Prescribing Practices in Long-Term Care: Invisible Influences

Diane Feeney Mahoney
MGH Institute of Health Professions

Tammy McNeill

MJ Henderson

Follow this and additional works at: http://scholarship.law.marquette.edu/elders

Part of the Elder Law Commons

Repository Citation
Available at: http://scholarship.law.marquette.edu/elders/vol13/iss1/4
PREScribing Practices in Long-Term Care:
Invisible Influences

Diane Feeney Mahoney*, Tammy McNeill**, MJ Henderson***

Introduction

Adults over age sixty-five are the greatest consumers of prescription drugs, taking one third of prescription medications

* Diane Feeney Mahoney PhD, ANP, BC, FAAN is the Jacque Mohr Research Professor in Geriatric Nursing at the MGH Institute of Health Professions in Boston, Massachusetts. She has been a geriatric nurse practitioner for over thirty years and is known for her innovations in geriatric care delivery and intervention research. She has been a principal investigator in over sixteen funded geriatric studies and has published over eighty-five original research articles in the fields of gerontology, geriatrics, nursing, informatics, and gerontechnology. Her dissertation research focused on the appropriateness of geriatric prescribing by clinicians, and she has maintained a lifelong interest in the topic. She is a fellow in both the Gerontological Society of America and the American Academy of Nursing.

** Tammy McNeill, MSN, ANP-BC, GNP-BC is a geriatric nurse practitioner in internal medicine at Lawrence Memorial Hospital in Medford, MA. McNeill monitors geriatric in-patients at the Hospital and assesses their responses to medications to reduce negative side effects and delirium. She is a graduate of the MGH Institute of Health Professions School of Nursing in Charlestown, MA.

*** MJ Henderson has been a Gerontological Nurse Practitioner for 26 years practicing in a variety of clinical settings in the USA. She is very involved in NP professional organizations serving on boards of directors and she is a past President of the Gerontological Advanced Practice Nurses Association. She also serves on editorial and advisory boards of professional journals and is a sought after speaker both nationally and internationally. She is an Assistant Professor of Nursing at the MGH Institute of Health Professions School of Nursing in Boston, Massachusetts.
prescribed in the U.S.\textsuperscript{1} Older adults in long-term care settings are more likely to be in poorer health than their community-dwelling counterparts. Nursing home residents, on average, take ten different medications daily for a range of co-morbid health conditions and still rate their health as either fair or poor.\textsuperscript{2}

The purpose of this paper is to provide an overview of the existing influences on prescribing patterns in the long-term care setting, and to inform and alert the legal community about issues that affect treatment of geriatric clients in these settings.

Older adults are at increased risk for adverse drug events due to consumption of multiple medications and age-related physiological alterations in the absorption and elimination of medications. Other more invisible influences, such as pharmaceutical industry marketing techniques, also affect prescribing practices in long-term care settings. Currently, pharmaceutical marketing activities are under scrutiny for influencing consumer demand and physicians’ drug decision making. The advent of nurse practitioner (NP) prescribers offers new insights into additional key influences on drug selection and utilization. Examination of a range of seemingly invisible influences is explored to bring to light the complexities of geriatric prescribing in long-term care. (See Figure 1.) Ways to optimize safe, cost-effective prescribing approaches for older adults will also be discussed.

**AGE-RELATED PHYSIOLOGICAL CHANGES THAT AFFECT PRESCRIBING**

**PHARMACODYNAMICS**

Pharmacodynamics relates to the physiological and

\begin{enumerate}
\end{enumerate}
biochemical effects that drugs have on the body. The pharmacodynamic properties of prescription drugs are altered in the older adult due to age-related changes within multiple body systems.\footnote{See Hutchison, supra note 1, at 63.} For example, the cardiovascular system of the older adult experiences diminished capacity of the baroreceptors to respond to drops in blood pressure, making individuals more susceptible to orthostatic hypotension, and to respond to lowered blood pressure that can result from changes in posture,
such as standing, that can be exacerbated by many classes of anti-hypertensive medications. The older adult is also more likely to experience isolated systolic hypertension due to loss of elasticity of blood vessels, making sudden decreases in blood pressure even more severe.

