

Medicare Auction Update

sponsored by
Representative Sue Myrick (NC-R)

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www.cramton.umd.edu

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Details at www.cramton.umd.edu/papers/health-care

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U.S. Senate Briefing

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It's unwise to pay too much, but it's unwise to pay too little, too. When you pay too much you may lose a little money...that's all. When you pay too little, you sometimes lose everything because the thing you bought was incapable of doing the thing it was bought to do. The Common Law of Business Balance prohibits paying a little and getting a lot...it can't be done. If you deal with the lowest bidder, it is well to add something for the risk you run, and if you do that, you will have enough to pay for something better.

– John Ruskin

8 February 1819 – 20 January 1900

Summary

Bad news: CMS is doing an atrocious job with the DME auction program

Good news: Competitive bidding, if done right, can result in large cost reductions without sacrificing quality

Motivation

Unfunded Medicare expenses

About \$70 *Trillion!*

Diabetes Medicare costs

2007 Total Estimated Healthcare Costs for Medicare Beneficiaries with Diabetes

\$115 billion

In-Hospital, ER, Outpatient and Home Care Costs

\$24.2 billion
Prescription Medications

\$14.3 billion
Physician Office
Visits & Tests

\$2.5 billion
DMEPOS
Test Supplies
& Equipment

Managing health at home
and keeping out of the
hospital is essential to
controlling costs

(Assumes 9 million beneficiaries with diabetes; extrapolated from 2007 Lewin Group data)

