FINANCIAL MECHANISMS FOR UNIVERSAL ACCESS TO HEALTHCARE IN THE US: A CRITICAL ANALYSIS

Prepared by

David Burress[1]
President, Ad Astra Institute

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Ad Astra Institute of Kansas, Inc.
POBOX 2241, Lawrence KS 66044-8935
FAX: 208-977-5833
Phone: 785-749-1218
aai@adastrainstitute.org
www.adastrainstitute.org

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> I want to cover everybody. Now, the truth is that, unless you have a single-payer system, in which everybody is automatically covered, then you're probably not going to reach every single individual (President Barack Obama, 2009).

Introduction

Strong majorities of Americans have supported the principle that everyone ought to have access to needed health care services (i.e. Universal Access to Health Care, or UAHC herein) at least since polling began on the topic in the 1930s (Jacobs, 2008). Since that time significant progress has been made towards universal coverage. However, coalitions opposed to UAHC have consistently obstructed its full implementation. Two important factors have led to disarray among UAHC supporters:

- the perceived high cost of achieving UAHC; and
- fear and uncertainty about personal impacts of shifting to unfamiliar financing mechanisms.

Both factors suggest a need for close analysis of current and proposed financing mechanisms.

Although a major share of health care funding in the US comes from government sources (well over half, by some measures)[2] health care providers in the US largely work for private or nongovernmental nonprofit organizations. In that sense, health care is a privately provided good. Yet health care differs in many important respects from most other privately provided goods. For example:

- Individual needs (and hence their market demands) are highly unpredictable; moreover, individual consumption demands in a given time period exhibit huge variation in dollar amounts, more so than for any other major category of goods or services.
- Individuals lack the specialized knowledge they would need to decide on diagnostic steps and treatment; therefore, demands are largely determined by specialists on behalf of the consumer, rather than directly by the consumer himself.
- Socially, medical care is viewed as a necessity rather than a luxury. And in economic terms, the quantity of "necessary medical care" needed is almost completely unrelated to an individual's income. In particular, costs of medically necessary care in major medical events generally exceed the individual's ability to pay. Consequently, unfettered private markets cannot provide UAHC for persons with low income or high medical needs.
- It might be thought that private insurance could at least handle high need situations, if not low incomes; but, as we shall see, that is very frequently not the case.

These features and others make it impossible for consumers to obtain UAHC in the absence of

2. Estimated for 2005 at 60.5%, including 45.4% in direct social expenditures plus 15.1% in government employees' insurance and tax incentives for private insurance (Woolhandler and Himmelstein, 2007).

very strong governmental involvement in health care markets.[3]

This paper reviews public policy options or mechanisms for providing UAHC in the US. Healthcare access is supported by two intersecting systems: physical delivery systems and financial payment systems. That is, access requires not only the production of health care services, but also the collection and disbursement of funds to pay for them. However, American discussion of UAHC has tended to focus on financial and insurance systems. The underlying assumption is that universal access can be achieved by reforming the system of finance and insurance, without making large or immediate changes in physical delivery systems. Although changes may ultimately be needed in delivery systems, some of those changes will follow as a normal response to market forces if the financial payment systems are correctly aligned, while addressing the remaining problems (especially cost containment) would be facilitated by financial reform. This paper makes the same general assumptions, with very brief comments on physical delivery mechanisms.

In American parlance, Auniversal access@ is a slippery concept. This paper argues that market-based or mixed health insurance mechanisms supported by many politicians are not in fact capable of delivering as equitable or comprehensive coverage as are Asingle payer@ health coverage systems (defined below). Instead they seek a lesser goal of making health care Aaffordable.@ Therefore a strict definition of UAHC would eliminate market-based insurance systems from consideration. Yet most of the recent American literature is concerned with options that mix market-based private insurance mechanisms with the existing direct government financed, single payer Medicare/Medicaid system. Therefore this paper discusses both market-based affordable access to healthcare and single payer UAHC. We will use the term broad access to health care to encompass both types of systems.

This paper analyses policy options along three dimensions:

- mechanism design;
- criteria and performance; and
- ideology.

In addition, we will make brief remarks about political economy.

By mechanism design, we mean the kinds of options or program devices that politicians propose and argue about. Within the market-based approach, that includes devices such as employer mandates, household mandates, tax subsidies, community rating, and much else. Within the single payer approach, that includes direct administration versus subcontracting of claims. Within both approaches, various mechanisms have been proposed for raising funds and disbursing funds to health care providers. Mechanisms for controlling the cost and effectiveness of physical delivery systems are not addressed in detail.

This paper focuses on three criteria for evaluating the performance of access mechanisms: social efficiency (including cost containment); quality of care (including definitions of Amedically

3. A theoretical basis for this statement is reviewed in Appendix 2.

necessary care@); and equality of access and uniformity of care. The paper argues that single payer systems tend to outperform market-based systems with respect to all three criteria, and that competition among private insurance companies is an inherently inefficient mechanism.

By Aideology@ we mean the ways in which mechanism design is influenced by over-arching ideas about the rightness and propriety of things, and/or by ideas about how things work at a very basic or general level. We will contrast three stylized positions generally described herein as market fundamentalist, Democratic centrist, and progressive.

By Apolitical economy@ we mean the ways in which mechanism design influences and is influenced by political interest groups, as analyzed through the lens of material self-interest. We are also interested in political sustainabilityBi.e., whether a particular mechanism design supports existence of a supportive coalition, while discouraging existence of an opposition coalition. The paper argues that political power of insurance companies is the main obstacle to adoption of a modern single payer system.

The US ideological spectrum

This paper considers three rather stylized ideologies as benchmarks representing a broader continuum.

Market fundamentalist ideology takes the libertarian position that unfettered free market systems are both more efficient and more equitable than any other systems for delivering health care. This ideology is fundamentally opposed to any government provision of health care finance, and hence on principle opposes both UAHC and broadly affordable access. In practice, however, American market fundamentalists fight a constant rear-guard action, first to minimize government involvement in medical markets, and then to maximize the use of market-based mechanisms for accomplishing any government interventions that remain.[4]

Interestingly, while market fundamentalists broadly defend the general legitimacy as well as the particular interests of private insurance companies, a strong undertone in fundamentalist theory is hostile to the very idea of insurance as such. Insurance by nature is a collective good that can be offered to individuals only by virtue of their membership in a group (referred to as a Arisk pool@). This collectivity tends to conflict with fundamentalist ideals of self-reliance. Thus, market fundamentalist proposals to replace group insurance with individual insurance can best be understood as an effort to break up the risk pool into smaller pieces, and ultimately to make individuals stand on their own. Equally troubling to fundamentalists, insurance by nature reduces the effect of immediate price signals on individual health care decisions, which fundamentalists perceive as interfering with market efficiency.[5] Consequently some fundamentalist proposals

4. As noted below, Presidential Candidate John McCain=s 2007-2008 proposals were an example of a market-fundamentalist "rear guard action."

