THE EXCLUSION OF COMPETITION FOR HOSPITAL SALES

THROUGH GROUP PURCHASING ORGANIZATIONS

By Professor Einer Elhauge
1575 Massachusetts Ave.
Cambridge, MA 02138
(617) 496-0860
elhauge@law.harvard.edu

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THE EXCLUSION OF COMPETITION FOR HOSPITAL SALES THROUGH GROUP PURCHASING ORGANIZATIONS

Professor Einer Elhauge[1]

Group Purchasing Organizations (GPOs) negotiate terms by which member hospitals can buy medical devices from manufacturers. Unfortunately, many GPO agreements with incumbent medical device makers exclude rival manufacturers from competing for hospital sales even when the rival products are better or cheaper.[2] I begin by detailing the nature of these exclusionary arrangements and explaining why they raise anticompetitive issues meriting federal concern. I then explain why GPOs and hospitals might enter into arrangements that deprive hospitals and patients of cheaper or better products. Finally, I suggest some appropriate reforms to deal with these problems.

I. PRACTICES THAT EXCLUDE BETTER OR CHEAPER PRODUCTS

The essential problem is that large incumbent medical device makers have entered or offered exclusionary agreements through GPOs that effectively foreclose member hospitals to rival device makers. In particular, I understand that the two largest GPOs, Premier and Novation, have frequently entered into such agreements. This practice appears to be an instance of the general economic problem that powerful sellers and buyers often have incentives to collude to create monopoly power by raising their rivals' costs and then splitting the monopoly profits they created.[3]

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[1] I am a Professor of Law at Harvard Law School, where I teach antitrust law, but submit this report in my personal capacity, and the views expressed here are not offered on behalf of, nor intended to express the views of, Harvard University. The initial work for this report was funded by the Medical Device Manufacturer's Association and the rest of the work was finished on a pro bono basis.

[2] GPOs also apparently adopt similar exclusionary agreements regarding hospital purchases of pharmaceuticals, *see* Premier Group Purchasing Policy 3-4 (1996), but my research has focused on medical devices.

[3] *See* Thomas G. Krattenmaker & Stephen C. Salop, *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power Over Price*, 96 YALE L.J. 209 (1986); Stephen C. Salop & David T. Scheffman, *Raising Rivals'Costs*, 73 AM. ECON, REV. 267 (1983) (Special Issue); Elizabeth Granitz

A. The Nature of the Exclusionary Agreements

Many agreements between incumbent device makers and GPOs amount to exclusionary agreements with hospitals given the arrangements between the GPO and its member hospitals. This is true when GPOs enter into explicit exclusionary contracts with incumbent device manufacturers for a given product with which member hospitals are obliged to comply by agreement and/or coercive threats of expulsion or penalties for deviations. For example, Premier's board of directors in 1996 adopted a general policy of commitment that requires all member hospitals to sign a letter of intent to comply with any commitment contracts that Premier negotiates with suppliers.[4] Pursuant to this policy, "once a group contract or contract category has been announced as included in Premier's Committed Program, members will not contract independently for products in areas covered by these contracts."[5] Premier has a special compliance committee to monitor member hospital compliance with commitment contracts.[6] A noncomplying member hospital must appear before this compliance committee.[7] If this committee determines that "the member is not in consensus with Premier's group purchasing strategy of commitment and unwilling to comply," then the committee will recommend that Premier's board impose appropriate sanctions including "financial adjustments or, if appropriate, removal from the Premier organization."[8]

& Benjamin Klein, *Monopolization by Raising Rivals' Costs: The Standard Oil Case*, 39 J.L. & ECON. 1 (1996); Hovenkamp, *Mergers & Buyers*, 77 VA. L. REV. 1369 (1991); IV AREEDA, HOVENKAMP & SLOW, ANTITRUST LAW ¶943b, 204-06 & n.4(1998).

[4] *See* Premier Group Purchasing Policy 1-5 & Attachment A (1996). The only exceptions that Premier allows are when (a) the supplier does not supply the hospital's area, (b) the hospital does not use the product, or (c) the member is transitioning away from a contractual obligation it had with another supplier before Premier began its commitment program. *See id.* at 5.

[5] *Id.* at 4-5

[6] *Id.* at 5-6.

[7] *Id.* at 7.

[8] *Id.* at 7. Premier's letter of intent specifically provides that member hospitals understand that their compliance with Premier's commitment programs will be monitored and that the penalty for noncompliance may include termination in the commitment program or the Premier organization. *Id.* at Attachment A. Legal counsel to Premier has written me a letter asserting that my description of Premier's purchasing policy is inaccurate because: "Premier does not preclude any member from entering into separate agreements with non-contracted suppliers to meet a member's needs for purchases *that fall outside the commitment percentage*." Letter of James Gardner to Professor Elhauge at 1 (May 17, 2002) (emphasis added). But, as the italicized portion makes clear, this statement merely means that Premier does not penalize member hospitals who keep within the commitment percentages negotiated by Premier, not that hospitals are free to deviate from those

Explicit exclusionary contracts between suppliers and GPOs may also be unnecessary to bind member hospitals. GPOs often forbid member hospitals from buying outside the GPO, either explicitly or by a practice of imposing penalties if they do.[9] If a GPO that is the exclusive purchasing agent for a hospital then simply declines to approve competing devices in a given product market, it effectively imposes an sole source device contract on member hospitals without ever doing so explicitly. This same is true for GPOs that allow members to buy from other GPOs but only for product categories not covered by the first GPO. For example, Premier in 1996 made all member hospitals sign a letter of intent to commit that they will buy from Premier to the extent possible and use other group purchasing organizations only for supplies not available through Premier.[10] Premier also contracted with device makers that Premier will not permit its members to buy through other GPOs and that device makers will not sell to Premier members other than through Premier.[11] Thus, if Premier offers one device and does not approve any rival devices, its members can only use the offered device and the effect is the same as entering into an exclusive dealing contract with each Premier hospital to use only that device.

Many other exclusionary contracts are offered through GPOs but are not imposed on member hospitals. Instead those member hospitals are free to accept or reject those exclusionary contracts on a contract by contract basis. But as we will see, those GPO-offered exclusionary contracts often cover multiple products and manufacturers, impose retroactive penalties on deviation, or ban even considering rival products. Each of those features can effectively bind member hospitals even when rivals for some products later offer a better and cheaper product. And even when not bound in this way, device makers and GPOs can give individual hospitals ample incentives to

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percentages. Premier's counsel also does not explain the apparent inconsistency between this statement and the provisions, quoted in the next paragraph, that require member hospitals to buy through Premier to the extent possible. If Premier has no contract with a supplier at all, buying from that supplier would seem to violate this obligation even for purchases outside the commitment percentage.

[9] *See* GAO, Group Purchasing Organizations – Pilot Study Suggests Large Buying Groups Do not Always Offer Hospitals Lower Prices 6 (April 30, 2002) [hereinafter "GAO Study"] ("Some GPOs, such as HealthTrust, require that members do not belong to other GPOs.")

[10] *Id.* at Attachment A. *See also* Quorum Health Group 10K (group of managed hospitals reporting that it entered into a five year agreement making Premier its "exclusive group purchasing organization").

[11] *See* Horizon Medical Products Inc., Form S-1 A00, Exhibit 10, Material Contracts, Premier Purchasing Partners Group Purchasing Agreement ¶3.0 (April 3, 1998).

join exclusionary contracts that anticompetitively exclude device rivals, harm consumers, and harm hospitals as a group. As will be detailed in Part II, they can do so by either exploiting hospitals' collective action problems, giving hospitals other compensating benefits, disfavoring hospitals who do not join the exclusionary scheme, and/or giving hospitals who do join a share of the supracompetitive profits earned from downstream consumers. Indeed, illegal forms of exclusive dealing typically proceed through voluntary agreements with multiple willing business buyers even though the long run result is a reduction of competition harmful to the ultimate consumer and often to the business buyers themselves.

Nonetheless, defenders have stressed that many of the exclusionary agreements entered or offered through GPOs differ from absolute exclusive dealing in various ways. It is thus worth examining these differences one by one. As we shall see, while each complicates the analysis somewhat, none alters the basic economic result.

First, many of the exclusionary GPO agreements at issue do not require purchasing 100% from one manufacturer, but instead some other high percentage like 90 or 95%.[12] This is a point stressed by Professor Hovenkamp's report defending GPO arrangements.[13] While this is a technical difference, it does not ultimately alter the legal or economic analysis. If it did, firms could evade any exclusive dealing rule by imposing requirements to buy 99.9% of a product from them. That would make no legal or economic sense. When exclusive dealing arrangements cause anticompetitive harm by raising rivals' costs, they generally do so by denying rivals the economies of scale they need to compete effectively.[14] As long as economies of scale require more than 5-10% market access, that effect can occur at 90-95% foreclosure as well as at

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[12] *See, e.g.,* Novaplus Pulse Oximetry Letter of Committment (requiring 95% minimum of annual oximetry sensor purchases from Tyco-Nellcor, which had 88% of market); Novation's Opportunity ® Spectrum I Portfolio Participation Agreement (requiring 95% minimum spanning 12 product categories); Baxter – Wrap Around Incentive Agreement Exhibit C2 (requiring 90% minimum for each of various products and product categories); Ethicon-Novation Commitment Document (offering different discounts for Novation hospitals buying 90 or 95% of sutures from Ethicon, which had 81% of suture market); Ethicon-Premier Commitment Contract Information Sheet (discount for Premier hospitals buying 90% of sutures from Ethicon).

[13] *See* Hovenkamp, "Competitive Effects of Group Purchasing Organizations' (GPO) Purchasing and Product Selection Practices in the Health Care Industry" at 18-19 (2002) [hereinafter "Hovenkamp Report"].

[14] *See infra* II.B.

100% foreclosure. As we will see below, there are reasons to think such economies of scale are particularly significant for rival medical device makers.

In addition, the difference between 90% and 100% foreclosure is more nominal than real for medical devices because of the importance of medical standardization. It is now well-established that standardization within any given hospital reduces medical errors. Because of this, the hospital accreditation group, JCAHO, exerts pressure on hospitals to encourage each to standardize the devices it uses. This means that a commitment to buy 90-95% of a device from one seller is often tantamount to a commitment to buy 100%. This is not to say that standardization within hospitals is bad. The problem is that a 90-95% obligation can prevent standardization on the best or cheapest product. Nor is there any medical reason to force standardization *across* hospitals in the devices they buy since it is standardization *within* any given hospital that improves medical outcomes. In any event, the practical upshot is that, for devices used in hospitals, there is little difference between a 90% and 100% purchase obligation. Rival devices that offer especially large medical benefits may sometimes be able to overcome the benefits of standardization to occupy the 5-10% of hospital business left open to them. But even then the result is anticompetitive because the hospital and its patients lose the medical benefits of both standardizing on the rival device and using that better device for the other 90-95% of patients. Most rival devices, even if somewhat better and cheaper, will not be able to overcome the medical benefits of standardization given that the hospital must buy a high percentage of that product from another supplier.

Exacerbating this tendency for 90-95% to become the equivalent of 100% is the fact that either the general terms of GPO membership or contracts for particular product areas also often require the hospital to use the GPO as its sole purchasing agent for the covered product categories. This is true both for Premier generally and under Novation's Opportunity program[15] If a hospital is bound by such a contract or membership agreement, then it cannot buy a rival device unless the GPO is willing to

[15] *See, e.g., supra* (describing Premier's policy); Novation's Opportunity ® Spectrum I Portfolio Participation Agreement ("Participant declares Novation as its sole supply cost management company for the purchase of products in the OPPORTUNITY product categories. . . . Participant will purchase OPPORTUNITY ® products though Novation purchasing arrangements and will not purchase OPPORTUNITY products or any products that compete with OPPORTUNITY products though any other supply cost management company."); Novation's Opportunity ® Spectrum II Portfolio Participation Agreement (same).

offer it. Thus, if the GPO simply elects not to offer any rival device that might be more desirable, then 90-95% becomes the same as 100%. Further, some of these agreements – including for Premier and Novation – provide that a signing hospital cannot solicit rival bids, examine rival products, or even entertain rival proposals.[16] If a hospital cannot consider rival products, it is hard to see how a hospital can adopt it even for the remaining 5-10%. Many have thus reported that in practice rival devices are often 100% excluded from hospitals despite the nominal right to buy 5-10% from them.[17]

Professor Hovenkamp's report assumes that because hospitals often have more than one GPO, including a national and regional GPO, that hospitals are free to switch between them for any given product.[18] But, as the GAO study indicated, this is not true for many GPOs, which do not allow members to belong to other GPOs.[19] Nor is switching permitted just because a GPO allows members to join other GPOs, as the Premier and Novation provisions make clear. As shown above, Premier allows member hospitals to use regional or other GPOs only for product markets that are not available through Premier. Likewise, the Novation opportunity program does not allow participating hospitals to use other GPOs for any product within that program. If, for example, Premier engaged in an anticompetitive practice in syringes, member hospitals could not respond by switching to another GPO for syringes, and the fact that the member hospitals get some other product (like jello or laundry) through a regional GPO does not give them any power to switch that would constrain an

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[16] *See* Premier Group Purchasing Policy 4 (1996) ("members will not independently solicit quotations from suppliers for products or services covered under Committed Program agreements"); Novation's Opportunity ® Spectrum I Portfolio Participation Agreement ("Participant will not . . . participate in competitive product evaluations for OPPORTUNITY products."); Novation's Opportunity ® Spectrum II Portfolio Participation Agreement (same); Supply Partner Terms of Participation Opportunity ® Spectrum I Portfolio ("Health care organization agrees not to cause supply partner to incur defensive selling costs during the term of this Agreement (such as can be caused by *entertaining* proposals from other vendors or conducting product evaluations) . . .") (emphasis added); Supply Partner Terms of Participation Opportunity ® Spectrum II Portfolio (same).

