26 October 2010

The Honorable Frank Pallone, Jr.
Chairman, Subcommittee on Health
House Committee on Energy and Commerce
237 Cannon House Office Building
Washington, DC 20515

Dear Congressman Pallone:

We are economists, computer scientists, and operations researchers with expertise in the theory and practice of auctions.\(^1\) 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.

We applaud your leadership in supporting the Medicare Competitive Bidding Program. There is no flaw with the legislation. The flaws rest entirely with the implementation details that were wisely delegated to the administering agency. Unfortunately, it is now clear that the agency’s implementation is fatally flawed and that your leadership is again required to insist that the auction program be restructured to address the flaws. Otherwise, the current program will lead to a “race to the bottom” fostering fraud and corruption. New Jersey beneficiaries, indeed all Medicare beneficiaries, rely on your leadership to insure a good design that will provide quality product and service with sustainable savings.

On 14 October 2010, CMS acknowledged problems with the Round 1 bidding results in their explanation for delaying the announcement of winners: “We wanted to provide an update on all the current information we have at this time concerning the announcement of the final list of the contract suppliers. In testing a new program integrity tool on the list of potential competitive bidding suppliers, a number of red flags were raised that require further examination before CMS announces the final list.” Unfortunately, while acknowledging the history of fraud under the program, CMS went on to announce: “We expect to move forward with the implementation of the program very soon, beginning with the announcement of the contract suppliers and continuing our aggressive education and outreach activities for beneficiaries and other stakeholders.” This haste to implement results that raised many red flags with respect to program integrity seems contrary to the public interest and common sense.

**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.

---

\(^1\) The views expressed here are our own and do not represent the views of any organization. For additional information please contact Peter Cramton, University of Maryland, pcramton@gmail.com.
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 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.]

Dilip Abreu  Princeton University  Eric Budish  University of Chicago  Gregory M. Duncan  Brattice Group
Itai Ashlagi  MIT  James Bushnell  Iowa State University  Jeffrey Ely  Northwestern University
Susan Athey  Harvard University  Estelle Cantillon  Université Libre de Bruxelles  Itay Fainmesser  Brown University
Lawrence M. Ausubel  University of Maryland  Andrew Caplin  New York University  Emel Filiz-Ozbay  University of Maryland
Chris Avery  Harvard University  Marco Celentani  Universidad Carlos III  Dan Friedman  University of California Santa Cruz
Ian Ayres  Yale University  Kalyan Chatterjee  University of Illinois  Theodore Groves  University of California San Diego
Kerry Back  Rice University  Yeon-Koo Che  Columbia University  Lawrence R. Glosten  Columbia University
Patrick L. Bajari  University of Minnesota  In-Koo Cho  University of Chicago  Oliver Hart  University of Chicago
Sandeep Baliga  Northwestern University  Peter Coles  Harvard University  Philip A. Haile  Yale University
Michael Ball  University of Maryland  Peter Cramton  University of Maryland  Milton Harris  University of Chicago
David Baron  Stanford University  Vincent Crawford  University of California Santa Cruz  Ronald M. Harstad  University of Wisconsin
Michael Baye  Indiana University  Jacques Cremer  University of Chicago  Robert Hauswald  American University
Coleman Bazelon  Brattice Group  Robert Day  University of Connecticut  Thomas W. Hazlett  George Mason University
Dirk Bergemann  Yale University  Luciano I. de Castro  Northwestern University  Jason Hartline  Northwestern University
Gary A. Biglaisier  University of North Carolina  Francesco Decarolis  University of Wisconsin  John Hatfield  Stanford University
Sushil Bikhchandani  UCLA  George Deltas  University of Wisconsin  Donald Hausch  University of Wisconsin
Kenneth Binmore  University College London  Peter DeMarzo  Stanford University  Robert Hauswald  American University
Andreas Blume  University of Pittsburgh  Raymond J. Deneckere  University of Wisconsin-Madison  Thomas W. Hazlett  George Mason University
Simon Board  UCLA  Nicola Dimitri  University of Siena  Karla Hoffman  George Mason University
Gary Bolton  Pennsylvania State University  David Dranove  Northwestern University  William W. Hogan  Harvard University
Tilman Borgers  University of Michigan  Marc Dudey  Rice University  Charles A. Holt  University of Virginia
Ali Hortacsu  
University of Chicago