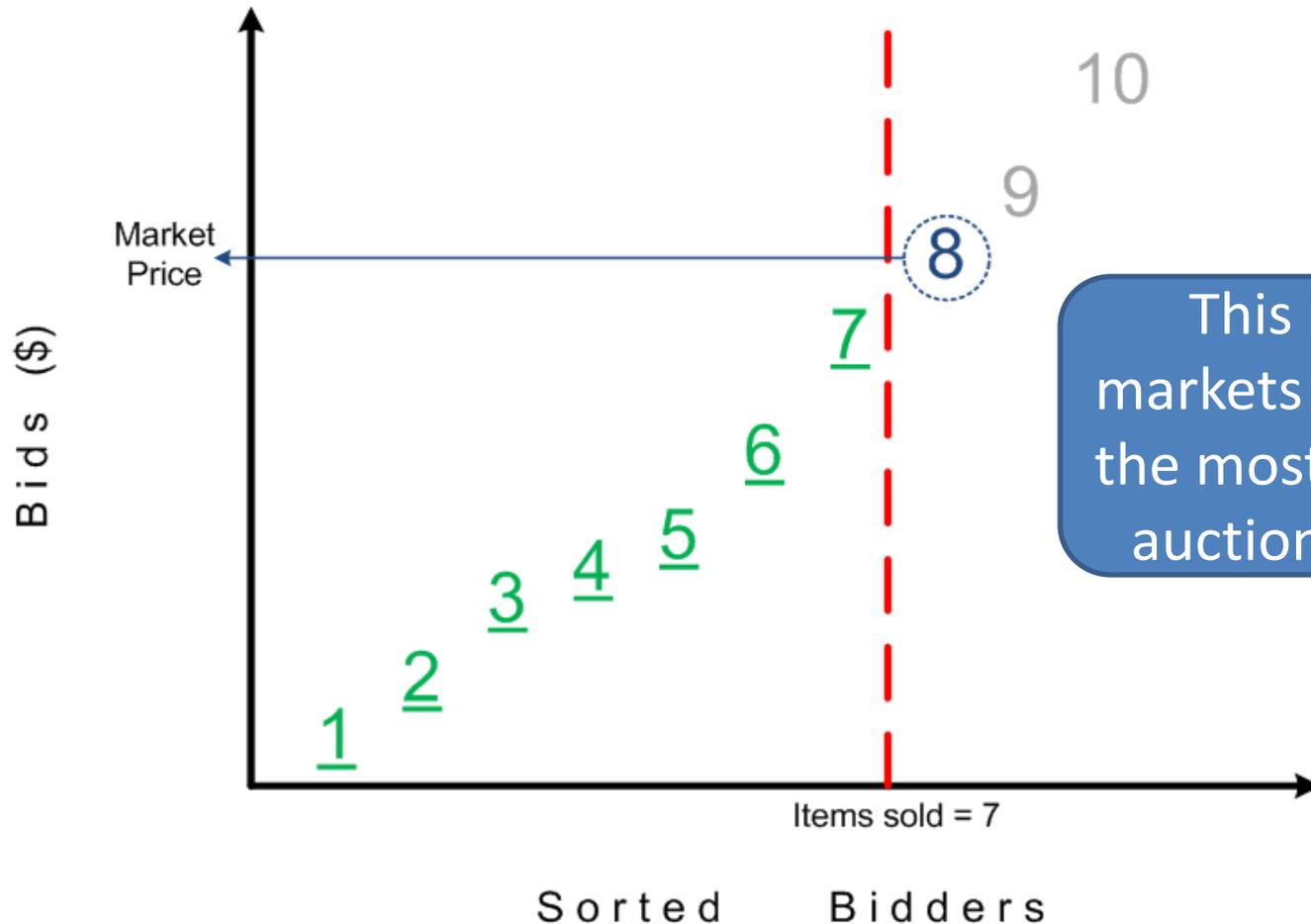
Fact: CMS design is fatally flawed

Complete consensus among
auctions experts

*No expert thinks that CMS is
doing this right!*

