

# **Access to Home Medical Equipment: Survey of Beneficiary, Case Manager, and Supplier Experiences**

*Understanding the Impact of Competitive Bidding*

**Dobson | DaVanzo**

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# Access to Home Medical Equipment: Survey of Beneficiary, Case Manager, and Supplier Experiences

*Understanding the Impact of Competitive Bidding*

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American Association for Homecare

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# Executive Summary

The Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003 authorized the Centers for Medicare and Medicaid Services (CMS) to establish a competitive bidding (CB) program for Medicare Part B durable medical equipment, prosthetics, orthotics, and supplies (DME). The stated goals of the CB program for DME are to:

- assure Medicare beneficiaries access to quality DME products and services;
- reduce the amount Medicare pays for DME under a payment structure that is reflective of a competitive market;
- limit the financial burden on beneficiaries by reducing out-of-pocket expenses, and;
- contract with providers that conduct business in a manner that is beneficial for the program and its beneficiaries.<sup>1</sup>

CB has been interpreted as fulfilling this requirement for a market-based solution; however, the program is highly controversial. This study concludes that the CB process appears to have numerous unintended consequences.

## Survey

Dobson | DaVanzo conducted a survey of beneficiaries, case managers, and suppliers of DME to analyze the effects of the CB program.<sup>2</sup> Through the survey, respondents provided input via fixed “yes or no” response questions and added nuance and depth via free-text comments. It was disseminated via email and social media channels, with a telephone option available to those who preferred to share their feedback in person.

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<sup>1</sup> Centers for Medicare and Medicaid Services. (2007). 42 CFR Parts 411 and 424 | Medicare Program; Competitive Acquisition for Certain Durable Medical Equipment, Prosthetics, Orthotics, and Supplies (DMEPOS) and Other Issues; Final Rule. (Federal Register, Vol. 72, No. 68). Washington, DC.

<sup>2</sup> Dobson | DaVanzo was commissioned by the American Association for Homecare (AAHomecare) to conduct the survey.

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As a primarily electronic survey, numerous responses were received quickly from a diverse range of stakeholders. Internet-based surveys are an effective method of obtaining qualitative and quantitative data in health services research, and are “more rapid and cost efficient than other interview modes” within epidemiologic studies in a geographically varied population.<sup>3</sup> Furthermore, crowdsourcing via social media is “an efficient and appropriate alternative to standard research methods” compared to traditional participant pools.<sup>4</sup>

## Results

There were 1,064 respondents to the survey. Of these 437 were beneficiaries, 361 were case managers/discharge planners, and 266 were DME suppliers. Respondents are generally representative of various geographical (e.g. urban bid, and urban non-bid, rural) and demographic profiles compared to CMS data. Due to the volume of responses received in each of the three categories, our high-level results are statistically significant at the 0.05 level.

Key findings are as follows:

- Beneficiaries and case managers are experiencing a wide range of quality and access issues, and many suppliers are strained to the point where beneficiaries question their capability to meet their needs.
  - 52.1% beneficiaries report problems accessing DME and/or services
  - 88.9% of case managers report an inability to obtain DME and/or services in a timely fashion
- Beneficiaries and case managers reported difficulties in locating suppliers to provide DME and services, resulting in unnecessary medical complications and expenses. This was reported to be especially troubling for beneficiaries who receive oxygen therapy with 74.3% reporting some sort of disruption to their service.
- Beneficiaries are experiencing anxiety over their ability to get needed DME and at times are choosing to leave the Medicare market and pay for their equipment privately out-of-pocket in order to avoid delays, receive better quality items than those supplied by recipients of a CB contract, and exercise their choice of supplier.
  - 36.9% of patients reporting an increase in out-of-pocket expenses related to their DME.

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<sup>3</sup> Rankin, M. et al. “Comparing the reliability of responses to telephone-administered vs. self-administered web-based surveys in a case-control study of adult malignant brain cancer.” *Cancer Epidemiol Biomarkers Prev.*, 17, no. 10 (2008): 2639-2646. doi: 10.1158/1055-9965.EPI-08-0304

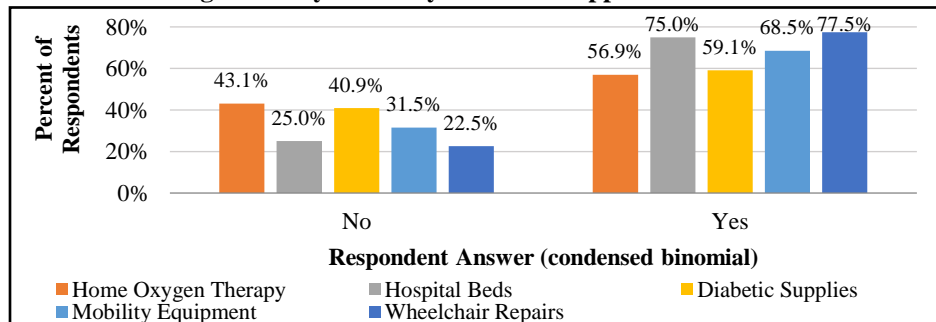
<sup>4</sup> Behrend, T., Sharek, D., Meade, A., and Wiebe, E. “The viability of crowdsourcing for survey research.” *Behav Res.*, no. 43 (2011): 800-813. doi: 10.3758/s13428-011-0081-0

# Executive Summary

- Case managers noted that the program has complicated the discharge process and that delays in obtaining DME have often resulted in or contributed to Medicare beneficiaries' need for emergency care or a hospital re-admission.
  - 70.8% of case managers report discharge delays of 1-7 days
  - 61.7% of case managers say patients are having medical complications some of which result in readmission to the hospital
- Most suppliers (65%) report having to reduce the number of items supplied or are fearing for their company's viability due to unsustainable payment rates. Smaller firms noted that they face significant pressure that may force them to close or be acquired.
- These problems are particularly prominent in rural areas. Rural beneficiaries noted significant increases in stress and anxiety due to decreased frequency of deliveries on non-route days; they increasingly felt as if they had to demonstrate more of a "need" to receive medically necessary items.

Figure ES-1 below shows that beneficiaries reported access issues in obtaining DME which is indicative of the broader sentiment of the results.

**Figure ES-1: Binomial frequency of beneficiary self-reported experience of access issues in obtaining medically necessary DME and supplies**



## Implications

Our findings indicate that the CB program has negatively affected beneficiaries' access to DME services and supplies, adversely impacted case managers' ability to coordinate DME for their patients, and placed additional strain on suppliers to deliver quality products without delay. While transitions are by their nature disruptive, the degree to which survey respondents identified negative impacts with CB suggests that the program is in need of mid-course corrections. If timely adjustments are not made, there is little doubt that beneficiaries, case managers, and suppliers will continue to face adverse outcomes, particularly in rural areas.

# Introduction

The Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003 authorized the Centers for Medicare and Medicaid Services (CMS) to establish a competitive bidding (CB) program for Medicare Part B durable medical equipment, prosthetics, orthotics, and supplies (DMEPOS).

DMEPOS, often referred to simply as DME, is defined as medical equipment that may be reused (e.g. hospital beds, walkers, respiratory equipment).<sup>5</sup> CB was enacted following demonstrations from 1999-2002 which showed CB could reduce Medicare expenditures for DME products and services. The purpose of the DME CB program is to facilitate efficient payment rates through awarding contracts for the rights to supply DME to Medicare beneficiaries within competitive bid areas (CBA). CB efforts to control Medicare spending have relied on a “market-based alternative to administratively imposed payment reduction[s]”, which was the foundation of the Ryan-Wyden proposal that informed the 2012 Republican House budget.<sup>6</sup> CB has been interpreted as fulfilling this requirement for a market-based solution.

It was anticipated by CMS that CB could save Medicare money if successfully and properly implemented. DME costs were 2.13 percent of Medicare in 2003 and have been decreasing since that time. In 2014 they represented approximately 1.25 percent of Medicare spending.<sup>7</sup> According to a 2011 report by the Government Accountability Office

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<sup>5</sup> Centers for Medicare & Medicaid Services. (September 2016) “Medicare Coverage of Durable Medical Equipment and Other Devices” [PDF document]. Accessed September 20, 2017. Retrieved from: <https://www.medicare.gov/Pubs/pdf/11045-Medicare-Coverage-of-DME.pdf>.

<sup>6</sup> Song, Z., Landrum, M., and Chernew, M. “Competitive Bidding in Medicare Advantage: Effect of Benchmark Changes on Plan Bids.” *J Health Econ.*, 32(6), 2013, 1301-1312.

<sup>7</sup> American Association for Homecare. (2014) “Durable Medical Equipment (DME) Represents Approximately 1.25% of Medicare Spending” [PDF document]. Accessed September 20, 2017. Retrieved from: [https://s3.amazonaws.com/aafh/downloads/458/Medicare\\_Spending\\_Chart\\_01\\_16.pdf](https://s3.amazonaws.com/aafh/downloads/458/Medicare_Spending_Chart_01_16.pdf).



(GAO), CB at 2011 rates could have reduced home oxygen payments by as much as \$700 million, which is consistent with the findings from the 1999-2002 demonstrations.<sup>8</sup>

The stated goals of the CB program for DME are to:

- assure Medicare beneficiaries access to quality DME products and services;
- reduce the amount Medicare pays for DME under a payment structure that is reflective of a competitive market;
- limit the financial burden on beneficiaries by reducing out-of-pocket expenses, and;
- contract with providers that conduct business in a manner that is beneficial for the program and its beneficiaries.<sup>9</sup>

In practice, however, the DME CB program has been highly controversial. Detractors have argued since the program's outset, and continue to argue, that the DME CB program uses questionable methodology; lacks transparency; reduces efficiency; and produces payment rates that do not support providers' acquisition, service, and distribution costs.<sup>10,11</sup> However, at the time of this writing, CMS contends that the CB program meets its objectives in saving the Medicare program billions of dollars by reducing fraud and waste and implementing payment rates closer to natural market prices without reducing access to care.<sup>12</sup>

On March 15, 2016, CMS announced new payment rates following the Round 2 Recompete and began contracting with suppliers who received the winning bids. On July 1, 2016, these Round 2 Recompete rates were fully implemented across all areas – competitive bid, non-competitive bid regional and non-competitive bid rural.<sup>13</sup>

This report presents an analysis of beneficiary, case manager, and supplier experiences with DME CB following the implementation of Round 2 Recompete payment rates from July 1,

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<sup>8</sup> United States Government Accountability Office. "MEDICARE HOME OXYGEN: Refining Payment Methodology Has Potential to Lower Program and Beneficiary Spending." [PDF document]. Published 2011. Accessed September 20, 2017. Retrieved from: <http://www.gao.gov/products/GAO-11-56>.

<sup>9</sup> Centers for Medicare and Medicaid Services. (2007). 42 CFR Parts 411 and 424 | Medicare Program; Competitive Acquisition for Certain Durable Medical Equipment, Prosthetics, Orthotics, and Supplies (DMEPOS) and Other Issues; Final Rule. (Federal Register, Vol. 72, No. 68). Washington, DC.

<sup>10</sup> Cramton, P. Testimony presented before the Subcommittee on Healthcare and Technology, United States House Committee on Small Business. "Medicare Auction Reform." September 11, 2012. Retrieved from: <http://www.cramton.umd.edu/papers2010-2014/cramton-testimony-medicare-auction-reform-11-sep-2012.pdf>.

<sup>11</sup> Merlob, B., C. R. Plott, and Y. Zhang. "The CMS Auction: Experimental Studies of a Median-Bid Procurement Auction with Non-Binding Bids." *Quarterly Journal of Economics*, 127, 2012, 793–827.

<sup>12</sup> Centers for Medicare & Medicaid Services. (March 15, 2016). "Competitive Bidding Program Continues to Maintain Access and Quality While Saving Medicare Billions." Department of Health and Human Services. Accessed September 20, 2017. Retrieved from: <https://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets/2016-Fact-sheets-items/2016-03-15.html>.

<sup>13</sup> Ibid.

# Introduction

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2016 through September 2017 as gathered through a nationally representative survey. Survey respondents are representative of various geographical (e.g. urban bid, urban non-bid, and rural), demographic, and supplier profiles.

The results of this study indicate significant barriers to access and quality issues experienced by beneficiaries and case managers in addition to delays in discharging patients from the hospital and receiving equipment. Furthermore, beneficiaries have experienced increases in out-of-pocket expenses. Beneficiaries and case managers reported difficulties in locating suppliers to provide DME and services, resulting in unnecessary medical complications and expenses. This was reported to be especially troubling for beneficiaries who need oxygen therapy. Additionally, beneficiaries, case managers, and suppliers are reporting that some beneficiaries choose to bypass the Medicare DME process to avoid delays or to exercise their choice of supplier by paying privately. This trend shifts costs from Medicare to the beneficiary and provider. The degree to which survey respondents identified issues with CB suggests that the CB program may need a significant mid-course correction if the program is to meet its claimed objectives in a fashion acceptable to all participants in the DME market.

# Background

## The Medicare Competitive Bidding Process for DMEPOS

The CB process requires providers to submit bids for selected products from specific product categories. Each bid is based on entitled benefits for a “standard enrollee” with risk-adjusted payments.<sup>14</sup> The submitted bids are evaluated based on the provider’s eligibility, financial stability, and bid price. Financial and quality standards are set to ensure that winning providers can fulfill the DME orders for all products that may result from winning a contract. Winning providers who accept contracts from CMS are required to accept all medically necessary requests from Medicare beneficiaries for bid items and will be reimbursed at the price determined by the auction.<sup>15</sup>

Under the CB program, prices are determined based on the “lead” product cost for each category, which is defined as the product with the greatest Medicare dollar volume. Other items within a product category are price-adjusted based on a relative price index for each individual item within the category (e.g. 30% of a walker’s overall cost for a walker replacement part). The price index is based on bidder reports made during the qualification stage. No payment distinction is made between mail-order and retail products. Thus, product prices are separated by category and use, rather than by the method of warehousing and delivery.<sup>16</sup>

The CB program covers eight product categories: enteral nutrition, general home medical equipment including hospital beds, commode chairs, nebulizers and supplies, negative pressure wound therapy, respiratory equipment including oxygen and sleep therapy,

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<sup>14</sup> Feldman, R., Dowd, B., and Coulam, R. “A Competitive Bidding Approach to Medicare Reform.” Presented at the National Health Policy Forum, Washington, D.C. May 17, 2013.

<sup>15</sup> Centers for Medicare and Medicaid Services. (2012). “Overview of the DMEPOS Competitive Bidding Program.” Department of Health and Human Services. Accessed September 20, 2017. Retrieved from: <http://www.dmecompetitivebid.com/palmetto/cbic.nsf/vMaster-DID/79NTSG0132>.

<sup>16</sup> Cramton, P. (March 29, 2011). “Auction Design for Medicare Durable Medical Equipment.” March 29, 2011. [PDF document]. Accessed September 29, 2011. Retrieved from: <https://web.archive.org/web/20170929182939/http://www.cramton.umd.edu/papers2010-2014/cramton-auction-design-for-medicare.pdf>.

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standard mobility including walkers, and standard power and manual wheelchairs. Each category includes a specific number of products covered by the CB contracting process. CB suppliers must be accredited by an approved organization and must produce their products in accordance with specifications outlined in CMS' *Booklet on Durable Medical Equipment*.<sup>17</sup> Suppliers are required to submit bids for select products, but not all products or services are subject to the CB process.<sup>18</sup> Contract suppliers must furnish all items in the product category under contract to any beneficiary who maintains permanent residence within or visits the respective competitive bidding area. Suppliers cannot discriminate against Medicare beneficiaries.<sup>19</sup>

The CB program designates three types of areas for use by CMS. Competitive bidding areas (CBAs) are urban locations determined by CMS in which suppliers are awarded DME contracts based on immediate results of each Round of competitive bidding. Non-competitive bidding urban areas are areas in which CB did not occur, but as of July 1, 2016 are fully subject to CB rates. Finally, although rural areas are exempt from the CB process, prices from the Round 2 Recompete are now applied to rural areas.<sup>20</sup>

From January 1, 2016 through July 1, 2016, the DME fee schedule was based half on the traditional rates for DME and half on the competitive bidding national expansion (CBNE) rates. The CBNE rates are based on the average of each region's CBA's single payment amounts. Starting July 1, 2016, the fee schedule is entirely based on CBNE rates that are formed through the competitive bidding process. Additionally, on July 1, 2016, CMS implemented the results of the Round 2 Recompete to 117 CBAs nationwide.<sup>21</sup>

This study was conducted at a crucial point in the implementation of CB, as it details the experiences of market participants at all stages of the DME CB process. This study may therefore provide necessary evaluations of the effect of current DME policy on Medicare beneficiaries, case managers, and suppliers, such that effective mid-course corrections can be implemented to improve the economic and clinical outcomes of CB.

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<sup>17</sup> O'Roark, B. and Foreman, S. (2008). *The Impact of Competitive Bidding on the Market for DME*. Pennsylvania Association of Medical Suppliers. Mechanicsburg, PA.

<sup>18</sup> "DMEPOS Competitive Bidding – Home." CMS.gov. Centers for Medicare and Medicaid Services, Department of Health and Human Services. Accessed 29 September 2017. Retrieved from: <https://web.archive.org/web/20170929175845/https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/DMEPOSCompetitiveBid/index.html?redirect=/DMEPOScompetitivebid/>.

<sup>19</sup> Centers for Medicare and Medicaid Services. (2014). *Contract Supplier Obligations*. Accessed 29 September 2017. Retrieved from [https://web.archive.org/web/20170929175323/https://www.dmecompetitivebid.com/Palmetto/Cbicrd2Recom-pete.Nsf/files/23\\_Fact\\_Sheet\\_Contract\\_Supplier\\_Obligations.pdf/\\$File/23\\_Fact\\_Sheet\\_Contract\\_Supplier\\_Obligations.pdf](https://web.archive.org/web/20170929175323/https://www.dmecompetitivebid.com/Palmetto/Cbicrd2Recom-pete.Nsf/files/23_Fact_Sheet_Contract_Supplier_Obligations.pdf/$File/23_Fact_Sheet_Contract_Supplier_Obligations.pdf).

<sup>20</sup> Centers for Medicare and Medicaid Services. (2016). *Medicare Claims Processing Manual: Chapter 36 – Competitive Bidding*. Accessed 29 September 2017. Retrieved from: <https://web.archive.org/web/20170929175235/https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/clm104c36.pdf>.

<sup>21</sup> ResMed. (2015). "Competitive Bidding Fast Facts." Accessed 29 September 2017. Retrieved from: [https://www.resmed.com/us/dam/documents/articles/1016059\\_Competitive\\_Bidding\\_Fast\\_Facts.pdf](https://www.resmed.com/us/dam/documents/articles/1016059_Competitive_Bidding_Fast_Facts.pdf).

