Medicare Auction Reform

Prepared Testimony of Peter Cramton[1]
Professor of Economics, University of Maryland
Chairman, Market Design Inc.

Before the Subcommittee on Healthcare and Technology
United States House Committee on Small Business
11 September 2012

Chairwoman Ellmers, Ranking Member Richmond, and members of the House Committee on Small Business, I am honored to appear before you today and have this opportunity to speak to such a critical committee on a matter of great significance to our future: Medicare auction reform. Without the effective use of market methods to control costs and encourage efficient supply and demand, Medicare is unsustainable. This is why it is essential for Congress to step in and insist that the Centers for Medicare and Medicaid Services (CMS)[2] replace its fatally-flawed competitive bidding program for Durable Medical Equipment with a modern auction based on best-practice and science (see Market Pricing Program Summary 2012). CMS has had ten years to adopt a sensible auction, but has refused to do so. Congress must give CMS more specific instructions.

My testimony is that of an independent auction expert who has spent well in excess of 1,000 hours studying the CMS DME competitive bidding program. All of this work—with the exception of my first few hours of study—was unpaid. Further, although I often provide auction services to governments, I am not seeking nor do I desire to provide such services to CMS.

My work has involved five main steps:

- Identify the problems in the CMS design. This was the easiest step, since the main flaws are obvious. (See Ayres and Cramton 2010, Cramton and Katzman 2010, 2011c, and Letter from 167 Experts, Cramton 2011e, Cramton 2012)
- Develop an efficient Medicare auction based on best-practice and science. This step drew on my considerable experience and skills designing and implementing complex auctions markets for many related products. The step included hundreds of hours of working with providers,

[1] My specialty is the design of complex auction markets. Since 1993, I have contributed extensively to the development of innovative auctions in many countries and industries. I have advised nineteen governments on major auctions, including the United States. I am currently advising the governments of the United Kingdom, Canada, and Australia on the design and implementation of major auctions in telecommunications, electricity, and timber. I frequently advise bidders in major auctions around the world. I have written over fifty practical papers on auctions and market design published in peer-reviewed journals. This research is available at www.cramton.umd.edu and citations of my work are available here. I thank the Honorable Nancy Johnson, the twenty-four-year Congresswoman from the great state of Connecticut. She first introduced me to the Medicare auction problem and has been unfailing in her wisdom and encouragement throughout this difficult ordeal.

[2] Throughout I will refer to those responsible for the CMS competitive bidding program simply as CMS. I do so with apologies to the many staff at CMS who are worthy of praise and not critique. I am well aware that CMS has many outstanding public servants like any large government organization.

beneficiaries, and government leaders to understand well the market for durable medical equipment. (See Cramton 2011a)

- Educate the stakeholders about the problems with the CMS design. The participants and government leaders quickly understood the problems of the CMS design. CMS has thus far failed to respond. (See Cramton 2010a,b,c, Cramton 2011b,c,e,f, Cramton 2012, Cramton, Ellermeyer, and Katzman 2012)
- Educate the stakeholders about how the problems with the CMS design can be addressed. The result is a market that identifies the least-cost sustainable prices and the efficient suppliers who can provide quality goods and services at those prices. Again the participants quickly understood the benefits of the proposed design, but CMS has thus far failed to respond. (See Cramton 2011b and Cramton 2011f)
- Convince stakeholders that a reformed Medicare auction does indeed work. This step required a great deal of work, especially to convince providers that fixing the flawed CMS design is preferable to a repeal of the legislation that mandates auctions for DME.[3] A key event in this step was the April 2011 Medicare Auction Conference held at the University of Maryland. The event brought over 100 stakeholders from government leaders to providers to beneficiaries to experts together to discuss the flaws in the current program and develop an alternative based on best-practice. The event included a nearly full-scale mock auction in which fifty bidding teams competed to supply 56 products. The mock auction was conducted using a state-of-art auction platform customized for the Medicare setting. The auction realized 97% of the potential gains from trade. In sharp contrast, the CMS auction realized less than 50% of the potential gains from trade in experimental laboratories at the Caltech and the University of Maryland despite a much simpler economic environment (Merlob, Plott, and Zhang 2012 and Plott 2012). (See Cramton 2011b, Cramton 2011f, Cramton, Gall, and Sujarittanonta 2011, Letter from 244 Experts, and Medicare Auction Conference 2011)

There is consensus on this issue

Let me start with a point of consensus: Small businesses are the engines of innovation that allow the US economy to grow and prosper. We only need to think of Apple, Google, and Microsoft. All started as small businesses—one or two youths in a garage or a university cubical. These tiny businesses without capital, but with vision, are the true job creators.

Indeed consensus will be a theme of my remarks. There is no disagreement among experts about what I will say and the issue is non-partisan. I have spent two years working hard on this issue—talking and sharing with experts, government leaders, Congressional staff, providers, beneficiaries, Democrats, and Republicans—I have yet to hear a serious logical criticism to the arguments made here. CMS stands alone in arguing that their competitive bidding program should not be changed—yet CMS has to date failed to present any rational argument for the status quo.

[3] Indeed strong evidence that I was not and am not a "hired gun" for the provider special interest is that I advocated for many months a position that the providers did not endorse: Medicare auction reform, rather than the repeal of the DME competitive bidding legislation. Providers only recently (I believe about December 2011) began to support auction reform.

The fatal flaws in the CMS design

The fatal flaws in the CMS auction design were first identified by auction experts in September 2010. The auction community—167 distinguished economists, computer scientists, and engineers engaged in auction and market design—sent a letter to many Congressional committees pointing out the flaws and urging action. Congressional offices responded with numerous letters to CMS and HHS demanding action, but CMS failed to act. As a result of this inaction in June 2011, and expanded group of 244 auction experts including four Nobel laureates wrote to the White House again urging auction. Since the letter articulates well the CMS design flaws and a path forward I quote it directly:

