

The Robert Graham Center Update:

A Primary Care Perspective on Health
Care Workforce and Expenditures

Version 2.0 - 2009



UPDATED: Bazemore – 3.9.09

Message: The following is a compendium of annotated and referenced slides for public use that includes original and adapted analyses and commentary from the staff of the Robert Graham Center for Policy Studies in Family Medicine and Primary Care. We hope that you will find one or more of these slides useful in your own presentations.

www.graham-center.org

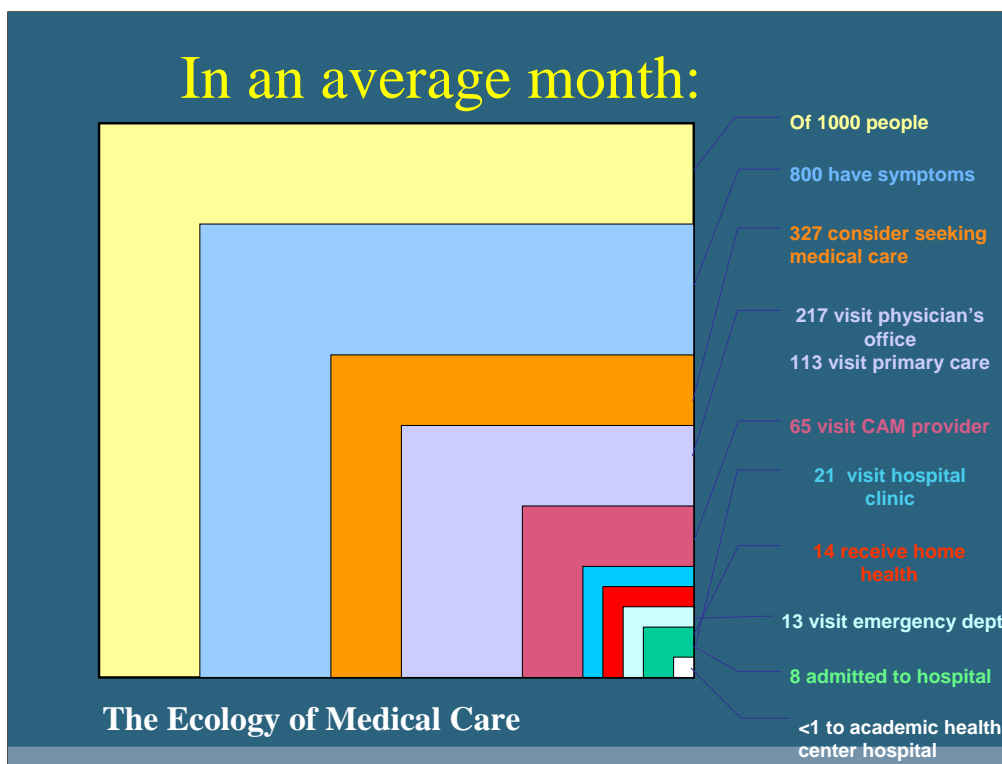
We welcome your feedback and comments: policy@aafp.org

Disclaimer: The information and opinions contained in research from the Graham Center do not necessarily reflect the views or policy of the AAFP.

Part I: Health System Cost and Outcomes

Version 2.0 - 2009





UPDATED – Bazemore – 1/12/09

Source: N Engl J Med. 2001 Jun 28;344(26):2021-5.

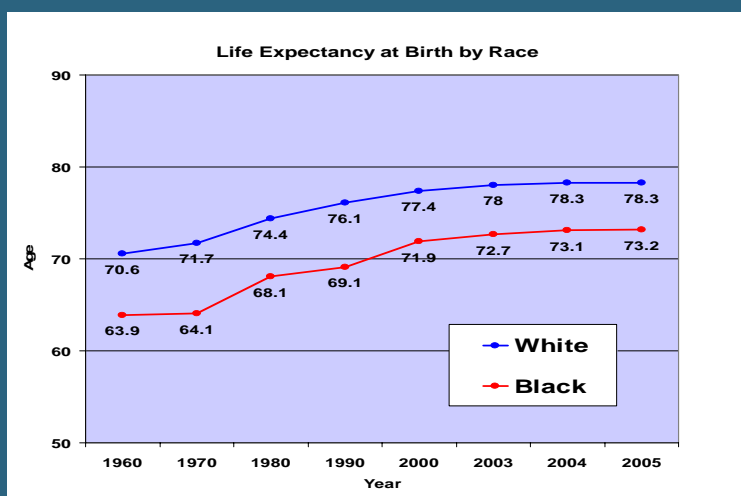
Message: First demonstrated by Kerr White in the classic ecology of medical care study published in 1961, and updated by the Robert Graham Center in 2000, physician's offices remain the largest platform of formal health care in the United States.

In a typical month in the US in 2000, of every 1000 individuals: 800 reported symptoms, 327 considered seeking medical care, 217 visited a physician's office (113 of which were seen in a primary care office), 65 were seen by a complementary or alternative care provider, 21 visited a hospital outpatient clinic, 14 received home health care, 13 visited an emergency department, 8 were hospitalized, and less than one was seen in an academic health center. The continued focus of education and research on hospitals and the problems seen within them persists and invites policy revisions that better balance education, research, and service toward the needs of the entire population.

More information can be found at:

- 1) <http://www.graham-center.org/online/graham/home/publications/onepaggers/2001/op10-contemporary-ecology.html>
- 2) <http://www.graham-center.org/online/graham/home/publications/onepaggers/2003/op25-care-children.html>
- 3) www.graham-center.org/online/graham/home/publications/articles/2005/byawnms-using-ecology.html
- 4) <http://content.nejm.org/cgi/content/extract/344/26/2021>

Unconscionable Disparity:



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UPDATED: Phillips – 3.6.09

Source: <http://www.cdc.gov/nchs/data/hus/hus08.pdf> Table 26

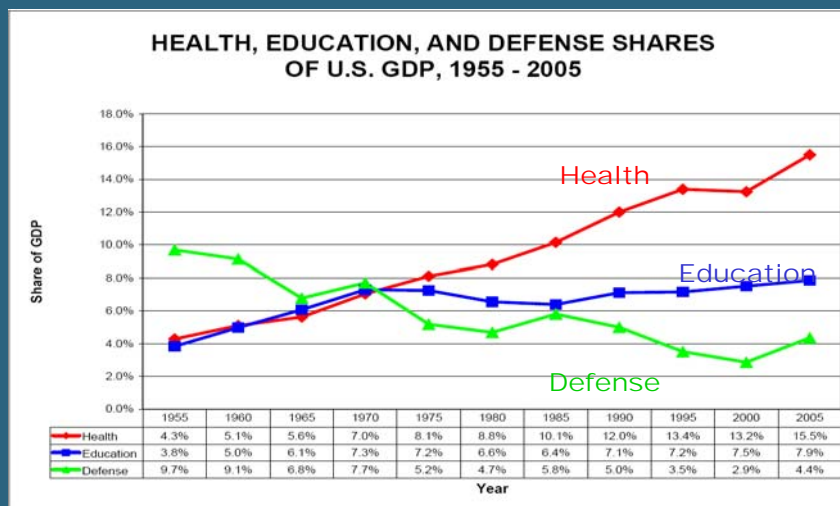
Message: Life expectancy at birth has been increasing for decades for both black and white people in the United States. This good news must be tempered, however, because of a stubborn persistence of a 5-7 year disparity in the length of life a black child can expect, compared to a white child.

How much longer will we tolerate such unconscionable disparity?

More information can be found at:

- 1) *Health, United States, 2005*, DHHS Publication #2005-1232, <http://www.cdc.gov/nchs/data/hs/hs05.pdf#027>
- 2) Woolf et al, "What if We Were Equal?", *Health Affairs*, 24, no. 2 (2005): 459-464
<http://content.healthaffairs.org/cgi/content/abstract/24/2/459>

Health Care Expenses



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UPDATED: Phillips 6.19.06

Source: *Health Costs Absorb One-Quarter of Economic Growth, 2000 – 2005 Recent Federal Report Unintentionally Obscures Massive Rise Physicians' Decisions Key to Controlling Cost.* Data Brief No. 8 - 9 February 2005. www.healthreformprogram.org. Alan Sager, Ph.D. and Deborah Socolar, M.P.H.

Message: Health care spending tracked with education spending as a percent of our economy until 1970 –the year when spending on education, health care, and defense were nearly the same. Since then, health care spending has continued to grow at a steady pace, while education has nearly flattened and defense has declined (except during the Reagan and Bush II administrations)

Nearly a half century ago, the United States spent almost equal amounts of its gross domestic product on education, defense, and health care. No longer. Now we spend about the same proportion on education, a bit less on defense (at least prior to the Iraq and Afghanistan Wars), but much, much more on health care. Health care spending approximates what is spent on education, prisons, defense, farm subsidies, food stamps, and foreign aid combined. There are some who argue that spending more on health care is a good thing, benefiting people and creating good jobs. There are others who note the relatively poor performance measures concerning health in the United States and suggest that we are spending our resources unwisely, if not wastefully, and at the expense of alternative uses of capital for other worthwhile objectives. In biology, cells that grow uncontrollably and crowd out other cells are called “cancer.”

More information can be found at:

1) [Who Will Have Health Insurance in the Year 2025?](http://www.graham-center.org/online/graham/home/publications/onepagars/2005/op40-insurance-2025.html) www.graham-center.org/online/graham/home/publications/onepagars/2005/op40-insurance-2025.html

Health Care Spending

- 2008 health spending (estimated)
 - \$2.39 trillion** (\$2,390,000,000,000)
 - \$7,868 per person (2008 estimate)
 - Increased from \$2000-\$4600 from 1980-2000
 - \$421 billion increase over 2005
- Projected to reach \$4.3 trillion by 2017, nearly 20% of the economy

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UPDATED: Phillips – 2.15.09

Source:

1) Total and per capita health spending (2008 estimates)

Keehan S, et al. Health spending projections through 2017: the baby-boom generation is coming to Medicare. *Health Affairs* 2008;27(2):w145-55

2) Ref for adjusted spending 1980-2000

3) Letter to NY Times Editor: Peter Salgo argues that "health care dollars became scarce in the 1980's and 90's." But if we look at per capita health spending in constant, inflation-adjusted year 2000 dollars, we see that spending rose from about \$2,000 in 1980 to \$3,400 in 1990 and to \$4,600 in 2000. That is an increase of about 130 percent over two decades. Uwe Reinhardt; Princeton, N.J., March 22, 2006. *The writer is a professor of political economy at Princeton University.*

Message: In 2008, healthcare spending is expected to be nearly \$2.4 trillion, over \$7800 per person. This is \$421 billion more than in 2005. Between 1980 and 2000, health care spending per person more than doubled (rose 120% in 2000 adjusted dollars). It took only 5 years for nearly the same increase and it will likely take less than a decade to double again.

