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Potential Reduction in Unnecessary Visits to Doctors from Safe and Appropriate Use of OTC Medicines Could Save Consumers and Taxpayers Billions Annually

The cost of healthcare in America is staggering. Healthcare expenditures in the United States (U.S.) surpassed \$2.3 trillion in 2008, more than three times the \$714 billion spent in 1990. Greater use of safe and effective over-the-counter (OTC) medicines, those available without a prescription, could help Americans cut healthcare costs while meeting their everyday healthcare needs.

The aim of this paper is to estimate savings that could be achieved by reducing unnecessary visits to primary care physicians for patients who can address symptoms with appropriate use of OTC medicines. For the purpose of this research, we defined primary care physicians as including pediatricians, internists, and general practitioners based on definitions from the Centers for Disease Control and Prevention (CDC). The Your Health at Hand survey referenced throughout also included pediatricians and internists in its definition of primary care physicians. Our research makes the following important points:

- Primary care physicians (including internists and pediatricians) have estimated that 10 percent or more of visits to their offices were unnecessary and could have been avoided by self-management of healthcare, including the use of OTC medicines for minor ailments.¹
- Patients made 1.5 billion visits to medical offices in 2008, including 992 million visits where they saw a doctor.²
- Of the 992 million visits to doctors, approximately 525 million were visits to primary care physicians.³
- The average total payment for a visit where the patient saw a doctor was \$199, including \$28 in out-of-pocket (OOP) costs.⁴
- If one-half of the visits that primary care physicians report as unnecessary could be avoided by greater self-management of healthcare including more use of OTC medicines, it would save consumers and taxpayers \$5.2 billion annually.
- The shortage of primary care physicians in the United States is becoming increasingly problematic. Reducing unnecessary visits from 10 percent to 5 percent (by 26.3 million visits annually) would save overburdened doctors almost a half hour per day, allowing them to focus on more urgent patient needs.

There are other economic advantages that would come with greater self-management of certain health conditions and minor ailments, including through efficient, effective use of OTC medicines. These advantages include time and monetary gains for consumers and

employers if less time was spent in doctors' offices, but these are not evaluated in our savings estimates.

Introduction

OTC medicines are an affordable and effective first-line treatment for a variety of common minor conditions.⁵ (See section below on *Conditions Amenable to Treatment with OTC Medicines*.) A survey of primary care physicians and consumers (the "Your Health at Hand survey") conducted by StrategyOne in November 2010 for the Consumer Healthcare Products Association (CHPA) confirms this: 92 percent of doctors surveyed agreed that OTC medicines are effective in this first-line treatment role.⁶

The Your Health at Hand survey also found that doctors believe a significant number of office visits – about 10 percent according to the primary care physicians – are unnecessary and could be reduced with more self-management of healthcare by patients with minor conditions, including reliance on OTC medicines. If unnecessary visits could be reduced from 10 to 5 percent (that is by approximately 26.3 million per year) it would save the healthcare system \$5.2 billion annually. The body of this paper examines these and other costs, and describes how we arrive at the estimates of potential savings from reducing unnecessary visits.

Unnecessary Visits that Could Be Avoided by Greater Self-management of Healthcare and OTC Medicines

A significant number of Americans, despite evidence of the safety and effectiveness of OTC medicines, choose to visit a doctor's office or an emergency room (ER) with minor ailments. Primary care physicians, including internists and pediatricians, interviewed in the Your Health at Hand survey estimated that about 10 percent of visits to their offices could be avoided if more patients managed minor ailments through self-management of healthcare including the use of OTC medicines.^{7,8}

Unfortunately, time wasted during unnecessary doctor visits has a significant cost associated with it. This includes the primary care physicians' time and that of their staffs, unnecessary tests and procedures as well as labor and resources used to treat patients during visits to ERs and clinics, all of which are far more expensive than the costs of the OTC medicines that in some and perhaps many cases could be tried first. Data from the Medical Expenditure Panel Survey (MEPS) – part of the Agency for Healthcare Research and Quality (AHRQ) of the U.S. Department of Health and Human Services (HHS) – put the mean cost of a non-surgical visit to a doctor's office at \$199, of which \$28 represents out-of-pocket (OOP) costs to patients.

Calculating the Value of OTC Medicines: Potential Reduction in Unnecessary Visits to Doctors

As we consider how to cut down on unnecessary doctors' visits through responsible self-management of healthcare, including the greater use of OTC medicines, it is important to first examine existing data to better understand the potential savings.