[17] *See, e.g.*, Letter from James Bradley of Stuart Cardiology Group to Jake Langer of Biotronik, Feb. 26, 2001 ("Hospital has entered into a GOP Novation contract, which provides only a single cardiac rhythm device vendor. The hospital is enforcing a 100% compliance to this vendor even though the actually contract states 95% compliance.")

[18] *See* Hovenkamp Report at 4, 12-13, 18-19, 21, 24-25.

[19] *See* GAO Study, *supra* note, at 6.

anticompetitive practice in syringes. In any event, even if switching to other GPOs or suppliers were possible for some purchases of a given product, it could only apply to the small percentage left after member hospitals fulfill their commitment to buy from the favored manufacturer, and thus could not alter the foreclosure of the large percentage covered by the commitment.

Second, many of the exclusionary agreements do not feature an absolute obligation to buy a high percentage from the favored supplier, but instead provide loyalty rebates if that high percentage is met.[20] This is again a difference is stressed in the Hovenkamp Report,[21] but again does not prove especially relevant. Even an absolute contractual obligation to buy from only one supplier is at worst a promise to either do so or pay contractual penalties. Using loyalty rebates simply sets a different penalty on noncompliance, and one that is far more enforceable to boot. With a loyalty rebate, the supplier can unilaterally impose a penalty for noncompliance by just withholding the quarterly or annual rebate without even going to court, and can easily prove in court the amount of past rebates that must be returned. With an absolute exclusive dealing contract, the supplier faced with a noncomplying buyer cannot impose any penalty without going to court and winning a litigation and appeal, and has damages that are much harder to prove and measure. Moreover, because any exclusive dealing agreement that unreasonably restrains trade is not enforceable under contract law, an absolute contractual obligation may not even enjoy any contractual penalties for noncompliance. Thus, normally the only real penalty suppliers impose on buyers who do not comply with an absolute exclusive dealing contract is refusing to deal with that buyer in the future. This termination penalty is serious enough to make exclusive dealing agreements raise antitrust concerns. By adding additional penalties that are more enforceable, loyalty rebates probably increase rather than decrease the exclusionary effect.

In any event, it is well understood that a loyalty rebate that is conditional on the buyer taking all or a high percentage of its purchases from a favored supplier can amount to

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[20] *See, e.g.,* Novaplus Pulse Oximetry Letter of Committment (discount contingent on 95% compliance); Novation's Opportunity ® Spectrum I Portfolio Participation Agreement (same); Ethicon-Premier Commitment Contract Information Sheet (discount for Premier hospitals buying 90% of sutures from Ethicon).

[21] *See* Hovenkamp Report at 19.

de facto exclusive dealing.[22] One might mistakenly think that such rebates or discounts are no different than a price cut, and thus should be policed only under the doctrine of predatory pricing. But there are two enormous differences here.

(1) Here the rebates or discounts are *conditioned* on purchasing a high *share* of the buyer's purchases from the supplier. Thus, this is not a per item price cut that can be met by any equally efficient rival for any future purchases. To the contrary, precisely because the loyalty rebates are conditioned on getting a high share of the buyer's purchases, they leave rivals with access to only a lower share which may not sustain economies of scale. When they do so, such loyalty rebates exclude rivals by worsening the rivals' efficiency. In contrast, straight price cuts, if above cost and thus nonpredatory, can only exclude a less efficient rival that cannot match the lower price, and thus reward firms that improve their own efficiency rather than try to worsen the efficiency of their rivals. Indeed, if loyalty rebates were never illegal unless the resulting price were below cost and thus predatory, then any firm could immunize its exclusive dealing agreements from antitrust scrutiny by the simple expedient of inflating the price and then offering a rebate conditioned on exclusivity.

(2) Once the buyer has committed to the arrangement, the rebates on all the buyer's *past* purchases are contingent on it meeting the loyalty threshold. Because loyalty commitments can last for five to seven years, a failure to comply can result not only in losing any rebate already earned in the current year but a demand for a return of all the rebates paid in all past years too.[23] The threat to reclaim all those rebates on past purchases can thus induce buyers not to switch to making future purchases from a rival that is just as efficient and offering a lower price.

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[22] *See* IIIA AREEDA & HOVENKAMP, ANTITRUST LAW ¶768B3, AT 151 (1996); XI HOVENKAMP, ANTITRUST LAW ¶1807, at 115-18 (1998).

[23] *See, e.g.,* Novation's Opportunity ® Spectrum I Portfolio Participation Agreement ("all earned incentive payments received by the Participant will be subject to repayment if Participant fails to comply for the full [five-year] term of the OPPORTUNITY portfolio" with a 95% purchase commitment and other requirements); Novation's Opportunity ® Spectrum II Portfolio Participation Agreement (same); Baxter – Wrap Around Incentive Agreement Exhibit B (if participating hospital fails to meet thresholds for any 6 month period during the 87 month contract, then it "shall repay the full amount of the received Signing Discount"); Mark Smith, "Innovative medical products: a clash of blood and money," HOUSTON CHRONICLE (April 18, 1999) (Premier has 7.5 year contract requiring member hospitals to buy 90% of syringes from Becton Dickinson).

Third, often the exclusionary programs cover multiple products and manufacturers rather than just one. Sometimes a given incumbent device maker gives rebates or discounts on a whole product line if the buyer commits to making a high percentage of their purchases from that manufacturer for each product in the line.[24] Sometimes a GPO even gives rebates or discounts on menu of products from different manufacturers if the hospital commits to buying a high percentage of each product from the corresponding manufacturer on the menu.[25]

This does make these programs differ from a single product exclusive dealing arrangement, but only worsens the anticompetitive consequences. With these programs, the penalty for buyer failure to meet the threshold for any one product now includes withholding or reclaiming rebates not only for that product but for all the other products as well. That exacerbates the penalty for noncompliance after the rebates have been earned. Further, it also means that, even at the very beginning of a rebate period, an equally efficient rival could not compete by simply offering a price on one of the products that matches or beats the price the incumbent device maker is charging for that product net of the program discount.[26] For the hospital would have to take into account that even if it gets a better price from using the rival for that product, it loses the discount on all the other products in the program. Multi-product rebates can thus reflect sidepayments given to buyers in exchange for agreeing to

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[24] *See, e.g.*, Baxter – Wrap Around Incentive Agreement Exhibit C.2 (requiring Premier member hospitals to buy 90% of its purchases from Baxter for each product category and for specific products within the product categories); Ethicon-Novation Commitment Document (offering highest discount for Novation hospitals that buy 95% of sutures and 85% of endomechanical products from Ethicon, which had 81% of suture market and 61% of endomechanical products); Ethicon-Premier Commitment Contract Information Sheet (discount for Premier hospitals buying 90% of sutures and 80% of endosurgery products from Ethicon).

[25] *See, e.g.*, Novation's Opportunity ® Spectrum I Portfolio Participation Agreement (95% purchase commitment applies for twelve product categories covering five different manufacturers, though with one manufacturer for each product category); Novation's Opportunity ® Spectrum II Portfolio Participation Agreement (85-95% purchase commitment applying to 14 product categories covering 7 manufacturers).

[26] A package discount can also be an illegal tying agreement when it induces a low proportion of customers who buy product A from the defendant to buy product B from another seller. *See* X AREEDA, ELHAUGE & HOVENKAMP, ANTITRUST LAW ¶1758b, at 343-346 (1996). If this tying doctrine does apply, it does not require showing foreclosure of a substantial share of product market B. *Id.* at 345 n.18. The use of market power in product A to foreclose any nontrivial dollar amount of sales of product B suffices under standard antitrust law.

enhance a seller's market power by excluding rivals in one product, with the sidepayments compensating these buyers for the fact that this scheme will increase the price they pay for the product whose market power was enhanced.[27]

More generally, as noted above, even when a hospital does not formally make a multi-product commitment, some GPOs pressure or threaten with expulsion any member hospitals who do not comply with the commitment obligations made on any of the GPO's exclusionary agreements with incumbent device manufacturers. In such GPOs, *every* single product exclusionary agreement is effectively the same as a multi-product one, and thus raises the same heightened concerns.

Fourth, many payments that incumbent device manufacturers make to GPOs or hospitals for high share commitments are not volume-based at all, and thus do not really amount to rebates or discounts. This includes giving GPOs or their officials stock-options, warrants, or investment interests in the manufacturers favored by GPO commitment programs.[28] It also includes those favored manufacturers making monetary investments in GPO-owned businesses, or giving GPOs favorable business terms on other unrelated deals.[29] Another tactic involves having device makers who want to be favored by GPO commitment programs pay large sums for a private meeting with GPO officials or to belong to a GPOs institute for evaluating technologies.[30] Further, device makers often pay GPOs fixed amounts that are not linked to volume in the form of: (1) fees given to have products considered, (2) annual

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[27] *See infra* Part II.

[28] *See, e.g.,* Bogdanich, Meier & Walsh, *Medicine's Middlemen; Questions Raised of Conflicts at 2 Hospital Buying Groups*, N.Y. TIMES (March 4, 2002). *See also* Horizon Medical Products Inc., Form S-1/A, Exhibit 10, Material Contracts (April 3, 1998) (simultaneously filing a contract giving Horizon a Premier commitment contract and a contract giving Premier warrants to purchase 500,000 shares of Horizon stock).

[29] *See, e.g.,* Bogdanich, Meier & Walsh, *supra* note; Scott Hensley, "A first for Premier," Modern Healthcare (June 29, 1998) (as part of pact between McKesson and Premier, McKesson paid $155 million for a company in which Premier was a minority owner and got a 20-year exclusive agreement to supply medical-surgical and pharmaceutrical products under Premier's Provider Select Program).

[30] *See* Bogdanich, Meier & Walsh, *supra* note*;* "Premier's Innovation Institute: To Play, Must You Pay?", Medical Device & Diagnostic Industry Magazine (editor's page, June 1998) (noting that 10-15 companies had agreed to pay $1 million/year for fund Premier's Innovation Institute). The latter payments also create the problem that they are likely to distort the GPOs' evaluation of new technologies, as the analysis below of breakthrough technologies suggests.

administration fees, (3) marketing or endorsement fees, or (4) licensing fees for use of the GPO brandname. Likewise, device makers or GPOs also often pay hospitals fixed fees that are not dependent on the volume of sales in exchange for their commitment to achieving the target shares.[31]

The fact that the payments given for loyalty commitments often are not proportional to volume does make them different from typical loyalty rebates. But it is a difference that actually worsens the anti-competitive effects. That is because side-payments that are unrelated to sales volume are even more likely to be effective means of dividing monopoly profits created by seller-buyer collusion designed to enhance seller market power, for reasons explained in Part II.[32]

Fifth, sometimes the *de facto* exclusivity for any given product is granted not to one incumbent device maker, but to two of them. But the fact that two manufacturers take part in some such arrangements does not mean they do not have similar anticompetitive effects because they still protect those manufacturers from competition by rivals and entrants. This can protect and reinforce a duopoly power that is just as harmful as monopoly power. "[D]uopoly markets typically perform quite poorly. . . . Indeed, depending on assumptions, output may be no higher, and price no lower, in such a market than it is in an absolute monopoly."[33]

Sixth, some rival device makers report that GPOs have offered to allow their rival products to be offered if they would agree to increase their prices dramatically to levels higher than that being charged by the incumbent device makers who benefit from the exclusionary agreements. For example, Retractable Technologies reports that Novation finally said it would agree to use safer needle technology from Retractable Technologies, but only if it were sold under Novation's private label for a price 270% higher than Retractable wanted to charge.[34]

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[31] *See* Baxter – Wrap Around Incentive Agreement Exhibits B and C2 (hospitals that commit to sole source compliance get a signing discount totaling up to $295/hospital bed, depending on scope and level of commitment); Quorum Health Group 10K (describing over $6.9 million in annual fixed payments from Premier irrespective of volume if minimum thresholds are met).

[32] *See also* IV AREEDA, HOVENKAMP & SLOW, ANTITRUST LAW ¶943b, 204-06 & n.4(1998).

[33] *Id.* at 55 & n.1.

[34] *See* Thomas Shaw, "Examine the 'questionable' side of GPOs," Commentary, Dallas Business Journal (March 15, 1999); Mark Smith, *supra* note.

Again, this is a difference, but not one that undermines the anticompetitive effects of the arrangement. To the contrary, it confirms that the purpose is to raise the costs of the rivals to the incumbent device makers even if that increases the prices charged to hospitals and ultimately to the patients, insurers, donors, and government payors who fund those hospitals.[35] Without such a purpose, there would be no reason for a GPO to insist that a supplier *increase* its prices in order to be offered to hospitals.

Seventh, at least one GPO (Premier) has a breakthrough technologies exception. But this exception is inadequate. First of all, many other GPOs (like Novation) do not have such a program. Second, even if Premier's program operated as stated, limiting rivals to "breakthroughs" is anticompetitive. There is no reason why GPOs should set themselves up as superior to the FDA in determining which new products are sufficiently safe and effective compared to existing products to enter the market. Indeed, the very impetus to offer a breakthrough exception shows that better products are being routinely excluded by general GPO practices. Third, reports indicate that the process for recognizing a breakthrough exception is highly biased against new device makers. Fourth, in fact, the exception has been more nominal than real. Hardly any breakthroughs have been recognized. Fifth, the risks and uncertainty created about whether a new product will be approved under this exception will itself deter investments in the research necessary to create new products that could apply for this breakthrough exception. Finally, even if it were not biased against new products, the breakthrough exception process is long and cumbersome, and even in the few cases where it results in approval, substantially delays the entry of new products into foreclosed hospitals.

