Not-for-Profit Organizations: Community Benefits, Efficiency and Quality

The Honors Program
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ABSTRACT

This study addresses the effect of hospital ownership on the delivery of medical services to patients with financial difficulties in the southern New England community, using two alternative definitions of community benefits. Also, this study examines the impact of government subsidies on the efficiency and quality of care provided by nonprofit hospitals versus for-profit in Connecticut, and Rhode Island.

Previous research demonstrates that there are no differences when it comes to efficiency and quality when dealing with nonprofit organization or a for-profit company. Using data from hospitals in Connecticut and Rhode Island, these findings on efficiency and quality have been reinforced. In addition, the study finds that nonprofit hospitals may not provide enough community benefits to cover the subsidies provided by the United States government on a national average. These results are sensitive to the definition of community benefits, thus indicating need for a more explicit identification of both the amount of benefits provided, and what is considered a community benefit.

INTRODUCTION

There is a beauty associated with the concept of a free market economy where everything balances to equilibrium and each resource is put to its best use. Sometimes, however, market failures arise. Either too much or too little of a good or service are provided. Economically this can be stated as saying; the quantity being produced is not allocated efficiently. These market failures can occur for many different reasons, including: distribution issues, people's ability to pay, and asymmetry of information. A distribution problem is a concept that in some areas of the world there is an abundance of a good that everyone should have equal access to, while in other parts of the world there is a shortage. For example, water is a good that is essential to survival and should be of equal access to everyone. In some parts of the world, there is not enough clean drinking water for everyone to consume. While some other areas have an abundant amount of clean water. In this market, it is difficult to give everyone equal access unless there is a way to distribute the good more effectively throughout the population. People's ability to pay, for a good that should be of equal access to everyone, is a problem because a private organization is going to optimize the amount of goods and services that they are selling based on what people are willing to pay for them. An example, where there are issues regarding people's ability, is in the hospital industry. A lot of people are unable to afford healthcare and therefore will not have equal access to consuming this necessary care. Finally, asymmetry of information is where one party knows more information than the other about the product that is being provided. This knowledge gap allows one party to take advantage of the other and either charge an unfair price or provide some quantity that will not satisfy the individual's needs. This often occurs when the value of the product is not measurable.

Different approaches have emerged to address market failures. One approach has been for members of the community to come together voluntarily to address these problems through organizations that seek to solve social problems without direct government intervention. An example of this is when a group of philanthropists decide to donate money to a specific cause in order to help provide more of this good or service that is in short supply. This approach uses the mechanisms of a free market economy, but people may not be willing to corroborate to address some market failures. This idea that some people are not going to pull their weight

in providing money to this cause is known as the free rider problem. These free riders can either consume more of the goods than they are entitled to, or will not donate their fair share to the cause. Alternatively, governments can step in and directly support the cause and correct the market failure. The government is able to do this by providing either a subsidy or instituting a tax. When the government gives a subsidy they are increasing the quantity of the goods or services provided as they are helping fund distribution or are allowing more people to afford it. By instituting a tax, the government aims to decrease the quantity of the good or service in the market by raising price, as there is an excess quantity. A hybrid of these two approaches results when government support and charitable donations are used together to help the quantity provided and consumed reach a socially optimal level. The approaches to address market failures that involve government intervention go against the principle of a free market economy. However, to ensure allocative efficiency in the presence of market failure, government intervention is justified.

Where there is a positive externality present, in a free market economy there may be an underestimation of the marginal benefit to society causing too little of the good to be produced. In this case, marginal refers to the additional benefit associated with producing the next unit. The intersection between the marginal private benefit and the marginal private cost leads to the wrong quantity being produced. A positive externality occurs where there is an underestimation of the social benefits received by a private consumer from the good or service. The marginal social benefit curve depicts the optimum level of quantity at each given price for the entirety of society. This includes those people who are unable to pay for the good or service that everyone should have equal access too. Consider the following graph.

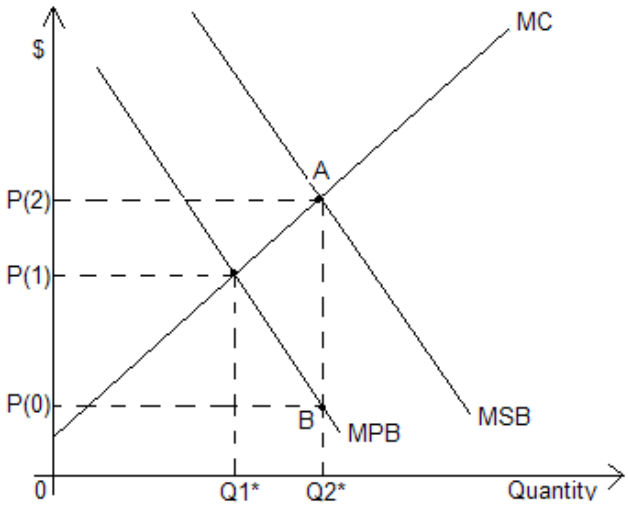


Figure 1 – Positive Externality Representation

At Q1* there is no government intervention or charitable donations. At that quantity everyone who is consuming the good or service are willing to pay for it. Because of ability to pay issues, the true market demand for health is read off MSB. In order to shift the quantity of the good or service provided from Q1* to Q2*, there needs to be charitable donations or a government subsidy. At Q2*, the amount paid for by the consumer is the area 0-P(0)-B-Q2*. At that given quantity people are only willing to pay a price of P(0) for the good or service. To cover the social benefit, the amount being subsidized is P(0)-P(2)-A-B. This is a substantial shortfall that needs to be paid for by the government or through charitable donations.

There are three distinct entities that can be used to deal with this market failure. These include: a government entity, a for-profit company, and a not-for-profit organization. First, the government can create an entity directly to solve the deficiencies that are involved with the market failure. The government, for example, can directly help to distribute these necessary goods to make sure everyone has equal access. They are directly solving the problem, and are hopefully making sure that all of the money that is put into this entities operation is being put towards the cause. Second, a company that is established as for-profit seeks to maximize profit through equating marginal revenue and marginal costs. Throughout the rest of this paper, a for-profit will be referred to as a company. Where marginal revenue equals marginal costs, profits are maximized, and price and quantity are in equilibrium in a perfectly competitive scenario. Pure perfect competition does not exist, but this is what is

strived to be achieved in a free market economy. The government can either tax or subsidize these companies in order to achieve the desired outcome and fix the market failure. Third, the organizational goal of a not-for-profit entity is to minimize cost while satisfying consumer wants. Another goal of these nonprofit organizations is to maximize community prestige. Throughout the rest of this paper, a not-for-profit will be referred to as an organization. In charging a lower price and providing a greater quantity leads nonprofit organizations to have a higher market share over their for-profit counterparts. This higher market share is due to the assumption that nonprofits are willing to sell the same goods and services for a lower price. This assumption can be shown in the graph below as nonprofit organizations will provide a greater quantity of the good at a lower cost. This is different from a profit scenario when the industry involved is not perfectly competitive and marginal revenue diminishes with each additional unit produced. This is different as a nonprofit company seeks its goal through equating demand and marginal cost. The average total cost curve is the average cost associated across all the units being produced. When this curve is at its minimum point, the company is achieve constant returns to scale or has minimized the costs per unit.

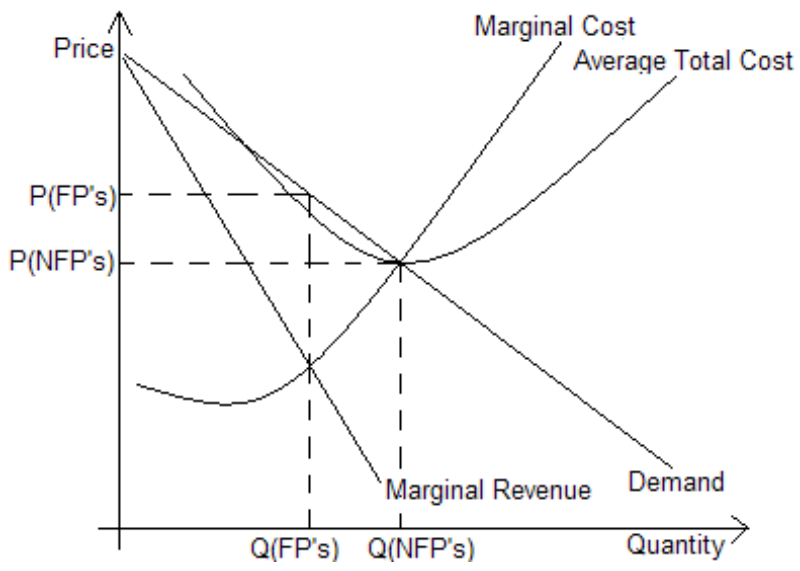


Figure 2 – Graphical Depiction of Nonprofit vs. For-Profit

The quantity produced by the nonprofit organizations is equal to Q2* in figure 1. The quantity produced by for-profit companies is Q1* in figure 1. This shortfall by the for-profit companies can be made up by subsidizing them instead of using a nonprofit organization.

