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BENEFICIAL MORAL HAZARD AND THE THEORY OF THE SECOND BEST

Kevin D. Frick
Johns Hopkins Bloomberg School of Public Health

Michael E. Chernew
Harvard Medical School

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Economic Research Initiative on the Uninsured
University of Michigan
109 S. Observatory, M3242, SPH-II
Ann Arbor, MI 48109-2029

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Abstract

Economic analysis of health insurance markets has long noted that insurance increases consumption of heath care services because it shields individuals from the true price of care. The additional consumption attributed to insurance is often labeled as “moral hazard” and, in standard economic models, is considered to result in welfare loss. The cost associated with additional consumption provides one argument against expanding coverage. This article examines the welfare consequences of moral hazard and brings together several arguments suggesting that in many cases the additional consumption could be welfare enhancing. Since conditions for maximum economic efficiency fail to hold in the market for medical care, the concept of the theory of the second best is important; in this case, the market distortions caused by insurance may increase welfare by mitigating the averse consequences of other distortions. We focus on three efficiency-related reasons why insurance-induced consumption may improve welfare: (1) insurance can offset market power; (2) insurance can remedy some externalities; and (3) insurance can mitigate problems associated with mis-information that results in many types of care being underutilized. We also focus on one distributional reason, the idea that insurance can facilitate desired income transfers between healthy and sick states of the world. These arguments strengthen the case for expanding coverage. Yet, the cost of additional consumption associated with expanding coverage must be addressed, even if it enhances aggregate economic welfare. More sophisticated benefit packages may be able to minimize the cost of additional consumption associated with coverage by limiting detrimental moral hazard, while maximizing access to the health care services that provide substantial value.

Introduction

Analyses of health insurance markets over the past several decades have recognized that insurance encourages beneficiaries to consume more health care than they would if they were uninsured. Although advocates for universal coverage and improved access to care may view this increase in utilization as positive, standard economic analysis suggests that this extra consumption will diminish economic welfare and the label for this extra use, *moral hazard*, reflects this negative connotation. In the context of exploring whether government provision or encouragement of health insurance was welfare enhancing, Mark Pauly presented the seminal analysis of this phenomenon in 1968.[1] Today the phenomenon of moral hazard has become one of the fundamental empirical findings in health insurance markets and the debate associated with any change in the United States. Influential studies of demand elasticity, such as the RAND health insurance experiment, devote considerable attention to quantifying the changes in utilization and expenditures associated with greater coverage,[2] and the results have been used to estimate changes in welfare.[3]

In contrast, there is a growing body of research that argues that the extra consumption and expenditures associated with insurance may not diminish welfare. Since conditions for maximum economic efficiency fail to hold in the market for medical care, the idea that insurance induced demand for care will increase welfare is an application of the second best theory. This paper reviews those arguments, focusing specifically on three efficiency-related reasons why insurance-induced consumption may improve welfare: (1) insurance can offset market power; (2) insurance can remedy some externalities; and (3) insurance can mitigate problems associated with mis-information that results in many types of care being underutilized. We also focus on one distributional reason, the idea that insurance can facilitate desired income transfers between healthy and sick states of the world.

The effects of the extra consumption on economic welfare is important for policy debates. Specifically, over 46 million Americans lack health insurance coverage.[4] One argument that is consistently raised against expanding coverage is that the coverage will induce wasteful spending (e.g. moral hazard.) Similarly, many insured individuals remain exposed to relatively high levels of cost sharing at the point of service, and some policy initiatives propose to encourage enrollment in such 'high deductible plans' as a means to lower costs and improve the efficiency of the health care system. Thus, a comprehensive discussion of the many possible effects of changes in utilization and expenditures associated with additional insurance coverage can add insight to the debate on expanding insurance to those who are uninsured and on making insurance more generous for those who are in high deductible or high coinsurance plans.