5. As outlined in Appendix 2, this claim is diametrically opposed to mainstream economic theory of medical insurance markets. In mainstream theory, health care consumers lack both the knowledge and incentives they would need to make socially efficient decisions about health care, and therefore need to rely on health care

(e.g. medical savings accounts, as argued below) are so retrograde that they serve the long term interests neither of insurance companies nor of the public at large.

Democratic centrist[6] ideology supports UAHC as a long-run goal, but argues on short-run pragmatic or political grounds that it is necessary to reach compromises with medical insurance companies and other powerful political actors, using market-based mechanisms to achieve broad access.[7] More generally, democratic centrists have a bias towards using market mechanisms rather than direct government provision for accomplishing social goals, provided this can be done without seriously compromising those goals.

Progressive ideology supports single payer systems[8] for achieving UAHC, based on considerations such as:

- Single payer eliminates wasteful private insurance, and also saves money in other ways.
- Single payer provides more uniform, complete, and fair coverage than private insurance.
- Supporting affordable access rather than universal access leads to diluting or abandoning the politically powerful rhetoric of equality and universality.
- Single payer eliminates most medical insurance companies, which otherwise would continue to exist as powerful political agents that fundamentally oppose UAHC and tenaciously seek its subversion.

More generally, progressives are willing to use market mechanisms where shown to be efficient and fair, but progressives are considerably more critical of market mechanisms than are Democratic centrists. In particular, progressives tend to support market mechanisms for health care delivery (e.g., by means of doctors in private practice), but not for insurance coverage.

Basic concepts in mechanism design

Single payer

Single payer is sometimes described as AMedicare for all.@ In most general terms, a single payer system is defined as one in which most or all Amedically necessary@ healthcare costs are paid for by a single organization or entity, referred to in this paper as a Atrust fund,@covering a single unified risk pool that includes all relevant persons.

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providers.

6. So-named because this view is generally supported by the more pragmatic wing of the Democratic Party, as represented by 2007-2008 reform proposals from Presidential Candidates Hillary Clinton and Barack Obama, and Senate Finance Committee Chair Max Baucus.

7. Some democratic centrists also argue that public opinion tends to oppose single payer. For cites and contrary data see Sullivan (2008).

8. As exemplified by specific proposals from Physicians for a National Health Program (2003) and by Congressman John Conyer=s single payer proposal (HR676).

The key questions have to do with whose healthcare costs are covered. In a single payer system, the risk pool of persons being covered must be:

- very large, to generate economies of scale
- limited to a particular geographical region
- automatically or involuntarily defined, so that individuals cannot easily choose either to join or leave the risk pool, except by moving away.

Authorities differ on details. Some purists say that a true single payer system must cover all persons (or citizens) in the geographical region. At the other extreme, some authorities would include certain systems in which an individual can shift between particular risk pools by changing jobs.[9] In general, the smaller the range of choices that individuals have to join or leave the risk pool, the better the system works.

Also, while in most single payer systems individuals are free to purchase healthcare services outside the system, healthcare coverage within the system is always available and always comprehensive. Individuals who purchase outside services remain obligated by taxes or other contributions to the trust fund.

The Asingle payer@ concept as such does not specify the source of funds in the trust fund. Typically the sources will be payroll taxes and general revenue taxes. There may also be user fees that are relatively small and easily waived, but substantial user fees would tend to deter access and infringe UAHC.

The Asingle payer@ concept does not specify the nature of any controls on prices paid to healthcare providers, but in practice such controls are always required in order to prevent an explosive growth in costs.

As in any health care finance system, a more-or-less bureaucratic procedure is needed to define what health care services are Amedically necessary,@ or the equivalent. There are two levels of determination:

- rules: the specification of what *types* of services are covered, and under what *conditions*; and
- application: determination of what services qualify under particular conditions.

Rules in a single payer system are generally determined by the trust fund. Applications are determined by health care professionals, subject to a limited degree of oversight from the trust fund.
While some market fundamentalists refer to single payer finance as Asocialized medicine,@ a more accurate description is Asocialized health insurance.@ The term Asocialized medicine@ is usually reserved for physical delivery systems in which health care workers are directly

9. See the Asickness funds@ or Asocial insurance funds@ described in Appendix 1.

employed by the government, such as in the US Veteran=s Administration hospitals and the United Kingdom=s National Health Service. (Note however that socialized medicine systems are generally financed by a single payer.) Internationally, a large majority of national health care systems make only rather limited use of true socialized medicine.

Insurance market pathologies

This paper contrasts competitive medical insurance companies or Aprivate insurance companies@ with single payer organizations. Appendix 1 defines competitive private insurance more precisely. They are contrasted with systems based on monopoly insurance companies and social insurance funds, viewed as intermediate between competitive insurance and single payer.

As argued in Appendix 2, the mainstream theory of medical insurance markets suggests that competitive insurance tends to work very poorly, exhibiting perverse features that include:

- asymmetric informationBinsurance consumers have much less understanding of insurance contracts than do insurance companies;
- public good characteristicsBeffects on third parties are important, and are ignored by markets;
- adverse selectionBAcherry picking@ by insurance companies tends to limit coverage to those who least need it;
- negative competitionBincreases in intensity of competition lead to declines in quality of insurance services and Aa race to the bottom@;
- risk pool fragmentationBthe risk pool gets divided into small, inefficient and unfair segments;
- negative moral hazardBmany people fail to seek medically necessary care because of price barriers;
- underprovisionBthe market provides less medically necessary health care than society needs; and
- underinsuranceBinsured individuals are not fully protected against medical bankruptcy (as a result of co-pays, maximums, and other loopholes).

The concept of Amedically necessary health care services@

The term Amedically necessary@ has both normative and bureaucratic meanings.

The normative term Amedically necessary@ refers to medical services that are useful and needed to help a patient maintain or recover the physical or somatic functionings that society considers to be normal. Market fundamentalists tend to argue that the term represents a relatively arbitrary set of value judgments that differ widely across individuals.[10] However, medical practitioners tend to believe that the term has a relatively coherent meaning that should be professionally determined by practitioners.

10. This claim is ideologically significant because it attempts to debunk the distinction between positive and negative moral hazard (as explained in Appendix 2), as well the very coherency of the concept of UAHC.