Sloan assumed that "not-for-profit [organizations] … maximize quantity and quality subject to a constraint developed from the loci of points where demand curves intersect average cost curves or the point of zero profit" (Sloan, Newhouse, & Culyer, 2000). The question addressed in this paper is whether a nonprofit organization provides similar quality and efficiency as a company organized as a for-profit entity.

For-profit companies focus on maximizing profits. These companies achieve this through charging patients the cost to produce plus a profit margin. As can be seen from this graph, for-profit companies are earning a small economic profit, whereas the nonprofit organizations are only earning a normal profit. Economic profit occurs when the amount of revenue earned exceeds the opportunity costs or the amount of money that can be earned by investing the capital into the next best option. Nonprofits, on the other hand, seek to maximize the welfare of a particular community or group. These organizations charge patients the base cost to produce as they are not in business to earn a profit. Both types of organizations look to operate to satisfy consumer wants, but their methodologies of how they approach this differ significantly. In terms of a nonprofit, "Society's objective is to select a social contract (or allocation mechanism) that maximizes social welfare subject to the constraint that, for any contract selected, both consumers and the manager behave in their own self-interest" (Easley & O'Hara, 1983). This idea gives a free market feel in that each party is behaving in their best interest to drive the well-being of the whole. This study will look at the profitability of not-for-profit organizations to examine whether they are exorbitant. This profitability number can be tied directly into the manager's salary. This will prove if these nonprofits are using their funds the most effectively by creating the most value for every dollar spent on the consumer.

Some industries that have asymmetric information or unequal knowledge between consumer and producer there are nonprofit organizations present. This topic of asymmetric information was discussed earlier in the paper. Asymmetric information is not necessary and sufficient for nonprofit organizations existence. There are some industries with asymmetric information that only have companies with a for-profit motive. Also, some industries have nonprofits for other reasons than asymmetry of information, such as disbursement and ability to pay issues. A few examples of areas with nonprofit organizations include: environment, health care, education and religion. This paper will examine some generalized assumptions regarding all

nonprofit organizations and then specifically look at the hospital industry. With regard to information asymmetry, nonprofit organizations are used to help the consumers through providing an organization with a greater incentive to act in a way that is best for the consumer. Society decides how many resources to provide to this organization, while the organization then determines how to deal with the issues it was designed for. It is important for these industries to be regulated to make sure that they are providing the greatest benefit for what society is providing them.

Institutional Differences Between Profit and Not-for-Profit Organizations

There are three important differences between for-profit and a not-for-profit organizations that are relevant to this study (Santerre & Neun, 2007). These institutional differences are summarized in Appendix A. First, for-profit organizations can acquire initial capital, either through investors or borrowing or by any means necessary, while not-for-profit organizations rely only on donations or borrowing. This is relevant to this paper because society, not stockholders, are providing nonprofit companies money and would like to see it put to its best use. This is different from maximizing shareholder value because society does not have the same rights and obligations as their counterparts. It is important to monitor to see how well these entities are operating and qualifying for the money that they are receiving. One of the focuses of this paper is to evaluate how efficiently nonprofits operate to assess the community benefits derived from the involuntary public funding through tax benefits and subsidies. People are able to voluntarily donate their own money and will do so based on what they feel is efficient. These people have a greater sense of what the organization is doing with the funds as they will most likely do this research before providing their charitable donations. Although, these philanthropists do not have as much information as stockholders of a public traded company do to help make the most informed decision.

Second, for-profits are taxed along with everyone, while nonprofits obtain a tax exempt status and are eligible for some generous subsidies that for-profit companies are not eligible. Nonprofits do not have to pay income taxes, property taxes, or sales tax. Referring back to figure 2, these tax exemptions shift the average total cost curve downward and lead nonprofit organizations to make a large economic profit. This economic profit would be diminished if they provide enough in charitable care. This will be examined closely in this paper, as well as

how the government can measure and assess if it is giving enough or too many subsidies to nonprofits. "Until 1969, subsidies were monitored along with the amount of benefits provided in the hospital industry before they became difficult to measure" (Schneider, 2007). This tax break and subsidies allow for these organizations to provide charitable care at the expense of the government, as in some cases it would not be feasible to run without this benefit. These government benefits help encourage entrepreneurs to open a nonprofit organization and help solve the market failure.

Third, for-profits can use money earned to distribute dividends, while nonprofits have a non-distribution constraint, unless they are donating to a charitable purpose in which the organization was formed. The constraint was formed in order to give civic people the comfort that their donations were going to the cause they anticipated. Also, this helps to make sure government subsidies are put toward their intended use. On the other hand, there is no economic incentive to make sure the funds are used efficiently other than the desire to fulfill the organization's mission. This non-distribution constraint allows these institutions to be lackadaisical when keeping track of the costs of non-tangible goods and services as they are not looking to impress shareholders. An example of a non-tangible good would be the amount of time a doctor spends with a patient to make sure they understand there condition and know what they are suppose to do to take care of themselves. These companies have audits and care about meeting the company's mission, but may cut corners on certain hard to measure outputs. "Many nonprofits produce outputs that are unobservable, but the benefits of this non-distribution constraint must outweigh any monitoring costs associated with it" (Easley & O'Hara, 1983). The problem arising from these untraceable costs is how to measure whether a nonprofit organization is providing as high of quality as their for-profit counterparts. It is very difficult to analyze this constraint with a lot of different items being difficult to measure, including monitoring costs and benefits. Sometimes this constraint allows for nonprofits to grow their organizations faster than their for-profit counterparts as there is no need to satisfy investors with their return on equity requirements. These organizations are applying more of their funds back into the company, which is putting the funds to better use and allowing them to operate efficiently. In this case, the nonprofit

organizations by producing more output, lower their per unit costs thereby experiencing economies of scale.

Given these differences, it is interesting to determine which type of institution provides more utility in different situations. Theoretically, a nonprofit may provide more utility than its for-profit counterpart if the quality or the cost associated with the output cannot be observed effectively. The idea that the quality of the output is unobservable is known as contract failure. This is not a tangible item or one that provides something that can be measured in an exact way. The example, used earlier, of how much time the doctor spends with you to make sure you understand how to treat an illness applies here. This is different from a haircut, which is something that can be measured and kept track of. This is a situation where both parties, the producer and consumer, must trust each other that they will take care and provide an output of good quality. The reason why it is better to have a nonprofit organization in this case is because consumers feel that these organizations will be more ethical in the prices they charge and services they provide. Also, managers will not compromise quality to cut costs as there is no profit maximization motive, leading to a higher quality product. The asymmetry of information is partially fixed by the non-distribution constraint as all funds have to be put toward their designated social obligation. Although manager's salaries in these nonprofit organizations can be excessively high as they are looking out for what is most beneficial to them.

These above reasons associated with a nonprofit organization relate to trust, but it is still interesting that many companies that are nonprofit have a considerable amount of fraud and unethical dealings. It is not publicized as much as other frauds because it may result in an unwillingness of donors to give to any nonprofit. In a study done by The Association of Certified Fraud Examiners (ACFE), they found fifty-eight cases in which nonprofit organizations committed fraud resulting in $30 million of losses (Greenlee, Fischer, Gordon, & Keating, 2007). This is not meant to show that fraud is rampant, but is to demonstrate that it is present even in organizations that are prided upon their image and community prestige.

