

Statement by

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U.S. Senate Committee on Health, Labor, Education & Pensions  
Subcommittee on Primary Health and Aging

Hearing on

*“30 Million New Patients and 11 Months to Go:  
Who Will Provide Their Primary Care?”*

January 29, 2013

My name is Uwe E. Reinhardt. I am the James Madison Professor of Economics and Public Affairs at the Woodrow Wilson School of Public and International Affairs and the Department of Economics of Princeton University, Princeton, New Jersey.

My research over the last several decades has focused primarily on health economics and -policy, although I also teach or have taught at Princeton University general economics, financial accounting and financial management. Throughout my career, I have had an interest in issues surrounding the health workforce.

I would like to thank you, Mr. Chairman, and your colleagues for inviting me to testify before this Committee on a matter of importance to the successful implementation of the Affordable Care Act (ACA) of 2010 – the ability of our health system to absorb the additional demand for health-care services likely to be triggered by the extension of health-insurance coverage to an estimated 30 million or so Americans who would otherwise have remained uninsured.<sup>1</sup>

That challenge should prompt us once more to explore the following questions that have hovered over workforce issues in this country for at least half a century, to wit:

- I. Is our current health workforce – especially in primary care -- used as effectively and efficiently as it could be?
- II. What public-policy levers are there to influence the choice of physicians on:
  - a. what medical specialty to enter, and
  - b. where to practice?
- III. To the extent that financial incentives play a role in the choice of specialty and location, what policy levers are there in this respect?

I will order my remarks along this outline. Before proceeding, however, I would like to summarize here my various recommendations sprinkled in bold print throughout this Statement.

**1. As an economist I have long favored the independent clinical practice of primary care by properly trained nurse practitioners without supervision by a physician, either in free-standing, nurse-led clinics of**

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<sup>1</sup> Association of American Medical Colleges. *The Impact of Health Care Reform on the Future Supply and Demand for Physicians Updated Projections Through 2025* (June 2010).

the sort pioneered by Mary Mundinger<sup>2</sup> or, better still in clinically integrated settings where the idea “supervision by a physician” would be replaced by “collegial collaboration with a physician.”

2. I endorse the idea put forth by the *Advanced Practice Nurse Practitioners (APNP) Consensus Working Group* and the *National Council of State Boards of Nursing* to develop for use by the states a *national* scope of practice (SOP) for the nursing profession, to limit or perhaps even eliminate the current variation in SOPs across the states.

3. Evidently, the standardized national SOP should reflect the expertise of both, physicians and nurse practitioners. But, to avoid the inherent economic conflicts of interest both professions have in the matter, the standardized SOP should be developed by a carefully selected board that is not dominated by either nurse practitioners or physicians, and that has significant representation by patients and those who pay for health care, including public payers.

4. As even the authoritative *Medicare Payment Advisory Commission (Medpac)* could not find a theoretical foundation for the existing payment differentials for identical primary-care services rendered by primary-care physicians and by non-physician primary-care givers, I support calls for eliminating these differentials in public insurance programs and for calling upon private health insurers, whose clients also lament a shortage of primary care physicians, to recognize the role of non-physician primary-care givers and to eliminate the payment differentials as well.

5. If Congress sincerely believes that there is and will be an acute shortage of *primary-care physicians*, it should realign the levels of compensation of physicians under Medicare and Medicaid more in favor of primary-care physicians. If Congress would like to see that realignment, it has no choice but to lead the way, as individual private insurers would find it difficult to effect the realignment by themselves.

6. Congress should fund experiments with rewarding the choice of a career in primary care, or to practice in an area with an acute shortage of primary-care physicians, by forgiving for every year the physician works full time in primary care part of the debt medical graduates have accumulated during their education and training.

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<sup>2</sup> Mary O. Mundinger *et. al.* “Primary Care Outcomes in Patients Treated by Nurse Practitioners or Physicians: A Randomized Trial, *Journal of the American Medical Association* (January 5, 2000) 283(1):59-68. <http://jama.jamanetwork.com/article.aspx?articleid=192259#qundefined> .

**7. As long as carried interest paid from long-term capital gains is accorded the dubious tax preference Congress has accorded it, Congress should extend that privilege also to primary-care professionals, at least for some time of their careers.**

## **I. EFFECTIVE AND EFFICIENT USE OF THE HEALTH WORKFORCE**

Primary health care is still thought of among the laity as the health care rendered by a particular subset of *physicians* who tend to serve as the patient's primary contact with the health-care system. It naturally leads to hand-wringing over projected physician-population ratios for physicians in primary care.

A much superior definition of primary care has been offered by the Institute of Medicine in a report "Primary Care: America's Health in a New Era"<sup>3</sup>:

*Primary care is the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community.*

This definition undoubtedly leans on the even more expansive definition offered in the World Health Organization's *Declaration of Alma Alta* of 1978:

*Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self reliance and self-determination. It forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process.*<sup>4</sup>