This paper will discuss (1) the standard economic evaluation of insurance, (2) efficiency arguments for greater coverage in a section on the theory of the second best, (3) distributional implications, and (4) balancing beneficial and detrimental moral hazard. Finally, the paper will conclude

Standard economic analysis

Textbook analyses of moral hazard are typically based on a comparison of consumption when insured to consumption when not insured (Figure 1). The optimal level of consumption is at point A, where the demand curve intersects the price. Insurance that lowers the price faced by consumers increases consumption to the quantity represented by point B. The cost of the extra consumption is the added quantity multiplied by the price of care (represented by the area AECD). The loss of economic welfare is generally computed as the cost of this care minus an estimate of the value of the care. The value of care is measured by the area under

the demand curve. Thus, the incremental value is represented by the area ABCD. This value is smaller than the cost, suggesting a welfare loss represented by the triangle AEB.

The welfare loss is felt by consumers when they pay the premium, which finances a large part of the care. When they are ill, they treat the costs of the care (paid largely through the premium) as sunk costs, and only perceive the costs and value associated with the extra care. Moreover, if the premium is subsidized by employers or taxpayers, or otherwise not transparent to the consumer, they may not perceive the welfare loss. However, the costs of coverage (and, ultimately, care) are borne somewhere in the system. As a result, at the aggregate level the welfare loss would still exist.

The key to this analysis is the comparison of the efficient and actual levels of medical care consumption. If actual consumption is above efficient consumption (which, critically, is not observed empirically),[5] welfare loss will be present and equal to the cost of that care minus its value as was shown in Figure 1. Similarly, if, for whatever reason, actual consumption is below the efficient level, loss of welfare will occur as a result of the missed opportunity to consume care that is valued at a level that is greater than what it costs to produce; the welfare loss would equal the value of care not consumed, minus its cost.

In standard economic models of insurance, this welfare loss is offset by the fact insurance coverage provides a benefit in the form of risk mitigation. Risk averse individuals wish to avoid the potential for significant financial loss and are able to protect against that risk through insurance. Institutional details, such as the tax treatment of coverage, provide additional incentives to purchase insurance despite the societal welfare loss.

The standard economic analysis of the economically efficient level of insurance focuses on the tradeoffs between welfare loss and risk mitigation. At the margin, in efficient equilibrium, better coverage is purchased until the marginal disutility of the welfare loss associated with better coverage equals the marginal utility of improved risk protection.

The point at which equilibrium is reached is an open empirical question that has received considerable attention. For example, as early as 1973, Martin Feldstein performed a societal welfare analysis of the raising the coinsurance rate for hospital services.[6] In the analysis, the demand for insurance in each state was modeled as a function of the price of insurance, the group nature of the purchases, hospital prices and other variables. The estimation captured the interactive nature of hospital coverage and hospital prices. Comparing the welfare loss to risk mitigation, Feldstein suggested that having individuals face a higher out-of-pocket cost (particularly for expenses of a moderate magnitude) would be welfare increasing.

Expanding the economic analysis to the theory of the second best

The core of these arguments is largely driven by standard economic theory assuming well-informed consumers making purchases in markets of competitive health care providers; in other words, the conditions for the optimality of a free market for health care are assumed. In light of the many limitations to neoclassical economic reasoning, reconsideration of the core of the moral hazard arguments is reasonable, and economic analyses motivated by the theory of the second best (i.e. that moving away from some conditions of optimality may not be inefficient when there are constraints to other optimality conditions already in place) deserve consideration.

Insurance does increase utilization of health care services and the increased consumption and expenditures have the potential to reduce welfare if the costs of the additional services

exceeds the value of the services rendered. Yet, if we expand the framework of analysis, there are many situations in which the costs do not exceed the value, and, the extra consumption would be beneficial and improve welfare. The common thread across these reasons is that the efficient level of care is greater than the quantity consumed when a person is uninsured. Constraints in the market may prevent efficient levels of consumption from being attained by uninsured individuals; in this case, distortions caused by insurance may actually improve welfare and removal of coverage, so patients must pay the full price of care, are not guaranteed to increase economic welfare. In the case of health insurance, if the efficient quantity is greater than the uninsured quantity, the welfare loss associated with coverage diminishes. As a result, moral hazard may be beneficial or 'welfare enhancing'.

Issue 1: Market power and excessive prices

The standard economic argument relies on the market price to define the efficient level of consumption. This assumes a well-functioning competitive market so that the prices in the market represent the true marginal social costs of providing medical care.