While the normative concept Amedically necessary@ is not arbitrary, it is contingent. It depends not only on currently existing medical technology (and on existing evidence for its effectiveness), but also on social expectations concerning normal functionings, as well as on the overall wealth of society. Thus a very rich society might come to view routine cosmetic facial surgery as necessary for full social participation by aging individuals, and as result could view it as medically necessaryBbut that=s not the case today in the US.

The bureaucratic term Anot medically necessary@ or its equivalent is used by all insurance systems (including national health coverage systems) as a basis for denying insurance coverage. (Usually there are other bases for denial as wellBe.g., most insurance contracts list services that are excluded even when medically necessary.) The bureaucratic or contractual definition of this term is usually indirect and generally has three elements:

- a list of medical services and indicating conditions recognized as Amedically necessary@;
- a list of services and indicating conditions recognized as Anot medically necessary@; and
- a procedure for determining the status of services and indicating conditions that don=t appear on either list.

In general there are institutional and legal processes that tend to force the bureaucratic definition to approximate a normative definition, but the approximation is usually inexact and contentious.

Categories of broad access

Universal access is prerequisite of individuals in a designated reference group. It is a composite notion that may include several different conditions, such as:

- full enrollment: all individuals in the reference group are covered;
- equal rights: terms of coverage and application of terms are identical across all individuals;
- comprehensiveness: coverage is complete across all types of medically necessary services;
- equal access: individuals have a free choice of medical service providers;
- effective outreach: strong efforts are made to ensure that care is actually received; and
- equitable delivery: any wait-listing is reasonably minimal in amount, equitably applied across persons, and prioritized by medical need.

This paper assumes that strict universal access entails all six of these definitional conditions.

Affordable access should be clearly distinguished from universal access. Affordability posits individual purchase decisions in a market, while universal access posits availability independently of market forces. Even where insurance is affordable, some individuals will gamble that they won=t need it and may be deprived of health care if they guess wrong. Also efforts to ensure affordability are necessarily means-tested, using income or asset measurements that sometimes make errors and leave people out in the cold.

Insurance mechanisms at the macro level

This section compares single payer, private insurance, and mixed systems with respect to universality of access and social efficiency.

Universality of access in single payer versus private market insurance companies

Pure or unfettered private markets can=t deliver universality because they condition access on private payments (price rationing). Modern single payer systems can deliver access that comes close to achieving all six definitional conditions of UAHC. Every industrialized country except the US has a national health insurance system, but all of them deviate in varying degrees from strict single payer in ways that infringe some conditions for universality (most commonly, excessive reliance on user fees). Table 1 gives some illustrative data.

Single payer system failures. Inefficiencies and system failures can certainly occur in single payer systems. Moreover, such failures can infringe universality of access. Possible system failures include:

- Mechanisms may deviate from strict single payer (e.g., too high user fees; multiple risk pools).
- The definition of Amedically necessary@ always engenders controversies and inconsistencies.
- Budgets or capacity may be exhausted, typically leading to waiting lists.
- Especially skilled or popular providers can=t accommodate all would-be patients, again leading to waiting lists.
- Errors in judgment and application may occur on the part of insurance system personnel.
- Systemic appeals and error correction mechanisms may be poorly designed or poorly applied.
- Medical service resources may be misallocated, leading to surpluses and shortages.
- There can be waste, corruption, and outright fraud.
- Society as a whole may simply refuse to fund the system adequately.

Private market system failures. Systems that include private insurance companies are prone to all of the same system failures. In addition, private insurance competition always leads to price rationing.

Any purely private system strongly violates each of the six definitional conditions for universality of service. Competing companies simply refuse to cover extremely unhealthy people and poor people. In a race to bottom, they provide loophole-ridden and non-uniform insurance contracts to everyone else.[11]

11. Under perfect competition, any company that refuses to behave this way will quickly be driven out of business in two ways: first, other insurance companies will cherry pick away its best customers by offering lower premiums; and second, competition in capital markets will lead to a takeover by a more cutthroat management intent on raising profits by cherry picking.

Waiting lists. Waiting lists or queues exist in all systems. Market fundamentalist literature argues that single payer is more prone to waiting lists than is private insurance systems. Empirically, that=s hard to evaluate because of complicating factors (such as overall levels of funding; also degree of reliance on direct provision of services by noncompeting organizations such as HMOs and socialized medicine systems). Based on insurance theory, however, the claim that single payer systems would tend to cause more waiting than private insurance seems strongly supported, for three reasons:

- Private insurance companies tend to rely more on price rationing than on waiting lists. (At the same time, wait-listing is a fact of life under private all health plans that restrict the choice of doctors and specialists to "preferred providers", which has become the norm in the US.)
- Well-managed single payer systems intentionally plan for occasional well-managed waiting lists, rather than planning for the extreme excess capacity that would be needed to guarantee no waiting.
- Delivery systems financed by private insurance are decentralized and uncoordinated. In cases where they happen to underprovide capacity relative to social need, service providers can simply turn uninsured consumers away without wait-listing them.

Waiting time taken alone is not a valid criterion for comparing systems. Thus, the patients waiting under a single payer system are often those who would not be served at all under a private market system. Most people would rather be wait-listed than flatly denied service.

Valid comparisons might be based on a more complicated criterion, such as "waiting time for people with enough money to have health insurance under a private market system." While this criterion could be criticized as pro-rich and elitist, it does represent legitimate concerns that many currently insured people feel about the prospect of shifting to a single payer system. However studies of this question have not distinguished wait-listing caused by choice of finance system from wait-listing caused by relatively low aggregate commitment of resources to health care.

Universality of access in mixed systems

A mixed system is one that uses a combination of government regulation of private insurance markets with direct government insurance or subsidization for the poor and uninsurable. In theory, such systems could achieve a close approximation of UAHC under the following seven idealized regulatory conditions:

- All private and public insurance contracts must be effectively standardized and identical, providing the same coverage rules for everyone.
- The standardized coverage must be comprehensive, without loopholes.
- The standardized contract must contain no significant deductibles, co-pays or maximums, so that no one is financially deterred from seeking needed medical care.
- The standardized contract must provide for free choice of providers (rather than establishing preferred providers).

- Individuals lacking private insurance must be required to join the government-provided risk pool and pay the associated insurance premiums (presumably on a sliding scale).
- Government must charge significant premiums (or else no one would buy private insurance, leading to single payer).

Under these regulatory conditions, insurance companies would be allowed to engage in limited types of negative competition: designing underwriting systems to identify the health risk of each applicant or applicant group, designing pricing schemes to attract the good risks, and rejecting the bad risks from coverage. Assuming that the seven regulatory conditions are strictly enforced, such limited forms of negative competition wouldn't interfere with universal access as such.