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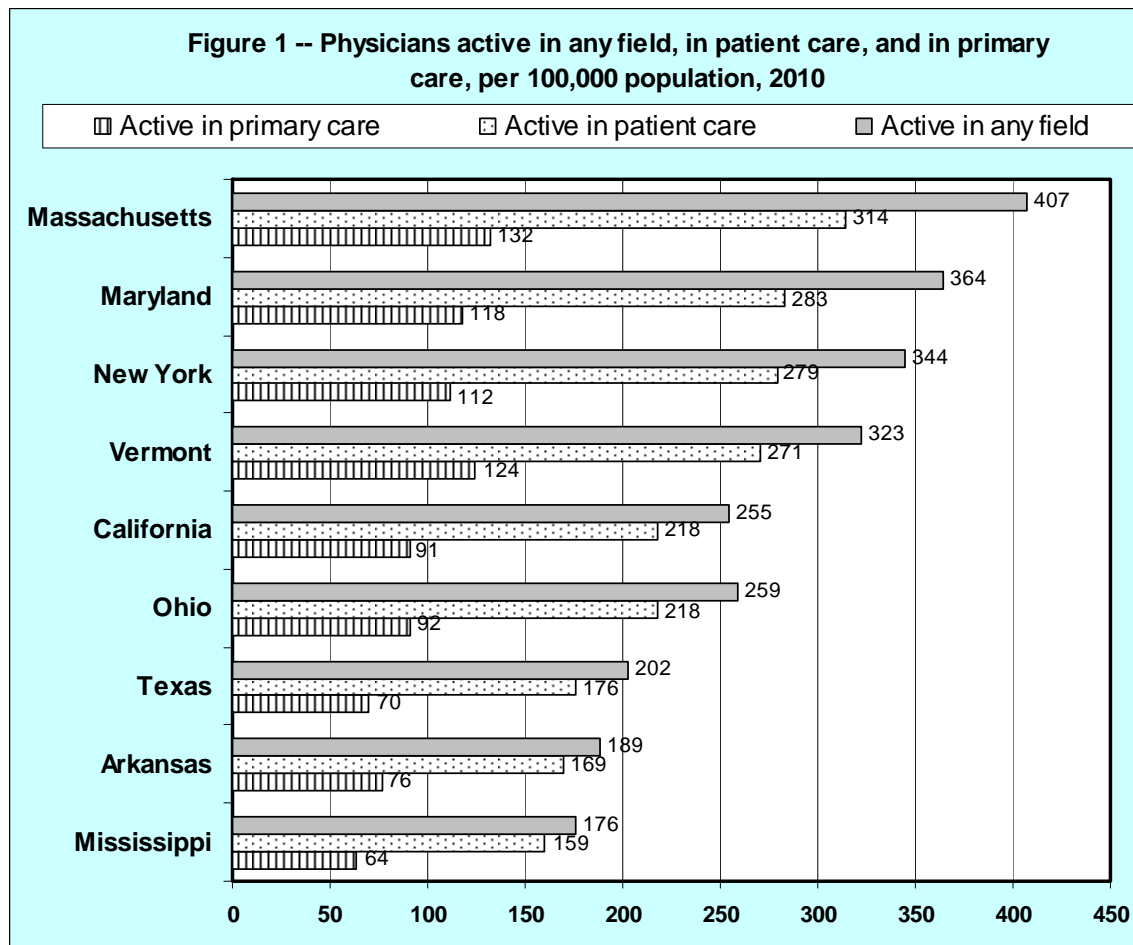
<sup>3</sup> Molla S. Donaldson, Karl D. Yordy, Kathleen N. Lohr and Neal A. Vanselow, eds. *Primary Care: America's Health in a New Era* (1996). Washington, D.C.: Committee on the Future of Primary Care, Institute of Medicine, 1996. <http://www.nap.edu/openbook.php?isbn=0309053994>.

<sup>4</sup> World Health Organization, *Declaration of Alma-Ata International Conference on Primary Health Care*, Alma-Ata, USSR, 6-12 September 1978. [http://www.who.int/publications/almaata\\_declaration\\_en.pdf](http://www.who.int/publications/almaata_declaration_en.pdf)

I recite these definitions of primary care – presumably very well known to members of this Committee – to highlight the fact that the provision of primary care in a community and in the nation should be a *team effort*, ideally within an organizational structure that encourages teamwork and the efficient delegation of tasks among members of the team.

**Physician-Population Ratios:** Research over the years has shown that there is actually much more flexibility in the substitution among types of health professionals than has traditionally been presumed among health work force planners who think in terms of ideal physician-population ratios.

Indeed, it is remarkable how widely physician population ratios vary among advanced economies and even within countries. Figure 1 illustrates this phenomenon for the U.S. with data published by the American Association of Medical Colleges (AAMC) in its report *2011 State Physician Workforce Data Book*.<sup>5</sup>

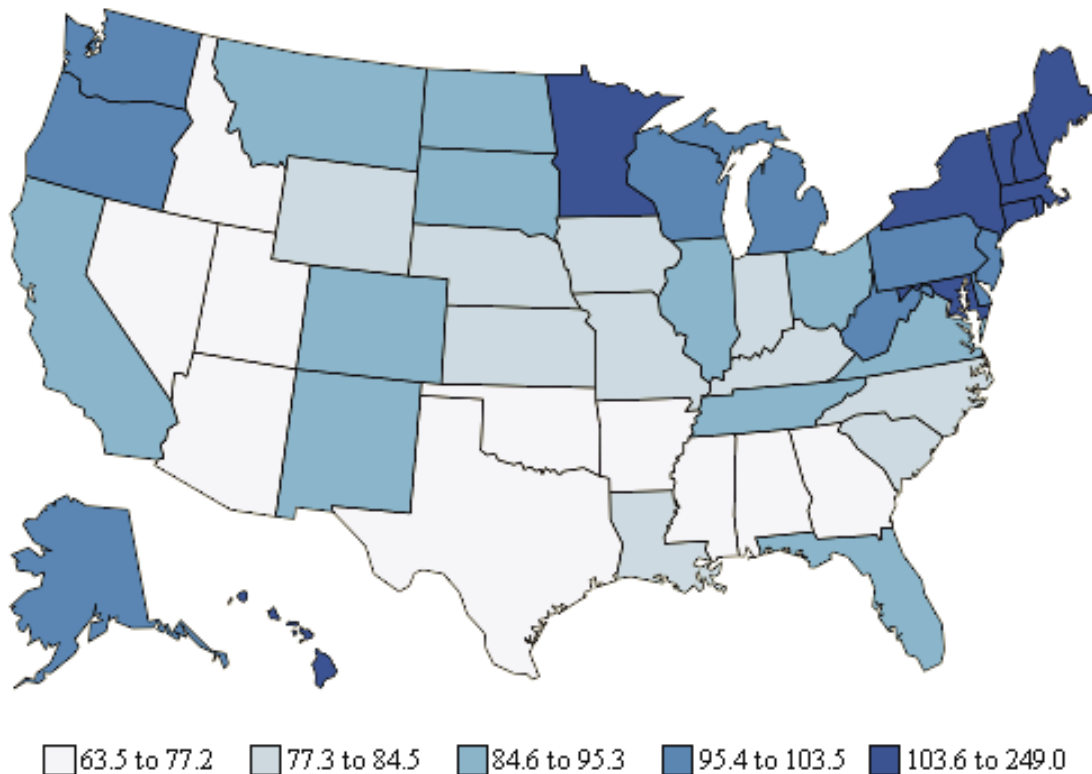


<sup>5</sup> American Association of Medical Colleges (AAMC). *2011 State Physician Workforce Data Book*. Washington, D.C.: AAMC, November, 2011.