The situation where a profit driven company will perform better is one where there is intense competition. "The for-profit organization will be more productive and will use less capital

and labor than its nonprofit counterpart" (Herzlinger & Krasker, 1987). Theoretically, a for-profit company has a larger motive to be efficient in everything it does in order to maximize profit, while a nonprofit will focus on providing the best quality, no matter how much time and resources are needed. For-profit companies are generally preferable in the free market economy as it they use resources to maximum efficiency. When necessary, the government is able to subsidize these organizations to help solve a market failure. It is difficult to make sure that these funds provided are going towards their intended use in a for-profit company. Again, these companies do not have the non-distribution constraint to force them to put their money to the cause in which they were chartered to operate for.

It is interesting to note that in the largest industry where there is a profit and nonprofit sector, they "have been studied and it has been found that they provide about the same amount of charitable care" (Santerre & Neun, 2007). This industry is the healthcare industry. Charitable care refers to the amount of uncompensated service provided to the community. If both entities, profit and not-for-profit companies, provide the same amount of charitable care then we cannot justify the subsidy for a not-for-profit sector in that industry.

The two questions addressed in this study are as follows. Which hospital, profit or nonprofit, provides a greater amount of efficiency and quality? Second, does a nonprofit hospital provide enough charitable care to cover the tax breaks and subsidies they are receiving? Also, is this charitable care comparable with what for-profit hospitals provide?

Health Care Industry

There are 5,800 total hospitals in the United States representing 5% of the nation's gross domestic product (GDP). Out of these hospitals 15% are for-profit, 59% are private nonprofits, and the remaining 26% are government owned (Sloan, Picone, Taylor Jr., & Chou, 2001). Government hospitals are completely financed and run by the government, and therefore will not be addressed in this paper. Of all nonprofit organizations, hospitals accounted for 42.5% of the revenue earned in 2004 (The Nonprofit Sector In Brief, 2007). Because nonprofits do not pay out dividends, a nonprofit hospital will reinvest profits to provide a greater variety of services and possibly a more technologically advanced care. When a for-profit hospital is started it generally wants to find a niche market where it can gain

significant market share and make as much money from that specified task. Being able to offer more services at a single location is better for the consumer. This is especially true with hospitals because if a patient does not know their diagnoses, a hospital that offers a wider variety of services is more likely going to be able to serve this patient. Insurance companies are the venders who choose where a patient is going to attend. They will be more likely to send a patient to a hospital that offers a wider variety, especially if there is a lack of information regarding what needs to be provided.

There are some shortfalls in the healthcare industry that make it beneficial to have a not-for-profit entity providing the services. The main issue in healthcare is that the information is asymmetric. This means that doctors know more about a person's illness than buyers leaving the doctors to decide the price they are going to charge. Again, insurance companies decide which service provider that a person is able to use, but these companies still do not have as much knowledge as the hospital does. Also, the product purchaser is often not well informed about the quality of the service as consumers often cannot experience the quality of the good. This type of good is known as a credence good. The problem that can be inferred from this is the opportunity for fraud. The doctor has the opportunity to charge whatever price he deems necessary, which could be exorbitant. Also, it is very difficult to determine a price for the service provided, as both firms cannot deny the care to someone who cannot pay. This is based on an ethical dilemma and the fact that hospitals are encouraged by society to give everyone an equal opportunity at the good. This is known as a merit good, as the government judged that everyone should have access to this good. Some insurance companies have developed specifically to deal with this issue to help make sure that the consumer is not being charged excessive amounts. There are two types managed care organizations to help make sure that the consumer is not charged too much for the hospitals services. These are a preferred provider organization (PPO) and a health maintenance organization (HMO). The difference between these two is that a PPO is a third party insurer, while and HMO is run directly by doctors and other health care officials.

Another issue, related to the asymmetric information, is sometimes the seller will not even know the cost of the inputs. This makes it even more unlikely that the effected price will be charged for the service provided. Also, it is impossible to find a provider as unconscionable if

they have no way to track the cost of the inputs. Unconscionability refers to the idea of a company charging prices that are exorbitantly higher than the market would value or expect to pay. This is where the trust a consumer has for a nonprofit over a for-profit institution has its advantages. This assumed trust comes from the idea that nonprofit organizations are not looking to earn a profit. Also the non-distribution constraint is an economic incentive to help make sure these organizations are allocating their funds effectively. Also, these organizations should have an obligation, brought about by the community, to do as much and as efficiently as possible to benefit society. Next, the hospital structure of profit and nonprofit entities will be discussed.

Hospital Structure (Nonprofit and For-Profit)

Nonprofit and for-profit hospitals can be compared in their structure. Looking at not-for-profit hospitals first, general assumptions can be made about their structure and the market they assist. These are summarized in Appendix B. Herzlinger came up with the following differences in order to determine if nonprofit hospitals have worse financial results than for-profit hospitals (Herzlinger & Krasker, 1987). Not-for-profit hospitals are likely to have older assets and more beds and staff than their for-profit counterparts. This is due to the non-distribution constraint and nonprofits general concern for helping the most patients it can without having to worry about being profitable. Also, they have older assets because they do not need to be competitive to earn business, as an insurance company will be more likely to send a patient to them just because they offer more services. This leads to nonprofit hospitals holding on to their older equipment as there is no incentive to upgrade. Second, the government determines where they will be located. This type of hospital cannot decide it wants to be located in an upscale area where there is little poverty because of the lack of need by people in that area. It is interesting to note, that even though for-profit hospitals are able to locate anywhere they want, they tend to locate where there is a high need by patients who are unable to pay for their services. This shows that even though they are for-profit, they are still looking out for the well being of society. Third, nonprofits offer a broader scope of services, including those that for-profits consider too unprofitable. This, again, relates to nonprofit hospitals having more assets due to their lack of requirements to investors, and their requirements to the community. Fourth, nonprofits provide medical teaching and research functions that for-profit companies will not because these functions are not profitable. For-

profit companies are looking to gain a competitive edge, and are therefore unwilling to share trade secrets, while nonprofit hospitals have more capital that is reinvested into the organization to spend on research and development and want to do what is best for society. Fifth, it is considered that nonprofit hospitals deal with sicker indigent patients because of the area they are located. Although, it has been seen in previous research that for-profit companies give more access to uninsured patients than nonprofits do, which would go against the principle that these nonprofit organizations deal with sicker patients. Also, due to the wider variety of services they offer, a nonprofit hospital may be the first stop in order to diagnose an uninsured patient who has avoided seeking medical attention for an elongated period of time. Sixth, a nonprofit tends to charge lower prices and have higher operating expenses leading them to earn less profits before subsidies come into play.

This sixth difference between nonprofit and for-profit hospitals is where the benefits provided by the government come into play. How much benefits should be provided to balance the amount of money for-profits versus not-for-profits make? In other words, how do you determine the amount of community care that should be mandatory by both for-profits and nonprofits, and then should you pay nonprofits the amount they provide over the mandatory amount? This would be paying the nonprofits their subsidies after they have provided the benefits and guarantee that they are providing an overall surplus to society. As of right now, benefits provided to nonprofit organizations are given without regard to the use of these subsidies. There have been many studies done on this subject which will be discussed later.

Behavioral Differences in Hospitals

There are quite of few differences between for-profit and not-for-profit hospitals, which help to reinforce the need for nonprofit entities. What are some of the advantages/disadvantages that a for-profit hospital has? First, a profit seeking hospital may provide high quality on easily monitored dimensions, but cut corners on hard-to-monitor quality measures. With these hard to measure details, it would be easy for a profit making company to cut corners as the consumer is unlikely ever to recognize it and is therefore would not recognize it as a value adding activity that they should pay for. Most organizations these days are operating lean trying to minimize the amount of activities that are not value adding. This will be difficult in the analysis of whether a nonprofit is providing enough care to cover their benefits because it

is difficult to measure the corners that are being skipped by the profit companies. There are ways to measure quality in hospitals, but it is difficult to measure the magnitude of these quality cuts.