The estimates of potential savings in time and money that are developed in this study are based on: 1) the number of visits to primary care physicians, 2) the average cost of these visits, and 3) an assessment of the number of visits that might be avoided by greater self-management of healthcare, including the use of OTC medicines. The data on the first of these are adequate, and for the second there are enough data to make a reasonable estimate. Teasing out a supportable estimate of the third – the degree to which self-management of healthcare linked to the greater use of OTC medicines can be substituted for visits to doctors – is harder to find in the data, but there is still data to allow us to make estimates with which we are comfortable.

The most comprehensive and reliable data in this general area are from two governmental sources: the National Ambulatory Medical Care Survey from the CDC and the MEPS data from AHRQ. These data sources cover numbers of visits to primary care offices, hospital outpatient departments, and ER departments. They also provide cost per visit data, data on out-of-pocket costs, data on specific conditions occasioning visits to doctors, and data on types of prescriptions dispensed during these visits.

1. Number of Doctors Visits

CDC data show there were about 1.123 billion visits to doctors in 2006, 525 million of which were to primary care offices.⁹ This is 46.8 percent of all visits to doctors. The more recent MEPS data looks at visits to medical offices more broadly defined. It indicates that there were 1.5 billion visits to medical offices in 2008, in about two-thirds of which (992 million) the patient saw a doctor.¹⁰ Only a portion of the 992 million visits, however, were with primary care physicians.

We use the smaller (2006) number from the CDC for visits to primary care physicians (525 million) because it is clearly defined and conservative given that it is 5 years old. We assume this category of visits is the one which could be reduced the most by increased self-management of healthcare and OTC medicine use although a significant number of visits to other practitioners might be avoided as well with better self-management of healthcare. The basic question is how many of these 525 million visits could be avoided through greater reliance on self-management of healthcare and OTC medicines encouraged by policy changes, better education, and information.

2. Costs of Medical Visits

The MEPS documentation estimates that a visit to a primary care physician costs \$199 in 2008. A Nielsen study of the benefits of OTC heartburn medicines to consumers and the healthcare system uses \$121 as the cost of an office visit.¹¹ We use the MEPS \$199 number as the cost of a visit because it is the most recent although it is 3 years old. We recognize, however, that some lower estimates exist but these may not include (as the MEPS number does) total payments per doctors visit including the costs of tests, etc.

We also assume (as noted above) that only half of the unnecessary visits can be avoided. If half of the unnecessary office visits to primary care physicians can be avoided by increased self-management of healthcare and OTC medicine use, it would save 26.3 million appointments or \$5.26 billion annually.¹² This would allow doctors to spend more time with patients, especially those with more serious medical conditions.

3. Doctors' Time Per Visit

The 2008 National Ambulatory Medical Care Survey estimates that a visit to a doctor takes approximately 20 minutes, which is in the range of all the various studies we have reviewed.^{13,14} Avoiding unnecessary doctor's visits through increased self-management of healthcare and use of OTC medicines would save a significant amount of doctors' time. Assuming the doctor works nine hours per day, reducing even half of the unnecessary patient visits would save 27 minutes a day. This is roughly one half an hour a day, 117 hours per year, or 351 appointments saved and available for other patients, such as those with more urgent medical needs.

4. Unnecessary Visits

On average, doctors taking the Your Health at Hand survey said that about 10 percent of patient visits result from minor ailments and are unnecessary, a number we use consistently throughout this paper. One-third of the doctors surveyed, however, thought 16 to 25 percent of the visits to their offices were for conditions which could be self-managed; another 17 percent thought the number of unnecessary visits was as high as 26-50 percent; and 5 percent thought more than 50 percent of the visits to their offices were for conditions which could be self-managed.¹⁵

When analyzing the complete breakdown of doctor responses to this Your Health at Hand survey question, one could assert that doctors estimate an average of 10 to 14 percent of patient visits are unnecessary.¹⁶ We note also that the 10 percent estimate for unnecessary visits in the Your Health at Hand survey is conservative because the number is based solely on visits to primary care physicians. The MEPS data suggest there were as many as 1 billion visits to other medical providers or to doctors' offices without seeing a doctor. Some of these certainly could be avoided with greater reliance on self-management of healthcare, including the use of OTC medicines.