<https://www.aamc.org/download/263512/data/statedata2011.pdf>

The map overleaf, taken directly from the AAMC report, illustrates the geographic pattern of the ratio of primary-care physicians to population. Evidently, the northeastern states are relatively much better endowed with primary-care physicians than are many of the southern states. Yet in these states one also constantly hears laments over a prevailing or impending physician shortage.

Figure 2 – Map of Primary-Care Physicians per 100,000 population, 2010



The AAMC data raise the following question. If the ideal endowment with primary-care physicians is to be gauged by some ideal physician-population ratio, which of the many different ratios across the United States should it be? How should one arrive at the answer?

I addressed myself to this question years ago in my doctoral dissertation with the now politically incorrect title *Physician Productivity and the Demand for Health Manpower*, at a time when the earlier enactment of Medicare gave rise to laments of a serious overall physician shortage.<sup>6</sup> Using a cross-section data base on medical practices, I found that the feared shortage could be substantially mitigated through

<sup>6</sup> Uwe. E. Reinhardt, *Physician Productivity and the Demand for Health Manpower*. Boston, MA: Ballinger Publishing Company, 1975.

more judicious task delegation from physicians to support staff with clinical training short of a physician's, but also with much lower costs per hour of work.

In the meantime, modern technology and improved training of non-physician clinical personnel has made possible even more extensive task delegation. Most prominently mentioned among the non-physician health professionals are advanced practice nurse practitioners (APRNs or simply NPs) and physician assistants (PAs). A more comprehensive definition would include pharmacists providing pharmaceutical care services and certified nurse midwives. Some would include even dentists.

**The Growing Role of Non-Physician Primary-Care Professionals:** The consensus in the literature<sup>7</sup> is that the traditional primary-care model relying almost exclusively on primary-care physicians is a thing of the past.<sup>8</sup> It had physicians perform many task for which, in effect, they were overqualified, as has been vividly described by primary-care physician Lawrence P. Casalino in his "A Martian's Prescription for Primary Care: Overhaul the Physician's Workday."<sup>9</sup>

The traditional model is being replaced by new models of primary care in which advance practice registered nurses, physician assistants and other professionals will play a much larger role. Some authors have recently argued that the perceived primary care shortage could be all but eliminated through the use of primary-care teams relying heavily on non-physicians and modern electronic communication.<sup>10</sup>

In fact, non-physician primary-care professionals have been by far the fastest growing component of the primary-care workforce in this country. During 1995-2005, for example, the number of primary-care physicians per capita grew by only 1.1% per year while that of nurse practitioners grew by 9.4% and that of physician assistants by close to 4%. To be sure, physicians still made up three quarters of the primary-care

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<sup>7</sup> For syntheses of this literature, see Robert Wood Johnson Foundation, *Primary care workforce in the United States*. Policy Brief No. 22. July, 2011, or Julia Paradise, Cedrik Dark and Nicole Bitler, *Improving Access to Adult Care in Medicaid: Exploring the Potential Role of Nurse Practitioners and Physician Assistants*. Washington, D.C.: Kaiser Commission on Medicaid and the Uninsured. March 2011, <http://www.kff.org/medicaid/upload/8167.pdf> or Mary D. Naylor and Ellen T. Kurtzman, "The Role of Nurse Practitioners in Reinventing Primary Care." *Health Affairs*. (May, 2010) 29(5): 893-899.

<sup>8</sup> David Margolius and Thomas Bodenheimer, "Transforming Primary Care: From Past Practice to the Practice of the Future." *Health Affairs*. (May 2010) 29(5): 779-84.

<sup>9</sup> Lawrence P. Casalino, "A Martian's Prescription for Primary Care: Overhaul the Physician's Workday." *Health Affairs* (May, 2010) 29(5): 785-90.

<sup>10</sup> Linda V. Green, Sergei Saving and Yina Lu, "Primary Care Physician Shortages Could Be Eliminated Through the Use of Teams, Nonphysicians and Electronic Communication." *Health Affairs*. (January 2013). 32(1): 11-19.

workforce by 2005,<sup>11</sup> but only about 60 percent by 2009<sup>12</sup>. That fraction is bound to fall further in the decades ahead as models relying on non-physician primary-care professionals develop further and proliferate, especially in areas less popular with primary-care physicians. In those areas non-physician primary-care professionals already make up a greater share of the primary-care workforce.<sup>9</sup>

Although the barriers to greater reliance on non-physician primary-care professionals do not strike me as overwhelming, there remain some that could and should be removed by government. These barriers are (a) state-regulated scopes of practice (SOPs) and (b) differential payment levels.

**Scope of Practice (SOP) Restrictions:** Like any other health professionals, nurse practitioners, physician assistants and other non-physician professionals working in primary care -- e.g., pharmacists providing a valuable service called “pharma-care” or “pharmaceutical care services (PCS)”<sup>13</sup> – are subject to formal scopes of practice (SOPs) that require a specified content of education and training, prescribe limits on the scope of services the professional may deliver and also dictate whether or not they may practice independently of a physician or must be supervised by a physician.<sup>14</sup>

Society has traditionally granted licensed physicians an extraordinarily wide SOP, including the off-label prescription of potentially harmful drugs that have not been approved for these off-label indications by the Food and Drug Administration.

The SOPs for non-physician primary-care givers are reasonably narrower than those granted physicians – as the former undoubtedly would be the first to agree. But for reasons that evidently have much more to do with a penchant for protecting economic turf and the political power of state medical societies than with safety standards of patient care, the SOPs for non-physician primary-care professionals still vary considerably among states<sup>15</sup> – and that in the land that originally invented and grew powerful on the idea that “one-size fits all” (think of McDonalds, the Holiday Inn,

<sup>11</sup> A. Bruce Steinwald, Primary Care Professionals: Recent Trends, Projections, and Valuation of Services. Washington, D.C.: General Accountability office, February 12, 2008: Table 1, p. 7.

<sup>12</sup> Julia Paradise, Cedrik Dark and Nicole Bitler *op. cit.*: 3.

