COPD—Whose Burden, How Large, and What to Do About It?

According to a November 2004 report from the American Lung Association, nearly two thirds (64%) of smokers are not concerned about developing chronic obstructive pulmonary disease (COPD), America’s fourth ranking cause of death, despite the fact that more than half of them (55%) experience at least one of the symptoms of COPD a minimum of once each week. This is a mind-numbing finding that provides some insight into the nature of the societal burden created by what appears to nonsmokers as a largely self-inflicted disease. Norman Edelman, a medical consultant for the American Lung Association, found that smoking is the most common cause of COPD, responsible for 80% to 90% of all COPD deaths, and that the majority of smokers who could have COPD are ignoring the signs. COPD claims the lives of more than 120,000 Americans each year.

Denial or ignorance of the association between smoking and disability and death from COPD does not surprise those who have worked in clinical practice. Few clinicians, particularly those who are nonsmokers, will forget their first encounter in an intensive care unit (ICU) or coronary care unit (CCU) in which the patient is near death from a cardiovascular event and requests a cigarette. The point is further driven home when a close relative—a son, daughter, or spouse—lights up outside the waiting room (in the “old” days) adjacent to the ICU or CCU.

COPD is a term referring to a large group of lung diseases, principally emphysema and chronic bronchitis, characterized by obstruction to airflow that interferes with normal breathing. COPD patients typically describe the feeling as hungry for air, like trying to breathe through a straw. The American Lung Association estimates that COPD will be the third largest cause of death worldwide by 2020, rising from its present rank as the fourth leading cause of death. According to estimates by the National Heart, Lung, and Blood Institute, chronic bronchitis and emphysema take a heavy toll on the economy. In 2004, the annual cost of COPD in the United States was $37.2 billion. This included $20.9 billion (56%) in direct health care expenditures, $7.4 (20%) billion in indirect morbidity costs, and $8.9 (24%) billion in indirect mortality costs.

In this issue of the Journal, Tinkelman, Nordyke, Isonaka, et al. examine the definitions of disability associated with COPD and estimate the economic burden of COPD on long-term disability. The conclusion from this research is that better methods are necessary to define disability associated with COPD and that the economic burden of COPD is apparently underestimated. On the former point, research has shown that a composite measure of COPD is a better predictor of the risk of death compared with forced expiratory volume (FEV1) alone. Evaluation of 207 patients with COPD found that 4 factors predicted the risk of death in this cohort: (a) the body-mass index [B], (b) the degree of airflow obstruction [O], (c) dyspnea [D], and (d) exercise capacity [E], measured by the 6-minute walk test. The 4 variables were used to construct the BODE index, a multidimensional 10-point scale in which higher scores indicate a higher risk of death. The hazard ratio for death from any cause per 1-point increase in the BODE score was 1.34 (95% CI, 1.26-1.42; P<0.001), and the hazard ratio for death from respiratory causes was 1.62 (95% CI, 1.48-1.77; P<0.001).4

For the latter point, highlighted by Tinkelman et al., COPD is the only chronic illness where the morbidity and mortality rates are going up, as are the direct and indirect costs of the disease. COPD has been identified by the Centers for Medicare and Medicaid Services (CMS) as one of 3 high expenditure chronic disease conditions (the other 2 are congestive heart failure and complex diabetes) to be targeted for disease management in the Chronic Care Improvement Program (CCIP) under the Medicare Modernization Act of 2003. Permanent disability accounts for about 14% of persons eligible for Social Security benefits in the United States, 6.5 million of 46.4 million beneficiaries, and about 14% (5.8 of 40.5 million) of Medicare beneficiaries.6 Data prepared for the CCIP showed 1,738,691 Medicare beneficiaries with COPD in 2002, 30.0% of the Medicare disabled population and 4.2% of all Medicare beneficiaries.7 The Medicare beneficiary with COPD accounts for mean annual Medicare expenditures that are about 2.4 times the average for all Medicare beneficiaries.8

