Pharmacy Research Can Help Raise Health Literacy Standards, Say Experts
Special Themed Issue of Research in Social and Administrative Pharmacy

Philadelphia, PA, September 25, 2013 – Limited health literacy can lead to difficulties in patients’ self-care activities such as taking prescribed medications. Since a considerable amount of health information changes hands in the pharmacy setting, research by pharmacists into evaluating which tools are effective in practice can make a valuable contribution to goals set by the 2010 US National Action Plan to Improve Health Literacy and lead to improvements in communications and health care, say experts in this special themed issue on “Pharmacy, Medication Use, and the National Action Plan to Improve Health Literacy,” published in the journal Research in Social and Administrative Pharmacy.

Health literacy is defined by the Institute of Medicine as "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions."

As reported by the 2003 National Assessment of Adult Literacy, approximately 36% of adult Americans exhibit health literacy skills that are at the basic level or below. This affects people’s ability to search for and use health information, adopt healthy behaviors, and act on important public health alerts. Limited health literacy affects people of all ages, races, incomes, and education levels; but the impact of limited health literacy disproportionately affects lower socioeconomic and minority groups, which includes racial and ethnic minorities as well as seniors. Limited health literacy is also associated with poorer health outcomes and higher costs.

With these concerns in mind, and guided by Michael J. Miller, RPh, DrPH, FAPhA, of the College of Pharmacy, The University of Oklahoma, Research in Social and Administrative Pharmacy solicited and compiled a collection of papers from top authorities from around the world, affiliated with prominent institutions such as the US Centers for Disease Control and Prevention and the US Department of Health and Human Services. Their collective contributions demonstrate pharmacy-relevant efforts supporting the US National Action Plan to Improve Health Literacy.

“The ideas generated from the research described in these papers should serve as a stimulus for future research and dialogue about a topic that is fundamental to ensuring optimal medication use, safety, and equity in health information-sharing,” says Miller.
The US Department of Health and Human Services’ 2010 National Action Plan to Improve Health Literacy defined seven goals to improve health literacy and suggested strategies for achieving them. The topics and studies in this special issue align most closely with goals on accessible, accurate, and actionable health information (Goal 1) and health-literate health care services (Goal 2). Improving quality and use of written communication materials, evaluating and creating environments that encourage active communication, and describing and testing novel ways to raise student awareness about health literacy issues highlight just a few of the important topics raised in this special themed issue.

Six studies examine the comprehensibility of patient education materials. Their conclusions support the value and necessity of clear communication and of designing and testing materials with the intended users.

Pharmacy schools are beginning to adopt health literacy as a framework for training the next generation of pharmacists to be effective communicators. Health literacy has begun appearing on syllabi, and has become a topic of experiential education activities. Six articles highlight the important role pharmacy schools are playing to further health literate pharmacy practice, while other contributions provide additional evidence of the important role pharmacy students can play in promoting health literacy in community pharmacies.

Other investigators found that to use the AHRQ Health Literacy Assessment to measure the impact of their training intervention, they had to modify the tool.

“The publication of this special issue on dissemination, translation, and evaluation of health literacy tools in pharmacy practice marks a significant accomplishment for the field,” say editorial authors Cynthia Baur, PhD, of the Centers for Disease Control and Prevention, and Cindy Brach, MPP, of the Agency for Healthcare Research and Quality, US Department of Health and Human Services. “Health literacy education, training, and practice improvement tools can contribute to reorienting future and current pharmacists. But to create ‘health literate pharmacies,’ practitioners and researchers must collaborate in evidence-based redesign of the ‘pharmacies of the future.’ Our medication delivery systems must be designed to make clear communication easy rather than perpetuate confusion and errors. We can’t rely on individual pharmacists’ good will if the systems they operate in hamper their ability to promote the safe use of medicines.”

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NOTES FOR EDITORS
The articles in this special themed issue of Research in Social and Administrative Pharmacy are available online and are published in Volume 9, Issue 5 (September 2013). The journal is published by Elsevier.

Full text of the articles is available to journalists upon request. To obtain copies contact Chris Baumle at 215-239-3731 or c.baumle@elsevier.com. Journalists wishing to set up interviews with the guest editors or individual authors should contact Michael J. Miller at 918-660-3586 or Michael-Miller@ouhsc.edu.