> We are economists, computer scientists and engineers with expertise in the theory and practice of auctions.[4] In September 2010, many of us signed a letter to Congressional leaders pointing out the numerous fatal flaws in the current Medicare competitive bidding program for durable medical equipment (DME). We also emphasized that the flaws could easily be fixed by adopting modern auction methods that have been developed over the last fifteen years and are now well-understood.
>
> The flaws in the auctions administered by the Centers for Medicare and Medicaid Services (CMS) are numerous. The use of non-binding bids together with setting the price equal to the median of the winning bids provides a strong incentive for low-ball bids—submitting bids dramatically below actual cost. This leads to complete market failure in theory and partial market failure in the lab. Another problem is the lack of transparency. For example, bidder quantities are chosen arbitrarily by CMS, enabling a wide range of prices to emerge that have no relation to competitive market prices.
>
> We write today, nine months later, to report that—much to our dismay—there are to date no signs that CMS has responded to the professional opinions of auction experts or taken any serious steps to fix the obvious flaws to the competitive bidding program. Rather CMS continues to recite the mantra that all is well and that CMS does not plan to make any changes to the program as it expands from nine pilots to the entire United States.[5]
>
> We find this especially distressing and unreasonable given your Executive Order of 18 January 2011 on regulation. In that order, you lay out numerous sensible principles of regulation that administrative agencies must follow. The CMS competitive bidding program violates all of the principles, especially the principles of transparency and of basing regulations on the best available science. Indeed, the current program is the antithesis of science and contradicts all that is known about proper market design.

---

[4] The views expressed here are our own and do not represent the views of any organization. None of us are paid to provide our views; we provide our independent views as experts who understand the advantages and challenges of market methods. For additional information please contact Peter Cramton, University of Maryland, pcramton@gmail.com.

[5] For example, "Laurence Wilson, a Medicare official overseeing the bidding process, said his agency is `very pleased' with how the nine-city rollout has gone and has no major changes scheduled before the new system starts in large cities." (CaliforniaWatch.org, 26 May 2011, Christina Jewett)

Since the writing of our letter in September, several of us have done further detailed scientific study to explore the properties of the CMS design and contrast it to modern efficient auctions. The findings are dramatic and illustrate the power of science to inform auction design. Specifically, auction theory was used to demonstrate the poor incentive properties of the CMS design and how these lead to poor outcomes.[6] Laboratory experiments were conducted at Caltech and the University of Maryland that demonstrate that these poor theoretical properties are observed in the lab. Moreover, simple efficient auctions perform extremely well in both theory and in the economic laboratory.[7] Finally, some of us have studied extensively the Medicare setting, speaking with hundreds of DME providers and beneficiaries, and have developed a modern auction design for the setting that is consistent with the best practice and market design methodologies.[8]

This design step was far from a theoretical exercise. On 1 April 2011, a Medicare auction conference was conducted at the University of Maryland to show how the modern auction methods work and to conduct a nearly full-scale demonstration of an efficient auction. Over 100 leaders in government and the DME industry attended the event. The results are documented at www.cramton.umd.edu/health-care, including a complete video and transcript of the event. The mock auction achieved an auction efficiency of 97%.[9] In sharp contrast, the CMS auction exhibited efficiencies well below 50% in the laboratory, even in simplified environments. Despite these sharp results, CMS continues to assert that all is well and that no significant changes are required.

The problems with the CMS auction grow worse upon closer inspection. The complete lack of transparency is inappropriate for a government auction. For example, we now know that CMS has almost complete discretion with respect to setting prices in a nontransparent way. CMS can and did manipulate the quantities reported by bidders during qualification.[10] These quantities are essential to forming the supply curve, which ultimately sets the price in each product-region. To this date we know little about what quantities were used in the price

---

[6] Cramton, Peter, Sean Ellermeyer, and Brett E. Katzman, "Designed to Fail: The Medicare Auction for Durable Medical Equipment," Working Paper, University of Maryland, March 2011. [pdf]

[7] Merlob, Brian, Charles R. Plott, and Yuanjun Zhang, "The CMS Auction: Experimental Studies of a Median-Bid Procurement Auction with Non-Binding Bids," Working Paper, California Institute of Technology, April 2011. [pdf]

[8] Cramton, Peter, "Auction Design for Medicare Durable Medical Equipment," Working Paper, University of Maryland, June 2011. [pdf]

[9] Cramton, Peter, Ulrich Gall, and Pacharasut Sujarittanonta, "An Auction for Medicare Durable Medical Equipment: Evidence from an Industry Mock Auction," Working Paper, University of Maryland, April 2011. [pdf]

[10] Tom Bradley, Chief of the Medicare Cost Estimates Unit at the Congressional Budget Office, describes this manipulation in his remarks at the Medicare Auction Conference at minute 49:13, "What they did was they selected bidders up to the quantity well over the amount needed to clear—to serve the given market, and then from that vastly expanded pool, they selected the median. Fundamentally, that's an arbitrary number. It's a number that bears no relationship to the market clearing price." [pdf]

determination. As a result of this lack of transparency, it is now clear that the CMS design is not an auction at all but an arbitrary pricing process.

Given that nine months have passed and given the disregard by CMS of the market design recommendations received from recognized experts, we call upon the executive branch to direct CMS to proceed otherwise. We also ask that you consider supporting new legislation that requires the Secretary of Health and Human Services to conduct efficient Medicare auctions, consistent with the best practice and the best science.

There is much at stake. Unfunded Medicare expenses are estimated to be in the tens of trillions of dollars going forward. Medicare is unsustainable without the introduction of innovative market methods and other fundamental reforms. The DME auction program represents an important first step, especially since failures in homecare will inevitably lead to much more expensive care at the hospital.

We believe that proper design and implementation of market methods can bring gains to all interested parties: Medicare beneficiaries benefit from receiving the quality goods and services they need, Medicare providers benefit from being paid sustainable competitive prices for the quality goods and services they deliver, taxpayers benefit by paying the least-cost sustainable prices for these products, and CMS benefits from the numerous efficiencies that result from conducting an effective program, largely free of complaint, fraud, and corruption.

We believe that government plays an important role in establishing effective market rules. For the Medicare auctions, the impediments to reform are not special interests or a lack of knowledge, but bureaucratic inertia. This is an important setting and change of the prior administration's regulations is required to contain Medicare costs and assure quality services for Medicare beneficiaries. We are counting on your leadership to bring effective reform.

Many thanks for your thoughtful consideration of our concerns.

Sincerely, [244 auction experts]

The market design process

In sharp contrast to the design process followed by CMS, the modern auction design process begins with the government staff engaging auction experts via competitive RFP to help them in the auction design. Just as you would consult a bridge expert to build a bridge or consult a dermatologist to address a skin disease it makes sense to engage auction experts. Missing this initial step was I believe a main source of the CMS disaster that still continues after over ten years.