<sup>13</sup> Carole W. Cranor, Barry A. Bunting and Dale B. Christensen, “The Asheville Project: long-term clinical and economic outcomes of a community pharmacy diabetes care program.” *Journal of the American Pharmaceutical Association*. (May-April, 2003) 43(2): 173-84.  
[http://healthmaprx.com/yahoo\\_site\\_admin/assets/docs/Cranor31.90105431.pdf](http://healthmaprx.com/yahoo_site_admin/assets/docs/Cranor31.90105431.pdf)

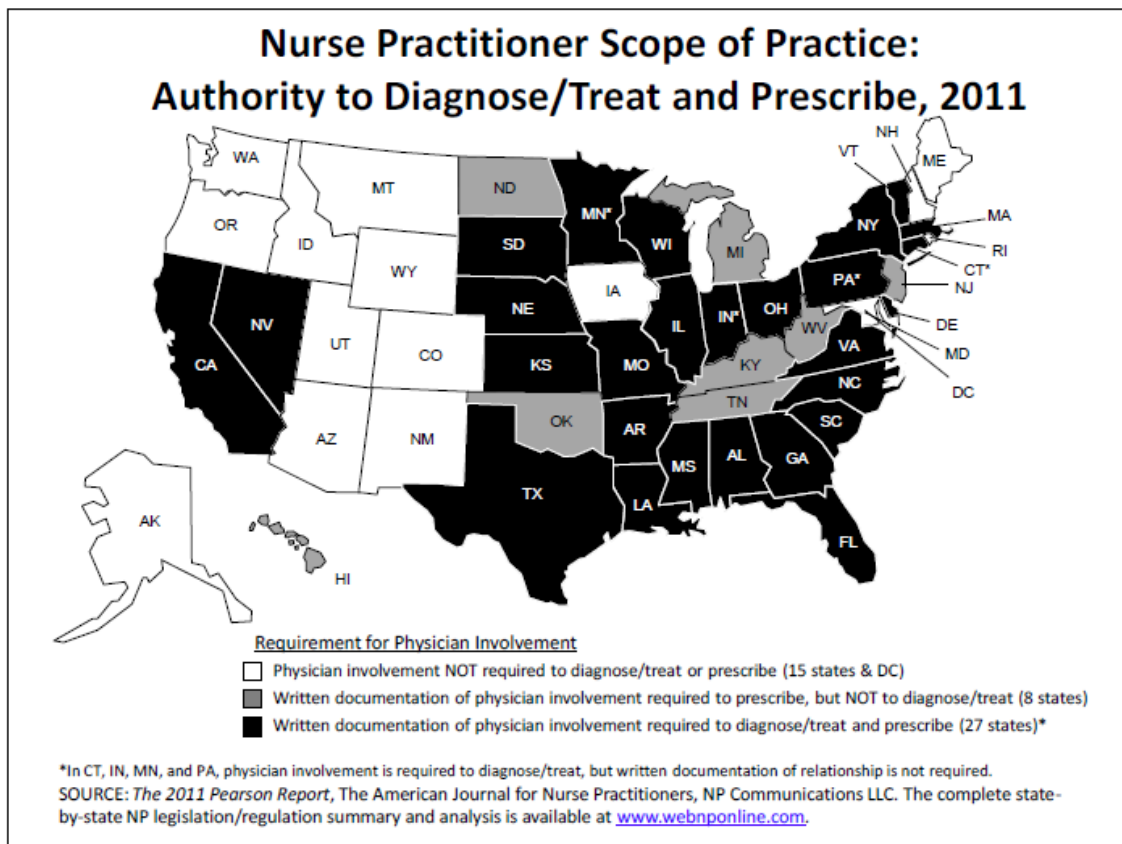
<sup>14</sup> American Medical Association, AMA Scope of Practice Data Series. (October, 2009).  
<http://www.tnaonline.org/Media/pdf/apn-ama-sop-1109.pdf>

<sup>15</sup> Joanne M. Pohl, Charlene Hanson, Jamesetta A. Newland and Linda Cronenwett, “Unleashing Nurse Practitioners’ Potential to Deliver Primary Care and Lead Teams.” *Health Affairs*. (May 2010): 29(5): 90-905.



and the many other national and now global franchises for which America is famous.) Furthermore, in some states these restrictions are narrower than they need to be.<sup>16</sup>

The most contentious issue in this regard is the clinical independence of nurse practitioners. The conceptual model for the work of physician assistants has always been to work with and under the supervision of a physician, and the profession seems comfortable with that restriction. Nurse practitioners, on the other hand, could and do practice independently of physicians and in quite a few states as can be seen in this map taken directly from the previously cited Kaiser Commission on Medicaid and the Uninsured.<sup>9</sup>



The foregoing leads me to the following recommendations:

**As an economist I have long favored the independent clinical practice of primary care by properly trained nurse practitioners without supervision by a physician, either in free-standing, nurse-led clinics of**

<sup>16</sup> Mary D. Naylor and Ellen T. Kurtzman, "The Role of Nurse Practitioners in Reinventing Primary Care." *Health Affairs*. (May, 2010) 29(5): 896.

the sort pioneered by Mary Mundinger<sup>17</sup> or, better still in clinically integrated settings where the idea “supervision by a physician” would be replaced by “collegial collaboration with a physician.”

I endorse the idea put forth by the *Advanced Practice Nurse Practitioners (APNP) Consensus Working Group* and the *National Council of State Boards of Nursing* to develop for use by the states a *national scope of practice (SOP)* for the nursing profession, to limit or perhaps even eliminate the current variation in SOPs across the states.

Evidently, the standardized national SOP should reflect the expertise of both, physicians and nurse practitioners. But, to avoid the inherent economic conflicts of interest both professions have in the matter, the standardized SOP should be developed by a carefully selected board that is not dominated by either nurse practitioners or physicians, and that has significant representation by patients and those who pay for health care, including public payers.

**Payment for Non-Physician Primary-Care Givers:** Most economists probably would subscribe to the principle that the same price should be paid for identical goods or services, regardless of who produced it. A truly competitive market of textbook fame would actually yield that result.

The available research suggests that the quality of the care rendered by nurse practitioners – measured along several dimensions, including process, clinical outcome and patient satisfaction – is as good as that rendered by primary care physicians for the services allocated to nurse practitioners under existing SOPs<sup>18</sup>. That circumstance suggests that nurse practitioners should receive for the services they render the same fees paid to physicians for those same services.

In fact, however, the current practice has been to pay nurse practitioners less. Medicare and Medicaid, for example, pay them 75 to 85 percent of the comparable physician fee, unless the nurse practitioner practiced under the direct supervision of a physician in which the payment is 100%.