An efficient “clearing-price auction”:
demand = 7; price = 8th lowest bid

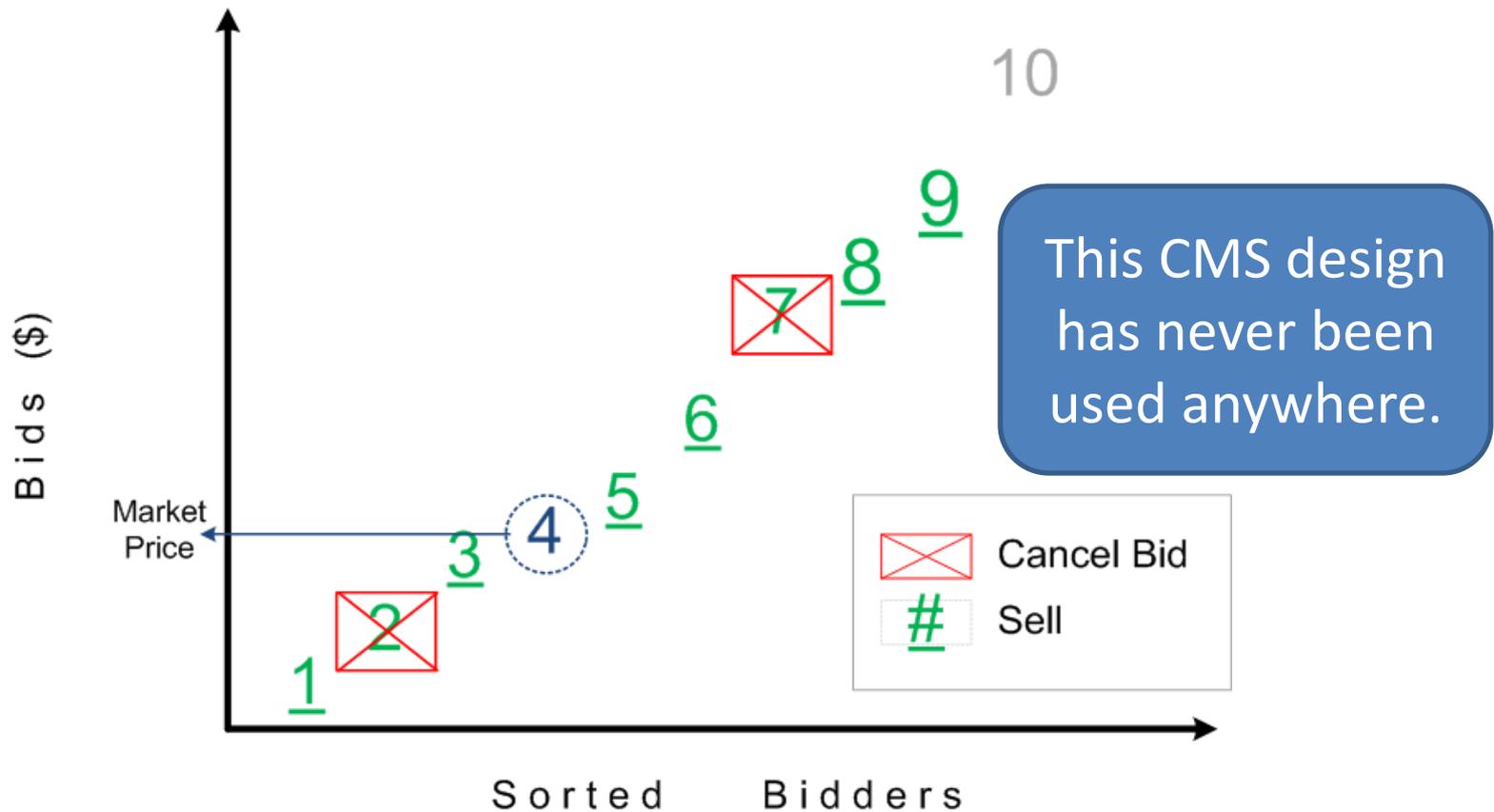
FIRST EXCLUDED BID



This is how markets work; it is the most common auction format.