The aging nervous system also contributes to altered responses to medications in the older adult. For instance, an older adult’s brain has a diminished reserve of neurotransmitters, and therefore has a diminished capacity to compensate for changes in response to medications. Psychoactive medications that permeate the blood brain barrier may cause increased concentrations of the drug at the nerve endings, often manifesting as increased effects even with lower doses of medications. Increased sensitivity to anti-cholinergic medications, such as antihistamines, can lead to drowsiness and even major confusion in older adults. For this reason, it is recommended that any initial prescription for these types of medications be prescribed at the lowest dose and, if necessary, gradually increased over time to prevent potentially harmful side effects.

**Pharmacokinetics**

Older adults experience age-related changes that affect pharmacokinetics—the manner in which drugs are distributed, metabolized, and excreted—predisposing this population to possible adverse drug effects. Absorption of medications is altered due to changes within the gastrointestinal system. Most drugs are absorbed through passive diffusion in the small intestine; however, oral and gastric absorption of medication
also occurs. A slowed transit time between the oral cavity and small intestine due to decreased peristaltic movement will decrease absorption. A subset of older adults experience achlorhydria, which is a decreased secretion of hydrochloric acid. Achlorhydria is often found in those who have had peptic ulcer disease or previous gastric surgery. In addition, many geriatric patients undergo long-term treatment with proton-pump inhibitors and histamine-2 blockers for gastroesophageal reflux disease (GERD), more commonly called heartburn, which can potentially decrease the absorption of drugs.

The storage and distribution of drugs in older adults significantly affects sensitivity and response to medications. Older adults have a decrease in total body water and lean muscle mass, and a corresponding increase in body fat percentage. Therefore, hydrophilic (water-loving) medications have a smaller volume of distribution, and greater effects at smaller doses. This alteration indicates the need to prescribe the lowest possible medication dose because therapeutic responses will be seen sooner than in younger adults. Higher serum concentrations of hydrophilic medications put the older adult at greater risk for experiencing toxic effects. Similarly, medications that are distributed into lean muscle mass also have a smaller volume of distribution. One example of such a medication is digoxin, which slows and strengthens heart contractions. Digoxin has an average distribution volume of only three to four liters per kilogram in the geriatric population, compared to six to seven liters per kilogram in younger adults. As a result, digoxin toxicity is common and should be carefully

10. Id. at 63.
11. Id.
12. Id.
13. Id.
14. See id.
15. Id.
16. Id.
17. Id.
18. Id. at 63–64.
monitored in older adult populations.\textsuperscript{19}

Lipophilic (lipid- or fat-loving) medications pose a unique problem to older adults, as these medications have the propensity to accumulate in the body and to be stored for longer periods of time.\textsuperscript{20} As the drug accumulates, older adults are more likely to experience toxic effects. Due to this alteration in drug distribution, lipophillic benzodiazepines and antipsychotics are two classes of medications that pose higher risk in the older adult population.\textsuperscript{21} Many psychotherapeutic agents also have longer half-lives, which prolong the effects and can result in older adults progressing through stages of drowsiness, confusion, delirium, and on to somnolence from the medication accumulation.\textsuperscript{22}

Older adults who have decreased protein stores, such as those with hypoalbuminemia, may also experience increased drug effects. A protein-binding drug that is unbound to a body protein is the active form of the drug responsible for its effects on the body. Malnourished and frail elders are the most susceptible to decreased protein stores and consequent increased effects from medications.\textsuperscript{23} Two protein bound medications are warfarin (blood thinner) and phenytoin (anti-seizure).\textsuperscript{24} Warfarin is a commonly prescribed anti-coagulant used to prevent blood clots from forming after heart attacks, valve replacements, and rapid heart rates, or to prevent existing clots from growing. Accumulation of this medication can cause serious bleeding; therefore, the dosage must be carefully monitored during the entire course of therapy, and all clinicians involved in treatments need to be informed of its use.\textsuperscript{25}

