CONSUMING HEALTH: PHYSICIAN CONFLICT, PATIENT CARE, AND DEVELOPING TECHNOLOGY

A MARKET ANALYSIS AND NORMATIVE EVALUATION OF A CONFLICT BETWEEN CARDIOLOGISTS AND CARDIAC SURGEONS

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I. INTRODUCTION

When you visit your physician, you would like to believe you are receiving the best health care possible—especially when it involves your heart. Recent litigation, however, suggests this may not be the case. In a conflict spreading nationwide, cardiologists and heart surgeons are responding to a new technology by fighting over patients and filing claims alleging unfair competition.[1]

Coronary artery disease "is the most common cardiovascular disorder in adults. . . . [and] is caused by the build-up of cholesterol deposits [clots] in the wall of the coronary arteries that convey the blood to the heart muscle (myocardium)."[2] Every year, millions of Americans visit their cardiologists complaining of chest pain, a common indicator of coronary artery disease.[3] For these patients, there are a few nonsurgical treatments available.[4] A majority of patients, however, require a surgical procedure to remove the cholesterol deposits and prevent potentially fatal heart attacks.[5] For the patients who require surgery, there are generally considered to be two options: inserting a stent or bypass surgery. U.S. doctors performed 1,204,000 angioplasties (stent insertions) in 2002 and 515,000 cardiac revascularizations (bypasses) in 2001.[6]

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[1] *See* Geeta Anand & Ron Winslow, *Transformation in Medicine is Putting Specialists at Odds*, WALL ST. J., Sept. 10, 2003, at A1.

[2] Charles J. Mullany, *Coronary Artery Bypass Surgery*, CIRCULATION, Am. Heart Ass'n (Jan. 28, 2003), at 1, *available at* http://circ.ahajournals.org/cgi/reprint/107/3/e21.pdf.

[3] *See Stent Procedure*, Am. Heart Ass'n, *at* http://www.americanheart.org/presenter.jhtml?identifier=4721 (last visited Feb. 14, 2004) [hereinafter *Stent Procedure*].

[4] *See* Mullany, *supra* note 2 (including "changes in lifestyle, diet modification, weight reduction, and cholesterol reduction, as well as control of diabetes and high blood pressure" as nonsurgical procedures).

[5] *See id*.

[6] *See Angioplasty and Cardiac Revascularization Statistics*, Am. Heart Ass'n, *at* http://www.americanheart.org/ presenter.jhtml?identifier=4439 (last visited Jan. 19, 2005).

The stent procedure is a minimally invasive procedure developed in the last decade.

> A stent is a wire mesh tube used to prop open an artery that's recently been cleared using angioplasty. The stent is collapsed to a small diameter and put over a balloon catheter. It's then moved into the area of the blockage. When the balloon is inflated, the stent expands, locks in place and forms a scaffold. This holds the artery open. The stent stays in the artery permanently, holds it open, improves blood flow to the heart muscle and relieves symptoms.[7]

Coronary artery bypass grafting (CABG), however, is a very invasive procedure that has been around for almost thirty years, known to most people as open-heart surgery. CABG "involves creating new arteries to provide blood to the heart by use of other blood vessels as conduits to bypass the obstructions in the patient's coronary arteries."[8] Heart surgeons use a vessel section, cut from another part of the body, to circumvent the blockage by attaching the vessel on either side of the thrombosis (clog).[9] "In almost all cases, the operation requires an incision in the midline of the chest (sternotomy). During most bypass operations, the heart is stopped and is connected to a heart-lung machine that does the work of both the heart and the lungs (cardiopulmonary bypass)."[10]

Determining which procedure a patient should receive is causing serious problems within the medical field. When a patient is symptomatic, he will initially be referred to a cardiologist.[11] In the past, if a thrombosis was present, the cardiologist would refer the patient to a cardiac surgeon, a specialist who performs the extremely difficult CABG procedure.[12] With the advent of the stent, however, it is cardiologists who perform the procedure.[13] Consequently, cardiologists are not making referrals to heart surgeons for CABG; rather, they are telling patients to get a stent and then performing the procedure themselves.[14] "Since the stent made its debut in 1994, the number of such procedures . . . has more than doubled to nearly one million annually. Meanwhile, bypass surgeries have fallen by more than 20% . . . ."[15] As a result, heart surgeons' practices are rapidly declining as they lose patients to cardiologists; their operating costs have increased 16%, while revenues have increased only 6%.[16] This phenomenon is occurring on a large scale; the Wall Street Journal reports that "tensions are rising between cardiologists and cardiac surgeons in [] communities around the country."[17] Cardiologists now hold a tight

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[7] *Stent Procedure*, *supra* note 3.
[8] Mullany, *supra* note 2, at 1.
[9] *See id.*
[10] *Id.*
[11] *See* Andand & Winslow, *supra* note 1.
[12] *See id.*
[13] *See id.*
[14] *See id.*
[15] *Id.*
[16] *See id.*
[17] *Id*.

monopoly[18] on the market for treating coronary artery disease and a growing number of patients are expressing concerns that their cardiologists are not fully informing them of their options.[19] In particular, questions are being raised about "what patients know about financial ties and other arrangements that influence referrals,"[20] and whether the insertion of a stent is truly the best medical plan of action, or rather the byproduct of the cardiologists' new monopoly.[21]

It is likely that this conflict will also impact national policy because health care is a high priority on the legislative and policy agenda. In particular, in "the year 2000, approximately fifteen percent of the nation's gdp [*sic*] was devoted to health care, amounting to about $1.3 trillion annually."[22] While the ultimate effect of this conflict has yet to unfold, it is certain that its effects will go beyond finances, altering the landscape of medical practice, physician relationships, and patient health.

Part II of this Note examines whether the cardiologists' monopoly is a result of the stent being a superior product and thus an inevitable conclusion. It reveals that CABG is competitive and, in fact, a better procedure for patients with a high number of clots. More important, Part II reveals a "gray area"—patients with between two and four clots. Under the current situation, all of the patients in this gray area are getting stents even though some of these patients would benefit more from a bypass.

Part III analyzes the conflict to see if the monopoly is the natural result of patient preferences, rather than cardiologist control. It reveals that patients are unable to be independent consumers and are inevitably dependent on the recommendations of their physicians—meaning that cardiologists artificially generate the current demand for stents. Together, Parts II and III reveal a cluster of related problems: an inability to have an independent consumer, a conflict of interest embodied in the cardiologists, and consequently, a market that is not operating in response to free market pressures.

Parts IV and V examine the efficiency of the current regime under a market and normative analyses, respectively. Part IV analyzes some of the underlying influences on this particular market and then graphically represents and compares the dead-weight loss to society in the current regime against one with competition. It concludes that dead-weight loss to society would be reduced if demand for stents were not artificially inflated. The normative analysis in Part V considers whether the current situation is

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[18] *See* F.M. SCHERER & DAVID ROSS, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 11 (2d ed., Rand McNally 1980) (defining a monopoly as an entity whose changes in output decisions have a perceptible influence on price).
[19] *See* Anand & Winslow, *supra* note 1.
[20] *Id*.
[21] *See id.*
[22] *See* Ass'n of the Bar of the City of New York Antitrust Comm'n, *Supplement to the 2002 Milton Handler Annual Antitrust Review Proceedings: Recent Developments in Four Areas of Antitrust Law: Merger Enforcement; Criminal Enforcement and Health Care Initiatives; Exclusionary Conduct; and the Noerr-Pennington Doctrine and State Action Immunity*, 2003 COLUM. BUS. L. REV. 451, 504–05 (2003).

providing a just allocation of resources given that it significantly impacts patient health. It concludes that the current regime is not allocating resources appropriately to maximize patient health.

Part VI observes whether the use of suits for unfair competition, the current attempt to alter the present regime, will be effective. It concludes that unfair competition is unlikely to prospectively remedy the situation. Part VII examines other possible methods for preventing cardiologists from hyperinflating demand. Ultimately, this Note proposes the development of an independent, third-party consultant as an effective and fair remedy to deflate the artificial demand for stents by providing unbiased referrals, thereby removing the cardiologists' conflict of interest.

II. STENT PROCEDURE VERSUS BYPASS PROCEDURE: IS COMPETITION POSSIBLE?

To begin, it must be asked why the stent monopoly developed, and whether competition is possible in this market.[23] At first blush, it appears that using the stent may be a better, less invasive, and more effective medical procedure. This part, therefore, examines whether stents have rendered bypass surgery obsolete, or whether there is still a need and a place for competition between the two procedures in the health care market. In comparing the procedures, it is important to note that national long-term data are not yet available on a representative sample of people who have had stents inserted, because it is a relatively new technology.[24] The available information provides, therefore, an accurate yet noncomprehensive overview.[25] Additionally, physicians are dubious about statistics that reflect negatively on their respective procedures, because choosing certain patients and calculating statistics in a particular fashion can predetermine outcomes.[26] This section analyzes each procedure for: (1) invasiveness; (2) expense; (3) effectiveness; (4) limitations; and (5) developing technological improvements. This comparison reveals that while stents are clearly advantageous for some patients, CABG (despite being more invasive) does not necessarily outprice the stent procedure;

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[23] It appears that the products are differentiated, which would result in monopolistic competition. Differentiated products are defined as products that are different in physical attributes, information, and/or subjective image, so that one product is clearly preferred by at least some buyers over rival products at a given price. Stents, representing one product, and CABG, another product, are examples of monopolistic competition; each product previously influenced price (so that the quantity of output sold would increase by a reduction in price, under given demand conditions) and there was competition between them. *See generally* SCHERER & ROSS, *supra* note 18.

[24] It will be many years before any data can be compiled about the benefits of stents because the technology has been implemented in only the last few years.

[25] Complicating factors for both stent and bypass surgery procedures include gender, age, race, the presence of other diseases, the severity of the cardiovascular problem, and the patient's compliance with her medical treatment. Thus, estimates of the efficacy of either procedure are mediated by the existence and variation of these factors. *See generally Heart Disease and Stroke Statistics—2005 Update*, Am. Heart Ass'n, *available at* http://www.americanheart.org/downloadable/heart/1105390918119HDSStats2005Update.pdf (last visited Jan. 13, 2005).