However, this idealized mixed system has four weaknesses:

- The negative competition allowed for private insurance companies is socially wasteful, and has no purpose other than shifting costs from the insurance company to the government.
- Insurance companies will seek back-door ways to reduce coverage, e.g., by creating paper-work barriers or making slow payments or reinterpreting rules on medically necessary services.
- Some individuals have incentives to escape through the cracks and avoid purchasing any kind of insurance, placing an expensive onus on government to track them down. (If government simply denied any health care assistance to uninsured people, the goal of universal access would be defeated.)
- Politically, insurance companies would resist this system almost as much as they resist single payer. It drastically limits profit opportunities, and therefore doesn't represent a politically viable compromise.

In practice, mixed systems currently being proposed by democratic centrists look nothing at all like the idealized system described above. Instead they provide substantial freedom for insurance companies to engage in additional discriminatory profit-seeking activities such as: varying contract terms and creating loopholes; cherry picking applicants; requiring use of preferred providers; and imposing co-pays and maximums.

Exercising this freedom on the part of insurance companies would necessarily infringe on all six of the definitional conditions for universality. Therefore mixed-system proposals are really affordability proposals rather than UAHC proposals.[12] Also, practical proposals typically leave coverage gaps, making them only quasi-affordable.

12. The recently adopted Massachusetts plan is good example. After 2 years, it reduced the rate of uninsured to about 5.4% of the population (Nardin, Himmelstein,and Woolhandler, 2009), apparently the best ever achieved statewide in the US. There are significant differences in quality of insurance across households. There was a significant increase in the total cost of health care.

Cost containment at the macro level

Cost-effectiveness of any finance system depends on its cost-containment regulations, some of which need to be built into the large-scale system design.

Mechanisms available under single payer

- Budget power. In a single payer system, the single most important cost-control mechanism is the power of the trust fund to set an over-all health care budget. However, without additional enforcement, cost overruns will occur and the government will be forced either to find more money or to cut medically necessary services. What a budget does is create a target plus a feedback system to guide more detailed cost control mechanisms, which can then be improved over time.
- Negotiated universal payment methods. The trust fund negotiates a structure with provider groups such that the aggregate workload gets covered and paid for on terms acceptable to providers.

Mechanisms compatible with any system

- Price controls. Government places direct controls on selected prices. It is especially important to regulate patent drug prices, because they are monopoly prices facing no direct market competition.[13] As a backdoor form of price controls, opening the US market to drugs imported from price-controlled Canada would tend to lower US drug prices.[14]
- Market oversupply. It was once thought that wages of doctors could be forced down by subsidizing medical schools to increase the numbers of doctors. In practice that didn't work.[15]

Insurance deregulation. Market fundamentalists argue for reducing or removing regulations on insurance so that positive competition can drive down the cost of insurance.[16] Insurance market theory reviewed in Appendix 2 suggests that such proposals are actively perverse and would accelerate the race to the bottom.

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13. Patents are in fact a form of government-regulated price control, in the negative sense of a sanctioned monopoly.

14. Perfect market literature argues that price controls on drugs inhibit R&D by drug manufacturers, leading to reduced progress in medical technology. Progressives argue however that direct government subsidization of R&D would be considerably more efficient than existing patent-motivated R&D.

15. The main reason that prices are not restrained very well by doctor competition is that the demand for medical procedures is determined more by doctors (based on specialized knowledge) than by patients (who don=t know what is needed). It turns out for example that doubling the number of surgeons in a region tends to double the number of operations, without necessarily producing any significant gains in health (Goodman and Fisher, 2008).

16. A variant of this was included in the 2007-8 McCain healthcare proposals.

Differential impacts of deviations from universality

Health care is a primary or Abrutal@ need.[17] The absence of health care is therefore a primary deprivation, a symptom of relative poverty or powerlessness. Conversely, if society tolerates deviations from universal access, then the impacts of those deviations will tend to fall differentially on the less rich and powerful. It follows for example that many subgroups of women, being as a class relatively less rich and less powerful than men, are at greater risk than men of suffering a lack of full access to health care. Studies confirm this prediction in the US (National Women=s Law Center, 2008). Thus, women are less likely to be covered by group insurance at work. However women have better average health outcomes (e.g. lifespan; Ezzati *et al.*, 2008), perhaps in part because many women are more proactive at seeking out health care.

Similar or stronger remarks apply to Blacks, Hispanic, and other minorities, who receive inferior medical care (Institute of Medicine, 2002) and experience less favorable health outcomes (see e.g., Murray *et al*., 2006).

It follows that there is a substantial risk that achieving affordability that falls short of strict UAHC will have differentially negative effects on many women, children, and minorities.

However, there is no guarantee that a single payer system will treat women and other groups with full equality. In particular, defining Amedically necessary@ treatment in the context of gender or social differences could lead to disparate treatment. For example, a trust fund might conceivably determine that female-controlled birth control devices are not medically necessary. What the single payer system does accomplish, however, is to turn the definition of Amedically necessary@ into a transparent, public, politically responsive, and nation-wide decision where women and other groups can collectively influence outcomes.

Social efficiency impacts of deviations from universality

Quite apart from distributional or fairness questions, failure to provide UAHC contributes to immense losses in aggregate human welfare, to some degree affecting individuals of all social classes, genders, ethnic groups, and stages of life. These losses are valued at on the order of a tenth of GDP. As explained in Appendix 3, these losses operate through channels that include:

- Wasted GDP due to inefficient medical care insurance and service delivery
- Reduced GDP due to lost productivity (from illness) and job lock-in (for insurance eligibility).
- Foregone personal welfare value of preserving health (not part of GDP)
- Welfare loss from unnecessary exposure to financial risk (not part of GDP)

Universal affordability would reduce these losses, but to a lesser extent than would UAHC.

17. As defined, for example, in Maslow's (1999) hierarchy of needs.

Insurance mechanisms at the micro level

This section addresses detailed designs for revenues, disbursements, access, and cost containment.

Revenue collection mechanisms

Most existing and proposed insurance systems obtain needed funds from a combination of five sources:

- direct payment for service by the patient
- insurance deductibles, co-pays, and maximums (which lead to payments by the patient)
- insurance premiums (paid by insured and/or by her employer)
- payroll taxes (paid by worker and/or by her employer, based on wages)
- general revenue taxes.

In addition, the effectiveness of revenue sources can be influenced using four additional mechanisms:

- insurance purchase mandates (on individuals or employers)
- subsidies and tax incentives
- borrowing and issuing bonds
- saving and investing excess health insurance revenues for future use.