The liver is one of the major body organs involved in the

\begin{itemize}
  \item[\textsuperscript{19}] See, e.g., Kristen Cook & James E. Tisdale, Cardiovascular, in \textit{Fundamentals of Geriatric Pharmacotherapy} 121, 121, 147 (Lisa C. Hutchison & Rebecca B. Sleeper eds., 2010).
  \item[\textsuperscript{20}] Hutchinson, \textit{supra} note 1, at 64.
  \item[\textsuperscript{21}] \textit{Id.} (citation omitted).
  \item[\textsuperscript{22}] See \textit{id.}
  \item[\textsuperscript{23}] \textit{Id.}
  \item[\textsuperscript{24}] \textit{Id.}
  \item[\textsuperscript{25}] See, e.g., Cook & Tisdale, \textit{supra} note 19, at 147.
\end{itemize}
metabolism or breakdown of drugs in the body. The liver in older adults is often smaller in size and has decreased blood flow. Drugs that are highly metabolized through the liver must be prescribed at lower dosages because greater concentrations will be available in the blood stream.

Decreased excretion of drugs is another age-related change that must be considered by clinicians prescribing for the older adult. Kidney size and renal blood flow are reduced in the older adult, in addition to decreased functioning of the kidney’s filtration units, the glomeruli. Direct measurement of the glomerular filtration rate (GFR) is not routinely measured in clinical practice because it requires a 24-hour urine collection and processing. Therefore, it is possible that kidney function in some older adults may be more diminished than estimated. The usual standard of practice is to use an estimated GFR that can be found with a simple blood test, or to determine creatinine clearance with the Cockcroft-Gault equation. The use of the Cockcroft-Gault equation may be problematic for those with low muscle mass as the equation may not adequately take into account the decreased rate of tubular secretion in proportion to the decreased number of nephrons in the smaller kidney of the older adult. Adults with compromised kidney function carry a high risk of experiencing increased effects of medications since they circulate for a longer period of time in the blood before being filtered out. A number of prescription drugs have specific guidelines for renal dosing in those with varying degrees of known renal impairment.

26. Hutchison, supra note 1, at 64.
27. Id.
28. See id. at 65.
29. Id.
30. Id.
31. Id.
POLYPHARMACY

Polypharmacy, or the use of many medications, is a common issue in geriatric therapeutics because of the frequency of multiple chronic diseases that require multi-drug regimens. Additionally, there is a plethora of what are known as “me-too” drugs—medications that are often more expensive than their predecessors but offer no additional treatment benefit, and which generally have not been tested with frail older adults with co-existing illnesses. The fact that older adults are frequently excluded from clinical drug trials further contributes to the lack of knowledge and awareness of polypharmacy effects in the geriatric population.

It cannot be overlooked that many chronic diseases such as hypertension, congestive heart failure, chronic obstructive pulmonary disease, and diabetes often co-exist and require multi-drug regimens for therapeutic outcomes. The proliferation of some new medications has contributed to improvements in management options for these illnesses. Coupled with the fact that older adults are more at risk of developing chronic diseases as they age, it can be argued that polypharmacy can be a necessity.

Unnecessary polypharmacy, however, can occur due to a preventable phenomenon known as “prescribing cascade.” This results from prescribing one medication for one indication, such as a non-steroidal anti-inflammatory drug (NSAID) for arthritis pain, which then results in a prescription for a proton-pump inhibitor when gastric irritation occurs from NSAID use.

34. See Jerry Avorn, Medication Use in Older Patients: Better Policy Could Encourage Better Practice, 304 JAMA 1606, 1606–07 (2010).
37. Id. at 44.
Clinicians must be vigilant to avoid treating one drug symptom with another drug that also produces side effects resulting in more drug therapies for symptoms that are not disease-induced. Multiple prescribers from multiple settings also increase the likelihood of polypharmacy. As patients transition among generalists and specialists and through primary care, acute care, rehabilitation, and long-term care settings, redundant medications can occur. A medication review to reduce redundant and unnecessary medications is recommended at every transfer point in care.

ADVERSE DRUG EVENTS

Adverse drug events (ADEs) include both harm caused by the drug, such as an adverse drug reaction (ADR) or overdose, and harm from the use of the drug. Unfortunately, ADRs can occur within normal dosing ranges and regular usage. As stated previously, older adults are more susceptible to ADEs due to changes related to normal aging. Because older adults are more likely to experience chronic diseases that require multi-prescription drug regimens, this population is also more likely to experience side effects and interactions between multiple medications. ADEs are a significant cause of morbidity and mortality in the older adult population, as well as one of the top reasons for admission to the hospital. Drug-drug interactions account for many incidences of ADEs and drug toxicities.