Once experts are engaged, the market design process involves a number of interrelated steps:

- Use auction theory to inform the basic design
- Use simulation to test the design
- Test critical features of design in experimental lab
- Test design in pilots in the field

- *With each step refine the design to better achieve objectives*

CMS failed at all five steps. The only one that was at least partially followed was the conduct of pilots in the field. However, CMS neglected to scientifically design the pilots and then examine the results of the pilots to refine the design to better achieve its objectives.

A Medicare auction based on best-practice and science

I now summarize the Market Pricing Program (MPP), which is a reformed Medicare auction based on best-practice and science. The draft legislation for Market Pricing Program is not being refined and should be introduced in the House soon.

The proposed design addresses each of the flaws identified in the CMS design.

The most important flaws: non-binding bids and the median pricing rule are easily fixed. First, we make bids binding commitments. This is done through rigorous qualification one month before auction. A deposit proportional to a bidder's capacity is made before bidding begins. Once the auction concludes the bid deposit is returned to losing bidders and transformed in to a performance deposit for winning bidders. Again the performance deposit is proportional to a winner's capacity. Second, the median pricing rule is replaced with the clearing price rule: the price that each winner is paid is the clearing price—the price at which supply and demand balance. More specifically the price is set at the last excluded bid, the lowest price that is rejected. In this way, the auction establishes a clearing price for each product in each region.

The MPP uses a simple and effective auction mechanism, the simultaneous descending clock auction (Ausubel and Cramton 2004, 2006). The auction format has been used for over ten years in many industries with great success and it was the approach used in the mock auction conducted at the Maryland Auction Conference in April 2011. The format is a generalization of an English auction, as Sotheby's or eBay would conduct, but the many related products are auctioned together.

There is one price "clock" for each product category and region. The prices initially are high. For each category and region and its associated price, the bidder says "in" or "out." If "out" the bidder provides an exit bid indicating the price the bidder wishes to drop out of the category. Once a bidder drops out of a category, the bidder cannot return to the category. This is called the activity rule. It prevents the bid-sniping that is often seen on eBay.

The auctioneer lowers the price on each category for which there is excess supply. Again the bidders respond with "in" or "out." This process continues until supply and demand balance for all product categories.

Importantly, in the MPP, capacities are based on historic supply. This avoids the arbitrary pricing of the CMS format in which opaque decisions of CMS determine the prices.

An incumbent's capacity is its historic supply. Each qualified new provider is assigned a capacity of 1 block (either ½ percent or 1 percent depending on the particular product-region). Winning a particular product-region comes with both rights and obligations. Any provider may supply more than its capacity, but its capacity is assumed in matching supply and demand and in setting performance obligations.

Notice that capacities are determined in objective manner. The auction administrator (CMS) has no discretion in setting capacity and therefore price.

In the MPP format auction, competition comes from new entry. Given the relatively low entry costs, especially from providers supplying in other regions or other categories, ample new entry can be expected at prices above competitive levels. Further the financial guarantees (bid deposits) ensure that bidders will exit at prices below competitive levels.

Winning bidders and prices are determined as follows. As soon as supply falls to 100 blocks or less, the clearing price is set at the exit bid of the bidder that caused supply to fall to 100 or less. Each bidder still "in" wins its capacity. If supply is less than 100 blocks, the blocks won are scaled up to 100/Supply.

An important advantage of the MPP approach is that post-auction competition motivates quality. After the auction, the winners compete for Medicare beneficiaries by offering quality products and services. Medicare beneficiary choice is an important driver to motivate providers to provide high quality products and services.

An important simplification in the MPP design is that prices of individual products are relative to price of the lead product in the category. This avoids the bid-skewing problem observed in the CMS pilots (Katzman and McGeary 2008). In qualification stage, for each category of interest, each bidder reports the relative price of each product as a percentage of lead product's price. The auctioneer computes the relative price index for each product in each category as the capacity-weighted average of bidder reports. The auction then determines the price of each lead product in each category; other individual product prices are determined from the relative price index.

A sample reporting form is shown in the table below for the Walkers category.

Category: Walkers and Related Accessories							
HCPCS Code	HCPCS Code Description	Definition of a Bidding Unit	Current Ohio Fee Schedule Allowable	Index to Lead Product Price at Current Fee Schedule	Enter for each Non-Lead Product the % Relationship You Believe the Product should have to the Lead Product Price		Example of Pricing (You Enter Lead Product Price You Believe is Appropriate)
							Enter Price Below
E0143 **LEAD PRODUCT***	Walker, Folding, Wheeled, Adjustable Or Fixed Height	purchase of one (1) new item	$92.49	100.0%	N/A		
E0144	Walker, Enclosed, Four Sided Framed, Rigid Or Folding, Wheeled With Posterior Seat	purchase of one (1) new item	$288.20	311.6%			$0.00
E0135	Walker, Folding (Pickup), Adjustable Or Fixed Height	purchase of one (1) new item	$69.34	75.0%			$0.00
E0154	Platform Attachment, Walker, Each	purchase of one (1) new item	$54.24	58.6%			$0.00
E0155	Wheel Attachment, Rigid Pick-Up Walker, Per Pair	purchase of one (1) new item	$24.28	26.3%			$0.00
E0149	Walker, Heavy Duty, Wheeled, Rigid Or Folding, Any Type	purchase of one (1) new item	$202.00	218.4%			$0.00

Product categories, products, and regions should be re-optimized for new approach. Indeed the product and region configuration should be revisited periodically, but especially during the initial design process. The approach can easily accommodate more product categories, products, and regions. The optimization of categories, products, and regions is an essential task in the product design step with major input from HME providers.

My recommended approach is to auction a representative 10% each year for two-year contracts. This approach does not disrupt the market structure excessively. Indeed to minimize disruption, it is desirable to auction only about two categories in each region (one-fifth of the current total). This keeps the emphasis on establishing competitive prices, rather than excluding suppliers.

Under this approach of auctioning a representative 10% each year for two-year contracts, 20% of the product-regions are under auction contracts. Only winning suppliers of the particular product-region may supply the particular product in the particular region. It is this possibility of exclusion that motivates competitive bids.