## Auction Design

Unlike the CB program, standard auction mechanisms utilize a “clearing-price auction” by which potential sellers submit sealed bids to the buyer and are unaware of each other’s bid amounts. The seller who receives the contract is the one who submitted the lowest price that is financially achievable.<sup>22</sup> The market price is then set at the first excluded bid, and each additional bid a step up from the lowest bid is considered until the quantity required is satisfied – called “composite bids.” For example, if 10,000 units are required and the winning bids are 7,000 units for \$10, 3,000 units for \$11, and 4,000 units for \$13, then the clearing price would be set at \$13, which is one bid price above the quantity-clearing amount under a “clearing-price auction.”

On the other hand, the CB program utilizes a unique form of bidding that is different from a clearing-price auction. The type of bidding used in CB is called “median-bid pricing,”<sup>23</sup> which was designed and implemented by CMS but not mandated by Congress in the MMA.<sup>24</sup> The median-bid pricing system is different from the clearing-price auction because the final supplied price is decided by the median bid price of the winning bids rather than the clearing-price.<sup>25</sup> The average of bids across products is weighted by government-estimated demand. For example, if 10,000 units are required and the winning bids are 3,000 units for \$5, 4,000 units for \$6, and 3,000 units for \$8, then the contract price would be set at the 5,000<sup>th</sup> unit at \$6 instead of the clearing-price, which is one step below the final quantity-satisfying bid price of \$8. This process lowers the final supply payment rate to one below the clearing-price; that is, the median-bid rate is entirely determined by the composite bids, not the first excluded bid once the quantity required has been supplied.

Under median pricing bids, all contracts are awarded at the unweighted median among the winning bids. Half of the winning bidders will thus be awarded contracts at prices that are higher than their bids. Median pricing encourages suppliers to bid low, as lower bids improve the chance of winning, have a negligible effect on the ultimate price paid, and are not binding if costs exceed the median price.<sup>26</sup>

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<sup>22</sup> Chang, W., Chen, B., and Salmon, T. “An Investigation of the Average Bid Mechanism for Procurement Auctions.” 2013. Accessed September 29, 2017. Retrieved from: <https://doi.org/10.1287/mnsc.2013.1893>.

<sup>23</sup> “DMEPOS Competitive Bidding – Home.” CMS.gov. Centers for Medicare and Medicaid Services, Department of Health and Human Services. Accessed 29 September 2017. Retrieved from: <https://web.archive.org/web/20170929175845/https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/DMEPOSCompetitiveBid/index.html?redirect=/DMEPOScompetitivebid/>.

<sup>24</sup> Rye, B. and Barry, M. “Medicare’s Competitive Bidding Program May Shape Future, Save Money.” Bloomberg Government. July 10, 2012. Retrieved from: <https://web.archive.org/web/20170929175949/http://c.yimcdn.com/sites/www.gameshme.org/resource/resmgr/imported/Bloomberg%20Competitive%20Bidding%20Study%20by%20Brian%20Rye%20071012.pdf>.

<sup>25</sup> “DMEPOS Competitive Bidding – Home.” CMS.gov. Centers for Medicare and Medicaid Services, Department of Health and Human Services. Accessed 29 September 2017. Retrieved from: <https://web.archive.org/web/20170929175845/https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/DMEPOSCompetitiveBid/index.html?redirect=/DMEPOScompetitivebid/>.

<sup>26</sup> The process is a “sealed-bid auction;” bidders are not aware of the prices bid by others, and the lack of ability to compare may result in the loss of service complementarities if a supplier receives a contract for an item in a category that typically (or cost-effectively) goes in tandem with another item. Additionally, bid prices are not recalculated if suppliers are found not to meet the criteria for the bid. Winning

# Background

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CMS selects winners based on the lowest composite bid until the total capacity of winners satisfies the estimated demand.<sup>27</sup> Small providers must be represented in winning bids; therefore, CMS ensures that 30% of each competition's winning bids are offered to small providers. If that threshold is not met, then additional small providers would be offered contracts without changes to the CB supply or price.<sup>28</sup> CMS may further discount reported quantities on which suppliers bid to administratively adjust prices to an internal benchmark.<sup>29</sup>

Since DME and home health are “among the largest contributors to area variation” in Medicare spending and utilization,<sup>30</sup> the median-price bid system may smooth out extreme fluctuations. CMS contends that the CB program as currently designed reduces fraud and abuse through licensure, quality, accreditation, and financial standards in addition to forcing a reduction in “excessive payment amounts” per the median-bid auction design.<sup>31</sup>

Bidding is recognized as “one of the most important price-setting mechanisms in economics” with a “growing empirical literature.”<sup>32</sup> Although the economic theory of the median-pricing system has not been defined in literature,<sup>33</sup> the median-pricing system assumes that bidding behavior will not change from that observed in clearing-price auctions. The system also assumes that the median-price will reflect the actual median cost of production and procurement of services among winners, all other associated costs ostensibly being equal.

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bids within the DMEPOS CB program are non-binding and may be withdrawn. Legislation regarding CB bids was recently changed to make bids binding commitments; however, this will not be implemented until some period between 2017 and 2019. Currently, bidders of Rounds may decline to sign a supply contract following the completion of the auction.

<sup>27</sup> Cramton, P., Ellermeyer, S., and Katzman, B. “Designed to Fail: The Medicare Auction for Durable Medical Equipment.” *Economic Inquiry*, 53(1), 2015, 469-485.

<sup>28</sup> “Report to Congress: Evaluation of the National Competitive Bidding Program for Durable Medical Equipment, Prosthetics, Orthotics, and Supplies.” 2011. U.S. Department of Health and Human Services. Accessed September 29, 2017. Retrieved from [https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Reports/Downloads/DHHS\\_DME\\_RTC\\_August\\_2011.pdf](https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Reports/Downloads/DHHS_DME_RTC_August_2011.pdf).

<sup>29</sup> Cramton, P. Testimony presented before the Subcommittee on Healthcare and Technology, United States House Committee on Small Business. “Medicare Auction Reform.” September 11, 2012. Retrieved from: <http://www.cramton.umd.edu/papers2010-2014/cramton-testimony-medicare-auction-reform-11-sep-2012.pdf>.

<sup>30</sup> Reschovsky, J., Ghosh, A., Stewart, K., and Chollet, D. “Durable Medical Equipment and Home Health among the Largest Contributors to Area Variations in Use of Medicare Services.” *Health Affairs*, 31(5), 2012, 956-964. Retrieved from: <https://web.archive.org/web/20170929180522/http://content.healthaffairs.org/content/31/5/956>.

<sup>31</sup> Centers for Medicare and Medicaid Services. “Medicare’s DMEPOS Competitive Bidding Program: Frequently Asked Questions.” Department of Health and Human Services. Accessed September 29, 2017. Retrieved from: <https://web.archive.org/web/20170929180642/https://www.cms.gov/Outreach-and-Education/Outreach/Partnerships/Downloads/DMEPOSPartnerFAQsRevised4813508.pdf>.

<sup>32</sup> Song, Z., Landrum, M., and Chernew, M. “Competitive Bidding in Medicare Advantage: Effect of Benchmark Changes on Plan Bids.” *J Health Econ.*, 32(6), 2013, 1301-1312.

<sup>33</sup> Merlob, B., C. R. Plott, and Y. Zhang. “The CMS Auction: Experimental Studies of a Median-Bid Procurement Auction with Non-Binding Bids.” *Quarterly Journal of Economics*, 127, 2012, 793–827.

## Criticisms

The median-bid price system has faced substantial criticism from economic researchers, industry members, and policymakers. Transparency of the program has been questioned. There is neither administrative nor judicial review for contract awards, designation of CBAs, selection of items, or bidding structure.<sup>34</sup> The ability of CMS to adjust pricing by discounting quantities in an “arbitrary” fashion has been notably critiqued by University of Maryland economist Peter Cramton.<sup>35</sup> Additionally, the use of median-bid price instead of the clearing-price has been questioned by economics researchers as encouraging quantity inefficiency.

The median-bid price system and lack of binding bids may encourage “low-ball bids”<sup>36</sup> and “suicide bidding,” in which DME companies take substantial losses on specific items to retain high market share of non-CB items within the CBA. Low-ball bids are effective bidding strategies because these bids have a negligible impact on the eventual price paid since the payment rate is based on a weighted median, especially in large supply markets where many suppliers compete in the bidding process. The weights provided by the median-bid pricing methodology result in payment rates that are non-competitively generated, and the non-transparent quality of the bidding process may obfuscate true costs.<sup>37</sup> Low-ball bidding has been produced in experimental economics research under the parameters of a median-bid price system with non-binding bids.<sup>38</sup>

The CB process encourages bidders to submit low-ball bids that can lead to arbitrary and low prices which do not cover actual production costs. By design, payment to cost ratios considerably less than 1.0 will crowd out competitors. However, some suppliers may accept a CB contract where the Single Payment Amount (SPA) is below their bid amount and provide certain services at reimbursement levels that are less than their costs in the hope that other service provision can cross subsidize their losses which may result in lesser quality products for bidders to provide at lower prices.

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<sup>34</sup> Centers for Medicare and Medicaid Services. (2016). *Medicare Claims Processing Manual: Chapter 36 – Competitive Bidding*. Accessed 29 September 2017. Retrieved from: <https://web.archive.org/web/20170929175235/https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/clm104c36.pdf>

<sup>35</sup> Cramton, P. Testimony presented before the Subcommittee on Healthcare and Technology, United States House Committee on Small Business. “Medicare Auction Reform.” September 11, 2012. Retrieved from: <http://www.cramton.umd.edu/papers2010-2014/cramton-testimony-medicare-auction-reform-11-sep-2012.pdf>

<sup>36</sup> Cramton, P. Testimony presented before the Subcommittee on Healthcare and Technology, United States House Committee on Small Business. “Medicare Auction Reform.” September 11, 2012. Retrieved from: <http://www.cramton.umd.edu/papers2010-2014/cramton-testimony-medicare-auction-reform-11-sep-2012.pdf>

<sup>37</sup> Merlob, B., C. R. Plott, and Y. Zhang. “The CMS Auction: Experimental Studies of a Median-Bid Procurement Auction with Non-Binding Bids.” *Quarterly Journal of Economics*, 127, 2012, 793–827.

<sup>38</sup> *Ibid.*

# Background

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This may bolster a supplier's market power, as beneficiaries are more likely to purchase DME from the same supplier if that supplier stocks a wide variety of products than they are to price compare and purchase from multiple suppliers.<sup>39</sup>

The premise that winning bidders may see increased business due to expanding market share is not necessarily applicable to providers in rural areas, as these locations do not hold the capacity for increased business or an expanding client base. Although rural providers are given a 3 percent to 10 percent positive price adjustment to account for location, critics state that rural suppliers face difficulties in offsetting costs due to infrastructure and healthcare demographics.<sup>40,41</sup> A 2016 study conducted by the University of Washington on rural home health noted criticisms from advocates of rural healthcare concerning delivery costs and a lack of economies of scale to offset the payment reductions from CB payments, with one interviewee stating the CB program has “killed access to care.”<sup>42</sup>

Despite evidence from CMS showing that the CB process has reduced payments,<sup>43</sup> there is substantial concern that beneficiary access and the quality of products and services has decreased. Testimony presented to the Committee on Small Business of the House of Representatives in 2012 concerning small suppliers within the DME CB program questioned whether the program truly saved money or simply shifted costs.<sup>44</sup> Consumer and business representatives such as the National Federation of Independent Business (NFIB) have expressed concern to Congress about the ability of CB to sustain small businesses, particularly in rural areas.<sup>45</sup> As winning bids potentially become lower due to the median pricing option, small businesses are more likely to be crowded out than in a clearing-price auction or fee-for-service reimbursement.<sup>46</sup> Thus, while the CB process likely reduces

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<sup>39</sup> Dobson, Al, DaVanzo, J., Berger, G., El-Gamil, A., and Nejat, Y. (2010). *The Risks to Medicare Beneficiaries of DMEPOS Competitive Bidding – Considerations for the Round 1 Re-Bid and Beyond*. Retrieved from <http://www.peopleforqualitycare.org/uploads/articles/b43060ae91941a18702d3bb8f9a8461f.pdf>.

<sup>40</sup> Centers for Medicare and Medicaid Services. “Adjustments to Fee Schedule Amounts for Certain DMEPOS Using Information from the Competitive Bidding Program.” CMS.gov. Department of Health and Human Services. June 23, 2016. Accessed September 29, 2017. Retrieved from: <https://web.archive.org/web/20170929181209/https://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets/2016-Fact-sheets-items/2016-06-23.html>.

<sup>41</sup> “Access to Rural Home Health Services; Views from the Field.” Rural Health Research and Policy Centers. February 2016. Accessed September 29, 2017. Retrieved from: [https://web.archive.org/web/20170929181728/http://depts.washington.edu/fammed/rhrc/wp-content/uploads/sites/4/2016/02/RHRC\\_FR152\\_Skillman.pdf](https://web.archive.org/web/20170929181728/http://depts.washington.edu/fammed/rhrc/wp-content/uploads/sites/4/2016/02/RHRC_FR152_Skillman.pdf).

<sup>42</sup> Ibid.

<sup>43</sup> “The Durable Medical Equipment, Prosthetics, Orthotics, and Supplies (DMEPOS) Competitive Bidding Program.” Centers for Medicare and Medicaid Services, Department of Health and Human Services. April 2016. Accessed September 29, 2017. Retrieved from: <https://web.archive.org/web/20170929181853/https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLN-Products/downloads/DMEPOSCompBidProg.pdf>.

<sup>44</sup> Hearing before the Subcommittee on Healthcare and Technology of the Committee on Small Business, House of Representatives. “Medicare’s Durable Medical Equipment Competitive Bidding Program: How are Small Suppliers Faring?” September 11, 2012. Accessed September 29, 2017. Retrieved from: <https://web.archive.org/web/20170929182008/https://www.gpo.gov/fdsys/pkg/CHRG-112hhrg77561/pdf/CHRG-112hhrg77561.pdf>.

<sup>45</sup> National Federation of Independent Business, Letter to Rep. Price and Loeb sack May 16, 2016.

<sup>46</sup> Independence through Enhancement of Medicare and Medicaid Coalition. “Re: Disability Community Support for the Patient Access to Durable Medical Equipment Act of 2016 (PADME), H.R. 5210.” May 25, 2016. Accessed September 29, 2017. Retrieved from:



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Medicare DME payments, it could also reduce the quality of and beneficiary access to DME products and associated services.

According to the 2007 Final Rule for the Competitive Acquisition for Certain Durable Medical Equipment, Prosthetics, Orthotics, and Supplies (DMEPOS) and Other Issues, CMS “will be evaluating bids to ensure that they are bona fide, and we may request that a provider submit additional financial information, such as manufacturer invoices, so that we can verify that the provider can provide the product to the beneficiary for the bid amount. If we conclude that a bid is not bona fide, we will eliminate the bid from consideration.”<sup>47</sup>

Providing services at substantially lower costs may negatively impact the quality of and beneficiaries’ access to needed supplies.<sup>48</sup> Cost analysis for Medicare DME prior to CB demonstrated that only a quarter of the cost of DME relates to the actual acquisition of the item; most of the financial burden is in corporate business expenses, delivery, warehousing, documentation, and customer intake/interaction.<sup>49</sup> An investigation conducted in 2016 by Dobson | DaVanzo demonstrated that the current program “typically [does] not cover the costs of production for a broadly representative sample of DME providers representing approximately 12.7 percent of Medicare expenditures for the HCPCS under study.”<sup>50</sup>

Several other limitations have been reported during implementation of the current CB program. Most existing providers by volume did not win a contract in their region and product category in the first round of rebidding,<sup>51</sup> and 34% of the Medicare bid program contractors were not financially secure.<sup>52</sup> The latter consideration is due in part to the issue of incomplete and inaccurate licensure data. In May 2016, the Department of Health and Human Services issued a memorandum that stated the CB program used data that did not reflect state licensure program requirements, so some providers that were not licensed with the state and/or were not licensed for specific product categories were awarded contracts.

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[https://web.archive.org/web/20170929182126/https://s3.amazonaws.com/aaafh/downloads/899/ITEM\\_Coalition\\_Endorsement\\_HR\\_5210\\_Letter\\_\\_05\\_25\\_16.pdf](https://web.archive.org/web/20170929182126/https://s3.amazonaws.com/aaafh/downloads/899/ITEM_Coalition_Endorsement_HR_5210_Letter__05_25_16.pdf).

<sup>47</sup> 72 Fed. Reg. 18047, Tuesday, April 10, 2007.

<sup>48</sup> Dobson, Al, DaVanzo, J., Berger, G., El-Gamil, A., and Nejat, Y. (2010). *The Risks to Medicare Beneficiaries of DMEPOS Competitive Bidding – Considerations for the Round 1 Re-Bid and Beyond*. Retrieved from <http://www.peopleforqualitycare.org/uploads/articles/b43060ae91941a18702d3bb8f9a8461f.pdf>.

<sup>49</sup> Cramton, P. (March 29, 2011). “Auction Design for Medicare Durable Medical Equipment.” March 29, 2011. [PDF document]. Accessed September 29, 2011. Retrieved from: <https://web.archive.org/web/20170929182939/http://www.cramton.umd.edu/papers2010-2014/cramton-auction-design-for-medicare.pdf>.

<sup>50</sup> Dobson, A., Heath, S., Murray, K., Kilby, D., and DaVanzo, J. “Analysis of the Cost of Providing Durable Medical Equipment to the Medicare Population: Measuring the Impact of Competitive Bidding.” American Association for Homecare. October 28, 2016. Accessed September 29, 2017. Retrieved from: [https://web.archive.org/web/20170929182428/https://s3.amazonaws.com/aaafh/downloads/1017/Full\\_Report\\_-\\_AAHomecare\\_Dobson\\_DaVanzo\\_True\\_Cost\\_Study\\_Report\\_10.18.16\\_FIN.pdf?1476827284](https://web.archive.org/web/20170929182428/https://s3.amazonaws.com/aaafh/downloads/1017/Full_Report_-_AAHomecare_Dobson_DaVanzo_True_Cost_Study_Report_10.18.16_FIN.pdf?1476827284).

<sup>51</sup> Cramton, P. “Medicare Auction Failure: Early Evidence from the Round 1 Rebid.” June 29, 2011. Accessed September 29, 2017. Retrieved from: <https://web.archive.org/web/20170929182544/http://www.cramton.umd.edu/papers2010-2014/cramton-change-in-market-structure-from-rebid.pdf>.

<sup>52</sup> Invacare. (2010). 34 Percent Medicare HME Bid Program Contractors Are Not Financially Viable.

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States are not legally required to report licensing information to CMS contractors running the bidding process, and the requirements for licensure may change frequently and be interpreted differently by the state and the provider.<sup>53</sup>

Current economic theory contends that a median-pricing auction with non-binding bids may be neither an efficient nor sustainable methodology of pricing Medicare DME. A 2015 study on the auction system concluded that the median-price auction creates both quantity and allocation inefficiencies.<sup>54</sup> The former occurs as demand is unfulfilled as some winning bidders face a price less than their costs, resulting in winners refusing to supply the product or supplying an insufficient number of units. The latter occurs when high-cost firms displace low-cost firms and are unable to provide equipment or services on a timely basis.