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A range of reasons may result in firms in the health care industry charging prices above marginal cost. In some markets there may be an insufficient number of providers to generate competition. For example, there may be only one hospital or a few physicians of specific specialties. In such markets, to the degree that the provider can set prices, the resulting prices are an overestimate of the efficient amount of resources that society must use to obtain effective care. Using price as the measure of social cost will lead to an overestimate of the cost of care in a calculation of welfare loss. Also, in such a market, the quantity of care consumed when uninsured would be less than a socially efficient quantity. This type of market power is most likely in rural areas, although it may also reflect barriers to entry such as licensing requirements or certificate of need laws.

Market power may even exist in markets with substantial numbers of providers due to imperfections in the ability or willingness of patients to search for care based on price. Pauly and Satterthwaite present a model in which more providers in a market leads to a price increase, as opposed to a price decrease, because of the increase in the number of providers increases search costs.[7] Furthermore, the inability to observe quality limits consumers' willingness to seek care from the least expensive provider. Provider differentiation along a number of dimensions, including location, reputation, and amenities further limits the extent to which competition can drive prices down to marginal costs. Finally, insurance itself exacerbates the problem of insufficient price shopping. Consumers only retain a small portion of the savings, if any, if they seek care from less expensive providers.

Patent protection is another source of monopoly power, most relevant in the market for prescription drugs. Monopoly power allows the pharmaceutical manufacturer to obtain economic profits and sell the product at a price that is higher than the marginal cost of production. Uninsured prices in the market for pharmaceuticals will not necessarily maximize welfare, although there are many arguments for why patents and the accompanying economic profits may be a reasonable policy option for encouraging innovation. Regardless of the positive and negative aspects of patent protection, the prices that are charged while the patent applies are an overestimate of the costs to society when considering changes in welfare that may occur when more individuals have insurance.

If market prices exceed marginal cost, as it likely in many cases, the efficient amount of care depicted in Figure 1 is too low. If one were to instead calculate the efficient level of care using a low price, efficient consumption would be higher and closer to the consumption with

insurance (Figure 2). In Figure 2, the efficient consumption is at point F. If patients were uninsured, and consuming at point A, there would be a welfare loss associated with underconsumption because the value of care going from A to F (the area under the demand curve between A and F) exceeds the cost (the area under social marginal cost associated with quantities C and D). The triangle AFG represents beneficial moral hazard. The only welfare loss that is caused by insurance is the over consumption as patient moves to consume the quantity at point B. This is represented by triangle FHB and is smaller than under the standard analysis. When the social marginal cost is very low, as in the case of many prescription drugs, the insured price may not be below social marginal cost and moral hazard may not decrease welfare at all; there may be only beneficial moral hazard.[8]

The market has generated alternatives to providing less coverage to control the increase in utilization and expenditures associated with greater insurance. Managed care plans can mitigate this problem and reduce the mark-up of prices above marginal cost. They can do this by limiting their networks and using their negotiating power. In essence, this is searching on behalf of their beneficiaries. The beneficiaries can obtain a less expensive premium, but in exchange they may have to accept a limited provider network. Moreover, in equilibrium it is theoretically possible for greater search by managed care plans to lower prices without requiring substantial reductions in network breadth. The threat of limiting access to the network may be sufficient.

Some research suggests that this is how managed care plans achieved savings in the 1990s.[9] Other evidence suggests that at least for some services in some markets health maintenance organizations (HMOs) may pay close to marginal cost.[10] This is most likely to be the case in markets with many providers.[10,11] The same work suggests that even in competitive markets, less managed plans likely pay above marginal cost.

Alternative methods to mitigate the problems associated with market power have been developed such as price regulation and policy initiatives. Initiatives include information provision and product standardization; these options may improve the search process for consumers. In fact some evidence suggests that demand elasticities are greater when quality information is provided.[12,13] However when pursuing these policies it is important to distinguish between high prices due purely to a lack of competition or search and high prices that reflect patents and an associated incentive for innovation.

Issue 2: Externalities

The demand curve posited in the standard economic analysis of moral hazard typically does not reflect externalities that suggest optimal coverage should exceed the level that would be consumed in the absence of insurance. A classic case of externality is infectious diseases; in this case the use of health care services can improve health for other members of society. This is the case for situations such as vaccinations. This would decrease the long-term risk exposure for the individual that comes in the form of the risk of becoming ill and the risk of having one's risk change and decrease the risk to society of having more high risk individuals.