Identifying ADEs in the older adult poses an even more difficult problem because older adults often present with vague symptoms, such as confusion or fatigue, which may actually be

40. Ballentine, supra note 36, at 40.
41. See id. at 45; see also Jerry H. Gurwitz et al., The Incidence of Adverse Drug Events in Two Large Academic Long-Term Care Facilities, 118 AM. J. MED. 251 (2005).
signs of a serious ADE. Additionally, the ADE may present long after the patient has started taking the drug because of the age-related changes discussed above or the addition of a new acute condition. Estimates indicate there are approximately 760,000 preventable ADEs annually in nursing homes resulting mainly from complications of polypharmacy due to indefinite use of medications beyond their original indications.\(^{42}\)

Medication errors refer to mishaps that occur during prescribing, transcribing, dispensing, or administering a drug. Not all errors result in ADEs, but they may be classified as “near misses” or potential for ADE when they are stopped prior to harm. Medication errors are more common than ADEs, but result in harm less than 1% of the time.\(^{43}\) ADRs and harmful medication errors should be documented in the medical record and pharmacy and therapeutic committee reports. Suspected severe ADRs should be reported to the FDA’s MedWatch program.

**Suboptimal Prescribing**

Suboptimal prescribing refers to overuse, misuse, or underuse of medications.\(^{44}\) It can be argued that suboptimal prescribing can also refer to using medications as the initial treatment for a condition, rather than considering appropriate non-drug alternatives.\(^{45}\) In 1991, Dr. Mark Beers and colleagues published a listing of medications that an expert panel consensus deemed inappropriate for frail older adults residing in nursing homes.\(^{46}\) In 1997, the listing was expanded to include medication therapy in all patients over age sixty-five.\(^{47}\) Beers’

\(^{42}\) See Gurwitz et al., *supra* note 41, at 256.

\(^{43}\) Nebeker et al., *supra* note 39, at 797.


\(^{45}\) Mahoney et al., *supra* note 35, at 11.


criteria deemed a medication inappropriate if its usage and/or dosage presented potential risks that outweighed potential benefits. The list offers straightforward guidelines for geriatric prescribing, identifying both harmful medications and inappropriate dosages. Beers’ list was updated again in 2003. The Centers for Medicare and Medicaid Services (CMS) adopted this list as a guideline for nursing home regulation. Wise prescribers and consultant pharmacists also apply the Beers listing in practice. Still, in a 2005 study of 157,517 adults over age sixty-five enrolled in health maintenance organizations (HMO), it was found that five percent of participants were prescribed at least one out of the eleven medications in the “always avoid” category of Beers’ list. In 2010, researchers found mixed results in a review of eighteen interventions that employed a variety of approaches to improving suboptimal prescribing in nursing homes. Thus, despite the existence and acceptance of guidelines pertaining to prescribing for the older adult, suboptimal prescribing continues to be an issue that requires the careful attention of health care practitioners.

Similarly, attention is turning to the enhancement of palliative care efforts by relieving pain and increasing comfort for nursing home residents with advanced dementia. By expert panel consensus, medications have been identified and deemed “never appropriate” for treatment of advanced dementia when the goal of treatment is palliative care. And yet, in a recent

(1997).

48. Id.

49. Donna M. Fick et al., Updating the Beers Criteria for Potentially Inappropriate Medication Use in Older Adults, 163 ARCHIVES INTERNAL MED. 2716 (2003).


52. Zachary A. Marcum et al., Interventions to Improve Suboptimal Prescribing in Nursing Homes: A Narrative Review, 8 AM. J. GERIATRIC PHARMACOTHERAPY 183, 183 (2010).