Allocation inefficiencies are especially affected by issues of geography, where a supplier with no local presence may be contracted to supply goods and services for an area where a local supplier that did not win the bid may be better equipped to handle – in other words, geographical crowding-out.

A report by Bloomberg Government published in July 2012 foresaw a “wave of mergers and acquisitions” as smaller suppliers and locally-owned stores are unable to sustain themselves upon implementation of CB. The report also questioned the claim by CMS that Round 1 saved \$202 million on DME, stating that “the picture of savings appears incomplete.”<sup>55</sup> Additionally, economist Cramton has suggested evidence of market failure as the logical outcome of CB.<sup>56</sup>

Additionally, the use of low bidding can lead to outcomes where contract winners have higher costs than providers who do not receive contracts, so firms that win the contract may not have submitted bids that reflect costs.<sup>57</sup> Crampton and co-authors suggest that moving from a median-bid pricing to a procedure such as a clearing-price auction with binding bids, could eliminate these inefficiencies. The experimental work of Merlob, Plott, and

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<sup>53</sup> “Incomplete and Inaccurate Licensure Data Allowed Some Providers in Round 2 of the Durable Medical Equipment Competitive Bidding Program That Did Not Have Required Licenses.” Department of Health and Human Services, Office of Inspector General. May 25, 2016. Accessed September 29, 2017. Retrieved from: <https://oig.hhs.gov/oas/reports/region5/51300047.asp>.

<sup>54</sup> Cramton, P., Ellermeyer, S., and Katzman, B. “Designed to Fail: The Medicare Auction for Durable Medical Equipment.” *Economic Inquiry*, 53(1), 2015, 469-485.

<sup>55</sup> Rye, B. and Barry, M. “Medicare’s Competitive Bidding Program May Shape Future, Save Money.” Bloomberg Government. July 10, 2012. Retrieved from: <https://web.archive.org/web/20170929175949/http://c.yimcdn.com/sites/www.gameshme.org/resource/resmgr/imported/Bloomberg%20Competitive%20Bidding%20Study%20by%20Brian%20Rye%20071012.pdf>.

<sup>56</sup> Cramton, P. (March 29, 2011). “Auction Design for Medicare Durable Medical Equipment.” March 29, 2011. [PDF document]. Accessed September 29, 2011. Retrieved from: <https://web.archive.org/web/20170929182939/http://www.cramton.umd.edu/papers2010-2014/cramton-auction-design-for-medicare.pdf>.

<sup>57</sup> Cramton, P., Ellermeyer, S., and Katzman, B. “Designed to Fail: The Medicare Auction for Durable Medical Equipment.” *Economic Inquiry*, 53(1), 2015, 469-485.

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Zhang corroborates this theory.<sup>58</sup> Other work that compared median-bid pricing with clearing-price auctions suggested that the current auction design “cannot be fixed by marginal changes” and that “the policy of non-binding bids can independently make an otherwise well-functioning auction perform poorly.”<sup>59</sup>

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<sup>58</sup> Merlob, B., C. R. Plott, and Y. Zhang. “The CMS Auction: Experimental Studies of a Median-Bid Procurement Auction with Non-Binding Bids.” *Quarterly Journal of Economics*, 127, 2012, 793–827.

<sup>59</sup> *Ibid.*

# Methodology

## **Our Approach**

Dobson | DaVanzo conducted a survey of beneficiaries, case managers, and suppliers of DME, also called home medical equipment (HME). The survey was conducted to analyze the effects of the CB program on DME and supplies since July 1, 2016 – the date that Round 2 Recompete payments were applied nationwide regardless of whether an area participated in CB. Through the survey, respondents shared quantitative and qualitative data, including open-ended comments.

The survey was fielded through individualized e-mail links, social media, and phone interviews. Professional and advocacy organizations worked with Dobson | DaVanzo to achieve a geographically and demographically representative sample. The respondents are not necessarily members of any organization, nor did they have a particular affiliation or supplier status.

The analytic methodology comprised of three steps: 1) development of the survey instrument to capture beneficiary, case manager, and supplier experiences; 2) administration of the survey instrument and ongoing technical assistance to respondents; and 3) evaluation of beneficiary, case manager, and supplier experiences via a mixed-method approach of quantitative and qualitative analyses.

## **Development of the Survey**

Dobson | DaVanzo created tailored surveys for each of the three respondent categories – beneficiaries, case managers, and suppliers. All three surveys asked respondents to indicate their experiences with DME and supplies since July 1, 2016 to capture respondent experiences with DME following the application of Round 2 Recompete rates. The goal of the questions was to gain information on a wide variety of response categories and experiences while avoiding a survey design that was too long and would risk losing respondents; the survey was designed to take no longer than fifteen minutes to complete.

The survey questions were written in short-answer, checklist, and multiple-choice formats to capture a variety of response types. Questions included a variety of common and unique themes to identify possible trends throughout the competitive bidding process. Certain questions requested follow-up responses or explanations – for example, “If you answered ‘YES’ for Question #15, please describe the nature of your medical complications, emergency care, and/or re-admission” within the beneficiary survey. Each survey ended with a text box in which respondents could write additional comments that may not have been addressed in the main body and to act as a “safety net” that identifies issues that may not be covered by the 5-point categorical or binary questions.<sup>60</sup> As many questions as possible were designed as a 5-point categorical or binary response, but a survey that primarily uses text boxes for answer entry is at risk of increased non-response and is more difficult to interpret.<sup>61</sup>

Respondents were not asked to provide personally identifiable information when filling out the survey, and IP addresses were masked upon submission. Each survey requested the respondent to provide their five-digit zip code to ensure a representative geographic sample with assurances that the data would not be published. This question was not mandatory, so respondents who did not wish to provide their five-digit zip code could submit the survey without entering their geographic information.

The surveys contained questions concerning beneficiaries’ and case managers’ ability to access certain categories of DME and supplies, and the suppliers’ ability to furnish those supplies. The eleven categories of DME and supplies include:

- Home oxygen therapy
- Hospital beds
- Diabetic supplies
- Mobility equipment (e.g. walkers, wheelchairs, etc.)
- Wheelchair repairs (manual and power)
- Sleep Apnea Treatment (e.g. CPAP, BiPAP)
- Enteral Nutrition and Equipment
- Nebulizers
- Negative Pressure Wound Therapy
- HME Supplies (e.g. CPAP and Oxygen supplies)

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<sup>60</sup> O’Cathain, A. and Thomas, K. “‘Any other comments?’ Open questions on questionnaires – a bane of a bonus to research?” *BMC Medical Research Methodology*, 4(25), 2004. doi: 10.1186/1471-2288-4-25

<sup>61</sup> Couper, M., Traugott, M., and Lamias, M. “Web Survey Design and Administration.” *Public Opinion Quarterly*, 65, 2001, 230-253. doi: 0033-362X/2001/6502-0004\$02.50

- Other HME

Respondents who selected “Other HME” were asked to describe the type of equipment they required in 500 characters or less.

Beneficiaries and case managers were asked to rate their experiences in accessing medically necessary DME and supplies on a 5-point categorical scale, with “1” meaning “Never Problems” and “5” meaning “Always Problems.” The seven categories were:

- Finding a local HME supplier
- Ease of coordination in receipt of multiple HME items
- Access to HME and services provided by supplier(s)
- Quality of HME and services provided by supplier(s)
- Timeliness of the supplier(s) in providing HME
- Timeliness of the supplier(s) in servicing or repairing HME
- Timeliness of communication response

Questions specific to the beneficiary survey included:

- If you were receiving HME prior to July 1, 2016, how has your ability to receive home medical equipment and supplies in a timely manner changed since that date, if at all?
- Have you experienced a delay in a hospital discharge due to a delay in the delivery of necessary HME and supplies since July 1, 2016?
- Have you changed your HME supplier since July 1, 2016?
- Are you an Oxygen Therapy patient?

Questions specific to the case manager survey included:

- How has your ability to order HME and supplies changed since July 1, 2016, if at all?
- If your position includes discharging patients from a facility, have you experienced delays in discharging Medicare patients due to an inability or a delay in obtaining HME and supplies since July 1, 2016?
- If possible, please provide the rough percentage of each of the following localities of where your patients reside for whom you coordinate HME and supplies (CBA, non-CBA, rural).

Questions specific to the supplier survey included:

- What percent of your current overall revenue is Medicare-related? In 2015?

- If you selected “My company is or will no longer be taking assignment” on Question #4, please explain why.
- What types of regions does your company service?
- Has your company experienced Medicare-eligible patients buying medically necessary HME out-of-pocket and not filing a claim with Medicare since July 1, 2016?

Full copies of each survey may be found in Appendix A.

## Design of the Survey

The survey instrument was designed as an electronic format that could be completed entirely on one’s computer in a single sitting. A paper copy was also designed in case of a request for such by a potential respondent.

Questions and answers were clearly and consistently aligned based on answer choice and format to reduce potential confusion.<sup>62</sup> A series of logic checks and detailed instructions were instituted to reduce errors of commission. Each question clearly stated the format by which the respondent was expected to answer but without any further information to reduce response bias.

For example, the question “On a scale of 1-5, rate your experiences in obtaining or receiving service for your home medical equipment (HME) and/or supplies as a Medicare beneficiary” told beneficiaries to “select one choice per row” with a description of the values (“1 = Never Problems, 5 = Always Problems”).

The technical set-up of the survey allowed respondents to change their results before final submission of the survey but not afterwards based on IP address information. The contact information of the Dobson | DaVanzo survey technician was provided at the beginning and end of the survey and on the splash page that a respondent would see if he/she attempted to access the survey again in case he/she wished to make a change to his/her answers. This was implemented to encourage respondents to supply their immediate impressions of the CB program and to mitigate response bias or the risk that respondents would research their answers instead of providing their own experiences.

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<sup>62</sup> Smith, T. “Little Things Matter: A Sampler of How Differences in Questionnaire Format Can Affect Survey Responses.” National Opinion Research Center, University of Chicago. GSS Methodological Report No. 78. July 1993. Accessed September 29, 2017. Retrieved from: <http://gss.norc.org/Documents/reports/methodological-reports/MR078%20Little%20Things%20Matter%20A%20Sample%20of%20How%20Differences%20in%20Questionnaire%20Format%20Can%20Affect%20Survey%20Responses.pdf>

## Administration of the Survey

Upon completion of a thorough internal review, the survey was fielded with beneficiaries, case managers, and suppliers who either receive DME or participate in the DME market. Potential respondents were contacted by organizations such as the Case Management Society of America, American Association for Respiratory Care, People for Quality Care, and Spina Bifida Association. One week prior to fielding the survey, all interested participants were sent an e-mail that provided the purpose of the survey, an approximate time commitment, and the contact information of the survey technician at Dobson | DaVanzo who was responsible for providing support. Potential respondents were asked to answer the survey questions to the best of their ability in a single sitting.

Most respondents accessed the survey via social media links from professional organizations or advocacy groups such as the Case Management Society of America. Crowdsourcing via social media is “an efficient and appropriate alternative” to standard research methods, and crowdsourced respondents tend to be “older, [are] more ethnically diverse, and had more work experience” compared to traditional participant pools.<sup>63</sup> Facebook, the main platform through which social media respondents accessed the survey, has been demonstrated to be an effective method at reaching demographically diverse populations.<sup>64</sup> Open-access links provided by the social media accounts of consumer and professional organizations can facilitate surveys of hard-to-reach demographics such as older members of the population.<sup>65</sup>

Respondents who previously expressed their interest in completing the survey were sent an advance e-mail one week prior to fielding the survey to remind them of their participation and to provide additional exposition as to the purpose of the survey and what respondents could expect upon their receipt of the survey link. Sending e-mails in advance of Internet surveys has been shown to increase response rates to a level comparable to traditional paper-based surveys.<sup>66</sup> Advance e-mails also reduce the risk of the survey link being tagged as “junk mail” by automated servers or by the potential respondents.<sup>67</sup> Two weeks following the initial fielding of the survey, a follow-up e-mail was sent to those who

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<sup>63</sup> Behrend, T., Sharek, D., Meade, A., and Wiebe, E. “The viability of crowdsourcing for survey research.” *Behav Res.*, 43, 2011: 800-813. doi: 10.3758/s13428-011-0081-0

<sup>64</sup> Brickman-Bhutta, C. “Not by the Book: Facebook as a Sampling Frame.” *Sociological Methods & Research*, 41(1), 2012, 57-88. doi: 10.1177/0049124112440795

<sup>65</sup> Wiersma, W. “The validity of surveys: Online and Offline.” Oxford Internet Institute. 2013.

<sup>66</sup> Kaplowitz, M., Hadlock, T., and Levine, R. “A Comparison of Web and Mail Survey Response Rates.” *Public Opinion Quarterly*, 68(1), 2004, 94-101. Doi: 10.1093/poq/nfh006.

<sup>67</sup> Sills, S, and Song, C. “Innovations in Survey Research: An Application of Web-Based Surveys.” *Social Science Computer Review*, 20(1), 2002, 22-30. Retrieved from: <http://www.sagepub.com/journalsProdDesc.nav?prodId=Journal200948>.



expressed interest but had not yet completed the survey to request their participation again and remind them of the purpose of the survey efforts.

The survey was primarily fielded via the Internet through the SurveyMonkey platform as opposed to a traditional paper-based survey format. Internet surveys are “more rapid and cost efficient than other interview modes” within epidemiologic studies in a geographically distributed population.<sup>68</sup> Internet-based surveys are an effective method of gaining qualitative and quantitative data in healthcare research. In addition, Internet surveys have a faster response speed than normal pen-and-paper surveys.<sup>69</sup> SurveyMonkey has been utilized as the main respondent platform in many epidemiological, access, and other healthcare studies due to its ease of use, navigability, and cost-effectiveness.<sup>70,71,72,73</sup> All survey technicians at Dobson | DaVanzo had previously used SurveyMonkey when piloting a study concerning the costs of DME per the CB program and were familiar with the program.<sup>74</sup>

Each Internet survey response was flagged based on the method by which it was distributed. For example, respondents to the case manager survey who received their survey through an individualized e-mail link were grouped together, whereas those who accessed the case manager survey through Facebook were grouped separately. This was achieved through creating unique URLs for the social media links that automatically generated metadata based on access. Controlled-access surveys that monitor survey submissions by methods such as flagging survey responses can increase internal and external validity by allowing researchers to identify incongruent responses and mitigate “trolling.”<sup>75</sup>

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<sup>68</sup> Rankin, M. et al. “Comparing the reliability of responses to telephone-administered vs. self-administered web-based surveys in a case-control study of adult malignant brain cancer.” *Cancer Epidemiol Biomarkers Prev.*, 17(10), 2008, 2639-2646. doi: 10.1158/1055-9965.EPI-08-0304.

<sup>69</sup> Truell, A., Bartlett, J., and Alexander, M. “Response rate, speed, and completeness: A comparison of Internet-based and mail surveys.” *Behavior Research Methods, Instruments, & Computers*, 34(1), 2002, 46-49. doi: 10.3758/BF03195422.

<sup>70</sup> Bell, D., Lambourne, A., Percival, F., Laverty, A., and Ward, D. “Consultant Input in Acute Medical Admissions and Patient Outcomes in Hospitals in England: A Multivariate Analysis.” *PLOS One*, 2013. doi: 10.1371/journal.pone.0061476.

<sup>71</sup> Narsai, K., Williams, A., and Mantel-Teeuwisse, A. “Impact of regulatory requirements on medicine registration in African countries – perceptions and experiences of pharmaceutical companies in South Africa.” *South Med Rev.*, 5(1), 2012, 31-37. Retrieved from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3471191/>.

<sup>72</sup> Waclawski, E. “How I Use It: Survey Monkey.” *Occupational Medicine*, 2012. doi: 10.1093/occmed/kqs075.

<sup>73</sup> Zgierska, A., Rabago, D., and Miller, M. “Impact of patient satisfaction ratings on physicians and clinical care.” *Patient Prefer Adherence*, 8, 2014, 437-446. doi: 10.2147/PPA.S59077.

<sup>74</sup> Dobson, A., Heath, S., Murray, K., Kilby, D., and DaVanzo, J. “Analysis of the Cost of Providing Durable Medical Equipment to the Medicare Population: Measuring the Impact of Competitive Bidding.” American Association for Homecare. October 28, 2016. Accessed September 29, 2017. Retrieved from: [https://web.archive.org/web/20170929182428/https://s3.amazonaws.com/aafh/downloads/1017/Full\\_Report\\_-\\_AAHomecare\\_Dobson\\_DaVanzo\\_True\\_Cost\\_Study\\_Report\\_10.18.16\\_FIN.pdf?1476827284](https://web.archive.org/web/20170929182428/https://s3.amazonaws.com/aafh/downloads/1017/Full_Report_-_AAHomecare_Dobson_DaVanzo_True_Cost_Study_Report_10.18.16_FIN.pdf?1476827284).

<sup>75</sup> Wiersma, W. “The validity of surveys: Online and Offline.” Oxford Internet Institute. 2013. Accessed September 29, 2017. Retrieved from: [http://papers.wybowiersma.net/abstracts/Wiersma,Wybo,The\\_validity\\_of\\_surveys\\_online\\_and\\_offline.pdf](http://papers.wybowiersma.net/abstracts/Wiersma,Wybo,The_validity_of_surveys_online_and_offline.pdf)

Respondents who were not comfortable with taking the survey electronically were interviewed over the phone by a Dobson | DaVanzo survey technician

All of an individual respondent’s answers were flagged together as coming from the same respondent. This was performed so that in case a respondent reported incongruent answers or was an inappropriate respondent – such as a case manager replying to the beneficiary survey – the answers could be excluded from the analysis. Information was only shared internally within Dobson | DaVanzo.

A total of 1,064 respondents participated in the survey. Table 1 shows the number of respondents by category and modality.