More information can be found at:

1) Who Will Have Health Insurance in the Year 2025? www.graham-center.org/online/graham/home/publications/onepagers/2005/op40-insurance-2025.html

Health Care Spending

- 16% of the US Economy

BUT

- From 2000 – 2005 healthcare devoured nearly 25% of our Economic Growth

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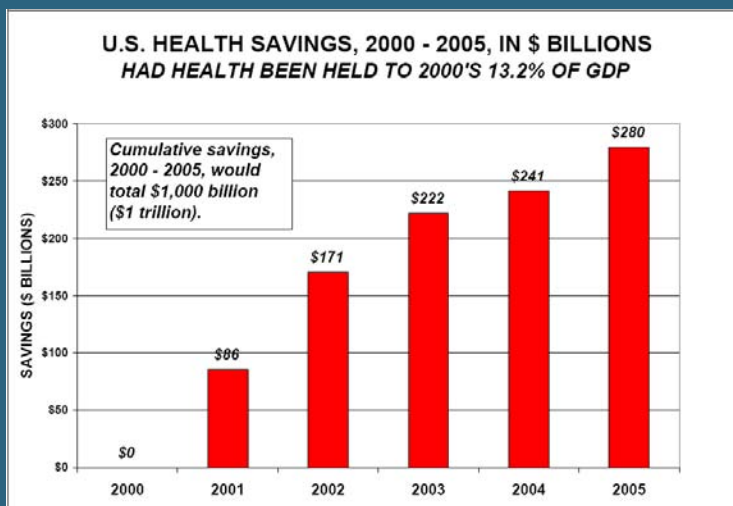
UPDATED: Phillips/Bazemore – 2.15.09

Source: *Health Costs Absorb One-Quarter of Economic Growth, 2000 – 2005 Recent Federal Report Unintentionally Obscures Massive Rise Physicians' Decisions Key to Controlling Cost.* Data Brief No. 8 - 9 February 2005. www.healthreformprogram.org. Alan Sager, Ph.D. and Deborah Socolar, M.P.H.; Directors, Health Reform Program, Boston University School of Public Health.

Message: It is widely known that we spend about \$1 of every \$6 in our economy on healthcare; but what is less recognized is that between 2000 and 2005 we spent one-quarter of new dollars in the economy.

More information can be found at: Catlin A, et al. National Health Spending in 2006: A Year of Change for Prescription Drugs. *Health Affairs* 2008;27:1;14-29.

Health Care Spending



Healthcare's major role has become Economic Engine



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UPDATED: Phillips – 6.20.06

Source: *Health Costs Absorb One-Quarter of Economic Growth, 2000 – 2005 Recent Federal Report Unintentionally Obscures Massive Rise Physicians' Decisions Key to Controlling Cost.* Data Brief No. 8 - 9 February 2005.

www.healthreformprogram.org. Alan Sager, Ph.D. and Deborah Socolar, M.P.H.; Directors, Health Reform Program, Boston University School of Public Health.

Message: In 2000, we spent 13.2% of our economy on health care. If we had managed to freeze our spending at 13.2% of GDP, there would have been a cumulative savings over the next 5 years of \$1 trillion.

And the Results?

1960: U.S. Infant mortality 13th (of 28 developed countries)

Women's Life expectancy 15th

Men's Life expectancy 20th

2005: U.S. Infant mortality 25th among 28 developed countries (just behind Hungary & Poland)

Women's Life expectancy 7th

Men's Life expectancy 9th

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UPDATED: Phillips/Bazemore – 2.15.09

Source:

1) 1960 and 2005 infant mortality rate

<http://www.oecd.org/dataoecd/46/36/38979632.xls>

2) 1960/2005 life expectancy:

<http://www.oecd.org/dataoecd/46/36/38979632.xls>

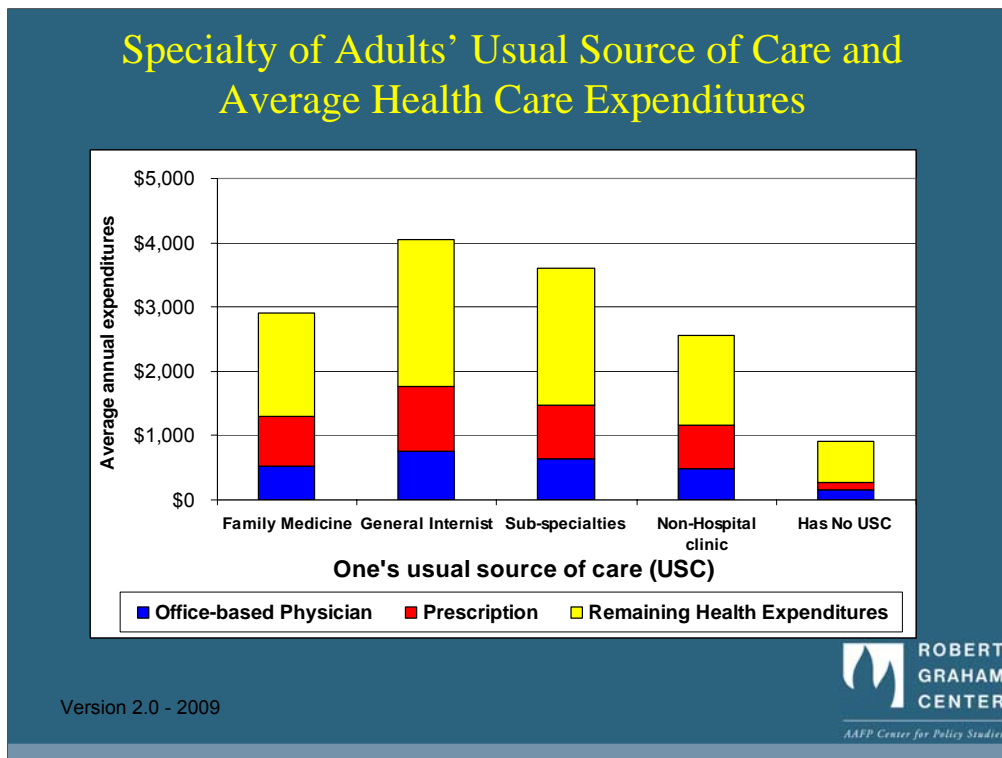
Message: If the United State's extraordinary spending on health care were accompanied by outstanding measures such as very low infant mortality and very high life expectancies for people of all races and ethnic groups, it might well be a cause for celebration. Regrettably, it is not so. We spend the most while settling for mediocre results. This situation is an international embarrassment for the United States. Better performance is known to be possible. There is something scandalously wrong with US health care.

More information can be found at:

1) www.oecd.org

2) The World Fact book:

<http://www.cia.gov/cia/publications/factbook/index.html>



UPDATED: Dodoo – 7.21.06

Source: 2002-2003 MEPS

Message: Having a usual source of care is a strong predictor of participating in the health care system in various settings of care. Little is known about the effects associated with people having as their usual source of care a clinic vs. a particular physician or one type of primary care physician vs. another type. Interestingly, even after controlling for a host of personal variables including health status, expenditures vary for health care for people who designate different types of primary care physicians as their usual source of care. This example shows that more is spent on health care for adults with an internist as their usual source of care than those with a family physician. Of course, unmeasured variables, such as how sick the patients are, might explain this difference. However, patients with these different types of physicians as their usual source of care do not differ as a group on reported measures of health status. This difference could be interpreted to reveal either over or under use of care. The most important point is that this variation seems to be real, and that research techniques that might be expected to “adjust it away” based on patient characteristics and attributes, do NOT make it go away. Interestingly, it occurs without deterioration of self-reported health status during the relatively short time frame of a year or so, and without any decrement in patient-declared satisfaction. There are plausible explanations related to training and practice style that might mediate this variation in expenditure, and there may be opportunities for some collaborative learning here. Extended to a national scale, differences of this magnitude could be very important from an economic perspective.

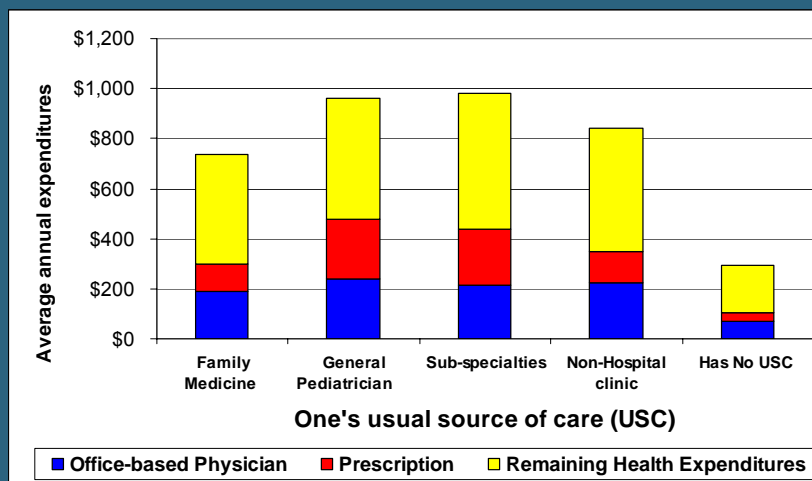
More information can be found at::

- 1) <http://www.graham-center.org/online/etc/medialib/graham/documents/publications/mongraphs-books/2004/rgcmo-physician-workforce.Par.0001.File.tmp/rgcmo-physician-workforce.pdf>
- 2) <http://www.graham-center.org/online/etc/medialib/graham/documents/publications/mongraphs-books/2005/rgcmo-care-children.Par.0001.File.tmp/rgcmo-care-children.pdf>

Note: Associated log and syntax file at: SAS run using 2-part model from
 g:\rgcwork\medical_home\prg\medhome3.sas and

Excel calculations from g:\rgcwork\medical_home\doc\tables 1 and 6.xls and
 g:\rgcwork\medical_home\doc\usc_tables.doc

Specialty of Children's Usual Source of Care and Average Health Care Expenditures



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UPDATED: Dodoo – 7.21.06**Source:** 2002-2003 MEPS

Message: Having a usual source of care is a strong predictor of participating in the health care system in various settings of care. Little is known about the effects associated with people having as their usual source of care a clinic vs. a particular physician or one type of primary care physician vs. another type. Interestingly, even after controlling for a host of personal variables including health status, expenditures vary for health care for people who designate different types of primary care physicians as their usual source of care. This example shows that more is spent on health care for children with a pediatrician as a usual source of care than those with a family physician. Of course, unmeasured variables, such as how sick the patients are, might explain this difference. However, patients with these different types of physicians as their usual source of care do not differ as a group on reported measures of health status. This difference could be interpreted to reveal either over or under use of care. The most important point is that this variation seems to be real, and that research techniques that might be expected to “adjust it away” based on patient characteristics and attributes, do NOT make it go away. Interestingly, it occurs without deterioration of self-reported health status during the relatively short time frame of a year or so, and without any decrement in patient-declared satisfaction. There are plausible explanations related to training and practice style that might mediate this variation in expenditure, and there may be opportunities for some collaborative learning here. Extended to a national scale, differences of this magnitude could be very important from an economic perspective.