Daniel Houser  
George Mason University

Nicole Immorlica  
Northwestern University

R. Mark Isaac  
Florida State University

Philippe Jehiel  
Paris School of Economics

Thomas D. Jeitschko  
Michigan State University

John Kagel  
Ohio State University

Charles Kahn  
University of Illinois

Ehud Kalai  
Northwestern University

Michael L. Katz  
University of California Berkeley

Brett E. Katzman  
Kennesaw State University

Paul R. Kleindorfer  
University of Pennsylvania

Kala Krishna  
Pennsylvania State University

Michael Landsberger  
University of Haifa

John Ledyard  
California Institute of Technology

Jonathan D. Levin  
Stanford University

David K. Levine  
Washington University in St. Louis

Gregory Lewis  
Harvard University

Tracy R. Lewis  
Duke University

Kevin Leyton-Brown  
University of British Columbia

Yuanchuan Lien  
Hong Kong Univ. of Science & Tech.

Barton L. Lipman  
Boston University

John List  
University of Chicago

Jeffrey K. MacKie-Mason  
University of Michigan

W. Bentley MacLeod  
Columbia University

George J. Mailath  
University of Pennsylvania

Timothy Mathews  
Kennesaw State University

Steven A. Matthews  
University of Pennsylvania

David McAdams  
Duke University

Mark J. McCabe  
University of Michigan

Flavio Menezes  
University of Queensland

Paul Milgrom  
Stanford University

John Morgan  
University of California Berkeley

Stephen Morris  
Princeton University

Herve Moulin  
Rice University

Roger Myerson  
University of Chicago

Dana S. Nau  
University of Maryland

Axel Ockenfels  
University of Cologne

Shmuel Oren  
University of California Berkeley

Michael Ostrovsky  
Stanford University

Erkut Ozbay  
University of Maryland

Marco Pagnonzi  
University of Naples

Mallesh Pai  
University of Pennsylvania

Ariel Pakes  
Harvard University

Thomas Palfrey  
California Institute of Technology

David Parkes  
Harvard University

Motty Perry  
University of Warwick

Nicola Persico  
New York University

Martin Pesendorfer  
London School of Economics

Michael Peters  
University of British Columbia

Charles R. Plott  
California Institute of Technology

David Porter  
Chapman University

Robert Porter  
Northwestern University

Andrew Postlewaite  
University of Pennsylvania

Marek Pycia  
UCLA

S. Raghavan  
University of Maryland

Eric Rasmusen  
Indiana University

Stephen J. Rassenti  
Chapman University

Philip J. Reny  
University of Chicago

John Riley  
UCLA

Michael Riordan  
Columbia University

Jacques Robert  
HEC Montreal

Donald John Roberts  
Stanford University

Gregory Rosston  
Stanford University

Al Roth  
Harvard University

John Rust  
University of Maryland

Maher Said  
Washington University in St. Louis

Larry Samuelson  
Yale University

William Samuelson  
Boston University

Tuomas W. Sandholm  
Carnegie Mellon University

Mark A. Satterthwaite  
Northwestern University

Thomas C. Schelling  
University of Maryland

William Schulze  
Cornell University
Alan Schwartz
Yale University

Jesse Schwartz
Kennesaw State University

Michael Schwarz
Yahoo! Labs

Ilya Segal
Stanford University

Yoav Shoham
Stanford University

Martin Shubik
Yale University

Matthew Shum
California Institute of Technology

Andrzej Skrzypacz
Stanford University

Joel Sobel
University of California San Diego

Tayfun Sonmez
Boston College

Richard Steinberg
London School of Economics

Steven Stoft
Global Energy Policy Center

Jeroen M. Swinkels
Northwestern University

Robert J. Thomas
Cornell University

Utku Unver
Boston College

Eric Van Damme
Tilburg University

Timothy van Zandt
INSEAD

S. Viswanathan
Duke University

Rakesh Vohra
Northwestern University

Michael Waldman
Cornell University

Mark Walker
University of Arizona

Ruqu Wang
Queen’s University

Steven R. Williams
University of Illinois

Bart Wilson
Chapman University

Robert Wilson
Stanford University

Catherine Wolfram
University of California Berkeley

Dennis Yao
Harvard University

Pai-Ling Yin
MIT

Jaime Zender
University of Colorado

Jeroen M. Swinkels
Northwestern University

Michael Waldman
Cornell University

Mark Walker
University of Arizona

Ruqu Wang
Queen’s University

Steven R. Williams
University of Illinois

Bart Wilson
Chapman University

Robert Wilson
Stanford University