**Table 1: Number of Respondents by Category and Mechanism**

Modality	Beneficiaries	Case Managers	Suppliers	Total
Social Media	427	335	231	993
E-mail	1	23	35	59
Phone	9	3	0	12
<b>Total</b>	<b>437</b>	<b>361</b>	<b>266</b>	<b>1,064</b>

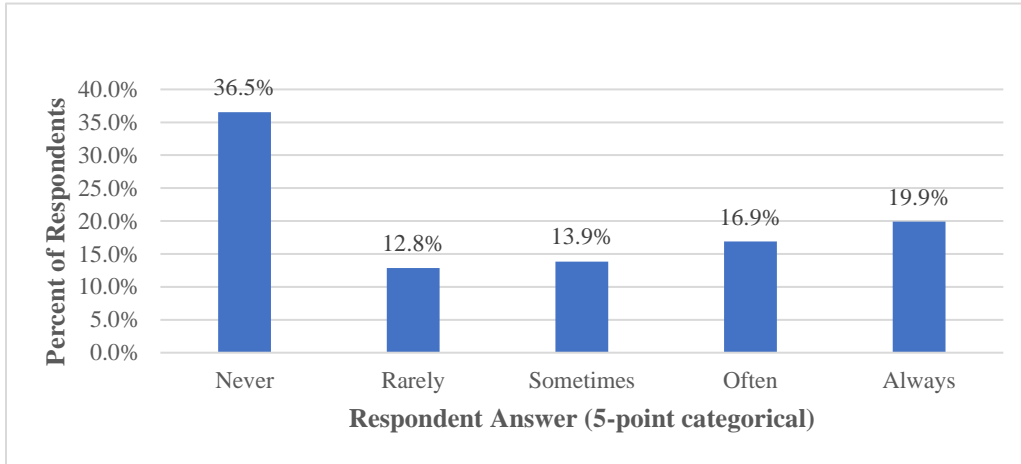
## Evaluation of Survey Results

A series of statistical analyses were performed on responses to the quantitative questions that required a fixed “yes or no” or were rated on a 5-point categorical scale through the Statistical Analysis System (SAS) program. A qualitative content analysis was performed on the open-ended questions to identify a variety of experiences that might not have been captured by the quantitative answers. The content analysis also identified major themes of beneficiary, case manager, and supplier experiences. The coding methodology was based on specific individual themes per open-ended question for transferability.

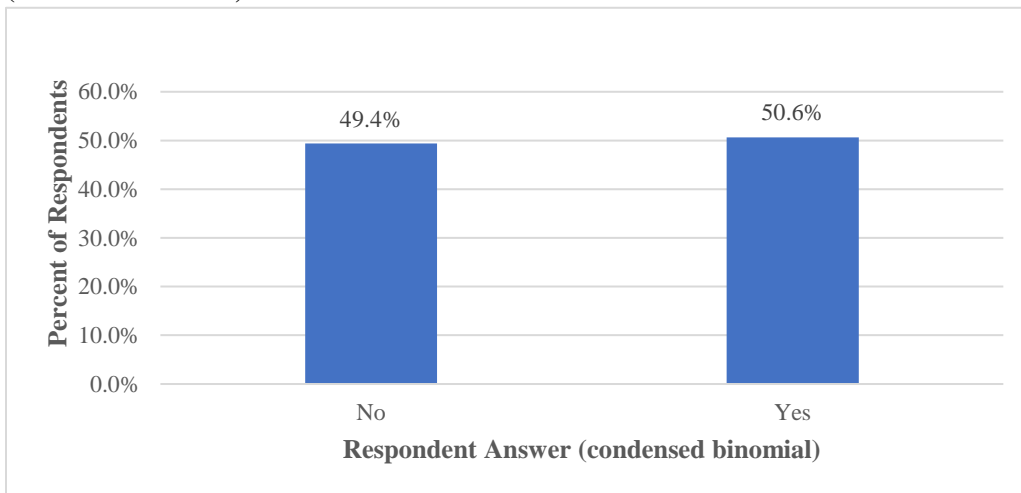
Incongruent answers and errors of commission were excluded from the analysis – for example, an answer of “I did not answer ‘yes’” to the question “If you answered ‘YES’ for Question #7, please explain the circumstances of your change [in HME supplier]” would be excluded, as it is not applicable to the question at hand and would have been captured in previous question “Have you changed your HME supplier since July 1, 2016?”.

The results of the quantitative analyses were checked for statistical significance. Each 5-point categorical variable in the survey’s self-reported data provided the initial variables for statistical analyses. These categorical variables were converted into binomial variables whereby “Never” (1) and “Rarely” (2) were converted into “No”; and “Sometimes” (3), “Often” (4), and “Always” (5) were converted into “Yes.” Figure 2 shows an example of this conversion process. Figures 1 and 2 display this conversion process.

**Figure 1: Frequency of problems faced by beneficiaries in finding a local HME supplier (5-point categorical)**



**Figure 2: Frequency of problems faced by beneficiaries in finding a local HME supplier (condensed binomial)**



The binomial data were then checked for significance via Equation 1 to approximate a 95 percent confidence interval from a binomial distribution.<sup>76</sup>

### **Equation 1**

$$\text{C. I.} = \frac{n}{N} \pm 1.96 \sqrt{\frac{p * (1 - p)}{N}}$$

The SurveyMonkey platform provides a response size for significance calculator to recommend sample sizes for confidence, which is detailed in Equation 2.<sup>77</sup>

### **Equation 2**

$$n = \frac{\frac{z^2 * p(1 - p)}{e^2}}{1 + \left(\frac{z^2 * p(1 - p)}{e^2 N}\right)}$$

The formula is similar to Equation 1, except it is solved for sample size instead of the confidence interval. If the Medicare population affected by the CB program is 8 million, then a sample size of at least 200 per respondent category is sufficient to support conclusions at a 95 percent confidence interval with a 7 percent margin of error.

The respondent pools represent a wide distribution among geographic regions. The results show fewer responses from rural areas and more responses from CBAs and urban non-bid than are distributed according to CMS' regional data. Figure 3 displays the distribution of survey responses by region in comparison to CMS' data.

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<sup>76</sup> Cochran, William R. *Sampling Techniques: third edition*. John Wiley & Sons, Inc. USA. (1977).

<sup>77</sup> "Sample Size Calculator." SurveyMonkey. Accessed September 29, 2017. Retrieved from: <https://web.archive.org/web/20170929184840/https://www.surveymonkey.com/mp/sample-size-calculator/>

**Figure 3: Distribution of Survey Responses by CB, Non-CB Region, and Rural**

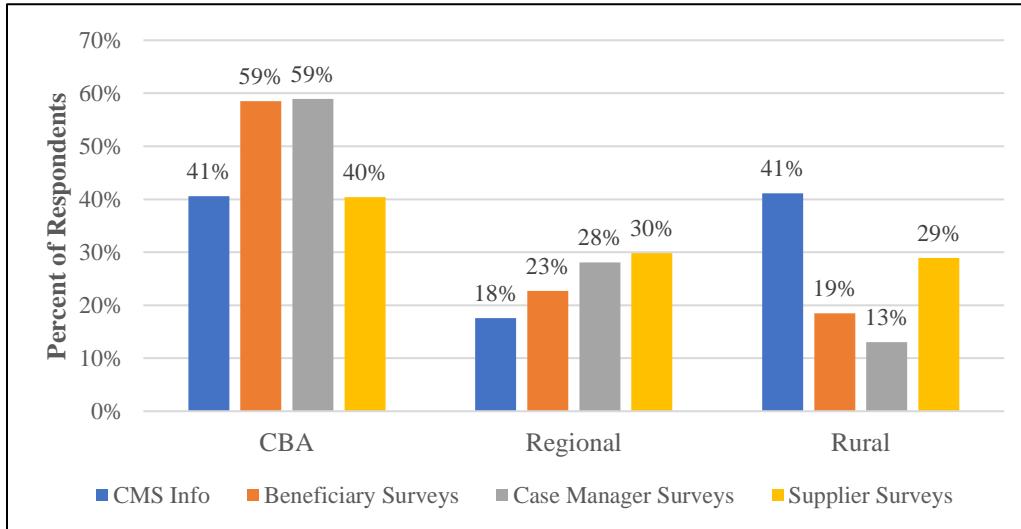


Figure 4 displays the distribution of respondents to the beneficiary survey by state. The overall distribution is diverse; there is some clustering along coastal areas and in the Midwest.

**Figure 4: Distribution of Beneficiary Respondents by State**

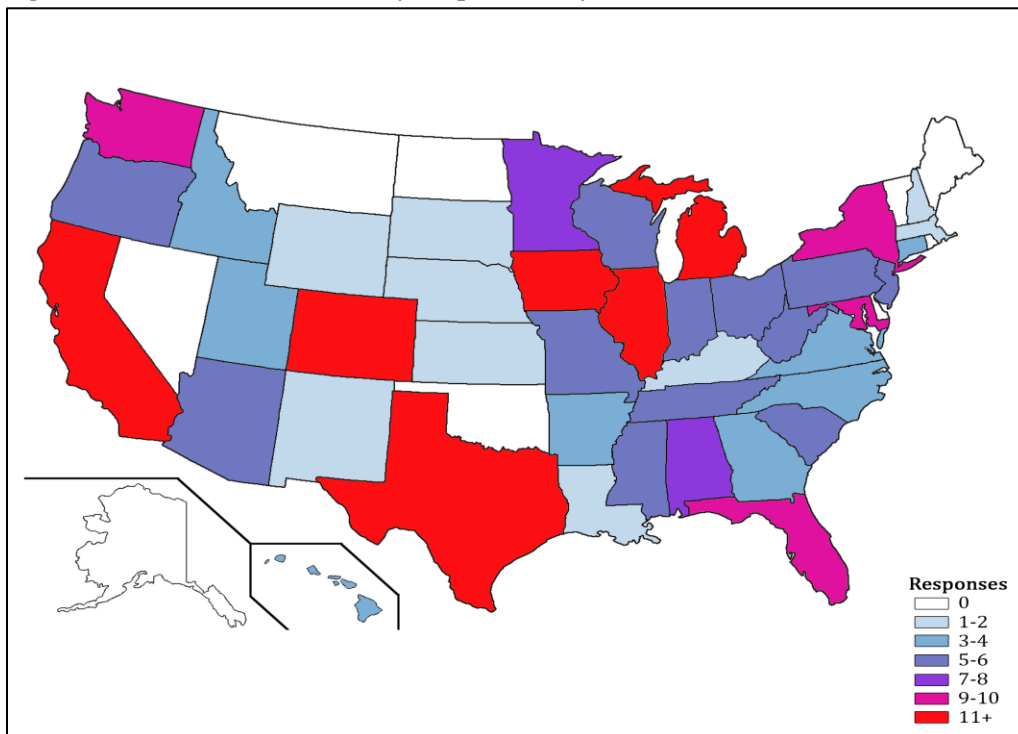


Figure 5 displays the distribution of respondents to the case manager survey by state. The overall distribution is diverse; there is some clustering in the Midwest, in the South, and in the West Coast/Rocky Mountain areas.

**Figure 5: Distribution of Case Manager Respondents by State**

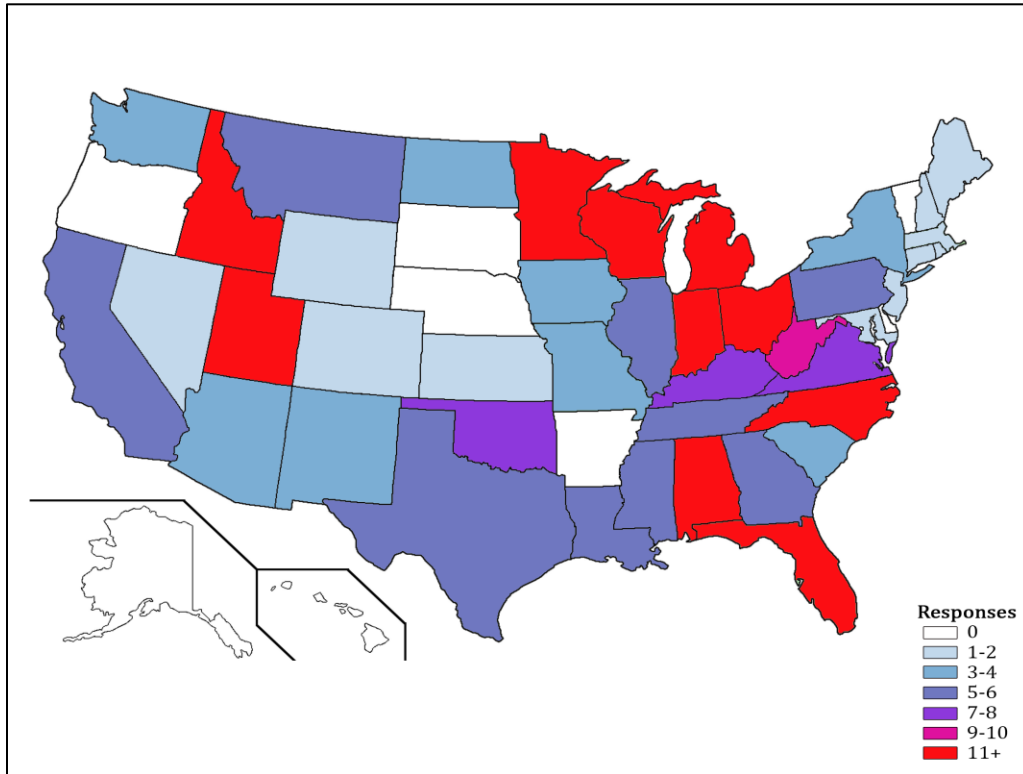
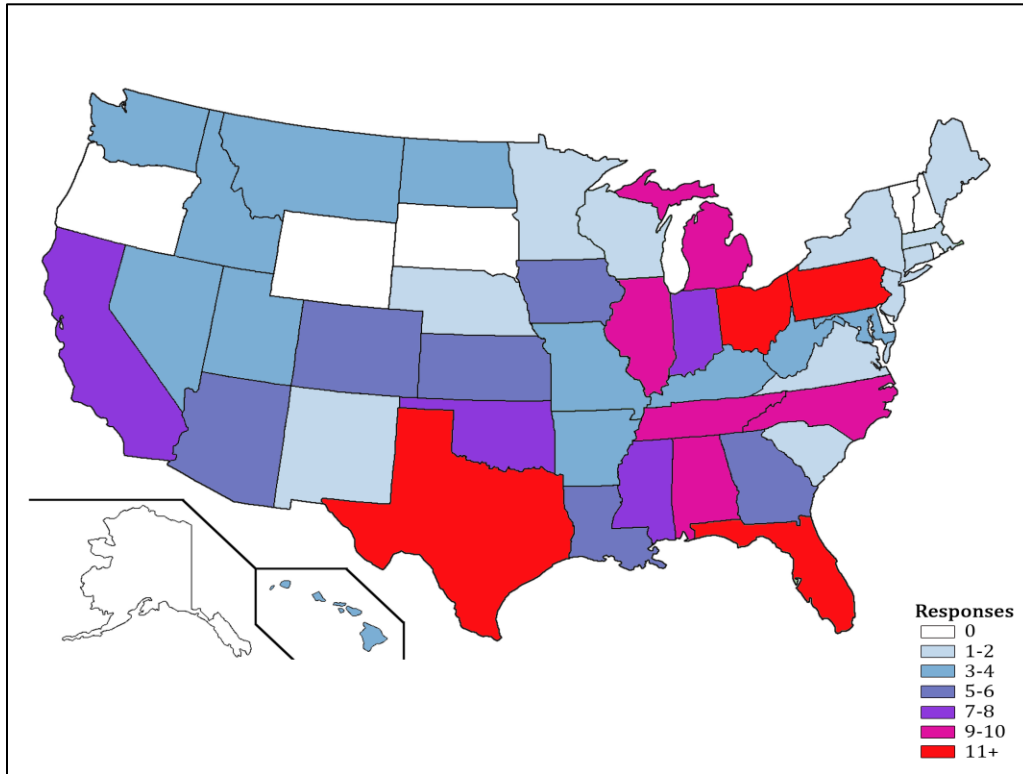


Figure 6 displays the distribution of respondents to the supplier survey by state. The overall distribution is diverse; there is some clustering in the Mid-Atlantic, the South, and in the Midwest.

**Figure 6: Distribution of Supplier Respondents by State**



# Results

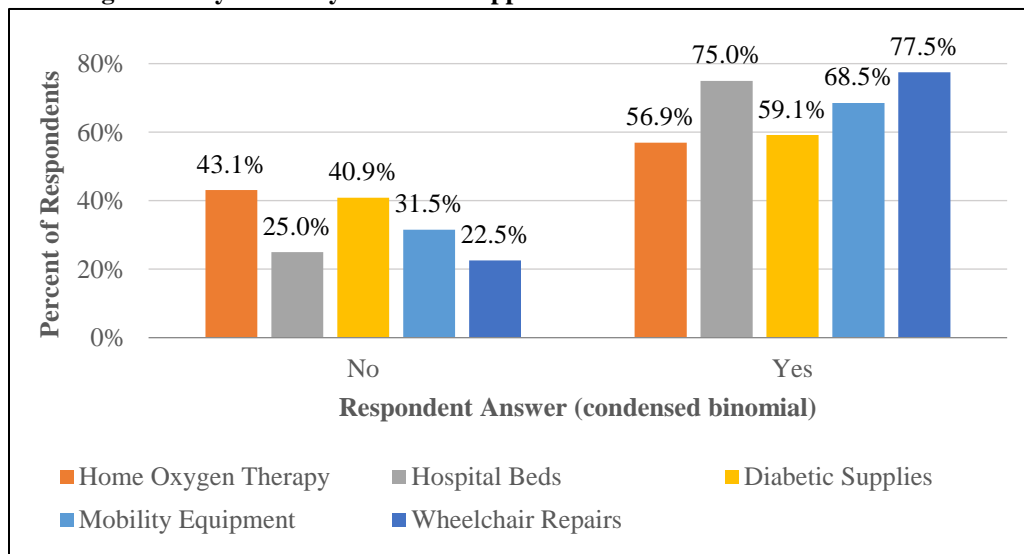
## Quantitative Analyses

The results of the quantitative analyses performed on the 5-point categorical and binomial questions are described in detail below for beneficiary, case manager, and supplier surveys.

### BENEFICIARIES

Between 56.9 percent and 80.0 percent of beneficiaries in each category reported “sometimes,” “often,” or “always” having issues in accessing their DME and supplies while 20.0 percent to 47.5 percent of beneficiaries in each category reported “never” or “rarely” having issues in accessing their DME and supplies. Figures 7a and 7b display the binomial frequency of beneficiary self-reported ability to obtain medically necessary DME and supplies.

