

Prescription for Improving Patient Safety: Addressing Medication Errors

An Executive Summary of the The Medication Errors Panel Report

Pursuant to California Senate Concurrent Resolution 49 (2005)

About the Medication Errors Panel:

Recognizing the significant and growing public health concern of medication errors, in 2005 Senator Jackie Speier authored Senate Concurrent Resolution (SCR) 49, sponsored by the California Pharmacists Association. This resolution, adopted September 14, 2005, called for the creation of an expert panel to study the causes of medication errors in the outpatient setting and to recommend changes to the healthcare system that would reduce errors associated with prescription and over-the-counter medication use.

The Medication Errors Panel, assembled in 2006, consisted of two Senators, two Assembly members and 13 persons representing academia, consumer advocacy groups, health professions (medicine, nursing, public health and pharmacy), health plans, the pharmaceutical industry, and community pharmacies. Throughout 2006, Panel members gave a tremendous effort to this study and met at the state capitol 12 times to hear and discuss testimony from 32 invited speakers who included many widely respected state and national leaders in the fields of pharmacy practice, medicine, medical technology, healthcare regulation, academia, and the pharmaceutical industry.

The following is the Executive Summary of the Panel's report complete with its consensus recommendations.

The Problem of Medication Errors

A medication error is any preventable event occurring in the medication-use process, including prescribing¹, transcribing, dispensing, using and monitoring, that results in inappropriate medication use or patient harm. These errors and their consequences present a significant public health threat to Californians.

While most consumers and healthcare providers do not often associate poor health outcomes with adverse drug events – frequently the result of medication errors – the human and financial costs of the problem are staggering.

The most recent estimate of costs associated with drug-related morbidity and mortality in the US exceeds \$177 billion per year.² Amazingly, this amount is significantly greater than the amount actually spent on prescription drugs during the same year. In terms of patient harm, the Institute of Medicine projects that at least 1.5 million Americans are sickened, injured or killed each year by medication errors.³ Extrapolating these figures to California suggests that on an annual basis, the problem costs our state \$17.7 billion and causes harm to 150,000 Californians.

Perhaps the most concerning aspect of these errors is that the tremendous human and financial costs are not the result of some serious disease, but rather, well-intentioned attempts to treat or prevent illness.

Reducing Errors through a “Systems Approach”

Testimony provided to the Panel indicated that efforts to address errors are best targeted not at a particular group of individual “wrong doers,” but rather at faulty systems, processes, and conditions that either lead people to make mistakes or fail to prevent them. Consequently the Panel took a “systems approach” for studying the problem and developing its recommendations.

After spending considerable time examining each part of the medication-use process – prescribing, dispensing, using (administering/self-administering) and monitoring – and the inter-relationships of each component, the Panel identified four key medication-use systems/ processes and three key stakeholder groups which served as the focus of its recommendations.

Key Processes and Stakeholders

The four key processes which the Panel believes could be better designed to reduce and prevent medication errors are those related to:

- 1) **The transcription and transmission of prescriptions** (i.e. the methods prescribers use to document a prescription order and communicate that order to the pharmacy where it will be filled).
- 2) **The education of the consumer** regarding the purpose of the treatment, the effective use of the medication, and the monitoring of signs and symptoms that may indicate efficacy or toxicity.
- 3) **Healthcare provider payments and incentives** which can directly or indirectly influence providers to pursue behaviors designed to reduce medication errors.
- 4) **Healthcare provider training and licensure** which could foster a better understanding among providers about the seriousness of medication errors and the behaviors to adopt that will reduce them.

The three key stakeholder groups which the Panel believes will be critical in affecting the necessary changes to these processes are:

- 1) **Consumers and consumer oriented organizations** such as the California Department of Consumer Affairs; advocacy organizations (e.g. AARP, American Heart Association); community-based organizations; and private and public foundations.
- 2) **Healthcare providers and related organizations** such as academic institutions, professional societies and advocacy groups, and provider licensing/oversight Boards.
- 3) **Healthcare purchasers, payers, regulators and related organizations** such as the State of California, its Department of Health Services and the Medi-Cal program; private purchasers of health care such as employers; commercial insurance companies which administer health benefits for both public and private sector purchasers; the California Departments of Insurance and Managed Health Care which regulate these insurance companies; pharmacy benefit managers which focus specifically on the administration of pharmacy benefits; and of course, the Legislature and Administration of the State of California which possess the potential to influence and/or establish accountability for these groups.