To take one example described in the New York Times, Masimo has been excluded from selling its pulse oximeters to hospitals belonging to Novation or Premier because they have exclusionary agreements with Tyco-Nellcor.[36] Masimo applied for the breakthrough technology exception. An internal evaluation by Premier's technology assessment group recognized Masimo's product was superior.[37] Fifty clinical studies

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[35] *See* sources cited *supra* note 3; *infra* at Part II.

[36] *See* Bogdanich, Meier & Walsh, *supra* note.

[37] *Id.* A letter from Premier's legal counsel disputes this, stating that the Premier Technology Assessment Unit evaluated only technological algorithims, not any Massimo oximeter product, which counsel states was not available until August 2000, by which time a similar Nellcor product was available. *See* Letter of James Gardner to Professor Elhauge at 2 (May 17, 2002). But examination of Premier's Technology Assessment May 1999 paper supports the New York Times

and numerous hospitals indicated the Masimo pulse oximeter was more accurate and reliable. Nonetheless, Premier took two years to evaluate Masimo's product. Further, in the end, Premier ignored this evidence because of the results of a hospital survey, even though of the 20 surveyed hospitals that were actually aware of Masimo's product, 15 agreed the Masimo product was more accurate.[38] During this two year period, Premier's exclusive supplier, Tyco-Nellcor, developed a product that reportedly tried to imitate the same technology as Masimo's product. When Masimo sued Tyco-Nellcor for patent infringement, it was told that bringing this suit would prevent Masimo's product from being considered as a breakthrough product. Tyco-Nellcor thus continues to benefit from this *de facto* exclusivity even though its imitation of Masimo's product reportedly remains inferior.

Likewise, a breakthrough exception was not recognized for St. Jude's longer-lasting pacemaker even though Premier's internal expert panel unanimously agreed the breakthrough claim was substantiated.[39] Thus, in actual practice, the breakthrough

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account. It states that: "Masimo began introducing their Signal Extraction Technology® (SET) about two years ago. Clinical trials, conducted and published by well-respected physicians in the U.S., indicate that Masimo SET has significant clinical advantages for neonates and some highly critical adult patients. Consistent with the company's historical process, they released SET as an OEM product with no immediate plan to introduce a stand-alone Masimo product. (Allegiance has licensed Masimo SET as the foundation for their stand-alone pulse oximeter. The company is the exclusive provider of a stand-alone pulse oximeter with Masimo SET in the U.S.)" Premier Technology Assessment, Pulse Oximetry – Technology Assessment Position Paper at 1 (May 6, 1999). This clearly indicates that the Masimo product was tested and available through Allegiance before May 1999. Premier's Technology Assessment Unit also reported that all four of its patient monitoring business partners had tested the Masimo product and found it "a definite improvement" and three of four had already adopted it or had definite plans to do so. *Id.* at 2.

Premier's legal counsel also states that the Premier Technology Assessment Unit only recommended that Masimo's product be tested against the existing Nellcor product. *See* Letter of James Gardner to Professor Elhauge at 3 (May 17, 2002). But this is not true. Instead, Premier Technology Assessment Unit observed that, while Nellcor might well develop a similar product in the future, "Masimo SET, however, has a significant market advantage already." Premier Technology Assessment, *supra*, at 3. Further, it concluded that "We can conservatively say Masimo technology will remain superior to that of Nellcor and HP through the remainder of 1999." *Id.* Premier's Technology Assessment Unit thus recommended at least providing a one-year exception "for Masimo SET products" during the period while Nellcor was developing a similar product. *Id.*

[38] *See* Bogdanich, Meier & Walsh, *supra* note

[39] *Id.* Premier's legal counsel disputed this New York Times account, but did not provide any documents from its internal expert panel to support this contrary claim. *See* Letter of James

exception does not at all undermine the *de facto* exclusivity created by the general arrangement.

B. The Anticompetitive Effects

Do the loyalty agreements between manufacturers and GPOs and hospitals foreclose a sufficient share of product markets to create anticompetitive effects? This is a complicated question because the economic inquiry varies by device, each of which is likely to have somewhat different foreclosure shares and relevant economies of scale. Nonetheless, there is good reason to think these loyalty agreements do generally have anticompetitive effects, and particular reason to think they have had anticompetitive effects in specific instances.

Novation and Premier are the two biggest GPOs, and have policies of frequently entering into such exclusionary arrangements with device manufacturers.[40] Further, similar exclusionary arrangements have spread throughout the industry. According to Modern Healthcare, 24 other GPOs by 1999 also had either committed buying programs or a strategy of long-term sole source or dual source contracting.[41] The collective share of hospital device purchases these GPOs cover is clearly large. According to Modern Healthcare, Novation and Premier alone "easily command two-thirds of the acute care purchasing market between them."[42] Novation is the largest GPO and its own analysis shows that it has 29-30% of the national market of supplies purchased for hospital admissions and surgeries.[43] This percentage is probably below the higher percentage for acute care supplies because some hospital admissions and surgeries are non-acute and use a broader and less specialized set of supplies. In any event, even if we combine this more conservative estimate with the relative

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Gardner to Professor Elhauge at 3 (May 17, 2002).

[40] *See, e.g.*, Premier Group Purchasing Policy 1, 3 (1996) (describing Premier's general strategy as entering into commitment contracts with suppliers and hospitals).

[41] The other 24 GPOs on this list are: AllHealth, Amerinet, Buy Power, Child Health Corporation of America, Consorta, GNYA Services, Greater Cincinnati Health Council, Group One Purchasing Services, Health Affiliated Services, Health Services of New England, Health Services Corporation of America, HealthTrust Purchasing Group, Hospital Central Services Affiliates, Innovatix, InSource Health Service, Joint Purchasing Corp., MAGNET, National Capital Shared Services, NorMet Shared Services Corporation, Prime, Professionals' Purchasing Group, Shared Services Health Care, Southwest Ohio Health Care Affiliates, and Yankee Alliance. *See* Modern Healthcare 40, 46 (Sept. 20, 1999).

[42] *See* Modern Healthcare 28 (May 21, 2001).

[43] Healthcare 2003, Global Strategies and Business Opportunities, Powerpoint Presentation.

purchasing volumes for the ten largest GPOs reported by Modern Health Care,[44] it suggests the 2000 national shares of purchases for hospital admissions and surgeries are:

GPO	Share	Exclusionary Purchasing
Novation/HPPI	29-30%	Yes
Premier	24%	Yes
Amerinet	9%	Yes
Managed Health Care	6%	Not Reported
HSCA	5%	Yes
Consorta	4%	Yes
National Purchasing Alliance	1.5%	Yes
All Health	1.5%	Yes
Innovatix	1.5%	Yes

That would mean that at least 75.5% of hospital purchases are made through GPOs that engage in exclusionary purchasing. And that does not include the exclusionary agreements entered through GPOs outside the top ten whose volume was not reported. Nor does it include exclusionary agreements that incumbent device manufacturers may enter into directly with hospitals that do not belong to GPOs.

Professor Hovenkamp's report in defense of GPO practices finds dramatically lower market shares for GPOs.[45] To reach this conclusion, he relies on the premise that GPOs purchase only 45% of all supplies purchased by health care institutions,[46] and then he measures GPO market shares by dividing their purchases by all health care purchases to find market shares that are all slightly less than half of the market shares noted above.[47] But if one examines this source on which he relies on for the 45% figure, it turns out that it says that GPOs control 45% of all "healthcare industry purchases," a term that on its face includes not only purchases by hospitals, and not even only purchases by nursing homes, clinics, and HMOs, but also includes purchases by individual doctors or medical practices that provide routine care.[48] Further, this turns out to be the same source that states that Novation and Premier

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[44] *See* http://www.modernhealthcare.com/charts/gpo_chart.php3?id=1.

[45] *See* Hovenkamp Report at 2-3.

[46] *See id.* at 2 & n.7 (citing Modern Healthcare 28 (May 21, 2001)).

[47] *See* Hovenkamp Report at 3.

[48] *See* Modern Healthcare 28 (May 21, 2001). Indeed, the article was about a firm that mainly handled purchases for 11,000 members in the nonacute-care market acquiring a GPO in order to try to enter the acute-care supply market. *Id.*

alone "easily command two-thirds of the acute-care purchasing market."[49] This latter figure is the more relevant one because the economic effects of exclusionary agreements depend on the degree of foreclosure in each relevant product market,[50] and the products purchased to provide acute care are much more narrow than the wider range of supplies that account for all healthcare industry purchases. The latter range (even for hospitals) from the expensive medical devices at issue here to prescription drugs, bandaids, aspirin, blankets, beds, lights, trays and hospital jello.[51] If GPOs have brokered agreements that foreclose 100% of the market for pacemakers, the anticompetitive effects in the pacemaker market are not somehow lessened because hospitals or other medical purchasers can buy their jello elsewhere.

It thus seems clear that exclusionary purchasing agreements cover a relatively high percentage of device purchases for hospital admissions and surgeries (and probably even a higher share of acute-care purchases). Unfortunately, because my data reflects the share of *all* purchases used in hospital admissions and surgeries, the precise percentage foreclosed of the market for each medical device is not clear. Exclusionary practices may be less prevalent for the pharmaceuticals used in hospital admissions and surgeries than for devices, and national GPOs may not even try to cover the purchases of many supplies that are used in cases of hospital admissions and surgeries

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[49] *See* Modern Healthcare 28 (May 21, 2001).

[50] Professor Hovenkamp recognizes this, *see* Hovenkamp Report at 22, but because he mistakenly assumes that a GPO's share of all healthcare industry purchases equals its share of purchases of particular medical devices used for acute care, he reaches the mistaken conclusion that the foreclosure from any particular supplier can be no higher than 14.5%, *id.* In fact, the largest GPO has at least a 29-30% share and probably more for acute care purchases for reasons described in text. Further, relying only on the share of the largest GPO is mistaken for two other reasons. If a particular supplier has exclusionary agreements with all distributors, then its foreclosure is 100%, not the percentage of whichever distributor happens to be largest. Further, exclusive dealing measures the foreclosure of suppliers *cumulatively* – if one supplier has exclusionary agreements foreclosing 35% of the market and two other suppliers have exclusionary agreements foreclosing 30%, then the appropriate measure of foreclosure is 95%, not 35%. *See* FTC v. Motion Picture Advertising Service Co., 344 U.S. 392, 395 (1953) (aggregating four suppliers with exclusive dealing contracts to find 75% foreclosure). This cumulative measure of foreclosure makes sense because the anticompetitive effects of exclusionary agreements come from depriving the market of the additional firms that would exist if each were allowed free access to achieve its minimum efficient scale, and that can happen when a few suppliers foreclose so much of the market as to exclude further rivals.

[51] It is not even clear that the term "supplies" does not include utilities like electricity or services like laundry and janitorial work.

like beds, food, and laundry. Thus, their percentages on the device markets they do attempt to cover is probably even higher than I have indicated above. Even if the market shares I indicate above did reflect each GPO's *average* share of device purchases, the share purchased through these GPOs will necessarily be higher than this average for some medical devices, and lower than average for others. By the same token, GPOs negotiate many device purchases that are not made through exclusionary programs, and it is not clear whether they all choose the same devices and manufacturers for their exclusionary programs and whether all their hospitals comply with those programs.[52] The purchase shares also reflect the shares for *all* hospitals, and thus may also be higher for private hospitals than public ones, or differ for nonprofit and for-profit hospitals. Of particular concern is the fact that Novation has GPO contracts with 100% of university hospitals, which are the hospitals one would normally expect to be most likely to adopt cutting edge technologies. Foreclosing those hospitals would thus be expected to have the most adverse effect on the entry of innovative new products.

While the precise percentages are thus unclear and should vary by device market, it seems plain that the policy of so many leading GPOs to favor exclusionary agreements with incumbent device manufacturers forecloses a substantial percentage of hospital purchases for at least some devices, and has the potential of doing so even more pervasively in the future if allowed to take hold. This causes and threatens serious anticompetitive effects for a number of reasons.

First, there are enormous economies of scale in researching new products. The costs of research, and of securing patents and FDA approval, are large, and must be incurred upfront. The investments are also risky because millions can be invested in trying to

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[52] According to Modern Healthcare, in 1999 committed buying programs accounted for all $12 billion of the purchases made through Premier, and all $400 million of the purchases made through Innovatix. *See* http://www.modernhealthcare.com/charts/gpo_chart.php3?id=3. But for other GPOs, the percentage of purchases made through committed buying programs was less. Committed buying programs accounted for $5 billion out of $13.1 billion in purchases made through Novation, $800 million out of $2.45 billion made through HSCA, and $125 million out of $564 million made through AllHealth. *Id.* (Data was not available for Amerinet.) Of course, what really matters are the percentages for each relevant device. If the GPOs who purchase only some of their products through committed programs all choose the same devices for those programs, then the relevant market foreclosure will be very high even though the GPOs buy other products without similar commitments.

create a new improved product that does not pan out. If the innovators who succeed cannot access a large share of the product market, then capital markets will necessarily provide less funding for innovation than they otherwise would. For example, suppose it would cost $100 million to fund innovation that has a 50% chance of successfully creating an improved device. Suppose further there are 1000 hospitals and that a successful device could earn $300,000 per hospital, or a total of $300 million. Without any foreclosing arrangements, the capital markets would fund the project because the $100 million investment has an expected return of 50% of $300 million, or $150 million. Now suppose that 71% of hospitals are foreclosed because of exclusionary agreements. Then only 290 hospitals will be available, and a successful product will only earn $87 million. Now, no venture capitalist will fund the innovation because the $100 million investment would have an expected return of only $43.5 million. The point does not turn on these precise numbers. As long as any significant share is foreclosed, at the margin some innovative projects will not be funded that otherwise would have been.