If seeking health care entails significant out-of-pocket expense, many patients will delay or avoid seeking care (negative moral hazard). Consequently, direct payments and deductibles are incompatible with strict UAHC. Also, if individuals can choose between contracts with differing premiums, some will choose limited coverage, leading to potential out-of-pocket expenses that limit or deter access.[18] Therefore strict UAHC is generally financed with a combination of payroll taxes and general revenue taxes, but not user fees or insurance premiums. In addition, borrowing and saving may be used to address mismatches between the times when money is raised and spent.

Access-expansion mechanisms

Many mechanisms can help expand access for targeted groups. Democratic centrists support some of these mechanisms as components of affordability. Market fundamentalists support other mechanisms as a political bulwark against further government intervention in medical markets.

Subsidies. Several US insurance subsidies were instituted mainly by democratic centrists, including:

- Means-tested or age-tested premium payments (e.g. in many state-level SCHIP programs

18. As explained above, in theory insurance premiums could be combined with subsidies and mandates and contract regulation in order to approximate full access. In practice no such systems have been proposed or adopted.

and the new Medicgare Part D drug coverage)
- Itemized deductibility from income taxes of health care expenses
- Income tax exclusion for employer-provided group health insurance.

Market fundamentalists have supported newer subsidy mechanisms such as:[19]

- Incentivized medical savings accounts to cover small and routine health care expenses. (This mechanism puts individuals into the business of insuring themselves in a terminally fragmented risk pool of one).
- Incentivized Acatastrophic health insurance@ to cover large expenses. (This mechanism makes medical savings accounts more palatable for covering small expenses.)
- Shifting the existing tax exclusion from employer group insurance to household individual insurance. (Over time, this mechanism would be likely to eliminate most group insurance. By taking market power away from insurance purchasers, it would also be likely to increase the price of insurance.)

Contract regulation devices. Some regulations that have been proposed or implemented by democratic centrists include:

- Group insurance (all members of a workforce or affinity group constitute a single risk pool)
- Standardized coverageBinsurance companies are required to choose between a small number of contracts (ideally just one)
- Standardized claims systems
- Prohibition of pre-existing condition exclusions
- Prohibition on waiting periods for coverage
- Community rating (i.e. each insurance company has only a single risk pool per an entire geographical area)
- External appeal procedures for claim denials.

Marketing structures. Some proposals have included:

- The connector (or exchange): a single combined market for health insurance options
- High-risk pools (consisting of persons that insurance companies are required to insure as a last resort)
- Creation of new insurance purchasing groups and coops
- Opening the government employee=s group insurance risk pool to other groups or individuals.

Single payer for some (e.g. Medicare, Medicaid, VA hospitals). These programs constitute a great democratic centrist health care success story. Market fundamentalists have recently struck back by carving out subsidized and inefficient private insurance mechanisms for delivering Medicare (e.g., Medicare Advantage).

19. Versions of all of the following mechanisms were proposed in the 2008 McCain healthcare proposals.

Supplementary insurance. Most national health insurance systems allow private insurance that covers services not covered by the national system (e.g., Medicare=s AMedigap@ insurance). Some national health care systems pay a percentage of medical costs and individuals need private insurance to help cover the rest.

There is a vast literature on the relative efficiency, effectiveness, and fairness of various access devices. Note that none of these mechanisms are used or needed in strict single payer systems. In general these mechanisms are criticized by progressives because:

- They fail to add up to universal insurance coverage. Many people fall through the cracks.
- In practice they provide radically different terms of coverage across household groups.
- In particular, they discriminate against persons who are low in income or lack group insurance.
- The system as a whole is unnecessarily expensive.
- The system as whole is too complicated to support adequate political supervision.
- Most of these mechanisms tend to subsidize insurance companies, who are the political opponents of UAHC.

Payment disbursement mechanisms

All insurance systems pay medical providers for their services. Payment systems create strong incentives that can lead to wasteful or inequitable behavior by providers. Payment system incentives can also be designed to change traditional bad practices that are ingrained in the delivery system. Because this paper focuses on insurance systems rather than delivery systems, these incentive problems are not analyzed in detail here. However it is important to note that single payer systems, being centralized, are in a much more powerful position than decentralized (i.e. mixed or private) insurance systems for imposing system-wide incentives.

The main payment methods in use in the US include:

- Fee for serviceBeach provider action is itemized and billed to the patient or the insurance company. Fee for service tends to create an incentive for providing services that are unneeded or cost-ineffective. Fee for service is accompanied with features such as:
  - Negotiated or Ausual and customary@ fee schedules, setting what the insurance company pays for each service. Uninsured patients are billed at prices determined by providers.
  - Individually negotiated fees. Individuals can sometimes persuade providers to reduce their bills.
  - Reimbursing doctors versus reimbursing patients. Patients are usually better off if the provider initially bills the insurance company rather than the patient.
- Capitation and bundling and “Diagnostic Reimbursement Groups” (DRGs) B the provider is paid a set fee per patient-year or per diagnosed case. Capitation can create an incentive to shirk difficult cases or unhealthy patients.
- Direct employmentBthe provider is an employee of an organization that provides both

insurance services and health care services (e.g. socialized medicine; HMOs[20]). Direct employment tends to put the provider in a monopoly position that is relatively insensitive to consumer needs.

- Subsidies and grants addressing underserved needs (e.g. rural areas; inner cities; non-English speakers; primary care). Subsidies and grants lead to monitoring costs and enforcement problems.

Cost containment and quality improvement mechanisms

Cost containment can=t be separated from quality improvement. The appropriate social goal is minimizing cost at a given level of quality of service; or equivalently, maximizing quality at a given level of cost. Also, regulations that reduce medical errors generally lead to simultaneous cost reductions and quality improvements. This topic is very complex, and the following examples are not comprehensive.

Cost-effectiveness controls in the finance system

- Refusal of payments for medical errors
- Reimbursement linked to evidence-based diagnostic and treatment protocols
- Changing reimbursement rules to encourage greater emphasis on primary care
- Requiring a Amedical home@ to coordinate treatment for each patient
- Rewarding improved preventive care.

Cost-effectiveness controls in the delivery system. Many cost and quality reforms involve regulating the delivery system independently of the finance system. Collectively, wasteful and dangerous US medical delivery systems may be an even bigger problem in dollar terms than insurance market failures, and are much more complex. Reforms are needed in all medical sectors, including hospital administration, record keeping, drug marketing, new drug approval processes, patent law, R&D, medical education, and tort law. More subtly, changes are needed in medical mores and culture. While financial incentives can be created for nearly any reform, financial managers may not be the best leaders for systemic reform efforts.