[26] Telephone Interview with Dr. Malcolm MacDonald, Pediatric Cardiovascular Surgeon, Stanford University, Department of Cardiothoracic Surgery (Mar. 16, 2004).

ultimately, some patients benefit more from the CABG procedure, and not only in extreme cases.

CABG, one of the most frequently studied medical procedures, is considered highly invasive because it requires the chest cavity to be opened and the heart to be stopped.[27] To stop the heart, the surgeon attaches a machine to the patient that functions as both the heart and lungs.[28] The surgery takes four to six hours, and afterwards the patient recovers in an intensive care unit.[29] In most cases, patients are not able to walk for one to two days, and must stay in the hospital for a week.[30]

Unlike bypass surgery, stents do not require the chest cavity to be opened or the heart to be stopped. Typically,

> Balloon angioplasty takes 1 to 2 hours to complete and is done with local anesthesia on patients who are mildly sedated. Blood thinners . . . may be used intravenously . . . to prevent intracoronary blood clotting. Most patients will stay overnight in the hospital for observation, will be discharged the following morning, and can resume normal activities within a week."[31]

Additionally, "[s]tents also help restore normal blood flow and keep an artery open if it's been torn or injured by the balloon catheter. . . . To date there's no evidence of long-term complications from having a permanent stent."[32] A stent is a less invasive procedure than CABG and, as a result, enables a shorter recovery than CABG.

CABG is widely regarded as more expensive than a stent procedure because of the extended hospital time and added cost of compensating surgeons for the extensive training required to perform the surgery.[33] A recent study, however, indicates that CABG's expense may ultimately be equivalent to that of a stent. While the study hypothesized that cost is a disadvantage of CABG, it revealed that repeated stent procedures raise the cost of stents almost to the initial cost of CABG.[34] Because stents can create sites for additional artery blockage, about one in five patients experiences reclogging (restenosis), which necessitates a repeat intervention within a year.[35] Additionally, as stent technology develops in

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[27] *See Many Coronary Bypass Patients Readmitted to Hospital*, Am. Med. Ass'n (Aug. 12, 2003) ("CABG surgery may be the most frequently studied of all surgical procedures, probably in part because of its expense, the frequency with which it is performed, and that it relates to the most common cause of death in the United States, coronary heart disease"), *at* http://www.medem.com/medlb/article_detaillb.cfm?article_ID=ZZZQW00DAJD&sub_cat=618.
[28] *See* Mullany, *supra* note 2, at 1.
[29] MEDLINEPLUS MEDICAL ENCYCLOPEDIA, *Heart Bypass Surgery*, *at* http://www.nlm.nih.gov/medlineplus/ency/article/002946.htm (last visited Apr. 13, 2004) [hereinafter *MedlinePlus*].
[30] *See* Mullany, *supra* note 2, at 2.
[31] Andrew D. Michaels & Kanu Chatterjee, *Angioplasty Versus Bypass Surgery for Coronary Artery Disease*, CIRCULATION, Am. Heart Ass'n (Dec. 3, 2002), *at* http://circ.ahajournals.org/cgi/content/full/106/23/e187?maxtoshow=&HITS=10&hits=10&RESULTFORMAT=&fulltext=chatterjee&searchid=1101237062960_14394&stored_search=&FIRSTINDEX=0&search_url=http%3A%2F%2Fcirc.ahajournals.org%2Fcgi%2Fsearch&journalcode=circulationaha.
[32] *Stent Procedure*, *supra* note 3.
[33] *See MedlinePlus*, *supra* note 29.
[34] *See* Michaels & Chatterjee, *supra* note 31.
[35] *See id.*

an effort to reduce the incidence of restenosis, the upfront cost of stents increases dramatically.[36] Consequently, the cost alone does not clearly advantage one procedure over the other.

With respect to effectiveness, CABG is known to be an effective long-term remedy for coronary artery disease, while the long-term benefits of stents are relatively uncertain.[37] In fact, a recent study shows that bypass surgery is better than stent-assisted angioplasty at relieving chest pain and improving quality of life in the year after the procedure.[38] Because similar data have been available about bypass surgery for some time, and it is a procedure that doctors have perfected, many hospitals implement a bright-line rule that if a patient has more than three thromboses, a bypass is required.[39] Overall, CABG is known to be more effective in two areas: relieving overall patient pain, and benefiting patients with several clogged arteries.[40]

On the other hand, there are limitations to both CABG and stent procedures. With respect to CABG, the Journal of the American Medical Association reported that "[a]bout 13 percent of patients discharged from a hospital following coronary artery bypass graft (CABG) surgery are readmitted within 30 days for reasons related to the surgery."[41] Unfortunately, the researchers were unable to pinpoint what factors caused the rehospitalization,[42] indicating that this problem may persist.

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[36] It may reduce the cost of stents overall, though, because in theory, the technology will eliminate the need for successive stent procedures. Telephone Interview with Dr. Malcolm MacDonald, *supra* note 26.

[37] *See id.*

[38] For this study:

> The analysis is based on data from the Stent or Surgery trial in which 988 patients with more than one blocked heart artery were randomly assigned to receive either CABG or percutaneous coronary intervention (PCI, also known as angioplasty). Five hundred had CABG; 488 had PCI. The patients' average age was 61. Seventy-nine percent were male, 14 percent had diabetes, 24 percent had acute coronary syndrome and 45 percent had hypertension.
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> Patients' cardiac-related health status was measured at baseline, after six months and after one year using the 19-item, self-administered Seattle Angina Questionnaire. The questionnaire focused on physical limitations, angina stability and frequency, treatment satisfaction and perception of quality of life. Overall, treatment satisfaction was high for both groups.

Bypass Surgery May Relieve Chest Pain Better than Angioplasty Plus Stent, Am. Heart Ass'n (Sept. 16, 2003), *at* http://www.americanheart.org/presenter.jhtml?indetifier=3015373.

[39] But the bright-line rule fails to account for changing technology, nor does it maximize health care as a result; but it does evidence the continued use of bypass as a solution to coronary artery disease. Telephone Interview with Dr. Stephen Liu, Emergency Medicine Physician, Stanford University (Mar. 14, 2004).

[40] Telephone Interview with Dr. Malcolm MacDonald, *supra* note 26.

[41] *Many Coronary Bypass Patients Readmitted to Hospital*, *supra* note 27. Additionally,

> Risk factors for death after CABG surgery have been studied extensively, however which factors are associated with early readmissions are less clear. Edward L. Hannan, Ph.D., of the State University of New York, Albany, and colleagues examined the frequency and causes of hospital readmissions within 30 days following CABG surgery in the state of New York from January 1, 1999, through December 31, 1999. The researchers found that of 16,325 total patients, 2,111 (12.9 percent) were readmitted within 30 days for reasons related to CABG surgery. The most common causes of readmission were postsurgical infection (n=598 [28 percent]) and heart failure (n=331 [16 percent]).

Id.

[42] *See id.*

Additionally, women have three times the risk of death than men during or shortly after bypass surgery.[43] Even though the overall risk of death from the procedure is low, researchers are not able to isolate factors to explain why women have a statistically greater risk of mortality than men.[44] Consequently, despite the efficacy of bypass surgery, it is still a risky procedure.

With stents, restenosis is a notable problem.[45] There are two locations where an artery can clog after a stent has been inserted: at the site of the stent and in the same artery past the location of the stent.[46] Recently, doctors have been combating the latter type of clogging by using what is known as a "drug-eluting stent," which slowly emits a drug to prevent the blood vessel from reclosing, along with blood-thinning agents like Plavix, for three months after the surgery.[47] Ostensibly, this seems like an improvement, yet in July 2003, the Food and Drug Administration released a report warning against the use of drug-eluting stents after receiving reports of thirty-four blood clots and five deaths.[48] In October 2003, another warning was issued after 290 patients suffered blood clots with sixty deaths resulting, as well as fifty reports of allergic reactions resulting in an undisclosed number of deaths.[49] Thus, in comparison to CABG, stents have an increased incidence of restenosis; and drug-eluting stents, while reducing restenosis, have not been proven safe for patients.

Scientists, however, are developing new technologies to address the limitations of both procedures. A potential improvement for CABG is a new minimally invasive and less expensive procedure: the minimally invasive direct coronary artery bypass (MIDCAB).

> MIDCAB is used to avoid the heart-lung machine. It's done while your heart is still beating and is intended for use when only one or two arteries will be bypassed. MIDCAB uses a combination of small holes or "ports" in your chest and a small incision made directly over the coronary artery to be bypassed. . . . The surgeon views and performs the attachment directly (rather than microscopically), so the artery to be bypassed must be right under the incision.[50]

Currently, information is being gathered and scrutinized about this new process.[51] If this process can be refined to the point where it is as

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[43] *Young Women at Greater Risk than Men After Bypass Surgery*, Am. Heart Ass'n (Feb. 19, 2002), *at* http://www.americanheart.org/presenter.jhtml?identifier=3000829.
[44] *See id.*
[45] *See Stent Procedure*, *supra* note 3.
[46] *See New Warning on Heart Stent*, CBSNews.com (Oct. 29, 2003), *at* http://www.cbsnews.com/stories/2003/10/29/health/main580792.shtml.
[47] *Heart Stent Procedure*, Online Lawyer Source, *at* http://www.onlinelawyersource.com/heart_stent/procedure.html (last visited Nov. 6, 2004). But this drug-eluting stent does not eliminate the risk of the clog occurring at the site of the stent. *See New Warning on Heart Stent*, *supra* note 46.
[48] *See Heart Stent Procedure*, *supra* note 47.
[49] *See id.*
[50] *Minimally Invasive Heart Surgery*, Am. Heart Ass'n, *at* http://www.americanheart.org/presenter.jhtml?identifier=4702 (last visited Feb. 14, 2004).
[51] In a negative light, a recent study in the New England Journal of Medicine indicated that MIDCAB procedures seem to be less effective primarily because the surgeon's view is obscured by blood moving from the still beating heart. Telephone Interview with Dr. Malcolm MacDonald, *supra* note 26.

minimally invasive as angioplasty, then it will have a distinct advantage over angioplasty given that there will not be the same threat of reclogging currently present in stents.[52]

Drug-eluting stents are the newest innovation; however, the deaths associated with them have spurred research to create a stent that reduces restenosis and subsequent deaths. Researchers are also developing derivative technologies, such as stents coated with nitric oxide, for use in other areas of the body to cure different ailments.[53] One North Carolina company is recruiting internationally-recognized pulmonologists to develop stents for use in the lungs.[54] Another group of doctors in Maryland is using stents in combination with coils to treat brain aneurysms, and the results so far have been overwhelmingly successful.[55] Additionally, counties around the country are opening catheterization labs[56] and creating programs to encourage cardiologists to work in their respective areas.[57] It is possible, then, that the limitations of stents will be overcome in the near future.