Conditions Amenable to Treatment with OTC Medicines

Many medical conditions lend themselves to safe first-line self-management of healthcare with OTC medicines. This is especially so when the consumer recognizes the symptoms based on earlier experience, information from family and friends, and/or an earlier diagnosis from a doctor. The Your Health at Hand survey shows that 90 percent of both doctors and consumers recognize that there are safe and effective OTC medicines for the first line treatment of minor, repetitive, and sometimes chronic conditions.¹⁷

The Consumer Healthcare Products Association's *Your Health at Handbook* lists products for 18 categories of conditions, each with several sub-categories.¹⁸ The more detailed *Handbook of Nonprescription Drugs* (16th Edition) from the American Pharmacists Association (APhA) lists in its table of contents over 40 subcategories of medical conditions for which there are OTC medicines.¹⁹ Broadly speaking, eight categories of such conditions include: 1) allergies, asthma, and sinus, 2) minor pain, 3) coughs and colds, 4) smoking cessation, 5) issues relating to digestion, 6) acid reflux, 7) a range of feminine issues, and 8) topical problems.²⁰

Conclusions

Our research suggests that greater self-management of health conditions and minor ailments, including the use of more OTC medicines, would reduce unnecessary patient visits to primary care physicians, saving billions of dollars and better preserving the time of these doctors who are in short supply and who are needed to treat more serious health conditions. The estimate is that greater self-management of healthcare and more use of OTC medicines would save consumers and taxpayers roughly *\$5.2 billion annually*.

It would be worth exploring data that can capture additional savings through appropriate use of OTC medicines. For example, more reliance on safe, effective, and affordable OTC medicines as a first line of treatment could also: reduce time lost from work by consumers and related costs to employers; reduce time lost from school; reduce the time that pharmacists now spend confirming prescription information with doctors' offices, freeing these pharmacists to work as informed advisors on self-management of healthcare and appropriate use of nonprescription medicines.

The data demonstrate that the potential readily exists to provide consumers, doctors, and our nation's healthcare system with substantial cost and time savings. OTC medicines are an appropriate and recommended first line of defense in the United States when it comes to treating many minor conditions and represent a significant cost-effective healthcare option for our nation's overburdened and costly healthcare system.

Table 1**2008 Office Visit Data**

<u>2008 Office Visits</u>	<u>All</u>	<u>Excluding \$0 Pay Events</u>
Total Office Visits (Any Provider)	1,535,017,041	1,459,900,000.00
In Person Visits	1,523,348,517	1,459,600,000.00
In Person with Doctor	992,214,420	953,400,000.00
Mean Total Payment Per Visit	\$178.00	\$186.00
Mean Out-of-Pocket Payment Per Visit	\$29.00	\$30.00
Mean Total Payment Per MD Visit	\$199.00	\$206.00
Mean Out-of-Pocket Per MD Visit	\$28.00	\$29.00

Source: Agency for Healthcare Research and Quality. Medical Expenditure Panel Survey HC-118G Codebook: 2008 Office-Based Medical Provider Visits. 2010.

Table 2

Estimate of Average Time for a Primary Care Visit

Time spent with physician					
Physician seen	Solo or group practice	Physician specialty recode (3 groups)	Mean	Visits	Total Time
Yes	Yes	Primary care specialty	20.25	176,984,774	3,583,941,674
		Surgical care specialty	20.75	57,564,994	1,194,473,626
		Medical care specialty	26.85	60,924,827	1,635,831,605
Total			21.71	295,474,595	6,414,753,457

Source: National Ambulatory Medical Care Survey, 2008 [Computer file]. ICPSR29921-v1. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2011-01-18. doi:10.3886/ICPSR29921.

Notes: There are a number of factors that may affect the time of a visit beyond specialty and corporate ownership. These factors can include the type of visit, the type of complaint, chronic conditions, and the previous relationship between the patient and physician.

