 27, 2016) <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6411a1.htm>, adjusted for population growth by the author

<sup>12</sup> Ford et al., *COPD Surveillance—United States, 1999-2011*, Table 1, Chest Journal, Vol. 144, Issue 1, pp. 284-305 (2013) [https://journal.chestnet.org/article/S0012-3692\(13\)60478-X/fulltext](https://journal.chestnet.org/article/S0012-3692(13)60478-X/fulltext), adjusted to 2017 using CMS population data

<sup>13</sup> Id., applying the severity distributions set out in *COPD severity differs by severity system used*, GlobalData Healthcare (2017) <https://www.pharmaceutical-technology.com/comment/commentcprd-severity-differs-by-severity-system-used-5852521/>

<sup>14</sup> Pasquale et al., *Impact of exacerbations on health care cost and resource utilization in chronic obstructive pulmonary disease patients with chronic bronchitis from a predominantly Medicare population*, Int J Chron Obstruct Pulmon Dis., 7: 757–764 (2012), adjusted by the author to 2017 dollars using Healthcare CPI data. This cost result can be duplicated using the COPD Cost Calculator provided by the COPD Foundation, adjusted for exacerbation severity, CPI data and private pay to Medicare cost comparisons. See <https://www.copdfoundation.org/pdfs/COPD-Calculator.xls> and *An Analysis of Hospital Prices for Commercial and Medicare Advantage Plans*, Congressional Budget Office (2017) <https://www.cbo.gov/system/files/115th-congress-2017-2018/presentation/52819-presentation.pdf>. Another study suggests that this cost could be higher, in excess of \$15,000, Hilleman et al., *Pharmacoeconomic evaluation of COPD*, Chest, Nov. 118(5):1278-85, (2000) [https://journal.chestnet.org/article/S0012-3692\(15\)51198-7/abstract](https://journal.chestnet.org/article/S0012-3692(15)51198-7/abstract) and Guarascio et al., *The clinical and economic burden of chronic obstructive pulmonary disease in the USA*, Clinicoecon Outcomes Res. 5: 235–245,

- The total incremental healthcare costs for these beneficiaries in the same period is \$39,601.<sup>15</sup>

These costs are determined by subtracting the cost of treating COPD-related issues for beneficiaries with no exacerbations from the cost of treating those with one or more severe exacerbations. The same process is applied to overall healthcare costs for beneficiaries. The differential costs were then converted to 2017 dollars.<sup>16</sup>

***“In the year following a severe COPD exacerbation, the expected cost shift in Medicare payments to treat COPD-related issues because Medicare fails to provide or delays in providing needed supplemental oxygen therapy is approximately \$14,350.”***

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***“The total incremental Medicare cost for these beneficiaries in the same year is \$39,601.”***

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(2013) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3694800/>, also adjusted by the author to 2017 dollars using Healthcare CPI data

<sup>15</sup> Id.

<sup>16</sup> See Note 14, Pasquale et al.

# MEDICARE COST SHIFTING

## MEDICARE COST SHIFTING WHEN DME IS DELAYED/NOT PROVIDED RESULTING IN A COPD EXACERBATION

U.S. ADULTS WITH COPD: 16.3 MILLION<sup>11</sup>



SENIORS WITH COPD: 6.1 MILLION<sup>12</sup>



SENIORS WITH SEVERE COPD: 1.2 - 2.6 MILLION<sup>13</sup>



TOTAL U.S. SPENDING ON COPD TREATMENT: 100 BILLION<sup>5</sup>



MEDICARE COPD SPENDING: 38.6 BILLION<sup>6</sup>



MEDICARE COST SHIFT PER BENEFICIARY TO TREAT COPD ISSUES AFTER SEVERE EXACERBATION<sup>14</sup> **\$14,350**

MEDICARE COST SHIFT PER BENEFICIARY FOR TOTAL HEALTH CARE COSTS AFTER SEVERE COPD EXACERBATION **\$39,601**