Issue 3: Flaws in decision making

The demand curve depicted in Figure 1, and relevant for welfare analysis, assume rational, fully informed, decision makers. Yet a growing body of research identifies many reasons why individuals may not make choices in their best interest. In some cases the explanations are simple, such as a lack of information or understanding of the consequences of different treatment decisions. This includes distortions in consumption due to imperfect agency. It also includes a range of cognitive explanations related to the inability of individuals to

process complex information or manages their medical care in an environment with many competing distractions.

In other cases the explanations are more complex, such as hyperbolic discounting, in which patients do not internalize future events in an optimal manner. Similarly, individuals may have difficulty appropriately responding to uncertainty in settings where the consequences of their actions, or inaction, maybe to some extent random. For example, failure to take cholesterol medication does not guarantee a heart attack, but in increases the likelihood of a heart attack.

Whatever the reasons, considerable evidence suggests that individuals often fail to utilize medical services that are proven to be effective and to offer large benefits relative to the costs.[5,14-15 16 17 18 19] This underutilization can occur at any number of points in the process of providing appropriate medical care. Underutilization can occur in the management of an ongoing condition like hypertension, diabetes, or heart disease. For example, patients with diabetes and high blood pressure should take their glucose control medications and blood pressure medications. Patients that have had a heart attack and have high cholesterol should take their cholesterol medication. Patients that have had a heart attack should take a beta-blocker. While it is true that in some cases these conditions can be managed with lifestyle changes, evidence suggests that a substantial number of patients are not effectively managing their disease. Similarly, many screening and prevention services are considered to provide exceptional value. These could be simple screening for cancer, like mammography, or the utilization of vaccinations (like influenza vacation for older adults or any portion of the population).

Some of this underutilization can be attributed to the physician behavior as the physicians clearly have control over what type of care is used in some situations (e.g. prescriptions). However, in many cases the cause of underutilization may be more a problem with the consumer's choices.

Over the past decade, initiatives designed to improve the quality of care received have identified these high value services. Often they are incorporated into quality measures used to evaluate physician or health plan performance. In other cases they are used as the basis for reimbursement schemes such as 'pay-for-performance'. In still other cases these services are targeted by the growing array of disease management programs designed to encourage use of these services. The disease management interventions use a range of information interventions to increase use of these highly effective services. When an individual does not manage their disease or utilize appropriate screening or prevention services it is assumed that they have made a poor decision that needs remedy. Often considerable resources are devoted to improving the decisions.

The common thread underlying all of these quality initiatives is that the demand for these services 'should' be highly inelastic. If we accept these clinical perspectives, then in these situations there cannot be welfare diminishing moral hazard. Over-consumption is not possible. To the extent that financial barriers contribute to the underconsumption of these services, moral hazard can be beneficial.

In fact, although there are many reasons for underconsumption of highly valuable services, as noted above, considerable evidence suggests that financial barriers are a part of the explanation. Evidence suggests that when faced with higher cost sharing requirements individuals reduce utilization of high value and low value services in similar proportions.[20,21]

Individuals with chronic disease are less likely to take there medications if they face a higher price. [22-23 24] Conversely, individuals are more likely to take their medications when copays are lowered, even if they already are subject to disease management programs. Similarly patients are less likely to receive cancer screening services.[25] Higher copayments reduce the likelihood individuals will comply with commonly accepted quality metrics.[26] The impact is greater for low income individuals.[27] Evidence suggests that these decisions may lead to adverse clinical outcomes.[28] Because of the potential to reduce adverse events, in some cases reduced cost sharing requirement may actually save money.[29]

The beneficial moral hazard in these cases is depicted in Figure 3. Specifically, we have now drawn a perfectly inelastic demand curve to represent the prefect information demand curve. Consumption should be at quantity F. The misinformed demand curve generates actual consumption at point A if the individual is uninsured. The welfare loss in this case is captured by ADF. Insurance increases consumption to point B, which yields less welfare loss (BCF) because it reduces underconsumption. Moral hazard is beneficial because it helps move people to the efficient level of consumption.