The medical community has recognized the clearest cases where stents and CABG would be most effective: one clog and five or more clogs,[58] respectively. It is unclear, however, which treatment is best for patients who have between two and four clogs. One study was designed specifically to find a solution; unfortunately, the results have not produced a definitive answer, which the researchers predict is due to time limitations.[59] The initial results show that patients who received a stent after one year were more likely to experience restenosis and complain of chest pains.[60] The quality-of-life scores, however, were nearly identical between the two groups.[61] The study also found that medical costs of the stent patients were significantly lower than those of bypass patients, despite the added cost of restenosis.[62] This study (as well as similar other studies)

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[52] *See Minimally Invasive Heart Surgery*, *supra* note 50.
[53] *See NitroMed, Inc. Reports Financial Results for Third Quarter; Company Also Reports on Recent Corporate Achievements*, BUS. WIRE, Dec. 18, 2003 (nitric oxide is a chemical naturally produced by the body for cardiovascular, immune, reproductive and nervous systems).
[54] *See Five Internationally Recognized Pulmonologists Join Alveolus' Physician-Advisory Board*, PR NEWSWIRE, July 15, 2002 (projecting nonvascular stents to be used to open blocked airways in the lungs due to tumor growth, and some benign conditions as well).
[55] *See New Stent-Assisted Coiling Procedure Means Some Patients with Wide Neck Aneurysms May Avoid Brain Surgery*, ASCRIBE NEWSWIRE, Mar. 3, 2003.
[56] *See* Andrea Perera, *New Lab Helps Hospital Fight Heart Disease*, ORLANDO SENTINEL, Dec. 11, 2003, at H1 (describing new catheterization labs that allow "the diagnostic procedures that determine pressure and blood flow in the heart's chambers" to be visually seen by the cardiologist while being minimally invasive).
[57] *See* Cathy Mentzer, *County Sees Influx of Cardiologists*, PUB. OPINION, Jan. 2, 2004, at 19A (describing an influx of cardiologists after a "study indicated that the number of bypass operations being done [was] declining, in large part due to the success of intervention procedures like angioplasty and stenting").
[58] This is also known as multivessel disease.
[59] *See* H.M. Krumholz, *CABG v. Stenting for Multivessel Disease*, JOURNAL WATCH CARDIOLOGY, June 1, 2001, *available at* http://cardiology.jwatch.org/cgi/content/full/2001/601/1?maxtoshow=&HITS=&hits=&RESULTFORMAT=&fulltext=CABG+stent&andorexactfulltext=and&searchid=1081918318237_4028&stored_search=&FIRSTINDEX=0&resourcetype=1&eaf.
[60] *See id.*
[61] *See id.*
[62] *See id.*

ultimately concluded that more long-term data would be necessary before the question can be conclusively answered.[63]

Overall, it is evident that the products have their own benefits and costs, but that CABG is a procedure that can compete with stents. CABG is considered the better procedure if there are numerous arteries clogged and if the disease is extreme.[64] Additionally, it is currently more effective at both relieving pain and preventing restenosis. On the other hand, stents are less invasive and are notably effective. Both procedures may also develop technologies to improve their weaknesses.[65] Even though cardiologists monopolized the market by controlling access to patients, the bypass is still a viable option—and perhaps even a better option for some patients. CABG, therefore, may still save some patients' lives in cases where a stent cannot.

III. PATIENTS' RIGHTS: THE UNINFORMED CONSUMER

In predicting that competition creates market efficiency,[66] one must assume that consumers know their preferences and are fully informed of their options. Consumer preferences within the health care market are complicated, and even though patients may research their own health problems, their superficial knowledge is almost invariably outweighed by the expertise of their physicians. Knowing this, most patients ultimately defer to the recommendation of their doctors. Consequently, patients are not fully informed consumers who develop their own preferences independently. This part explores this dilemma from the patient's perspective, specifically by understanding the medical and financial information available to the patient to determine if it is possible for the patient to become a fully-informed consumer. Subsequently, this examination will reveal if the current demand level is a product of actual patient preference, or if it is artificially generated. Ultimately, the analysis reveals that it is not possible for consumers to be fully informed and to

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[63] *See id.* "By 1 year, repeat revascularization was significantly more common among stented patients (16.8 percent vs. 3.5 percent) . . . ." Krumholz, *supra* note 59. "However, freedom from new revascularization procedures . . . were superior in the CABG group." A. Rodriguez et al., *Coronary Stenting Versus Coronary Bypass Surgery in Patients with Multiple Vessel Disease and Significant Proximal LAD Stenosis: Results from the ERACI II Study*, HEART, *available at* http://heart.bmjjournals.com/cgi/content/abstract/89/2/184?maxtoshow=&HITS=&hits=&RESULTFORMAT=&fulltext=CABG+stent&andorexactfulltext=and&searchid=1081918318237_4028&stored_search=&FIRSTINDEX=0&resourcetype=1&eaf. "[T]he cost/benefit ratio of stenting is determined primarily by the increasing need for revascularization in the [stented] group." Victor M.G. Legrand et al., *Three-Year Outcome After Coronary Stenting Versus Bypass Surgery for the Treatment of Multivessel Disease*, CIRCULATION, Am. Heart Ass'n (Mar. 1, 2004), *at* http://circ.ahajournals.org/cgi/content/abstract/109/9/1114?maxtoshow=&HITS=&hits=&RESULTFORMAT=&fulltext=CABG+stent&andorexactfulltext=and&searchid=1081918318237_4028&stored_search=&FIRSTINDEX=0&resourcetype=1&eaf.

[64] Also, if numerous stents are inserted and reclose then it may not be possible to later remedy the reclosure with a bypass because the arteries have become too damaged for repair. Telephone Interview with Dr. Malcolm MacDonald, *supra* note 26.

[65] *See* SCHERER & ROSS, *supra* note 18, at 17 (because of these differences it is evident that these two procedures are differentiated products, which means that the market used to be one of monopolistic competition).

[66] *See infra* Part IV.

make independent judgments about their best health care options, and consequently, the current demand level is the result of the cardiologists' control of the market.[67]

A. MEDICAL INFORMATION

> I am an overweight, 69-year-old-man. Last May, I experienced a heavy feeling in my chest and shortness of breath. My primary-care physician ordered a nuclear stress test that was abnormal. He referred me to a cardiologist for further testing. Initially, the receptionist said that I could not see a specialist for several weeks. . . . When I screamed bloody murder, they got me the cardiologist, who performed a catheterization procedure and placed a stent in one coronary artery. I was much improved for about three weeks. Then the chest heaviness and breathlessness returned. . . . My concern is: Am I receiving appropriate health care? Why did the stent not improve my symptoms for longer than three weeks?[68]

In an objective discussion of market structures, efficient competition, and bottom lines, it is easy to forget that each stent is inserted into a patient who is concerned about her health and unsure of whom to trust. The ability of a patient to make an informed choice depends significantly on three factors: (1) information she receives from her doctor; (2) the availability of information on the health problem from other sources; and (3) whether the information available generates dependence on or independence from the physician's recommendation.[69] If the consumer is informed, it will help correct for market inefficiencies because it is logical that a patient, when informed objectively and accurately of the pros and cons of the procedure, will choose the procedure that will benefit her health the most.

In transmitting information to patients, the dynamics of the doctor-patient relationship puts physicians in a position of power over their patients because their expertise can be essential to prolonging or possibly saving patients' lives. This means that there is a very real ability for physicians to generate demand because they are the primary source of essential information.[70] Here, because cardiac surgeons are dependent upon cardiologists for referrals, and cardiologists now have the ability to insert a stent, cardiologists—who have always been able to generate demand—are now doing so in a self-serving manner. Rather than relaying any information about the possible benefits of a bypass procedure, cardiologists appear to be skewing the information they give to patients and recommending patients get a stent instead.[71] If this is the case, then the monopoly is not reflective of patients' preferences, but rather an artificially generated demand curve.

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[67] Unless the patient happens to be a cardiologist or cardiac surgeon.
[68] D. Harper, *Continued Coronary Blockage Requires Prompt Attention*, INTELLIGENCER JOURNAL, Jan. 14, 2004, at A9.
[69] *See generally* PHILIP JACOBS, THE ECONOMICS OF HEALTH AND MEDICAL CARE 93–95 (1980).
[70] *See id.* at 95.
[71] *See* Anand & Winslow, *supra* note 1.

Despite this reliance on physicians, independent consumer choice may still be responsible for the current demand scheme because coronary artery disease is so common that there is a lot of information available from books and online sources about the available procedures. If this information serves to create a less dependent, more informed consumer, then the risk of demand generation is reduced. If true, then the current market structure is a reflection of patients' informed choices preferring stents. Consequently, it would indicate that the cardiologists' monopoly is an accurate reflection of the patients' demand for stents rather than bypass surgery.

The information available, however, encourages patients to implicitly follow their doctors' recommendation; thus the apparent demand for stents is probably a false indicator of patients' real needs and desires. For example, one website tells patients, "Your cardiologist and cardiac surgeon will decide what is the most appropriate treatment for you. The location, the extent, and the number of obstructions in the arteries often dictate what is the most appropriate treatment for any particular individual."[72] This information does not empower the patient to assess the validity of a recommendation; rather, it serves to increase the patient's dependency upon the physician. This indicates that the current demand scheme for stents is artificially generated due to cardiologists failing to fully inform patients.

B. FINANCIAL INFORMATION

Patients' abilities to function independently are also affected by how much information they are given about their doctors' financial incentives. Currently, patients are limited in their ability to learn about financial relationships, and, because of tensions between cardiologists and cardiac surgeons, this lack of information is fostering a sense of distrust in patients.