**Figure 7a: Binomial frequency of beneficiary self-reported experience of access issues in obtaining medically necessary HME and supplies**





**Figure 7b: Binomial frequency of beneficiary self-reported experience of access issues in obtaining medically necessary HME and supplies**

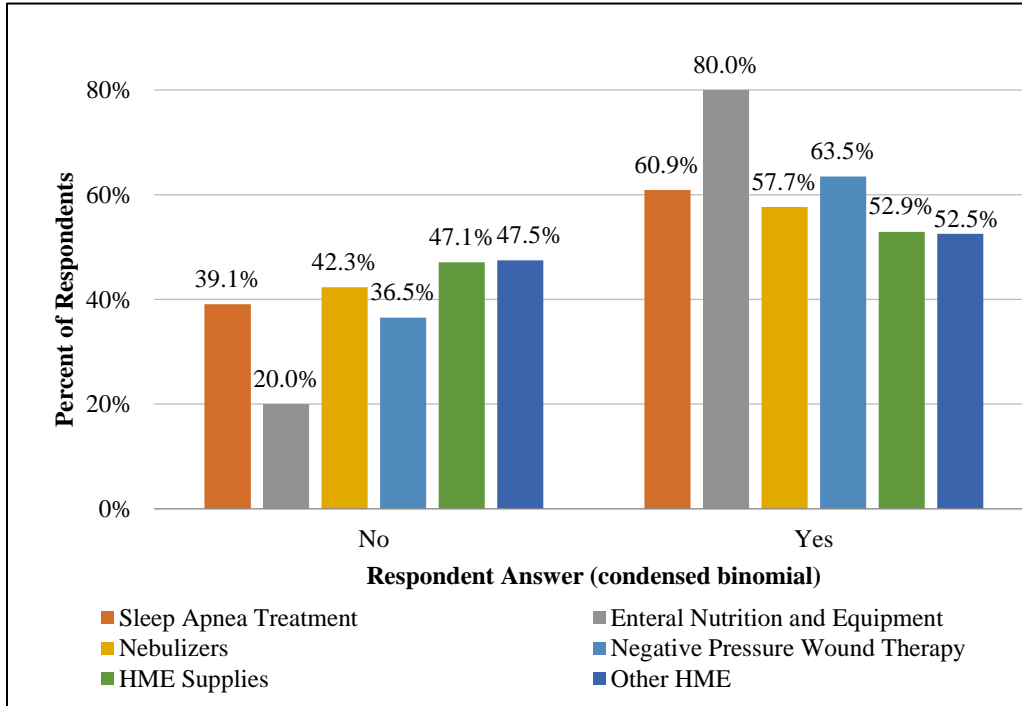


Figure 8 displays the frequency of beneficiary self-reported experiences with their DME supplies, equipment, and services. Between 48.8 percent and 54.3 percent of beneficiaries reported “sometimes,” “often,” or “always” experiencing issues in various aspects of accessing their DME and supplies from their CB supplies.

**Figure 8: Binomial frequency of beneficiary self-reported experiences with their HME supplier, equipment, and services**

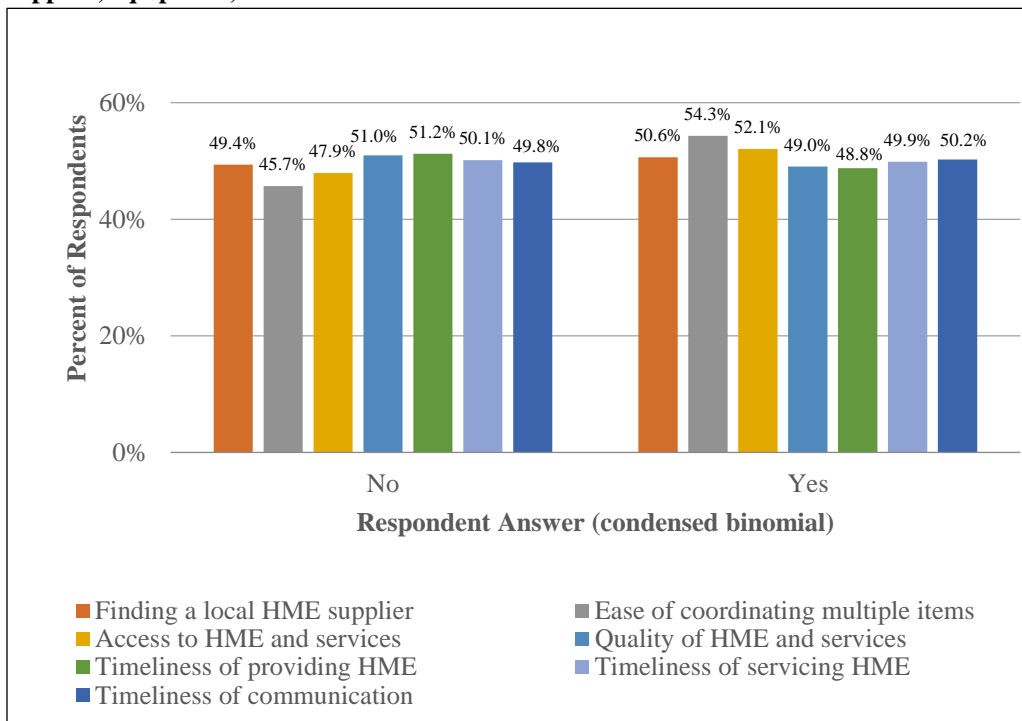


Figure 9 displays the percent of beneficiaries who had experienced a delay in a hospital discharge(s) due to a delay in the delivery of medically necessary DME and supplies since July 1, 2016. A total of 76.2 percent of beneficiaries reported “no;” 23.8 percent of beneficiaries reported “yes.”

**Figure 9: Beneficiary self-reported experience of a delay(s) in a hospital discharge(s) due to a delay in the delivery of medically necessary HME and/or supplies since July 1, 2016.**

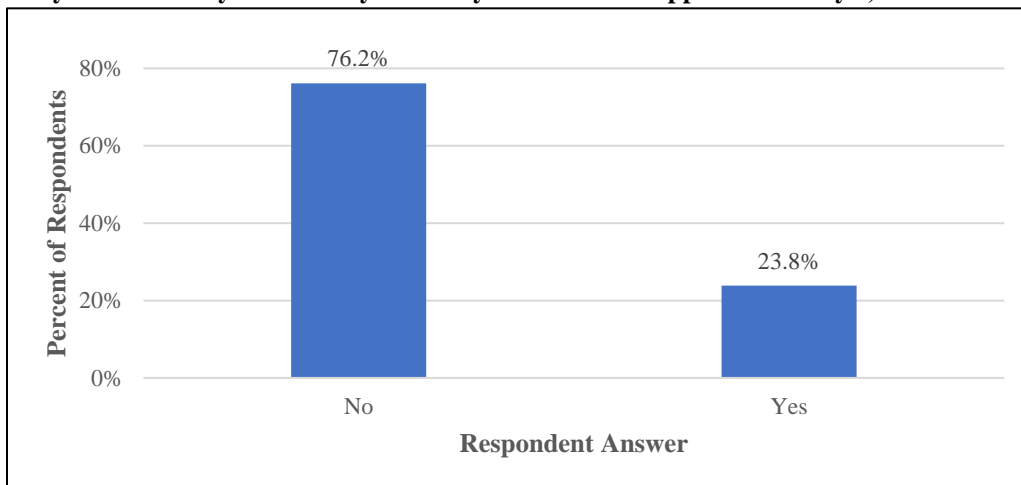


Figure 10 displays the percent of beneficiaries who had experienced a delay(s) in receiving medically necessary DME and/or supplies at home since July 1, 2016. A total of 50.8 percent of beneficiaries reported “no;” 49.2 percent of beneficiaries reported “yes.”

**Figure 10: Beneficiary self-reported experience of a delay(s) in receiving medically necessary HME and/or supplies at home since July 1, 2016.**

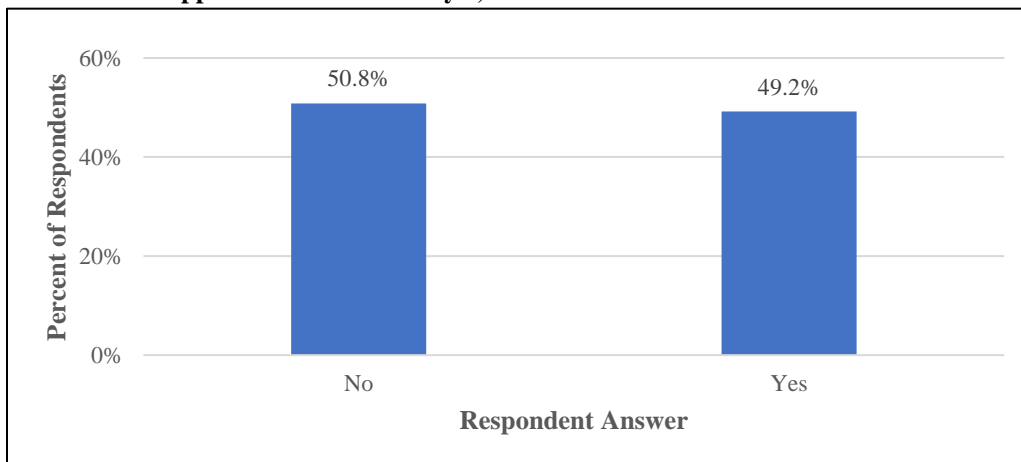


Figure 11 displays the percent of beneficiaries who had experienced an increase in out-of-pocket medical costs regarding DME and/or supplies since July 1, 2016. A total of 63.1 percent of beneficiaries reported “no;” 36.9 percent of beneficiaries reported “yes.”

**Figure 11: Beneficiary self-reported experience of an increase in out-of-pocket medical costs regarding HME and/or supplies since July 1, 2016**

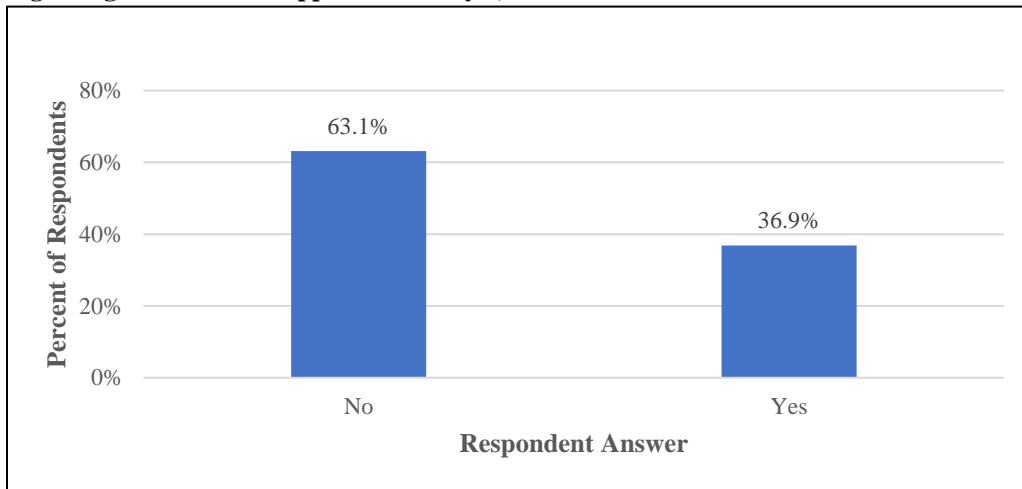


Figure 12 displays the percent of beneficiaries who reported being unable to obtain their medically necessary DME and/or supplies at some point since July 1, 2016. A total of 73.6 percent of beneficiaries reported “no;” 26.4 percent of beneficiaries reported “yes.”

**Figure 12: Beneficiary self-reported experiences of being unable to obtain medically necessary HME and/or supplies since July 1, 2016**

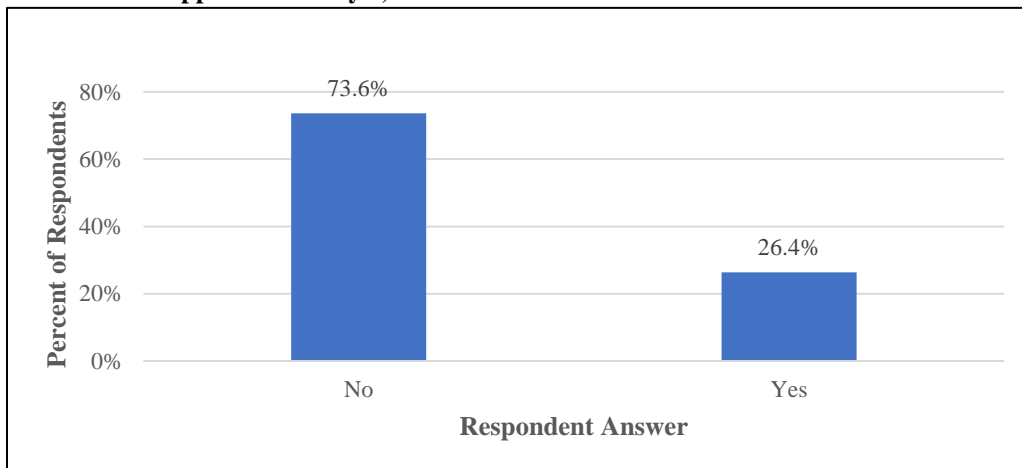
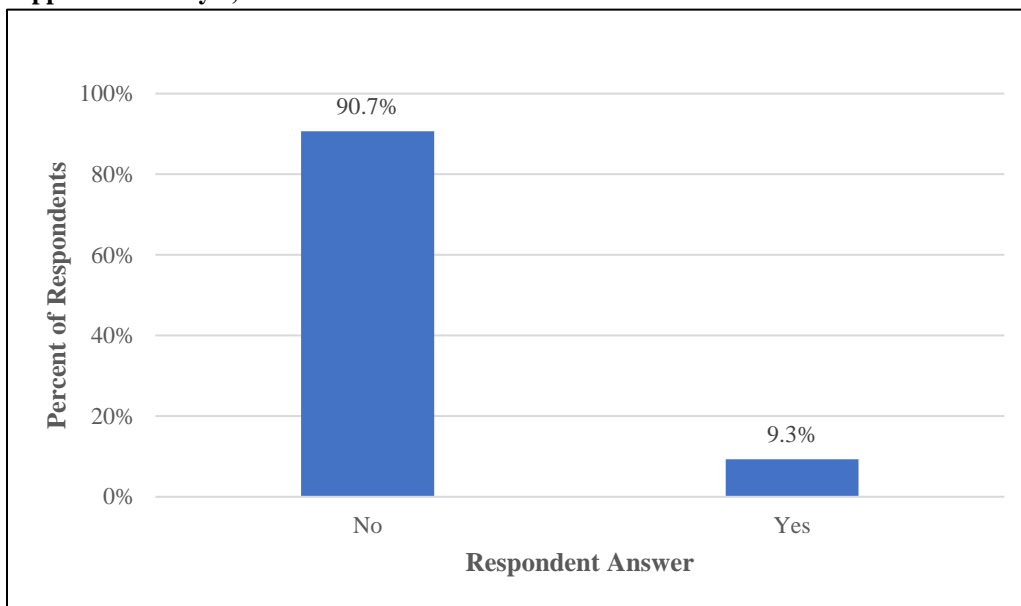


Figure 13 displays the percent of beneficiaries who reported having developed medical complications, received emergency care, or been re-admitted to a hospital due to issues relating to obtaining proper and/or timely DME and/or supplies since July 1, 2016 where 90.7 percent of beneficiaries reported “no;” 9.3 percent reported “yes.”

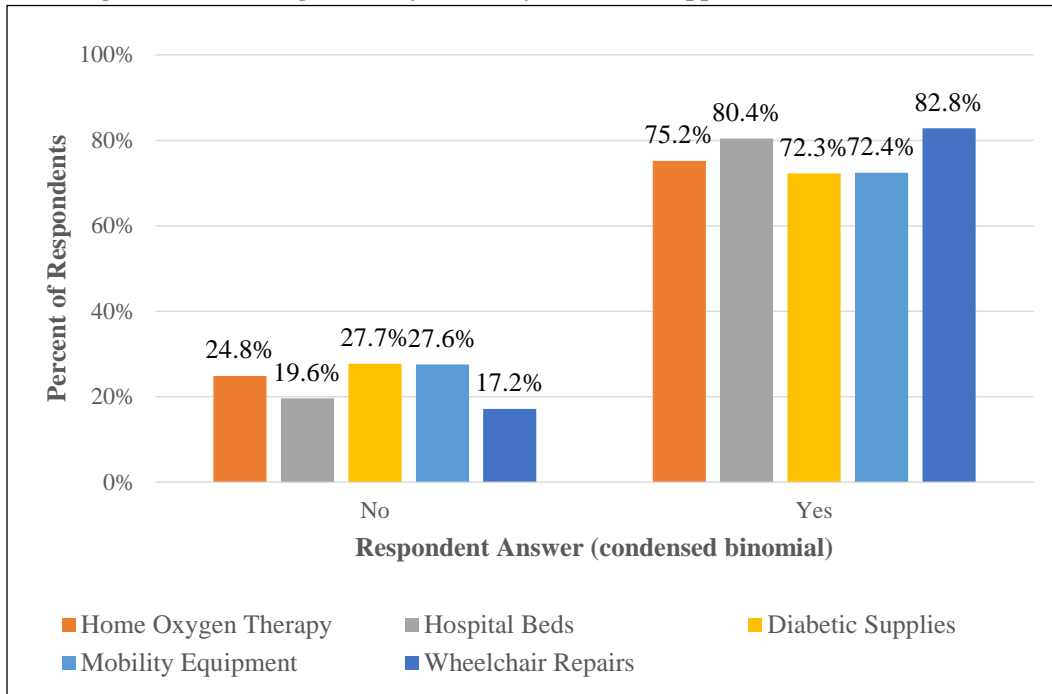
**Figure 13: Beneficiary self-reported experiences of medical complications, emergency care, or re-admission to a hospital due to issues in obtaining proper and/or timely HME and/or supplies since July 1, 2016.**



## CASE MANAGERS

Between 61.7 percent and 82.8 percent of case managers in each category reported “sometimes,” “often,” or “always” having issues in accessing and coordinating DME and supplies for Medicare beneficiaries while 17.2 percent to 38.3 percent of beneficiaries in each category reported “never” or “rarely” having issues in accessing and coordinating DME and supplies. Case managers reported approximately 10 percentage points less difficulty in obtaining medically necessary nebulizers than other types of equipment. Figures 14a and 14b display the binomial frequency of case manager self-reported ability to obtain medically necessary DME and supplies.