54. See Holly M. Holmes et al., Integrating Palliative Medicine into the Care of
study of nursing home residents with advanced dementia, thirty-seven percent received at least one of the medications considered never appropriate, with modest reductions in dosage or usage occurring only during the last week of life.\textsuperscript{55} In a separate study, forty-four percent of nursing home residents who reported pain received neither standing orders for pain medication nor special services for pain management.\textsuperscript{56} Non-white residents and those with dementia were less likely to report or show signs of pain than white residents or those cognitively intact, respectively.\textsuperscript{57} Efforts are underway to improve pain management. In 2009, CMS promulgated F309, a guideline pertaining to quality of care related to pain assessment and management.\textsuperscript{58} Additionally, the Center for Nursing Excellence in Long-term Care now offers free access to their website’s evidence-based tools and best practices for assessment and management of pain in older adults—an invaluable tool for nurses who work in nursing homes.\textsuperscript{59} Future research is warranted to determine the effects of these approaches.

\textbf{Geriatric Prescribers and Influences on Their Treatment Decision Making}

With the burgeoning aging population, the need for clinicians with specialized training in geriatric prescribing is more relevant than ever. However, specialized training in geriatric prescribing remains a critical piece still missing from many medical, dental,

\textsuperscript{55} Jennifer Tjia et al., \textit{Daily Medication Use in Nursing Home Residents with Advanced Dementia}, 58 \textit{JAGS} 880, 880 (2010).
\textsuperscript{57} \textit{Id. at} 4.
\textsuperscript{59} \textit{The Center for Nursing Excellence in Long-Term Care}, \textit{http://www.centerfornursingexcellence.org} (under “Resources” click “Geriatric Pain Website”).
and osteopathic education programs in the United States.\textsuperscript{60} Required courses in geriatrics are absent or limited in most medical schools, and many trainees emerge into practice with a poor understanding of pharmacotherapeutics in older adults.\textsuperscript{61} Formal medical training continues to emphasize the mechanisms of disease and diagnostics, with inadequate attention paid to the nuances of prescriptive and non-prescriptive therapies for older adults.

The newest prescriber group is advanced practice registered nurses (APRNs), which encompasses more than 150,000 nurse midwives, psychiatric or mental health clinical specialists, and nurse practitioners (NPs). In the nursing home setting, most NPs are certified as either adult and/or gerontological NPs. NPs receive additional education in their specialty, usually at the Master’s or Doctoral level, and after passing a national certification exam they are authorized per individual state regulations to practice and prescribe.\textsuperscript{62}

Numerous studies have documented the effectiveness of NPs’ management of complex patients in a variety of clinical settings. NPs are educated to examine the geriatric patient as a \textit{whole person}, that is, not only looking at an individual’s medical information, but also their social, psychological, and mental health and health behaviors as well as economic status and cultural beliefs. Initial research on NP prescribers found they were significantly less likely than physicians to write a suboptimal prescription for a condition when a non-drug alternative or lifestyle recommendation was considered more appropriate.\textsuperscript{63} When the first nurse-developed guidelines for geriatric prescribing were published in 1999, practitioners were instructed to first consider treatment by a non-drug alternative

\begin{itemize}
  \item 60. Avorn, supra note 34, at 1606.
  \item 61. Id.
  \item 63. See Diane Feeney Mahoney, Appropriateness of Geriatric Prescribing Decisions Made by Nurse Practitioners and Physicians, 26 J. NURS. SCHOLARSHIP 41 (1994).
\end{itemize}
therapy and assess whether new symptoms were attributable to present drug therapies.64 The current version offers four recommendations prior to introducing a new drug therapy and nine recommendations to assist in balancing the risks and benefits and educating patients and their caregivers about their medications.65

Recent research suggests that APRNs in primary care are increasingly targeted by pharmaceutical promotions, and some APRNs reflect physicians’ positive attitudes towards marketing efforts by favoring brand name drugs when lower cost generics are available.66 This research was conducted with NPs from primarily ambulatory settings. A review of the research literature found only one study of gerontological NPs’ prescribing patterns; this study reported that gerontological NPs’ prescribing practices were more influenced by practice setting than by their age, education, and years of practice.67 Although inappropriate prescribing according to the Beers criteria was minimal, it was more likely to occur in ambulatory office-based settings rather than long-term care settings.68 The reasons for this discrepancy were speculative. Given the lack of clarity about influences on NPs’ choice of drug therapy, gerontological NPs in attendance at a national meeting were recruited to participate in one of two focus groups conducted to increase understanding about the influence of their practice setting and other factors on their prescribing patterns.69 Several key influences were identified.