What happens for the remaining 80% of product-regions that are not under auctioned contracts? For these non-auctioned product-regions, we apply competitive bid-based prices using a simple econometric model. Thus, 100% of the product-regions are competitively priced: 20% directly from the last two auctions and the remaining 80% indirectly from an econometric model that estimates the competitive price for the particular product-region from the two most recent annual auctions.

Each year a different 10% is auctioned, so over 10 years each product-region is auctioned once. To be clear, in the auctioned product-regions, only the winners can supply during the two-year commitment

period. However, the winners still must compete to supply within the product-region. For the non-auctioned product-regions, any certified supplier can supply. This competition in non-auctioned product-regions is a strong motivator for a provider to supply quality goods and services.

The MPP auction format is easy for bidders to understand and participate in. This was demonstrated in the mock auction conducted at the Medicare Auction Conference in April 2011. First, the price process is easy for bidders to manage. Bidders interested in a particular category can focus on that category in all regions. Similarly, bidders interested in a particular region can focus on that region in all categories. Bidders with other interests can focus on the most relevant categories and regions for them. Second, proxy bids allow small bidders to bid as in a sealed-bid auction. That is, they can enter in the first round, their minimum price for each product-region they desire. There is no need from them to track every round of the dynamic bidding process.

The Market Pricing Program is highly transparent. Qualification and financial guarantees are reported publicly well in advance of the auction. Capacities are determined in objective manner. The auction rules including product definitions, performance obligations, and penalties are known two months before auction. Following each bidding round, excess supply at current prices as well as prices for next round are publicly announced. Winners and quantity won are immediately announced at the conclusion of the auction. Finally, an independent market monitor reports on auction outcomes and any problems within two weeks of the auction end.

The use of an independent market monitor is an important innovation that began in electricity markets following the California Electricity Crisis of 2000-2001. The original auction rules were designed by a committee of stakeholders and included numerous market flaws that ultimately led to market failure in 2001. An independent market monitor would have identified the market flaws in advance of the crisis and even if it did not, the independent market monitor would have identified the crisis and quickly propose fixes to get the market on track. Now all electricity markets in the US have an independent market monitor. The independent market monitor is one reason the US electricity markets, following the California Electricity Crisis, have been so successful and have become models of electricity market design worldwide.[11]

The proposed design is based on proven methods. The clearing-price approach is commonly used across all countries and industries, including health care. The design emphasizes beneficiary choice, which helps avoid the race to the bottom by motivating quality goods and services. Transparency is another

[11] One of the important duties of the independent market monitor is to prepare an annual State of the Market Report. This report provides extensive analysis of the operation of the market and critically evaluates the markets performance. Any problematic issues are raised and solutions are proposed. The reports of the independent market monitor of PJM, the largest US electricity market, provide an excellent example of the reports and the roles, see http://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2012.shtml. The contrast between the PJM state of the market report and that of CMS' (2012) annual report is dramatic. The CMS report provides no critique of the market, is not independent, is not conducted by experts, and does not raise or resolve the numerous serious issues raised by hundreds of prominent auction experts. Interestingly, the PJM report is produced by a small business of 25 employees (30 including contractors). CMS has 4,477 employees.

key feature of the MMP auction. Transparent auctions are commonly used in highly successful government auctions.

In sharp contrast, the CMS design with non-binding bids and the median pricing rule has never been used in any country or industry. CMS stands alone defending a mechanism with proven and well-understood failings.

Through theory, experiment, and practice, the Market Pricing program has been shown to achieve least-cost sustainable prices. An important advantage of the approach is that it motivates efficient least-cost providers that supply quality goods and services.

Figures don't lie, but liars do figure

Throughout my testimony and indeed throughout the vast set of materials that I cite I make every effort to be transparent, objective, and honest. Truth matters. All that I say is readily confirmed from the supporting papers, data, video, and transcripts that I provide at the end of my testimony. I mention this at the outset, because CMS has not used the same standard in the discourse on this issue. CMS conceals the data and makes misleading statements. When CMS uses numbers I am reminded of the saying that my Dad taught me: "Figures don't lie, but liars do figure." I elaborate on two important examples in the appendix. Below I briefly describe CMS' claim of substantial cost savings. These cost savings are a gross overestimate. The details are in the appendix and the supporting documents

Myth: CMS' Competitive Bidding Program will save $42.8 billion over ten years

The 18 April 2012 HHS Press Office (2012) News Release states, "According to the report, the program saved $202 million in its first year in nine metropolitan statistical areas – a reduction of 42 percent in costs and, as the program expands under the Affordable Care Act and earlier law, it could save up to $42.8 billion for taxpayers and beneficiaries over the next 10 years." This is the second sentence of the News Release and the "$42.8 billion savings" also is in the subtitle, "*Health care law expands second round, program will save up to $42.8 billion"*, so it is clear that the number is central to the argument.

Given that DME Competitive Bidding is an important pilot program within CMS, an organization with 4,477 employees and a budget of $606.9 billion, you may think that there is a lot of analysis in the $42.8 billion number. There is not. Here is the logic: The total DME market currently is about $10 billion a year. A savings of 42 percent is estimated in the pilot program's first year, which covers about 9 percent of the US. Assume the same savings percentage throughout the country and assume the same savings in each year for ten years: then the roughly $100 billion spend gets cut by 42 percent or $42 billion. Easy.

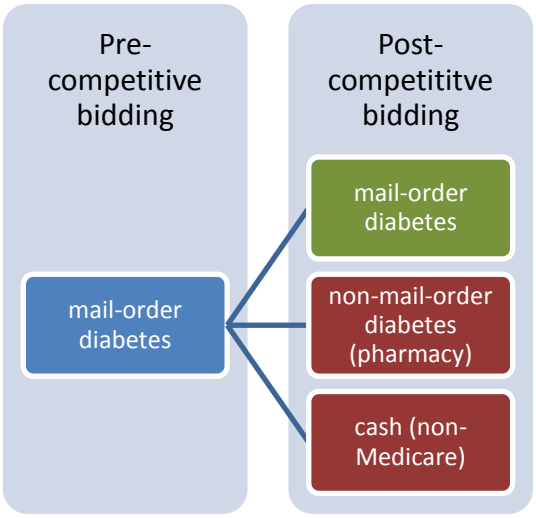
Here is the problem: the $202 million savings number on which the house of cards is based is wrong. I do not have time to go into all of the serious problems with this number and others but let's look at one important example, which will be instructive: diabetes test strips.[12] This is one of the most important products in the DME program. It accounts for $51 million of the $202 million total savings for all of DME. However, the $51 million number is "***simply not mathematically possible***." (Milam 2012, p.2, bold-italics in original)

[12] I urge the Committee to look at Lewis (2012) for a critique of CMS' methodology.