The general point is worth emphasizing. Media attention has focused on the fact that these exclusionary agreements are precluding *existing* products that are cheaper and better. That is not surprising because those make the most dramatic tales. But by far the bigger cost of such exclusionary agreements is that they are likely to prevent all sorts of innovative products from ever being created. These costs are harder to see and estimate because the alternative products are not tangible. But they should be the greatest source of social concern. And it should be no surprise that incumbent firms that currently have dominant market shares for particular devices would be greatly interested in entering into arrangements that discourage innovation that might displace their position.

Second, the medical device industry also features considerable economies of scale in production. That is, even after innovation has created a new device, producing the first units costs more than latter units. There are overhead costs involved in maintaining regulatory approval and hiring the necessary personnel to run the business that include an irreducible minimum for the first few units and rise only slowly after that. There are also the costs to running a facility, including rent and maintaining a sterile environment, that are relatively lumpy. By denying rivals access to the market share they would need to achieve their minimum efficient scale, exclusionary agreements can thus raise rivals' costs. Such a cost increase will prevent many rivals from offering their product at all, and we will never see them. Other rivals may be so

much more efficient that they can overcome this barrier to offer their product, but the fact that their costs have been raised means they cannot offer as low a price as they otherwise could.

One example of this phenomenon is Retractable Technologies. It has created the retractable VanishPoint Syringe, which greatly improves safety by minimizing needlesticks.[53] Unfortunately, its ability to market this syringe has been impeded by the fact that GPOs have exclusionary agreements favoring other syringe makers.[54] Its prices are also higher than conventional needles. But Retractable Technologies reports that the reason its prices are higher is that it cannot access enough of the hospital market to obtain the sales volume to lower its per unit costs.[55] Thus, here the exclusionary agreements are apparently preventing Retractable Technologies from getting to its minimum efficient scale, where it could offer a product that was both better and cheaper. A somewhat different example is Masimo, which reports that, where not barred by GPO foreclosing arrangements, it currently sells its oximeter sensors for a price more than 30% below that of Tyco-Nellcor. But Masimo also reports that, because of Tyco-Nellcor's exclusionary agreements, it can only sell 1 million sensors annually, which is far below the 7 million that would constitute the cost-minimizing output for its facility. The exclusionary agreements favoring Tyco-Nellcor are thus preventing Masimo from reaching its minimum efficient scale, where it could offer a price that is even lower than the already significantly lower price that Masimo offers today.

Again, the general point is worth emphasizing. While media attention has focused on the exclusion of currently cheaper products, an even bigger cost is that these exclusionary agreements can prevent rivals from offering cheaper products at all, or make the rival products more expensive than they could have been in an unrestrained market. This will be true whenever the sales that rivals can make to the unforeclosed market are lower than their minimum efficient scale.

Professor Hovenkamp's report defending exclusionary GPO arrangements

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[53] *See* Smith, *supra* note; "The Gray Sheet" 10 (Oct. 18, 1999) (ECRI study found Retractable Technologies' VanishPoint syringe preferable on because of needlestick safety issues to the alternative syringes manufactured by Becton Dickinson).

[54] *See* Smith, *supra* note (Premier has 7.5 year contract requiring member hospitals to buy 90% of syringes from Becton Dickinson).

[55] *See* Smith, *supra* note.

acknowledges the enormous importance of economies of scale in both the research and production of medical devices.[56] But rather than considering the possibility that denying those economies of scale to rivals can be anticompetitive, his report considers only the possibility that incumbent device makers need a very high share to reach their own economies of scale. That possible efficiency defense is considered (and rejected) below in Section II.C. But a balanced treatment plainly also requires consideration of the anticompetitive effect on rival economies of scale.

Third, even when rivals are able to overcome the fact that these exclusionary agreements increase the costs of creating and producing a rival device, and thus can offer a better and cheaper product, the anticompetitive effects remain great. In any member hospitals that are party to such exclusionary agreements, the foreclosure of rival devices means patients, insurers, and government payors will be deprived of access to the best and cheapest devices. In particular, it is significant that shopping for the sorts of medical devices one uses in hospitals is not like shopping among retail stores. In the normal retail case, consumers shop item by item among many retailers. If one retailer fails to stock the best product or offer the best price, consumers may be able to just go to another retailer to buy it. And the barriers to entry in setting up a new retailer are relatively small, so that if all the existing retailers fail to offer the best products or prices, another firm may have incentives to enter the retail market and do so. For medical devices used in hospitals, patients (and thus their insurers or government payors) do not really shop for medical devices at all, let alone shop device by device. They select a hospital based on a whole host of factors and must accept whatever medical devices the hospital offers. In many areas, there is only one hospital to which patients can turn, in other areas just a few. And the barriers to entry for new hospitals are enormous, including not just large capital costs and the difficulty of assembling a full medical and nursing staff, but government regulation of entry. All this means that, when a hospital fails to stock the best or cheapest medical devices, the patients who actually consume those devices are stuck with lower quality products, and they, insureds, and taxpayers are stuck paying more.

To take the Masimo example again, its *de facto* exclusion from hospitals belonging to Novation or Premier has been harmful both in terms of quality and price. Medical quality has suffered because, as discussed above, the Masimo pulse oximeter is more accurate and reliable. One might thus think this was a case of GPOs skimping on

[56] *See* Hovenkamp Report at 7-8, 12, 25.

quality to save money. But Masimo reports that Premier never once even asked it about the cost of its product, even though its excluded oximeter actually costs more than 30% less. Further, by avoiding health problems, the Masimo oximeter should lessen the costs of further treatment. Patients in these hospitals are thus stuck paying more for a worse product, and sometimes suffering unnecessary health problems to boot.

The recent GAO Study might be taken to signal a lower or more mixed cost difference but actually measured a different question. The GAO study asked whether hospitals got lower prices on their own than from a GPO when buying the *same* model of safety syringe.[57] Even by this measure, the GAO study found that median prices were higher through GPOs than outside them for all safety syringe models and most pacemaker models.[58] This seems relevant to judging the separate question of whether the *existence* of GPOs provides any benefit to hospitals. But the GAO measure does not purport to measure the costs to hospitals *of the exclusionary agreements* because it does not consider the greater costs of excluding cheaper models. For example, in the Masimo example, even if GPOs excluded a superior Masimo product that was 30% cheaper than the Nellcor model, the GAO study would not pick up that cost difference unless Nellcor charged more when its model was sold through the GPO than when its model was sold outside it.

Suppose the 30% cost difference from excluding the Masimo product is typical. According to Modern Healthcare, GPO committed buyer programs covered $20 billion in purchases, and this does not include those who did not report figures on this. That would suggest hospitals (and ultimately the patients, insureds and taxpayers who support them) are paying $6 billion/year more than they would without the exclusionary agreements. Another cost estimate might be derived by analogy to other industries. For example, a typical empirical study in the airline industry indicates that each additional competitor in a given route lowers price by 4%.[59] Additional competitors probably lower prices far less for airline routes than for medical devices. After all, airline travel is a commodity for which entry into any one route is relatively easy and that (since deregulation) has not commanded prices much in excess of costs.

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[57] *See* GAO Study, *supra* note, at 2, 13.

[58] *Id.* at 11.

[59] *See* Kwoka, *Non-Incumbent Competition: Mergers Involving Constraining and Prospective Competitors*, 52 CASE WESTERN L. REV. 173, 194 (2001) (collecting sources).

This limits the possible size of price reductions from adding a rival. In contrast, medical devices are often patented and not directly duplicable and command prices far above costs. Thus, we would expect additional competitors to be able to bring prices down much further for medical devices. Nonetheless, if we conservatively assume that additional rivals have the same sort of effect in both industries, and further assume that exclusionary agreements on average exclude two actual competitors, then that suggests that they increase prices by 8%. Multiplying this by the $20 billion base indicates a cost overcharge of $1.6 billion.

These estimates are of course crude, but they do at least suggest that we are talking about a substantial enough cost overcharge to be worth examination. And these estimates greatly underestimate the anticompetitive costs because they exclude: (1) the costs from any greater health problems that result from using lower quality products, and (2) the costs resulting from the fact that these arrangements, as discussed above, increase the costs of existing rival products or prevent them from ever being created. Because of this, the costs to member hospitals from these exclusionary agreements are *not* limited to whether those hospitals pay more than they could pay for *existing* rival products.

It should also be emphasized that the social costs from these exclusionary arrangements do *not* depend on whether member hospitals on average are better off with GPOs or not. This is true for several reasons. (1) GPOs may provide many valuable services that offset the anticompetitive effects of these arrangements. The costs to member hospitals thus do not turn on whether they are better off with or without GPOs, but on whether they would be better off with GPOs that did not enter into such anticompetitive arrangements than they are with GPOs who do.[60] (2) Hospitals that belong to GPOs that offer such exclusionary agreements are only a subset of all hospitals. Much of the anticompetitive costs of uncompetitive device markets will be visited on hospitals who do *not* belong to GPOs or who belong to GPOs that do not engage in similar arrangements. Indeed, hospitals may be better off within these GPOs precisely because they have agreed to an arrangement that inflates prices for hospitals outside these GPOs and gives member hospitals a discount from those inflated prices.[61] (3) Any costs to hospitals are just a subset of the full social costs of the anticompetitive effects inflicted by these arrangements, which are also

[60] *See infra* at II.

[61] *See infra* at II; sources cited *supra* note 3.

visited downstream on patients and payors. Even if hospitals received side-payments or special discounts that offset their own increased costs, the arrangements would remain socially undesirable if they created monopoly profits for device makers.[62]

C. Redeeming Efficiencies?

GPOs have offered various redeeming efficiencies for their exclusionary agreements that should be taken into account. But none of them are persuasive.

1. Reducing Product Evaluation and Contracting Costs. – One offered justification is that GPOs allow hospitals to share (and thus reduce) the costs of evaluating and contracting for products.[63] There is reason to doubt this justification is real. Hospitals that belong to GPOs reportedly still perform separate product evaluations and draft separate contracts before they buy each product. This suggests that the GPO efforts may in fact be duplicative, adding extra evaluation and contracting costs that must be recouped by GPOs in administrative fees and ultimately by device makers in higher prices. This might help explain why buying a given product model through GPOs generally costs more than buying it directly.[64] Further, this justification is inconsistent with the above examples where GPOs have mandated the use of products that are of demonstrably higher price and lower quality even according to the GPOs' own product evaluations.[65]

In any event, even if this justification were accurate, it would be irrelevant to the current inquiry. The question here is not whether GPOs should be illegal, but whether their exclusionary practices should. And while this justification might explain collectively paying for GPO recommendations about product quality and standard form contracts, it cannot explain making those recommendations and form contracts binding through exclusionary obligations or inducements.[66] Exclusionary agreements thus do not further this offered justification and certainly have not been shown to be

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[62] *See infra* at II; sources cited *supra* note 3.

[63] *See* Hovenkamp Report at 7, 25; GAO Study, *supra* note, at 6-7 (noting that GPOs stress this benefit).

[64] *See* GAO Study, *supra* note, at 11.

[65] *See supra* II.B.

[66] In some markets, free rider problems might explain imposing a collective quality judgment on individual firms. For example, a franchisor might insist that franchisees exclusively use its supplies to prevent some franchisees from free-riding on the franchise reputation by using cheap low quality supplies. But that possible efficiency is not claimed here and has no apparent application.

the least restrictive alternative for doing so.

2. Economies of Scale. **–** Another justification stressed by the Hovenkamp report defending GPOs is that there might be economies of scale in research and production so that a manufacturer can produce a greater volume at a lower cost.[67] Similarly, there might be efficiencies in shipping so that if a hospital orders an entire truckload of devices, there is a cost savings that can be passed on to the hospital with a quantity discount. Such economies of scale are real and important. But there are several reasons to reject this offered efficiency defense for the GPO exclusionary agreements at issue here.

First, the obligations and rebates that incumbent device makers are actually offering through their exclusionary agreements with GPOs are based on the *share* of hospital business obtained rather than the *volume*. That is, the obligations and rebates turn on whether each hospital meets a certain percentage threshold regardless of the hospital size or demand for the device in question. A 90% threshold might mean 1,000 units for one hospital, and 10,000 units for another. Any given percentage applied to all hospitals is thus likely to be too high to be necessary to achieve any volume-based efficiencies for some hospitals, and perhaps too low to achieve them for other. This suggests that the rebates are designed to buy loyalty rather than achieve volume-related efficiencies.[68] Professor Hovenkamp does not explain why this offered efficiency justifies discounts or agreements based on shares rather than volume.

Second, economies of scale normally peter out past some minimum efficient scale and do not require high market shares.[69] Certainly no evidence was presented in the Hovenkamp report to show that, for medical device makers, economies of scale are

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[67] *See* Hovenkamp Report at 7-8, 12, 19, 22, 25.

[68] *See Virgin/British Airways*, European Commission Decision, IV/D/2/34.780, ¶¶97-107 (July 14, 1999) (reaching a similar conclusion about the difference between discounts that are based on shares rather than volume); *Michelin,* Case 322/81, ECR 3461 (1983) (same); *Hoffman-La Roche*, Case 85/76, ECR 541 (1979) (same). Professor Hovenkamp argues that an equally efficient rival can always match the discount, *see* Hovenkamp Report at 19-20, but this is not true if (as he supposes) economies of scale exist because the exclusionary scheme will restrict the market share of the rival and thus deprive it of the economies of scale it needs to match the discounted price. *See supra* II.B.