Distributional issues with increasing moral hazard

Before addressing the one issue that is specific to distributional considerations, it is worth noting that two of the efficiency issues also have distributional implications. First, although beneficial moral hazard may improve the aggregate economic efficiency of the system and counter market power, financing the additional spending may be a cause for concern. Specifically, even if insurance charged consumers the social marginal cost, so that consumption with insurance was socially efficient, the increased consumption would entail a potentially large transfer to providers who were charging prices above marginal cost. That transfer does not represent a loss of aggregate welfare, but creates distributional issues

because consumers (or taxpayers) are transferring money to providers. With public financed insurance there may also be associated inefficiencies associated with taxation necessary to fund the transfer.

Second, related to externalities, as a society we care about the health of others. Disutility associated with poor health outcomes extends beyond the individual. Public health programs and the existence of safety net providers reflect these values. Since others in society care about individuals but individuals' decisions are based only on their own benefit, individuals without coverage may underconsume care. In these cases, the additional care associated moral hazard may move consumption closer to the efficient level and thereby be beneficial.

An issue specific to distributional concerns is income transfers, although in the case of health insurance it has been described as a matter of transferring income to oneself from a healthy state to a sick state. The welfare analysis of the standard economic model is often presented using the observed demand curve. This demand curve represents the change in consumption due to a change in price. Economic theory identifies two reasons why consumption rises when price falls. The first reason is that consumers substitute towards the commodity whose relative price has fallen, in this case the relevant commodity is health care. This is labeled the substitution effect. The second reason is that, with lower prices, consumers are effectively wealthier. They can consume more of everything. This latter effect is labeled the income effect.

Welfare analysis considers only the substitution effect a distortion because only the substitution effect captures the impact of distorted relative prices. If insurance simply gave beneficiaries a fixed payment when they became ill, but did not distort relative prices, there

would be an income effect, but no substitution effect. Hence there would be no welfare loss associated with additional consumption.

One important aspect of health insurance is that it allows individuals to purchase care they would otherwise not be able to afford (or finance through loans). This is essentially an income transfer from individuals when they are healthy to themselves if and when they become sick. Healthy individuals recognize that if they become ill they may need more money. This additional purchasing power leads to welfare improvements as long as the care that is purchased as a result would be purchased if the individuals were to face undistorted relative prices.

Extensive analysis of this issue by John Nyman has demonstrated the welfare enhancing aspect of the income transfer portion of moral hazard.[30,31] In that analysis, the efficient level of consumption is not the amount an uninsured person would consume if they became ill, but instead the amount an insured person would consume if the insurance transferred the optimal amount of income but did not distort prices. This level of consumption would be greater than point A in Figure 1.

As in the discussion of beneficial moral hazard that mitigates market power, the portion of moral hazard that moves consumption to the efficient level given optimal income transfer is beneficial moral hazard. To the extent that insurance distorts prices, some traditional detrimental moral hazard remains. Nyman estimates that accounting for this effect would reduce estimates of detrimental moral hazard substantially and could be used to justify a national health insurance policy.[32]

Balancing beneficial and detrimental moral hazard

As noted, a standard economic marginal comparison argues that the economically efficient coinsurance rate is the rate that balances the marginal welfare loss associated with moral hazard with the marginal social benefit of mitigating the financial risk associated with illness.

The preceding analysis suggests that in some cases moral hazard may be beneficial, or offer a second best solution in light of the fact that there are distortions in the market that prevent ever achieving maximum economic efficiency. The challenge for those designing benefits is to design insurance packages that mitigate detrimental moral hazard but permit beneficial moral hazard. At present, many individuals may have less coverage than is efficient, particularly for high value services. This situation may worsen as cost containment efforts include movement to high deductible plans that offer less coverage. While high deductible plans are supposed to maintain undistorted relative prices when a consumer spends little on medical care, evidence that consumers are often unable to make decisions consistent with the utilization of appropriate, effective, high value care suggests that these supposedly appropriate incentives may lead to significant decreases in health.