Could such a differential in payment be defended? The only explanation I can think of is that with a visit to a physician, the patient purchases two things: (a) the delivery of the service in question and (b) a conveniently available stand-by capacity in

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<sup>17</sup> Mary O. Mundinger *et. al.* “Primary Care Outcomes in Patients Treated by Nurse Practitioners or Physicians: A Randomized Trial, *Journal of the American Medical Association* (January 5, 2000) 283(1):59-68. <http://jama.jamanetwork.com/article.aspx?articleid=192259#qundefined> .

<sup>18</sup> Julia Paradise, Cedrik Dark and Nicole Bitler , *op cit.*: 3-4.

the form of the physician's wider technical competence in health care. The higher fee paid physicians thus could be construed as payment for that stand-by capacity. This may not be a convincing argument, but it is that presumably has driven the differential payment.

Do private insurers have a more sophisticated approach in this regard? On the contrary. According to the literature, many of them erect much higher financial barriers to nurse practitioners by refusing to recognize and credential them as primary-care providers or, if they do credential them, paying them less than they pay physicians.<sup>19</sup>

**As even the authoritative *Medicare Payment Advisory Commission (Medpac)* could not find a theoretical foundation for the existing payment differentials for identical primary-care services rendered by primary-care physicians and by non-physician primary-care givers, I support calls for eliminating these differentials in public insurance programs and for calling upon private health insurers, whose clients also lament a shortage of primary care physicians, to recognize the role of non-physician primary-care givers and to eliminate the payment differentials as well.**

**Government's Role in Primary-Care Innovation:** Although popular folklore has it that government rarely innovates in health care – even though it was the first to introduce bundled payments for health care in the form of DRGs and developed the Medicare fee schedule whose underlying relative-value scale is now used by most private insurers – Medicare and Medicaid and several state government actually have been quite progressive in supporting the development of the more modern primary-care models.

On the *supply side*, the federal government as early as the 1960s started to provide financial support to the education and training of non-physician primary-care professionals through the National Health Service Corps (NHSC) which also, of course has supported physicians. It can be argued that the NHSC has never been as large as it should have been, or ought to be in the future; but it was important in recognizing early the value of these non-physician health professionals.

The ACA of 2010 further enhances federal institutional support to expand the supply of these professionals, along with individual support through the NHSC program.

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<sup>19</sup> Tine Hansen-Turton, Ann Ritter and Rebecca Torgan, Insurers' Contracting Policies on Nurse Practitioners as Primary Care Providers : Two Years Later. *Policy Politics Nursing Practice* 2008 9(4): 241-8.

Finally, the U.S. Veterans Administration health system has long demonstrated the successful use of non-physician primary-care professionals in the delivery of health care.<sup>20, 21</sup>

On the *payment* side the Medicare program at the federal level and the Medicaid program at the state level have since the 1970s recognized the role of these professionals in primary care, in contrast to private health insurers. As noted, however, they do pay nurse practitioners lower fees for given services than they pay physicians.

On the *delivery* of primary care, the federal and state governments have encouraged the development of nurse-led clinics in primary care which, as noted, I endorse. That development is further encouraged in the ACA through demonstration projects.

The federal government also has long supported the establishment of qualified community health centers of which the nation now has over 2,000. They have demonstrated their value in making primary care accessible especially to otherwise underserved, low-income populations. Non-physician primary-care givers play important roles in these centers.

The ACA of 2010 encourages the further development of the *Patient Centered Medical Home*, thought of as a clinically integrated primary-care facility that should facilitate collaboration among teams of primary-care professionals and would facilitate further by the use modern electronic information systems. Part of these establishments task would be maintenance of a personal electronic health record.

Finally, a number of state governments have been active on their own in promoting innovative primary-care models that rely heavily on non-physician primary-care workers – e.g., Minnesota, Pennsylvania and Vermont.<sup>22</sup> Vermont's *Blueprint for Health* legislation created Community Health Teams of nurses, social workers and behavioral counselors that work with participating medical practices to help coordinate

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<sup>20</sup> Perri M. Morgan, David H. Abbott, Rebecca B. McNeil and Deborah A. Fisher, "Characteristics of primary care office visits to nurse practitioners, physician assistants and physicians in United States Veterans Health Administration facilities, 2005 to 2010: a retrospective cross-sectional analysis." *Human Resources for Health*. 2012. 10: 42. <http://www.human-resources-health.com/content/pdf/1478-4491-10-42.pdf>

<sup>21</sup> D. Buzdi, S. Lurie and R. Hooker, "Veterans' perceptions of care by nurse practitioners, physician assistants, and physicians: a comparison from satisfaction surveys." *Journal of the American Academy of Nurse Practitioners*. (March 2010) 22(3): 170-6.

<sup>22</sup> Robert Wood Johnson Foundation, How Nurses are solving some of primary care's most pressing challenges. Policy Brief No. 18 (July, 2012) <http://www.pcpcc.net/2012/08/21/rwjf-report-how-nurses-are-solving-some-primary-cares-most-pressing-challenges>

and monitor the primary care of patients. They now serve over half of the state's population in this capacity.

All told then, although high-performing private-sector health-care delivery systems also have experimented and innovated in this area – e.g., Kaiser Permanente or the Virginia Mason health system<sup>23</sup> to mention but two of many -- it is fair to say that governments at both the federal and state levels have actively encouraged innovation in enhancing the supply of primary-care services through innovative models of health care delivery. It is appropriate and fair to acknowledge from time to time this role of government as an innovator in U.S. health care.

## II. INFLUENCING THE SPECIALTY- AND LOCATIONAL CHOICES OF PHYSICIANS.

Even if innovation in the delivery of primary care that relies on non-physician professionals were pushed to the acceptable limit, there would undoubtedly remain the need for a sizeable supply of primary-care physicians. There is the possibility that the future demand for such physicians would still outstrip the future supply of them – certainly in traditionally underserved inner-city and rural areas.

It raises the question what public-policy levers there are to influence the specialty- and locational choices of physicians in general, and especially of primary-care physicians.

A very comprehensive survey on this question can be found in a 2009 report by the Josiah Macy, Jr. Foundation, which specializes in health workforce issues.<sup>24</sup> The report notes that specialty- and location choices are related in complex ways to many factors other than financial incentives, among them the characteristics of medical students themselves, the mentoring of students during residency training and the medical school attended.