[69] *See, e.g.*, DOJ/FTC Merger Guideline §4 (noting that most plausible efficiencies could be achieved without requiring high market concentration).

so enormous that they require over 90 percent market shares.[70] One cannot simply assume that economies of scale are infinite and justify any increase in market share up to 100% – the precise nature and degree of those economies of scale must be documented.[71]

Third, if there were such enormous economies of scale, firms would not need exclusionary agreements to achieve them.[72] Instead, they could simply offer a lower per unit price than rivals and keep expanding their sales until they achieved those economies of scale. Doing so without any exclusionary agreement would provide a market test of whether those economies of scale really do justify such enormous market shares. To instead allow firms to impose a high market share with exclusionary agreements -- subject to antitrust review of it was justified by economies of scale -- would be to replace the normal market process with a regulatory process for gauging economies of scale. There is no reason to think this replacement would improve accuracy, especially given the fact that the regulatory process here would be conducted through multi-year, after-the-fact, adversarial antitrust litigation whose results may hinge on the happenstance of the judges and jurors drawn. There is also no reason to think this replacement would be justified give that Congress has, through its antitrust laws, decreed the fundamental policy of instead relying on market competition to sort out such economic issues as whether economies of scale drive markets to high concentration levels. In any event, even if were proper to replace the market process with this effectively regulatory review, Professor Hovenkamp's report does not offer any reason or hard evidence to think achieving these economies of scale requires such exclusionary agreements here.

Fourth, even if economies of scale exist that can only be achieved through exclusionary agreements, they would not justify agreements imposing a 90% market share unless those efficiencies were passed on to consumers. Those who defend mergers or other agreements in restraint of trade must instead prove that the likelihood and magnitude of any efficiencies offset the anticompetitive effect on market output

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[70] *See, e.g., id.* ("Efficiencies almost never justify a merger to monopoly or near-monopoly.")

[71] *See, e.g., id.* (noting that firms have an obligation to "substantiate efficiency claims" with concrete evidence, especially given that they control access to the relevant information). This is of course also true outside of merger law.

[72] *See, e.g., id.* (noting that efficiencies must be proven to be as practical matter unachievable through any less restrictive alternative). Again this is also true outside of merger law.

and price.[73] In conducting this analysis, one must not only prove the efficiencies are larger, but also that they will actually be passed on to consumers in the form of lower prices than they would have paid without the merger or agreement.[74] This is because the normally understood goal of the antitrust laws is to maximize consumer welfare.[75] The Hovenkamp report does not provide the requisite evidence. And to the extent we have evidence, it indicates that the prices available for products that benefit from GPO exclusionary agreements are not even lower than the prices for other existing products available outside them,[76] let alone lower than the prices for other products that would be available if such exclusionary agreements did not raise the costs of rivals by depriving them of economies of scale. Indeed, the GAO study indicates that GPOs generally do not even offer lower prices on the models they do carry.[77]

3. Reducing Uncertainty Costs. – Another efficiency mentioned by Professor Hovenkamp is that exclusionary agreements reduce uncertainty about whether sales will be made.[78] But this again is an efficiency that, if important, could be achieved by volume-based contracts rather than requiring a certain share of purchases. Nor have these saved uncertainty costs been documented and measured, let alone shown to require market shares of over 90%. And no proof has been offered that these allegedly saved uncertainty costs would be passed on to consumers in a way that lowers their net prices. More generally, saving uncertainly costs is an efficiency that claims too much since obtaining *any* monopoly would reduce the uncertainty faced by the aspiring monopolist. Preventing monopolists from sluggishly living "the quiet life" is one important reason we have antitrust laws that instead encourage competition and all the uncertainty that entails.[79]

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[73] *See id.*

[74] *Id.* ("To make the requisite determination, the Agency considers whether cognizable efficiencies likely would be sufficient to reverse the merger's potential to harm consumers in the relevant market, e.g., by preventing price increases in that market. In conducting this analysis, the Agency will not simply compare the magnitude of the cognizable efficiencies with the magnitude of the likely harm to competition absent the efficiencies.")

[75] *See* Lande, *Wealth Transfers as the Original and Primary Concern of Antitrust*, 34 HASTINGS L.J. 65, 68, 74-77, 82-106, 142-51 (1982).

[76] *See supra* II.B.

[77] *See* GAO Study, *supra* note, at 11 (GPOs' median price higher for all safety needle models and for 60% of pacemaker models).

[78] *See* Hovenkamp Report at 22.

[79] A similar claim is that the allegedly anticompetitive conduct reduces marketing and sales costs. *Cf.* GAO Study, *supra* note, at 7 (observing that GPOs state they offer this benefit). This

II. WHY WOULD GPOs AND HOSPITALS AGREE?

Why would GPOs and hospitals enter into arrangements that anticompetitively exclude some medical devices? One might think this can only leave GPOs and hospitals worse off, and that they would thus never agree to such arrangements. I answer this question in two stages. In the first stage, I leave aside all the special features of the health care market, like medical agency costs, insurance reimbursement, and pressures to cut costs without running afoul of legal liability for worsening health outcomes. Even without those features, antitrust economics shows that buyers in ordinary markets often have incentives to agree to arrangements that anticompetitively exclude some sellers even though their products are better or cheaper. I review the possible economic theories, and show why there is reason to think these theories and incentives apply to GPOs and hospitals as currently constituted. In the second stage, I consider the special features raised by the health care market. I show how they exacerbate the problems of antitrust economics. I also show how, even absent any market power raising antitrust problems, these special features raise problems of health economics.

As the analysis will suggest, there are multiple reasons why GPOs and hospitals might agree to arrangements that anticompetitively exclude some device manufacturers. In a market as variegated as that for medical devices, it will not be surprising if the motives vary for different devices. Some arrangements might involve an exploitation of seller market power, others an exploitation of buyer market power, others an arrangement whereby powerful sellers and buyers agree to generate and split supracompetitive profits between themselves at the expense of downstream buyers. Some arrangements might involve inflating prices in a way that abuses insurers, others might involve distortions of medical advice for payment, and yet others might involve sacrificing patient care in order meet insurer demands for cost-cutting. The particulars will turn on the specific medical devices, the distribution of market power regarding them, and the specific arrangements that have been made. This means that the search for one universal explanation for all such arrangements may be too simplistic. But the key point is not that one motive exists. It is that general structural

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cannot be accepted as an efficiency defense, or it would justify every effort at monopolization since all monopolies enjoy lower marketing and sales costs. Nor has it been documented, shown to require huge market shares, and proven to be passed on to consumers.

incentives indicate that, for many different reasons, GPOs and hospitals often have incentives to enter into anticompetitive exclusionary arrangements. This suffices to establish that one cannot dismiss the anticompetitive problems raised in Part I with the simple assertion that GPOs and hospitals would not agree to such arrangements if they were anticompetitive.

In short, the analysis that follows does not depend on establishing any one unifying reason for the relevant exclusionary agreements. The point is rather to rebut the contrary claim that the only reason GPOs and hospitals would ever agree to them must be that they are efficient and procompetitive.[80]

A. General Reasons

Because GPOs are powerful buyers, one might think they would exercise that power to countervail any market power possessed by dominant device manufacturers. But powerful buyers often have incentives to instead agree to terms that maintain or enhance seller market power to levels greater than would have persisted on a competitive market, in exchange for market advantages over other buyers or for a share of the seller's supracompetitive profits. Even without the possibility of such mutually beneficial collusion, exclusionary arrangements that cause long term harm to competition in the device markets can be explained by the exploitation of buyer collective action problems or agency costs.

1. Mutually Beneficial Collusion Between Sellers and Buyers Having Market Power. – Rather than exercising buyer market power to countervail seller market power, buyers have incentives to agree to preserve or enhance seller market power (by excluding the seller's rivals or raising their costs) in exchange for side-payments that split the seller's supracompetitive profits, or special discounts that give the participating buyers market advantages over other buyers and thus enhance the participating buyers' downstream market power.[81] This is true whether buyers have market power individually or collectively, as long as the buyers sell to others in a downstream market. Indeed, the ability of buyers to reach agreements with sellers that help sellers acquire market power and then share the profits with buyers (either

[80] Such a claim has been stressed by the GPOs in news articles and statements to the GAO, *see* Bogdanich, Meier & Walsh, *supra* note; GAO Study, *supra* note, at 9, as well as in Professor Hovenkamp's report defending the GPO practices, *see* Hovenkamp Report at 4, 11.

[81] *See* sources cited *supra* note 3.

directly or by increasing the buyers' downstream market power) is just one special application of the general Coase Theorem.[82]

i. Side-Payments. – Buyers might agree to an arrangement that enhances seller market power, even if that means each buyer must pay more for the seller's product, in exchange for the seller agreeing to share its supracompetitive profits through side-payments.[83] Such side-payments can leave participating buyers better off because the increased prices for the monopolized good are passed on to the buyers' customers as part of increased marginal costs. The participating buyers' losses thus only result from reduced sales, which can be more than offset by a side-payment out of the sellers' monopoly overcharge.[84] Such side-payments are distinguishable from mere product discounts because they are not made on a per-unit basis; thus they do not decrease the buyer's marginal costs in a way that would cause it to pass any savings downstream to consumers. Instead, they increase the buyer's profits without reducing its marginal costs, and thus effectively constitute a payment of a share of the sellers' monopoly profits in exchange for helping the seller enhance or maintain its monopoly profits.

There is considerable evidence to support the theory that this is what is going on between GPOs and incumbent device makers. GPOs get far more in total payments from device makers than they do in fees from member hospitals. Further, as noted above, many of the payments that incumbent device makers are paying to GPOs are not related to the volume of purchases. These payments may reflect side-payments being made in exchange for the GPOs conferring a *de facto* exclusivity that enhances the market power of the incumbent device maker. Indeed, even if a GPO were accurate when it insists that it did not require an ownership interest in a device maker as a actual condition of giving that maker an exclusive contract, that would not matter because the mere fact that the GPO has such an ownership stake gives it a share of any seller supracompetitive profits the GPO can generate by agreeing to exclusive contracts that enhance seller market power.

Side-payments could also be paid through the ubiquitous practice of offering discounts on multiple products in return for meeting commitment goals on all of them.

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[82] *See* IV AREEDA, HOVENKAMP & SLOW, ANTITRUST LAW ¶943b, 204-06 & n.4(1998).
[83] *Id.*
[84] *Id.*

Since these discounts are not dependent on the volume of only a single product, the discounts given on other products can be effective sidepayments that are given in exchange for participating buyers helping the seller create market power over one of the products.

Many other fees collected by GPOs or hospitals are based on a percentage of the dollar volume of purchases for each product. This includes not just the administrative fees charged by GPOs, but marketing fees or per product payments for having the GPO put its brandname on the product. These fees can be enormous. In other industries, rebates based on a percentage of the purchase price for a single product might not be considered sidepayments because they would decrease the marginal cost of purchasing that product. One might thus expect such rebates to be passed on downstream. One might also expect that, absent some additional theoretical explanations (which I describe below), buyers would agree to such rebates only if the rebate amount exceeded the price inflation created by the enhanced seller market power. But we do not need to reach those additional explanations yet because here, although GPOs negotiate the purchases, they do not actually make them. Instead the purchase price is paid by hospitals, and the GPOs get a percentage of what the hospitals pay, collecting both from device makers and member hospitals. These payments made to the GPOs do not reduce the marginal costs to hospitals by an equal amount because GPOs like Premier and Novation only return 22-40% of their revenue to member hospitals.[85] GPOs thus have incentives to agree to exclusionary agreements even if they cause a price inflation whose amount exceeds the amount of the percentage payments because the GPOs do not pay the inflated price but do get the payments. Indeed, because they are compensated based on a percentage of the purchase price, GPOs not only have incentives to agree to enhance seller market power in exchange for additional payments, but generally benefit from anything that causes price inflation in device prices. The market arrangement gives GPOs a direct cut of the seller's supracompetitive profits.[86]

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[85] *See* Bogdanich, Meier & Walsh, *Medicine's Middlemen; Questions Raised of Conflicts at 2 Hospital Buying Groups*, N.Y. TIMES (March 4, 2002).

[86] Professor Hovenkamp instead wrongly assumes that because GPOs are the purchasing agents for hospitals, they have "no greater incentive" to accept a side-payment to take an inferior or overpriced good than an ordinary retailer who buys the product would. *See* Hovenkamp Report at 24. But this assumption ignores the vast economic and legal literature on agency costs, which demonstrates that agents generally always have some incentive to deviate from the interests of their principals. *See, e.g.*, Jensen & Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs*

These sorts of exclusionary agreements are likely to be particularly attractive to incumbent device makers who face or fear entry by innovative new products. In such cases, the GPOs are basically giving incumbent device makers the benefit of the additional barriers to entry that exist for hospitals in exchange for sidepayments that give the GPOs a share of the device makers' monopoly profits. It is worth noting that many of these side-payments parallel the most anticompetitive form of slotting allowances for retail shelf space considered in recent FTC proceeding on that topic. And the concerns about coordinating increases in entry barriers are far more serious for hospitals than for retailers because entry is so much harder into the hospital market.

Such mutually beneficial seller-buyer collusion is also likely to be particularly attractive to medical device makers because such arrangements are generally most advantageous when the demand of the downstream buyers is relatively insensitive to increases in price. When downstream demand is price insensitive in this way, the upstream buyers get a side-payment for the price inflation but suffer relatively little output reduction. The demand for health care and medical devices is particularly insensitive to price increases and thus a market where such mutually beneficial collusive schemes are particularly likely.

In short, GPOs do not directly enjoy lower device prices. Instead, their compensation is based on a combination of side-payments that are not linked to volume of any particular product, and reimbursement (by both manufacturers or hospitals) based on the dollar volume of purchases. Even the latter gives GPOs a direct share of any price inflation created by enhanced seller market power and thus a direct split of any supracompetitive profits. Since in the medical industry the overall volume of products used is unlikely to be affected, any price inflation is relatively unlikely to reduce the number of commissions the GPOs get. GPOs thus have ample incentive to collude with sellers to create seller market power in exchange for a share of seller's supracompetitive profits.