What can be done to reduce this huge economic burden in the United States and the world? Most of COPD (80%-90%) is caused by smoking, and a smoker is 10 times more likely than a nonsmoker to die of COPD.9 Most of the burden of COPD is therefore preventable. Education would seemingly play a large role in any strategy to reduce the burden of COPD. An amazing statistic from the American Lung Association is that 51% of smokers are unaware of the disease, despite the fact that COPD deaths have increased in the United States over the past 3 decades. There is also a larger than expected incidence of COPD-related deaths in women—61,422 females in the United States died from COPD in 2002 compared with 59,133 males. Even passive exposure to cigarette smoke is associated with an increased risk of coronary heart disease (CHD), a relative risk of CHD of 1.23 for nonsmokers exposed to the smoke of 1 to 19 cigarettes per day and a relative risk of CHD of 1.31 for non-smokers exposed to the smoke of 20 or more cigarettes per day, compared with nonsmokers not exposed to smoke.10

There are at least 3 opportunities for managed care organizations (MCOs): (1) efficient treatment of COPD, (2) education campaigns to increase awareness of the direct association between smoking and COPD, and (3) prevention of the disease and its progression through smoking cessation interventions. For treatment, the evidence for safety and effectiveness is constantly changing, enough so that there were 3 major evidence-based clinical practice guidelines for disease...
management of COPD released in less than 2 years, in 2003-2004. Improved functional status and improved quality of life are elusive outcomes of care in COPD, and a randomized controlled trial (RCT) of lung-volume reduction surgery versus medical management did not favor either treatment. Greater public awareness of COPD and its causes has created some momentum at the national and international level, including designation of November 17, 2004, as World COPD Day, and the 2004 theme, “Don’t Ignore COPD.”

While there appears to be an ominous lack of awareness in the populace about the direct relationship between cigarette smoking and COPD, disability, and death, there are, at the same time, encouraging signals from employers. The direct medical economic burden of COPD is of course reflected in part in health care premiums and direct health costs for self-insured employers. Some employers are screening job applicants to prevent hiring persons who smoke, and some employers are forcing current employees who do not quit smoking to leave their jobs. Other employers require smokers to pay more for their health care coverage—in July 2005, Navistar International Corporation (Warrenville, Illinois), a large truck manufacturer, will begin charging employees who smoke, $50 more per month for their health care coverage.

Since cigarette smoking is the most important causative factor in COPD, smoking cessation is the mainstay of COPD therapy. It was therefore fitting and overdue for U.S. Health and Human Services (HHS) Secretary Tommy G. Thompson to announce on December 23, 2004, that CMS intended to provide new coverage allowing certain Medicare beneficiaries who smoke to receive counseling services that will help them to quit smoking. Secretary Thompson said, “This new benefit, focused on treating seniors’ smoking-related diseases, will go a long way toward reducing their risk of dying prematurely. The combination of lives lost, unnecessarily, and the cost of treating smoking-related diseases makes our investment in smoking cessation benefits all that more important. It’s never too late to benefit from quitting smoking.” Data released by CMS coincident with the announcement revealed that (a) about 9.3% of those aged 65 years and older smoke cigarettes; (b) about 440,000 people die annually from smoking-related disease, with 300,000 of those deaths (68%) in those aged 65 years or older; (c) the Centers for Disease Control and Prevention (CDC) estimated in 2002 that 57% of smokers aged 65 years and older reported a desire to quit; and (d) about 10% of elderly smokers quit each year, with 1% relapsing. CMS Administrator Mark McClellan, MD, PhD, said “The evidence available fully supports the hope that seniors at risk of the diseases caused by smoking can quit, given the right assistance. . . . As we add the ‘Welcome to Medicare’ exam and other preventive benefits and drug coverage, this is another step in using the medical evidence to turn Medicare into a prevention-oriented program.”

The proposal for Medicare to cover smoking cessation counseling resulted in part from a request from the Partnership for Prevention (PFP) in June 2004. The PFP requested that CMS open a national coverage decision to consider coverage of tobacco cessation counseling as detailed in the HHS Public Health Service 2000 Clinical Practice Guideline (CPG), “Treating Tobacco Use and Dependence.” The CPG has been endorsed by many health care and professional organizations, and CMS proposed to extend smoking cessation coverage to beneficiaries who smoke and have been diagnosed with a smoking-related disease or are taking certain drugs whose metabolism is affected by tobacco use. The announcement by CMS at year-end 2004 followed a series of HHS initiatives designed to help Americans quit smoking, including the opening of a new national quitline (1-800-QUITNOW) and designating all HHS campuses tobacco-free. The federal government apparently decided that it is never too late to quit smoking and that smoking cessation in the elderly is important to mitigating risking Medicare costs, even in those who have smoked for years. CMS noted that the Medicare drug benefit program that becomes effective on January 1, 2006, will cover smoking cessation treatments that are prescribed by a physician.