Inefficient CMS auction:
demand = 7; price = 4th lowest bid

MEDIAN PRICE WITH CANCELATION



median pricing

+

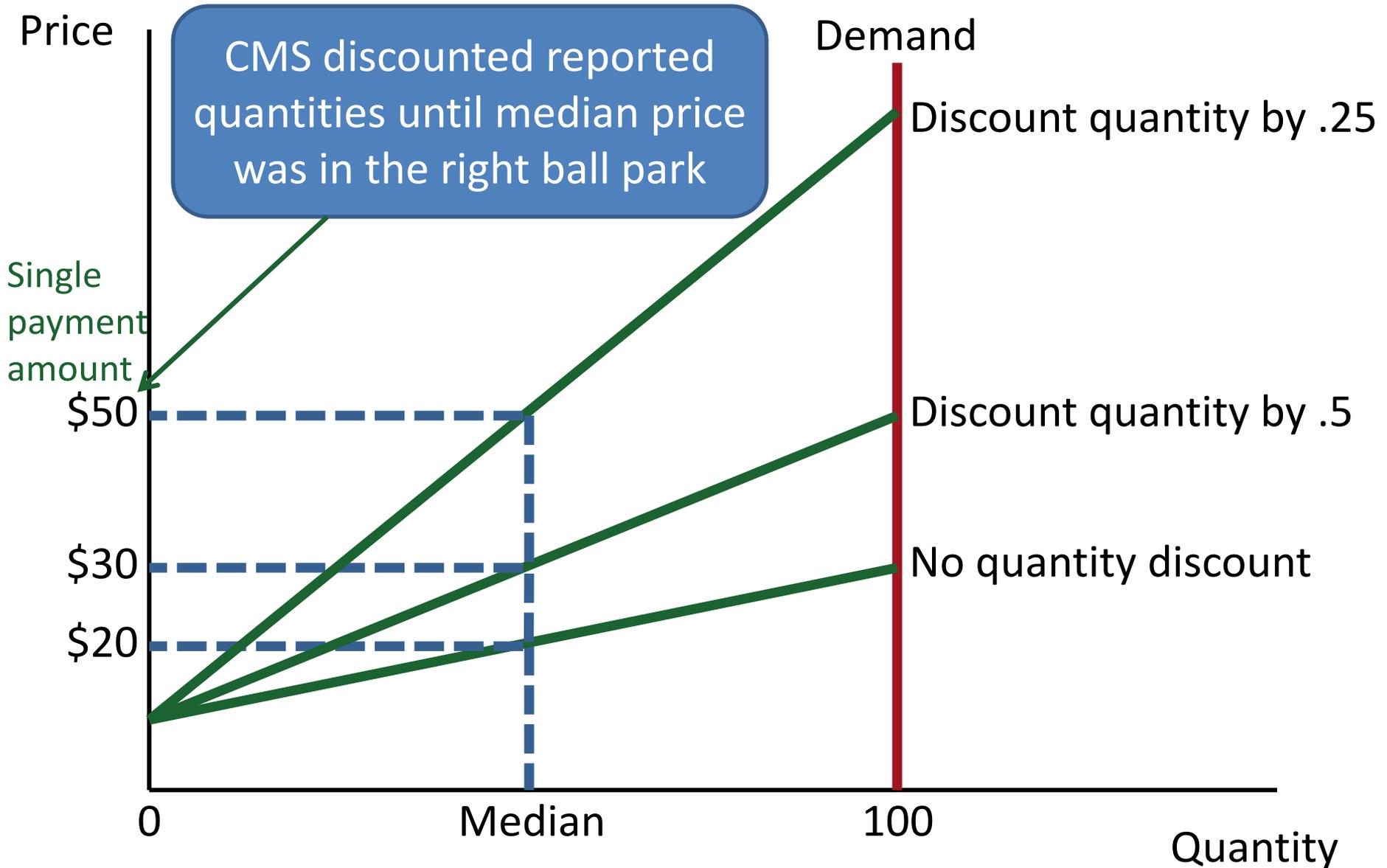
non-binding bids

= low-ball bids

Why no train wreck yet?

Lack of transparency lets CMS manipulate prices until they are in the realm of reason

Arbitrary pricing from manipulated quantities



Evidence of program failure

- Theory
- Experiment
- Field

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Fact

- Modern auction methods apply to health care
- Auction theory and practice is a well-established discipline within science and industry involving:
 - Economists
 - Computer scientists
 - Engineers

Obama Executive Order of 18 Jan 2011

Section 1. General Principles of Regulation. (a) Our regulatory system must protect public health, welfare, safety, and our environment while promoting economic growth, innovation, competitiveness, and job creation. ***It must be based on the best available science.*** It must allow for public participation and an open exchange of ideas. ***It must promote predictability and reduce uncertainty. It must identify and use the best, most innovative, and least burdensome tools for achieving regulatory ends.*** It must take into account benefits and costs, both quantitative and qualitative. ***It must ensure that regulations are accessible, consistent, written in plain language, and easy to understand.*** It must measure, and seek to improve, the actual results of regulatory requirements.

Market Design Process

- Engage auction experts to build auction markets, just as you would consult a bridge expert to build a bridge, or consult a dermatologist to address a skin disease
- Engage industry and government in a collaborative effort to design the auction market

Market Design Process

- 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***

Medicare auction conference

- Demonstrated the feasibility of proven methods
 - Despite the complex bidding environment, the mock auction achieved extremely high levels of economic efficiency (97%)
 - Participants were able to understand the auction format and platform, and successfully execute bidding strategies for 6 products in 9 regions, all in a matter of hours
- ***To avoid program failure, the Medicare auctions must be reformed to take advantage of modern auction methods***

Medicare auction conference: highlights

- Tom Bradley

Chief, Medicare Cost Estimator, CBO

- “Program will fail with near certainty”
- “Program results in arbitrary pricing”

- Evan Kwerel

Senior Economic Advisor, Federal Communications Commission

- “When the gov’t tries to go it alone it doesn’t work”

- Nancy Lutz

Program Director, Economics, National Science Foundation

- “If the auction design doesn’t work in theory, it won’t work in practice”
- “If the auction design doesn’t work in the experimental lab, it won’t work in practice”