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and Ownership Structure, 3 J. FIN. ECON. 305 (1976). For example, if the appropriate price for a product were $100, a retailer will not agree to instead inflate the purchase price to $110 in order to get a discount of $9, because the agreement would cost the retailer $1 a unit. But an agent for the retailer might well agree to inflate the purchase price to $110 even for a $1 side-payment because the agent gets the extra $1 but does not pay any of the extra $10.

ii. Selective Price Discounts. Another way for sellers and buyers that both have market power to collude is to agree to give participating buyers special price discounts that are unavailable to other buyers. These special discounts enhance the participating buyers' market power downstream by giving them a cost advantage over existing or potential rivals that effectively constitutes a barrier to rival expansion or entry.[87] In these cases, the seller effectively agrees to enhance the participating buyers' downstream market power (through discounts unavailable to the buyers' rivals) in exchange for the participating buyers helping maintain and enhance the seller's market power upstream (by excluding the seller's rivals).

In some cases, the special discount to these participating buyers might just offset the supracompetitive price inflation that results from the enhanced seller market power. Sellers have incentives to agree to such special discounts because the agreements with the participating buyers that enhance seller market power enable the sellers to charge supracompetitive price levels to the nonparticipating buyers. The participating buyers have incentives to agree because the agreement does not increase their costs, but does increase the costs of their rivals. This helps the participating buyers keep out new entrants, and oust or hobble their rivals. Here the exchange is a straightforward trade of enhanced seller market power (exercised against other rival buyers) in exchange for enhanced buyer market power (against downstream buyers).

In other cases, the special discounts might even exceed the supracompetitive price inflation attributable to whatever aid the participating buyers provide to seller market power. In these cases, the seller effectively shares (with the participating buyers) the proceeds from its enhanced seller market power against nonparticipating buyers, as well as enhancing the participating buyers' downstream market power. But the larger the share of purchases made by the participating buyers, the less advantageous such a scheme can be to the sellers.

Perhaps more typically, the special discounts are smaller than the supracompetitive price inflation that results from the enhanced seller market power. That would result in prices to the participating buyers that are higher than they would be without the agreement. Even then, these buyers might be willing to agree to this price increase

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[87] *See* IV AREEDA, HOVENKAMP & SLOW, ANTITRUST LAW ¶943b, 204-06 & n.4(1998); Elizabeth Granitz & Benjamin Klein, *Monopolization by Raising Rivals' Costs: The Standard Oil Case*, 39 J.L. & ECON. 1 (1996).

because their special discount means that the price increase raises their rivals' costs more than their own, and thus enhances participating buyers' market shares compared to rival buyers. In this case, the participating buyers would pay some premium (in input prices) in exchange for an increase in their downstream profits.[88] Here, the participating buyers effectively give the sellers a share of the supracompetitive profits created by their enhanced buyer market power, as well as give the seller enhanced market power against nonparticipating buyers.

Any of these special discount scenarios might apply to exclusionary GPO programs. GPOs may agree to help device makers enhance their market power because in exchange GPOs receive special discounts unavailable to other buyers. Perhaps with these special discounts GPOs pay less than they would have paid if they did not help the device maker exclude its rivals, perhaps the GPOs pay more. But the key point is that the GPOs pay less to the device makers than the GPO's *rivals* pay. This enables the participating GPOs to gain market share against GPOs who do not help the seller enhance its market power. It also enables these GPOs to claim they have obtained discounts unavailable to hospitals who do not buy through GPOs and to increase the market share of GPOs generally.[89] Of course, such discounts are not real societal cost savings because they are discounts from a price that have been inflated because of the exclusionary agreements entered into by these GPOs. This is yet another reason why the desirability of these exclusionary agreements cannot be determined by whether hospitals within GPOs pay less than hospitals outside them.

A rival device maker may sometimes be able to undercut this scheme by offering (to hospitals that do not belong to these excluding GPOs) a price that is lower than the discounted price available within these GPOs. But there are two major problems with this counterstrategy. First, if the excluding GPOs have foreclosed the market access the rival device maker needs to achieve economies of scale in innovation or production, then the rival may not be able to fund the innovation to create the product or to produce it at a cost low enough to make that offer.[90] Second, because these GPOs obtain discounts on a range of other products, for which substitutes may not be

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[88] This is what happened in Standard Oil. *See* Elizabeth Granitz & Benjamin Klein, *Monopolization by Raising Rivals' Costs: The Standard Oil Case*, 39 J.L. & ECON. 1 (1996).

[89] This is an important reason why one cannot assume that an increase in GPO market share means they must be acting in a procompetitive manner, which is an assumption made by Professor Hovenkamp. *See* Hovenkamp Report at 6, 17.

[90] *See supra* I.B.

available, this counterstrategy will often not be available. Sometimes manufacturers can offer discounts on an entire product line, thus precluding rivals unless they can simultaneously achieve the minimum efficient scale for every product in that line. Or the GPOs may be able to obtain discounts on other products because they are large enough to exercise monopsony power and take advantage of bulk efficiencies for those other commodity products where the sellers lack market power. These discounts on unrelated products may bar a more efficient rival in one product from circumventing this scheme.

2. Exploitation of Buyer Collective Action Problems. – Collective action problems can drive individual buyers to each agree to help enhance seller market power in exchange for a discount even though those discounts are ultimately offered to all buyers and thus in the end confer no market advantage. This is especially true if no individual buyer has any market power, but can even be true among a set of buyers that each have some market power. These are thus "special" discounts in the sense that they are offered only to buyers who agree to the exclusionary arrangement that enhances seller market power. But once all buyers agree, the discounts become universal. These exclusionary discounts are thus not in the end beneficial to buyers as a whole, but because of collective action problems each buyer nonetheless has incentives to voluntarily agree.

Collective action problems are a generalization of the prisoner's dilemma problem, whereby individual members of a group have incentives to pursue conduct that is individually rational even though collectively it harms the members as a group.[91] If other buyers have not agreed to the arrangement, each individual buyer can gain a market advantage by agreeing to the special discount. If other buyers have agreed, then each individual buyer has incentives to agree because otherwise it would suffer a market disadvantage by paying higher prices than its rivals.

If all the buyers in the market were collectively organized, then they could reject an exclusionary discount that enhanced seller market power against buyers as a group in a way that inflated prices by more than the discount offered.[92] But if buyers act

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[91] *See* MANCUR OLSON, THE LOGIC OF COLLECTIVE ACTION (2d ed. 1971); RUSSELL HARDIN, COLLECTIVE ACTION (1982).

[92] Even then, as shown above, the collectively organized buyers would have incentives to instead agree to enhance seller market power in exchange for a side payment that shares the sellers'

individually, then each will rationally conclude that it suffers all the market advantage or disadvantage from foregoing a discount, but that resisting enhanced seller market power confers a benefit that must be shared with other buyers whether or not they agree to the discount. If each buyer concludes that its individual decision will not by itself determine whether or not the seller gets enhanced market power, it has incentives to agree to the exclusionary arrangement that will definitely determine whether it gets the discount. But because each buyer acts on such individual incentives, they will all agree to the exclusionary discount. The end result will be that no buyer has any market advantage over other buyers and they all face a seller with enhanced market power.[93]

In the present context, suppose the following were true. Each GPO – or perhaps more likely, each hospital – rationally concludes that whether or not it individually agrees to an exclusionary agreement is unlikely to alter whether the device maker will enjoy monopoly power. But it knows that if it does agree, it will get a discount, and that if it does not agree, it will not. If so, each individual buyer has incentives to agree to the exclusionary agreement in order to get the discount even though the collective result of all of them agreeing is that they pay higher prices. The discount may be from a monopoly price that will only result because all (or a sufficient number) of them can be expected to agree. Or the discount may be a real short-term discount from the price they would otherwise pay that they each have incentives to take even though in the long run taking the discount means they face a seller with enhanced market power who will raise prices for all buyers.

In any event, collective action problems mean that we cannot leap from the observation that buyers (be they GPOs or hospitals) individually agree to join a scheme to the conclusion that the scheme must benefit them. The expectation that the scheme will hurt them if its succeeds whether or not they contribute to it can induce them to voluntarily join a scheme to reap a gain that depends on their individual decision to join, even though that gain is more than offset by the loss they suffer from the scheme because enough buyers join to harm buyers collectively.

3. Exploiting Buyer Agency Problems. – Buyers are generally corporations, and

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supracompetitive profits.

[93] *See generally* Louis Kaplow, *Extension of Monopoly Power Through Leverage*, 85 COLUM. L. REV. 515, 532-33 (1985).

corporations cannot speak for themselves -- only their managers can. A firm's managers may benefit from agreeing to an exclusionary agreement even though it creates enhanced seller market power that harms their firm in the long run. This is part of a general problem of agency costs that affects all firms.

This can be true if, for example, the firm's managers receive direct payments from the sellers. Even if harm to the firm would to some extent harm the manager, that can be more than offset by the direct gain the manager gets. For example, suppose a manager owns 1% of his corporation. He agrees to enter a scheme that increases his corporation's costs by $1 million. In exchange he receives a $100,000 payment to himself. Even though the scheme hurts his corporation by $1 million, and thus hurts him to the tune of $10,000, it is worth agreeing to because he will earn $100,000 from doing so. As noted above, there is some evidence here that GPO officials have received direct payments from device makers favored by exclusionary agreements.

Another agency cost problem is that, without any such direct payments, managers may benefit by procuring a short-term price reduction for their firm even if the firm's long-term costs increase because the scheme enhances seller market power. This is especially a problem when the true long-term costs of agreeing to the anticompetitive scheme are hard to discern or estimate. Then a manager might gain a promotion by lowering short-term costs for the firm. Eventually the firm's long-term costs will increase, but that problem may well be attributed to general market forces rather than the manager's earlier decisions. The manager might also have moved on to a new job or retired by the time the long term costs hit, in which case it would be a problem for the manager's successors.

4. Hospitals v. GPOs. – Even if the above explains why GPOs agree to join these exclusionary agreements, one might wonder why hospitals put up with them. One common defense offered by GPOs is that, if GPO agreements were excluding better or cheaper rival devices, member hospitals would just leave the GPO.[94] But there are a number of reasons this response is unpersuasive.

i. Member Hospitals May Be Bound. – One reason hospitals may not just leave the GPO to buy from rival device makers is that they are contractually bound not to

[94] *See, e.g.*, Hovenkamp Report at 4, 11; GAO Study, *supra* note, at 9 (reporting this GPO argument); Bogdanich, Meier & Walsh, *supra* note (same).

do so. As noted above, member hospitals often have general agreements obligating them to buy all of their purchases in certain product categories through their GPO.[95] Even if the general GPO membership agreement contains no such a restriction, particular program agreements often do. For example, once a hospital signs a contract agreeing to participate in Novation's Opportunity ® Spectrum I or II Portfolios, then for the five year period of the contract, that hospital agrees that it will purchase all products in the covered product categories through Novation.[96] Where this is so, hospitals cannot simply buy rival products outside the GPO when the GPO-approved products are more expensive or lower quality. Their contract restricts them to products offered through the GPO, so if the GPO declines to approve a rival device, the hospital cannot buy it and stay within the contract.

True, many GPO commitment contracts do provide the hospitals a right of termination. But termination is often painful and indeed generally the main remedy in practice for even pure exclusive dealing agreements.[97] The agreements also often impose onerous penalties on the exercise of the right of termination. For example, Baxter Healthcare Corporation requires "a termination fee" equal to the sum of 20% of the last two years of purchases and the return of all signing discounts totaling up to $295 per hospital bed.[98]

Even when additional termination fees are not assessed, hospitals have little ability to switch to a rival product because then they would have to give up their rebates for all past years, which can be enormous given that GPO commitment contracts are very long term, lasting as long as five to seven years.[99] Further, these GPO commitment contracts are often on multiple products. Thus, even when it does not have past rebates it might lose, a hospital that wants to switch to a cheaper or better new product cannot do so because the penalty of losing future rebates on all the covered products

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[95] *See supra* at I.A (collecting sources).

[96] Novation's Opportunity ® Spectrum I Portfolio Participation Agreement ("Participant declares Novation as its sole supply cost management company for the purchase of products in the OPPORTUNITY product categories. . . . Participant will purchase OPPORTUNITY ® products though Novation purchasing arrangements and will not purchase OPPORTUNITY products or any products that compete with OPPORTUNITY products though any other supply cost management company."); Novation's Opportunity ® Spectrum II Portfolio Participation Agreement (same).

[97] *See supra* at I.A.

[98] *See* Baxter – Wrap Around Incentive Agreement Exhibit C2.

[99] *See supra* at I.A.

is too great. Indeed, some such contracts prohibit the hospital from even considering rival products.

For example, the Novation Opportunity ® Spectrum I Portfolio Agreement gives participating hospitals an additional 5-7% rebate (on top of the single product rebates otherwise offered) if they buy more than 95% of their products in twelve categories from five vendors. A rival device maker that wanted to offer one product would thus have to offer a price on that product that not only offset the 5-7% rebate on that product, but offset the rebate on the other eleven products as well. If we assume purchases in each category are roughly equal, that means that a rival could not compete with a single new product unless it could offer a price 60-80% below the incumbent device maker's price. Rival device makers who have a product that costs half as much would thus be excluded by such an arrangement even if they happened to offer their product right before a hospital began its participation in this program. Worse, once the hospital has begun on the five year contract, it would have to give up all past rebates if it failed to comply with the 95% commitment on any one product category.[100] Suppose a hospital is halfway through such a contract. To compete, a rival product would have to offer a price for the remaining two and a half years that sufficed to offset the past and present rebates on all 12 product categories. If we again assume the product categories are roughly equal in volume, there is literally no price the rival device maker can offer for one product that could persuade a hospital to terminate its contract and switch: even if that rival offers to give away its product for free, that cannot offset the lost rebates.[101]

Indeed, even if the rival could offer a product that can somehow overcome these rebates, they will be barred by the Novation contractual provision that provides that

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[100] *See, e.g.*, Novation's Opportunity ® Spectrum I Portfolio Participation Agreement ("all earned incentive payments received by the Participant will be subject to repayment if Participant fails to comply for the full [five-year] term of the OPPORTUNITY portfolio" with a 95% purchase commitment and other requirements).