**Figure 14a: Binomial frequency of case manager self-reported experience of access issues in obtaining and coordinating medically necessary HME and supplies**



**Figure 14b: Binomial frequency of case manager self-reported experience of access issues in obtaining and coordinating medically necessary HME and supplies**

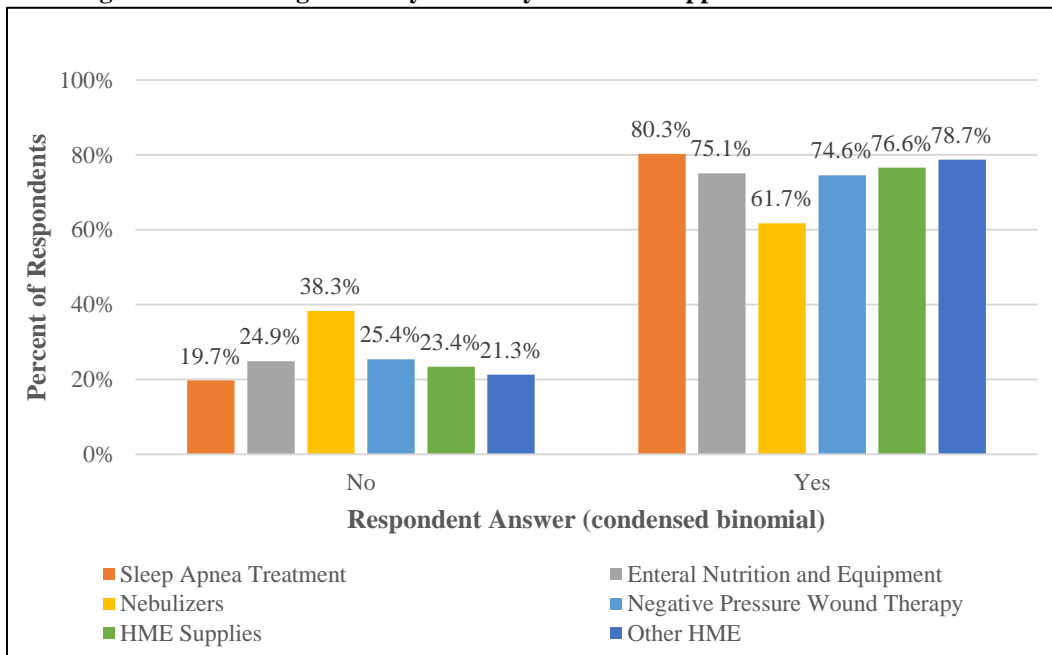


Figure 15 displays the frequency of case manager self-reported experiences in coordinating DME supplies, equipment, and services for Medicare beneficiaries. Between 60.1 percent and 77.6 percent of case managers reported “sometimes,” “often,” or “always” experiencing issues in various aspects of the coordination and discharge process.

**Figure 15: Binomial frequency of case manager self-reported experiences in coordinating HME supplier, equipment, and services**

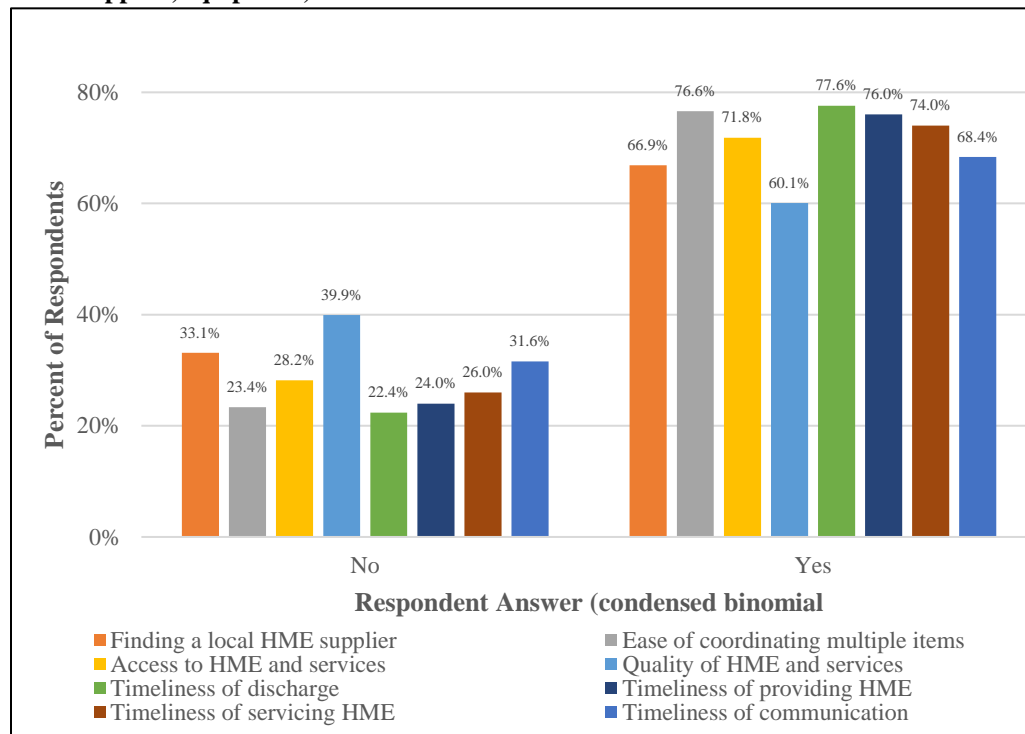


Figure 16 displays the percent of case managers who reported experiencing delays in discharging Medicare patients due to an inability to obtain DME and supplies or a delay in obtaining medically necessary DME and supplies since July 1, 2016. A total of 88.9 percent of case managers reported “yes;” 11.1 percent reported “no.”

**Figure 16: Case manager self-reported experience of a delay(s) in discharging Medicare patients due to an inability to obtain or a delay in obtaining medically necessary HME and/or supplies since July 1, 2016.**

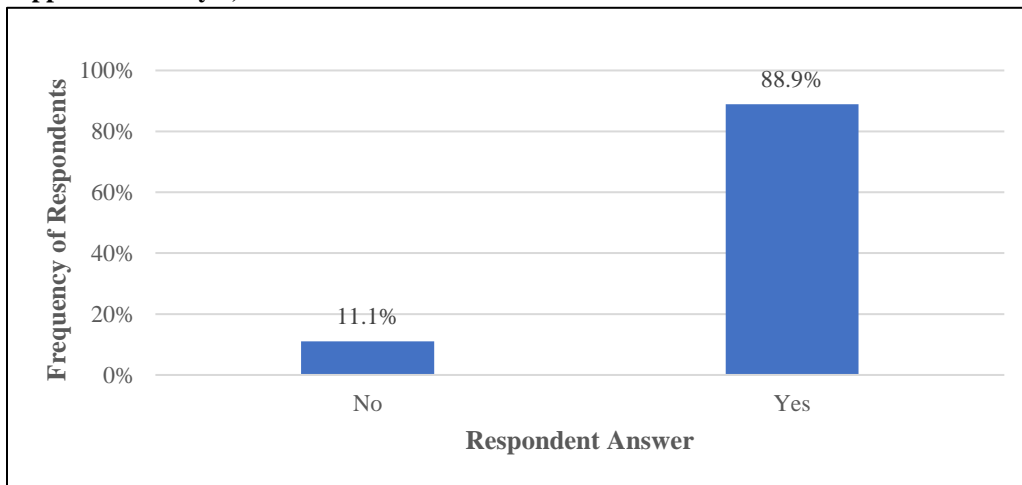


Figure 17 displays the length of delay in discharge or obtainment of medically necessary DME and supplies for case managers who reported experiencing a delay in either case. Twenty three percent of case managers reported delays lasting “a few hours; 70.8 percent of case managers reported experiencing delays of up to 7 days. Many (57.2 percent) reported delays lasting 1 to 2 days while an additional (13.6 percent) reported delays of 3 to 7 days. Nearly three percent of case managers reported delays lasting one to two weeks, and 3.3 percent reported delays lasting more than two weeks.

**Figure 17: Case managers’ self-reported length of delay in discharging Medicare beneficiaries or in obtaining medically necessary HME and/or supplies since July 1, 2016.**

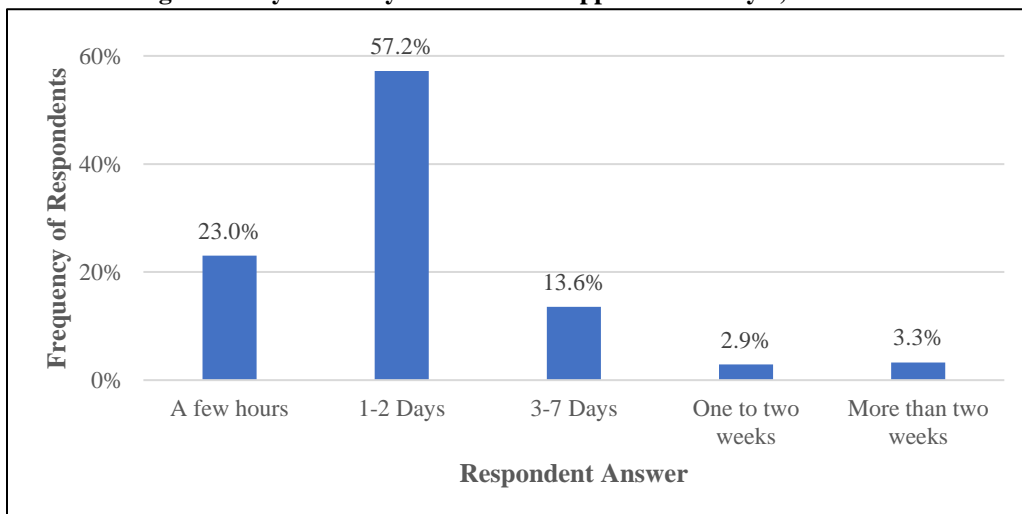
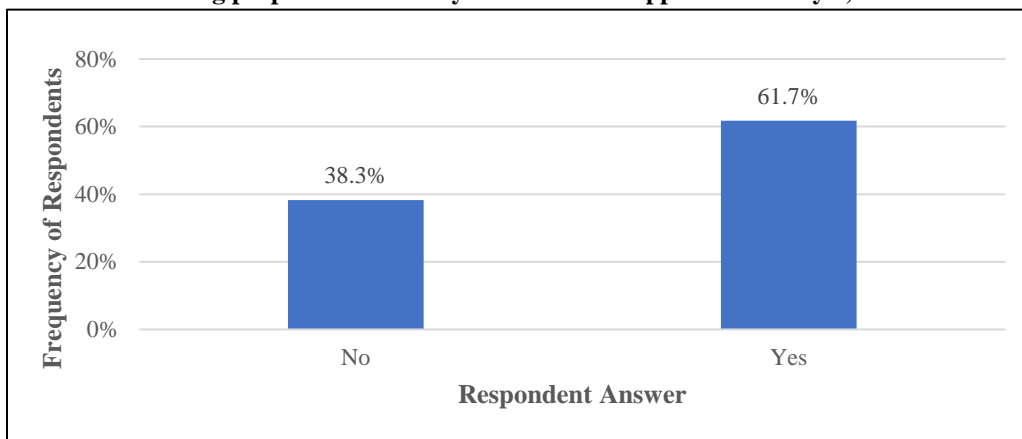




Figure 18 displays the proportion of case managers who reported patients developing medical complications, receiving emergency care, or being re-admitted to a hospital due to issues related to obtaining proper and/or timely DME and/or supplies since July 1, 2016. A total of 61.7 percent of case managers reported “yes;” 38.3 percent reported “no.”

**Figure 18: Proportion of case managers who self-reported patients developing medical complications, receiving emergency care, or being re-admitted to a hospital due to issues related to obtaining proper and/or timely HME and/or supplies since July 1, 2016.**



## SUPPLIERS

Figure 19 displays the proportion of suppliers who indicated their agreement with the statement: “Under Competitive Bidding, Medicare beneficiaries report to our company that it is more difficult to obtain HME services and supplies” where 86.3 percent of suppliers reported “agree” or “strongly agree;” 7.9 percent reported “neutral;” and 5.8 percent reported “disagree” or “strongly disagree.”

**Figure 19: “Under Competitive Bidding, Medicare beneficiaries report to our company that it is more difficult to obtain HME services and supplies.”**

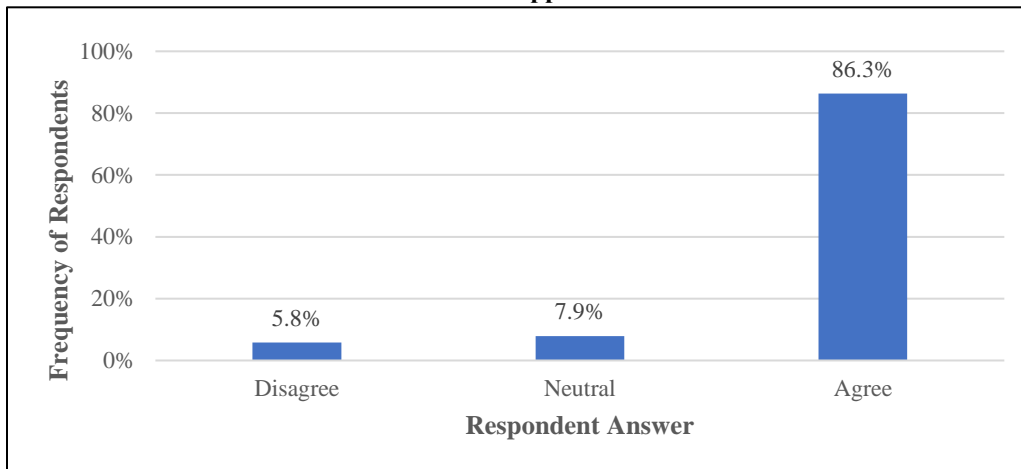


Figure 20 displays the proportion of suppliers who indicated their agreement with the statement: “Under Competitive Bidding, beneficiaries report to our company that they have experienced more issues with timeliness of servicing and/or repair” where 85.4 percent of suppliers reported “agree” or “strongly agree;” 8.4 percent reported “neutral;” and 5.8 percent reported “disagree” or “strongly disagree.”

**Figure 20: “Under Competitive Bidding, beneficiaries report to our company that they have experienced more issues with timeliness of servicing and/or repair.”**

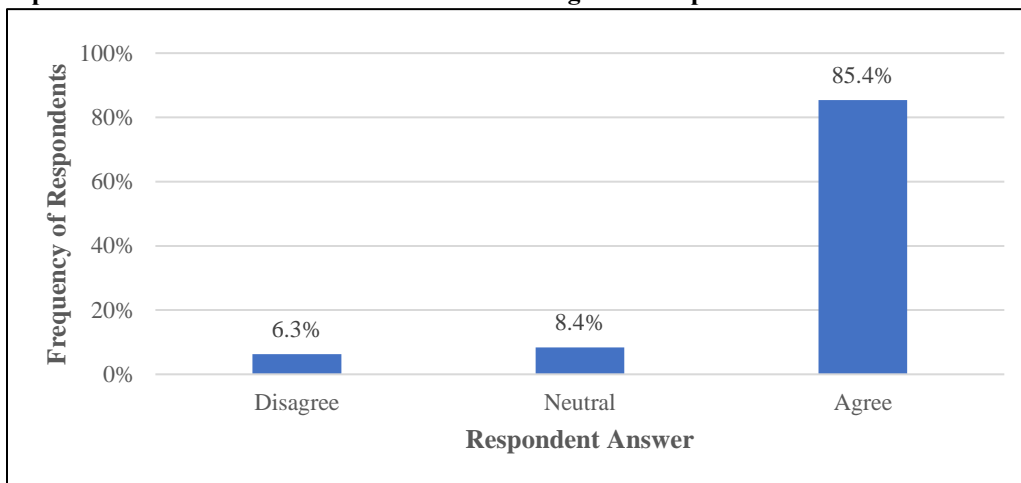


Figure 21 displays the proportion of suppliers who indicated their agreement with the statement: “The Competitive Bidding Program benefits the clients that my organization serves.” A total of 8.5 percent reported “agree” or “strongly agree;” 6.9 percent reported “neutral;” and 84.6 percent reported “disagree” or “strongly disagree.”

**Figure 21: “The Competitive Bidding Program benefits the clients that my organization serves.”**

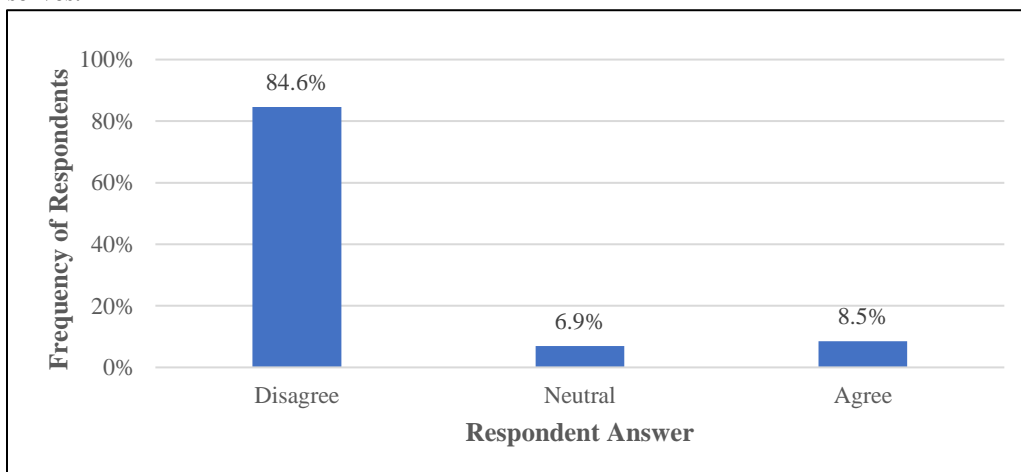


Figure 22 displays the percent of suppliers who reported experiencing an increase in formal or informal patient complaints concerning DME and/or supplies since July 1, 2016. A total of 94.7 percent of suppliers reported “yes;” 5.3 percent reported “no.”

**Figure 22: Suppliers’ self-reported experience of increases in formal or informal patient complaints concerning HME and/or supplies since July 1, 2016.**

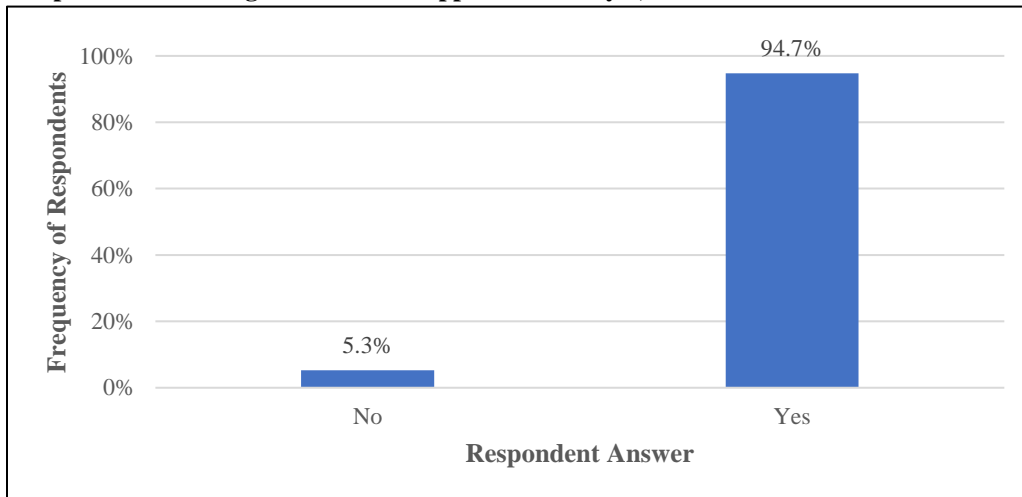


Figure 23 displays the percent of suppliers who reported experiencing Medicare-eligible patients purchasing medically necessary DME and/or supplies out-of-pocket and not filing a claim with Medicare since July 1, 2016. Eighty five percent of suppliers reported “yes;” fifteen percent reported “no.”