Three other labels, according to Duggan, that have been associated with for-profit entities are cream skimming, diversion, and exploitation. Cream skimming refers to an allegation that for-profit hospitals locate in geographic areas where affluent people live, and limit care to profitable service. A study done by Herzlinger and Krasker on cream skimming, found that for-profits do not "cream" the affluent patients, and actually give slightly more access to patients who carry little or no health insurance than did the nonprofit hospitals (Herzlinger & Krasker, 1987). This is important to this study as it shows that there are many difficult to measure benefits, such as providing a hospital in a poverty stricken area. These benefits are not accounted for when looking at community benefits, which will be explained in greater detail later on in the paper. Diversion means that for-profit hospitals allocate too much to administration costs and marketing expenses. This is said to represent a leakage of resources, as this money could be put toward research or towards increasing materials. This relates specifically to the efficiency of the resources used toward providing the greatest amount of utility to the consumer. There has been no study that specifically examines this issue, but it would be very interesting to find out. Exploitation says it is alleged that for-profit hospitals charge higher prices, channel demand to their facilities, and may even induce demand. This may leave poor people with the lack of coverage, and middle class citizens with a large hit on their income unnecessarily. A study was done on this subject by Herzlinger and Krasker. They found that for-profit hospitals do not channel demand to their facility or induce demand. These companies provide the same amount of access to everyone as a nonprofit hospital. Each of these are just stereotypes brought about throughout the industry, and do not necessarily apply to each individual for-profit company.

SURVEY OF THE LITERATURE

Efficiency in Hospitals

In this section, it will be demonstrated why efficiency should be higher in for-profit hospitals, while quality measures should be higher in nonprofit hospitals. Data will be analyzed later to

see if both of these theoretically sound arguments hold true. Efficiency in economic terms can be defined in two ways. First, efficiency may be defined as producing a given level of output with the least amount of resources or at least cost. Second, efficiency may be defined as with a given amount of resources or a given cost providing the greatest level of output. In the long run, a corporation hopes to achieve economies of scale by producing at the lowest overall cost achievable. In a hospital, it is difficult to apply this term, because it is difficult to determine what one unit of output is. Many consider the best way to measure efficiency in hospitals is through the occupancy rate, or how many beds are filled at every point in time. Doctors want occupancy rates to be low for comfort, and administration want this number to be high in order to maximize its potential value, either through community prestige or profit. Also, stockholders want this number to be higher in order to increase their profits, while nonprofits do not mind a little cushion in order to be able to provide the maximum amount of benefits to the community, not worrying specifically about costs. Also, it is important to note that the cost of having additional materials is not very costly in comparison with the overhead cost of the hospital. According to Rushing there is "evidence indicating that occupancy increases at a decreasing rate across the range of size" (Rushing, 1974). This shows that bigger hospitals are more efficient then smaller hospitals, but with an exponential growth rate less than one.

There are other ways to measure efficiency, including: personnel ratios and administrative fees. Personnel ratios may be looking at how many officials there are for every patient there is admitted to the hospital. Another way to look at personnel ratios is to divide the number of people who are working in administration by the number of doctors and nurses, who are adding value directly to the consumer. The lower this number is the more efficient the hospital is deemed to be. Administrative fees are a way to measure efficiency, as well, because these expenses are not adding value to the consumer. The lower the amount of administrative fees shows that the majority of the expenses are going to providing patient care. Both of these ratios are not used as much when measuring efficiency in hospitals, but each of these gives a slightly different variation, and may help breakdown why some hospitals have higher operating margins than others from the expenses side.

A study was done in 1974 by William Rushing looking at the effectiveness and efficiency in general short-stay hospitals. This study defines efficiency the same way that has been done above. This study was based on a questionnaire sent to hospital administrators in the 105 hospitals in the Tennessee Mid-South region that were members of the American Hospital Association (Rushing, 1974). As far as personnel ratios, the two types of hospitals are fairly similar. The difference between a for-profit and not-for-profit hospital's personnel ratios is not statistically significant.

Since for-profit hospitals are generally smaller than nonprofits, as they generally provide a more specific service, does this mean that they are less efficient? This does not seem to be the case, as the data from Rushing shows. Data does not indicate with significance whether for-profit or not-for-profit hospitals are more efficient, but "if anything, since profit makers have a slightly higher occupancy rate, profit hospitals may be slightly more efficient overall" (Rushing, 1974). This holds up to the theory that a profit oriented company would be more focused on efficiency. Now this is very important to note, that not-for-profit hospitals are not any more efficient than a for-profit hospital. There is no statistical significance between these two bodies in terms of efficiency.

Quality in Hospitals

Quality is another measure that is important to measuring a hospital's success. Efficiency and quality can be looked at as opposite; as the more efficiently an organization operates the more likely they will not take due diligence in making sure everything is done with the most care. In economic terms, quality can be defined as the amount of utility or usefulness that a given item provides. In this definition, utility refers to what value the consumer gets out of the good or service that they are consuming. This utility is associated with how much a purchaser is willing to buy of a certain good.

Quality, in a hospital, is measure by the mortality rates, changes in functional and cognitive status, and changes in activities in daily living. Mortality rates are straightforward as it is the percentage of people that die after a certain medical procedure is performed. Mortality rates are examined at a specified time after this procedure has been performed. For example, a study may look at the mortality rates six months and one year after the service has been

provided. This may be a loaded measure when looking at nonprofit versus for-profit hospitals because one may be located in an area where they are not dealing with as sick of patients. These mortality rates look at a specific disease and procedure, but some people may have a more advanced form of an illness than others. Changes in functional and cognitive status can be measured by performing a subjective survey to patients who have been released from the studied hospital. These changes in functional and cognitive status may, also, be measured through looking at probabilities of a person being readmitted to the hospital for the same diagnosis. Finally, quality may be measured through activity of daily living standards (ADLs) as well. An ADL may be a person's ability to walk or bathe. Quality is a very difficult concept to measure as it is difficult to form a cause and effect relationship between each of these above measures. These measures may be highly correlated, but that does not mean that there is causation behind it.

It would be logical to think that nonprofit hospitals would be more focused on quality, as they are trying to maximize community prestige, but the next study found that for-profits provided higher quality. Keeler and co-authors measured quality in 1992 by sending out surveys to patients asking, "Based on what you now know, would you send your mother to this hospital?" (Sloan, Picone, Taylor Jr., & Chou, 2001). This is an implicit measure of quality based on how the patient felt about the service that they were provided. This study, also, had explicit measurements of quality that were discussed above and found no difference between for-profit and not-for-profit hospitals. The results from this study showed that with this implicit measure there was statistical significance showing that for-profit hospitals have higher levels of quality.

Another study was done in 2001 by Sloan looking at hospital ownership and quality. This study sample was drawn from the National Long-Term Care Survey (NLTCS), which looks at 35,800 Medicare beneficiaries. The primary diagnoses that were addressed in this analysis of quality were hip fracture, stroke, coronary heart disease, or congestive heart failure. For each of these diagnoses the study looked at mortality rates for one month, six month, and one year following the service. Also, this study looked at some ADLs to compare the quality in these hospitals of different ownership. To make sure there was as little bias in this sample demographics, health levels, and times were all regressed to make sure that these were not

statistically different. Overall, this study found that hospital ownership does not seem to make a difference on quality. It was stated that, “there is not a dime’s worth of difference” in quality (Sloan, Picone, Taylor Jr., & Chou, 2001).

With both quality and efficiency both being studied to be equal between not-for-profit and for-profit hospitals, it is important to study if the community benefits being provided by not-for-profit companies. This is an intriguing result as logically quality should be higher in a nonprofit hospital as they would not be cutting corners on hard to measure factors. Next, some of the previous studies done on community benefits will be examined.