The recent increased federal emphasis on smoking cessation and the relationship of smoking to COPD would be better described as evolutionary than revolutionary. A U.S. Internal Revenue Service (IRS) ruling (99-28) in June 1999 revoked a 20-year-old ruling that said the costs of smoking cessation programs were tax-deductible medical expenses only for those employees with specific ailments or diseases such as emphysema. The new ruling made the costs of smoking cessation programs, including prescription drugs, tax deductible even if the individual employee does not have a specific smoking-related disease. These health benefits are tax deductible and can be funded through pretax contributions to flexible spending accounts. The IRS ruling in June 1999 was apparently influenced by the growing evidence at the time that smoking was a clear and direct threat to health—the ruling said “Scientific evidence has . . . established that nicotine is addictive and that smoking is detrimental to the health of the smoker.” On July 23, 2004, the U.S. Treasury Department defined smoking cessation drugs along with statins, angiotensin-converting enzyme inhibitors, and weight-loss drugs as exempt from the $1,000 annual deductible in the new health savings accounts established under the Medicare Modernization Act of 2003, “Drugs or medications are preventive care when taken by a person who has developed risk factors for a disease that has not yet manifested itself or not yet become clinically apparent . . . or to prevent the reoccurrence of a disease from which a person has recovered.”

In drug benefit plans, smoking cessation drugs have historically been more likely to be excluded from coverage. Over the 3-year period from 1997 through 1999, about two thirds of employer-sponsored drug benefit plans excluded...
coverage for smoking cessation drugs.\textsuperscript{19} Since the nicotine replacement gum and transdermal patches are available over the counter, OTC coverage in drug benefit plans is key to health plan support of smoking cessation by this method, yet OTC coverage by health maintenance organizations appears to be little changed, at 31.5% of HMOs in 2003 compared with 32.1% in 2002 and 32.4% in 2001.\textsuperscript{20}

The results of MCO interventions in smoking cessation are mixed. Measures used by the National Committee for Quality Assurance (NCQA) in the Health Plan Employer Data and Information Set (HEDIS) Medical Assistance with Smoking include 3 components: (1) the percentage of smokers or recent quitters who received advice to quit smoking from their practitioner, (2) the percentage of smokers with whom the practitioner discussed smoking cessation medications, and (3) the percentage of smokers whose practitioner discussed smoking cessation strategies.\textsuperscript{21} For the most recent data available, commercial MCOs reported that 68.6% of current smokers or recent quitters received advice from practitioners to quit smoking in 2003, with a slightly lower rate for Medicare MCOs (63.3%) and Medicaid MCOs, (65.8%). These rates have remained constant in the 4-year period from 2000 through 2003. Perhaps more important, only 37.6% of current smokers or recent quitters in commercial MCOs discussed smoking cessation medication with their practitioner in 2003, and only 36% discussed smoking cessation strategies. The 2004 NCQA report (for 2003 data) estimated the direct and indirect costs of smoking to exceed $157 billion, or $4,443 per smoker per year, and current smokers were associated with 18% higher health care costs over an 18-month period compared with those who never smoked.

It is worth noting that the proposed expansion in Medicare coverage for smoking cessation pertains to counseling services. It will be up to drug benefit plans to determine which pharmacologic agents for smoking cessation, if any, will be included in coverage under the Medicare prescription drug benefit. The U.S. CPG, “Treating Tobacco Use and Dependence,” published in June 2000 by HHS, cited only 2 “first-line” pharmacotherapies for smoking cessation: bupropion SR and nicotine (in the form of gum, inhaler, nasal spray, or patch).\textsuperscript{22} There were only 2 second-line pharmacotherapies cited for smoking cessation: clonidine and nortriptyline. This comprehensive report (196 pages) included evaluation of 6,000 articles in the medical literature. “On-your-own” quit smoking rates were found to be in the range of 10% to 12% at 6 months, and motivation and willingness to quit are the most important factors in success for smoking cessation.