To date, the changes in coinsurance rates have been used as a fairly blunt tool, with few distinctions made across services that offer different value. Coinsurance may be used more effectively if it were used as a more finely tuned tool. For example, Fendrick and Chernew argue for a system of value based insurance design (VBID), in which cost sharing is designed to encourage use of high value services and discourage use of less valuable services.[33]

With the availability of more sophisticated health information technology, it is increasingly possible to design benefit packages that provide different levels of coverage for different

services and even for different subsets of the population. Accordingly, a number of employers have adopted VBID programs, lowering copayments for services deemed to be high value,[34] although the adoption of such plans has been limited so far.[35] In some cases, such the University of Michigan's Focus on Diabetes initiative, copayment reductions have been targeted to patients with specific diseases.

The merits of such VBID benefit packages depend on the welfare gain associated with exploiting beneficial moral hazard, relative to the costs of designing, implementing, and maintaining such programs. The costs of other mechanisms that could be used to limit or encourage utilization may be substantially higher as they require significant amounts of labor—either to manage utilization or to encourage utilization through disease management programs.

Conclusion

Economic analyses have traditionally considered moral hazard to be a cause for concern. Consumer oriented cost containment strategies are commonly based on the premise that higher cost sharing will reduce utilization, which will mitigate moral hazard and thereby enhance welfare. Our analysis suggests that for several reasons moral hazard may be beneficial. For example, moral hazard can mitigate underutilization due to market power. It can facilitate efficient income transfer, encourage increased utilization to mitigate negative externalities and increase in positive externalities, and offset the detrimental effects of poor decision making that leads to underconsumption.

Both detrimental and beneficial moral hazard will result in higher expenditures, Yet, the objective function is usually specified as improving net social welfare rather than simply saving money. In this context, greater coverage and the associated moral hazard can be a

useful tool. More generous coverage, in targeted cases, may be warranted and may bring about increases in utilization that are worth more to society than the additional expenditures that are incurred.

The discussion throughout this paper supports the notion that there is nothing inherently immoral or amoral about the concept of moral hazard from health insurance, supporting an argument first put forth by Mark Pauly in 1968. Instead, there are simply a combination of effects that lead to higher medical care expenditures and effects that lead to improvements in welfare that must be considered as tradeoffs when increasing the level of coverage for any service and for any segment of the population. The idea that we have provided overly generous levels of protection against potentially high and potentially unpredictable medical care expenditures deserves reconsideration in general and specifically with respect to the notion that providing coverage to those without insurance at present will decrease welfare in the United States. The potential existence of a second best solution that involves greater amounts of coverage requires careful scrutiny.

The discussion in this paper has been limited in several ways. It has focused on expanding the economic arguments about increasing coverage and not on several elements of a more general policy debate. The policy discussion must include attention to distributional issues of who pays for care as well as the more narrow question of whether aggregate welfare improves. In these discussions, perspective matters. Expanding public or private coverage, including VBID programs, will typically cost more from the perspective of the payer than from the societal perspective because the payer pays for both the increased use (which is the societal cost) as well as a greater share of the use that is already occurring (which, from the societal perspective, is only a transfer). The decision by Medicare to cover influenza vaccinations presents a classic example. Even before Medicare began to cover the service

in the early 1990's, nearly half of the older adult Medicare enrollees were already obtaining influenza vaccinations each year. In the time since Medicare began coverage, the vaccination rate has risen. Medicare has paid not only for the increased vaccinations, but they also paid more for the vaccinations that would have occurred anyway.

Other issues that lead to inefficiencies in the provision and financing of health care also were not discussed. These include the fragmentation of the health care system (i.e. a lack of integration between providers creates inefficiencies in production of care, arising from problems such as incomplete transmission of information and inability of any one provider to capture all the rents from better care), the fragmentation of the health care financing system (i.e. competitive insurance products so that no one insurer will necessarily enjoy the long-term benefits of prevention and so that insurers use considerable resources to compete on product differentiation), and the potential for deadweight loss from specific financing options (particularly options that use taxes to collect resources to finance health care). The last of these cannot be resolved with any changes to policy that are likely be considered. A completely free market for health care and health insurance is never going to be allowed in the United States. Deadweight loss will accompany any third party financing mechanism that involves taxes or that involves a single source of health insurance. Other market inefficiencies can be subject to policy changes—although some options may be more or less likely. For example, a single payer system will allow the payer to obtain many of the benefits of prevention and high quality care that occur over time and that are less likely to be captured by any payer in a fragmented third party payer system.