Foremost the NPs acknowledged that their practice setting,

64. Mahoney et al., supra note 35, at 12; Mahoney, supra note 38.
65. Mahoney, supra note 38.
68. Id. at 33.
including the type of patient served and the degree of autonomy they had in choosing medications, made a difference in their prescribing patterns. Office-based NPs were constrained beyond the usual practice regulations by the office drug protocols established by their employing physician(s). Overall, NPs took into consideration whether the patient was at home alone and able to independently take and remember their medications, or whether there were other caregivers who could reliably administer medications. They were knowledgeable about the affordability and insurance coverage for medications, and sensitive to ways to enable adherence to therapies. NPs had to educate and counsel families and patients who demanded drugs advertised on television, mistakenly believing the drugs would rectify chronic medical problems. Assessing drug necessity versus using a nondrug alternative was every NP’s starting point, with clear sensitivity to geriatric drug dosing, polypharmacy, and pharmacokinetics. The nurses participating in the study highlighted the geriatric dilemma inherent in evidence-based practice recommendations that are based on “research [that] did not include geriatric patients, generic drugs, or attention to quality-of-life issues.” Another dilemma presented itself when their supervising physician’s protocol did not follow evidence-based guidelines and therefore precluded the NPs from prescribing the “better” agent. Attending to drug reimbursement issues took considerable time and advocacy with insurers and in many cases the NPs recommended the commercial four-dollar drug plans because of better affordability and improved likelihood of purchase.

When asked about pharmaceutical marketing and drug

---

70. See id. at 21.
71. Id.
72. Id.
73. Id.
74. Id. at 21–22.
75. See id. at 20.
76. Id.
77. Id. at 21.
78. Id.
detailing, the NPs viewed those activities as providing information but not education.  

79 Clear skepticism about drug representatives presenting biased information was prevalent. Concerns also arose about prescribers being pressured to prescribe a certain drug because a pharmaceutical company gave the institution a “good deal” on purchasing it.  

80 When the patients transitioned into a facility that did not get the same good deal, they had to be switched to that facility’s offerings.  

81 The NPs also identified several “costs” associated with free samples including an unintended impression on patients that brand name drugs were superior to generics.  

82 In long-term care facilities, medications are provided by pharmacies in thirty-day packs. The NPs noted it was common to try several medications to find the best one for a patient’s particular situation. When the drug was changed after a week-long trial, many facilities discarded the remaining medication as waste.  

NPs’ preferred sources of drug information, after the professional drug literature, were geriatric physicians and consulting geriatric pharmacists.  

83 The latter were most desirable to aid in complex cases with multi-drug, multi-disease geriatric patients experiencing compromised renal and liver functioning.  

84 Comments portrayed the NPs role as multi-faceted, offering more than just being a prescriber. “Lifestyle counseling, care coordination, drug reviews and reductions, quality-of-life considerations, family and patient teaching, and nondrug treatment alternatives all remained equally important aspects” of the NPs’ offerings.  

85 Therapy was tailored according to the “patients’ biophysical, psychological, and economic needs with an involvement in the interplay of geriatric care issues not

79. Id. at 22.  
80. Id. at 23.  
81. Id.  
82. See id.  
83. Id. at 24.  
84. See id. at 23.  
85. Id. at 26.
typically addressed by primary care physicians.” Nonetheless, influences on NPs’ ability to prescribe and practice according to the full scope of practice were identified as limitations to improving geriatric care.

STATE AND FEDERAL REGULATIONS

The major external influences on prescribing in long-term care are federal and state regulation. The Omnibus Budget Reconciliation Act (OBRA), implemented in 1990, requires that the facility provide each patient with care that will enable the patient to “attain or maintain the highest practicable physical, mental, and psychosocial well-being . . . .” Since then, it has been the U.S. Centers for Medicare and Medicaid Services’ (CMS) responsibility for overseeing the implementation of this legislation.