[101] For example, suppose the twelve product categories each cover $1 million a year in purchases, which is a total of $60 million for the five year period. A 5-7% rebate for the five year period on all twelve categories would thus amount to $3-4.2 million. But if a rival tries to compete halfway through the contract, it can only offer a lower price for the remaining 2.5 years, which would have to be some discount from the $2.5 million the hospital is now paying before its rebates. Even if the rival gives away its product, the $2.5 million gain to the hospital cannot offset the $3-4.2 million in repossessed and foregone rebates.

participating hospitals will not even "participate in competitive product evaluations for OPPORTUNITY products."[102] Further, Novation's favored suppliers in this program prohibit participating hospitals from even "entertaining" proposals from rival suppliers.[103] Being unable to even evaluate or consider rival offerings, a hospital will not be able to adopt it.

ii. Other GPO Benefits May Outweigh Cost of Anticompetitive Arrangements. – Leaving aside the exclusionary GPO agreements, GPOs may confer considerable offsetting benefits to member hospitals on other products that make membership worthwhile. In particular, GPOs have considerable buyer market power (especially Premier and Novation) and might thus be expected to exercise that monopsony power to demand subcompetitive rates on many products, in particular on commodity items where the sellers have no market power.[104] GPOs might also enjoy small but significant economies of scale in warehousing, shipping or avoiding the transaction costs of negotiating on commodity items. Member hospitals might thus stick with GPOs because they find that the benefits the GPOs offer in terms of lower prices on commodity items (whether because of efficiencies or monopsony power) offset the harm GPOs inflict by colluding with sellers who have market power over more high-tech devices.

To the extent this theory were explanatory, one would expect that hospitals would be able to buy commodity products cheaper through the GPO than outside it, but that

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[102] *Id.*

[103] *See* Supply Partner Terms of Participation Opportunity ® Spectrum I Portfolio ("Health care organization agrees not to cause supply partner to incur defensive selling costs during the term of this Agreement (such as can be caused by *entertaining* proposals from other vendors or conducting product evaluations) . . .") (emphasis added).

[104] If so, the fact that hospitals have combined to exert such buyer market power through GPOs is itself anticompetitive. Because my focus is not on whether the creation or merger of GPOs is desirable but rather on whether the exclusionary practices brokered by GPOs are anticompetitive, I leave that issue for further elaboration in Appendix A, which also rebuts Professor Hovenkamp's claim that the creation of GPO buyer market power is desirable because it constrains seller market power in medical devices. *See* Hovenkamp Report at 9-11. But even if one did not agree with my rebuttal in Appendix A, this Hovenkamp claim could not justify GPO exclusionary practices that create, enhance, or protect seller market power. In any event, the point here is simply that the benefits of the bargaining power that GPOs give hospitals on some goods (whether or not socially desirable) may offset the costs to hospitals of GPOs' anticompetitive exclusionary practices on other goods.

hospitals might pay higher prices for high-tech products (where sellers have market power) inside the GPO than they could pay outside the GPO. One would also expect that the largest GPOs – who both could exert the most monopsony power and have the most efficiency savings in transaction costs on commodity products – would be able to offer the most extensive exclusionary agreements on high-tech products. Both observations appear to be true here.

If it is true that hospitals do better with GPOs than without them because of these offsetting benefits on other products, that hardly constitutes any market test that the exclusionary agreements are efficient and procompetitive. Hospitals are entitled to the benefits of an unrestrained competitive market, where they could reap the benefits of GPOs without enduring the costs of these anticompetitive arrangements. That is, since the question is not whether or not to outlaw GPOs, the answer cannot turn on whether or not hospitals on balance benefit from GPOs. The question is instead whether or not to outlaw or regulate these exclusionary agreements, and to the extent the effect on member hospitals bears on the answer, it turns on whether they would be better off with GPOs that did not have such exclusionary agreements than they are with GPOs that do.

This may be easier to see if we thought about the normal retail context in which such issues arise. Suppose one oil company got every gas station in the nation to carry only its gasoline, thus foreclosing all rivals. One would not conclude that this nationwide foreclosure must not be harmful to consumers because consumers prefer to buy their gasoline from gas stations rather than arrange for oil tankers to deliver gasoline from the refiners directly to their home. One would instead realize that gasoline stations provide a service that is sufficiently valuable that supracompetitive gas prices are not large enough to offset it. That would not alter the fact that consumers are entitled to the fruits of competition both at the manufacturer *and* retail levels. Similarly, even though member hospitals may well be worse off without any GPO at all than they would be with GPOs that participate in an anticompetitive scheme to enhance manfacturer market power, they would be even better off with the GPOs and without the anticompetitive scheme. And that is the competitive market to which they are entitled.

iii. Member Hospitals May Enjoy Sufficient Side-Payments or Special Discounts. – Another reason hospitals might agree to join exclusionary programs is that they receive side-payments too. This includes a share of the side-payments that

go to GPOs, some of which GPOs distribute to member hospitals and an even bigger share of which gets distributed to shareholder hospitals.[105] Further, hospital groups sometimes receive large separate fixed payments from GPOs or device makers in return for meeting thresholds that are not dependent on volume.[106] Perhaps most important, recall that hospitals also often get side payments in the form of rebates on other products in a wide product line. For reasons detailed above, this may well give them incentives to agree to the anticompetitive scheme even though it results in a net increase in price for the product where market power is enhanced.

All member hospitals further benefit from the special manufacturer discounts that help them compete against other hospitals who either do not belong to GPOs or belong to GPOs that are not willing to enhance seller market power in exchange for special discounts. It is possible that the benefits this confers by giving member hospitals an advantage in the hospital market outweigh the increased costs that result from enhanced seller market power. That is, member hospitals may agree to stay with their exclusionary GPOs because those exclusionary arrangements have inflated the prices charged to other hospitals, and not because the member hospitals actually pay lower prices than they would pay without those exclusionary arrangements.

Under this theory, the interests of member hospitals are aligned with those of GPOs, and both benefit from the exclusionary agreements. But that hardly means those exclusionary agreements are procompetitive. It just means that their anticompetitive costs are visited on nonmember hospitals and downstream on patients, insurers, and government payors. As with other theories, this theory provides another reason one

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[105] Thus one cannot assume, as the Hovenkamp Report does, that control by shareholder hospitals assures GPOs would not adopt polices that result in hospitals buying overpriced products. *See* Hovenkamp Report at 4. For example, suppose shareholder hospitals buy 10% of all syringes purchased through a GPO. The GPO agrees to an exclusionary practice that raises a syringe maker's profits by $100 million, $50 million of which the syringe maker pays to the GPO and that the GPO distributes to the GPO shareholders. Although the GPO practice does raise the shareholder hospitals' supply costs by $10 million, this is more than compensated by the $50 million addition in shareholder profits. Agreeing to such exclusionary arrangements is even more tempting if, as often happens, the higher purchase costs can be passed on to insurers. *See infra* II.B.1.

[106] *See* Baxter – Wrap Around Incentive Agreement Exhibits B and C2 (hospitals that commit to sole source compliance get a signing discount totaling up to $295/hospital bed, depending on number of product categories for which commitment it made); Quorum Health Group 10K (describing over $6.9 million in annual fixed payments from Premier irrespective of volume if minimum thresholds are met).

cannot assume GPOs are efficient if prices within GPOs are lower than prices outside them.

iv. Member Hospitals May Suffer From Collective Action or Agency Problems. – As foreshadowed above, member hospitals may well suffer from a collective action or race to the bottom effect. Each hospital feels pressured to join an exclusionary GPO to maintain its special discount so that it does not suffer a relative cost disadvantage to rival hospitals. Other hospitals feel the same pressure, and thus all join even though the long run effect is increased costs for all of them. Because the individual decision to join the GPO definitely affects whether the hospital gets the short-term discount, but has little effect on whether the anticompetitive scheme succeeds in inflicting the long run marketwide cost, every individual hospital has incentives to join even though the scheme is collectively harmful to all of them. Under this theory, the interests of member hospitals and GPOs are not aligned. Rather, the GPOs have market power that allows them to exploit the collective action problems faced by more numerous hospitals.

Likewise, hospitals may have agency problems because their administrators can take credit for securing short-term price discounts, but are unlikely to be blamed for long-term price increases or to be around when those increases are inflicted. Under this theory, the interests of GPOs and hospitals are again not aligned.

v. Member Hospitals May Simply Be Ill-Informed. – A final possibility is that member hospitals are harmed by GPOs but are simply not informed about the fact that they could do better. Of course, to the extent that is the cause, it suggests that the solution would be greater disclosure of all the fees and side-payments being paid to GPOs and of the alternative bids that the GPOs rejected.

B. Reasons Unique to Health Care Industry

Exacerbating or adding to the general reasons described above, there are many reasons unique to health care that may explain why GPOs or hospitals might agree to anticompetitive exclusionary schemes.

1. Insurance Reimbursement. – The general pass along possibility that drives the special discounts and side-payments noted above can be exacerbated by insurance

reimbursement. Such reimbursement means that an increase in costs (resulting from enhanced seller market power) can be passed on without decreasing volume because the patients do not pay the bulk of the costs, the insurers do. Indeed, even without any seller or buyer market power at all, this can create motives to agree to inflated seller prices (which are passed on to insurers) in exchange for side payments (which are not).

Suppose for example, the price for given medical device should be $100. The hospital instead agrees to pay $120 for the device in exchange for a $10 sidepayment or rebate. If the sidepayment or rebate is received in a form that does not affect insurance reimbursement for the cost of the device (perhaps because it is instead applied to general administration), then the insurer pays $120, or $20 more than it should, and the device maker and the hospital each take $10 of the overcharge. The same would be true if the patient or government pays the nominal price for the device.

The strength of this rationale obviously depends on the type of insurance at issue. If, as is increasingly common, the insurer does not reimburse the hospital for expenses but pays a flat fee for the treatment of a given diagnosis, then this rationale might seem inapplicable. But often health insurers or government payors adjust the level of future flat fees based on past expenditures for medical devices. Further, to the extent insurers do not adjust their flat fees because of device costs, the cost pressures this creates gives hospitals other incentives to join inefficient exclusionary schemes, as we shall next.

2. Evading Bars on Trading off Health Care Costs and Benefits. – Given the growing prevalence of flat fees and managed care, hospitals are under a lot of pressure to cut costs. This gives them incentives to help preclude the entry of new devices that increase hospital costs even if those new devices also provide greater health benefits to patients. But hospitals know that if they directly sacrifice patient health to save money, they run afoul of a series of legal restrictions that include, but are not limited to, the risk of malpractice liability.[107] Unfortunately, such a system gives hospitals incentives to cuts costs not in ways that make the most rational cost-benefit tradeoffs, but in ways that make the sacrifice of health benefits the least noticeable.[108] One

[107] *See* Elhauge, *The Limited Regulatory Potential of Medical Technology Assessment*, 82 VA. L. REV. 1525 (1997).

[108] *Id.*

common technique is to structure operations so that physicians do not have available the choice of the more expensive but healthier option, so that they never have to make that cost-benefit tradeoff and they and their patients may never become aware that it has been made.

This means that here one possible explanation might be that hospitals agree to join GPOs that generally exclude innovative new products in order to make those new products unavailable in their hospital. Further, by reducing the penetration of new products into health care, such exclusionary arrangements can help prevent or delay the day when usage of the device becomes customary medical practice, which would be necessary to make it malpractice to fail to use the new device. Of course, this hospital interest is hardly advanced in cases when the exclusionary agreements exclude products that are both better *and* cheaper. But the hospitals may figure that for every cheaper product excluded, the exclusionary arrangement excludes three new products that are better but more expensive. If so, agreeing to a generally exclusionary program can lower overall hospital costs even though the program raises costs for some products and sacrifices patient health for all of them.

In short, hospitals have incentives to help exclude new devices if, on average, they are more costly regardless of their benefits because the hospital experiences the costs but not the health benefits. Exacerbating these problems is the fact that some hospitals are also insurers, in the sense that they are owned or controlled by HMOs. Such hospitals have even greater incentives in this direction.

3. Externalities. – A more general aspect of the last problem is that the costs of excluding a new innovative product are not entirely borne by the GPO or hospital buyer. For example, the Centers for Disease Control estimate that 1 million health care workers suffer accidental needle sticks, with at least 1,000 contracting serious illnesses such as AIDs.[109] The injuries suffered because of those needle sticks are thus a real cost of choosing a nonretractable syringe.[110] But those costs are an externality because they are not reflected in the price hospitals pay for syringes. Accordingly, a hospital might agree to an exclusionary scheme that gives them nonretractable syringes at a lower price even though the true overall cost of excluding the retractable syringe is far higher once one includes the costs of treating personnel who become ill

[109] *See* Smith, *supra* note.
[110] *See supra* at I.B (collecting sources).

from needle-sticks.

Likewise, failure to use the best pulse oximeter product in the neonatal Intensive Care Unit may save a hospital money when all the sidepayments or loyalty rebates on other products are taken into account, but it also increases the risk of eye damage and blindness in infants. According to one hospital study, exclusionary agreements that bar use of the Masimo pulse oximiter product increase the risk of eye damage or blindness in low-weight from 10% to 30% for babies that weigh 500-750 grams, and from 0% to 12% for babies over 750 grams.[111] Obviously such an increase in eye damage is an enormous personal cost to those babies and their parents, and will also result in increased medical expenditures for insurers and taxpayers during the rest of those babies' lives. Because those costs are not suffered by the hospital, any cost-benefit tradeoff the hospital may make in taking rebates to use inferior technology is likely to be inefficient and socially undesirable.