Independent market monitor

- An independent market monitor plays an important role in the development of well-functioning markets, especially complex markets
- Market monitor provides an independent voice and expertise to identify problems and identify solutions quickly
- Market monitors are used in many complex auction markets; for example following the 2000-2001 California Energy Crisis, all electricity markets in the US have independent market monitors; the approach has proven highly effective

Efficient auctions are better than repeal alone

- Repeal alone is not a coherent strategy
 - Eliminates badly flawed auction, which resulted in arbitrary pricing and winners
 - ✘ Adversely impacts budget
 - ✘ No sustainable pricing mechanism
 - ✘ Large regulatory uncertainty
- Repeal and replacement with an efficient auction is a coherent strategy
 - Eliminates badly flawed auction, which resulted in arbitrary pricing and winners
 - Improves U.S. budget
 - Sustainable pricing mechanism
 - Efficient providers are able to earn profits and grow
 - Regulatory risk is minimized
 - Market gradually evolves to efficient market structure
 - Medicare beneficiaries get quality services at lowest sustainable price
 - All stakeholders benefit except inefficient providers

Next steps

Going forward

- Draft legislation for efficient Medicare auctions
- Educate stakeholders on benefits of an efficient auction
 - April 1, Medicare auction conference
 - May 24, Hill briefing on Medicare auctions
 - Summer, Hill and administration briefings
- CBO score of an efficient auction legislation, recognizing savings
- Pass bipartisan legislation to repeal and replace with an efficient auction as part of deficit
- Design and development until first-half 2013
- Implementation of initial auction in first-half 2013 with contracts starting 1 July 2013

Savings to taxpayers from
efficient auction vs. status quo

Hidden costs of current CMS approach

- Failure of supply
 - Substitution from lower cost DME supply to hospital supply, possibly after complications
- Destruction of efficient suppliers (inefficient market structure)
- Higher costs following failure of market
- Substitution from low-priced mail order diabetes to high-priced pharmacy diabetes
- More costly administration of current system
 - Handling of problems, avoiding shortage, higher fraud

Reduced costs from efficient auction

- Least-cost sustainable prices
- Promotion of efficient suppliers (efficient market structure)
- Promotion of innovation through product optimization
- Elimination of products with poor benefit/cost performance
- Expansion of products with high benefit/cost performance
- More rapid introduction of electronic systems and paperwork reduction

Repeal and Reform Statutory Language

Statutory language: Repeal and replace

- Repeal the Round 1 (Rebid) and restore prices to the administrative fee schedule effective on the day this new law is enacted
- Develop efficient auctions as detailed on the following pages

Note: The following has more detail than would appear in the actual legislation. This detail is provided to give the reader a better sense of how an efficient auction would work. Some of the specific numbers given are meant as examples and could be adjusted in the actual legislation. Further details are provided in

[“Auction Design for Medicare Durable Medical Equipment,”](#)

Working Paper, University of Maryland, March 2011. [[.pptx](#)]

Responsibilities of the Secretary

- The Secretary shall, through the Office of Health Reform, and within three months of bill passage through a competitive process, contract with an Auction Expert for a four-year term to assist the Secretary in the design, implementation and functioning of all competitively bid markets and products
 - Minimum qualifications of the Auction Expert
 - PhD education in field directly relevant to auction design (economics, business, engineering);
 - At least five years experience in the design and implementation of complex auction markets with total volumes in excess of \$10 billion
 - At least three references indicating successful design and implementation of auction markets
 - Auction Expert may not be a current government employee, a current or former CMS employee, nor a current or former CMS contractor that has been involved in competitive bidding or administrative pricing work before the passage of this law
- The Secretary shall provide the Auction Expert with access to all confidential information on the relevant markets

Responsibilities of the Secretary cont.