Thomas Milam, an expert in the diabetes market and a member of the DMEPOS Competitive Bidding Program Advisory and Oversight Committee (PAOC), gives the correct calculation for diabetes test strips in his letter of 10 September 2012. There are basically three sources of "savings" in the $51 million:

1. Beneficiaries getting the test strips they need from a mail-order provider at the reduced post-competitive-bidding price. Both Medicare and the beneficiaries enjoy this savings.
2. Substitution to non-mail-order. Beneficiaries are unable to get the test strips they need for their particular glucometer and so go the retail pharmacy for supplies. Non-mail order is not included in the DME Competitive Bidding Program and the prices are much higher, $37.55 rather than $14.65, a 256% increase. These much higher prices are born by both Medicare and the beneficiary. Both are made worse off.
3. Substitution to cash. Alternatively the beneficiary may decide that it is too difficult or impossible to get test strips from a contract supplier that CMS would allow. Instead the beneficiary pays cash, likely at the retail pharmacy price that is much higher than the mail-order DME Competitive Bidding price. CMS records this as a huge savings. This denial of access results in zero cost to Medicare, where in the pre-CB period Medicare paid the vast majority of the cost of the beneficiaries test strips. The result is a large apparent savings for Medicare and a large cost increase for the beneficiary.

These three possibilities are depicted below:



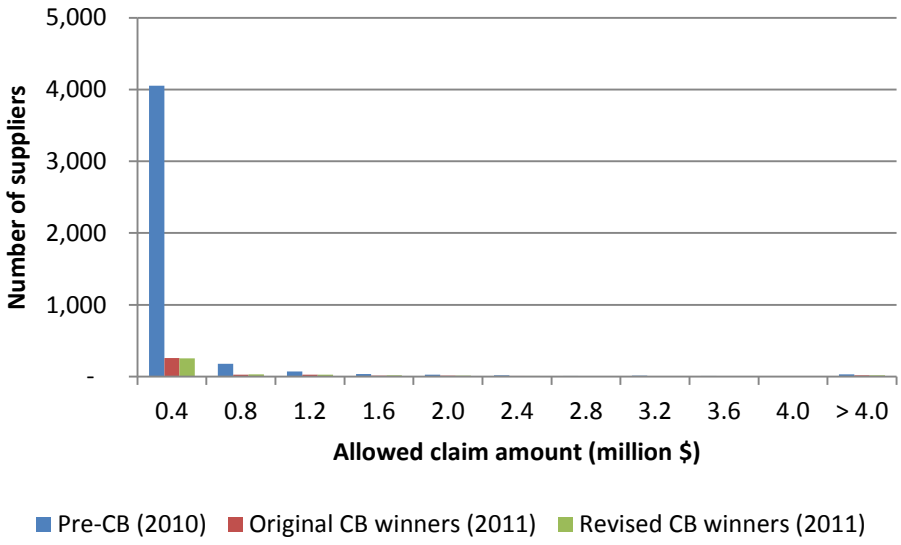
As shown in the figure only the first of the three possibilities—allowed mail-order diabetes supply—results in a cost savings. The other two possibilities—substitution to allowed non-mail order or cash purchase—result in cost increases either for both the Medicare and the beneficiary or just the beneficiary. The CMS data, the little that is available, confirm extensive substitution away from allowed mail-order (Milan 2012). As a result, the $51 million cost savings is a gross overestimate.

For the other product categories access also is seriously impaired. The Accredited Medical Equipment Providers of America (AMEPA 2012) shows a 35% decrease in portable auction allowed post-CB; similarly, there is a 65% reduction in walkers allowed post-CB. At best these declines, which are comprehensively shown in Cramton (2012), show that the cost savings is a gross overestimate. However,

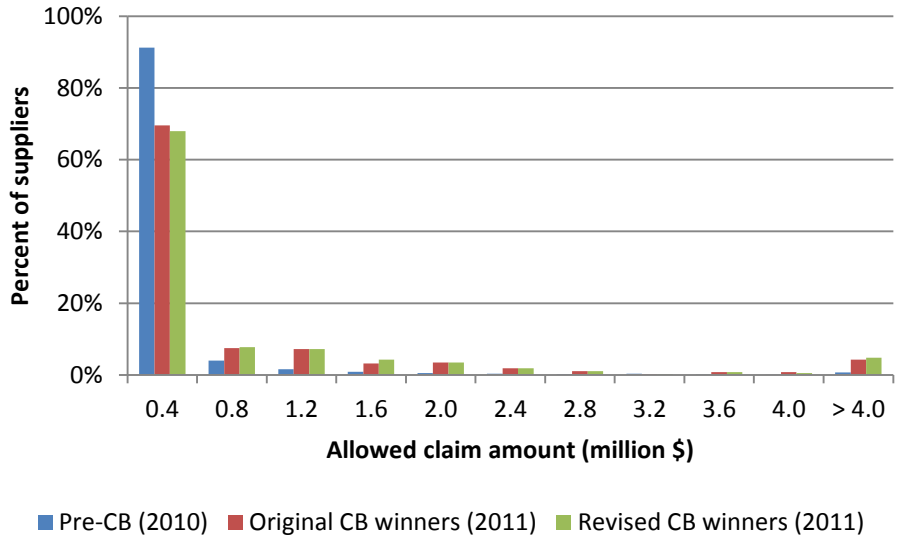
it is also likely, based on CMS data reported in Cramton (2012), that the loss in access has serious adverse health consequences. I am awaiting further data from CMS to confirm this result.

CMS' flawed program obliterates thousands of efficient small businesses

The chart below shows the number of contract suppliers both pre- and post-competitive bidding by supplier size, where supplier size is measured as by the company's total allowed claim amount for the year. I show the number of firms pre-CB (2010), post-CB based on the posting of winners in November 2010, as well as a revised posting of CB winners in the beginning of 2011. About 4,000 small businesses are wiped out under competitive bidding, over 90%.