Congress implemented the Patients' Bill of Rights Act in 1998, attempting to assuage patient concerns and promote competition in the health care market through disclosure.[73] This need developed as a result of capitalistic influences in health care, where the "ascendancy of market processes [developed] as a means of controlling health care costs. The stirrings of competition in health care coincided with a more general consumer movement in American society, in which both 'caveat emptor' and consumer protection legislation were meaningless without information."[74] The Act's effectiveness, however, is considered limited because it specifically excludes "individual contracts or financial arrangements between a group health plan or health insurance issuer and any provider."[75] By limiting access to information that is essential to understanding a physician's financial situation, the Act falls short of its intended goal.

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[72] Mullany, *supra* note 2, at 1.
[73] See William M. Sage, *Regulating Through Information: Disclosure Laws and American Health Care*, 99 COLUM. L. REV. 1701, 1705–06 (1999).
[74] *Id*. at 1706.
[75] *Id*. at 1791, quoting H.R. 3605, 105th Cong. § 121(e) (1998).

Consequently, patients are caught between cardiologists and heart surgeons without enough information to enable them to act independently. One of these patients, Mr. Krupsaw, realized how the lack of information about the financial relationship among the doctors was affecting him, causing concern about his health care. Mr. Krupsaw asked his cardiologist if Dr. McDonald, a heart surgeon who had performed surgery on Mr. Krupsaw before, could do his valve replacement surgery.[76] Instead, the cardiologist told Mr. Krupsaw that Dr. McDonald no longer performed that procedure, and referred him to another heart surgeon with whom he had a financial arrangement based on referrals.[77] Mr. Krupsaw said that he was not informed about this financial arrangement between the two doctors, and following the advice of his cardiologist, had the new heart surgeon perform the procedure.[78] Mr. Krupsaw learned a few months later that Dr. McDonald did do heart valve replacements and responded by saying, "I felt very confused . . . . You hope your doctor is giving you all of the information, and the right information."[79]

Because medical and financial information is limited, physicians are able to create artificial demand for their services that can result in the over-consumption of medical services, which may not produce the greatest benefit for patient health.[80] Under the monopoly power that the cardiologists are wielding, their ability to further exploit their imperfectly informed consumer, or vulnerable patient, is heightened. Indeed, given that it is difficult for doctors to be certain of which procedure is better, expecting patients to determine their own needs is unrealistic. This examination of patient consumption reveals three unavoidably linked problems: (1) the conflict of interest by cardiologists as their recommendations generate their profits, (2) the inability of consumers to achieve the medical insights of their doctors, and consequently, (3) the ultimate dependence of patients on doctors' recommendations.

IV. MARKET ANALYSIS

"In order to make a considered choice between various protective regimes, one has to take into account the economic effects on competition."[81] To that end, this part analyzes how the cardiologists' monopoly is operating, and what impact it has on consumer surplus and costs to society based on cardiologists' ability to control consumer preferences. Hypothetically, if there is an efficient monopoly, then economics instructs that the status quo is rational and should not be disturbed. The analysis reveals, however, that the monopoly over medical

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[76] *See* Anand & Winslow, *supra* note 1.
[77] *See id.*
[78] *See id.*
[79] *Id.*
[80] *See* DEBORAH HAAS-WILSON, MANAGED CARE AND MONOPOLY POWER: THE ANTITRUST CHALLENGE 42–43 (2003) (noting that in the 1980s approximately one-third of medical tests and procedures were found inappropriate, including 14% of coronary bypass surgeries).
[81] ANSELM KAMPERMAN SANDERS, UNFAIR COMPETITION LAW: THE PROTECTION OF INTELLECTUAL AND INDUSTRIAL CREATIVITY 100 (1997).

procedures is one that fails to provide consumers with the product they value most. The resulting inefficiency should be corrected by giving patients access to the procedures that they value the most.

One of the basic assumptions of our economic structure is that competition is good, and conversely, monopolies are bad. The most important condition for making competition perfect is the absence of barriers-to-entry for new firms.[82] There are several basic tenets for favoring competition: competition disperses power being held by any one group, it creates freedom of opportunity, and it is efficient.[83] On the other hand, if the market is inefficient, "[i]t leads to an allocation of resources that is inefficient in the sense of satisfying consumer wants with less than maximum effectiveness."[84] The difference between what consumers would be willing to pay (which is greater than what they are charged) and the failure to satisfy demand is known as consumer surplus.[85] When the consumer pays more than the amount that the service is valued, the difference is the dead-weight loss to society.[86] Both of these values are markers for market inefficiency. It is hypothesized that the current regime is resulting in dead-weight loss that is greater than what would occur if demand for stents were not hyperinflated.[87] To show this, I will use six graphs, all of which focus on the patients in the "gray area"—patients who have between two and four clots. Before analyzing the graphs, I will explain a few of the underlying values that are present in them: marginal cost, the slope of the demand curve, and the marginal cost to the doctors—the sum of the actual cost of the stent and overhead expenses. The shape of the demand curve will be estimated, accounting for variations in demand because the product is specific to health care.[88] The actual values for many

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[82] SCHERER & ROSS, *supra* note 18, at 11. Here, the barrier-to-entry is the system cardiologists have erected to divert patients from bypass surgery to stents.

[83] *See id.* at 12–14. A market is said to be competitive when the number of firms selling a commodity is so large, and each firm's share of the market is so small, that no individual firm finds itself able to influence appreciably the commodity's price by varying the quantity that they put out.

[84] *Id.* at 16.

[85] *See id.* at 17.

[86] Dead-weight loss represents the societal misallocation of resources created by monopolistic inefficiencies, indicating that the market is failing to maximize possible benefits to consumers. *See id.* at 17–18.

[87] It is possible for the analysis to be performed by measuring consumer surplus as well, but I will focus on dead-weight loss as an equally effective marker of market inefficiency.

[88] Another factor that could be analyzed is cost to the patient. For the purposes of this Note, I will be assuming that each patient has the ability to purchase the product at the price they value it. However, it should be considered whether cost is a fixed price, or if it varies depending on who the consumer is. For patients who have insurance, there is often a maximum charge they will have to pay in a year (for example, it is $2,500 for Blue Cross patients with a University of Southern California graduate student plan). One key fact is that "every insurance rate is different," and every insurance group develops an individual contract with each area of hospitals for procedures. Telephone Interview with University of Southern California Hospital Billing Department (Mar. 18, 2004). Any cost incurred by the hospital or group that is beyond what was negotiated in the contract is considered to be "discount." Telephone Interview with Blue Cross Insurance Group Representative (Mar. 18, 2004). Some contracts are based on a flat rate, while other groups pay a prearranged percentage of the cost of a procedure. Determining even a general contract rate for stent procedures is difficult because, beyond varying numbers of stents that are inserted and individual physician rates, Blue Cross does not even break down the contract rate for every procedure; rather it has two main cost groups: inpatient and surgical. Surgery is subdivided into groups (e.g., surgery 1, surgery 2) based on the difficulty of the surgery and contracts for the cost of each group. Additionally, Blue Cross will consider the cost of individual medical technology, such as

of these variables are limited because much of the data is protected by privacy acts; however, the general portrait is sufficient to support this analysis and to illustrate the many variables that impact this situation. I will use these values to shape the graphs and then pictorially depict how dead-weight loss and consumer surplus will be reduced when all of the "gray area" patients are not diverted to receive a stent.[89]

A. MARGINAL COST: STENTS AND OFFICE OVERHEAD

This section describes the marginal cost variable, and how it generally impacts the graphs as well as the cost transmitted to the patient. These variables will aid in approximating the profit shown in the graphs as well. Each cardiology group has a certain marginal cost, or overhead, that they must pay to maintain their practice. This amount varies among practice groups based on location, number of staff, cost of utilities, and other similar variables. Additionally, there is the initial cost of the stent. The cost charged per stent does not vary from one individual purchaser to the next, but it is reasonable to predict that a bulk purchase reduces the total cost. Stents vary in diameter, length and coating. The balloon expandable stent[90] with a diameter of 2.25 millimeters and a length of 8 millimeters (the smallest available size) costs $1,950 per stent.[91] The same manufacturer charges $2,750 for a stent 5 millimeters in diameter and 33 millimeters in length, which is the largest stent available.[92] The cheapest, smallest version of the Cypher Drug-Eluting stent is $3,195.[93] Stents can be purchased either by the cardiology group or by the hospital. Regardless, the cost will be passed on in one of three ways: (1) the full cost will be charged to an insurance group, (2) the full cost will be charged to the patient if the patient is uninsured, or (3) the cost will be divided between the insurance company and the patient, when the insurance group requires that the patient pay extra.[94] It is reasonable to predict that as more money is invested in stent research and the product becomes more technologically advanced,[95] the cost of the stent will increase.[96]

If the price charged for the stent procedure equals a cardiology group's marginal cost, then there will be no profit. Currently, however,

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the stent, by looking at the hospital's invoice. *Id.* Thus, the patient or insurance group will often adjust for the cost of the stent as well as for the cost of the procedure. Even though insurance companies are unwilling to disclose the values of contracts, it is definitely true that each insurance group negotiates a different contract with every hospital.

[89] For simplicity, I will be using hypothetical values to represent the form of the market, rather than employing actual values.

[90] Trademarked as *Bx Velocity Coronary Stent with Hepacoat*, order number VXH08225 from Johnson & Johnson.

[91] Telephone interview with telephone order representative, Johnson & Johnson (Mar. 18, 2004).

[92] *Id.*

[93] This stent features a diameter adaptive design. *Id.*

[94] Telephone Interview with Blue Cross Insurance Group Representative, *supra* note 88.

[95] It could be argued that as the market streamlines and the technology becomes more widely available that the price would actually decrease, yet that will probably not occur for some time given the uncertainty about the long range efficacy of the stent and the need for cutting edge technology to improve the product to make it more competitive with the bypass procedure for patients who have multiple clogs.

[96] Telephone Interview with Dr. Malcolm MacDonald, *supra* note 26.

cardiologists are not charging an amount equal to their marginal cost, as evidenced by their average profits of $250,000 per year per cardiologist.[97] This is in line with the existence of profits as depicted in the graphs *infra*.

B. THE DEMAND CURVE

The demand curve for a stent, or medical care in general, is difficult to determine for two reasons: (1) demand for health care products operates in a life and death environment, and (2) health insurance is a mediating filter.[98] Despite these complications, however, the demand curve is most likely downward sloping.