More information can be found at:

- 1) <http://www.graham-center.org/online/etc/medialib/graham/documents/publications/mongraphs-books/2004/rgcmo-physician-workforce.Par.0001.File.tmp/rgcmo-physician-workforce.pdf>
- 2) <http://www.graham-center.org/online/etc/medialib/graham/documents/publications/mongraphs-books/2005/rgcmo-care-children.Par.0001.File.tmp/rgcmo-care-children.pdf>

Note: Associated log and syntax file at: SAS run using 2-part model from
g:\rgcwork\medical_home\prg\medhome3.sas

Excel calculations from g:\rgcwork\medical_home\doc\tables 1 and 6.xls and
g:\rgcwork\medical_home\doc\usc_tables.doc

2007 US Health Expenditures

• Total	\$2,241,200,000,000
• Hospital Care	\$696,500,000,000
• Physician and Clinical Services	\$478,800,000,000
• Dental Services	\$95,200,000,000
• Nursing Home Care	\$131,300,000,000
• Home Care	\$59,000,000,000
• Prescription Drugs	\$227,500,000,000
• Admin/Net Cost of Insurance	\$155,700,000,000
• Gov't Public Health Activities	\$64,100,000,000

(Source: Hartman M, Martin A, et al. Health Affairs 2009;28:1;246-261.)

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UPDATED: 1/21/09

Source: Hartman M, Martin A, et al. National Health Spending in 2007: Slower Drug Spending Contributes to Lowest Rate of Overall Growth Since 1998. Health Affairs 2009;28:1;246-261.

Message: Each year the Medicare actuaries and others report health care expenditures, usually in the Jan-Feb issue of Health Affairs. The 2009 report is for 2007 expenditures as shown here. What this shows is that we spend a lot of money, **surpassing the milestone \$2 trillion per year mark in 2006**,--and amazingly, this is renewable annually. Hospitals continue to get more than any other group, but physicians continue to do well, moving well above the \$400 billion/year threshold. Pharmaceuticals garner nearly half as much as physicians. The \$155 million for administering our complex insurance system and leaving it with a profit is of course the target for those who see this bucket of money as a big down payment on universal health insurance coverage via a single payer system. As a fraction of all health care spending, expenditures for public health activities remains small, but \$64 billion is not a trivial investment.

Only people who live inside the Washington beltway can really understand what a billion is. And it is doubtful that any of us can grasp the T-word, i.e. a trillion. To illustrate the size of a trillion, ask yourself how long ago was a trillion seconds. How long? 31,709 years ago. So when the US spends \$2 trillion on health care in a single year, you can think of it in seconds, more than 63,000 years worth of seconds. Then, perhaps we would all do well to not complain that there just isn't enough money.

More information can be found at: See Health Affairs, Jan-Feb edition each year

The Situation: 2007 Expenditures

- ONLY 6.1% growth in healthcare expenditures, the lowest growth rate since 1998, accounting for 16.2% of GDP.
- Real GDP grew 2.0% and Population grew 1%.
- Private health care spending (\$1,205 billion) growth increased to 5.8%, compared with 5.4% in 2006.
- Public health care spending (\$1,035 billion) growth slowed to 6.4%, compared with 8.2% in 2006.

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UPDATED: 1/21/09

Source: Hartman M, Martin A, et al. National Health Spending in 2007: Slower Drug Spending Contributes to Lowest Rate of Overall Growth Since 1998. *Health Affairs* 2009;28:1;246-261.

Message: The 2007 healthcare expenditure growth rate dropped to its lowest rate since 1998 (from 6.7% in 2006 to 6.1% in 2007). Many, of course, hear that spending decreased, when in fact it was the rate of spending that decreased. Actual health care spending grew at more than twice the rate in the growth of the gross domestic product, and about 7 times more than the growth in the population. It is somewhat interesting that in 2007, private spending growth increased a bit while public spending growth actually slowed (mainly due to the implementation of Medicare Part D). In the view of many primary care and public health professions, a pattern of increased public health spending would be a good thing. When dealing with numbers this large, even a part of percentage increase can be a substantial amount of money.

More information can be found at: See *Health Affairs*, Jan-Feb edition each year

The Situation: 2007 Expenditures

- Medicare spending was \$431.2 billion with a growth rate of 7.2%, a decrease from 18.5% spending growth in 2006.
- Medicaid spending was \$186.1 billion, an increase of 6.4%. Annual growth in Medicaid spending has averaged 8.0% from 1995-2005.
- Out of pocket health care spending was \$268.6 billion, a growth rate of 5.3%, up from 3.8 in 2006.

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UPDATED: 1/21/09

Source: Hartman M, Martin A, et al. National Health Spending in 2007: Slower Drug Spending Contributes to Lowest Rate of Overall Growth Since 1998. *Health Affairs* 2009;28:1;246-261.

Message: Another way to look at spending is “who or what entity released the dollars to the providers?” From this perspective, you can see that Medicare spending returned to recent historical norms after a year of 18% growth in 2006. Medicaid spending growth also returned after an unprecedented decline in 2006, a crucial issue for states. The health care environment is such that states can’t print money and often have laws that require them to have a balanced budget. So, when one sector grows faster than the state’s revenue growth (assuming there is growth), the increased health care expenditures must come from somewhere else, such as schools. Most people recognize that robbing schools to pay for health care may be bad for your health.

And in a democracy where each person can have her or his vote, each person’s experience of taking out their wallet and handing over cash can affect the way people think and vote. Out of pocket expenditures for health care continued to rise for people, growing by 5.3% in 2007. This means that health care is requiring more AND a larger portion of household income. It is a bit troubling that so many people report that they aren’t sure what they get for these expenditures is worth it. It is also interesting that many think that making this portion of expenditures even larger would bring greater personal responsibility to the health care market place, possibly serving as a brake on health care costs.

One view is that whether it is called Medicare's money, Medicaid's money, or my money—is --that it is ALL our money, eventually coming from all of us collectively.

More information can be found at: See *Health Affairs*, Jan-Feb edition each year

The Situation: 2007 Expenditures

- Private insurance premium growth remained constant at 6.0%.
- The employer share of private health insurance was 72.9% in 2007 with employees paying the remaining 27.1%.
- Employers continued to seek savings by increasing use of coinsurance, adding deductibles, and eliminating coverage for some treatments or drugs.

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UPDATED – 1/21/09

Source: Hartman M, Martin A, et al. National Health Spending in 2007: Slower Drug Spending Contributes to Lowest Rate of Overall Growth Since 1998. *Health Affairs* 2009;28:1;246-261.

Message: Here is a similar story for private insurance. While increasing Part D retiree subsidies were a factor in lowering employer spending, expenditures for insurance coverage increased more than GDP and probably for most people, more than wages. It is obvious that such a pattern is not sustainable forever.

More information can be found at: See *Health Affairs*, Jan-Feb edition each year

The Situation: 2007 Expenditures

- The cost of administering our insurance system and the net cost of private insurance rose to \$155.7 billion in 2007, from \$145.5 billion in 2006 — a 3.6% increase.
- Many think that when this expense is added to the administrative burdens placed on providers by insurers for insurance related functions that perhaps 1/3 of premium dollars do not pay for health care.

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UPDATED: 1/21/09

Source: Hartman M, Martin A, et al. National Health Spending in 2007: Slower Drug Spending Contributes to Lowest Rate of Overall Growth Since 1998. *Health Affairs* 2009;28:1;246-261. Kahn et al, *Health Affairs*, Nov/Dec 2005.

Message: Health insurance continued to be a profitable business in the US. In 2004. ADMINISTRATIVE BURDENS placed on the health care delivery system by insurers — billing and insurance related functions for physicians and hospitals — BURN UP ANOTHER 12 PERCENT OR SO OF THE PREMIUM DOLLAR (Kahn et al, *Health Affairs*, Nov/Dec 2005). Added together, these costs account for ONE-THIRD OF THE PREMIUM DOLLAR THAT DOES NOT GO FOR HEALTH CARE.

More information can be found at: See *Health Affairs*, Jan-Feb edition each year

The Situation: 2007 Expenditures

- Public funds (\$1,035.7 billion) accounted for 46.2% of health care expenditures.
- Private funds (\$1,205 billion) accounted for 53.8% of health care expenditures.
- Compared to 2006, public spending on health care increased 6.4% while private spending increased 5.8%.

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UPDATED: 1/21/09

Source: Hartman M, Martin A, et al. National Health Spending in 2007: Slower Drug Spending Contributes to Lowest Rate of Overall Growth Since 1998. *Health Affairs* 2009;28:1;246-261.

Message: One often hears people speak with satisfaction, even pride, in our private health care system in the US. A key point shown here is that public sources account for nearly half of spending in our “private system of health care.” In 2007, public spending grew at a faster rate than private spending. These numbers don’t consider the effects of preferential tax treatment for insurance premiums that result in foregone government revenue.

More information can be found at: See *Health Affairs*, Jan-Feb edition each year

The Situation: 2007 Expenditures

	<u>% Increase vs. 2006</u>
• Hospitals	7.3
• Physicians	6.5
• Prescription Drugs	4.9

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UPDATED: 1/21/09

Source: Hartman M, Martin A, et al. National Health Spending in 2007: Slower Drug Spending Contributes to Lowest Rate of Overall Growth Since 1998. *Health Affairs* 2009;28:1;246-261.

Message: This brief table offers an explanation for why our legislators are not necessarily attuned to pleas for more funding for hospitals, doctors, and drugs. In 2007, expenditures for the products and services provided by these three groups increased rather nicely though increasing use of generics, slower pricing growth, and growing consumer safety concerns helped to “contain” the annual growth in prescription drug spending to around 5%.

More information can be found at: See *Health Affairs*, Jan-Feb edition each year

The Situation: 2007 Expenditures

\$7,421 per person in 2007

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UPDATED: 1/21/09

Source: Hartman M, Martin A, et al. National Health Spending in 2007: Slower Drug Spending Contributes to Lowest Rate of Overall Growth Since 1998. *Health Affairs* 2009;28:1;246-261.

Message: This slide is just stunning. We did not spend \$7421 per sick person, or per insured person. In 2007, we spent \$7421 for health care on average for every person that the census could count. This is more than the annual income of much of planet earth's population, and again makes the point that we are rich. It is both tantalizing, and humbling, to pause and think, "If I could have \$7421 to spend this year for every person, what would I do with it?" If you think about this later, just remember that never before has a nation spent so much to accomplish so little gain in health for so few. Maybe you can see a clear path for us to travel to redress this scandalous situation and end this international embarrassment.

More information can be found at: See *Health Affairs*, Jan-Feb edition each year, article on National Health Spending

Part II: Primary Care Workforce

Version 2.0 - 2009



The Workforce in 2008: Shortage???