A more recent RCT conducted after publication of the 2000 U.S. CPG reinforced the prior evidence of the marginal value of nortriptyline in combination with nicotine replacement therapy. The smokers of 10 or more cigarettes per day were randomized to either nortriptyline or placebo before (14 days) and after quit day (12 weeks), and transdermal nicotine (21 mg per day) was started on quit day and continued for 8 weeks. This was a 3-mode intervention since behavioral intervention was also provided, consisting of 12 brief, individual visits. The smoking cessation rates at 6 months were 23% for nortriptyline versus 10% for placebo plus nicotine and behavioral therapy (absolute difference, 13%; 95% confidence interval, 1.3%-24.5%; $P = 0.052$).\textsuperscript{23} In the world of RCTs of pharmacologic interventions for smoking cessation, this 13% effect is huge.

It is clear that most pharmacologic agents alone are not much more effective than placebo in smoking cessation as measured by smoke-free results at 6 or 12 months. The controversy surrounding the value of nicotine replacement therapy (NRT) in smoking cessation is particularly heated. A March 2003 meta-analysis of the 7 OTC patch and gum studies found an average placebo group 6-month quit-smoking rate of just 3%, permitting the 7% quit rate for NRT at 6 months to earn a 2-fold odds ratio (OR).\textsuperscript{24} In one of the 7 studies used to compute the March 2003 OTC meta-analysis rates for OTC NRT, fewer than 1 in 5 subjects in the placebo patch group believed that they had received the “Real McCoy,” and the authors admitted that “the effect of such a blinding failure would probably be a reduction of the placebo effect.”\textsuperscript{25} Experts in smoking cessation have criticized the manufacturers of NRT commercial products for sponsoring research that corrupts the “evidence” that is relied upon by the medical research community in assessing the value of NRT in smoking cessation.\textsuperscript{26} One thing is clear in all of the work that has been done in assessing the value of alternate interventions in smoking cessation—“modest” effect is a common term, underscoring the difficulty of achieving the desired outcome of smoking cessation.

So, why should an MCO make an investment in smoking cessation given the dismal likelihood of a positive return on investment? A study conducted at Group Health Cooperative of Puget Sound by Curry et al. found that the average cost of providing smoking cessation benefits ranged from $0.89 to $4.72 per member per year (in 1997 dollars), depending upon coverage and member cost share.\textsuperscript{37} Estimates of the annual rates of use of smoking cessation benefits ranged from 2.4% among smokers with reduced coverage to 10% among smokers with full coverage. The average health plan cost per user who quit was calculated to be $797 (in 1997 dollars) for the standard plan (50% coverage of the behavioral component and full coverage of NRT), $801 for full coverage (50% coverage of both behavioral therapy and NRT), $870 for “flipped” coverage (full coverage of the behavioral component and 50% coverage of NRT), and $1,171 for full coverage (100% coverage for both NRT and behavioral therapy). The study results supported full coverage of smoking cessation programs, finding an estimated average 2.8% of smokers who quit under full coverage, 1.7% with “flipped” coverage, 1.3% with standard coverage,
Evidence-based medicine is a concept much easier to say than to do. An academic definition of evidence-based medicine is, “the conscientious, explicit, and judicious use of the best current evidence in making clinical decisions about the care of individual patients.” A more practical definition is, “when there is evidence of benefit and value, do it; when there is evidence of no benefit, harm, or poor value, don’t do it; when there is insufficient evidence to know for sure, be conservative.”

For Pharmacy and Therapeutics (P&T) committees, the challenge to support evidence-based medicine is great, the potential value large, and the consequences potentially devastating. How many P&T committees added COX-2 drugs to the drug formulary from 1999 to 2004 when the evidence did not support either a safety advantage or cost-effectiveness? Now, P&T committees are faced with a barrage of data and information from many sources regarding the relative safety and benefit of the other COX-2 drugs still available in the United States: celecoxib and valdecoxib.