First, a downward sloping demand curve is typically assumed for most products under the rationale that no product is an absolute necessity; rather, there is some substitute for it.[99] It is speculated, however, that the demand curve for medical products and procedures is vertical because people demand the same quantity regardless of price, since their need for care does not change.[100]

Overall, the slope of the demand curve is an educated guess because there rarely are enough data available to test it.[101] The estimation of the demand curve is complicated by an imperfect ability to understand patients' preferences for the substitute and tastes for medical care.[102] This means that different patients may prefer a stent instead of CABG, or vice versa, although these preferences may be dampened because "[w]ith regard to an individual's tastes for medical care, perhaps the most important determining factor is his or her health status."[103] These preferences also indicate that some consumers will pay more for a stent because the doctor's reputation is exceptional, or the office environment is pleasant. A less subjective consideration is the product's health benefits for each individual patient.[104] This affects the demand curve because the demand curve requires a consumer who understands the benefits to be acquired from the

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[97] Telephone Interview with Dr. Afhrah Mashed, Cardiologist, University of California, Los Angeles Medical Hospital (Mar. 20, 2004).

[98] For example, "almost 90 percent of insured individuals under age 65 obtain this coverage from their employer or as dependents of a family member with group-sponsored health insurance. However, almost two-thirds of all employees do not have a choice among different health insurance plans." M. Susan Marquis & Stephen H. Long, *Worker Demand for Health Insurance in the Non-Group Market*, 14 J. HEALTH ECON. 47, 49 (1995) (citations omitted). Demand for health care cannot be directly measured by demand for insurance because health care is often a de facto benefit of employment. Those employees who choose not to obtain health care from their employer and to remain uninsured are usually workers who make minimum wage or less, work part time, and have a high job turnover rate. These workers are typically unwilling or unable to pay their share of the cost. Yet, there is a remaining group who participates in the individual insurance market because their employers do not offer it to them. This last group comprises about twenty-five percent of the population. *See generally id.*

[99] The slope of the demand curve of any commodity, as well as how much it shifts when substituted, will depend on how similar the substitutes are. Per the analysis *supra* Part II, bypasses and stents are not perfect substitutes. Rather, they have different benefits and drawbacks, so that equal access to both may not change the demand for stents. *See* JACOBS, *supra* note 69, at 61.

[100] *See id.* at 62.

[101] *See id.* at 77.

[102] *See id.* at 68.

[103] *Id.* Some individuals may choose to control their health with diet, medicine, or exercise to delay or eliminate the need for a medical procedure.

[104] *See id.* at 69.

product and the product's substitute. Yet, in reality, "the individual seldom possesses such a high degree of acumen. Indeed, part of an individual's reason for visiting a doctor is to have the doctor explain what he or she 'needs.'"[105] Because coronary artery disease is a condition that necessitates medical intervention, and is impacted by consumer preference and consumer information, it can be presumed that the demand curve for stents may be more vertical than those that operate for a product that is not necessary to prolong life.

Second, insurance companies interfere with the estimation of the demand curve. This is because they inhibit the market mechanism of direct price responsiveness, which is usually calculated by "measuring the per unit price paid directly by the consumer for the specific unit of output."[106] In an ordinary market, the price charged is paid directly from the consumer to the supplier, making it simple to determine the direct price.[107] In the case of medical care, however, the pervasive presence of insurance contracts, whose terms vary widely, complicates the ability to estimate the direct price.[108] The initial deductible, therefore, reflects only a portion of the direct price of the procedure, and "[w]hat the direct price will be for the remaining units of output will depend upon the type of coverage the insuree has."[109] Here, direct price is measured in average or marginal terms and consequently, "[t]he average direct price at any level of consumption is the average of all direct charges paid."[110]

Thus, the complicating factors of health, consumer preference, and insurance companies indicate that "other factors besides direct price are causing quantity demanded to be what it is."[111] Nevertheless, "empirical work performed on medical care demand has tended to support the contention of a negative relationship between direct price and quantity demanded of medical care . . . ."[112] As a result, studies have been able to rely on the speculated downward sloping demand to conduct health care market analysis.[113] Therefore, for the purposes of this analysis, it will be assumed that there is a downward sloping demand curve for stents, which, it is speculated, is influenced by the available substitute of CABG.[114]

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[105] *Id.* at 69. *See also supra* Part III.
[106] JACOBS, *supra* note 69, at 75.
[107] *See id.* at 75–76.
[108] *See id*. at 76.
[109] *Id.*
[110] *Id.* Actual calculation is beyond the scope of this Note.
[111] *Id.*
[112] *Id.*
[113] *See id.*
[114] Another important consideration is the elasticity of the demand curve. Elasticity reflects the responsiveness of demand to changes in price, and it can easily be speculated that under threat of death, a patient's preferences for a medical procedure are extremely inelastic. This likelihood fortifies the economic conclusions elucidated by the graphs because if stents decreased in price, those patients who would benefit more from a bypass would still prefer CABG, regardless of how comparatively affordable stents become.

C. MARKET ILLUSTRATION

Now that some general conclusions can be drawn about the existence of marginal cost, profit, and the shape of the demand curve, I will graphically depict the markets to demonstrate how competition could improve upon the current regime. In the graphs below, quantity of the product is on the x-axis and price is on the y-axis. For all of the graphs, the demand is downward sloping, marginal cost is constant, and there is some amount of profit. The demand is conceptualized as each point on that line representing a person who values the product at that particular price and quantity. Consequently, everyone who values the product more than the price charged is accounting for consumer surplus ("CS"). Everyone who values the product less than the price charged, but still has to pay the price charged, accounts for the dead-weight loss to society ("dwl"). I will focus on dead-weight loss as the marker of efficiency in this market because it is a very distinct representation of the hypothetical change.

These graphs focus only on the demand for stents and bypasses for patients in the "gray area," for whom the best procedure may be CABG, but who are receiving stents under the current regime because of the cardiologists' redirection. Thus, the graph CH(s)1 depicts the hyperinflated demand for stents in that patient group, while CH(b)1 illustrates the deflated demand for CABG. There is some demand in CH(b)1, but because it intersects the x-axis at a quantity lower than the price charged for stents, that indicates that there is no quantity demanded. Under a competitive regime, the patients who value a stent more than the price charged would receive one, and those who would value it less (and thereby accounting for dead-weight loss) would receive CABG instead.[115] Thus, CH(s)2 represents a lower demand for stents, and the dotted line demarks those patients who would receive a bypass instead, as depicted in CH(b)2.

The second set of graphs represents the aggregate of the graphs under each regime, thereby depicting the whole market for cardiac procedures. Because the current regime directs all patients to stents, it is essentially a reproduction of CH(s)1. On the other hand, because competition (or the intervention of a third party consultant, see discussion in Part VII.C *infra*) enables some patients to receive a bypass, the aggregate graph depicts the initial stent demand, later supplemented by the demand for CABG.

By visually comparing the dead-weight loss in the aggregate graphs, it is very obvious that the regime that enables competition has a vastly reduced dead-weight loss. While somewhat simplistic, these graphs do test the hypothesis about enabling competition and reveal that competition between these regimes would reduce the dead-weight loss to society.[116]

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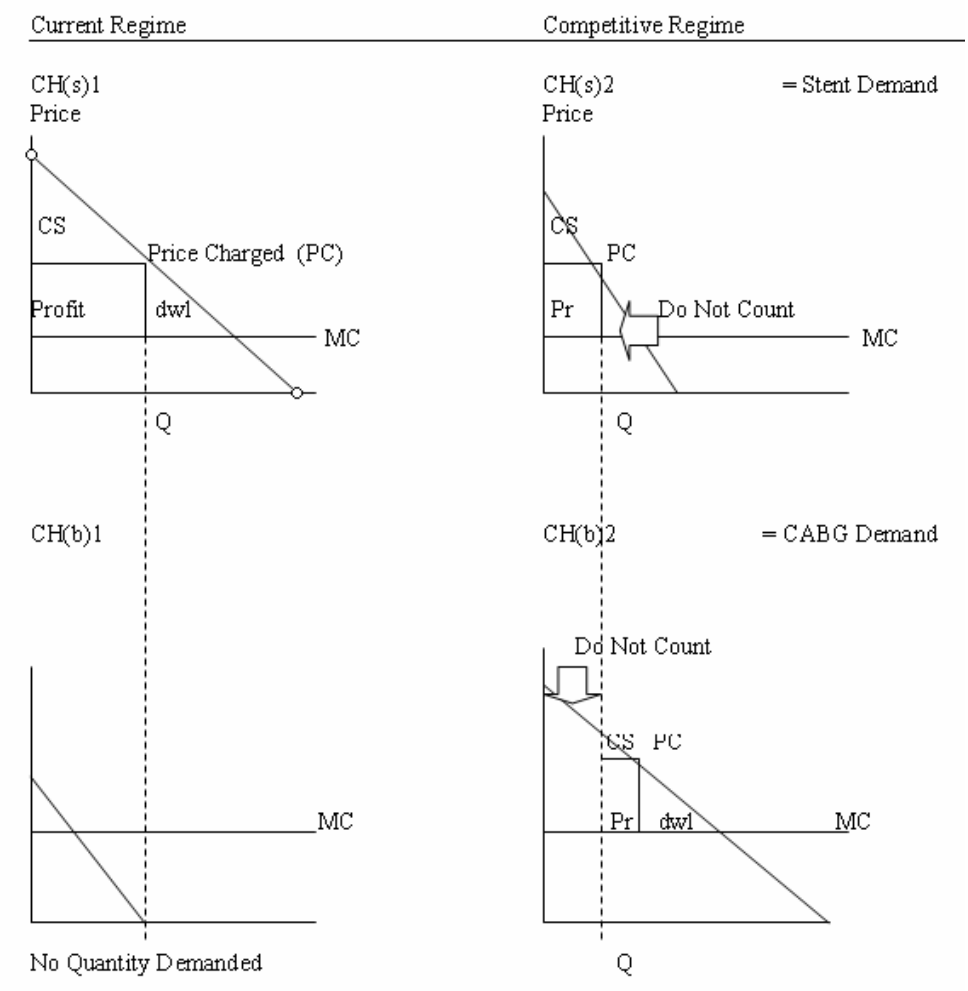
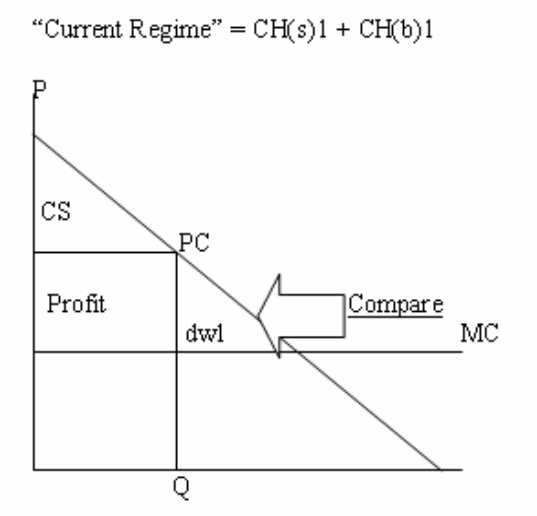
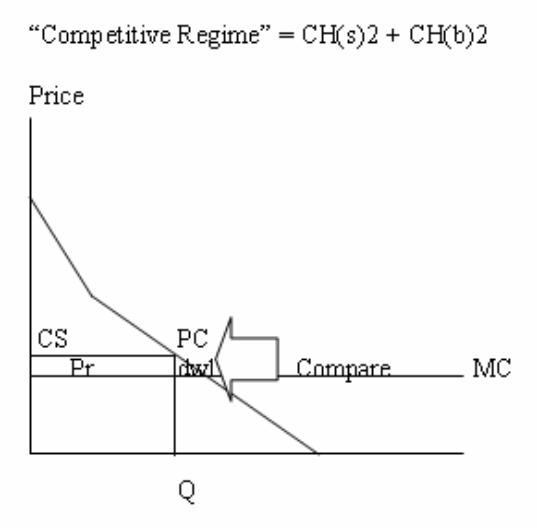
[115] Theoretically, this seems incompatible with the fact that CABG itself is more expensive than stent procedure, however, these charts are focusing on patient valuation, rather than actual. price of the procedure.