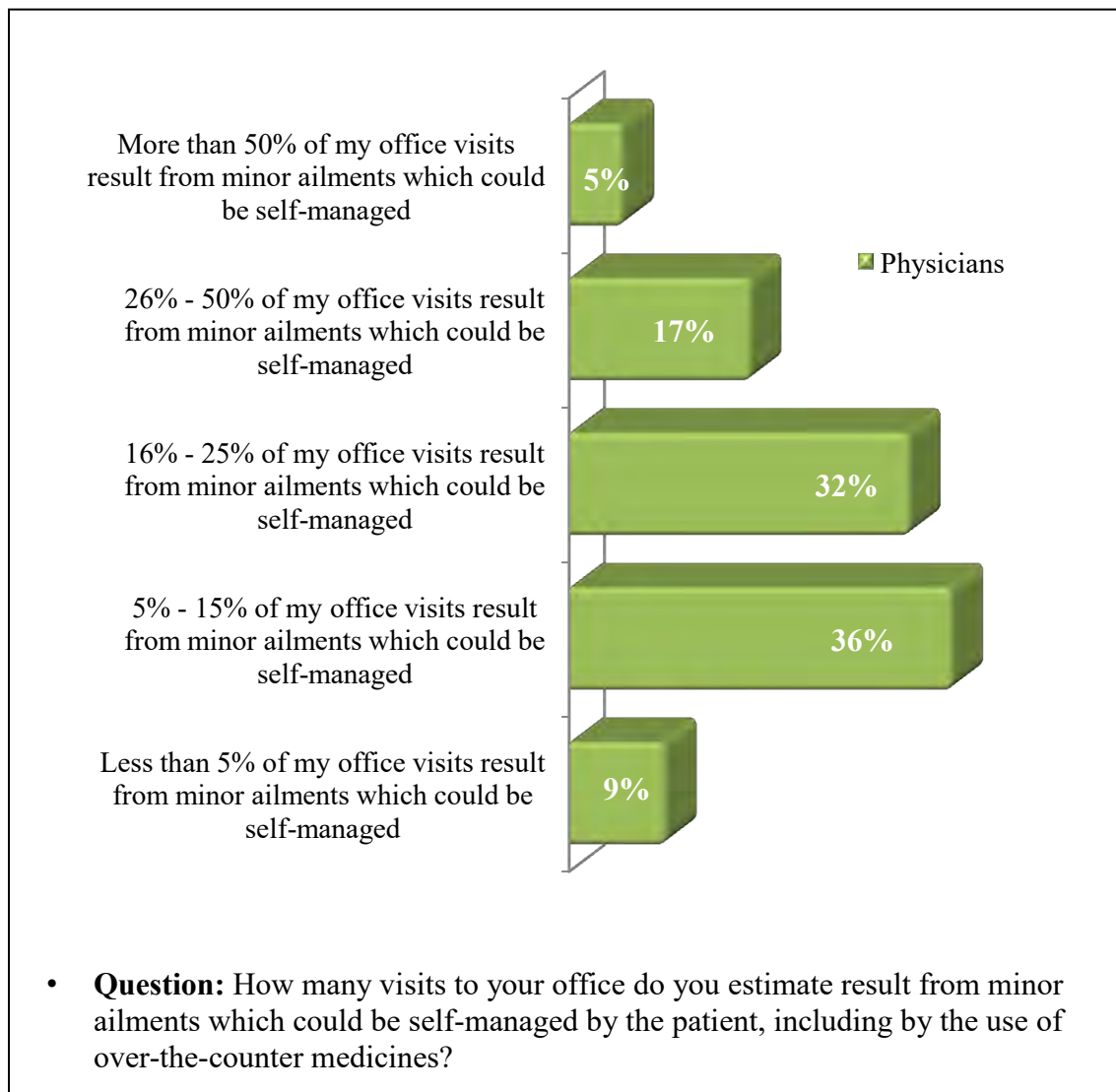
Table 3

2008 Ambulatory Care Visits and Expenses
2008 Dollars

	<u>ER Visits</u>	<u>OB-Physician Visits</u>	<u>OP-Out Patient</u>	<u>Total</u>
Total Visits	56,752,792	987,349,340	53,417,924	1,097,560,056
Per Capita Visits	0.19	3.24	0.18	3.61
Total Expenses	\$47,322,468,757	\$271,301,336,463	\$97,759,134,210	\$416,382,939,430
Mean Visit Exp	\$834	\$275	\$1,830	\$379
Mean Visit Exp - Non Surgical Visit	821	182	569	?
Mean OOP Per Visit	\$102	\$29	\$121	\$36
Total	\$5,788,784,784	\$28,634,290,860	\$6,463,568,804	\$39,220,716,086
Visits without OOP %	58%	44%	58%	45%
Visits without OOP #	32,916,619	434,451,310	30,982,396	498,350,325
Visits with OOP #	23,836,173	552,938,030	22,435,528	599,209,731
OOP/Expense Ratio	12%	11%	7%	9%
Adjusted Mean OOP Per OOP Visit Total	\$243	\$52	\$288	\$65
Visits with Specific Conditions #	53,347,624	750,415,898	45,405,235	849,168,758

Table 4

Self-Reported Physician Responses to Unnecessary Visits



Source: Survey by StrategyOne, for Consumer Healthcare Products Association, "Your Health at Hand: Perception of over-the-counter medicine in the U.S.," slide "Unnecessary Medical Visits" Nov. 2010.