While the safety net is not necessarily a market inefficiency, the fact that the United States policy system chooses to provide a safety net allows individuals to make choices about insurance that are not necessarily consistent with utility maximization in a setting that did not

involve a safety net. It also provides a level of economic well being against which any choice to change policy must be compared. The safety net is neither necessarily high quality nor particularly efficient but it must be acknowledged in the discussion of potential alternative policies for insurance of individuals who are uninsured at present.

Of course more sophisticated cost sharing is not a panacea for what ails our health care system. Supply side interventions such as provider payment reform and organizational changes are likely necessary and demand side interventions unrelated to cost sharing (such as information interventions) are likely valuable. What is clear is that traditional models, that ignore the heterogeneity in the effect of moral hazard, are limited and do not provide a complete picture that is necessary for welfare analysis.

The discussion in this paper can contribute to the debate about universal coverage by encouraging a reexamination of the premise that greater coverage leads to welfare loss. In some cases, not surprisingly in light of the theory of the second best, greater coverage can improve efficiency. Thus a more nuanced view of cost sharing is needed. More sophisticated benefit packages that recognize the heterogeneity in value and welfare loss across services and populations may address the need for cost containment, while encouraging access to the high value services that motivate many proponents of universal coverage.

Figure 1: Welfare Loss

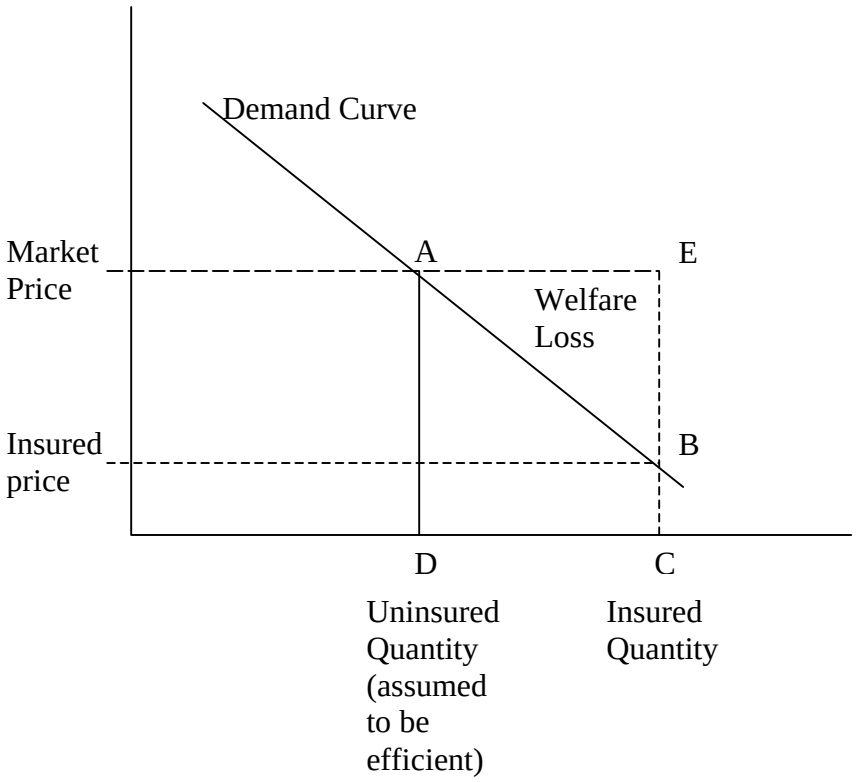


Figure 2: Beneficial moral hazard with market power

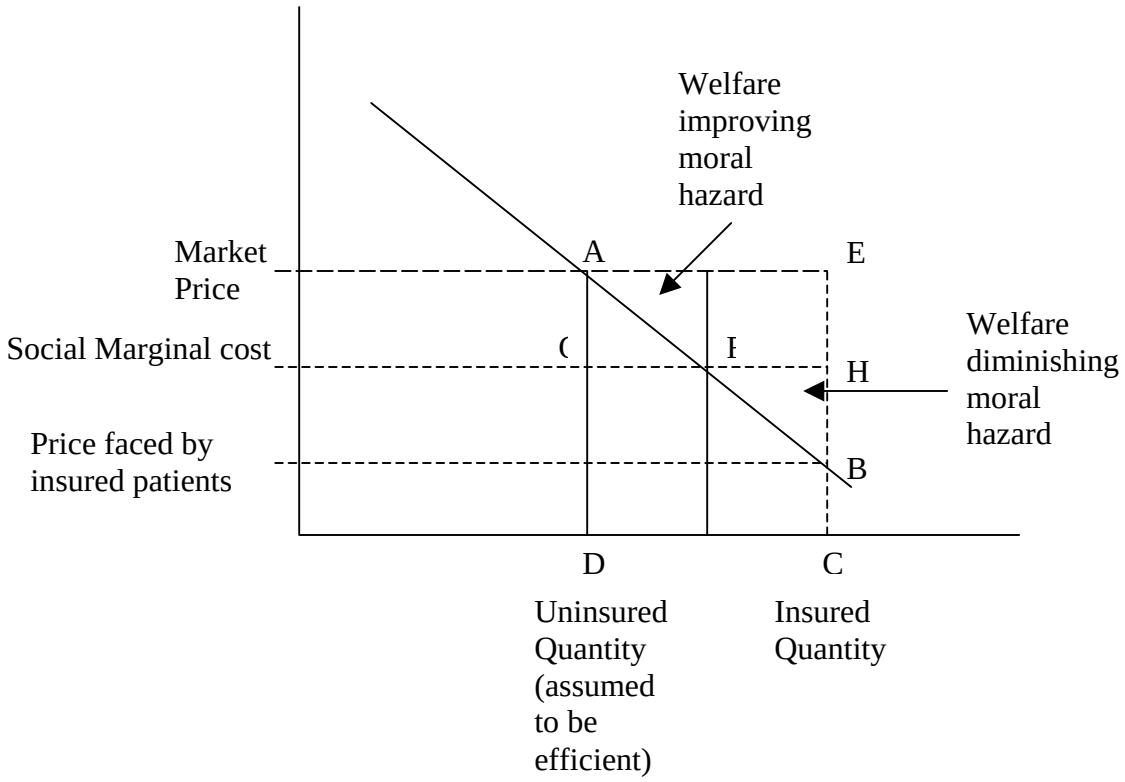
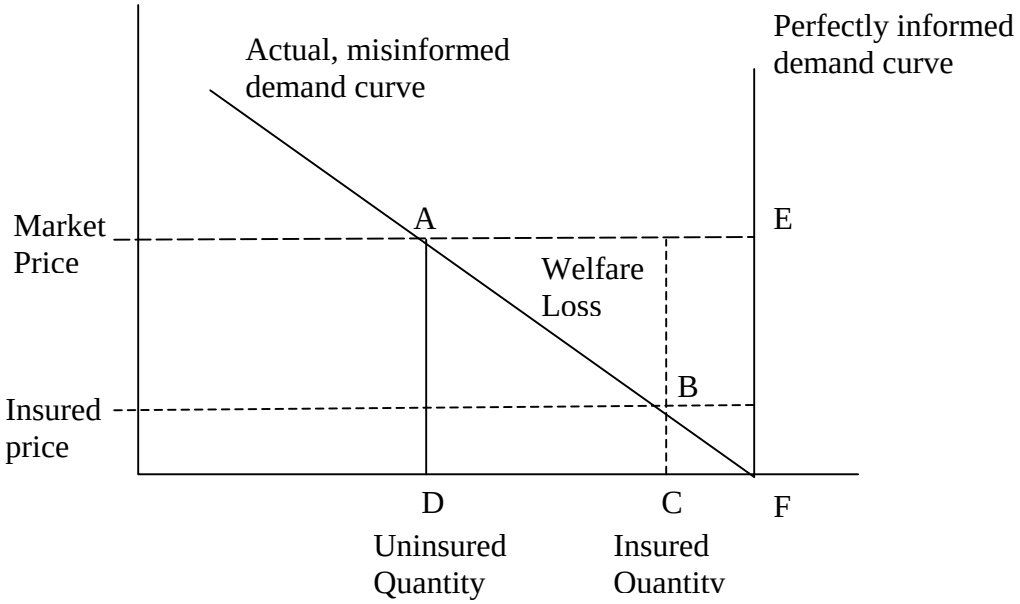


Figure 3: Beneficial moral hazard with misinformation



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