[116] Additionally, it also reduces the consumer surplus, which is evident if the two graphs are overlayed, given that the initial intersection with the y-axis is the same on both graphs. Also, it is possible that the



profit and price would ultimately realign to maximize profits, however it would still take shape under the reshaped demand curve, so dwl would still be lower than in a regime without competition.





D. MARKET ANALYSIS CONCLUSION

Given the sketch of the existing market, general conclusions can be drawn about its efficiency. Ultimately, the dead-weight loss indicates that resources are not being properly allocated, representing inefficiency that could be corrected by competition from the cardiac surgeons. My purpose in including the estimated market values is to illustrate the complexity of the health care market, its high costs, and attendant nuances. Yet the confluence of all these factors can be regulated so that the current

inefficiencies are reduced and a more equitable and competitive market develops.

V. STENTS AND BYPASS SURGERY: ASSIGNING A VALUE PREMISE TO THE ALLOCATION OF RESOURCES

> In a way different from other kinds of services, health care services allow us to pursue important life goals that could not be pursued without them. Because of health care's special place in society, it is often argued that health care should not be distributed solely according to either ability, or willingness to pay.[117]

To layer meaning beyond the efficiency rationale of market analysis, and to aid in the determination of how and why this situation should be remedied, it is necessary to attach normative values. The purpose of this analysis is to determine whether the conflict between cardiologists and cardiac surgeons, regardless of market efficiency, should be remedied based on principles of distributive justice.[118] Because there are different normative schemes, each of which may advocate a different allocation of resources, a normative framework that embodies principles that best reflect society's values should be used.[119] This part examines a normative dichotomy inherent in health care products: dollars and rights domains. For each of these domains, I conduct an analysis using particular normative theories.[120] Under the "dollars" approach, principles of wealth maximization reveal that the current market structure is failing to satisfy patient preferences and is consequently inefficient. Under the "rights" approach, four hypothetical patients will be used to determine how the regime would allocate resources according to John Rawls' "veil of ignorance," meaning here that each patient would receive the most beneficial health care.[121] Ultimately, this part recommends a reallocation of resources in a manner similar to that of the market analysis's conclusion based on principles of both wealth maximization and Rawlsian justice.

One theorist has characterized the dichotomy in health-related products as rights and dollars domains.[122] The two domains are divided so that "[e]quality as a proxy for fairness appears to be the guiding principle behind decisions made in the rights domain, whereas efficiency (mediated

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[117] Joshua Cohen & Peter Ubel, *Accounting for Fairness and Efficiency in Health Economics*, *in* THE SOCIAL ECONOMICS OF HEALTH CARE 94, 102 (John B. Davis ed., 2001) (citations omitted).

[118] Distributive justice is a premise that contends that all human beings have equal worth and equal claims, and therefore advocates for an allocation of resources according to principles of equality. *See id.*

[119] A complex discussion regarding the determination of society's values is beyond the scope of this Note.

[120] Health care as a product, as opposed to nonvalue laden products like chairs or oranges, already has social values attached. This enables a more straightforward contemplation of efficient allocations. Thus, when evaluating the "kind of health output to be produced—longer life expectancy, increased quality of life, fewer sick days—answers to this question presuppose a certain ethical view about what is best for society." Cohen & Ubel, *supra* note 117, at 95.

[121] Here, I will presume optimal health care to be how it impacts the extent and duration of pain relief, as well as life expectancy. Furthermore, the most beneficial health care here is equated with the patients' value for ease of understanding, despite the points made in Part III, *supra*.

[122] *See* Cohen & Ubel, *supra* note 117, at 96.

by utility- and profit-maximizing behavior) appears to guide the decision making process in the dollars domain."[123] Health care occupies the dollar domain as a large industry that accounts for a significant portion of the Gross Domestic Product.[124] In contrast, the rights domain includes moral components, such as legal entitlements to emergency treatment which ensures that those who are less financially well off have access to services.[125] Because health care automatically implicates moral values, there are already codifications in our legal system to provide the most minimal access to health care.

A normative approach to assess the dollars domain is wealth maximization, where the wealth of society is measured as an aggregate of individual satisfaction.[126] This means that the "wealth of society includes not only the market value in the sense of price times quantity of all goods and services produced in it, but also the total consumer and producer surplus generated by those goods and services."[127] Wealth maximization advocates that if each person is paying what he or she values for the stent, then the market is functioning efficiently and is therefore demarcated by the absence of dead-weight loss.[128] Conversely, the presence of dead-weight loss indicates that society is not maximizing its wealth and that, therefore, competition should be used to correct the inefficiency.[129] Because the market analysis reveals that the dead-weight loss is greater under the current regime than under a competitive one, competition should be enabled to achieve wealth maximization.

Under a "rights domain" approach, Rawls posits a different theory for the actualization of justice and the allocation of resources, which he argues does a better job of accounting for our considered moral judgments about social justice.[130] Rawls creates a thought experiment for a group of self-interested persons who know about the general laws of social theory, but choose the allocation of social goods behind a "veil of ignorance."[131]

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[123] *Id.* at 97.
[124] *See* Ass'n of the Bar of the City of New York Antitrust Comm., *supra* note 22, at 504 (stating that healthcare accounted for about 15% of the GDP in 2000).
[125] *See* Cohen & Ubel, *supra* note 117, at 96.
[126] *See* RICHARD A. POSNER, THE ECONOMICS OF JUSTICE 61 (photo. reprint 1983) (1981). Posner argues that the utilitarian approach is conceptually limited because hedonistic and eccentric values of the individual are given equal weight to claims of need. *Id.* at 69. On the other hand, wealth maximization relies on market forces to curb those eccentricities and allocate resources based on value and ability to act on the value.
[127] *Id.* at 60.
[128] *See supra* Part IV.
[129] *See* POSNER, *supra* note 126, at 69.
[130] JOHN RAWLS' THEORY OF SOCIAL JUSTICE xvii (H. Gene Blocker & Elizabeth H. Smith eds., 1980). One normative concept is the classic utilitarian methodology. This approach argues that "society is rightly ordered, and therefore just, when its major institutions are arranged so as to achieve the greatest net balance of satisfaction summed over all the individuals belonging to it," (or referred to in the vernacular as "the greatest good for the greatest number"). JOHN RAWLS, A THEORY OF JUSTICE 22 (Harvard University Press 1971). The unavoidable problem with this approach, however, is that even though the outcomes per unit of income are being maximized, it comes at a price to equality. This occurs because the initially sick become sicker and the initially healthy remain healthy or get healthier as the net utility of society is increased, so that both resources and outcomes are allocated unequally. Cohen & Ubel, *supra* note 117 at 101. Because the inherent purpose of distributive justice is equal allocation, the utilitarian approach does not reflect the values at issue here.
[131] READING RAWLS xxxviii–xxxix (Norman Daniels ed., photo. reprint 1989) (1975).

Because resources are chosen without knowledge of the person's position in society, it ensures a stringent level of procedural fairness, which in turn enables distributive justice.[132] Subsequently, the issue is framed: if operating behind a veil of ignorance, would the resources be allocated to the cardiologists the way they are now, knowing that we want to optimize our health care benefits, whether we are old, healthy, or sick?[133]

For this analysis, I will adopt four hypothetical characters: a cardiologist, a cardiac surgeon, a young, health-conscious male with two thromboses on several arteries (making him part of the "gray area"), and an older woman with two clogged arteries (also in the "gray area").[134] As discussed earlier, the cardiologist's conflict of interest predisposes him to prefer stent insertion because he will profit directly.[135] Consequently, the cardiologist would choose to maintain the monopoly. In contrast, the cardiac surgeon, facing a dearth of business, would likely advocate a change in the regime (this conclusion is reinforced by the fact that the cardiac surgeons are currently attempting to reallocate resources through unfair competition litigation, discussed in Part VI *infra*). The young male, who carefully manages his health, is most likely to receive the greatest benefit from a multiple bypass procedure for three reasons: (1) he will probably recover quickly from the surgery because he is young; (2) bypass procedures are known to be more effective in alleviating symptoms; and (3) multiple stents could harm him if the thromboses reoccur and require additional procedures. As a result, he would likely advocate for an alteration of the cardiologists' monopoly because the current situation will not afford him optimal health care. On the other hand, the older female with two thromboses will benefit most from a stent for three reasons: (1) she will recover more quickly because the procedure is less invasive; (2) because of her age, she is unlikely to live long enough for restenosis to occur; and (3) the stent will eliminate the increased risk of death that women experience from CABG surgery. The current regime, therefore, is affording her optimal health care. The results here reveal that the current regime is only benefiting half of the actors. Consequently, Rawlsian principles of distributive justice and equality demand that the current structure be altered.