Do Nonprofits Pay Their Way? Studies of Community Benefits

Nonprofit hospitals each receive subsidies in the form of tax breaks and other various subsidies. The government provides these subsidies in order to help these hospitals provide other various benefits to the community. Both forms of hospitals provide these community benefits, but which one provides a greater amount will be analyzed in these two studies that are done below. Senator Chuck Grassley said, "If these hospitals continue to press for keeping the public in the dark about how they justify $50 billion in tax breaks a year, that will greatly color my views about the need for legislation." These benefits are summarized in the figure below:

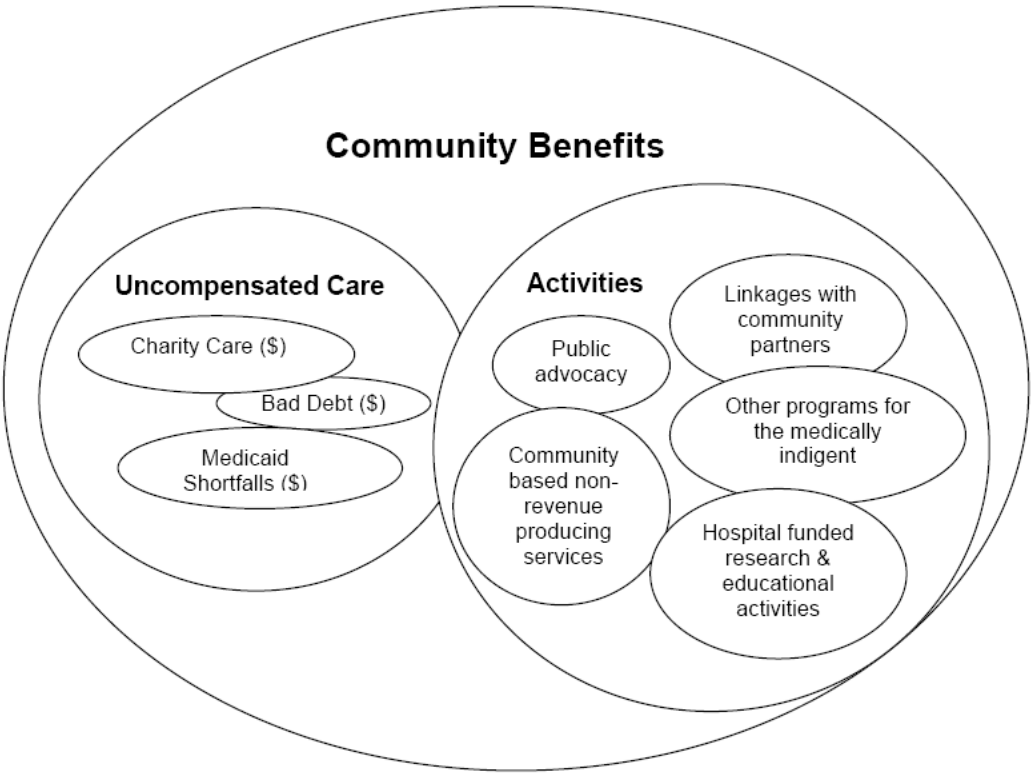


Figure 3 – Different Community Benefits

These studies, as well as the study that this paper performs only look at uncompensated care. The other activities that each hospital performs are not well documented, and are difficult to measure. For example, teaching hospitals provide a variety of services through training new physicians, but this is very difficult to value. It is interesting to note that 77% of not-for-profit hospitals are profitable, while only 66% of for-profit hospitals are. Also, the combine profits of the fifty largest nonprofit hospitals have jumped nearly 800% from 2001 to 2006 to $4.27 billion dollars. Uncompensated care consists of charity care, bad debt, and Medicaid/Medicare shortfalls. "Until 1969, nonprofit hospitals were required to provide charity care to qualify for exemption from federal and state income taxes" (Schneider, 2007). Each of these individual items are not split out when reported, but there is an uncompensated care number reported on each nonprofit hospitals income statement. This will change in 2009, according to the Wall Street Journal. "The new standards, due to take full effect in 2009, will require nonprofit hospitals to break out specifics of their community-benefit contributions. But they won't require the hospitals to provide any minimum amount of

charity care" (Carreyrou & Martinez, 2008). This will be a huge change and will help there be a more concrete result to the studies that have been provided here.

The first part of uncompensated care is charitable care or pure charity. This is care for which payment is not expected. These patients are not billed for the services they are provided. This only accounts for a very small portion of uncompensated care because most organizations are not looking to give out free care. Most organizations will provide the service expecting payment, but if it is not paid for will be able to forgive this debt. This is the next item that is included in uncompensated care. Bad debt is the value of care provided to patients who were presumed able to pay, but whom the hospital has been unable to collect. This item may depend on the location of the hospital and the demand of people who are unable to pay, but it has been studied earlier that for-profit hospitals do not locate in wealthier areas than the nonprofit hospitals. Again, recall that nonprofit hospitals are unable to choose their location.

The last item under uncompensated care is Medicaid/Medicare shortfalls. Medicare and Medicaid are plans created by the government to deal with the elderly and poverty stricken people when it comes to purchasing medical care. For Medicare, "As of 2003, total expenditures exceeded $274 billion, with an average rate of increase of 8.4 percent from 2000 through 2003" (Santerre & Neun, 2007). The interesting part of Medicare and Medicaid is the payment system that is used to keep the costs under control. Each medical care service provided in split up into different diagnosis related groups. These diagnoses related groups (DRG) have a price determined by the government on how much the service provided should cost. This is then paid on a prospective basis, or the amount to be paid to the care provider is determined before the service has been completed. This prospective system is to help avoid going through a third party for payment, and to give incentive to hospitals to only provide the necessary medical services. The prices determined by the DRG are generally lower than the actual cost of the service, since inflationary pressures in the medical industry are high. This is the major reason why we include Medicare/Medicaid patients in the uncompensated pool.

An interesting point regarding these DRG's is how some hospitals deal with these reimbursements from the government eliminating their shortfalls. "It has been alleged that

the largest for-profit hospital firm, Columbia-HCA, has bilked Medicare program by billing for services that were not provided or not needed an by using various accounting loopholes to increase payments from Medicare." An example of this would be if the hospital was to set a broken arm, they would tell the government that they provided a bypass surgery. This is because in order to cover the shortfall in fees that the hospital paid for, they will say they provided a service that will pay more to them to cover these costs. This may be unethical, but is fair because the hospital expects to be paid at least as much as the service they provided cost them.

There have been two studies done recently to analyze California, to see if there hospitals are providing enough community benefits to cover their tax benefits and generous subsidies. In the first study, community benefits are be defined as uncompensated care (Morrisey, Wedig, & Mahmud, 1996). This first study was done in 1996, when the aggregate annual tax subsidies were estimated to be $8.5 billion nationwide (Morrisey, Wedig, & Mahmud, 1996). Uncompensated care is determined by a hospital's billed charges for this care, stepped down to average costs using the hospital's own overall operating-cost-to-charge ratio. This study compares uncompensated care to the tax subsidies they receive. The income tax subsidy is estimated by computing the effective tax rate paid by investor-owned hospitals in California in each year and applying that rate to the revenue less expenses of nonprofit hospitals. The interest rate subsidy is computed by taking the face value of the bond and multiplying that with the difference between the reported interest rate and the rate on corporate A-rated bonds of similar duration. Lastly, the property tax subsidy was computed with a complex equation based on the net plant assets and the age of the hospital. The data used to analyze this was the Annual Hospital Disclosure Report collected by the Office of Statewide Health Planning and Development (OSHPD), which includes 189 nonprofit voluntary community hospitals in California. The results of this study were that nonprofit hospitals in California received an average of $1.58 million in subsidies with the larger hospitals receiving nearly $4 million. It was found that 19.6 percent, or one in five nonprofit hospitals, failed to cover their subsidies. Also, their average shortfall was nearly $815,000 (Morrisey, Wedig, & Mahmud, 1996). It is important to note that, in this study, larger teaching hospitals provided more uncompensated care per bed than their smaller counterparts.

The second study, done by Schneider in 2007, analyzes three important questions. First, are nonprofit hospitals meeting their obligation to provide community benefits? Second, has the increase in managed care and the increase in hospital competition reduced hospital supply for charity care? Third, what hospital characteristics affect hospital charitable contributions? The definition of uncompensated care used in this study is that it includes pure charity, bad debt, and taxes for those profit oriented hospitals. Included in these taxes is an interest rate subsidy that is afforded to nonprofit companies. Again, this study is comparing the uncompensated care provided by nonprofit hospitals to the uncompensated care plus taxes paid by for-profit hospitals. This study used 962 nonprofit and investor-owned hospitals from the Annual Hospital Disclosure Reports published by California's Office of Statewide Health Planning and Development (OSHPD). The results of this study found that on average, for-profit hospitals provided more uncompensated care including taxes. Also, higher managed care penetration impedes hospitals ability to provide uncompensated care as well as broader community benefits. According to this study it shows that there is no need for nonprofit hospitals as the for-profit entities provides more charitable care then the organization designed to do exactly that.