In short, to the extent some of the costs of choosing products are externalized either to health care workers, or to the patients and insurers who must endure the subsequent health problems and cover the treatment costs, the full costs will not be taken sufficiently into account by purchasing hospitals.

4. Special Agency Costs. – GPOs are effectively the medical agent of hospitals. They are being paid for their advice about which devices to buy. For them to take money from manufacturers distorts their incentives, and gives them incentives to instead effectively advise hospitals to buy the wrong devices. This can persist as long as hospitals are ignorant of the extent of the bias and that they are being deceived. Or it can persist even if hospitals are aware of this agency cost but conclude that it is offset by the value of having an agent – here having a GPO at all.[112] If the GPO confers a valuable benefit as to many other products, it has agency slack to pursue side-profits on some products.

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[111] *See* Letter from Dr. Augusto Sola of Emory Medical School to Senator Herb Kohl (April 19, 2002).

[112] *See generally* Jensen & Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305 (1976) (showing that even optimal agency relations will necessarily permit some positive agency costs). Professor Hovenkamp's contrary assumption that agency costs are necessarily zero, *see* Hovenkamp Report at 24, is incorrect for reasons explained above. *See supra* note.

Hospitals are also effectively the medical agent of patients. Patients rely on them to choose the best medical devices, expecting the hospital to be financially neutral about which devices it selects. If the hospital gets side benefits from choosing certain medical devices, it has incentives to select them even though they are more expensive than, or provide fewer health benefits than, alterative devices.

GPOs and hospitals are also effectively agents for insurers. Insurers rely on them to choose the most cost-effective devices. If the GPOs and hospitals can make side-profits by choosing more expensive devices, for which the insurer then pays, the insurer is effectively deceived.

Note that these agency costs are part of a common theory that underlies not only the general Medicare anti-kickback statute, but also ordinary rules against physicians splitting fees or making payments for referrals.

III. POSSIBLE REFORMS

Reform in this area should address both the types of anticompetitive schemes that raise concerns and the types of incentives that have lead to the imposition of those schemes. If these anticompetitive schemes were banned without addressing the underlying incentives, then those same incentives would likely lead to new types of anticompetitive schemes to achieve the same ends. If the incentives were addressed without banning the anticompetitive schemes, then those anticompetitive schemes would continue in place, inflicting their harms. And because there is such a multiplicity of possible incentives, correcting a few may leave enough other incentives to impose those same anticompetitive schemes. Disclosure should also be required in order to monitor compliance with any new legal restrictions and to make sure the anticompetitive schemes and incentives do not re-emerge in new guises.

A. Ban or Restrict Loyalty Rebates, Bundling, and Other Exclusionary Agreements

We need not reinvent the wheel here, but could rather borrow from European Union law, which prohibits a dominant firm from offering discounts conditional on customers taking all or most of their requirements from itself unless the discounts

relate to demonstrable efficiencies rather than being given for loyalty.[113] This need not be made general antitrust law; it could instead be made the law for manufacturer-GPO-hospital agreements in particular.

One way to interpret and implement this E.U. law would be to say that all agreements to offer discounts conditional on GPOs or hospitals taking a certain *share* of their purchases from a device maker are per se illegal because based on loyalty, but that when the agreement offers a *volume*-based discount, the device maker can rebut the presumption of illegality if it can meet the burden of proving demonstrable efficiencies that justify the agreement. Another way would be to say that GPO agreements could offer discounts conditional on hospital shares *if* they were able to show demonstrable benefits that were linked to share rather than volume. Under this latter interpretation, the burden of proof on whether volume-based discounts offered efficiencies might be shifted to the party challenging them.

A fortiori, a pure exclusive dealing agreement, where the seller will not supply the buyer at any price unless the buyer takes all or most of its requirements from that seller, would be banned in this area unless perhaps demonstrable efficiencies could be proven. (The effective discount in such cases is from an alternative price of infinity). This could be applied both to contracts requiring exclusive use (by a GPO or hospital) of one device maker or a given product market, or to contracts requiring exclusive use by a hospital of one GPO for all purchases.

Discounts should also be banned if offered for meeting share thresholds on multiple products. Such multi-product loyalty rebates are even more likely to be anticompetitive, and even less likely to reflect any efficiencies. It should also be illegal for a GPO to insist that a device cannot be offered in GPO contracts unless the device maker *raises* its product price. There can be no plausible efficiency argument for such conduct and thus it should be per se illegal.

B. Ban Side-Payments and Special Discounts

The greatest problem distorting incentives in this area are the side-payments and special discounts paid to GPOs and hospitals. A number of steps could be taken to

[113] *Virgin/British Airways*, European Commission Decision, IV/D/2/34.780, ¶¶97-107 (July 14, 1999); *Michelin*, Case 322/81, ECR 3461 (1983); *Hoffman-La Roche*, Case 85/76, ECR 541 (1979).

address this problem.

a. Ban GPOs or hospitals from having any investment interest or option in device makers.

b. Ban GPOs from taking any payments from device makers, whether proportional to volume or not. This would assure that GPOs are loyal only to hospitals.

c. Ban hospitals from taking any payments from device makers other than perhaps discounts proportional to purchases that can be proven to have demonstrable efficiencies as outlined above.

These reforms seem particularly attractive since it largely requires only lifting the regulatory exception previously granted to the general statutory ban on such kickbacks where the government covers health care costs.[114]

C. Require Disclosure

To the extent any payments or rebates from device makers to GPOs and hospitals were permitted, it would be desirable to require disclosure of them for each relevant product, as well as the conditions attached to them, the terms of any bid by a rival device maker, and the results of any product quality assessments. Such disclosure should go to the government, hospitals, insurers, and rival device makers, and perhaps also be available to physicians and patients.

One might be tempted to rely on such disclosure as a substitute for the more substantive reforms outlined above. But that would clearly do nothing to alter the underlying incentives which, for the reasons detailed in Part II, can drive the market to adopt the same anticompetitive agreements even if full disclosure were made. The point of requiring disclosure should instead be to monitor any exclusionary agreements that are made in the name of efficiency to make sure they conform to appropriate legal standards, and to help prevent the same anticompetitive aims from manifesting themselves in new forms.

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[114] *See* 42 U.S.C. §1320a-7b(b) (the anti-kickback statute); 42 C.F.R. 1001.952(j) (the exception).

APPENDIX A
DO GPOs DESIRABLY CREATE BUYER MARKET POWER?

My analysis is focused on whether GPO exclusionary practices are undesirable, not on whether the creation or combination of GPOs is undesirable. But because GPOs are often defended, including by Professor Hovenkamp, on the grounds that they combine hospitals to give them buyer market power,[115] it is worth noting that the creation of such buyer market power would in fact itself be anticompetitive. "The exercise of market power by buyers, or monopsony, can impose social costs equivalent to those imposed by monopoly."[116] Thus, Supreme Court precedent condemn buyer cartels under the same per se rule as seller cartels.[117] Indeed, the Supreme Court has expressly held that, even in health care, courts will not entertain justifications for horizontal maximum price fixing.[118] Likewise, federal guidelines judge mergers that create excess buyer market concentration under the same rules as mergers that create excess seller market concentration.[119]

To some, the adverse effects of monopsony power may seem counter-intuitive because the consequence is lower prices in the purchasing market. But these lower prices are *sub*competitive prices and thus (like *supra*competitive prices) produce a lower and subcompetitive market output and quality. Thus, the intuition proves false for at least three reasons.

(1) Especially if firms with buyer market power have any selling market power, the predictable result of any exercise of buyer market power is lower *sub*competitive production of the inputs that those business buyers use to make their output, lower output by those buyers downstream, and thus *higher* (supracompetitive) prices in the downstream market in which those buyers sell.[120]

(2) Even without higher prices in a downstream market, the creation of monopsony power in the upstream market remains anticompetitive, as many courts

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[115] *See* Hovenkamp Report at 9-11.

[116] IV AREEDA, HOVENKAMP & SOLOW, ANTITRUST LAW ¶ 980 (rev. ed. 1998); *see generally* BLAIR & HARRISON, MONOPSONY (1993).

[117] *See Mandeville Island Farms v. American Crystal Sugar,* 334 U.S. 219 (1948).

[118] *See Arizona v. Maricopa County Medical Society,* 457 U.S. 332 (1982).

[119] *See* DOJ/FTC Merger Guideline §0.1; *United States v. Pennzoil,* 252 F. Supp. 962 (W.D. Pa. 1965); *United States v. Rice Growers,* 1986-2 Trade Cas. (CCH) ¶67,288, at 61,459 (E.D. Ca. 1986).

[120] *See* HOVENKAMP, FEDERAL ANTITRUST POLICY §1.2b (1994).

have recognized.[121]

(3) Even if an upstream exercise of buyer market power does turn out to lower downstream consumer prices, those lower prices would remain *sub*competitive prices that create *sub*competitive levels of market output and quality downstream. These subcompetitive levels of output and quality would remain harmful to consumers, who by definition would have been willing to pay more for the output and quality level a competitive market would have afforded them. In many markets, including many markets for medical devices, upstream monopsony power is more likely to produce a downstream reduction in quality than in output. For example, GPOs exercising market power are less likely to buy fewer syringes than they are to buy syringes having a subcompetitive level of quality. The price (or quality-adjusted price) per syringe paid by insurers and patients may actually increase, for reasons noted above. But even if the prices paid by patients decreased, the anticompetitive result would remain that patients would receive syringes of a lower quality than a competitive market would have produced.

Professor Hovenkamp's report appears to assume that the creation of buyer monopsony power is desirable if device makers have seller market power.[122] But this is incorrect for several reasons.

(1) The existence of seller market power does not mean that a buyer with market power will even attempt to countervail it. To the contrary, as Part II explains, in such a situation, sellers and buyers have incentives to agree to terms that maintain or enhance their market power against rivals and downstream consumers, and that split the resulting supracompetitive proceeds between them. Professor Hovenkamp

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[121] *See Pennzoil*, 252 F. Supp. 962 (condemning merger that created local monopsony power in Pennsylvania crude oil market even though it seemed unlikely to affect output in downstream worldwide market for refined oil); *Rice Growers*, 1986-2 Trade Cas. (CCH) ¶67,288 (condemning merger that created local monopsony power in California paddy rice market even though it seemed unlikely to affect output in downstream worldwide market for milled rice); *Mandeville,* 334 U.S. 219 (1948) (condemning a buying cartel in a regional beet market even though it seemed unlikely to have a price effect on the downstream worldwide market in refined sugar); DOJ Decision on Cargill-Continental Grain merger. http://www.ers.usda.gov/publications/agoutlook/sep1999/ao264h.pdf (requiring divestitures to cure buyer market concentration in the markets for buying grain for export through port elevator facilities, even though it seemed unlikely the merger would have any downstream effect on world grain prices.)

[122] *See* Hovenkamp Report at 9-11, 25.

has himself argued as much in his academic writing.[123]

(2) Even when creating a buyer with market power does cause them to countervail seller market power, that is not likely to be desirable. This can be seen by considering the possible reasons why the seller might have market power.

(a) If the seller market power is illegal, then the best remedy is antitrust enforcement against the sellers, not allowing the entrenchment of anticompetitive market power on both sides of the market.

(b) If the seller market power was acquired legally through competition on the merits, then the seller's profits are presumably the just rewards for producing a better product than other market options. Indeed, such seller market power (especially with medical device makers) is often protected by patents, whose aim is precisely to reward innovative sellers with above-market returns for their innovations. In such cases, some seller market power is affirmatively desirable. Allowing buyers to organize to create countervailing market power would lower the return to making investments that create better products below either the competitive rate (which confers a temporary premium even if no patent is involved) or below the rate of reward for innovation intended by patent law (if the seller did have patent protection).

(c) Even when legally acquired seller market power is undesirable, the best remedy is to have it corrected by market forces (like the entry into the seller's market encouraged by above-normal returns) rather than to entrench market power on the other side. In a properly functioning market, that is the whole point of supranormal rates of return: to send a signal to other sellers about which markets they should enter, expand in, or make investments to innovate or otherwise improve product quality. Horizontal organizations of buyers to exercise countervailing market power short circuits that process. They discourage entry, investment and innovation in precisely those markets that need it most. Competition on both the seller and buyer side are clearly more desirable than market power on both sides.

(d) There may remain some cases where seller market power is legal, not the fruit of investment or innovation, and reflects a permanent ("natural") monopoly uncorrectable by antitrust law or market forces. Even then, it is better to remedy such seller market power with utility-type rate regulation, rather than to entrench an avoidable market power on the other side. If the government has declined to adopt utility rate-regulation, antitrust courts and enforcement agencies have no warrant to do so through the guise of antitrust law by allowing the creation of buyers with market

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[123] *See* Hovenkamp, *Mergers & Buyers*, 77 VA. L. REV. 1369 (1991); IV AREEDA, HOVENKAMP & SLOW, ANTITRUST LAW ¶943b, 204-06 & n.4(1998).

power in the hopes they will impose a form of rate regulation of their own.

(e) Even in the case where the seller market power is legal, undesirable, permanent, and uncorrectable by utility-type regulation, it turns out to be ambiguous whether countervailing buyer power would improve or worsen market output, and impossible for antitrust courts to determine in practice when an improvement would result.[124] So there is at best one ambiguous case among all the negative possibilities created by countervailing buyer power. Indeed, even in this rare and ambiguous situation, any change in industry costs, technology or demand might end the seller's "natural" monopoly and thus allow correction by market forces. Even in this case, then, future market results would probably be worsened by entrenching anticompetitive buyer market power in the market.

In any event, even if one did justify the creation or merger of GPOs on the grounds that they created buyer market power that could countervail seller market power, that could hardly justify allowing GPOs to enter into exclusionary arrangements that create, enhance, or protect seller market power. And that is the situation at issue here.

[124] *See* AREEDA & KAPLOW, ANTITRUST ANALYSIS 200 n.51 (5th ed. 1997).