- 681,808 active physicians in direct patient care (1 for every 451 persons in the US)

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UPDATED: Xierali – 01.23.2009

Source:

- 1) AMA Masterfile, July 2008
- 2) Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2000 to July 1, 2008 (NST-EST2008-01), <http://www.census.gov/popest/estimates.php>, released on Dec. 22, 2008

Message: Approximately 2/3 of physicians in the United States actively practiced medicine in 2008 as their main professional activity, that is, there were more than 681,000 practicing physicians, of all types, or 1 for about every 451 persons. How many do we need?

More information can be found at: <http://www.graham-center.org/online/etc/medialib/graham/documents/publications/mongraphs-books/2004/rgcmo-physician-workforce.Par.0001.File.tmp/rgcmo-physician-workforce.pdf>

Note: 1. July 2008 Population estimate includes the United States (304,059,724) and Puerto Rico (3,954,037)

2. Associated log and syntax files in:
g:\rgcdata\unwted\ama\prg\summary.sas

Primary Care Workforce July 2008 ⁽¹⁾

- 98,328 family physicians/general practitioners (1 for every 3, 132 persons; 14.42% of the physician workforce).
- 92,917 general internists (1 per 2,508 adults) and 49,171 general pediatricians (1 for 1,523 children and adolescents).
- 240,416 primary care physicians (1 for every 1,281 persons).

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UPDATED: Xierali – 01.23.09

Source:

1) AMA Masterfile, July 2008

2) Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2000 to July 1, 2008 (SCPRC-EST2008-18+POP-RES), <http://www.census.gov/popest/estimates.php>, released on Dec. 22, 2008

Message: Of these actively practicing physicians, a little more than 1/3 (about 240,000) were primary care physicians, with there being a primary care PHYSICIAN for approximately about every 1,281 persons in the United States. There was a family physician in active practice for every 3,132 persons, a general internist for about every 2,508 adults, and a general pediatrician for about every 1,523 children and adolescents. How many do we need?

More information can be found at: <http://www.graham-center.org/online/etc/medialib/graham/documents/publications/mongraphs-books/2004/rgcmo-physician-workforce.Par.0001.File.tmp/rgcmo-physician-workforce.pdf>

Note: 1.) July 2008 Population estimate includes the United States (304,059,724) and Puerto Rico (3,954,037); **2.)** July 2008 Population estimate shows there are 233,089,640 with age 18 and plus in the US and PR; **3.)** Associated log and syntax files in: g:\rgcdata\unwted\ama\prg\summary.sas

Primary Care Workforce 2004 ⁽²⁾

- 50,100 physician assistants
(more than 22,000 in primary care)
- 115,000 Nurse Practitioners
(about 92,000 in primary care)
- 336,000 primary care clinicians—probably the largest and best-trained primary care workforce that has ever existed in the US.

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AAFP Center for Policy Studies

UPDATED: Phillips – 6.19.06

Source:

- 1) PA: AAPA 2005; www.aapa.org
- 2) NP: RN Sample Survey, 2004; www.hrsa.gov
- 3) Aggregate: <http://www.graham-center.org/online/etc/medialib/graham/documents/publications/mongraphs-books/2004/rgcmo-physician-workforce.Par.0001.File.tmp/rgcmo-physician-workforce.pdf>

Message: In addition to primary care physicians, a portion of physician assistants and nurse practitioners also provide primary care services, about 22,000 physician assistants and perhaps 92,000 nurse practitioners in 2004. When these clinicians are added to the physician population, there were approximately 336,000 primary care clinicians caring for people in the United States in 2004, probably the largest and best-trained primary care workforce that has ever existed in the United States.

This represents a major policy success, addressing the problems precipitated mid-20th century by the decline of general practice in the United States.

More information can be found at: <http://www.graham-center.org/online/etc/medialib/graham/documents/publications/mongraphs-books/2004/rgcmo-physician-workforce.Par.0001.File.tmp/rgcmo-physician-workforce.pdf>

Selected Findings

- The number of nurse practitioners grew 120% to 155,990 between 1996 and 2004. Upwards of 80% were practicing in primary care in 2000.
- The number of physician assistants grew 160% between 1996 and 2007, to 69,473. Only one-third (34%) practice in primary care, down from half a decade earlier.

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UPDATED: Phillips – 6.19.06

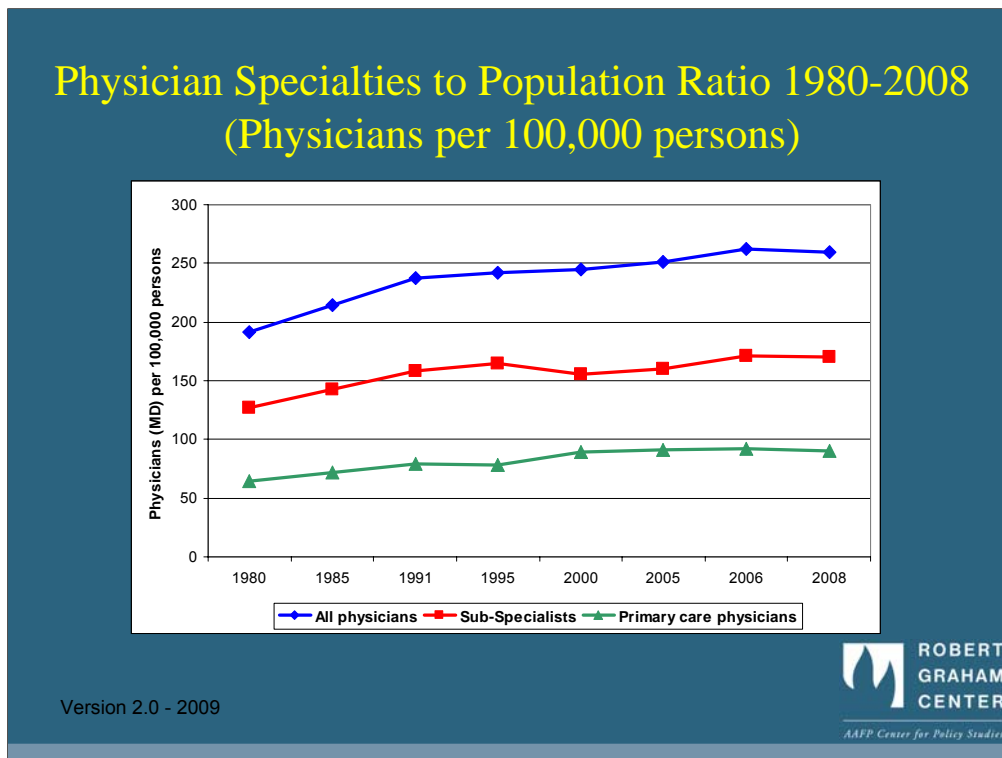
Source:

- 1) NP: RN Sample Survey, 1996 & 2004; www.hrsa.gov
- 2) PA: AAPA; www.aapa.org

Message: One of the most frustrating things about health care workforce analysis and planning is the propensity for various types of health care professionals to plan in isolation from everyone else. These remarkable growth rates of physician assistants and nurse practitioners, many of whom provide primary care, are examples of the need to work together, across fields, to organize care to achieve desired results. Some may see professionals in other fields as competitors, as they may well be. Others may see them as team members, enablers, expanders of what is possible in a patient-centered world. These data confirm as certain that there are a lot of nurse practitioners and physician assistants. They will be doing something for years to come. They can make important contributions to family medicine and primary care.

More information can be found at:

- 1) NP: RN Sample Survey, 1996 & 2004; www.hrsa.gov
 - 2) PA: AAPA; www.aapa.org <http://www.aapa.org/research/07census-intro.html>
- <http://www.aapa.org/research/censusa.html>



Updated: Xierali & Dodoo – 2-26-2009

Data sources:

1. Number of physicians (MD only) 1980 to 1995 from <http://bhpr.hrsa.gov/healthworkforce/reports/factbook02/FB202.htm>
 2. Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2000 to July 1, 2008 (NST-EST2008-01), <http://www.census.gov/popest/estimates.php>, released on Dec. 22, 2008 and from U.S. Census Bureau, Statistical Abstract of the United States: 2000, Section I, <http://www.census.gov/prod/2001pubs/statab/sec01.pdf>, Table No. 12
 3. Number of physicians (MD and DO) 2000 and 2008 from AMA Master Files, SAS programs at g:\rgcwork\Data_slide_update\data\prgsummary.sas
 4. Number of osteopathic physicians 1980 - 1995 from American Osteopathic Association, Publications Division, AOA Fact Sheet, June 2000 http://www.osteopathic.org/pdf/ost_factsheet00.pdf
- Calculations on doc_popln_ratios spreadsheet at g:\rgcwork\Data_slide_update\data\source_data_analysis.xls

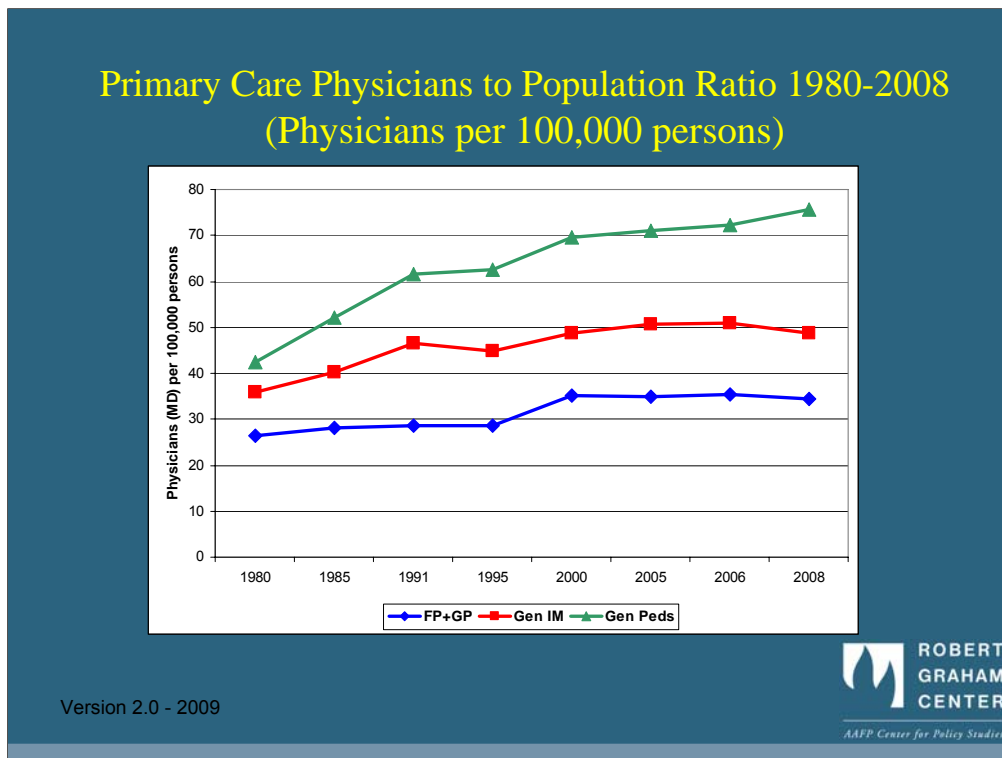
Message: This complicated slide shows that since 1980 the total number of physicians, the number of actively practicing physicians, the number of physicians in non-primary care specialties, and the number of primary care physicians have all consistently increased more than the population has grown. The green triangles represent the primary care physicians, and even when the three primary care physician groups are combined, it is clear that other specialties continue to dominate growth in the physician workforce.