The results of these two studies shows that nonprofit hospitals are not providing as much community benefits, if including taxes paid, as for-profit hospitals. Also, nonprofit hospitals are not providing as much uncompensated care as they are receiving in tax breaks and subsidies. Again, with efficiency and quality between these two types of hospitals being similar, a nonprofit hospital is difficult to justify if they are not covering their subsidies. Earlier, it was shown that these nonprofit hospitals are making substantial profits, which shows that there is a definite need for legislation. In the next sections, a few different states, Connecticut and Rhode Island, will be examined to see the amount of community benefits they provide in comparison with the subsidies they earn.

DATA

This study examines the 44 not-for-profit hospitals in Connecticut and Rhode Island. Connecticut data came from the Annual Report on the Financial Status of Connecticut's Short Term Acute Hospitals. This data was gathered by the Connecticut's Department of Health.

There are 30 hospitals in this data set. Rhode Island Data came from the 2006 Hospital Financial Dataset and the Hospital Community Benefits Report of 2003. This data was gathered by Rhode Island's Department of Health. There are 14 hospitals in this data set. Each of these two states has primarily nonprofit hospitals, and therefore this study only examines nonprofit hospitals in comparison to the tax subsidies they provide. Each of these two datasets includes the amount of uncompensated care provided by each individual hospital that can be compared with the amount of subsidies being provided. The subsidies that are provided have to be estimated because there is no way to calculate the specific amount. They are hypothetical as nonprofit hospitals do not have to calculate them in the first place. Below are the assumptions we made in order to make this study work.

In order to determine a benchmark in the amount of subsidies that is being provided, the amount of taxes paid for by the largest seven for-profit conglomerates were examined. This data was gathered from IbisWorld. The for-profit hospitals used to determine this benchmark were Columbia-HCA, Odyssey Healthcare, Amsurg Corporation, Universal Health Services, Rehabcare Group, Community Health Systems, and Health Management Associates. Each of these hospitals are a large conglomeration of hospitals scattered across the US and will give a good approximation to the amount of income tax subsidy provided. In taking the taxes paid by the for-profit hospitals and dividing it by the amount of patient revenue, the percentage is equal to 3.5 percent with a small standard deviation of 2 percent. This 3.5 percent will be used as a benchmark when comparing the amount of uncompensated care provided as a percentage of patient revenue. This measure is realistic because there are no laws in Rhode Island or Connecticut that would lead to them being treated any differently under corporate tax laws.

The issues related to this study are that income tax subsidies and property tax subsidies are not factored into the 3.5 percent benchmark. Therefore the amount of subsidies provided to nonprofit hospitals would be slightly higher than is reported in this number. Also, in the uncompensated care number that is reported it includes only charitable care, bad debt, and Medicare/Medicaid shortfalls. It fails to include other services like hospital funded research or public advocacy, which are shown under activities in Figure 3. This causes an underestimation of what the actual amount of community benefits that are being provided. It

is important to note that these numbers are most likely not going to make a huge dent in the percentage in comparison with net revenue. The revenue number is a relatively large number and would take a substantial amount of these other activities to make a difference in the study that is shown below.

RESULTS

Rhode Island

First, Rhode Island will be examined to see how the community benefits have been increasing over time. This is a sum of all of the community benefits provided by all the hospitals in RI. From 1995 to 2003 the amount of community benefits has increased by an average of $1.3 million per year. As can be seen from the graph below there is not a substantial amount of charity care that is being provided from these hospitals which was expected. This substantial increase in uncompensated care could be related to the fact that more people are unable to pay for medical services or that hospitals are becoming more willing to offer services to patients who are unlikely to pay. According to the 2006 Hospital Financial Dataset, the amount of bad debt in 2006 was up to $51 million showing that this increasing trend is continuing. These are real numbers adjusted for inflation, which shows that the amount of care really is increasing. It will be seen in the future whether this trend continues and whether it is from people not being able to afford healthcare or hospitals willingness to assist patients who are more risky in terms of their ability to pay.

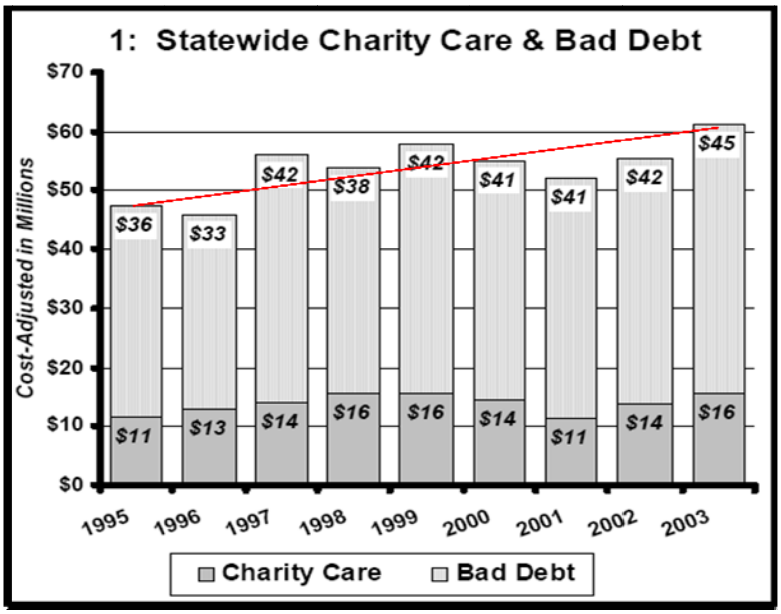


Figure 4 – RI Statewide Charity Care & Bad Debt

Next, how did Rhode Island's nonprofit hospitals fare against the 3.5% benchmark that was set by examining the seven largest for-profit conglomerate hospitals. The below graph looks at all 14 hospitals in Rhode Island and takes an average over the four-year period from 2000-2003 of the amount of community benefits they provided divided by the amount of patient revenue. This average is to make sure that one year in particular these hospitals provided an excessively high or low amount of community benefits. In this study, it was decided to compare these numbers to revenue instead of expenses because it is a more conservative number to make sure that the value of uncompensated care is not being underestimated. In comparing these number to expenses there is a wider gap between the income tax subsidy line and the percentage of uncompensated care provided then what is seen below.

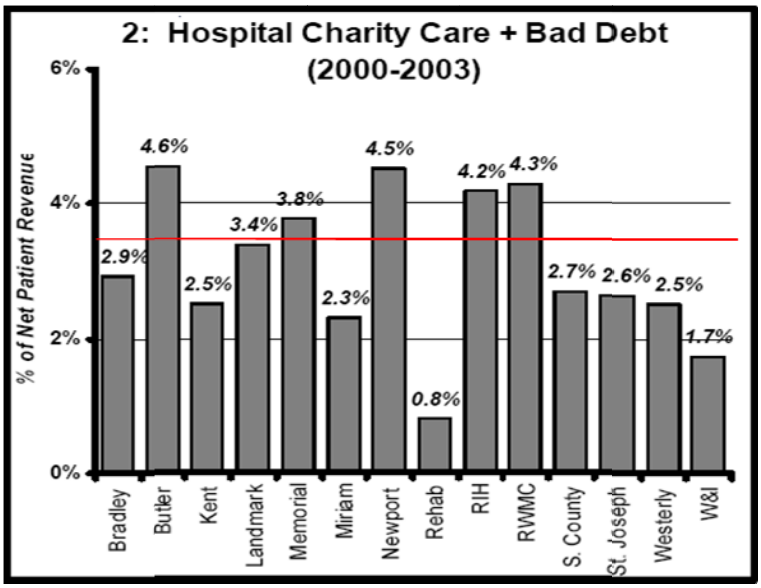


Figure 4 – RI Hospital Uncompensated Care (2000-2003)

As this chart shows only four of the hospitals actually achieve this 3.5 percent benchmark. Landmark Hospital is close to this border, and if they are given the benefit of the doubt, still only 33% of the hospitals in Rhode Island are providing enough uncompensated care to cover their income tax subsidy. This is a sad sign that reinforces what has been learned from the California studies shown earlier.

<u>Connecticut</u>

The average uncompensated care provided in Connecticut as a percentage of revenue was 2.67%, which is far below the 3.5% that these hospitals are receiving in an income tax subsidy. This again shows that these hospitals are at a cost to society as they are not providing enough care to cover the subsidies that the community is paying for. In appendix 3, there is a chart showing the individual hospitals in Connecticut and if you compare this again to the 3.5% benchmark, only three or four of these thirty hospitals are meeting the threshold. Plus, even if they do make the cut, they are just barely providing enough to cover the income tax subsidy, which doesn't include any of the other tax incentives or subsidies. Even though there are other community benefits out there, these are the majority of them, which shows that the government definitely needs to make some reforms in order to enforce these hospitals to make a difference in society.