Women graduates appear to be less likely to practice in rural areas, and men less likely in primary care. Other things being equal, however, rural birth, a declared interest in serving underserved populations, and residency training in inner-city facilities

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<sup>23</sup> C. Craig Blackmore, Jordan W. Edwards, Carly Searles, Debra Wechter, Robert Mecklenburg, and Gary S. Kaplan, "Nurse Practitioner–Staffed Clinic at Virginia Mason Improves Care and Lowers Costs for Women with Benign Breast Conditions." *Health Affairs*. (January 2013). 32(1): 20-6.

<sup>24</sup> Josiah Macy, Jr. Foundation, *Specialty and Geographic Distribution of the Physician Workforce: What Influences Medical Students and Resident Choices?* (March 2, 2009). <http://www.graham-center.org/online/etc/medialib/graham/documents/publications/mongraphs-books/2009/rgcmo-specialty-geographic.Par.0001.File.tmp/Specialty-geography-compressed.pdf>

increase the likelihood that graduates will choose primary care and locate in underserved areas. Students graduating from public medical schools appear to be more likely to choose primary care. Finally, medical graduates are more likely to choose primary care if during training they had mentors encouraging that choice or, in general, if the culture of their medical education encouraged it. Beliefs about and attitudes on the control over life style implied by different career choices also have been found to be highly influential.<sup>25</sup>

Remarkably, research on the influence of accumulated debt by medical graduates on career choice has yielded mixed results.<sup>24</sup> One would have thought it to be a major factor driving career choices.

Because the compensation of primary-care physicians is substantially lower than that of most medical specialists, there does seem to be wide agreement that financial incentives could be used to influence these choices. There certainly is empirical support for that theory.<sup>26</sup> As the authors of a Josiah Macy, Jr. Foundation report conclude:

The income gap between primary care and subspecialists has an impressively negative impact on choice of primary care specialties and of practicing in rural or underserved settings. At the high end of the range, radiologist and orthopedic surgeon incomes are nearly three times that of a primary care physician. Over a 35-40 year career, this payment disparity produces a \$3.5 million gap in return on investment between primary care physicians and the midpoint of income for subspecialist physicians.

There is something odd in the fact that for at least two decades health-workforce experts and health-policy makers have wrung their hands over an acute shortage of primary care physicians, all the while paying primary-care physicians so much less than is paid their specialist colleagues. To an economist, it comes across as insincerity over the alleged shortage. If primary-care physicians are deemed so essential to the health of Americans, why are they not paid more?

Be that as it may, in the next section I explore how the financial incentives facing medical graduates could be changed in favor of primary care.

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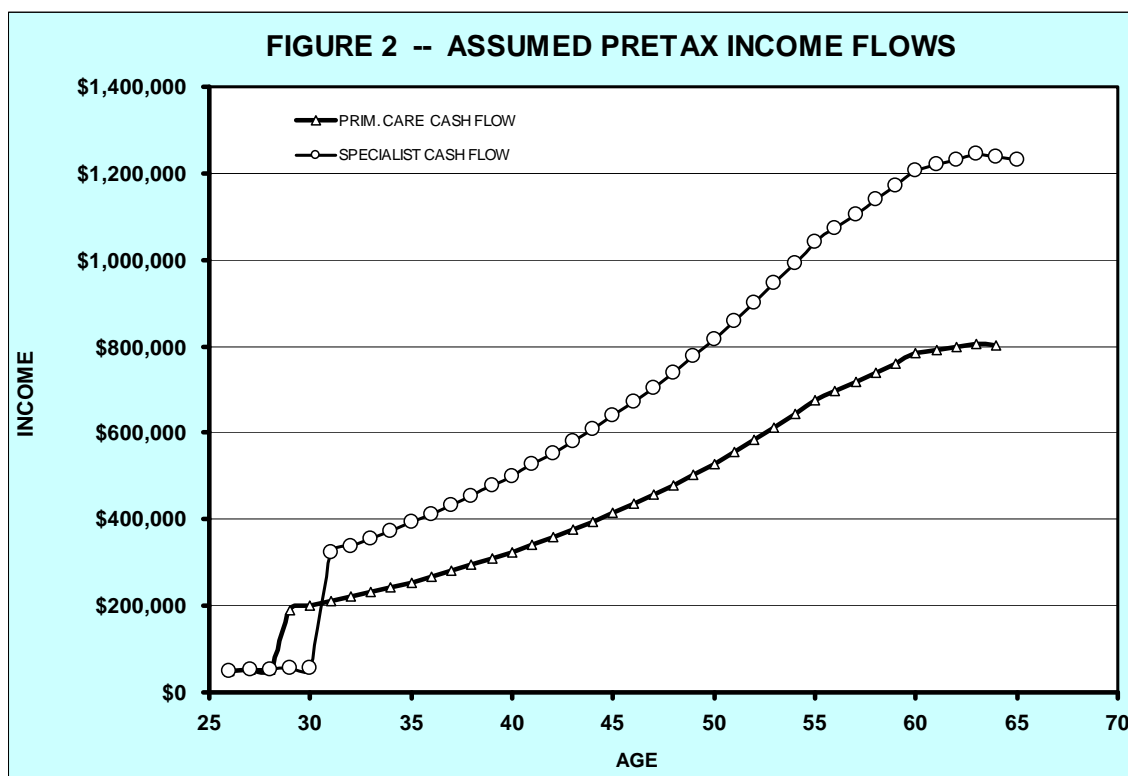
<sup>25</sup> E. Ray Dorsey, David Jarjoura and Gregory W. Rutecki, "Influence of Controllable Life Styles on Recent Trends in Specialty Choice by US Medical Students." *Journal of the American Medical Association*. (September 3, 2003) 290(9): 1173-8.

<sup>26</sup> James Thornton, "Physician choice of medical specialty: do economic incentive smatter?" *Applied Economics*. 2000. vol. 32:1419-1428.

### III. CHANGING FINANCIAL INCENTIVES TO ENCOURAGE A CHOICE OF PRIMARY CARE

Although economists recognize the complex set of factors that drive choices of a medical specialty and a practice location, it is natural that they concentrate on financial incentives.