Based on the analysis of these four key processes and three key stakeholder groups, the Panel developed 11 consensus recommendations within five subject areas, and a twelfth recommendation to further consider and address issues that went beyond the scope of the Panel's purpose.

Recommendations

- A. **Communication Improvements**, with an emphasis on improving the quality and accuracy of communications between prescribers, pharmacists and patients. Specific recommendations are:
 - 1) *Improve legibility of handwritten prescriptions, and establish a deadline for prescribers and pharmacies to use electronic prescribing.*
 - 2) *Require that the intended use of the medication be included on all prescriptions and require that the intended use of the medication be included on the medication label unless disapproved by the prescriber or patient.*
 - 3) *Improve access to and awareness of language translation services by pharmacists at community pharmacies and encourage consumers to seek out pharmacists who speak their language and understand their cultural needs.*
 - 4) *Promote development and use of medication packaging, dispensing systems, prescription container labels and written supplemental materials that effectively communicate to consumers accurate, easy-to-understand information about the risks and benefits of their medication, and how and where to obtain medication consultation from a pharmacist.*
- B. **Consumer Education** to increase consumer awareness regarding the proper use – and dangers of misuse – of prescription and over-the-counter medications. Specific recommendations are:
 - 5) *Identify and disseminate information about best practices and effective methods for educating consumers about their role in reducing medication errors.*
 - 6) *Establish an on-going public education campaign to prevent medication errors,*

targeting outpatients and persons in community settings.

- 7) *Develop and implement strategies to increase the involvement of public and private sector entities in educating consumers about improving medication safety and effectiveness.*

C. Pharmacy Standards and Incentives, with a focus on information and medication consultations given by pharmacists to their patients as a means of educating consumers about drug safety. Specific recommendations are:

- 8) *Help ensure quality and consistency of medication consultation provided by pharmacists within and among pharmacies.*
- 9) *Establish standards for Medication Therapy Management (MTM) programs and create incentives for their implementation and ongoing use by pharmacists and other healthcare providers.*

D. Training and Education for Healthcare Providers on various medication safety practices. The specific recommendation is:

- 10) *Create training requirements for pharmacists and other healthcare professionals that address medication safety practices and related programs, including medication consultation and medication therapy management programs.*

E. Research, with a focus on obtaining information about the incidence, nature, and frequency of medication errors in the community setting. The specific recommendation is:

- 11) *Establish and support efforts to collect data regarding the nature and prevalence of medication errors and prevention methods for reducing errors, especially focused on persons at high risk for medication errors and on community, ambulatory and outpatient settings.*

In addition to these five subject areas, the Panel identified a sixth that needs to be addressed but which it determined was beyond its scope. This issue relates to the many obstacles that pharmacists face in providing drug consultation to their patients which encompasses a variety of factors such as manpower shortages and the lack of payment systems to cover the time and expense associated with these tasks. Before additional duties can be imposed on pharmacists practicing in outpatient settings, the Panel recognizes that these issues must be addressed. Therefore the Panel put forth a twelfth recommendation:

- 12) *Convene a panel of stakeholders to identify and propose specific actions and strategies to overcome barriers to qualified pharmacists being recognized and paid as healthcare providers.*

Acknowledgements

This project has benefited from the generous contributions of many individuals and organizations. In particular the Panel would like to thank former Senator Jackie Speier who authored the resolution; Lynn Rolston of the California Pharmacists Association which sponsored SCR 49 (2005); Judith Babcock of the Pharmacy Foundation of California which managed funding for the Panel and arranged for administrative support; the Kaiser Family Foundation and California HealthCare Foundation which funded the Panel; Sandra Bauer, Michael Negrete and Ronald Spingarn who provided staff support for the Panel; and of course all of the Panel members listed on the following page with special thanks to Carey Cotterell for helping to write this report.

End Notes and References

¹While the Panel identified drug and dose selection as a process (i.e. prescribing) where errors can occur, its analysis and recommendations were focused on the areas of the medication-use process that occur *after* the point where prescribers consciously make such decisions.

²Ernst FR, Grizzle AJ. Drug-related morbidity and mortality: updating the cost-of-illness model. *J Am Pharm Assoc* 2001;41:192-9.

³Institute of Medicine (IOM). (2007). *Preventing medication errors: Quality chasm series*. P. Aspden, J. Wolcott, J. L. Bootman, & L. R. Cronenwett (Eds.). Washington, DC: The National Academies Press.

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