P&T committees need tools, and the AMCP Format for Formulary Submissions represents a deliberate attempt to standardize the presentation of data and information by pharmaceutical companies to drug formulary (P&T) committees. Over time, standardization in the presentation of data and information will most likely evolve to standardization in the evaluation process used by drug formulary committees. Perhaps the AMCP Format for Formulary Evaluation will be forthcoming. This, like the first generation of “The AMCP Format,” would be a good thing since the new format will presumably further support the replacement of expert opinion with evidence, mostly derived from randomized controlled trials (RCTs), for unpublished as well as published RCTs. This future format for formulary decision making may help standardize the P&T decision-making process by presenting a “grid” for evaluating alternative therapies.

The grid might provide a structure or framework for formulary decisions in which decision factors are weighted, a priori. Formulary committees would determine the relative weighting, but the list of factors would be considered in every decision, much like a checklist for operating a boat or aircraft. It would include factors such as safety, efficacy, effectiveness, relative number of affected beneficiaries, actual relative drug cost before rebate, actual relative drug cost after rebate, total health system cost (hospital, drug and other direct medical costs), and total community cost (direct medical and indirect costs that include workplace productivity and social costs). For example, the total cost of a drug would include the (1) actual acquisition cost, after all discounts and rebates; (2) medical costs for administration of the drug, if relevant; (3) adjunct therapy, if required; (4) laboratory or other monitoring costs including medical visits; (5) direct and indirect costs of side effects; and (6) direct and indirect costs of therapeutic failure.

To progress to this future level of standardized drug formulary evaluation, it is helpful to know where we are today. Fisher, in this issue of the Journal, provides a snapshot of the clinical and cost outcome data presented in a real-world P&T committee process for evaluation of the treatment alternatives and methods for psoriasis and psoriatic arthritis. For those readers who have not participated in decision making in a P&T process, this article provides a clear picture of the “evidence” that is considered in “evidence-based decision making.” For those who do have first-hand experience with the P&T decision-making process, the clinical monograph by Fisher should provide a useful, contemporary benchmark. Readers should note that this P&T committee examines actual cost and utilization data from its health plans and PBM operations for the most recent calendar quarter(s) available at the time of decision making.

Two other articles in this issue of the Journal provide examples of information that might be considered by P&T committees. Weinberg reviews the subject of atopic dermatitis (AD) and its therapeutic alternatives, particularly pimecrolimus, one of 2 topical immunomodulators that have been added to the pharmacotherapeutic arsenal to treat AD since the year 2000. Tarcrolimus ointment in strengths of 0.03% for children aged 2 to 15 years or adults and 0.1% for adults only, was approved by the U.S. Food and Drug Administration (FDA) on December 8, 2000. Tarcrolimus ointment is indicated for short-term and intermittent long-term therapy in the treatment of patients with moderate-to-severe atopic dermatitis in whom the use of alternative, conventional therapies are deemed inadvisable because of potential risks, or in the treatment of patients who are not adequately responsive to or are intolerant of alternative, conventional therapies. Pimecrolimus cream 1% was approved by the FDA one year later, on December 31, 2001, for “short-term and intermittent long-term therapy in the treatment of mild-to-moderate atopic dermatitis in nonimmunocompromised patients 2 years of age or older in whom the use of alternative, conventional therapies is deemed inadvisable because of potential risks, or in the treatment of patients who are not adequately responsive to or are intolerant of alternative, conventional therapies.”

Chang and Sung present a budget impact analysis for pimecrolimus. Both articles, by Weinberg and by Chang and Sung, represent information that might be contained in a product dossier that is considered by a P&T committee.
A budget impact model is a part of the pharmacoeconomic analyses recommended by the AMCP Format for Formulary Submissions, Version 2.0, although a health system cost-effectiveness model is preferred. As with all information examined by P&T committees charged with making value decisions, the source of the information is relevant and should be disclosed and acknowledged. Weinberg reported no specific funding for his review of AD and pimecrolimus, but he disclosed the receipt of research funds and compensation for participation in the speakers’ bureau for Novartis Pharmaceuticals, manufacturer of pimecrolimus.