For nursing homes to be certified to participate in the Medicare and Medicaid programs, pharmacists are required to review the appropriateness of residents’ medications on a monthly basis, and to recommend changes to providers when indicated. Additionally, each facility is required to complete the Minimum Data Set (MDS), a standardized tool to monitor and track residents’ functional abilities and progression or decline in relation to their diagnoses and treatments. Registered nurses or case managers hired by the facility are responsible for completing the MDS for each resident on a quarterly basis, or whenever there is a change in the resident’s condition. Facilities are subject annually to unannounced external reviews by CMS sponsored state surveyors who assess compliance to regulations, identify deficiencies, and mandate improvements if necessary.
ADVOCATING TO PROMOTE MORE APPROPRIATE PRESCRIBING IN LONG-TERM CARE

REDUCE THE IMPACT OF PHARMACEUTICAL MARKETING ON PRESCRIBERS.

The pharmaceutical industry spent $20.5 billion in 2008 to promote name brand prescription drugs. Of this, $12 billion was spent to detail physicians, NPs, and physician assistants; $3.4 billion to sponsor professional meetings and events; $400 million to advertise in professional journals; and $4.7 billion to advertise direct-to-consumers (DTC).

The Institute of Medicine (IOM) issued a report that addressed the role of funding from pharmaceutical and medical device companies to support professional continuing education programs. The report stated that such funding inherently creates conflicts of interest and recommends redesigning continuing education in the health professions to reduce dependency on these industries. From the federal legislative perspective, physician payment sunshine provisions were included in the Patient Protection and Affordable Care Act of 2009 (PPACA or ACA), which was signed into law on March 23, 2010 but implemented only recently. These sunshine provisions mandate the disclosure of gifts and payments over ten dollars to physicians and teaching hospitals by “manufacturers,” including pharmaceutical and medical device companies.

90. CONG. BUDGET OFF., ECON. & BUDGET ISSUE BRIEF, PROMOTIONAL SPENDING FOR PRESCRIPTION DRUGS 2 (Dec. 2, 2009).
91. Id. at 1–2.
93. Id. at 4, 69–72.
94. 42 USC § 1320a-7h (2009).
95. See id. at § 1320a-7h (e)(10)(B)(i). These disclosure reports should be publicly available online by September 30, 2013. Id. at § 1320a-7h (c)(1)(C).
At the state level, Vermont previously placed a ban on pharmaceutical companies providing free meals, and Massachusetts limits meals to purchases in a hospital setting and requires disclosure of any gift greater than fifty dollars. The Harvard affiliated hospitals recently enacted stringent policies on their staff, including clinical researchers who were not addressed under the legislation. This movement has caused a backlash among businesses, including hospitals, that benefited from pharmaceutical-sponsored events and which now claim loss of critical revenue during an economic recession. Lawmakers sought unsuccessfully to repeal the Massachusetts bill.

The Pew Prescription Project, created by the Pew Charitable Trusts, is an initiative “to promote consumer safety through reforms in the approval, manufacture, and marketing of prescription drugs, as well as through initiatives to encourage evidence-based prescribing.” The Project conducted a review of the published studies on academic detailing, or individual prescriber education programs to physicians, which provide unbiased drug information and drug cost comparisons. While the potential for improved care and cost savings existed, most programs were limited by short-term funding that hampered longer-term behavioral changes in prescribing practices.

101. See id. at 4–5.
CONTINUE THE USE OF PHARMACEUTICAL PENALTY FUNDS TO SUSTAIN RESEARCH AND DEMONSTRATION PROJECTS THAT IMPROVE MEDICATION DECISION MAKING AND REDUCE DRUG COSTS.

Pharmaceutical penalty funds can be created when drug manufacturers are ordered to pay substantial fines for violating laws that protect consumers.

On May 13, 2004, Warner-Lambert, a division of Pfizer, Inc., entered into an Assurance of Voluntary Compliance/ Discontinuance with the Attorneys General of 50 States and the District of Columbia to settle allegations that Warner-Lambert conducted an unlawful marketing campaign for the drug Neurontin® that violated state consumer protection laws. Among other things, the settlement provides for a $21 million Consumer and Prescriber Education grant program to be administered by a Special Committee of State Attorneys General pursuant to an Oregon Court Order.102

Through this endeavor, several key initiatives have been developed to increase prescriber’s skepticism about drug promotional activities and use of evidence-based drugs.