Both the normative dollars and the rights approaches lead to the conclusion that the current situation is unjust. Because there is inefficiency

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[132] *Id.*

[133] It is important to note that there are some limitations within this conceptual value premise, that

> [t]here must come a point beyond which the concern with ensuring health and prolonging life ceases to take objective priority over other concerns. At this point the requirements of equality are fulfilled, and it is up to each individual whether he wishes to sacrifice other goods in order to give himself additional forms of protection.

T.M. Scanlon, *Preference and Urgency*, 72 J. PHIL. 655, 662–63 (1975).

[134] I am choosing patients at either end of the coronary artery disease spectrum. In some hospitals it is policy that after a certain number of infarctions patients are automatically referred to a cardiologist, but I am focusing on the normative aspects here; therefore the greater the contrast, the clearer the picture.

[135] Please note that I am not alleging that every cardiologist would blatantly sacrifice the health of the patient for his own financial profit, but the lawsuit discussed in Part VI *infra* and the gray areas surrounding the efficacy of the stent make it reasonable to assume that, given a patient that could possibly benefit from a stent, that is what the cardiologist would recommend.

and unequal distribution, society would benefit by having cardiac surgeons perform bypass procedures on some patients in the "gray area" in an effort to provide the best possible health care.

VI. UNFAIR COMPETITION: THE CURRENT ATTEMPT TO REMEDY THE SITUATION AND WHY IT FAILS

Because of the shift in the power dynamic created by the advent of the stent, cardiologists are "holding up" the cardiac surgeons. To combat the situation, a group of cardiac surgeons filed an unfair competition suit in October 2001.[136] Unfair competition, however, is a doctrine that is not clearly defined under federal or state law, and is unlikely to reestablish a more equitable balance of power. This part addresses each of those concepts in turn to explain why the cardiac surgeons will not be able to correct the conflict through an unfair competition lawsuit.

Part of the allegations of the lawsuit, filed in Baltimore County Circuit Court, are that cardiologists are "holding up" the cardiac surgeons by forcing them to join their group, requiring them to contribute a fixed annual amount to the cardiologists' overhead, and, when the surgeons refuse, denying them referrals.[137] A "holdup" is defined as "a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by giving it the power to behave to an appreciable extent independently of its competitors, customers and ultimately of its consumers."[138] Even though the cardiologists have had a monopoly on patient access in the past, which automatically "[leads] to a situation in which market entry for new entrants is restricted," the advent of stents has enabled them to abuse the monopoly power so that entry to the market is not restricted for justifiable reasons, i.e., those that are based on incentive and reward-based paradigms.[139]

Because there are no prearranged methods for efficiently and fairly correcting the entry restrictions, cardiac surgeons are forced correct the competitive imbalance, after the problem has occurred and the patient has already been treated, by filing an unfair competition lawsuit. Unfair competition operates federally under the Lanham Act,[140] and varies greatly under state law. "Unfair competition was developed in the United States to regulate business methods and was seen as a compendium of actions against improper business conduct. . . . Unfair competition is therefore nothing more than a head under which several doctrines operate."[141] Essentially,

> Unfair competition provides a means of countering the undesirable effects of misuse of another's exploits . . . . It aims to protect fairness in

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[136] *See* Anand & Winslow, *supra* note 1.
[137] *See id.*
[138] SANDERS, *supra* note 81, at 116.
[139] *Id.* at 115.
[140] 15 U.S.C. § 1051 (2000).
[141] SANDERS, *supra* note 81, at 12–13.

> competition and to secure the freedom of competition structures, thus maintaining healthy competition as the foundation of the free-enterprise system. . . . As a result, its rationale is based upon general principles.[142]

But because it is based on general principles, unfair competition as a cause of action is difficult to define both judicially and legislatively and is rarely the only cause of action in a lawsuit.[143]

Overall, as a corrective measure, unfair competition litigation fails because the doctrine is so amorphous that establishing a cause of action is difficult. When a cause of action is difficult to define, it reduces the ability to predict the outcome. Consequently, it does not serve as an effective deterrent measure. Additionally, damages may be difficult to calculate because the new technology would account for some loss in the heart surgeons' business, irrespective of the cardiologists' monopoly—so it is possible that awarded damages may not accurately compensate for the injury caused.[144] Therefore, unfair competition suits are unlikely to effectively disturb the cardiologists' position of market dominance.

VII. ANTITRUST ENFORCEMENT, MALPRACTICE AND THIRD-PARTY CONSULATION AS POSSIBLE SOLUTIONS

In determining a way to resolve this situation, I propose three alternative methods and evaluate them for likelihood of success. Analysis has revealed four facets of the conflict: (1) the market is inefficient and needs to be corrected with competition; (2) the monopoly is unjust because it does not ensure the best medical care; (3) patients can never be fully autonomous in making their decisions; and (4) cardiologists have a conflict of interest when recommending stents. Any proposed solution must consider and attempt to remedy these problems, with the exception of full patient autonomy, which is probably immutable. Two classic methods for correcting these problems are antitrust regulation and medical malpractice. Yet I believe that neither of these can correct for the myriad of problems this conflict presents. Therefore, I am proposing a third solution of my own: an independent third-party consultant.

A. ANTITRUST

Antitrust regulation, since its inception in the Sherman Act in the late 1890s, has been a strong and effective method of preventing anticompetitive behavior, although its enforcement in the health care field

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[142] *Id*. at 22–23.

[143] *See* Benjamin A. Goldberger, *How the "Summer of the Spinoff" Came To Be: the Branding of Characters in American Mass Media*, 23 LOY. L.A. ENT. L. REV. 301, 389 (2003) (discussing the boundaries of unfair competition in respect to copyright law: "Attempts by Congress and the courts to strike the right balance in terms of copyright protection are hampered by the simple fact that 'we don't know how much incentive is enough, and how much is too much'"). An unfair competition claim usually includes some combination of a breach of contract, and an allegation of breach of good faith and fair dealing, sometimes as tort claims. Essentially unfair competition is used against businesses whenever another specific allegation of a legal violation can be made.

[144] *See* Robert P. Merges, *Toward a Third Intellectual Property Paradigm: Comments: of Property Rules, Coase and Intellectual Property*, 94 COLUM. L. REV. 2655, 2664–65 (1994).

has been sporadic.[145] Most of its uses in health care have involved health insurance companies and hospital mergers.[146] This is because "organized medicine [has] argue[d] that physicians need relief from the antitrust laws and has convinced many legislators and governors that consistent enforcement of the antitrust laws (defined as enforcement applied uniformly to all parties) may not be in the public interest."[147] This argument is based on issues of moral hazards, medical arms races, and quality deterioration.[148] The acceptance of this argument has been widespread, as evidenced by number of states that have enacted legislation to exempt health care from antitrust laws.[149]

Despite these apparent pitfalls, one commentator believes that "there is no inherent inconsistency between vigorous competition and the delivery of high quality health care. Theory and practice confirm that quite the opposite is true—when vigorous competition prevails, consumer welfare is maximized in health care and elsewhere in the economy."[150] Indeed, the argument makes sense because cardiologists are controlling the market for treatment of coronary artery disease, and it is this type of power that the Sherman Act is designed to counteract. Additionally, antitrust prosecution would enable competition as recommended by the market analysis, as well as revive the current trickle of business for cardiac surgeons.

Unfortunately, enforcement is a problem with an antitrust solution.[151] Because it is not always clear whether a patient should receive a stent or a bypass procedure, and it is not always clear after the procedure if it was the most beneficial one, it is very difficult for the government to set bright-line standards for cardiologists to adhere to and for which they may be prosecuted. Furthermore, constantly changing technologies impede the development of such a rule. Consequently, there is no way for antitrust mechanisms to prevent cardiologists from performing a large number of stent procedures and dominating the market. Additionally, enforcement is hampered because cardiologists, as a specialty, hold the monopoly; but it is cardiology groups that are exhibiting anti-competitive behavior towards cardiac surgeons, rather than one large firm controlling the price and output of a product. Thus, while antitrust regulation appeals superficially, it is a blunt and uncertain way to regulate health care, and should not be considered as the legal scheme for mediating this conflict.

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[145] *See* HAAS-WILSON, *supra* note 80, at 5.
[146] *See id.* at 6.
[147] *Id.*
[148] *See id.* at 41.
[149] *See id.* at 6. One explanation for these enactments may be that legislators and courts do not fully understand the economic issues, nor trust the standards of antitrust laws.
[150] *Id.* at 36 (quoting Timothy J. Muris, Chairman of the Federal Trade Commission in 2002).
[151] The argument that health care improves with competition is questionable because physicians who have been present before and after the advent of competition in their field argue that competition ultimately harms the patient. These physicians argue that doctors are prevented from ordering potentially informative tests because it would increase costs, thereby making it virtually impossible to operate in a competitive market. Telephone Interview with Dr. Stephen Liu, *supra* note 39.

B. MEDICAL MALPRACTICE

Medical malpractice, specifically informed consent, and negligence hold initial allure as well, but also fail on several counts. Medical malpractice is based primarily in tort law and "embraces all liability-producing conduct arising from the rendition of professional medical services."[152] To be held liable, a physician must exhibit a type of misconduct that falls below a level of care that is considered allowable by society. "Thus, the mere fact that a patient suffered a health-impairing experience during the course of a medical procedure will not, without more, ordinarily render one who provided the medical services that causes the harm liable for malpractice."[153] This is not limited to negligence; it can also include lack of informed consent and intentional misconduct, among others.[154] This also means that only the patient, rather than another physician, may file a suit. Therefore, in the situation at bar, cardiac surgeons cannot bring medical malpractice cases against the cardiologists because they were not the ones who contracted for medical care.