Other Notes : Looking at U.S. Census data and the AMA Masterfile data....IN THE YEAR 2000 THERE WERE ABT 275 MILLION PEOPLE IN THE U.S. AND ABT 813,000 DOCTORS.

To make this more manageable to look at, I calculated the # of Docs there are/have been in the U.S. per 100,000 people. For active docs (blue) we see that in the year 2000 there were 245 active docs per every 100,000 people in the U.S.

But when people say they "went to a doctor's office, they're pretty much referring to OUTPATIENT PCPs. If you add the FP/GP, Ped, and GIM folks all together for the year 2000, you get 89 docs per 100,000 people.

More information can be found at: <http://www.graham-center.org/online/etc/medialib/graham/documents/publications/mongraphs-books/2004/rgcmo-physician-workforce.Par.0001.File.tmp/rgcmo-physician-workforce.pdf>



UPDATED: Xierali & Dadoo – 2-26-2009

Data sources:

1. Number of physicians (MD only) 1980 to 1995 from <http://bhpr.hrsa.gov/healthworkforce/reports/factbook02/FB202.htm>
 2. Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2000 to July 1, 2008 (NST-EST2008-01), <http://www.census.gov/popest/estimates.php>, released on Dec. 22, 2008 and from U.S. Census Bureau, Statistical Abstract of the United States: 2000, Section I, <http://www.census.gov/prod/2001pubs/statab/sec01.pdf>, Table No. 12
 3. Number of physicians (MD and DO) 2000 and 2008 from AMA Master Files, SAS programs at g:\rgcwork\Data_slide_update\data\prgsummary.sas
 4. Number of osteopathic physicians 1980 - 1995 from American Osteopathic Association, Publications Division, AOA Fact Sheet, June 2000 http://www.osteopathic.org/pdf/ost_factsheet00.pdf
- Calculations on doc_popln_ratios spreadsheet at g:\rgcwork\Data_slide_update\data\source_data_analysis.xls

Note: Calculations are based on population served. FP+GP = Number of physicians/Total Population*100,000;
Gen IM = Number of physicians/Population ≥ 18 *100,000; Gen Peds = Number of physicians/Population < 18 *100,000

Message: This pattern of a relatively small primary care physician workforce and a relatively large subspecialized physician workforce is not a typical pattern, and many countries, often with better performance measures, have a different balance of primary care and subspecialty physicians, e.g. half and half or 2/3's primary care and 1/3 subspecialists. Many health policy experts believe that herein lies part of the explanation for the high cost without poorer health outcomes (and health disparities) that characterizes health care in the United states when compared to other developed countries

More information can be found at: <http://www.graham-center.org/online/etc/medialib/graham/documents/publications/mongraphs-books/2004/rgcmo-physician-workforce.Par.0001.File.tmp/rgcmo-physician-workforce.pdf>

People With Chronic Conditions Who Have Seen a Physician in the Last Year (2006 MEPS)

Condition	Saw PC Physician	Saw Subspecialist
Hypertension	38,837,409 (86%)	30,805,093 (68%)
CHF	1,662,049 (84%)	1,683,401 (85%)
Asthma	12,045,208 (85%)	8,308,323 (59%)
Glaucoma	2,639,362 (77%)	3,171,079 (93%)
MS	353,908 (71%)	489,764 (98%)
Parkinson's	386,406 (82%)	404,016 (86%)
Diabetes	15,371,384 (87%)	12,072,405 (68%)
Arthritis	2,030,564 (85%)	1,906,396 (79%)

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Update: Steve Petterson – February 2009

Source: MEPS 2006; Associated log and syntax files in
G:\RGCwork\Data_slide_Update\People With Chronic Conditions


Message: “Many people assume that once patients have a particular condition or diagnosis--they transfer their care to a physician who specializes in that condition or diagnosis. This is not the case as shown here for a spectrum of disorders. Indeed, more people with hypertension, heart failure, asthma, macular degeneration, and Parkinson’s disease see a primary care physician each year than see a specialist treating each of these conditions. Since a large majority of people with these chronic diseases see a primary care physician, there are definitely opportunities and obligations for primary care physicians in new models of primary care to provide and assure critical services, while avoiding wasting precious, often expensive, resources. Obviously, primary care and subspecialty physicians need to work together to optimize care for people with problems such as these.”

Direct Patient Care Physicians (MD&DO)

	FP	FP & GP	PC	Not PC	Total
1991	45,355	67,078	156,291	294,147	450,438
2001	67,860	85,656	204,068	370,678	574,746
2008	85,253	98,328	240,416	441,392	681,808
1991-2008	+88%	+47%	+54%	+50%	+51%

Population growth 1991-2008 = 20%

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UPDATED: Xierali, 2009

Source: AMA Masterfile, multiple years

and at

G:\RGCwork\Data_slide_update\data\source_data_analysis.xls for calculations

Message: From 1991-2008, the actively practicing physician workforce of the United States grew 51%, with an almost equal *percentage* growth of primary care physicians and all other types of physicians. The relentless decline of general practice continued, somewhat neutralizing the large growth rate of family physicians. When actual numbers, not percentages, are considered, there was a net gain of about 85,000 primary care physicians, accompanied by a net gain of more than 150,000 physicians in other specialties. A belief that this was period in which primary care was dominant—is not supportable.

Other Sources of Information on the subject: <http://www.graham-center.org/online/etc/medialib/graham/documents/publications/mongraphs-books/2004/rgcmo-physician-workforce.Par.0001.File.tmp/rgcmo-physician-workforce.pdf>

Visits to the Offices of Physicians

Period	FP/GP	GIM	GPEDS	PC	-PC
1980-1984	32.9%	12.4%	10.9%	56.2%	43.8%
1985-1989	30.1%	11.5%	11.6%	53.2%	46.8%
1990-1994	26.8%	14.2%	11.4%	52.4%	47.6%
1995-1999	24.6%	16.0%	11.4%	52.0%	48.0%
2000-2004	23.8%	16.0%	11.5%	51.2%	48.8%
2005-2006	22.4%	15.7%	13.1%	51.2%	48.8%

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UPDATED: Petterson – 2.02.09

Source: 1980-2006 NAMCS [*National Ambulatory Medical Care Survey*]

Message: The National Ambulatory Medical Care Survey describes visits made to physicians' offices by people in the United States. The decline of general practice and rise of family medicine seen in the last 20 years of the 20th century was accompanied by a steady decline in the proportion of visits made by people in the United States to family physicians and general practitioners. Simultaneously, there was an approximately 30% increase in the proportion of visits made to general internists and a smaller increase to general pediatricians. More than half of visits to physicians are to primary care physicians, but this number appears to be shrinking. One way of looking at this is that about 1/3 of the physician workforce, i.e. the primary care physicians, provides more than half of all visits to physician offices.

More information can be found at: <http://www.graham-center.org/online/etc/medialib/graham/documents/publications/mongraphs-books/2004/rgcmo-physician-workforce.Par.0001.File.tmp/rgcmo-physician-workforce.pdf>

Syntax and Log File in "G:\RGCwork\General\Data Slide Update\Slide documentation\Visits to Office of Physicians"

People Who Saw or Talked with a Physician

Table 9 (NHIS)	Specialist	Generalist	Generalist for Child & Adult
ADULTS			
1997: 195,276,321	46,426,980 23.8%	128,680,380 65.9%	79,610,278 40.8%
2007: 223,180,965	56,670,276 25.4%	145,178,569 65.1%	78,599,191 35.2%
CHILDREN			
1997: 71,359,353	8,485,838 11.9%	55,748,247 78.1%	27,586,530 38.7%
2007: 73,727,832	9,639,039 13.1%	57,934,221 78.6%	22,190,326 30.1%

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UPDATED: Petterson – 2.02.09

Source: 1997 and 2007 National Health Interview Survey

Message: Numbers this large can be mind-boggling. What this table shows is that a large majority of the people living in the United States, both adults and children, see or talk with physicians each year. It is particularly important to note the relatively small proportions of adults and children who see a subspecialist, compared to the proportion who see a generalist. One of the things this reveals is the large opportunity primary care physicians have to deliver important services to most of the population. For example, there remains an inadequately seized opportunity to provide preventive services that can prevent premature death and needless suffering. Large numbers of people with undetected and untreated mental health problems are relatively likely to see a primary care physician who might be able to help. These numbers are not theoretical; they describe what is happening in the United States. What is made obvious by this table is that primary care is well positioned to help the nation achieve some of its most important health related goals.

FM Marketshare?

- More than 100,000,000 persons per year report seeing a generalist who sees both children and adults.
- About 34%

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UPDATED: Petterson – 02.02.2009,

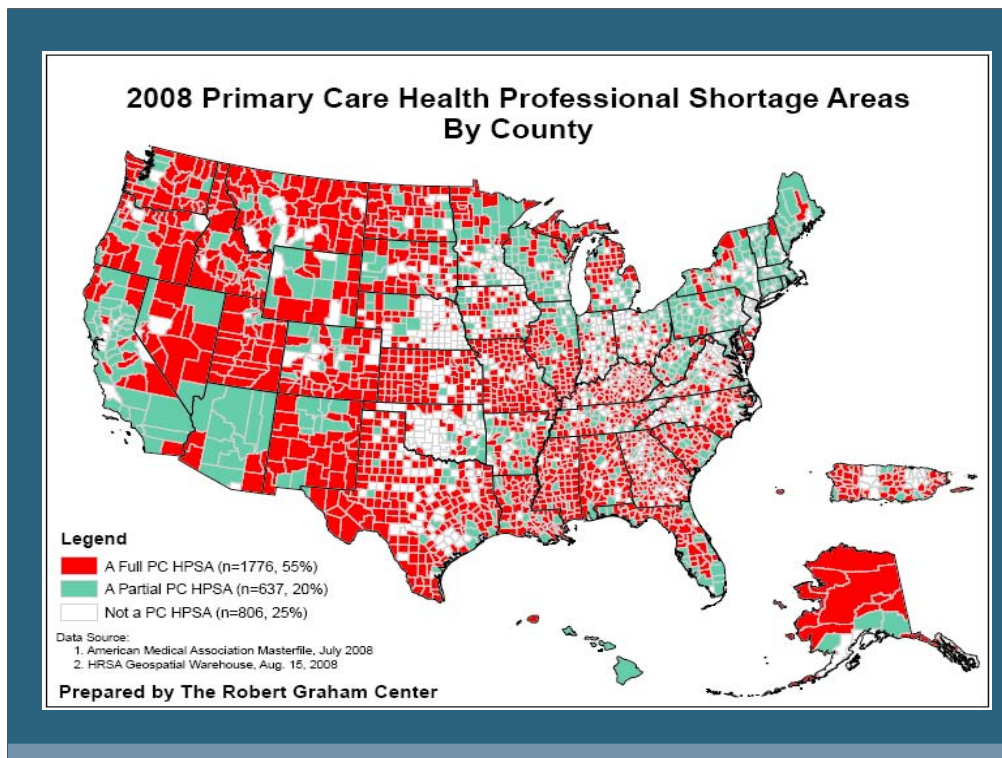
Source: National Health Interview Survey, 2007 - Results in "People who saw or Talked with a Physician" (2007 NHIS results)

[note: from slide 20: $78,599,191 + 22,190,326 = 100,789,517$; divided by 296908797 equals 34%.]