The next chart looks at the percent of supplies by size. As we can see, the vast majority of supplers both pre- and post-CB are small businesses. This is not surprising given the low economies of scale and the service advantage stemming from local service.



From the above it is clear that the current CMS competitive bidding program is bad for small businesses. However, it is bad for small and big businesses—all efficient (low cost) providers are harmed by the status quo. They either get thrown out of the market altogether or are forced to supply at a price that may well be below their cost.

The great injustice is that these businesses—both small and large—are not being wiped out because they cannot compete, but because the CMS auction is so flawed. The auction does not select the low-cost providers, but rather the suppliers that were "successful" in the low-ball bidding. This inevitable will lead to a "race to the bottom"—a frequent problem in poorly administered procurement auctions. Here the race would be especially rapid but for CMS' ability to manipulate the auction prices in a non-transparent way as describe earlier.

It breaks my heart to learn of the demise of one business after another as a result of unsustainable prices. Just a few days ago, I received an email from Esta Willman (2012) saying that she was shutting down her small business. For twenty-five years she and her husband have run Medi-Source Equipment & Supply, providing life-supporting oxygen and other durable medical equipment to beneficiaries in a rural area in San Bernardino County, California. I remember well having dinner with Esta in the Fall of 2010. We discussed the fatal flaws in the CMS program and how they could be readily fixed with modern auction methods. As a PAOC member, she was fascinated by the prospect of reform and fought for it until the end. The only thing she can cherish now is the love of the many beneficiaries who received quality supplies and services from her company for so many years and the knowledge that she worked tirelessly and without pay to reform the system that killed her company. Now the beneficiaries she served are without any local supplier of oxygen and other home medical equipment.

Is it wise for Congress to include specific design requirements and timetables in the reform legislation?

Generally, I am opposed to including specific design details and timetables in enabling auction legislation. Congress is not well-versed in the details of auction design and there is a real danger that including details in the legislation will hard-wire a flaw that then is difficult to change.

However, in the case of the DME auction, the administering agency, CMS has demonstrated gross incompetence with respect to auction design and implementation. CMS settled on a design roughly ten years ago and has pursued that flawed design through several pilots with only minor ineffective tweaks. For example, following pilots in early 2000, CMS switched from an average-price methodology to a median-price methodology, a switch that actually exacerbates the terrible incentive problem created by the poor pricing rule in conjunction with non-binding bids. Then when the 2008 Round 1 was held in pilot regions, Congress had to step in just days after the pilot and by law cancel the auction. As a result, CMS made a few minor tweaks such as tightening the *floor* on bids. The fact that CMS had to but in a tight floor on bids is clear evidence of strong incentives for low-ball bidding. Procurement auctions routinely have a *ceiling* on bids—or a clause to allow the buyer to reject all bids—to protect the buyer from an absence of competition, but floors are extremely rare.

It is not the case that complex auctions cannot be implemented effectively by government agencies. The agencies simply have to follow best-practice and science. This can be accomplished at extremely low

cost by retaining the services of experts. The best approach for such retention is through competitive bid. Indeed, very early on in this project in the Fall of 2010, I sent CMS a number of sample Request for Proposals from several governments seeking to retain expert auction services. I did this because CMS clearly did not even know that expert services were required, let alone how to acquire them.

Indeed, as I have previously testified before Congress, some agencies have done an outstanding job in designing and implementing complex auction markets (Cramton 2011d). The two leading examples are the Federal Communications Commission—spectrum auctions since 1994—and the Federal Energy Regulatory Commission—electricity markets since about 1998. In both cases, the agencies have sought and received significant expert advice.

In my most recent testimony to Congress (July 2011) on auction issues—the incentive auction legislation that Congress ultimate passed later that year—I said, "The incentive auction is complex. Its design is best left to experts. The FCC has an outstanding record of innovation in the auction arena and requires only limited guidance from Congress on the basic objectives and principles. It would be a mistake for Congress to prevent the FCC from adopting the best auction design by mandating auction details and other restrictions in the enabling legislation.

"Given the FCC's outstanding record in designing and implementing auctions, the legislation should provide the FCC with broad auction authority, focused on basic objectives and principles. To me, there are two key objectives: 1) transparency and 2) economic efficiency. What is needed is a statement of these objectives. Including specific details is apt to do more harm than good." I stand by those words.

In sharp contrast to the FCC and FERC, given CMS' dismal track record (see also Coulam et al. 2009), it is not only wise but essential that Congress specify each of the key features of an efficient auction based on best-practice and sciences together with a rigid and aggressive timetable. Doing less will lead to continued failure and will retard the use of effective market methods in other health care applications. The cost of such a failure likely is measured in trillions of dollars looking forward.

Congress must act

Unfortunately I am powerless to change this terrible injustice. Only Congress can insist on Medicare auction reform. By passing the Market Pricing Program, Congress can ensure an efficient, transparent, and fair market for durable medical equipment. The market—rather than illustrate government failure—can become a brilliant example of the government using market mechanisms in health care for the benefit of society. Taxpayers, providers, and beneficiaries will applaud your insistence.

References

All of the references below are available at www.cramton.umd.edu/papers/health-care, including complete data sets, data visualizations, transcripts, videos, and other supporting material.

AMEPA (2012), "Reductions in Allowed Claims Prove Limited Patient Access."

Ausubel, Lawrence M. and Peter Cramton (2004) "Auctioning Many Divisible Goods," (with Lawrence M. Ausubel) *Journal of the European Economic Association*, 2, 480-493, April-May 2004.

Ausubel, Lawrence M. and Peter Cramton (2006) "Dynamic Auctions in Procurement," in Nicola Dimitri, Gustavo Piga, and Giancarlo Spagnolo (eds.) *Handbook of Procurement*, Cambridge, England: Cambridge University Press, 2006.

Ayres, Ian and Peter Cramton (2010) "Fix Medicare's Bizarre Auction Program" (with Ian Ayres), Opinion Pages, *New York Times*, 30 September 2010.

CMS (2012) "Competitive Bidding Update—One Year Implementation Update," DMEPOS Competitive Bidding Program Update, Centers for Medicare and Medicaid Services, 17 April 2012.