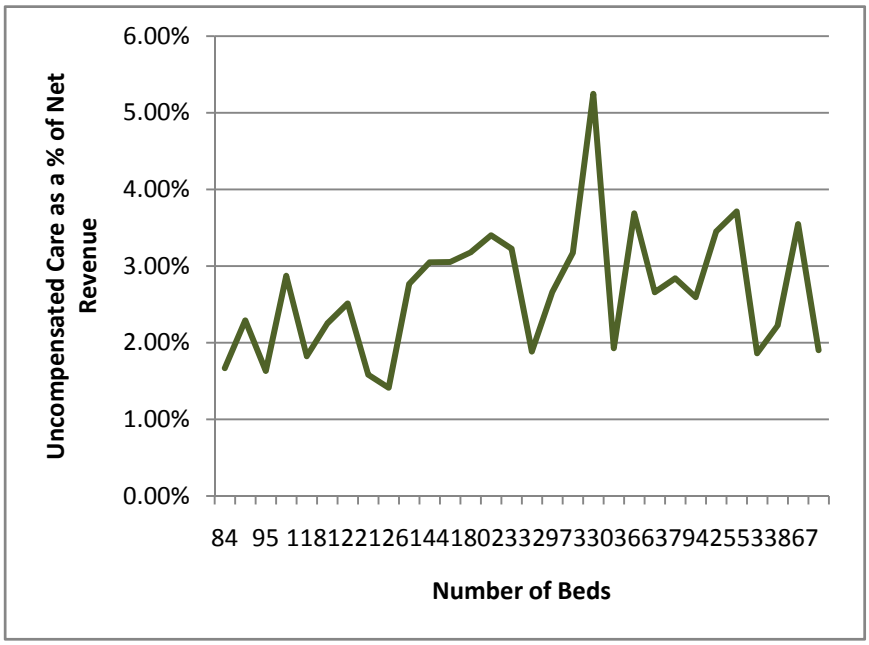


Figure 5 – CT Hospital Uncompensated Care per Bed

In figure 4, it is shown that these larger hospitals that can afford to provide more uncompensated care are not providing any more than these smaller hospitals. This goes against the previous studies that stated that the larger nonprofit hospitals were more likely to provide more uncompensated care per bed. This shows that there is no incentive for these hospitals to provide more charitable care when they are not being watched or told to break out where their subsidies are going.

The graph shown in Appendix 4, shows the amount of profits that these hospitals are making. The larger hospitals in Connecticut are making an excessively high profit every year. Again, this data shows a three year average. For example, Yale-New Haven Hospital, which is a large teaching hospital, is averaging a profit of $34 million per year. This money could be going back into the community, but instead it is going into manager's salaries and building bigger hospitals with items that are not adding any value, directly, to the consumer.

From these two states it is seen that neither is providing enough charitable care to cover the subsidies that they are given. It will be important for the government to take a look at this and make sure that there is some kind of reform to make sure that either the subsidies are being

put to their best use or to limit the subsidies to the amount of charitable care that is being provided. Below some of the options on how to deal with these shortfalls will be discussed.

CONCLUSION

Overall, from this study it can be seen first that nonprofit hospitals and for-profit hospitals do not differ in both quality and efficiency. Sloan stated that "there is not a dime's worth of difference" (Sloan, Picone, Taylor Jr., & Chou, 2001) and my analysis supports this fact. Second, it has been shown from analyzing data in both Rhode Island, Connecticut, and the previously studied California that very few of the non-profit hospitals are providing enough community benefits to cover the subsidies that they are being given. Now, what can be done to fix this problem.

There are three options that can be instituted to help fix this shortfall in community benefits. The first option would be to give subsidies to the nonprofit hospitals after they provide the community benefits. Accomplishing this would be relatively easy by holding these hospitals accountable for keeping track of their community benefits, which will be mandatory in 2009. This would help to make sure that the subsidies were being put to good use. Although, this system would be induce cheating on the part of nonprofit hospitals to maximize their community benefits in the easiest way possible. There would most likely be a loophole that these hospitals would find in order to get around this and find a way to get as much subsidies as they had before and provide the same amount of charitable care.

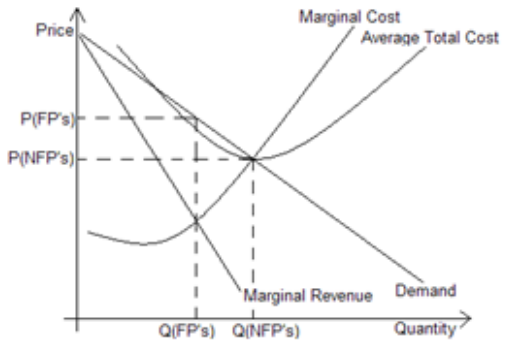
The second option would be to create strict guidelines on the amount of charitable care to be provided. These guidelines would require careful monitoring, which may be very expensive. This would not necessarily help as there would be wasting of subsidies that could be provided. On the other hand, if the guidelines are created very specifically, and have to be reported on the company's financial statements it may be a very effective way to make sure hospitals are meeting their goals. Also, if the hospitals are unable to meet their goals hefty fines should be in place to make sure hospitals take the guidelines seriously.

Finally, the government may want to subsidize the individual and not the institution. This way the government knows that they are helping out the people who have unequal access to

this good or service that everyone should have access to. This may be the best option, but again it is difficult to determine who gets the subsidies and how they should be disbursed. One option might be to look at people's income to determine the amount of subsidies they should receive and disburse them as vouchers. Hopefully, there are more studies to come to exploit these inefficiencies and lead to new legislation to make changes to the current system.

APPENDICES

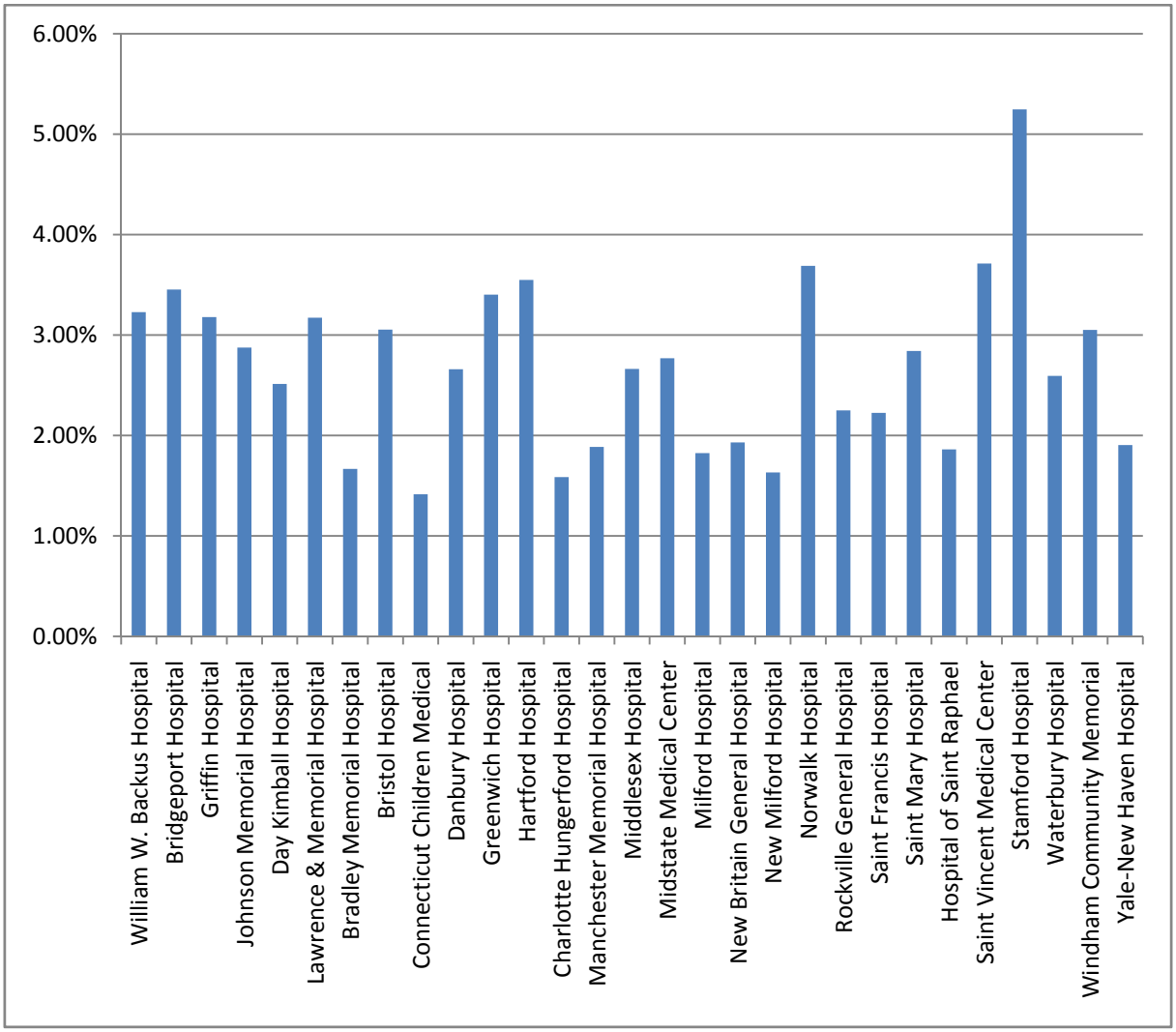
Appendix A – Distinctions between Not-For-Profits and For-Profits