- The Secretary shall, through the Office of the Assistant Secretary for Planning and Evaluation, and within three months of bill passage through a competitive process, contract with a Market Monitor for a four-year term to oversee the design, implementation and functioning of all competitively bid markets and products
 - Minimum qualifications of the Market Monitor:
 - PhD education in field directly relevant to auction design (economics, business, engineering);
 - At least five years experience in the design and implementation of complex auction markets with total volumes in excess of \$10 billion
 - At least three references indicating successful design and implementation of auction markets
 - Market Monitor may not be a current government employee, a current or former CMS employee, nor a current or former CMS contractor that has been involved in competitive bidding or administrative pricing work before the passage of this law
- The Secretary shall provide the Market Monitor with access to all confidential information on the relevant markets

Responsibilities of the Secretary cont.

- The Secretary shall ensure that the auction design is developed through a collaborative, transparent process, involving all stakeholders (DMEPOS suppliers, CMS, beneficiaries), under the guidance of the Auction Expert and the oversight of the Market Monitor, to establish market rules to set least-cost, sustainable, competitively bid prices, and protect beneficiary access to and choice of quality DMEPOS products, services, and suppliers
- The Secretary shall ensure the design and development process is then implemented according to the following timeline:
 - In the first-half of 2013, auction a representative 20% of the market with two-year contracts starting on 1 July 2013, with the remaining 80% of the market served by any qualified provider supplying DMEPOS at the prices determined by the auction, adjusted for regional characteristics
 - In the first-half of each year thereafter, auction a representative 10% of the market with two-year contracts starting on July 1 of the year of auction, with other market areas not under contract, DMEPOS is supplied by any qualified provider at the prices determined from the auction, adjusted for regional characteristics

Responsibilities of the Secretary cont.

- The Secretary shall ensure that the market has these basic features
 - In all regions currently under auction contract, DMEPOS supply shall be limited to auction winners, with the sole exception of a brief product-specific grandfathering period set by the Secretary on recommendation of the Auction Expert with oversight of the Market Monitor
 - The adjustment of prices in regions not under contract shall be based on a statistical model, using best practice and science, to account for region-specific cost differences among regions for each product category
 - The statistical model used to adjust prices in regions not under contract shall be set by the Secretary on recommendation of the Auction Expert with oversight of the Market Monitor, with price adjustments made on an annual basis; the model shall be reviewed and improved every two years
 - The capacity of each bidder for each product category in each region shall be set in an objective and unambiguous way based on historic supply
 - For each bidder who have not supplied in the product-region over the last three years, capacity is set at ½% for product-regions with more than 40 qualified new entrants and 1% for product-regions with less than 40 qualified new entrants
 - For each existing supplier in the product-region, capacity is set at the larger of the new entrant capacity and its weighted share of supply for the product category in the region in the prior 3 years:

Q_y = share of volume in category supplied in year y as a percentage of the total volume

$$\frac{40}{7} \text{ year-1} + \frac{20}{7} \text{ year-2} + \frac{10}{7} \text{ year-3}$$

Responsibilities of the Auction Expert

- The Auction Expert, within two months of appointment, shall develop a draft auction design; the draft design provides the starting point of the collaborative rule-making process
- The Auction Expert shall lead a design conference, convened by the Secretary within six months of the Auction Expert's appointment, including DMEPOS suppliers, beneficiaries, CMS and other agency personnel, to collaboratively design an efficient auction consistent with best science and practice
 - The design conference shall include a demonstration of the preliminary auction design, in which attendees participate in a mock auction
 - Working groups on key issues shall be formed by the Auction Expert
 - Each working group shall provide a report to the Auction Expert within two months of the design conference, summarizing the outcome of the group's deliberations
- Within three months of the design conference the Auction expert shall develop a final auction design recommendation
- The Auction Expert shall lead a bidder conference in advance of each auction to educate participants on all aspects of participation in the market
- The Auction Expert shall report directly to the Secretary of Health and Human Services

Responsibilities of the Market Monitor

- The Market Monitor shall review the draft auction design within one month of its release
- The Market Monitor shall participate in the design conference and provide a review of the design at the conference
- The Market Monitor shall provide quarterly reports, beginning with the report on the draft design, to the Secretary on the development and operation of the market, identifying potential problems and recommending solutions
- The Market Monitor shall review the final auction design recommendation within one month of its release
- The Market Monitor shall provide an annual report to the Congress on the development and operation of the market, identifying potential problems and recommending solutions
- The Market Monitor shall report directly to the Secretary of Health and Human Services