International comparisons

Table 1 compares some data from the US and several other industrialized countries. These data illustrate some of the relatively high access barriers and high social costs of US healthcare. Moreover US outcomes are well below international standards, despite an excellent record in reducing tobacco use.

The table lists five countries that exemplify five rather different systems. (These particular

20. A Health Maintenance Organization or HMO is a (usually private) organization that serves both as insurance provider of first resort, and service delivery provider, for a particular risk pool. Some insurance functions will typically be shared with a larger risk pool.

countries were chosen because comprehensive data were available.) The US has a mixture of publicly-provided insurance and private insurance, together with a large pool of uninsured people. Australia has a modified single payer system, with individuals mandated to purchase private insurance that covers about a third of medical expenses. Canada approximates a true single payer system, with health care providers mostly in private practice. Germany covers nearly everyone using sickness funds, which are heavily regulated quasi-private monopoly insurance companies organized mostly by industry or working group. The United Kingdom has socialized medicine, with providers who are directly employed by government.

The US system ranks last in every comparison except one. The US spends more per person and a higher share of GDP for health care than other countries, and within those expenditures in the US, higher shares of GDP go to out-of-pocket expenses and administrative overhead. More individuals are excluded from health care due to cost in the US than in other countries. Despite having the best record in tobacco consumption, the US has the worst death rate due to diseases amenable to medical treatment. The US ranked at the bottom in an indicator of overall system quality constructed by the Commonwealth Fund.

The US did well on one listed indicator: it ranked high in availability of same day primary-care appointments for serious conditions. Interestingly, however, Canada's single payer system ranked higher—which tends to contradict the claims US insurance companies make about excessively long waiting periods in Canada.

Conclusions and recommendations

Activists seeking universal access to health insurance (UAHC) need to choose between supporting mixed insurance finance systems and single payer systems. This paper agues that single payer systems can produce UAHC, while mixed systems at best can produce affordable access, or (more likely) access that is only quasi-affordable.

If UAHC were politically unobtainable, then affordability might be an acceptable improvement over what we have now. However activists have rarely accepted the argument that a better world is unobtainable. Therefore those who support a mixed system should do so on the assumption that it represents a political step towards a full single payer system. Adopting or rejecting such a position should rest on a prudential calculation of whether a step-by step approach is more effective than organizing for complete reform.[21]

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21. Gradualism towards achieving UAHC in the US using mixed systems has a long history of failure, together with a few successes. Since Teddy Roosevelt's time, all Democratic Presidents as well as some Republicans have attempted either to significantly expand healthcare access, or else to achieve full UAHC. Apart from small adjustments in insurance regulation, most have failed. The major success story is Lyndon Johnson's Medicare and Medicaid, noteworthy both for its significant scope (now constituting close to half of all US health care expenditures) and its single payer approach. Two noteworthy smaller successes are the Clinton-era SCHIP and George W. Bush's prescription drugs program. (Bush also scored some success at partly rolling back Medicare by inserting privatization features such as Medicare Advantage.) One especially interesting failure is Bill Clinton's effort to achieve full affordability using a mixed system.

Gawande (2009) argues that successful UAHC reform programs in other countries were achieved in a step-by-step manner, always building on systems already in place. He uses the United Kingdom's socialized medicine

With respect to system design at a more micro level, the goal of broad access implies that activists should support tax-based finance and oppose (*inter alia*) premium increases, user fees, deductibles, co-pays, medical savings plans, insurance deregulation, waiting periods, pre-existing conditions limits, and any steps towards increased privatization of health insurance.

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and France's social insurance funds as very interesting examples. He neglects however to discuss the successful de novo reforms in Taiwan and Canada, which adopted relatively pure single payer systems. In a certain sense, it is true that UAHC always builds on earlier systems, insofar as a vast delivery system infrastructure of medical personnel and hospitals was already in place at the time when each major insurance reform has occurred. However, Gawande fails to carefully distinguish the difficult task of insurance and finance reform from the even more difficult task of physical delivery system reform. Reforming delivery systems is far more complex than reforming insurance systems.

This historical record is rich enough so that both democratic centrists and progressives can find empirical support for their conflicting views on political strategy. A major problem for each side of this internecine debate is figuring out whether and how to work effectively with the other side.

Table 1:
Selected Countries and Features of Health Care Systems

COUNTRY	*USA*	*Australia*	*Canada*	*Germany*	*United Kingdom*		
FEATURE						**Years**	**Sources**
System type	Mixed	Single payer + supplem. Insurance	Single payer	Social insurance funds	Socialized medicine		(1)
As percent of GDP:							
Total health care expenditure	15.3%	9.5%	9.8%	10.7%	8.3%	2005	(2)
Out-of-pocket user fees [(a)]	1.7-2.0%	1.2-1.9%	1.2-1.5%	0.8-1.4%	0.5%	c.1996-2005	(3)
Direct cost of insurance administration [(b)]	1.2%	0.3%	0.4%	0.6%	0.3%	2005	(4)
Per capita healthcare expenditure	$6,401	$3,128	$3,326	$3,287	$2,724	2005	(5)
Deaths amenable to healthcare per 100,000	110	71	77	90	103	2002-2003	(6)
Same day appointments-serious primary care	46%	63%	32%	58%	57%	2007	(6)
Access restricted by cost during year	37%	26%	12%	21%	8%	2007	(6)
Overall performance ranking/1=best [(c)]	6	3.5	5	2	1	c.2005	(6)
Adult tobacco use	16.9%	17.7%	17.3%	24.3%	24.0%	2004	(5)

Notes:
(a) Range from various sources
(b) Does not include induced costs for providers
(c) New Zealand (not shown) was ranked 3.5.

Sources:
(1) Classified by the author
(2) OECD (2008)
(3) Calculated from OECD (2008), American College of Physicians (2008), and Anderson *et al.* (2002)
(4) Calculated from OEDC (2008) and Commonwealth Fund (2008)
(5) World Health Organization (2007)
(6) Commonwealth Fund (2008)

Appendix 1: Competitive and monopoly medical insurance companies

This paper uses the terms competitive medical insurance company or private insurance company for an organization that:

- is privately owned;
- seeks to maximize profits (as opposed to earning regulated levels of profit);
- sells medical insurance;
- competes with other insurance companies for customers; and
- has some degree of freedom to engage in profit-maximizing behaviors that limit access to health care, such as: setting premiums; selecting or rejecting customers; discriminating in premiums between individuals or groups; designing insurance contracts; deciding what claims to pay; and/or contracting with preferred medical service providers.