Chang and Sung are employees of Novartis Pharmaceuticals, the manufacturer of pimecrolimus. One might expect the assumptions in their budget impact model to be conservative, forecasting a small budget impact associated with pimecrolimus. It is up to P&T committees for health plans and pharmacy benefit managers (PBMs) to use their own data to formulate the assumptions in the budget impact model presented by Chang and Sung or to create their own budget impact model and projection. Fairman and Motheral earned the JMCP 2003 Award for Excellence for their article that employed actual health plan data to overturn the assumptions used in the early decision-analytic pharmacoeconomic models of cost-effective treatments for eradication of Helicobacter pylori.

Health plans are well advised by authors Chang and Sung to determine their own medical visit costs for treatment of AD and pharmacy costs for topical immunomodulators approved for use in AD. For example, data from a PBM pharmacy claims database show that there has been a much larger increase in expenditures for pimecrolimus than suggested by Chang and Sung. Pimecrolimus was ranked #134 in drug plan expenditures for pimecrolimus than suggested by Chang and Sung and #163 for 2003 (drug expenditure rank). Further examination of drug plan spending for pimecrolimus increased more than 3-fold, from 0.05% of total drug plan spending in 2004 to 0.12% in 2003 (drug expenditure rank #163) and 0.16% in 2002 (drug expenditure rank #134). Claims data from this PBM data warehouse showed that drug plan spending for pimecrolimus increased by 30% in 2004, from 0.12% of total drug plan spending in 2003. Over the 2-year period from 2002 to 2004, drug plan spending on pimecrolimus increased more than 3-fold, from 0.05% of total drug plan expenditures in 2002 (drug expenditure rank #305) to 0.12% in 2003 (drug expenditure rank #163) and 0.16% in 2004 (drug expenditure rank #134). Further examination of these real-world data shows that almost all of the 3-fold increase in the proportion of drug plan expenditures for pimecrolimus over this 2-year period was attributable to utilization. The average actual price per standardized 30-day supply of pimecrolimus was $127 in 2002, rising 13% to $142 in 2003 and rising by 9% to $155 in 2004.

Stated in other terms, the per-member-per-month (PMPM) cost of pimecrolimus was about $0.01 in 2002, $0.03 in 2003, and $0.05 in 2004. These data differ dramatically from that presented by Chang and Sung in the results of their pharmacoeconomic model. Their reported $0.008 PMPM drug cost for pimecrolimus in 2003 would appear to underestimate the actual cost experienced in this PBM database by about 75%.

**Prescription-Equivalent Over-the-Counter Drugs for Allergy, Heartburn, and Cholesterol Reduction**

The first over-the-counter (OTC) statin in the world was introduced to the market in the United Kingdom in August 2004 as Zocor Heart-Pro. The 10 mg simvastatin was marketed by a joint venture of Merck and Johnson & Johnson. Whether or not the U.S. Food and Drug Administration (FDA) permits access to an OTC statin in 2005, it seems likely that a low-dose statin will ultimately be available OTC in the United States at some point. As with all conversions from prescription (Rx) to OTC status, savings can accrue from more than the direct cost of the drug. The largest source of cost savings may be derived from fewer physician office visits. From this perspective, organized medicine in general might be expected to be opposed to Rx to OTC “switches.”

For consumers and payers, the savings from Rx to OTC conversions can be very large. Harris et al. showed in a previous issue of JMCP that a state health plan reduced spending on proton pump inhibitors (PPIs) by at least 50% through a benefit design change and increase in pharmacy reimbursement that favored OTC omeprazole (Prilosec OTC). Health plan members saved between 80% and 90% in copayments per Rx for OTC omeprazole and 17% in the average PPI claim. Similar but less dramatic savings for drug plan sponsors and drug plan members could be realized through drug benefit coverage of OTC loratadine in which the OTC version (e.g., Alavert) can be purchased for about $14 per 30-day supply, 80% less than the $69 charge for a 30-day supply of either desloratadine (Clarinex) or fexofenadine (Allegra). In a previous issue of JMCP, Richards, Blumenfield, and Lyon found generally favorable but not universally favorable opinions among pharmacy and medical officers in managed care organizations (MCOs) and pharmacy benefit managers (PBMs) regarding the possible introduction of OTC lovastatin to the U.S. market. More curious in the findings was the reaction of PBMs and MCOs to the availability of generic lovastatin: no PBMs and only 28% of MCOs changed the formulary status of the other statins. In anticipation of an OTC statin, no PBM or MCO would cover the OTC statin, and only 50% of all respondents, including one of 4 PBMs, reported that they would encourage use of the OTC statin. This is befuddling and suggests that health plans in general and PBMs in particular will not realize the cost-savings potential of market introduction of OTCs in their administration of prescription drug benefits.