SOURCES

- ¹ Survey by StrategyOne, for Consumer Healthcare Products Association, “Your Health at Hand (YHH): Perception of over-the-counter medicine in the U.S.” Slide entitled “Key Findings – Physicians,” Nov. 2010.
- ² See Table 1
- ³ CDC, NCHS, National Health Statistics Reports, Schappert, Susan M., et al, “Ambulatory Medical Care Utilization Estimates for 2006,” Number 8, Aug. 6, 2006.
- ⁴ See Table 1.
- ⁵ See section below entitled “Conditions Amenable to Treatment with OTC Medicines.”
- ⁶ Op cit, “YHH: Perception of over-the-counter medicine in the U.S.” Slide entitled “Key Findings – Physicians,” Nov. 2010.
- ⁷ Op cit, “YHH: Perception of over-the-counter medicine in the U.S.” Slide entitled “Office Visits that Could be Avoided by OTC Medicines,” Nov. 2010.
- ⁸ There is the suggestion that perhaps 30-40 percent of visits to crowded hospital ERs could be avoided if more people self-managed care before a costly and time-consuming visit. The Orange County Register, <http://healthyliving.ocregister.com/2010/02/24/most-er-visits-avoidable-in-o-c/16797/> accessed 5/26/2011. Meisel, Zachary F., Slate, “Why People Overuse the ER,” <http://www.slate.com/id/2199645/pagenum/all/#add-comment>, accessed 5/30/2011.
- ⁹ Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Statistics Report #8, August 6, 2008, Table 1, p. 10). 1,1 23,354,000 visits: Office Based (OB) PC visits 525,607.
- ¹⁰ Agency for Healthcare Research and Quality. Medical Expenditure Panel Survey HC-118G Codebook: 2008 Office-Based Medical Provider Visits. 2010.
- ¹¹ Mansfield, James E., et al, Nielson, Benefits of over-the-counter heartburn medication to consumers and the healthcare system, 2008, p 7 of 11.
- ¹² (26.3 million = 5% of PC visits) x \$199 (cost per visit) = \$5.26 billion.
- ¹³ See Table 2, National Ambulatory Medical Care Survey, 2008 [Computer file]. ICPSR29921-v1. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2011-01-18. doi:10.3886/ICPSR29921.
- ¹⁴ All the numbers we have seen relating to the length of visit are in the range of 15-20 minutes based upon the year of the study, type of practice, specialty of practice, and study methods.
- 1) 15 minutes – primary care internists: <http://www.ahrq.gov/research/may11/0511RA11.htm>. Source: Patient care outside of office visits: A primary care physician time study," by Melinda A. Chen, M.D., M.S., James P. Hollenberg, M.D., Walid Michelen, M.D., and others in the January 2011 *Journal of General Internal Medicine* 26(1), pp. 58-63.
 - 2) 17.5 minutes – family physicians: <http://www.ncbi.nlm.nih.gov/pubmed/16338912>. Source: [Gilchrist V, McCord G](#), et al. Physician activities during time out of the examination room. *Ann Fam Med*. 2005 Nov-Dec; 3(6):494-9.
 - 3) 19-20 minutes – physician type not specified: <http://www.commonwealthfund.org/Content/Performance-Snapshots/Responsiveness-of-the-Health-System/Time-Spent-with-Physician.aspx>.
 - 4) 17.5 minutes – primary care: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2254573/?tool=pmcentrez>. Source: Ming Tai-Seale, Thomas G McGuire, and Weimin Zhang. Time Allocation in Primary Care Office Visits. *Health Serv Res*. 2007 October; 42(5): 1871–1894. doi: [10.1111/j.1475-6773.2006.00689.x](https://doi.org/10.1111/j.1475-6773.2006.00689.x).
- ¹⁵ Op cit, “YHH: Perception of over-the-counter medicine in the U.S.” Slide entitled “Unnecessary Medical Visits,” table 11, Nov. 2010.
- ¹⁶ See Table 4.
- ¹⁷ Op cit, YHH: Perception of over-the-counter medicine in the U.S.” Slide entitled “Evaluating Over-the-Counter Medicines,” Nov. 2010.
- ¹⁸ CHPA, Your Health at Handbook: Guide to OTC Active Ingredients in the United States.
- ¹⁹ This 16th edition runs to 1050 pages and includes detailed information about each of the conditions and OTC drugs that are appropriate to deal with them.

²⁰ Hearn, Jean, CRS, Report for Congress, "Prescription Drug Coverage Under Medicaid," pps. 5-6. Feb. 6, 2008.