Informed consent is

> predicated on a recognition that a patient has a right to decide what happens to his or her body, and such a decision can be made only after the patient knows what a health care provider proposes to do, what the risks are from the procedure, and what alternatives exist.[155]

In some cases, courts have not required much in the way of disclosure after considering the elective nature of various procedures.[156]

Informed consent will not work to ameliorate the key difficulties[157] of this situation because informed consent already exists. As determined, patients are dependent upon the recommendation of their physicians. This means that a cardiologist can give informed consent and still skew the information to make it almost inevitable that the patient will choose a stent procedure. Theoretically, one could correct this by requiring the cardiologist to disclose his conflict of interest, but studies have shown that disclosing a conflict makes it more likely for the patient to be exploited.[158] Therefore, the cardiologists' ability to keep a tight hold on the market will not be altered by a suit alleging uninformed consent.

Negligence as a cause of action for cardiovascular procedures is usually brought when there is an unexpected result.[159] In addition, given that these procedures are extremely specialized and the physician's responsibilities are not common knowledge, expert testimony is usually

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[152] *See* JOSEPH H. KING, JR., THE LAW OF MEDICAL MALPRACTICE IN A NUTSHELL 3 (1986).
[153] *Id.* at 6.
[154] *See id.* at 3.
[155] RICHARD M. PATTERSON, HARNEY'S MEDICAL MALPRACTICE, 33 (4th ed. 1999).
[156] *See id.*
[157] Patients can never be fully autonomous in making their decisions, and cardiologists have a conflict of interest when recommending stents. *See supra* Part III.
[158] Interview with Professor Gregory Keating, William T. Dalessi Professor of Law at the University of Southern California Law School, in Los Angeles, Cal. (Mar. 10, 2004).
[159] *See* PATTERSON, *supra* note 155, at 301.

required in a malpractice suit.[160] Therefore, the problems with this type of suit as a corrective ex post remedy are twofold: (1) the result of inserting a stent can be moderately predicted even though it may not be the optimal procedure for the patient, and (2) health care specialists are often hesitant to inform patients that the problems they are experiencing are a result of negligent medical care, and they are also reluctant to testify at trial against other members of their profession.[161]

Overall, medical malpractice is unable to correct for the cardiologists' monopoly with either informed consent or negligence, because it neither counteracts the conflict of interest nor the ability of the cardiologists to generate demand for their services. Additionally, given the rampant malpractice suits that raise malpractice insurances rates, causing doctors in many states to abandon their practices,[162] the malpractice regime as it now operates may be completely reformed in the near future.

C. THIRD-PARTY CONSULTANT

Because legal causes of action have failed to rectify this situation,[163] I propose an independent third-party consultant to eliminate the conflict of interest and promote both an effective and just flow of business to both the cardiologists and cardiac surgeons. The third-party consultant should be another physician; someone who is either a cardiologist or cardiac surgeon[164] who would meet with the patient after the cardiologist has performed the initial workup. Only patients who have coronary artery disease and require some form of a medical procedure to correct it would visit the consultant. This consultant would then analyze the data from the laboratory work that the cardiologist developed; then discuss the patient's options, make a recommendation, and then refer the patient either back to the cardiologist or to a cardiac surgeon.

The use of an independent third-party consultant will correct the problems this Note has elucidated. It will enable competition because cardiac surgeons will now receive patients at a fairly steady rate,[165] thereby correcting the market misdirection and inefficiencies that are present. It does not, however, remove the dependence that patients have upon the recommendation of their doctor; but given the complexity and gravity of this medical field, it probably benefits patients to defer to the expertise of the consultant. Finally, the use of an independent third-party consultant will optimize patient care. By removing the conflict of interest, it ensures a

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[160] *See id.* at 303.
[161] Interview with Professor Keating, *supra* note 158.
[162] *See Medical Malpractice: Insurer to Leave Wyoming*, HEALTH & MED. WK. Mar. 29, 2004 at 532. *See also* KING *supra* note 152, at 5 (discussing the practice of 'defensive medicine' as doctors operate under the constant threat of liability).
[163] There may be other causes of action that I have not examined, but I have looked at the most likely methods of correction.
[164] There may still be bias for one specialty over another, but further investigation would probably show that the impact would be negligible.
[165] Given the amount of coronary artery disease and the frequency of multiple clog sites, cardiac surgeons will have plenty of patients in need of their services.

relatively unbiased referral which, as dictated by the nature of the profession, will be aimed at improving the health of the patient by recommending the best procedure.

To reify the solution that I have developed, I will look at another field that is riddled with conflicts of interest and potential for corruption: politics. Dennis Thompson, in his book *Ethics in Congress, from Individual to Institutional Corruption*, focuses on ways to protect against politicians who seek self-gain at the expense of the democratic process. He, too, recommends the development of a third-party protection system. In his case he recommends an ethics commission to alleviate the innate conflict of interest that politicians face.[166] Specifically, he predicts that "by at least partly separating the judge from the judged, the commission could help keep the minds of members concentrated on the primary duties of a representative. In this way it would act to block pressures that threaten independent judgment, fair procedure, and public confidence."[167] And, he advocates that the more independently the commission can operate, the more effective it will be at achieving its goals.[168] The parallels between Thompson's recommendations and the situation between cardiologists and cardiac surgeons mesh virtually flawlessly to flesh out the actual and perceived problems that would be alleviated by the use of a third-party consultant.

Drawing out this situation, there are two potential weaknesses: the ability to 'bribe' or aggressively persuade the consultant to favor one party over another, and the inherent biases of the consultant. The first weakness is not particularly difficult to correct; similar behavior has already been curtailed within the medical field against pharmaceutical companies that were flying doctors to exotic locations to learn about their new drugs.[169] Doctors are no longer allowed to receive endorsements or benefits beyond a dinner presentation or an informational packet and pen from the pharmaceutical companies.[170] This example is particularly informative because it involves physicians—professionals whose job it is to be informed of the most cutting edge drugs available to treat their patients—relying on less commercial methods of information and more on studies published in notable research journals.[171] Likewise, similar limitations could be imposed on the third-party consultants; limitations on the amount of money that can be spent on an event to inform them about a new stent or bypass procedure, and other similar regulations. Civil sanctions could also

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[166] DENNIS F. THOMPSON, ETHICS IN CONGRESS, FROM INDIVIDUAL TO INSTITUTIONAL CORRUPTION 174 (1995).
[167] *Id.*
[168] *See id*. at 161.
[169] Telephone Interview with Dr. Elie Lao (Apr. 25, 2004).
[170] *See id.*
[171] *See id.* One interesting circumvention by the drug companies, given their new limitation, is to increase product use by advertising to patients: creating commercials that talk about a drug and then telling the patient to ask their doctor about it. This is an interesting attempt to empower the patient and the potential benefits and drawbacks are beyond the scope of this Note, but it should be noted that the information can result in a belligerent patient who is determined to have the doctor prescribe the drug that he heard about on television, rather than a patient who is truly informed about the pros and cons of a particular remedy.

be levied against anyone who received bribes or participated in proscribed behavior with an outside party.[172] Employing these types of limitations could reduce, if not eliminate, the possibility of bribery of the third-party consultant.

The second weakness is far more subtle and insidious: the natural predisposition to favor one procedure over another. One possible way to correct for this would be to use a third-party consultant who is neither a cardiac surgeon nor a cardiologist, but this would eliminate the essential expertise that is required to diagnose and make a recommendation to the patient.[173] The solution to this innate bias is not readily evident, other than an admonition to make decisions in light of the best interests of the patient,[174] and faith that removal of the conflict of interest combined with an objective consultant will correct for the absence of competition. Such an answer may seem unsatisfying, but at some point the autonomy has to be grounded in the medical field and trust placed in the hands of the physicians.

Another consideration is the financial cost that would be incurred. This could, however, be offset by allowing the consulting physician to receive a set fee paid from the profits of the procedure.[175] Also, it probably would not take more than thirty minutes to make the assessment, talk to the patient, and then make the referral because the physician who later conducts the procedure will spend a lot of time explaining the nuts and bolts of the procedure to the patient. And, comparatively speaking, it is probably far less expensive to pay for the services of a third-party consultant ex ante than to incur the cost of litigation, which elevates the cost of insurance to both patients and physicians and erodes public trust in physicians. With these considerations in mind, it appears that a third-party consultant presents a more cost effective solution than litigation, and simultaneously remedies the multiple problems that are causing this conflict.[176]

VIII. CONCLUSION

In conclusion, an independent third-party consultant is the best method for remedying a number of the problems presented in this situation.

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[172] Similar to those implemented against congressmen for similar offenses.

[173] Theoretically, it may be possible to use another physician who develops an expertise over time, but this is a situation that calls for an immediate remedy for an extremely specialized and nuanced field of medicine with high patient consequences for improper diagnosis.

[174] Another possibility is a random review by the hospital or other governing body, but the drawback is that it results in layers of bureaucratic regulation, which may ultimately make the solution too cumbersome for it to be effective and efficient. If there already exists an outside ethics commission that regularly reviews other behavior, this solution may be more effective. (I speculate that this is the case at certain institutions).

[175] This makes it compatible with current federal disclosure laws, *see supra* Part III, and also eliminates the patients' current concerns about the unavailability of information about financial relationships among physicians.

[176] I realize that there are implementation concerns, including whether the service would be private, mandated or public and who would administer it. While this is worthy of analysis, it is beyond the scope of this Note.

Because of developing technology, it is apparent that bypass surgery can still benefit patients in ways that stents cannot, making it possible for the two products to compete if given the opportunity. Market analysis reveals that there are inefficiencies resulting in dead-weight loss within the current monopoly of cardiologists over patients with coronary artery disease, which can theoretically be reduced with competition. The ability for the market to function competitively, however, is complicated by the inability of patients to be fully informed, autonomous consumers, a feature that cannot be altered altogether, and enables demand to be falsely generated. Moreover, the normative evaluation reveals that the artificial generation of demand is inhibiting optimal patient care—a moral dilemma that should be corrected.

The conflict between cardiologists and cardiac surgeons is an intricate puzzle of technology, patients, and money that is affecting more than one piece of the medical community. Where other legal interventions fail, either because there is no privity or due to an inability to satisfy all of the elements of cause of action, an independent third-party consultant succeeds. Because it will help correct the market inefficiencies and optimize patient care, I recommend the employment of an independent third-party consultant to mediate the conflict between the medical specialists—so that when patients visit their doctors they will be receiving the best health care possible, especially when it involves their heart.