Note: The 2004 figure, based on the detailed results presented in other slide is a little less than 102,000,000. Using the same figures, the percentage is 35.3.

Message: There does not appear to be a fully satisfactory way to estimate the "marketshare" of any particular physician group. However, in the National Health Interview Survey, there is a question about whether or not the persons in the survey report seeing not just a generalist physician, but a generalist who sees both children and adults. It is likely that such generalists are family physicians or general practitioners. On the basis of responses to this question, more than 100 million persons per year report seeing such a generalist. So, one estimate of the "market share of family physicians" is that they see each year, about 34% of the population. Of course, some people report having a family physician and not having made a visit to that physician during the year, which would make this an underestimate. There could be physicians other than family physicians/general practitioners reported in the survey which would make this an overestimate. This is an area that could use further attention as a measure of the contributions of family physicians to the care of the nation.

More information can be found at: <http://www.graham-center.org/online/etc/medialib/graham/documents/publications/mongraphs-books/2004/rgcmo-physician-workforce.Par.0001.File.tmp/rgcmo-physician-workforce.pdf>



Updated: Imam Xierali 02.26.2009

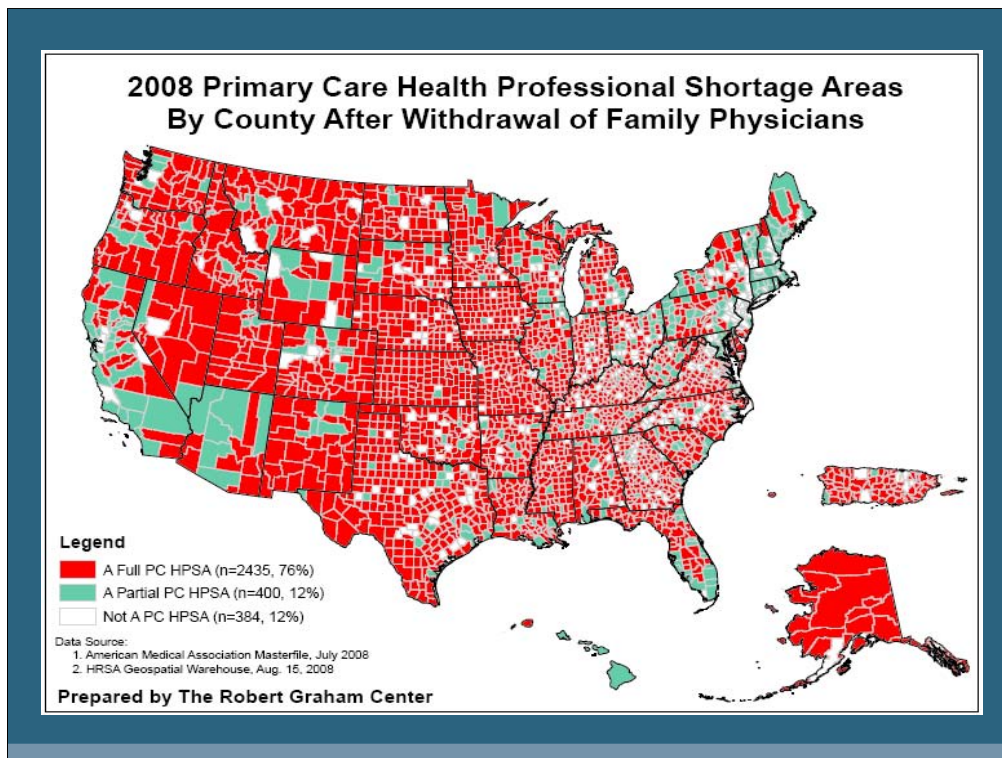
Source: HRSA Data Warehouse (HPSA Component Primary Care, August 15, 2008)

Method: Sub-setting the HPSA file to two groups: 1. Single County HPSA and 2 Geographic Area and Population HPSA; Find the county fipscode for group one and count as whole county hpsa; Use GIS to calculate areal proportion of group to county areas and define a ratio of 99% and above as full county hpsa and 1% to <99% as partial hpsa county and the rest as non-hpsa counties;

Message: Primary care Health Professional Shortage Areas (HPSA) are one of the ways the nation uses to identify areas that need more primary care physicians. In this map, red identifies entire counties that are designated a primary care shortage area, green indicates counties that have some portion designated as a shortage area, and white counties do not contain designated shortage areas. The key point is that despite the replacement of general practitioners with family physicians and growth in the other primary care physician specialties, many areas of the country have unmet needs and there is a persistent problem of adequate distribution of the resources we have.

More information can be found at: www.graham-center.org

Note: HPSAs are updated weekly; information on the latest HPSA definitions can be found at www.hrsa.gov



Updated: Imam Xierali 02/26/2009

Source: HRSA Data Warehouse (HPSA Component Primary Care, August 15, 2008) & 2008 AMA Master File

Method: After identifying full and partial PC HPSA counties, remove FP from PC counts (AMA) and create population to PC without FP ratio; if the county is already a full PC HPSA, then count it as Full PC HPSA; if the ratio is larger than 3000:1, mark the county for full PC HPSA; if the ratio is less than 3000:1 then keep original HPSA status.

Message: Whatever the size of persistent, unmet need, the number of counties that would become primary care shortage areas if it were not for family physicians would explode, with most of the nation falling into a shortage situation. The key point is that the United States depends heavily on its family physicians.

More information can be found at: www.graham-center.org

Note: HPSAs are updated weekly; information on the latest HPSA definitions can be found at www.hrsa.gov

Distribution of Physicians, July 2008

1,027,208 US Physicians

965,332 MD

61,876 DO

681,808 (66.37%) in direct patient care

636,470 MD

45,338 DO

636,470 not PC

23,251 not PC

218,329 are PC

22,087 are PC

82,248 FP/GP

16,080 FP/GP

(12.92% of MD)

(35.47% of DO)

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Updated: Xierali – 01.23.09

Source: AMA Masterfile, July 2008

Message: This is a particularly informative, if slightly complex, figure. It shows the numbers of physicians in the United States as of July 2008. About 2/3 of physicians were in direct patient care, including more than 636,000 MD physicians and more than 45,000 DO physicians. Of particular interest is the predominance of non-primary care physicians among MD's and DO's; only 1/3 of direct patient care MDs and less than 1/2 of DO's are in primary care. According to the AMA Masterfile, this is the first year in which osteopathic subspecialists outnumber osteopathic primary care physicians, a trend likely to increase given the specialty choices of recent osteopathic medical school graduates. More than 35% of DO's in practice were family physicians/general practitioners, while only about 13% of MD's are family physicians/general practitioners.

More information can be found at: <http://www.graham-center.org/online/etc/medialib/graham/documents/publications/mongraphs-books/2004/rgcmo-physician-workforce.Par.0001.File.tmp/rgcmo-physician-workforce.pdf>

Note: Associated log and syntax file at: - SAS run from
g:\rgcdata\unwted\ama\prg\summary.sas

Active PC Physicians - July 2008

Physicians	Number (%)	#/Persons
FP/GP	98,328(14.42%)	1/3,132 pop
GIM	92,917(13.63%)	1/2,508 adults
GPEDS	49,171(7.21%)	1/1,523 children
PCP's	240,416(35.26%)	1/1,281 pop

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UPDATED: Xierali – 01.23.09

Source:

- 1) AMA Masterfile, July 2008
- 2) Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2000 to July 1, 2008 (SCPRC-EST2008-18+POP-RES), <http://www.census.gov/popest/estimates.php>, released on Dec. 22, 2008

Message: In July 2008 there were more than 240,000 primary care physicians actively practicing in the United States. These primary care physicians comprised more than 35% of practicing physicians, and family physicians represented the largest primary care physician specialty group, 14.42% of the active physician workforce. With a primary care physician in active practice for every 1,281 people in the United States, it is reasonable to ask how many more primary care physicians are needed and not just automatically assume the answer is “more.”

More information can be found at: <http://www.graham-center.org/online/etc/medialib/graham/documents/publications/mongraphs-books/2004/rgcmo-physician-workforce.Par.0001.File.tmp/rgcmo-physician-workforce.pdf>

Note: Associated log and syntax file located at: SAS run from g:\rgcdata\unwted\ama\prg\summary.sas; - Calculations on sheet 3 spreadsheet at g:\rgcwork\Data slide update\data\source data analysis.xls

Part III: Primary Care Training Pipeline

Version 2.0 - 2009



The Supply of Medical Students ⁽¹⁾

- After 30 years of stable graduating class size, allopathic graduate totals increased from 15,676 in 2002 to 16,167 in 2008, with a 20-30% total increase expected by the year 2015
- Osteopathic graduates comprise a much smaller proportion of graduates, but their numbers have grown progressively from 421 in 1969 to 3100 in 2007—nearly an 8-fold increase

Version 2.0 - 2009



UPDATED: Bazemore – 3/17/09

Source:

- 1) <http://www.aamc.org/data/facts/2008/schoolgrads0208.htm>
- 2) <http://publish.aacom.org/about/fastfacts/Documents/FF-Enrollment-NationCOMs.pdf>

Message: The key point here is that there has been very little growth in the number of medical students in the United States until very recently, and what growth has occurred has been largely through growth in osteopathic medical students positions. What is not so obvious is how the physician workforce continues to outgrow the population, even if the medical schools haven't grown much. Explanations include the growth of offshore (Caribbean/Mexican) training sites for U.S.-born physicians, the importation of physicians from other nations and GME policy that funds thousands more residency positions than available graduating U.S. medical students. With allopathic and osteopathic expansion finally filling more of these slots, and continued concerns over the 'brain drain' – where developing nations' physicians fill surplus GME positions - should policymakers really be considering expanding Medicare-funded GME positions even further?