**Figure 23: Suppliers’ self-reported experience of Medicare-eligible patients purchasing medically necessary HME and/or supplies out-of-pocket and not filing a claim with Medicare since July 1, 2016**

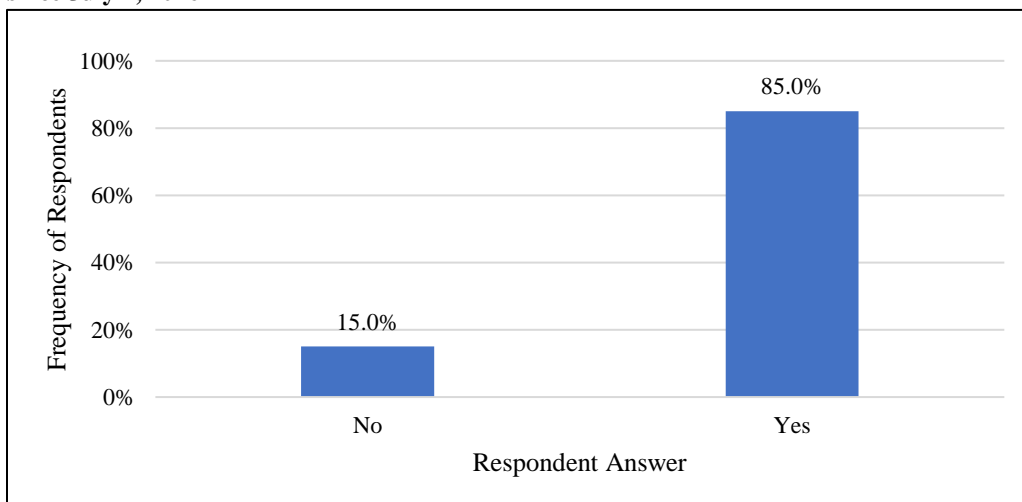
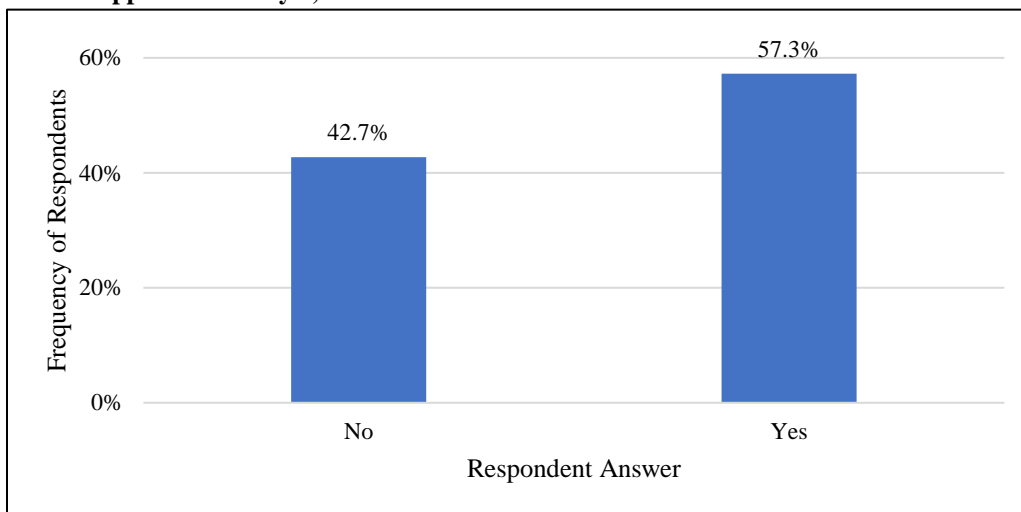


Figure 24 displays the percent of suppliers who reported awareness of patients who had developed medical complications, received emergency care, or been re-admitted to a hospital due to issues relating to DME and/or supplies since July 1, 2016. A total of 57.3 percent reported “yes;” 42.7 reported “no.”

**Figure 24: Suppliers’ self-reported experience of patients developing medical complications, receiving emergency care, or being re-admitted to a hospital due to issues relating to HME and/or supplies since July 1, 2016**



## Content Analysis

The results of the content analysis performed on the open-ended questions are described in detail below for beneficiary, case manager, and supplier surveys.

## BENEFICIARIES

Beneficiary responses to the open-ended questions depicted a range of experiences, concerns, and interactions with the DME CB program from July 1, 2016 through August and September 2017. The largest number of beneficiary self-reported experiences with the DME CB program concerned access issues such as an inability to receive or access medically necessary equipment such as oxygen therapy, delays of medically necessary equipment, and issues concerning payment and reimbursement. Most beneficiaries reported negative experiences with their ability to receive and utilize medically necessary DME and supplies since July 1, 2016.

Table 2 shows beneficiary responses to Question #3, which asked beneficiaries if their ability to receive home medical equipment and supplies in a timely manner changed since July 1, 2016. 132 beneficiaries stated that their ability to access DME and supplies had become more difficult. 28 beneficiaries stated that their access to DME and supplies had

improved. One beneficiary stated that their access improved for some services but become more difficult for others.

**Table 2: Self-reported quality of change in beneficiary access to HME and supplies in a timely manner since July 1, 2016**

Response Category	Number of Responses
Improved	28
More difficult	132
Other	1
<b>Total</b>	<b>161</b>

Table 3 shows beneficiary responses to Question #8, which asked beneficiaries who indicated that they had changed their supplier since July 1, 2016 to explain the circumstances of the decision to change. Of the 83 responses, the majority changed their supplier due to the beneficiary being unable to receive items or services from the previous supplier (16), their former supplier going out of business (14), the provider or insurance company mandating a change in supplier (10), and the supplier no longer accepting Medicare (9). Other responses include poor customer service (9), the former supplier not having won the bid and thus no longer able to service the area (6), the beneficiary moving locations (7), the beneficiary desiring a local supplier (5), and the supplier being bought out by another company (3).

**Table 3: Self-reported circumstances of change in supplier by beneficiary since July 1, 2016**

Response Category	Number of Responses
Supplier bought out	3
Supplier not bid winner	6
Supplier out of business	14
Supplier no longer accepted Medicare	9
Poor customer service	9
Provider or insurance changed suppliers	10
Beneficiary unable to receive items/services	16
Beneficiary moved locations	7
Beneficiary desired local supplier	5
Other	4
<b>Total</b>	<b>83</b>

Table 4 shows beneficiary responses to Question #10, which asked beneficiaries who indicated having reported a formal or informal complaint to Medicare, their supplier, or other healthcare professional to describe the nature of the complaint(s). The most widely reported reasons for complaints were those due to decreased access and/or availability to medically necessary DME and/or supplies (33) and complaints due to delays in receiving medically necessary DME and/or supplies (32). Other reasons for complaints include beneficiaries receiving the wrong item (4), beneficiaries experiencing issues with the Medicare system (8), beneficiaries experiencing issues with obtaining reimbursement (15), and issues concerning communication with their supplier and documentation of medical need (7).

**Table 4: Self-reported nature of beneficiary complaints since July 1, 2016**

Response Category	Number of Responses
Received wrong item	4
Issues with Medicare	8
Decreased access/availability	33
Issues with reimbursement	15
Delays	32
Communication/Documentation issues	7
Other	13
<b>Total</b>	<b>112</b>

Table 5 shows beneficiary responses to Question #12, which asked beneficiaries who reported an increase in out-of-pocket medical costs to describe the nature of such costs. The most common reasons for increased out-of-pocket expenses include less reimbursement so suppliers are harder to find (24), beneficiaries no longer receiving coverage for current or previously covered items (18), and the supplier no longer taking assignment (16). Notably, 25 beneficiaries stated they forewent Medicare and paid for their equipment or supplies privately to avoid delays (14) or due to frustration with the Medicare system (11).

**Table 5: Self-reported nature of beneficiaries' out-of-pocket medical costs since July 1, 2016**

Response Category	Number of Responses
Paid out-of-pocket to avoid delays	14
Paid out-of-pocket due to frustration with system	11
Supplier no longer takes assignment	16
Less reimbursement so suppliers are harder to find	24
No coverage for current or previously covered items	18
High-need beneficiary	5
Out-of-pocket (not otherwise specified)	15
Other	9
<b>Total</b>	<b>112</b>

Table 6 shows beneficiary responses to Question #14, which asked beneficiaries who reported an incidence of being unable to obtain medically necessary DME and/or supplies to describe the circumstances behind the incidence(s). The most common responses included a lack of suppliers in local area (24), severe delays in receiving equipment and/or supplies (17), and suppliers no longer carrying the item or services used by the beneficiary (13). Other circumstances included an inability to afford the item or service (10), inability to obtain goods not otherwise specified (10), and the supplier being unable to deliver the item or service to the beneficiary (5).

**Table 6: Self-reported circumstances of beneficiaries' inability to obtain HME and/or supplies since July 1, 2016**

Response Category	Number of Responses
Supplier unable to deliver	5
Could not afford items or services	10
Severe delays	17
Supplier no longer carried item or service	13
Lack of suppliers in my local area	24
Cannot obtain (not otherwise specified)	10
Other	11
<b>Total</b>	<b>90</b>

Table 7 shows beneficiary responses to Question #16, which asked beneficiaries who reported experiencing medical complications, emergency care, and/or re-admission(s) due to issues relating to proper and/or timely equipment and supplies to describe the nature of



those experiences. The largest number of beneficiaries experienced oxygen and breathing issues due to inability to receive proper oxygen therapy and treatment for COPD, sinus, and chest issues (13). Other reported issues include falls or mobility issues (5); skin issues and sores (4); and equipment failure (4).

**Table 7: Self-reported nature of medical complications, emergency care, and/or re-admissions concerning HME and supplies since July 1, 2016**

Response Category	Number of Responses
Equipment failure	4
Skin issues and sores	4
Oxygen user: COPD/Sinus/Chest issues and other breathing issues	13
Falls or mobility issues	5
Other	3
<b>Total</b>	<b>29</b>

Table 8 shows beneficiary responses to Question #20, which asked beneficiaries who indicated that their medical equipment and/or supplies do not currently meet their healthcare needs to describe the ways in which needs are not met. The main issue reported by beneficiaries was inability to access oxygen therapy and related supplies/services (25), followed by problems with customer and equipment service (13), issues with mobility equipment (12), issues with low quality equipment (11), and severe delays in receiving medically necessary DME and/or supplies (11). Other issues include a lack of access to or a low-frequency delivery of digestion and urinary supplies (6), an inability to find or access a supplier (5), and access issues not otherwise specified (8).

**Table 8: Self-reported reasons for beneficiary medical needs not currently being met by current access to HME and/or supplies.**

Response Category	Number of Responses
Lack of or low frequency delivery of digestion/urinary supplies	6
Cannot access supplier	5
Problems with customer and equipment service	13
Issues with mobility equipment	12
Oxygen access issues	25
Low quality equipment	11
Severe delays	11
Access issues (not otherwise specified)	8
Other	3
<b>Total</b>	<b>94</b>

## CASE MANAGERS

Case managers reported overwhelmingly negative experiences in their ability to facilitate and provide medically necessary DME and supplies to beneficiaries since July 1, 2016 through September 2017. Case managers reported substantial issues with access to DME and supplies, especially concerning oxygen therapy and delays in the receipt of medically necessary equipment.

Table 9 shows case manager responses to Question #4, which asked case managers to explain how their ability to order DME and supplies had changed since July 1, 2016, if at all. Of 231 total responses, only 1 case manager reported that ordering DME and supplies had become easier since the implementation of CB payment rates nationwide.

223 case managers reported that ordering DME and supplies had become difficult for various reasons that include delays or non-delivery of items (48); difficulties with coordination, order, and/or acquisition (47); areas lacking suppliers (41); issues with documentation and/or qualification (38), lack of access to oxygen equipment and supplies (14), and other difficulties not otherwise specified (25).

**Table 9: Self-reported changes in case managers' ability to order HME and supplies since July 1, 2016**

<b>Response Category</b>	<b>Number of Responses</b>
Easier	1
More difficult - lack of supplier	41
More difficult - delays or non-delivery	48
More difficult - coordination, order, and/or acquisition issues	47
More difficult - documentation and/or qualification issues	38
More difficult - oxygen access issues	14
More difficult - reimbursement and/or coverage issues	10
More difficult (not otherwise specified)	25
Other	7
<b>Total</b>	<b>231</b>

Table 10 shows case manager responses to Question #9, which asked case managers who indicated that they had experienced an increase in beneficiary complaints to describe the nature of the complaint(s).

The largest number of responses were identified as containing complaints concerning delays in equipment or discharge (49); increased fees, co-pays, or out-of-pocket expenses (38), and decreased access to or quality of DME and supplies (30). Other reported issues include issues concerning poor customer service (22), access to oxygen therapy (21), beneficiaries lacking local suppliers (9), and suppliers requiring beneficiaries to pay upfront for equipment and services (9).

Notably, 27 case managers reported beneficiaries bypassing the Medicare DME system entirely and either choosing to go without medically necessary equipment and/or supplies (16) or purchasing their equipment privately without Medicare reimbursement (11).

**Table 10: Nature of beneficiary complaints as reported by case managers since July 1, 2016**

Response Category	Number of Responses
Suppliers requiring beneficiaries to pay upfront	9
Lack of local suppliers	9
Choosing to pay privately outside of Medicare	11
Choosing to go without; no coverage	16
Oxygen issues	21
Decreased access or quality	30
Increased fees, co-pays, or out-of-pocket	38
Delays in equipment or discharge	49
Poor customer service	22
Other	8
<b>Total</b>	<b>213</b>

Table 11 shows case manager responses to Question #11, which asked case managers who indicated awareness of beneficiaries developing medical complications, receiving emergency care, or being re-admitted due to issues related to obtaining proper and/or timely DME since July 1, 2016 to explain the nature of any complications, care, and/or readmission(s).

58 case managers reported beneficiaries being re-admitted or experiencing complications due to an inability to access or receive oxygen equipment and supplies, which overwhelmingly dwarfed other response categories.

Other major issues included falls that lead to a readmission (16); issues with BiPAP/CPAP/NIV (15); and complications, emergency care, and re-admissions not otherwise specified (15). Smaller response categories include issues with bed and/or sling devices leading to receipt of care (7), exacerbation of wounds (5), problems with drug delivery and/or nutrition (3), issues concerning skin care such as sores (3), and delayed mobility devices resulting in care or re-admission (2).

**Table 11: Nature of beneficiary medical complications, emergency care, and/or re-admission(s) as reported by case managers since July 1, 2016**

Response Category	Number of Responses
Wounds	5
Drug delivery/nutrition	3
BiPAP/CPAP/NIV issues	15
Delayed mobility device	2
Bed/sling device issues	7
Fall and readmission	16
Oxygen issues	58
Skin issues	3
Complication, emergency care, or re-admission (not otherwise specified)	15
Other	6
<b>Total</b>	<b>130</b>

## SUPPLIERS

Suppliers reported negative experiences in their ability to supply beneficiaries and providers with medically necessary DME and supplies since July 1, 2016. Primary concerns included decreased reimbursement and unsustainable margins. Many suppliers reported beneficiaries contacting them to purchase equipment out-of-pocket due to frustration with the DME market following application of CB payment rates nationwide. Many suppliers also reported issues with equipment/service delays and issues with supplying oxygen therapy.

Table 12 shows supplier responses to Question #5, which asked suppliers who indicated in a previous question that they are or will no longer be taking assignment to explain their reasons why. The overwhelming majority of suppliers stated that they no longer take assignment because reimbursement rates from Medicare are too low (55). Other reasons for no longer taking assignment include suppliers not winning bids or deciding not to participate in a CBA (3). 7 suppliers indicated that they take partial assignment on items.

**Table 12: Supplier self-reported reasons for no longer taking assignment since July 1, 2016**

Response Category	Number of Responses
Reimbursement too low	55
Did not win bids or is not participating in CB	3
Takes partial assignment	7
Other	4
<b>Total</b>	<b>69</b>

Table 13 shows supplier responses to Question #13, which asked suppliers who indicated that they had experienced an increase in beneficiary complaints to describe the nature of any complaint(s).

Suppliers reported complaints concerning a lack of or decrease in products and/or services supplied (39), delays or timeliness issues (38), and beneficiary out-of-pocket expenses and co-pays (35). Other pertinent issues include beneficiaries being unable to find a supplier or do not have access to a local supplier (24), suppliers no longer delivering certain equipment or reducing the frequency of deliveries (15), and beneficiaries complaining about a lack of continuity in care or being forced to use suppliers that they do not wish to use (12).

Notably, 13 suppliers reported beneficiary complaints concerning choosing to pay for medically necessary equipment out-of-pocket or go without their equipment.

**Table 13: Nature of beneficiary medical complaints as reported by suppliers since July 1, 2016**

Response Category	Number of Responses
Supplier does not deliver or has reduced deliveries	15
Lack of continuity in care or forced to use supplier beneficiary does not want	12
Out-of-pocket expenses and co-pays	35
Cannot find supplier or no local supplier	24
Lack of or decrease in products and/or services	39
Delays or timeliness issues	38
Choosing to pay privately or go without	13
Access issues (not otherwise specified)	8
Other	9
<b>Total</b>	<b>193</b>

Table 14 shows supplier responses to Question #15, which asked suppliers who indicated awareness of beneficiaries developing medical complications, receiving emergency care, or being re-admitted due to issues related to obtaining proper and/or timely DME since July 1, 2016 to explain the nature of any complications, care, and/or readmission(s).

Complications and re-admissions due to oxygen and respiratory issues (28) far surpassed the other response categories, which included delays in receiving equipment (13), wound or skin issues (7); delays due to documentation or qualification affected service and/or care (6); falls due to mobility equipment (5); and other complications, re-admissions, or emergency care not otherwise specified (7).

**Table 14: Nature of beneficiary medical complications, emergency care, and/or re-admission(s) as reported by suppliers since July 1, 2016**

Response Category	Number of Responses
Wound or skin issues	7
Delays due to documentation or qualification affected service and/or care	6
Falls due to mobility equipment	5
Equipment delay	13
Oxygen issues	28
Complication, re-admission, or emergency care (not otherwise specified)	7
Other	5
<b>Total</b>	<b>71</b>

## Respondent Statements

The survey captured a variety of statements and anecdotes from respondents who answered the open-ended questions. The following vignettes present respondent answers according to theme. These statements have been edited for grammar.

### ACCESS TO OXYGEN

Beneficiaries, case managers, and suppliers expressed anxiety and in some cases alarm concerning the decreased access to oxygen therapy equipment and supplies following July 1, 2016. 66.5 percent of beneficiaries reported experiencing a discontinuity in their ability to access oxygen at some point since July 1, 2016. Case managers and suppliers noted in their responses to open-ended questions that the largest number of medical complications, emergency care, and re-admissions to hospitals occurred due to lack of access to oxygen. Several case managers reported beneficiaries expiring while waiting for oxygen therapy DME and supplies. Other case managers and some suppliers expressed frustration with

Medicare qualification guidelines in place following the expansion of the CB program as making it more difficult for beneficiaries to receive medically necessary oxygen therapy.