On the consumer education side, Consumers Union implemented Best Buy Drug reports to provide free web-based, unbiased descriptions and comparisons among common medications including their brand and generic costs.103 After its creation, the program was featured in Consumers Union’s publication and highlighted the most common drugs with generic savings as well as national locations for four dollar generics.104 This information is critical for consumers because of

the great number of “me-too” drugs. There is often a lack of evidence available comparing the “me-too” drugs to their predecessors because higher profits results from developing and marketing more expensive new drugs. This profit motive has been seen in the advent of new selective-serotonin reuptake inhibitors (SSRIs), despite the fact that older, generic drugs in this class are often better and cheaper alternatives.105 As Consumer Reports noted, many heartburn sufferers now go immediately to powerful proton pump inhibitors (PPIs) when studies have shown sixty-nine percent of them do not need PPIs, but could be treated by lifestyle changes such a modifying their eating habits or using inexpensive antacids.106 Should a PPI be necessary, consumers can save $184 a month by using a generic omeprazole instead of Nexium® (esomeprazole magnesium).107 Successful efforts to provide unbiased objective drug information to consumers and prescribers should be sustained and financially supported by pharmaceutical fines.

**SUPPORT THE INSTITUTE OF MEDICINE’S (IOM) RECOMMENDATIONS ON NP PRACTICE.**

The first recommendation of the IOM is “Nurses should practice to the full extent of their education and training.”108 The practice rules that define the NPs’ permissible activities, including prescriptive authority, vary widely because licensing and regulations vary among the states. A nurse can or cannot prescribe certain classes of drugs by virtue of where he or she resides and whether the NP has a supervising or collaborative relationship with physicians. Thus, the NPs’ skillset in the marketplace is limited not by their education, credentialing, or

---

105. See id. (click “Depression” in navigation pane).  
106. Id. (click “Heartburn” in left navigation pane).  
107. See id.  
practice competencies, but by the unique state laws and office policies where they work. The IOM recommends that state scope of practice laws be reformed to remove unduly restrictive barriers to NP practice. Broad based coalitions began developing in 2011 to pursue changes in restrictive state and federal legislation over the NP scope of practice as well as anti-competitive and anti-trust laws. Support for these endeavors will remove undue restrictions on NP services and bring more NP specialists caring for older adults into nursing homes.

ADDRESS THE ISSUES RAISED BY THE NPS IN LONG-TERM CARE.

NPs advocate for increased access to gero-psychiatric prescribers—especially consultant geriatric pharmacists—and coverage for remote consultations and new electronic ways of communicating with prescribers. NPs also support reductions in drug costs and drug waste. Most pharmacies dispense in 30-day quantities because prescription drug plans pay for 30-day supplies; however, recent legislative changes in Medicare Part D will enable beneficiaries in long-term care facilities to have drugs dispensed in 7-day or fewer quantities, thereby encouraging titration and reducing waste from unused and costly medications. If drug deals exist, geriatric advocates should pursue equitable provisions for consumers such as bulk buying opportunities for families or nursing home collectives, and the use of evidence-based, lower cost generic drugs when possible.

ADVOCATE FOR ELECTRONIC HEALTH RECORDS THAT OFFER MEANINGFUL DRUG THERAPY REVIEWS AND MEDICATION TRACKING ACROSS THE TRANSITIONS IN CARE SETTINGS.

As new technologies move into health care and long-term care, providers and the public need to demand programs that extend beyond administrative record keeping and actually carry the potential to improve the quality of care. Prescribers should

109. Id. at 1.
have access to in-house programs that conduct preliminary drug reviews, link to relevant guidelines, and incorporate comparative drug cost and efficacy data. These programs should offer online geriatric pharmacy consultations and export and import data when the patient transitions across other health care settings. In the future, long-term care can benefit from the development of a device similar to an “IBM Watson” for nursing home therapeutics. This device would input individual data, weigh the relevant factors, and provide the cost-benefit scenarios for the appropriate range of therapeutic options. Until then, all providers have critical roles to play in ensuring the welfare and safety of older adults.

110. For information about IBM Watson and how this technology may be applied in the healthcare field, see the video clip at Healthcare, IBM WATSON, http://www.ibm.com (under Popular Links, click Watson > Watson for a Smarter Planet > Industry Perspectives > Healthcare).