Service companies that merely advise or subcontract for a single payer trust fund to perform specific administrative functions generally do not qualify. Monopoly insurance companies do not qualify, whether or not they are regulated.

Finance systems in France, Germany, Switzerland and a few other countries are somewhat intermediate between single payer systems and private insurance systems. Health insurance is administered by a number of quasi-private businesses covering different sectors of the economy, but they are non-competing, profit-controlled, and so heavily regulated in their operations as to amount to arms of government. Historically they resulted from government takeover and rationalization of pre-existing private union-oriented insurance systems. These have been referred to as Asickness funds@ or Asocial insurance funds.@

Monopoly insurance companies can exhibit a wide range of behaviors, depending on the goals and techniques of their owners and public regulators. They could be modeled as resting on a continuum that resembles a single payer trust fund at one extreme, and competitive private insurance companies at the other. For that reason this paper won't analyze monopolized insurance mechanisms in detail. Briefly, however:

> Publicly-traded monopoly insurance companies tend to behave very much like their competitive counterparts. They are required by their capital markets to maximize profits, which they accomplish using all of the usual insurance company tools such as cherry picking and cost-avoidance. Since they do not need to compete for customers, in some cases they may be even more exploitative than competitive companies, for example by demanding higher premiums than competitive companies could demand. However in other cases they may be more slow-moving at adopting new cost-avoidance tools, leading to a relatively more benign treatment of consumers.
>
> Closely-held and non-profit monopoly insurance companies have acted in various ways. Blue Cross/Blue Shield companies were originally established in the 1930s as nonprofit monopolies. Their main supporters were doctors, for whom they guaranteed a steady stream of income by acting rather like a single-payer trust fund. Another economic motive on the part of doctors may have been to ward off government involvement in

health care access. Later it became apparent that insurance companies could become powerful independent profits centers. At the same time, their monopoly statuses began to be challenged by competitive private insurance companies. Subsequently, many of their top managers enriched themselves by taking their non-profits private and then selling publicly-traded stock. In states with strong regulators, major parts of the proceeds were diverted into funding non-profit foundations with health-care-related missions. In other states, the original managers captured most of the gains from privatization. Some Blues remain in nonprofit status, but act much like competitive private insurance companies.

Appendix 2: Health insurance theoryCa brief summary[22]

The nature of the economic benefit from insurance

Most households are willing to pay an excess amount over the average cost of health care in order to obtain health insurance. This excess amount is referred to as a risk premium. It is very important to understand exactly how and why this works, because that is the main point and the main benefit of insurance as an institution. The technical term for the process is Arisk-pooling.@[23] What it means is that a bunch of people put together a pool of money where each kicks in the average expected cost of next year=s health care. Then when someone gets sick the risk pool pays the entire costs of her health care. That way everyone pays out a relatively small but steady amount of money every year, instead of paying zero some years while risking the possibility of unexpected large, back-breaking payments in other years. Except for type AT@ personalities, most people greatly prefer a steady cost over a risky, fluctuating cost (assuming the same expected long-term average cost).

Generally speaking, the larger the risk pool and the more varied its members, the better the whole thing works. For example, if young people always join the pool and always stay in the pool, then when they get old and their medical costs tend to increase other young people will help them make the payment. As a matter of social efficiency, "cherry picking" (i.e. offering special deals to the healthiest people) is bad because it breaks up the risk pool into small fragments. While individual healthy people can sometimes gain from cherry picking, the total gain from insurance across society as whole is reduced. If cherry picking proceeds to the extreme, each person is a separate risk pool and the very idea of insurance no longer exists. Conversely, maximizing the total social gain from insurance requires putting everyone into a single risk pool.

Having a single, unified risk pool is just another way of describing a single payer system. Mixed affordability systems using private insurance subdivide the risk pool, and reduce aggregate social gains from insurance. Pure private market systems fragment the risk pool to an even greater extent.

Some market fundamentalists claim that individuals on average place a higher value on having the freedom to join or stay out of risk pools as they choose, than they do on having a high quality risk pool to join. Polling results and election results overwhelmingly reject this claim: most people in most societies say they are willing to pay significant levels of taxes in order to obtain universal coverage—which means having a mandated risk pool of high quality that you can't opt out of.[24]

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22. While the literature is vast, the seminal article explaining why unfettered competition in health care cannot be efficient was by Nobel Laureate Kenneth Arrow (1963).

23. There is also an independent insurance mechanism known as Arisk sharing,@ but it is not very important in health insurance markets and won=t be discussed here.

24. Some libertarians make an independent ethical claim that individuals ought to have a right to stay out of the risk pool even if the majority says otherwise. This claim tends to be rejected by other ideologies and religions because it constitutes a radical denial of human concern for and obligation to others. See e.g., Smith (1790) for an

Basic insurance concepts

The analysis in this paper is based on a number of important technical assumptions about health insurance markets. These assumptions are supported by much of the mainstream medical economics literature, but see below for a critical summary of contrary views. The mainstream approach suggests that unfettered health insurance markets tend to be deeply pathological, such that increases in intensity of insurance competition makes consumers worse off rather than better off (negative competition).

- Competition among private health insurance companies is characterized by strongly embedded adverse selection. In other words, insurance companies compete to Acherry pick@ healthy populations while excluding coverage for those who most need healthcare. They also compete to design exclusions and co-pays and manipulate definitions of Amedically necessary@ and invent other devices for shifting costs from the insurance company to consumers or government. Some of them also compete to provide opaque and constantly shifting and unenforceable contract language, and in finding the widest possible number of ways to reject claims. As a result, rather than benefitting consumers, competition among insurance companies leads to a Arace to bottom@.

- Administering these cost-avoidance activities is itself quite costly to insurance companies. As a result, increasing levels of competition between insurance companies leads to increasing administrative overhead and social inefficiency. Consequently, market fundamentalist proposals to increase insurance competition via deregulation are generally perverse.

- Medical insurance is characterized by especially strong problems of what can be called negative moral hazard. In other words, there is a large problem that individuals without adequate insurance often fail to seek medically necessary healthcare.[25] This happens in part because consumers tend to rely on doctors to define what healthcare is necessary, and often have very little advance information as to whether a particular visit to the doctor would be beneficial. It also happens because some people simply can=t afford medical care without foregoing more immediate needs.

- Medical insurance is *not* characterized by especially strong problems of what is called positive moral hazard. In other words, there is not a large problem of individuals seeking medically unnecessary healthcare when the price is artificially lowered by insurance. (Note that going to the doctor can be medically necessary even in cases where it turns out that the doctor can do nothing to help, because only the doctor can determine whether

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argument that morality is rooted in concern for others.

