

26 September 2010

The Honorable Pete Stark  
Chairman  
Subcommittee on Health  
Committee on Ways and Means  
239 Cannon Building  
Washington, DC 20515

Dear Chairman Stark:

We are economists, computer scientists, and operation researchers with expertise in the theory and practice of auctions.<sup>1</sup> We write to express our concerns with the Medicare Competitive Bidding Program for Durable Medical Equipment operated by the U.S. Department of Health and Human Services. We believe that competitive bidding can be an effective method of controlling Medicare costs without sacrificing quality. However, the current auction program has flaws that need to be fixed before it can achieve the objectives of low cost and high quality.

#### **Four main problems**

The first problem is that the auction rules violate a basic principle of auction design: *bids must be binding commitments*. In the Medicare auction, bidders are not bound by their bids. Any auction winner can decline to sign a supply contract following the auction. This undermines the credibility of bids, and encourages low-ball bids in which the supplier acquires at no cost the option to sign a supply contract.

The second problem is a flawed pricing rule. As is standard in multi-unit procurement auctions, bids are sorted from lowest to highest, and winners are selected, lowest bid first, until the cumulative supply quantity equals the estimated demand. What is odd is that rather than paying winners the clearing price (the last-accepted bid), the auction pays winners the unweighted median among the winning bids. This is unique in our collective experience. The result is that fifty percent of the winning bidders are offered a contract price *less than* their bids. This median pricing rule further encourages low-ball bids, since a low bid guarantees winning, has a negligible effect on the price and gives the supplier a free option to sign a supply contract. Even if suppliers bid their true costs, up to one-half of the winning suppliers would reject the supply contract and the government would be left with insufficient supply. Others may accept the contract and cross-subsidize public patients with the revenue from private patients, or just take a loss. This pricing rule does not develop a sustainable competitive bidding process or healthy supplier pool.

The third problem arises from the use of composite bids, an average of a bidder's bids across many products weighted by government estimated demand. This provides strong incentives to distort bids away from costs—the problem of bid skewing. Bidders bid low on products where the government overestimated demand and high on products where the government underestimated demand. As a result, prices for individual products are not closely related to costs. Bid skewing is especially

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<sup>1</sup> The views expressed here are our own and do not represent the views of any organization. For additional information please contact [Peter Cramton](mailto:pcramton@gmail.com), University of Maryland, [pcramton@gmail.com](mailto:pcramton@gmail.com).

problematic in this setting, since the divergence between costs and prices likely will result in selective fulfillment of customer orders. Orders for low-priced products are apt to go unfilled.

The fourth problem is a lack of transparency. It is unclear how quantities associated with each bidder are determined. These quantities are set in a non-transparent way in advance of the auction. Bids from the last auction event were taken in November 2009, and now more than ten months later, we still do not know who won contracts. Both quality standards and performance obligations are unclear. This lack of transparency is unacceptable in a government auction and is in sharp contrast to well-run government auctions such as the Federal Communications Commission spectrum auctions.

This collection of problems suggests that the program over time may degenerate into a “race to the bottom” in which suppliers become increasingly unreliable, product and service quality deteriorates, and supply shortages become common. Contract enforcement would become increasingly difficult and fraud and abuse would grow.

### **Key features of a good auction design**

Competitive bidding techniques have improved dramatically over the past twenty years and especially in recent years. Complex auctions like the Medicare competitive bidding program can be designed to achieve the objectives of low cost and high quality with little implementation risk. Successful government auctions emphasize transparency, good price and assignment discovery, and strategic simplicity. The result is sustainable long-term competition among suppliers which reduces costs while maintaining quality.

We recommend that the government fix the flaws in the current auction program and develop a new design that emphasizes the key features of successful designs. Implementation of the current design will result in a failed government program. There is no need for a bad outcome. With state-of-the-art auction methods and careful implementation, the auction program can succeed in reducing costs while maintaining quality—a win-win for both taxpayers and Medicare beneficiaries.

Respectfully submitted,

*[The following are economists, computer scientists, and operation researchers with expertise in the design of auctions and market mechanisms. Information on each of us, including our auction-related research, can be found with an Internet search of name and affiliation.]*

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## **Excerpts from the Email Replies of Auction Experts Asked to be Signatories of Letter to Chairman Stark**

Thanks for taking this on. What an awful design.

Naturally, I would be delighted to be a signatory. I cannot imagine an "auction" conducted along the lines of this so-called "Competitive Bidding" proposal. What a mess!

Yes, certainly, this sounds like a real disaster.

Not just "yes" but "hell, yes."

I am glad that you spotted a serious problem with the mechanism before it became implemented on the large scale.

This certainly seems like a crazy mechanism.

Unbelievable.

Sounds like a problem waiting to happen.

Looks to be totally messed up—which could easily be shown in an experiment (were data sometimes speak much louder than words).

It is pretty shocking—this will just lead to massive fraud and corruption.

Unbelievable they are using those flawed rules with all the knowledge at hand.

What a bizarre pricing rule. Usually the design mistakes creep in from assuming people will play truthfully, but here the auction doesn't make sense even if bidders are truthful.

Similar bidding programs have been used in Italy and elsewhere in Europe with disastrous results!

What a mess.

Scary stuff!

We actually have a similarly grotesque design in a few public procurement auctions in Europe. Because of the winner's curse, not the best but the median bid (or some variant of this) wins 'because the best bidder typically underestimates true costs'.

Wow! Yes, I'm happy to sign. Glad you guys are paying attention.

This is an amazingly bad system, seemingly designed to guarantee failure.

This almost sounds unbelievable.

The auction will have the undesirable effects that you list and possibly more that will be an embarrassment to the government should it be implemented in the form that is outlined. I think that a few controlled experiments could clearly illustrate the problems.

Who thought up the proposed program and what was he/she thinking?

It is evident from your statement that the governments proposed auction design is deeply flawed.

Indeed, the current bidding system is very badly designed.

Ridiculous! Yes, of course I'm happy to be a signatory.

The proposed auction has so many obvious flaws that it is difficult to conceive that CMS is pushing ahead with it.