Distinctions between Not-for-Profits and For-Profits		
Category	**Not-For-Profits**	**For-Profits**
Definition	Seeks to produce until consumers are satisfied through equating demand and marginal cost. (D = MC)	Seeks to maximize profit through equating marginal revenue and marginal cost. (MR = MC)
Graph		
Raising Capital	Only through donations, which includes government subsidies. Some government subsidies include discounted rates on loans and tax discounts.	Through any means necessary.
Assymetry of Information	These organizations are thought to be trustworthy with all the money associated with their business has to go towards their purpose (non-distribution constraint).	If there is assymetry, these organizations are highly regulated being required to keep very detailed records of their dealings. Sometimes information is difficult to measure.
Size	With the non-distribution constraint it may allow a nonprofit to grow faster at the beginning. Also, in terms of hospitals, they are generally larger because they provide care that for-profit counterparts would not find profitable.	For-Profits tend to focus on a more specialized field that they can be really efficiency and profitable at, and are therefore smaller on the average. This is true with respect to for profit hospitals.
Location	Government determines location based on the need of that particular area.	Able to locate wherever there is a demand for their services.
Motive	These companies are motivated to provide the best quality while sacrificing efficiency.	Looking to attain the highest profit through operating in an efficient manner.

Appendix B – Distinctions between Not-for-Profit and For-Profit Hospitals

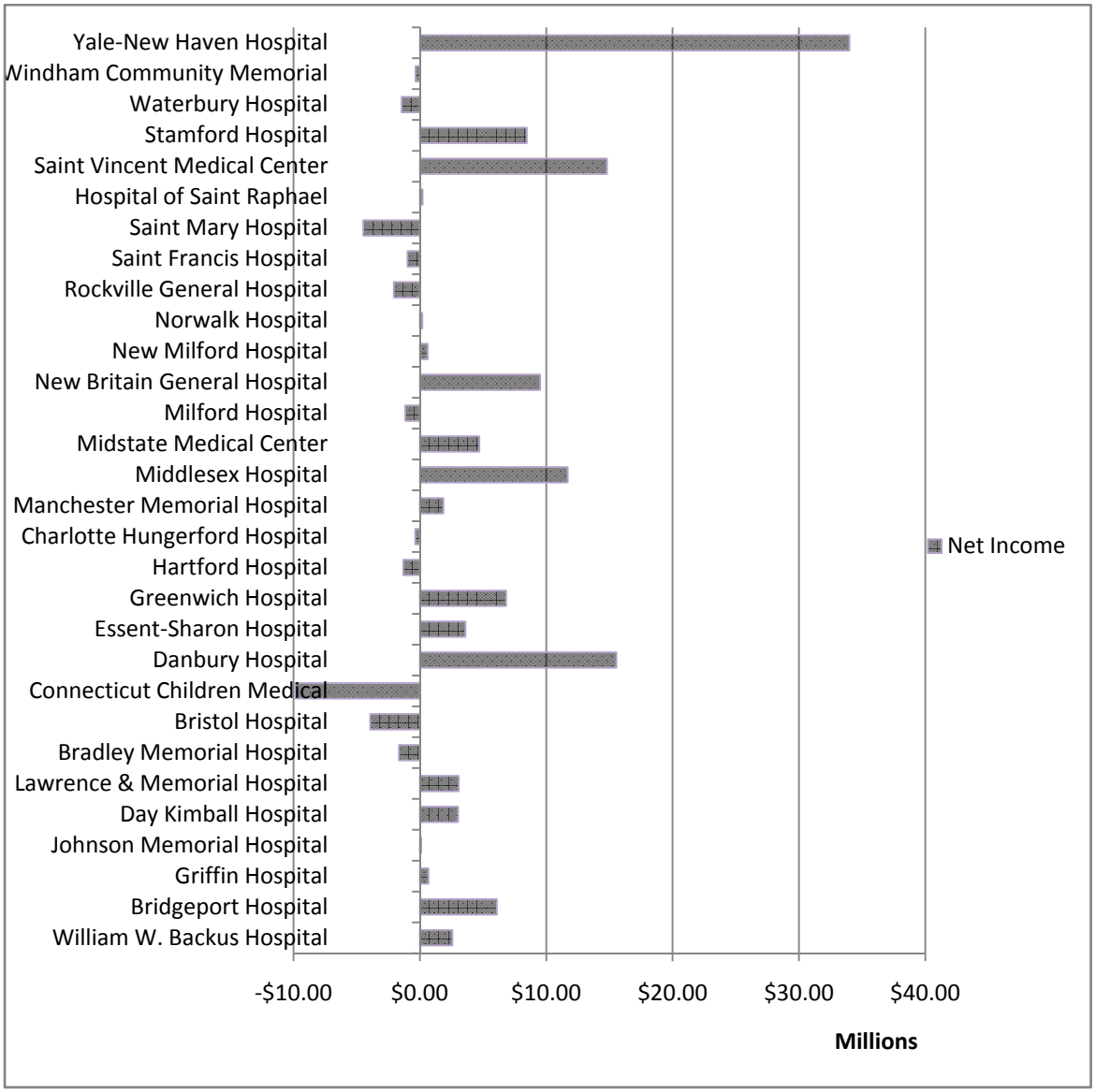
Distinctions between Not-for-Profit and For-Profit Hospitals		
Category	**Not-For-Profits**	**For-Profits**
Services (Technology)	Provide a greater amount of services as they are looking to provide the most quality, ignoring the profit motive. Also, reinvest earnings into more technologically advanced equipment.	Usually focus on a specific profitable service that they can call their niche market and are usually very technologically advanced in that specified area.
Research	Make knowledge public as soon as they discover a better treatment.	Are able to get a patents for their new developments.
Patient Quality	Deal with sicker patients as they provide a greater variety of service and are located in low income areas.	Deal with upscale patients that have a specific issue that has already been diagnosed.
Cream Skimming	Government mandates where these entities are located and is therefore not a problem that should be of concern.	Are thought to pick there location and customer base off of where they can be most profitable. This has been found to be untrue with profits providing slightly more access to patients with no health insurance.
Diversion	Are larger companies that do not spend their money on advertisements as most people know of their location. Administrative costs may be analyzed for excessive use.	Locate excessive money to administrative and marketing cost in order to promote their hospital rather than efficiently using that money to help sick patients.
Exploitation	Not an issue, as this company is looking to maximize its prestige and will do this by providing the highest quality at the lowest cost.	Channel demand to their location and charge a higher prices than they could get away with if information was not assymetric. May provide care that is unnecessary.

Appendix C – Uncompensated Care Provided by Connecticut Hospitals



This graph shows uncompensated care as a percentage of net patient revenue.

Appendix D – Distinctions between Not-for-Profit and For-Profit Hospitals



This graph shows the amount of profits being made by Connecticut Hospitals.

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