Coulam, Robert, Roger Feldman, and Bryan Dowd (2009) "Don't Forget to Save Medicare: Competitive Pricing, Not Price Controls," American Enterprise Institute for Public Policy Research, 17 July 2009.

Cramton, Peter (2010a) Email Correspondence to Jonathan Blum on Sample RFPs for Auction Services, 23 and 27 October 2010.

Cramton, Peter (2010b) Email Correspondence to Jonathan Blum on Second Data Request, 5 and 17 November 2010 and 12 December 2010.

Cramton, Peter (2010c) Letter to Deputy Administrator Blum (CMS) on Medicare Auction, 5 November 2010. [Data request, 17 November 2010]

Cramton, Peter (2011a) "Auction Design for Medicare Durable Medical Equipment," Working Paper, University of Maryland, March 2011.

Cramton, Peter (2011b) Competitive Bidding Congressional Update—What You Need to Know, Longworth House Office Building, sponsored by U.S. Representative Sue Myrick (R-NC), 24 May 2011.

Cramton, Peter (2011c) "Early Pilots of Medicare Auctions Bring No Solace to Auction Experts" (with Brett E. Katzman), *The Economists' Voice*, July 2011.

Cramton, Peter (2011d) "Incentive Auctions and Spectrum Policy," Testimony of Peter Cramton before the United States House Committee on Energy and Commerce, 15 July 2011. [Responses to questions]

Cramton, Peter (2011e) "Medicare Auction Failure: Early Evidence from the Round 1 Rebid," Working Paper, University of Maryland, June 2011. [Raw Data and Tableau Packaged Workbook, Tableau Reader, FOIA Data Request, Follow-up FOIA Data Request]

Cramton, Peter (2011f) "Medicare Auction Reform," a 12-minute video with problems and solution from leading experts, July 2011.

Cramton, Peter (2012) "The Hidden Costs of a Flawed Medicare Auction," University of Maryland, January 2012. [Data, Follow-up FOIA Data Request]

Cramton, Peter, Sean Ellermeyer, and Brett E. Katzman (2012) "Designed to Fail: The Medicare Auction for Durable Medical Equipment" (with Sean Ellermeyer and Brett E. Katzman) Working Paper, University of Maryland, August 2012.

Cramton, Peter, Ulrich Gall, and Pacharasut Sujarittanonta (2011) "An Auction for Medicare Durable Medical Equipment: Evidence from an Industry Mock Auction", Working Paper, University of Maryland, June 2011. [Appendix, Data visualization and raw data, Tableau Reader]

Cramton, Peter and Brett E. Katzman (2010) "Reducing Healthcare Costs Requires Good Market Design" *The Economists' Voice*, 7:4, October 2010.

HHS Press Office (2012), "New Report: Competitive bidding saving money for taxpayers and people with Medicare," News Release, U.S. Department of Health and Human Services, 18 April 2012.

Katzman, Brett and Kerry Anne McGeary (2008) "Will Competitive Bidding Decrease Medicare Prices?" *Southern Economic Journal*, 74:3, 839–856.

Letter from 167 Concerned Auction Experts on Medicare Competitive Bidding Program to Chairman Stark, Health Subcommittee, Ways and Means, U.S. House of Representatives, 26 September 2010.

Letter from 244 Concerned Auction Experts on the Medicare Competitive Bidding Program to President Obama, the White House, 17 June 2011.

Lewis, Al (2012) Letter to Health and Human Services Secretary Sebelius on Program Evaluation Methodology, August 2012.

Market Pricing Program Summary, July 2012.

Medicare Auction Conference (2011) Inn & Conference Center, University of Maryland, 1 April 2011. Video of entire conference (6 segments, 260 minutes) [Transcript]

Merlob, Brian, Charles R. Plott, and Yuanjun Zhang (2012) "The CMS Auction: Experimental Studies of a Median-Bid Procurement Auction with Non-Binding Bids," *Quarterly Journal of Economics*, 127, 793-782, May 2012.

Milam, Thomas J. (2012) Letter to Peter Cramton on the costs of competitive bidding in diabetes, 10 September 2012.

Plott, Charles R. (2012) "Statement of Charles R. Plot, Professor of Economics and Political Science, California Institute of Technology," U.S. House of Representatives Committee on Small Business, 11 September 2012.

Willman, Esta E. (2012) Letter to US House of Representatives Committee on Small Business, 11 September 2012.

Appendix: Supporting material for the written record

On independence

I emphasize my independence because I have been told several times by Congressional staff that CMS staff have attempted to discredit my work by characterizing me as a "hired gun" to special interests or a "consultant seeking to sell auction services to CMS." These CMS staff should be ashamed at their baseless assertions. My work has been totally without pay aside from my first 12 hours on this project more than two years ago. I have spent well over 1000 hours on this project at huge opportunity cost to myself. I have more auction work from governments and companies at professional rates than I can handle. I would be delighted not to work for CMS on the design or implementation of Medicare auctions. If I were motivated by money, then I would have stopped my work on this project over one year ago, certainly by mid-April of 2011, when it became clear that CMS had no intention to reform their competitive bidding program.

On attempts to collaborate with CMS in Fall 2010

During the Fall of 2010 and the Spring of 2011, I worked hard to constructively collaborate with CMS on both the auction design flaws of the current program and how best to remedy these flaws. I believe my efforts are well documented in two short email streams (Cramton 2010a,b). My efforts included not only working with CMS but educating other government agencies that I thought would be helpful in assisting CMS in improving their program.

Figures don't lie, but liars do figure

Here are two examples, both of which come from the same CMS (2012) report that presents an update on the competitive bidding program after the first year in the nine regions that were under the pilot program. Both are "4 Pinocchio" statements.[13] The statements are made with the intent to deceive and the misrepresentation is central to the writer's argument.