## Beneficiary Statements

*“I am very concerned that the low Medicare allowance will prompt my supplier to discontinue providing the liquid O2 that I’ve had for the past 10 years. Because I am on 4 to 6 liters, portable concentrators would not meet my needs and arthritis would limit my ability to leave home independently with large tanks.”*

*“I am concerned that oxygen suppliers are reimbursed so low that they are unable to buy the newest equipment to provide to us.”*

*“Totally inadequate in meeting needs for travel oxygen. Current supplies i.e. metal tanks are cumbersome and heavy for seniors which keeps seniors homebound and depressed. I purchased my own for \$3500. Most can’t afford this.”*

*“Oxygen was not delivered to my house in a timely manner and I ran out; having to return to the ER.”*

*“I received a call [...] informing me that they plan on phasing out liquid oxygen. As I have Alpha-1 antitrypsin deficiency, a genetic disorder, I am absolutely dependent upon liquid oxygen therapy to maintain my health and independence in a very rural setting. I sincerely hope that [supplier] will continue to deliver this essential service to me.”*

## Case Manager Statements

*“One patient left [hospital] because they had to wait over 4 hours for the DME. The patient ended up coding in the parking lot from low O2.”*

*“Readmissions are frequent due to issues with home oxygen being inadequate or not set up properly.”*

*“It is very difficult almost impossible to qualify Medicare patients for O2. I have had patients in tears because they had to pay privately.”*

*“We frequently have patients who would benefit from home oxygen therapy due to acute respiratory issues. Since acute health conditions do not qualify a patient for home oxygen, they either have a prolonged stay in the hospital or have to pay out of pocket to purchase or rent a concentrator.”*

*“Individuals who cannot afford oxygen privately leave the hospital without and have developed worsening medical problems.”*



## Supplier Statements

*“Patients are waiting days to get oxygen set up at home and in some cases still do not have oxygen in home after waiting 3 weeks.”*

*“Patients leaving the hospital usually have to pay for their home oxygen, as Medicare is denying almost all hospital discharged oxygen claims.”*

*“1 in 5 oxygen patients are unable to obtain portable concentrators because the reimbursement is lower than cost of goods sold.”*

*“Many patients do not qualify for the Medicare Oxygen benefit now (it is now only considered for patients in a chronic stable state long-term need). We cannot afford to provide the services for free and they cannot afford the home oxygen. The patient leaves the hospital hypoxic because they can't afford to pay cash for the home oxygen.”*

## CONCERNS FOR THE FUTURE

Beneficiaries, case managers, and suppliers expressed concerns about the future of the DME market. Beneficiaries – even those who reported no change to their current service or were otherwise satisfied with their current benefits – occasionally stated that they experienced an increase in anxiety toward the next round of changes to the DME market and how it would affect their access to medically necessary equipment and supplies. Case managers expressed a highly negative outlook on the future of the DME market and their ability to provide supplies for their beneficiaries under the current trends set by the DME CB program. Suppliers were concerned that the low reimbursement levels may force out small suppliers, decrease competition, and stifle innovation.

## Beneficiary Statements

*“Depending on unreliable monthly deliveries leaves me feeling insecure. A power outage or unusual extra activities could change my needs drastically. Having the local office closed and deliveries changed to monthly has increased my anxiety considerably, which is a co-morbidity of COPD and causes exacerbation of the disease.”*

*“I have been receiving HME since 2004 and up until now everything has been fine. But I am terrified of the future.”*

*“I am 'grandfathered' [into liquid oxygen], but I fear that my supplier will take my liquid portable oxygen cylinders and equipment away anyway. I always feel threatened because there are no other suppliers in my area for liquid and if my supplier drops me I will have to depend on green tanks which will severely limit my mobility.”*

## Case Manager Statements

*“Please take a close look at the way this system is working. It may be pennywise & pound foolish. As health care providers and as patients we have little recourse when we complain about the services as these companies know they are the only show in town.”*

*“I have been a therapist since 1991 and have never been so unable to do my job.”*

*“[Competitive Bidding] has not only adversely affected the quality of life of my patients, but has also hurt the DME community. DME companies are closing and more people are relying on Amazon since they are having to pay out of pocket.”*

*“It is becoming harder for suppliers to purchase new equipment / newer technology due to reimbursement costs and organizational budget constraints. Medicare reimbursement all around is decreasing, but the patients are still requesting equipment utilizing the latest technology. In the rural market, a vast amount of time / mileage is needed to reach the patients. With decreased reimbursement, the money to purchase new equipment is shrinking.”*

## Supplier Statements

*“The rate changes are unsustainable. Add that to not being able to compete in markets where the competitive bids are awarded is making it impossible to increase our volume to deal with lower rates. What is competitive about setting a price then excluding us from a market.”*

*“The current reimbursement rates are unsustainable long term and put an enormous barrier to growth, development, ability to invest in better technology, investing and incentivising/training staff to continually provide a higher level of care for the beneficiary.”*

*“Competitive bidding is an injustice to Medicare recipients. I doubt if our DME will be able to stay open another year due to cut backs in reimbursement.”*

*“Because of low Medicare reimbursement for HME, [beneficiaries] are greatly limited to access of newer technology. Newer HME technology could be used to help improve patient outcomes, but the low reimbursement rates will not allow for new technologies and professional training to be utilized.”*

## Respondent Anecdotes

The final survey question asked if respondents had any further comments to share that were not covered in the survey. In this field, several beneficiaries, case managers, and suppliers shared anecdotes regarding access to DME and the structure of the DME CB program.

One supplier expressed concern that the CB program is a “cost-shifting” and not a “cost-saving” program.

*“The reduction in reimbursement rates due to the expansion of the competitive bidding program into non-bid areas has truly been a cost-shifting instead of a cost-saving program. The costs are shifted to the Medicare beneficiaries themselves. We have had instances where patients have refused medically necessary equipment ordered by a physician because they could not make non-assigned payments. So, not only is it shifting costs to the beneficiaries, it is most assuredly shifting costs to higher priced institutions like hospitals and ERs when patients elect to not accept medically necessary equipment.”*

Another supplier stated that the CB program has resulted in significant cuts to equipment and service quality while beneficiaries are left “with very little information or understanding” as to reimbursement and service limits.

*“Competitive Bidding has created a bottleneck for claims according to what patients are telling us, and they are unable to get serviced in a timely manner. Once they do receive equipment, it is incredibly generic and basic due to the reductions in funding, and that impacts what options the patient has to receive equipment. The cuts in some cases do not even cover the manufacturer's cost of the item, and once Medicare reduces their prices, other managed care plans, Medicaid based plans, and even private insurers in some cases also reduce their prices and follow suit, which makes it very difficult for beneficiaries to get what they need. It's sad and frustrating not only for patients, but also providers, physicians, and the community, to see people get stuck in a situation they have no control over, and get shuffled around from company to company with very little information or understanding as to what their limitations are, and why they are unable to get the care they need.”*

A case manager described the results of the CB program upon her service area and beneficiaries as “borderline neglect.”

*“Patients are complaining they are not receiving walkers for 6 weeks or longer. Patients are complaining that it is taking months to get wheelchairs. Patients have had to incur out of pocket expenses for products that should be covered because they cannot wait. Patients have also complained about delays of hospital beds. In addition, they are having difficulty finding vendors. One of the local vendors closed their doors. The customer service they are receiving is borderline neglect.”*

A beneficiary who is receiving oxygen therapy expressed concerns about the reduced deliveries, periods of service, and changes to demonstration of need that their current supplier has mandated. The beneficiary also expresses frustration with Medicare.

*“I called my supplier after I received a partial delivery of oxygen I needed for the month. My supplier suddenly began to limit the amount of oxygen that they would deliver a month. The delivery is now based on the number of empty tanks I have. That number changes since I have to call days in advance before delivery. They just recently told me if I want more oxygen from what they delivered in the month that I personally have to pick it up. The site is 40 miles away from where I live. I called Medicare and they told me that according to their regulations the delivery could be as long as 90 days before a new delivery! Every time I call Medicare, I get a different answer to my question.”*

# Discussion

## **Common Themes among Respondents – Beneficiaries, Case Managers, and Suppliers**

Throughout the survey process, many beneficiaries, case managers, and suppliers expressed frustration with the DME CB program and questioned its ability to reduce healthcare costs while maintaining quality and access to care after July 1, 2016. Beneficiaries occasionally reported mixed opinions toward the DME market following July 1, 2016, with some beneficiaries reporting high standards of care or no change to their ability to access DME and supplies, whereas others experienced a markedly negative change in the program.

Analysis of the survey responses indicated that approximately one-half to three-fourths of beneficiaries for each category of DME and supplies reported “sometimes,” “often,” or “always” experiencing difficulties in accessing their medically necessary DME and supplies. These findings indicate multiple access issues are being experienced by beneficiaries who participated in the survey. A well-designed CB program would not result in over one-half of beneficiaries experiencing access issues as noted by survey respondents.

The variety of survey responses demonstrates the complex effects that the CB program has had on access to DME and supplies since July 1, 2016. Beneficiaries indicated numerous and diverse medical complications, reasons for current equipment needs not being met and out-of-pocket medical costs. The survey responses demonstrate that the nature of the CB program creates economically and socially complex problems that CMS needs to address.

A substantially greater proportion of case managers (88.9 percent) reported delays in hospital discharges due to a delay in the delivery of medically necessary DME and/or supplies since July 1, 2016, than beneficiaries (23.8 percent). This is likely due to case managers being responsible for large numbers of beneficiaries. The large proportion of case manager open-ended responses stating that delays result in increased stress and problems with the coordination of multiple DME and supplies may affect other aspects of providing

healthcare to Medicare beneficiaries. However, this could be because of beneficiaries utilizing other sources for their DME.

### **OXYGEN THERAPY**

All three categories of respondents expressed concern about their ability to access DME and supplies for oxygen therapy in their responses to quantitative and open-ended questions. Beneficiaries reported mixed opinions toward the CB program's ability to help suppliers furnish oxygen. The majority of beneficiaries stated they had experienced problems accessing oxygen, while others expressed concern for the future of oxygen services because of decreases in deliveries and available items. However, several stated that their current supplier is more effective than before July 1, 2016.

Beneficiaries, case managers, and suppliers reported severe access issues concerning the oxygen modality, and many beneficiaries – even those who reported satisfaction with their current receipt of oxygen therapy – reported concern about the future of the oxygen benefit under the Medicare program. One supplier who reported an increase in patient complaints stated that “patients are waiting days to get oxygen set up at home, and in some cases still do not have oxygen in-home after waiting 3 weeks.” Another reported having “qualified oxygen patients decide to live without needed oxygen due to significant out-of-pocket expenses.”

Three-fourths of beneficiaries and case managers reported experiencing problems with oxygen therapy DME and supplies, demonstrating the extent of the problem with that modality. Seventy four point three percent of beneficiaries reported a discontinuity or disruption in their ability to receive oxygen and related supplies since July 1, 2016. Seventy five point two percent of case managers reported experiencing issues in accessing and coordinating medically necessary oxygen therapy DME and supplies for their Medicare patients.

### **PRIVATE PURCHASE OF DME AND SUPPLIES**

One notable response theme from beneficiaries, case managers, and suppliers concerned beneficiaries leaving the Medicare CB market and purchasing their medically necessary DME and/or supplies through private entities not part of the CB market place. All three respondent categories reported delays and future anxiety as being reasons for beneficiaries purchasing their equipment privately. Eighty five percent of suppliers reported beneficiaries privately purchasing DME and supplies and not utilizing their Medicare benefits to file a claim with Medicare for reimbursement. One supplier referred to some beneficiaries purchasing their equipment on a secondary market of medical goods where there was no CMS oversight.

The presence of beneficiaries purchasing equipment privately rather than through Medicare coverage challenges CMS' claims that the reductions in payments for DME following the implementation of the CB program are primarily due to reduced fraud and waste.

According to survey respondents, beneficiaries would rather choose to pay for their equipment and supplies privately than go through Medicare; in one beneficiary's words, he was "fed up" with the program. Respondents also described beneficiaries choosing to go without their medically necessary DME and supplies due to lack of personal funds as the lower payment rates force suppliers to stop carrying certain items.

### REIMBURSEMENT AMOUNTS

Supplier concerns about the low reimbursement are consistent with the claims of numerous economists that the median-bid pricing system is ultimately economically unsustainable and results in payments that are not reflective of actual DME market provision costs.<sup>78,79</sup>

Suppliers noted that smaller firms have fewer opportunities to compete with larger firms, and that they frequently result in being bought out or closing locations.

Additionally, Dobson | DaVanzo conducted an analysis of the cost to suppliers of providing DME to Medicare beneficiaries. That analysis concluded that across the DMEPOS HCPCS studies, which were inclusive of all CB product categories, suppliers are were reimbursed at a median of 88% of overall cost.<sup>80</sup>

Case managers noted that the reduction in suppliers – especially local ones – puts additional stress on the discharge process and also stresses the beneficiaries, who frequently do not become aware of their suppliers' closure until after it has already occurred. A significant number of suppliers stated that low reimbursement levels influenced their decision to no longer take assignment on Medicare items as payment rates were below costs. Several case managers and suppliers questioned whether the CB program truly decreased the total cost of healthcare or merely shifted costs to the beneficiary.

Decreases in reimbursement have also led suppliers to decrease the frequency by which they perform deliveries of medically necessary equipment and supplies, which is negatively perceived by case managers and beneficiaries. Beneficiaries and suppliers reported that decreased deliveries influenced beneficiaries' decision to purchase their DME and supplies on the private market and forego reporting their purchase to Medicare for reimbursement. Case managers reported an increase in discharge delays and occasionally increases in

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<sup>78</sup> "Letter from 167 Concerned Auction Experts on Medicare Competitive Bidding Program." Received by The Honorable Pete Stark, 26 Sept. 2010. A copy can be found in Appendix B.

<sup>79</sup> "Letter from 244 Concerned Auction Experts on Medicare Competitive Bidding Program." Received by President Barack Obama, 17 June 2011. A copy can be found in Appendix B.

<sup>80</sup> Dobson DaVanzo & Associates, Analysis of the Cost of Providing Durable Medical Equipment to the Medicare Population, 2016.

complications or re-admissions due to patients not receiving deliveries of equipment in a timely manner – and in some cases death.

Additionally, all three respondent categories reported that suppliers were asking beneficiaries for payment or credit card information upfront before delivering DME and supplies due to the low reimbursement amounts, which beneficiaries found “confusing” and stressful.

Smaller suppliers reported having a more difficult time competing and participating in the CB program than large suppliers due to a lack of market power associated with relative buying power and economies of scale. This can result in closures of small suppliers and in some instances, necessitates that non-local suppliers win bids in areas which are far away from the suppliers’ actual dispensing locations and in which they may not be able to provide equipment reliably. Beneficiaries reported additional stress when their local supplier closed or was no longer able to provide them with their DME and supplies due to not receiving a CB contract. Several beneficiaries reported purchasing their items directly from their local supplier rather than through a national winning bid supplier, as they did not feel comfortable with switching.

### **CONTINUITY OF CARE**

Beneficiaries also reported increased mental burden due to lack of continuity of care; several reported anxiety in not knowing how their new supplier would continue the standard of care that they had previously received. Several case managers stated that beneficiaries felt “confusion” when told they could no longer receive their DME and supplies from the supplier with whom they were previously contracted. Case managers stated that beneficiaries felt as if they “should” receive their DME and supplies from certain suppliers and that their Medicare benefit “entitled” them to use the equipment. One case manager was concerned about receiving Medicare benefits in four years, stating that the status of the DME CB program reflected a poor direction for the future of the Medicare program as a whole.

Case managers and suppliers expressed concern that the current CB system disrupts the continuity of care. Case managers reported increased workload and time spent ordering supplies as beneficiaries may utilize “three to four different companies servicing them for various service lines” where previously they may have used one or two suppliers or a single local supplier. Case managers reported longer time spent with customer service representatives from suppliers or Medicare to facilitate the ordering process. According to one case manager, this has resulted in some otherwise avoidable delays of DME and supplies simply due to time taken to organize care from multiple suppliers for a single beneficiary.



## **RURAL ACCESS**

All three categories of respondents reported increased access issues for rural beneficiaries of DME and supplies following July 1, 2016. Rural beneficiaries noted significant increases in stress and anxiety due to decreased frequency of deliveries on non-route days, and they increasingly felt as if they had to demonstrate more of a “need” to receive medically necessary items.

One beneficiary expressed concern about her ability to maintain health and independence in a “very rural setting,” as her supplier’s home office informed her that the supplier would no longer be providing liquid oxygen. Although the beneficiary has switched to another supplier, the beneficiary expressed anxiety about an ability to continue her lifestyle with the new supplier.

A case manager stated that the CB program had become “very complicated and very limited in rural areas.” The case manager also stated that coordinating DME and finding local suppliers for beneficiaries was “much more time-consuming and difficult.” Case managers and suppliers reported decreased deliveries to rural areas and fewer suppliers who would service those areas.

Rural suppliers stated that new lower levels of reimbursement were not feasible in rural areas. A geographically isolated supplier stated that due to the higher cost of business in rural areas than metro areas, reimbursement severely affected their ability to provide for Medicare beneficiaries, and that their location restricted their market potential. The supplier stated that they “cannot survive on assigned claim allowed rates,” which was corroborated by a second supplier who stated they “cannot afford to do business at the current [CB] rate.”

## **MEDICAL COMPLICATIONS, EMERGENCY CARE, AND RE-ADMISSIONS**

Although 57.3 percent of suppliers and 61.7 percent of case managers reported an increase in beneficiaries developing medical complications, receiving emergency care, or being re-admitted to a hospital due to issues related to obtaining proper and/or timely access to DME and/or supplies, only 9.3 percent of beneficiaries reported the same concerns.

Of those who reported an increase in medical complications, emergency care, and re-admissions, the most common reasons across all three respondent pools involved issues related to oxygen therapy, falls, and wound or skin illnesses. Multiple case managers and suppliers stated that delays in DME and supplies resulted in or contributed to a beneficiary’s need for emergency care or a hospital re-admission.

## **Potential Biases**

The survey requested a variety of healthcare access and experience information from beneficiaries and case managers, and a variety of access and logistical questions from suppliers. Due to the level of cognitive skill required to complete the survey, the survey results are likely biased toward beneficiaries who are active and care for themselves and are less likely to rely on a caregiver for physical or cognitive support. Since most respondents accessed the survey through social media of professional and advocacy organizations, the results may be biased toward respondents who are technologically literate and have an interest in their health. However, we note that the literature indicates a movement towards surveys of this type and continued efforts to determine the reliability and validity of social media surveys.

Additionally, respondents to this survey are likely to be familiar with the CB program prior to taking the survey and are more likely to be invested in expressing their beliefs concerning the CB program as it now stands than other beneficiaries.

## **Conclusion**

Positive consumer ratings are an important asset of any business. If a product on Amazon drew the kind of customer reviews we found in our survey concerning CB, the product would not do well in the market.