Additional context for the findings of Richards, Blumenfield, and Lyon can be found in the results of 2 surveys conducted during one week in January 2004. Nearly three
fourths of 200 family practice physicians and 200 internists believed that new approaches are needed to reach consumers at risk for heart disease who are currently not being treated. (The survey apparently did not ask explicitly if the physicians supported OTC status for statins.) A separate survey of 600 consumers aged 30 years or older found that 33% were currently being treated for high cholesterol. Not surprisingly, OTC statin was of more interest to persons who were already taking supplements, avoided smoking, engaged in exercise, ate a low-fat diet, or who were trying to lose weight either regularly or occasionally.30

Lovastatin is not a second-class drug for the reduction of low-density lipoprotein cholesterol (LDL-C) and triglycerides and increase of high-density lipoprotein cholesterol (HDL-C). In 33,318 patients switched from simvastatin (Zocor) to generic lovastatin, Kaiser Permanente researchers found better clinical outcomes with lovastatin at much lower cost.31 These study results were presented by Kaiser researchers, David Campen and Eleanor Levin (chief of cardiology for Kaiser Permanente in northern California), at the Scientific Sessions of the American Heart Association during the week of November 7, 2004. Specifically, the 33,318 patients (45% women) were switched from simvastatin (average dose 25.6 mg per day), to lovastatin (average dose 51.1 mg per day). In the primary prevention group, average LDL-C fell from 119.4 on simvastatin to 116.6 on lovastatin (P<0.001), and average triglycerides decreased from 171.5 to 169.7 mg/dL (P<0.01); average HDL-C rose from 50.9 on simvastatin to 53.0 on lovastatin (P<0.001). For the secondary prevention group, LDL-C fell from 101.1 to 99.0 (P<0.001), and triglycerides fell from 170.7 to 169.5 mg/dL (P = 0.046); HDL-C rose from 45.7 to 48.1 (P<0.001). Elevated transaminase or creatine kinase levels were comparable during simvastatin and lovastatin treatment. The authors concludes that clinical outcomes were the same or better for lovastatin compared with simvastatin in patients switched to lovastatin, representing a large improvement in quality since generic lovastatin is much less expensive than simvastatin. Additional quality improvement from this intervention to switch patients from simvastatin to lovastatin might be derived from a smaller proportion of patients discontinuing statin therapy due to the (copayment) cost since a generic copayment is generally at least 50% lower than a brand-drug copayment. The authors also observed that the average 51.1 mg per day of lovastatin suggests additional room for dose increases since the maximum approved dose is 80 mg per day.

Now would seem to be a good time for P&T committees in both health plans and PBMs to anticipate the introduction to the U.S. market of an OTC lovastatin. The FDA advisory panel may consider an application from Merck to sell Mevacor (lovastatin) over the counter at its meeting on January 13 and 14, 2005, and Bristol-Myers Squibb announced in mid-December 2004 that it would seek FDA approval for OTC sale of Pravachol (pravastatin) in anticipation of generic competition in April 2006.42 The short-term value (clinical outcome divided by cost) opportunity may not be as large as that possible with coverage of OTC omeprazole, where savings are 50% or greater,43 but the long-term value opportunity could be large and certainly warrants attention by P&T committees.

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Letters to the Editor

J MCP welcomes letters that serve to clarify subjects published in previous issues of the Journal or regarding subject matter of interest to managed care pharmacists. Letters in J MCP are not peer reviewed but are subjected to editorial review. When a submitted letter refers to an article published in a previous issue of the Journal, the letter is sent to the authors of the subject article to allow their response to be published with the letter.

Each letter should be signed by no more than 3 authors. Submissions must include your title, affiliation, complete mailing address, telephone number, and e-mail address. Potential bias or conflicts of interest must be disclosed.

Letters should be prepared in a word processing program, preferably Microsoft Word, and submitted electronically at jmcp.submit.net.