Myth 1: CMS' DME program had 151 complaints out of 127,466 calls in its first year

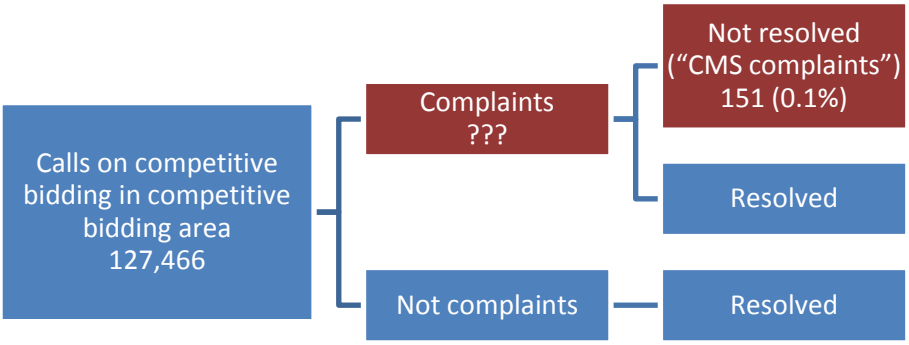
The summary of CMS' 17 April 2012 "Competitive Bidding Update—One Year Implementation Update" (CMS 2012) states, "CMS real-time claims monitoring has found no disruption in access to needed supplies for Medicare beneficiaries. Moreover, there have been no negative health care consequences to beneficiaries as a result of competitive bidding. CMS claims monitoring results are supported by the fact that the agency has largely received routine beneficiary or caregiver inquiries with only minimal complaints." These are sentences two-four in the lead-off one paragraph summary of the report, so it is clearly central to the writer's argument that the program is successful.

---

[13] This is my judgment based on the *Washington Post*'s Pinocchio Test: 1 Pinocchio = "Some shading of the facts. Selective telling of the truth. Some omissions and exaggerations, but no outright falsehoods." 2 Pinocchio = "Significant omissions and/or exaggerations. Some factual error may be involved but not necessarily. A politician can create a false, misleading impression by playing with words and using legalistic language that means little to ordinary people." 3 Pinocchio = "Significant factual error and/or obvious contradictions." 4 Pinocchio = "Whoppers". What makes a "Whopper" is the statement is made with the intent to deceive and the misrepresentation is central to the speaker's or writer's argument.

I will talk about access and health consequences in the second myth. For now let's focus on the evidence CMS gives for the "minimal complaints" claim.[14] CMS received 127,466 calls on the competitive bidding program in the competitive bidding areas during 2011, the first year of the program. This I do not dispute. But they go on and highly that of these 127,466 calls only 151 were complaints. This does not pass the laugh test.[15] The reason is simple: even if CMS was that perfect agency that never receives a complaint, they should have recorded well in excess of 151 complaints due to errors in coding the calls.

To explain the "151 complaints" we must look more closely at what CMS means by a "complaint" which Encarta Dictionary defines as "a statement expressing discontent or unhappiness about a situation." CMS' definition is different: "inquiries that express dissatisfaction with the program and cannot be resolved by a call center operator." The CMS logic then looks like this:



The complaint number is rendered completely meaningless, because CMS fails to define what is meant by "resolved by a call center operator." For example, the definition of resolved may be, "the call center operator hung up on the beneficiary or the beneficiary hung up on the operator." That is certainly one way to "resolve" calls. Consider our perfect agency that never has a complaint, but miscodes non-complaint calls as complaints 1% of the time (that is there is minimal coding error). If the agency received 127,466 calls then it would wrongly code 1,275 of the calls as complaints, vastly more than CMS, who presumably does receive calls from unsatisfied beneficiaries about the DME program.

The bottom line: The only thing we learn from the "151 complaints" is that CMS knows little about numbers or thinks its audience is so naïve about numbers to accept such a claim without laughing.

Myth 2: CMS' Competitive Bidding Program will save $42.8 billion over ten years

This example is presented in the main body of my testimony. Here I simply want to point out one weakness of the data used in Cramton (2012), which is acknowledged on page 3 of the report: "If there is a lag between the date of service and the date of receipt by CMS, then I would be underreporting 2011 claims by the length of the lag. For example, if the average lag between date of service and receipt by CMS is 30 days, then I should scale up claims by 365/(266 – 30) = 365/236. The size of the reductions

[14] It is on the bottom of page 5 and the top of page 6 (CMS 2012).

[15] I remember laughing out loud on 5 April 2011 when CMS Director Jonathan Blum triumphantly announced "only 43 complaints" out of many tens of thousands of calls on competitive bidding in the first quarter of 2011. My judgment: 4 Pinocchios.

in claims is so large that it seems implausible that this could be the result of long lags in the receipt of claims." To address this limitation, I have for many months sought through a Freedom of Information Request the same data fields but for the entire 2011 year and from an up-to-date claims database. Thus, far my request for data has not been filled. My request and the subsequent response is here.

On the competitive procurement of expert auction services

See Cramton (2010a). In my email I included four complete RFPs and stated, "The best approach for identifying the best experts is a well-written RFP and a competitive procurement of services. I have attached three recent RFPs as examples from three different industries (energy, telecommunications, and transportation) and two different countries (U.S and Canada). I encourage your staff to begin looking at these examples and think how they may need to be adjusted for the Medicare application in the event that CMS should decide to seek expert help in designing and implementing auction programs. Typically, this is done as a two-step process (design RFP followed by implementation RFP) and sometimes three steps (design RFP, testing RFP, and finally implementation RFP). The testing step in the three-step version is advisable when especially innovative auction methods are used, or the stakes are extremely high. Then experimental laboratory tests are desirable to test and fine-tune particular elements of the design.

I am sending these materials now, since I believe preparation of a suitable RFP is on the critical path to moving forward with improvements to your auction programs. Please let me know if you have any questions." I never received a reply and CMS made no effort to seek expert auction advice via RFP or otherwise.

On CMS' grade in auction design and implementation relative to other agencies

See Cramton (2011d). "Among all US agencies, the FCC gets the highest grade on auction design and implementation. At the other extreme is CMS, which gets the lowest grade among all US agencies for its design and implementation of the Medicare auctions for durable medical equipment. The CMS auction program is certain to fail at considerable cost to taxpayers and Medicare beneficiaries if Congress does not act to replace the current CMS auction with an efficient auction. Unlike the FCC, CMS requires much more direction from Congress. CMS over the last ten years has so far only demonstrated an inability to design and conduct auctions. Specific recommendations to the administration and Congress were provided in a June 2011 letter to President Obama from 244 concerned auction experts, including four Nobel laureates in economics. A wealth of supporting documents on this matter is available at www.cramton.umd.edu/papers/health-care. Like incentive auctions, Medicare auctions are of great importance to this committee; like incentive auctions, Congressional action is required and the proper course is clear."