Transparent market

- The DMEPOS market shall be established by the Secretary upon recommendation of the Auction Expert and review by the Market Monitor
- To ensure Transparency, all elements of the market, from financial and performance standards, to capacity allocation, to bidding rules, to winning awards, to performance accountability policies, shall be publically disclosed, with one exception:
 - Following each round of an auction aggregate supply will be revealed rather than the individual bids; however, individual bids will be disclosed within one day of the conclusion of the auction
- State-of-the-art methods will be developed to promote the timely disclosure of essential market elements in simple and powerful data bases, including the use of data visualization tools to access data
- The annual auction shall occur over the Internet using a commercial auction platform over one or more days, but not more than five days total, with about 4 to 8 rounds of bidding per day

- Timing of required minimum elements to be disclosed

Three months before auction date:

Detailed unambiguous auction rules, including

- Financial and other qualification requirements
- Algorithm for determining bidder capacities, based on historic supply
- Algorithms for determining winners and prices as a function of bids
- Performance obligations, guarantees, and penalties
- Products and product and categories
- Lead product for each category
- Regions to be auctioned

Two weeks before auction:

Identity of qualified bidders eligible to participate, including

- Bidder capacities
- Bidder eligibility by product-region
- For each bidder and product-region, the price, reported at qualification of each product for the region, relative to the lead product (that is, the price of the lead product = 100%)
- The price index for each product-region is formed as the capacity weighted-average of bidder reports of relative prices at qualification, and is used to determine the price of each product in product category, as the market clearing price of the lead product times the price index for the particular product-region

- Timing of required minimum elements to be disclosed (cont.)

During auction round:

- Time of end of round
- History of prior rounds including aggregate supply at end of round price for each product-region by round

Within fifteen minutes of end of each auction round:

- Round results, including
- Aggregate supply for each product-region at end of round price
- The bidder's own supply for all prices from start price to end of round price for each product-region
- Revised schedule of rounds for the rest of the bidding day

Within fifteen minutes of the end of the final auction round:

- Final results, including
- A list of winning bidders and market clearing prices for each product-region
- For each bidder and each product region, the bidder's supply for all prices from the start price to the market clearing price

Within one week after the end of the final auction round:

- List of performance guarantees received from each winning bidder, including a list of winners who failed to provide performance guarantee within one week of auction close and therefore forfeited their bid guarantee

Efficient market

- To ensure long-run efficiency with least-cost sustainable competitive prices, the auction shall
 - Use the market clearing price (the first excluded bid in each product-region) for each product-region
 - Optimize products consistent with an efficient market
 - Products regularly reviewed for benefit/cost performance
 - Innovative products regularly reviewed for benefit/cost performance
 - Benefits are based on latest clinical evaluations, including
 - both patient wellness support and healthcare cost reduction
 - input from clinicians experienced in each product category
 - Products will be grouped into categories that reflect strong complementarities among products, for example all the parts of a standard mobility device are in the standard mobility device product category
 - Identification of lead product for each product category that is directly bid in auction

Protections for participants

- To ensure appropriate protection of beneficiaries and suppliers of quality DMEPOS products and services, the auction design must include:
 - Rigorous qualification standards to bid and supply, consistent with best-practice in private-sector procurement of similar medical goods and services
 - Binding bids
 - From bidders, a deposit or letter of credit of 10% of expected annual volume as a bid guarantee
 - Clear obligation of performance by winners
 - From winners, a deposit or letter of credit of 10% of expected annual volume as a performance guarantee
 - Beneficiary choice is maintained and encouraged to the extent consistent with an efficient auction
- Market structure
 - Limit on supplier volume to assure long-run competition in the market
 - No supplier in any product-region can win a capacity greater than 20%
 - Small businesses with historical total volumes less than \$8 million shall provide at least 20% of capacity of each product-region