25. In fact, negative moral hazard can and does persist even when all medical costs are being covered by insurance. As explained in the next paragraph, obtaining medical care entails personal costs as well as financial costs. Lacking medical knowledge in particular cases, patients can easily underestimate the personal benefits of seeking treatment.

action is or is not needed.)

It is important to understand that there are substantial consumer costs of going to the doctor, even when insurance pays the entire provider cost. Visiting a doctor generally uses up a half day or more of prime working time. Also there may be transportation costs or day care costs, and the procedures doctors use are often quite unpleasant. Most people stay well away from doctors unless they believe there are medical reasons to go. The main exception consists of hypochondriacs—who would not necessarily be deterred from obsessive medical visits by higher out-of-pocket costs.

- Nevertheless, because of negative moral hazard, there is a strong consumer response to healthcare prices. This leads to a strong incentive for competing insurance companies to increase co-pays and deductibles.

- As a result, increasing competition between insurance companies leads to increasing gaps in coverage and increasing inequity between people covered by different plans.

- There are deep problems of asymmetric information: due to the complexity of insurance contracts, the absence of public information on contract fulfillment, and the relative rareness of major claims, most consumers are poorly informed about their own insurance contracts. Moreover, insurance contracts are typically negotiated by third-party employers or other groups. Consequently competition for customers is incapable of reining in these insurance market pathologies.

- Cost avoidance by insurance companies spills over into increased costs for healthcare providers. For example, providers, due to their specialized expertise, must bear the brunt of justifying any healthcare claims for which insurers seek to avoid payment. Also, providers need to become expert in negotiating multiple competing and constantly changing claims systems. These costs tend to increase with the degree of competition between insurance companies.

- Medical care has what are called public good aspects, meaning that the health of one person has effects on other people who may not be directly involved in insurance market and medical decisions. For example, some diseases are contagious. Also, bad health leads to loss of productivity in the work place. Also, people have ties of sympathy that make other people=s bad health a matter of personal concern. Because of these public good effects, from the point of view of social efficiency unfettered private market decisions will lead to underprovision of health care.

- The benchmark alternative to private insurance is single payer coverage. In comparing administrative costs and social efficiency between private insurance versus a public single payer trust fund, it is important to understand that trust fund organizations impose inefficiencies of their own (as described above). The relative size of private versus public inefficiencies is an empirical question, but a theoretical understanding of insurance markets plays an important role in any empirical measurements. There are both theoretical reasons and empirical data suggesting that public single payer trust funds are both much less costly to operate and much more equalitarian in their operations than a

system with competing private insurance companies.

Perfect-market theory

Note, however, that these assumptions are sharply contested in an economics literature based on a Aperfect-market@ model of market-fundamentalist ideology. Typical perfect-market literature turns the assumptions listed above on their head. Empirically, it assumes fully informed consumers with complete understanding of medical science, and insurance markets free from adverse selection and negative moral hazard but rich in positive moral hazard. Normatively, it assumes that individual healthcare is a simple commodity good in which society as a whole has no special interest—typically assuming, for example, that bad health is not contagious, that lost productivity due to bad health has no externalized impact on employers, and that people do not care about each other=s health. These counterfactual assumptions are typically implicit rather than spelled out in the model, but they are always present in perfect-market literature. For an extended polemic against single payer based on this literature, see Goodman *et al.* (2004).

Appendix 3: Some channels of welfare loss in the US mixed system

1. GDP waste from inefficient medical care insurance and delivery. As Americans are increasingly aware, the US health care system costs about twice as much to operate as any other health care system world-wide, while delivering inferior health outcomes, as compared with a number of developed countries. This entails a level of waste so large that it limits the ability of the US to obtain UAHC. At the same time it imposes approximately an 8% reduction in the average US monetary standard of living.[26]

As argued in this paper, degree of success in cost containment is likely to depend on success in achieving universal access. While an affordable access mixed system in the US could provide powerful new opportunities for cost containment, only a single payer system can achieve the substantial cost savings that would result from eliminating private insurance companies. Several US studies have estimated that simply eliminating insurance companies would more than pay for the costs of extending universal coverage to all individuals who are presently either uninsured or underinsured (e.g., Schramm, Raleigh and Smith, 2007. For a survey see Physicians for a National Health Program, 2008).

2. GDP loss due to lost productivity. Inadequate health care leads to ill health, leading in turn to a less effective workforce. Another productivity-related problem is Ainsurance lock-in,@ where absence of UAHC forces people to remain in their current job rather than lose coverage by switching to a better (and more socially productive) job. Absence of UAHC may reduce US output by a percent or two of GDP. Most though not all of this loss would be eliminated by an affordable access system (with the specific amount depending on details of the system).

3. Welfare value of preserving health. Medical benefit-cost and cost-effectiveness studies generally assume that a quality-adjusted year of life saved through medical interventions has an average personal non-monetized value in the neighborhood of or exceeding $100,000, in addition to any monetized increases in GDP it leads to (Hirth *et al.*, 2000). (This personal value of health is excluded from GDP because it doesn't reflect any market transaction—GDP is a measure of market activity rather than a complete measure of human welfare). The personal benefit of improved health resulting from adopting a UAHC system in the US could equal a few percent of GDP in value. An affordable access system would produce most though not all of this benefit.

4. Welfare value of reducing exposure to financial risk (a.k.a the consumer=s Arisk premium@ from having insurance). Inadequate health insurance leads to increased risk of bankruptcy, plus risk of lesser levels of financial strain. Under current conditions, inadequate health insurance is a

26. As calculated from the following assumption: the US spends about 16% of GDP on health care, which could be reduced to about 8% without loss of quality in health outcomes if foreign best practices were adopted. It could be argued to the contrary that US health outcomes are not a good measure of US health care quality, because they are degraded by an exceptionally unhealthy average American lifestyle. And indeed US obesity rates are very highBbut this should be more than offset by exceptionally low US rates of tobacco use. In any case, quite apart from outcomes there is no significant evidence that US medical care services and processes are superior in overall quality to those in other developed countries. Medical error rates for example are exceptionally high in the US (Commonwealth fund, 2008).

causal factor in well over half of US bankruptcies (Himmelstein *et al.*, 2009). Moreover, underinsurance is a much bigger problem than non-insurance. By eliminating this risk, UAHC would provide individuals with a benefit they would value at several percentage points of GDP. In other words, Americans on average would be willing to pay not only the average per capita cost of health care, but also an additional percentage of their gross income, to avoid the financial risks that the existing system imposes. (See Appendix 1 for further explanation of the risk premium.)

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