More information can be found at:

<http://publish.aacom.org/about/fastfacts/Documents/FF-Enrollment-NationCOMs.pdf>

The Supply of Medical Students ⁽²⁾

- Without a decline in rate of application to medical school by rural students, their acceptance rate dropped from 27% in 1983 to 16% in 1999
- Medical school expansions of class size have involved exclusively the admission of more urban students, with an average decline of rural students of 47% (for all medical schools) from 1976 to 2000.
- 91% of primary care capacity in rural areas supplied by FM/GPs
- Rural students with more than a 20% choice of FM have been replaced by urban students with an 11% probability of matching into FM

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UPDATED: Bazemore 7/3/08

Source: 1) Hyer JL, Bazemore AW, et al. Rural Origins and Choosing Family Medicine Predict Future Rural Practice. Graham Center One-Pager #49. July 2007.

Hyer JL, Bazemore AW, et al. Medical School Expansion: An Immediate Opportunity to Meet Rural Health Care Needs. Graham Center One-Pager #50. July 2007.

2) Geyman JP, Hart LG, et al. Educating generalist physicians for rural practice: how are we doing? *J Rural Health* 2000;16(1):56-80.

Message: Data shows that students from a rural and/or lower income county of origin are more likely to choose family medicine, and to practice medicine in a rural area. The sad news here is that in a nation with great unmet needs for rural populations and with evidence that indicates it is important to recruit medical students from rural areas if you want them to practice there—we don't. A "family medicine" student interest perspective on this situation is handily summarized by the last bullet. It may seem trite, but what comes out of a system does depend in part on what goes in. There is an urgent need to pay more attention to students from rural areas and to family medicine training if we are to have doctors for rural populations

Percentage of FM Residents by Type of Medical School & Citizenship

- During the 1990's FM residency positions increased more than 900 (34%)
- Family medicine residents from US allopathic medical schools (USMDs):
 - 1998-1999: 8232 (77.6%) 2006-2007: 4397 (46.5%)
- Family medicine residents from US osteopathic medical schools (USDOs):
 - 1998-1999: 986 (9.3%) 2006-2007: 1336 (14.1%)
- Family medicine residents from non-US medical schools (IMGs):
 - 1998-1999: 822 (12.3%) 2006-2007: 3708 (39.2%)

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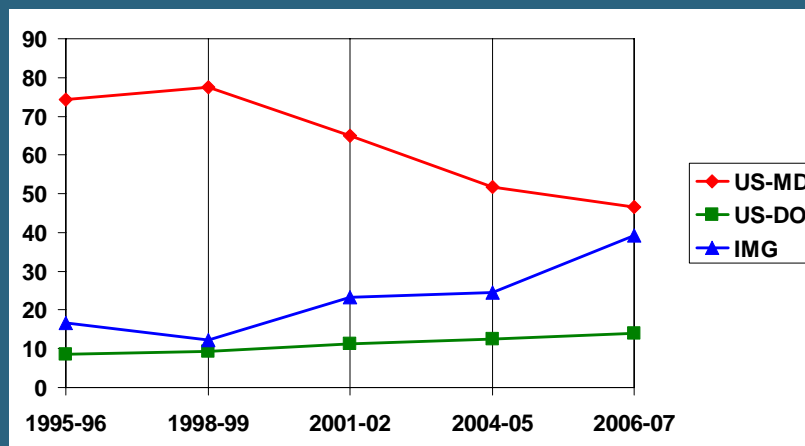
UPDATED – Bazemore – 7/2/08

Source: JAMA. 2005 Sep 7;294(9):1075-82 and JAMA. 2007 Sep 5;298(9):1081-96

Message: Said differently, the new family medicine residency positions created in the 1990's in an era when organized health care delivery systems were envisioned that needed family physicians desperately, substantially exceed the demand of US medical students now. There are many ways to look at this situation, one of which is to seize the current period when expansion is not necessary as an opportunity to revise family medicine residency training, i.e. a moment to turn hard on quality rather than quantity.

More information can be found at: JAMA, Annual update on US Graduate Medical Education

Percentage of FM Residents by Type of Medical School & Citizenship



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UPDATED – Bazemore – 7/2/08

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Message: The new family medicine residency positions created in the 1990's, an era when organized health care delivery systems were envisioned that desperately needed family physicians, substantially exceed the demand of US medical students now. There are many ways to look at this situation, one of which is to seize the current period when expansion is not necessary as an opportunity to revise family medicine residency training, i.e. a moment to turn hard on quality rather than quantity.

More information can be found at: JAMA, Annual update on US Graduate Medical Education (see Source for recent publication)

Notes:

During the 1990's FM residency positions increased more than 900 (34%)

Family medicine residents from US allopathic medical schools (USMDs):

1998-1999: 8232 (77.6%)

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Family medicine residents from US osteopathic medical schools (USDOs):

1998-1999: 8232 (9.3%)

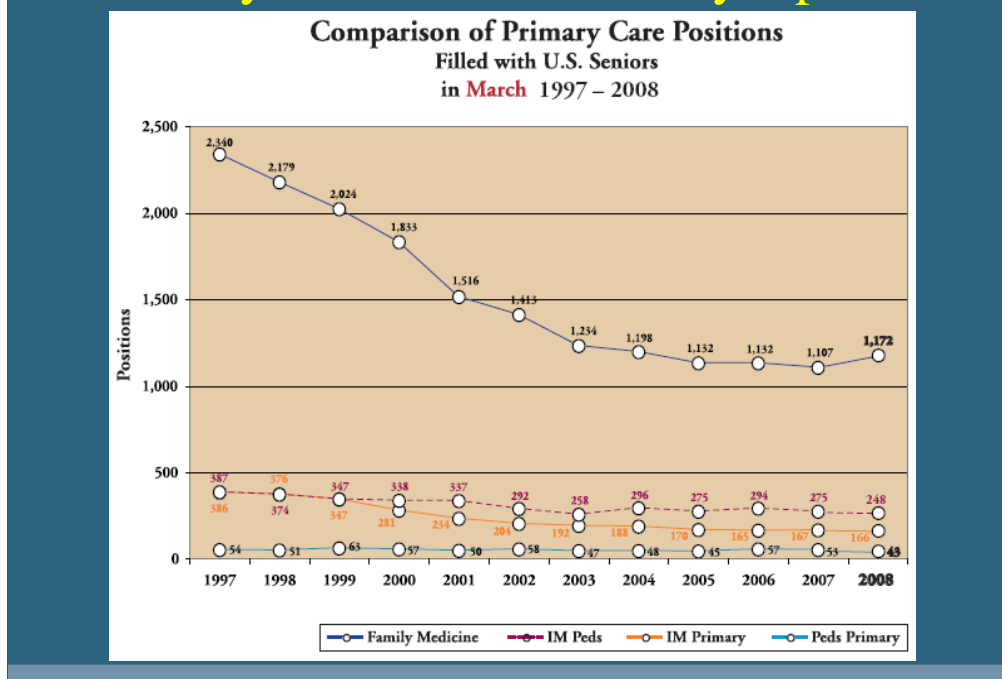
2006-2007: 1336 (14.1%)

Family medicine residents from non-US medical schools (IMGs):

1998-1999: 8232 (12.3%)

2006-2007: 3708 (39.2%)

Family Medicine Residency Update:



UPDATED: Bazemore – 7/2/08

Source: AAFP Match Data -

<http://www.aafp.org/online/en/home/residents/match/graph5.html>, accessed 7/2/08

Message: The decline that began in 1997 of US Seniors selecting family medicine residency positions through the match that occurs in March of each year seems to have leveled off just under half of the 1997 peak in the last 3-4 years. US Seniors now fill about 40% of available positions, down from a peak of greater than 70% in 1997. The other 3 explicit “primary care training options” students can select have not been selected in preference to family medicine. Instead, primary care internal medicine has experienced a similar 57% decline in student matches and general pediatrics and combined internal medicine/pediatrics positions have continued at their usual low rates. What this means is that when the match occurs, about 1,630 of more than 16,000 US seniors match into an explicit primary care program. While some “unmatched” students will take family medicine or other primary care residency positions after the match, there is a clear preference of students for training in categorical internal medicine and pediatric residencies and other specialties. From a market perspective, this situation can be seen as an undersupply of students or an oversupply of primary care positions. Given the known salutary effects of primary care based health care delivery system, this pattern’s persistence could seriously compromise the US health care system in the years ahead.

More information: <http://www.aafp.org/online/en/home/residents/match/summary.html>

Family Medicine Residency Update: The Match

- The percent of FM positions offered and filled in July of 2007 is 93.4%.
- The absolute numbers of allopathic seniors matching into FM has decreased little from what was seen in the late 1990s
- An increasing number of FM positions are being filled outside the NRMP or Military Matches—now about 1 in 6
- The growth rate of the family medicine workforce is still greater than approximately a decade ago

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UPDATED: Bazemore – 7/2/08

Source: AAFP Match Data -

<http://www.aafp.org/online/en/home/residents/match/graph6.html>, accessed 7/2/08

Message: Because of poor match fill rates, many people do not recognize the message here: specifically that the family physician workforce is still growing at a faster rate than a decade ago and the level of student interest is very similar to what was judged to be a rather good position in the 1980s.

More information can be found at: <http://www.aafp.org/match>

Family Medicine Residency Update: IMGs

- There has been a three-fold increase in IMGs filling FM PGY1 positions since 1996, to 39.2% in 2007, in contrast to the 16% prevalence of IMGs in the current FM workforce
- US IMGs, representing about 1 in 5 of all IMGs, distribute themselves more like USMGs in rural and underserved areas. FM attracts more US IMGs than most other specialties

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UPDATED: Bazemore – 7.2.08

Source:

1) FM PGY1 positions filled with IMG: AAFP Match Summary: <http://www.aafp.org/online/en/home/residents/match/summary.html>, and JAMA. 2007 Sep 5;298(9):1081-96

2) [IMGs in the current FM workforce – AMA Masterfile, 2004](#)

Message: There is probably no single change in the landscape of family medicine graduate medical education in the past decade that is as interesting and important as the explosion of residency positions filled by international medical graduates. This is a sensitive area that can provoke debate. There seems little doubt, however, that the future US family physician workforce will be more diverse, and the supply of family physicians will come at some expense to donor nations from whom many family physicians will have come. Many of these nations wish they could keep their doctors “at home” and think the US should supply its own doctors. Many people think it is important for the United States to be a land of opportunity for those who aspire to better living. What do you think?

More information can be found at: <http://www.aafp.org/match>; <http://www.graham-center.org/online/etc/medialib/graham/documents/publications/mongraphs-books/2004/rgcmo-physician-workforce.Par.0001.File.tmp/rgcmo-physician-workforce.pdf>

Family Medicine Residency Update: Osteopathic trainees

- As osteopathic schools have grown, so has the number of DOs taking FM PGY1 positions, 13.5% of the 2004 class.
- As osteopathic schools have grown, DO interest in FM has declined from 37.3% in 1996-7 to 30.9% in 2003.