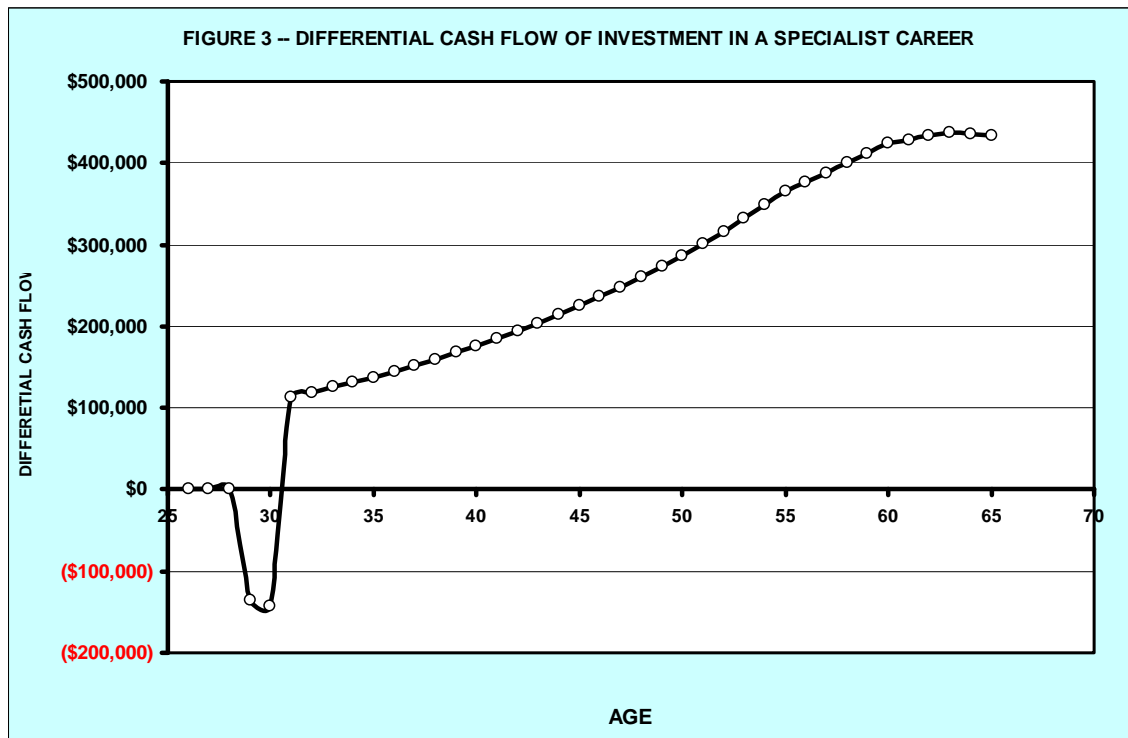
A compact way to model the impact of these financial incentives, in the minds of economists, is to think of the choice of a professional career as the perfect analogue of any other investment decision that requires an initial investment in the hope of a positive subsequent return on that investment. Figures 2 and 3 illustrate this so-called “human capital” model as it is exposed in the classroom.



In Figure 2 it is imagined that a medical-school graduate is aware of the two lines in that graph. The top line represents the typical future net cash flow, after practice expenses and income taxes, from practice in a medical specialty. The bottom line represents the analogous cash flow faced by a primary-care physician. It is assumed here that a specialist career requires some additional years of low-paying residency training. The foregone income that could have been earned in primary care is the up-front investment in a specialist career, relative to a primary-care career.

The decision to enter a specialist career, rather than one in primary care, can then be represented by subtracting the primary-care cash flow from the specialist cash flow, to obtain the differential cash flow shown in Figure 3. It is the cash flow which

from which one calculates the net-present-value (NPV) or the internal rate of return (IRR) of the decision to become a specialist rather than enter primary-care practice. Economists believe that medical graduates respond to these summary metrics in choosing their specialty.



It is immediately apparent from figures 2 and 3 that to enhance the financial attractiveness of a career in primary care, other things being equal, one could either shift down the projected cash flow to specialists or by shifting up the life-cycle cash flow to primary care or do both. The effect would be to shift down the cash-flow line in Figure 3, that is, to decrease the relative financial attractiveness of specialty training.

How could that be done?

**Changing compensation:** The most obvious method of doing so would be either to raise the compensation of primary-care physicians (fees, capitation, or salaries), or to lower the compensation of specialists, or to do both.

It has been attempted before, most notably when Congress established the Medicare fee schedule in 1992. At that time the fees of primary care physicians were raised substantially and those to many specialists were lowered relative to the previously prevailing fees.

For some reasons, however, it has proven difficult to maintain this tilting of the fee schedule over time, for reasons many observers attribute to the manner in which the relative value scale underlying the Medicare physician-fee schedule has proceeded.



<sup>27</sup> It is in good part a problem of intra-medical-profession politics and power, and also one of Congressional politics.

It can be asked next why private insurers have not led the way to raise the fees they pay primary-care physicians relative to those paid specialists. Many and probably most of them simply have adopted the Medicare relative value scale underlying their fee schedules, although their absolute level of fees may be higher than Medicare fees.

Insurance executives answer this question by pointing out that Medicare must lead the way. First, private insurers cannot act in unison, as that would violate antitrust laws. Second, if one of them individually raised substantially the payments to primary-care physicians, that insurer would have a cost disadvantage relative to competitors and yet would not be able to move the overall supply of primary care physicians. On the other hand, if the individual insurer wanted to achieve cost neutrality by paying specialists less, the insurer's enrollees might lose access to specialty care and move to competing insurers. I find that reasoning persuasive.

**Lowering the Amortization of Medical-School Debt:** In other industrial nations, tuition in medical school is low or zero. By contrast, American medical students pay substantial annual tuition charges, ranging in 2012-13 from a median of \$32,414 in public medical school to a median of \$50,309 in private medical schools.<sup>28</sup> Including other costs of attendance, but excluding the much higher opportunity cost of not earning a regular income in another job, the total cost of attending medical school ranged from a median of \$53,685 in public medical school to a median of \$72,344 in private medical schools.

Over 85 percent of medical students borrow to finance part or all of this huge investment in human capital. In 2012, 17% of them had an accumulated debt of \$250,000 or more upon graduating from medical school. The average accumulated debt per graduate was \$166,750 and the median \$170,000.<sup>24</sup>

It may be noted in passing that the amortization of this huge investment in human capital cannot be deducted from taxable income as would be an investment in physical capital – e.g., in a haberdashery. Our tax code has a distinct bias in favor of physical capital, even though it is now widely agreed that the wealth of modern nations depends crucially on its human capital.

Curiously, as already noted, the literature on the influence of debt on the career choices of medical-school graduates has yielded mixed results.<sup>24</sup> It does not seem to be a

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<sup>27</sup> In this connection, see Uwe E. Reinhardt, “The Little-Known Decision-Makers for Medicare Physician Fees.” *The New York Times Economix* (December 10, 2010).