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UPDATED: Bazemore – 7.2.08

Source:

1) FM PGY1 positions filled with DOs: JAMA - <http://jama.ama-assn.org/cgi/reprint/292/9/1099>

<http://jama.ama-assn.org/cgi/reprint/294/9/1075>, accessed 6.19.06

2) DOs in the current FM workforce – AMA Masterfile, 2004

3) DO Interest: JAMA. 2005 Sep 7;294(9):1075-82

Message:

The news in these two bullets is that DO's are "cross-training" in allopathic medicine at higher rates and that simultaneously, DO's are turning more toward non-primary care specialties. It will be interesting to observe the further evolution of the relationship between allopathic and osteopathic medicine. One could speculate that they are becoming more and more the same.

More information can be found at: <http://jama.ama-assn.org/cgi/reprint/292/9/1099>

<http://jama.ama-assn.org/cgi/reprint/294/9/1075>

A Word About General IM

- Increasing numbers of internal medicine residents are entering medical subspecialties
- From 1998 to 2003, internal medicine residents choosing primary care careers has fallen by 50%.
- If this persists, it has major implications for what may be expected of family physicians and other primary care clinicians.

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UPDATED: Phillips – 6.20.06

Source: Garibaldi, RA. Acad Med. 2005 May;80(5):507-12.

Message: 54% of internal medicine residents chose primary care careers in 1998, but only 27% made a similar choice in 2003. Verbal reports in 2006 from representatives from ACP indicate that only 17-19% of current internal medicine residents intend to practice as general internists, and even fewer first year residents. This conjecture appears to be our new reality. This may affect the need for family medicine to expand its share of the primary care market. The projections of the numbers of general internists based on patterns of the 1990's and early 2000's are probably going to be wrong if this pattern persists even for another 2-3 years. Based on historical patterns, general internists would be expected to outnumber family physicians/general practitioners in another 5-7 years or so. This apparent disaffection for general internal medicine occurring simultaneously with the persistent reduction in interest by students in family medicine might be a trigger for renewed consideration of collaborations in training, practice, and research.

Verbal reports in 2006 from representatives from ACP indicate that only 19% of current third year internal medicine residents intend to practice as general internists, and even fewer first year residents. This conjecture appears to be our new reality.

More information can be found at:

- 1) American College of Physicians; <http://www.acponline.org>
- 2) AAFP Match Data - <http://www.aafp.org/match>

COGME: Students and Residents

- January 2005: Council of Graduate Medical Education:
 - A 15.0% expansion of allopathic medical student positions,
 - A 12.5% increase in residency positions over 10 yrs,
 - Rolling assessments of the generalist-specialist mix without a targeted goal
- In 2006 AAMC increased the call to a 30% expansion
- It is notable that the overall physician workforce grew at a rate twice that of the US population for the last decade and is projected to continue to outpace US population growth, without medical school expansion

<http://www.cogme.gov/report16.htm>

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UPDATED: Bazemore – 6.17.06

Source: <http://www.cogme.gov/report16.htm>

Message: It is the nature of policy to change over time. This is one of the more dramatic medical policy reversals of recent years. The switch from surplus to shortage has been largely driven by models that expect relentless economic growth and the preferential use of disposable income in an ever-wealthier nation for more health care. Regardless of policy statement, it appears that expansion of medical school positions is underway. It is important to recognize that an accompanying increase in residency positions would not automatically be required to accommodate more graduating medical students. For some, for example employers paying health care costs for employees, expansion of the physician workforce without reform to reduce waste and over use is not viewed favorably. This issue likely will be contested for some time to come.

More information can be found at: <http://www.cogme.gov/report16.htm>;
<http://www.graham-center.org/online/graham/home/publications/editorials/2005/bphiled-cogme-report.html>

The Size of the Population

- The US population has increased steadily, on average about 1.1% per year between 1980 & 2008 to a total of about 304 million.
- The rate of growth increased in the early 1990's, but has been gradually decreasing since 1997 to slightly less than 1% per year.

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UPDATED: Petterson/Bazemore - 7.3.2008

Source: For up to-the-minute estimates of US population:

- 1) <http://www.census.gov/population/www/popclockus.html>, accessed 6.20.2006)

Message: The reason these findings are so important is their confirmation that the physician workforce has persistently, and continues now, to outstrip population growth.

Notes:

- 1) In 1980 the US population was 227,224,681 (see <http://www.census.gov/popest/archives/1990s/popclockest.txt>)

The average rate of growth is equal to for 1990s see <http://www.census.gov/popest/archives/1990s/popclockest.txt>

For 2000s see <http://www.census.gov/popest/national/asrh/NC-EST2005/NC-EST2005-01.xls>

More information can be found at: See

<http://www.census.gov/population/documentation/twps0050/graph01.pdf>

Regional Distribution of US Population

- There is steady growth in both metropolitan and non-metropolitan areas since 1990.
- The proportion living in non-metropolitan areas is steady, and suburbs, not central cities, account for most of the growth in metropolitan areas.

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UPDATED: Petterson 6.20.06

Source: A good source for these generalizations:

<http://www.luc.edu/depts/sociology/johnson/p99webn.html>, or
http://www.luc.edu/depts/sociology/johnson/Demographics_complete%20file.pdf
pdf downloaded 6.20.2006

Message: Because family physicians are committed to the entire population, patterns of population growth or decline are important. Presently, both urban and rural areas are growing, suggesting a likely increase demand for family physicians.


More information can be found:

http://factfinder.census.gov/home/saff/main.html?_lang=en

Supply/Demand vs. Planning vs. Need
(Need=Projected Population x 34.1%/1200)

Year	Supply & Demand	Planning	Need
2004 (*actual #)	*93,837	*93,837	83,300
2005	96,668	Not projected	84,100
2010	112,160	105,757	88,000
2015	130,134	116,838	91,700
2020	150,989	129,081	95,600

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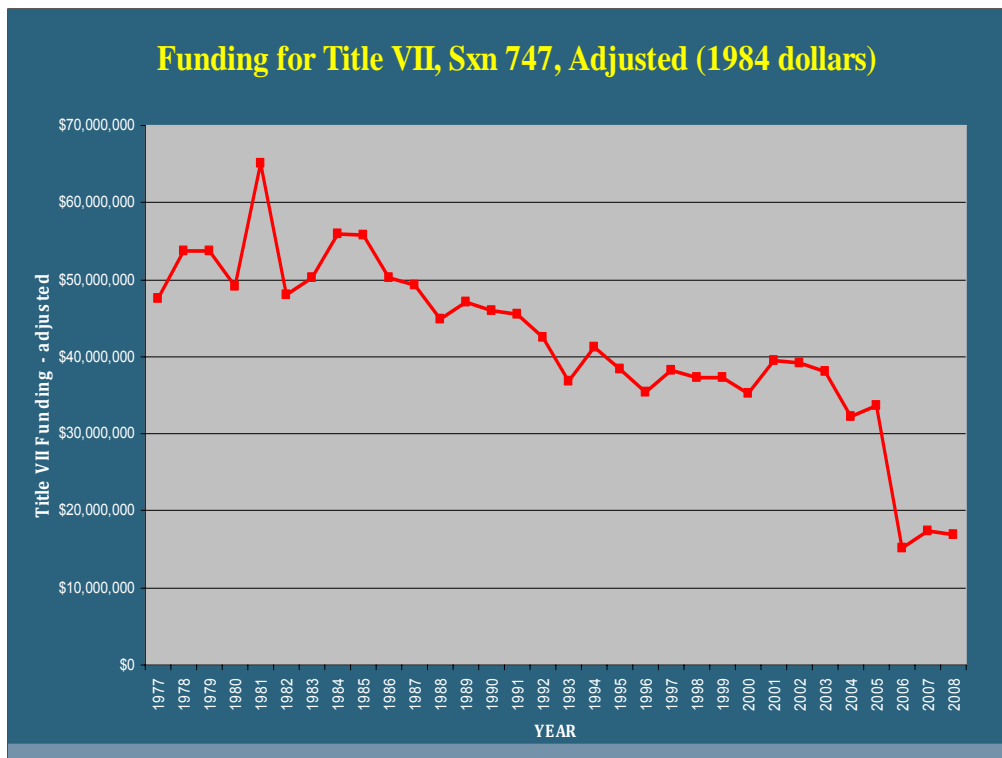
UPDATED: Dodoo – 6.20.06

Source: <http://www.graham-center.org/online/graham/home/publications/monographs-books/2004/rgcmo-physician-workforce1.html>

Message: This table shows why there are different opinions about the physician workforce. Different methods of projecting the workforce produce remarkably different results. One approach starts with answering the question, “how many people can a family physician take care of extremely well?” Then it assumes that family physicians want to keep taking care of at least the portion of the population they now care for. And then it calculates how many family physicians are “needed” to do that. The interesting result is that in 2004 there were more than enough family physicians in direct patient care to do exactly that, with about 10,000 left over. Alternatively, one could start with the number of residency positions available to produce doctors and make assumptions about inflow and outflow of all the physicians already in the system and estimate what will happen, planning for the system to continue pretty much as is. This approach, for example, yields a projection of more than 105,000 family physicians by 2010. Yet a third approach is to model the supply and demand curves that are likely to continue into the future based on actual measurements at several point in recent time. This approach produces the largest numbers of family physicians, much more than the planning model or need model yield. By 2020 the projected number of family physicians varies from less than 100,000 “needed” to more than 150,000 demanded and thus supplied. Regulated supply in the planning model comes in at an intermediate level.

This exercise begs the question of sufficiency. Will we have enough? Will we have too few or too many? Of course it depends on what family physicians will be doing for whom. Of course what family physicians will be doing depends on what other health professionals are doing, technology, border wars, payment mechanisms. In a time of transformative change in how medicine is practiced, who is confident they know the answer to how many family physicians we need?

More information can be found: <http://www.graham-center.org/online/etc/medialib/graham/documents/publications/mongraphs-books/2004/rgcmo-physician-workforce.Par.0001.File.tmp/rgcmo-physician-workforce.pdf>



UPDATED: Bazemore/Dodoo - 7.3.2008

Source: www.hrsa.gov; Impact of Title VII: <http://www.graham-center.org/online/etc/medialib/graham/documents/publications/presentations/2007/bphilps-aamc-impact.Par.0001.File.tmp/bphilps-aamc-impact.pdf>

Message: Title VII of the Public Health Services Act was established to support training in primary care around the same time as Family Medicine was established as a new discipline. Funding for this critical piece of legislation has suffered nearly continuous attrition since its inception. A recent impact analysis of this legislation shows that medical schools that receive primary care training dollars produce more physicians who work in CHC's and serve in the National Health Service Corps compared to schools without Title VII primary care funding. This finding is particularly true for family physicians.

Notes:

- 1) Adjustment used the consumer price index for professional medical services, using 1984 as baseline year for adjustment

More information can be found at: See <http://www.census.gov/population/documentation/twps0050/graph01.pdf>