<http://economix.blogs.nytimes.com/2010/12/10/the-little-known-decision-makers-for-medicare-physicians-fees/>

<sup>28</sup> Association of American Medical Colleges, Medical Students Education: Debt, Cost and Loan Repayment Fact Card. (October, 2012). <https://www.aamc.org/download/152968/data/debtfactcard.pdf>

major factor driving career choices. Even so, it may be worth exploring what potential policy levers a medical graduate's accumulated debt might offer.

Table 1 below illustrates the fraction of a physician's pretax net practice income (or salary) that would be absorbed by the amortization of debt for a hypothetical medical school graduate choosing either a primary-care career or entering a specialty.

<b>Table 1 -- Percentage of Pretax Net Practice Income Absorbed by Annual Debt Repayments under 20-Year Amortization,</b> (Assumed annual growth in practice income 3.5%; Borrowing rate 7.9%)				
<b>STARTING ANNUAL INCOME</b>	<b>\$150,000</b>		<b>\$300,000</b>	
<b>YEAR</b>	<b>Equal Payments</b>	<b>Growing Payments @ 3.5% per year</b>	<b>Equal Payments</b>	<b>Growing Payments @ 3.5% per year</b>
<b>1</b>	<b>10.1%</b>	<b>7.8%</b>	<b>5.1%</b>	<b>3.9%</b>
<b>10</b>	<b>7.2%</b>	<b>7.8%</b>	<b>3.6%</b>	<b>3.9%</b>
<b>20</b>	<b>5.1%</b>	<b>7.8%</b>	<b>2.5%</b>	<b>3.9%</b>

It is assumed in this table that debt amortization takes place over 20 years with either fixed annual loan repayments or, alternatively, payments that grow annually at 3.5%, the same rate at which the net practice income (or salary) of both types of physicians is assumed to grow. The assumed borrowing rate is 7.9%.

The tables show the absorption rates, in percent of net income, in practice years 1, 10 and 20. As would be expected, these absorption rates are sensitive to the borrowing rate students must charge on their debt. At a borrowing rate of only 4%, for example, the entries in the table would be as those in Table 2 below.

Table 2 -- Percentage of Pretax Net Practice Income Absorbed by Annual Debt Repayments under 20-Year Amortization, (Assumed annual growth in practice income 3.5%; Borrowing rate 7.9%)				
STARTING ANNUAL INCOME	\$150,000		\$300,000	
YEAR	Equal Payments	Growing Payments @ 3.5% per year	Equal Payments	Growing Payments @ 3.5% per year
1	7.4%	5.4%	3.7%	2.7%
10	5.2%	5.4%	2.6%	2.7%
20	3.7%	5.4%	1.8%	2.7%

Evidently, one way to enhance the future cash flow from primary care relative to that accruing to a specialty career would be to mitigate the burden of this debt amortization.

It could be done by lowering the borrowing rate for primary-care physicians, but not for specialists.

An alternative would be a loan-forgiveness program contingent on practicing full time in primary care. For example, for every year a physician works full time in primary care, \$X of his or her debt would be forgiven.

There might be arguments by specialists that some of their work involves primary care as well, for which they would seek pro-rated loan forgiveness; but such objections should not stand in the way of the general idea. One could work around it or simply reject the argument.

**Manipulating the tax code:** A final method to alter the future life cycle cash-flow from a choice of primary care, relative to that from a specialty career, would be changes in the tax code, much as economists dislike, as a matter of principle, the now widely practiced use of the tax code for social engineering, in lieu of more forthright subsidization of activities preferred by government.

As one such manipulation of the tax code, Congress has long extended to the managers of private-equity funds and hedge funds the tax-preference under which carried interest stemming from the long-term capitals gains earned by the fund for investors in the fund is taxed at the low capital gains rate. Carried interest is distinct from any long term capital gains these managers have earned on whatever their own investment in the fund may be. Carried interest basically is a cash bonus paid by other investors to the managers of funds for superior management of the funds. This tax preference has always been justified on the ground that it encourages capital formation, although like other economists,<sup>29, 30</sup> I personally find that justification unpersuasive.

But as long as this dubious tax preference continues to exist, it might as well be used in health policy. In one of my posts on *The New York Times* blog *Economix*<sup>31</sup> I had proposed that, if policy makers really do believe that the nation faces an acute shortage of primary-care physicians, they might come around to the view that this particular type of human capital is socially as meritorious as is general physical capital, be it factories or golf resorts. On that notion, the practice income of primary care physicians might be taxed, at least for some duration, as if it were the equivalent of carried interest.

To sum up at Section III of this Statement on financial incentives. In view of the foregoing discussion, I would recommend that:

**If Congress sincerely believes that there is and will be an acute shortage of *primary-care physicians*, it should realign the levels of compensation of physicians under Medicare and Medicaid more in favor of primary-care physicians. If Congress would like to see that realignment, it has no choice but the lead the way, as individual private insurers would find it difficult to effect the realignment by themselves.**

**Congress should fund experiments with rewarding the choice of a career in primary care, or to practice in an area with an acute shortage of primary-care physicians, by forgiving for every year the physician works full time in primary care part of the debt medical graduates have accumulated during their education and training.**

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<sup>29</sup> Alan S. Blinder, "The Under-Taxed Kings of Private Equity." *The New York Times*. (July 29, 2007). <http://www.nytimes.com/2007/07/29/business/yourmoney/29view.html?ei=5090&en=973b345a4a0b4227&ex=1343361600&adxnnl=1&partner=rssuserland&emc=rss&r=0>

<sup>30</sup> N. Gregory Mankiw, "The Taxation of Carried Interest." *Greg Mankiw's Blog*. (July 19, 2007). <http://gregmankiw.blogspot.com/2007/07/taxation-of-carried-interest.html>

<sup>31</sup> Uwe E. Reinhardt, "If Primary-Care Doctors Were Taxed Like Hedge-Fund Managers." *The New York Times Economix* (October 26, 2012). <http://economix.blogs.nytimes.com/2012/10/26/if-primary-care-doctors-were-taxed-like-hedge-fund-managers/>

**As long as carried interest paid from long-term capital gains is accorded the dubious tax preference Congress has accorded the managers of private equity and hedge funds, Congress should extend that privilege also to primary-care professionals, at least for some time of their careers.**