Pharmacy, Medication Use, and the US National Action Plan to Improve Health Literacy
Research in Social and Administrative Pharmacy
Volume 9, Issue 5 (September 2013)
FOREWORD
Pharmacy efforts in support of the National Action Plan to Improve Health Literacy
Michael J. Miller

EDITORIAL
Pharmacy research on health literacy can contribute to national goals and health care system improvements
Cynthia Baur and Cindy Brach

ORIGINAL RESEARCH
Assessing readability formula differences with written health information materials: Application, results, and recommendations
Li-Wern Wang, Michael J. Miller, Michael R. Schmitt, Frances K. Wen
Readability formulas are often used to guide the development and evaluation of literacy-sensitive written health information. Li-Wern Wang and colleagues assessed readability formula differences and provide recommendations for choosing an appropriate readability formula for written health-related materials to optimize their use.

Pharmacist and general practitioner ambivalence about providing written medicine information to patients—A qualitative study
Kim K. Hamrosi, David K. Raynor, S. Parisa Aslani
Australian and British authors led by Kim K. Hamrosi examined practices in Australia. They reveal that Australian clinicians often refrain from distributing Consumer Medicine Information (CMI), which was to be dispensed with prescription medicine, due to its shortcomings. “The challenge for government and industry is providing written medicine information that is usable, flexible, and user-friendly and available in diverse technological and multimedia avenues to improve access and communication. Future research should focus on ascertaining practical and cognitive ways in which health care professionals can be supported in embracing written medicine information, including CMI as an information-sharing tool to improve patient health literacy and outcomes,” says Hamrosi.

Impact of a health literacy assignment on student pharmacists learning
Aleda M.H. Chen, Marwa Noureldin, Kimberly S. Plake
Investigators report on the impact of a health literacy assignment (revising a patient medication information sheet) on 3rd year pharmacy students. They conclude that students became sensitized to the medical terminology that they had recently mastered and grasped the importance of using easy-to-understand language when talking to patients.

Using educational games to promote the seeking of a pharmacist and to teach key medication use messages: Results from an inner city health party
Kyle J. Burghardt, Margo R. Bowman, Maho Hibino, Barima K. Opong-Owusu Jr., Tiffany D. Pokora, Katherine Reeves, Kellie M. Vile
Kyle J. Burghardt and colleagues developed and tested an innovative intervention – educational board games played in a community pharmacy – on pharmacy patrons’ advice-seeking behavior.

Factors affecting adoption and implementation of AHRQ health literacy tools in pharmacies
Sarah J. Shoemaker, Leah Staub-DeLong, Melanie Wasserman, Mark Spranca
The authors found that implementation of the Agency for Healthcare Research and Quality’s (AHRQ) health literacy assessment tool was most successful in pharmacies that had available residents, students, or staff without full-time dispensing roles. In light of this finding, the team went on to develop a set of pharmacy health literacy curriculum modules that serve as a plug-and-play resource for pharmacy faculty.

Assessing health literacy practices in a community pharmacy environment: Experiences using the AHRQ Pharmacy Health Literacy Assessment Tool
Katherine S. O’Neal, Kimberly M. Crosby, Michael J. Miller, Kelly A. Murray, Michelle E. Condren
This study provides important lessons for tailoring health literacy tools to local conditions by demonstrating that some aspects of the AHRQ tool developed in a hospital outpatient pharmacy setting were not applicable to or feasible in community pharmacies.

 Adaptation of the health literacy universal precautions toolkit for rheumatology and cardiology – Applications for pharmacy professionals to improve self-management and outcomes in patients with chronic disease
Leigh F. Callahan, Victoria Hawk, Rima Rudd, Betsy Hackney, Sonia Bhandari, Lindsay P. Prizer, Thomas K. Bauer, Beth Jonas, Philip Mendys, Darren DeWalt
The authors adapted AHRQ’s Health Literacy Universal Precautions Toolkit, which was designed for primary care settings, for use in rheumatology and cardiology. They propose that with their heavy emphasis on communication about medicines, the tools may be useful to pharmacists as well.

PROPOSED MODEL
Pharmaceutical pictograms: A model for development and testing for comprehension and utility
Michael Montagne
Pictograms are a key component in re-designing medication information to improve comprehension, recall, and adherence. Michael Montagne reviewed pictogram development projects and proposes a model for pharmaceutical pictogram development and testing for comprehension and use.

RESEARCH BRIEFS
Reducing drug self-administration errors: A randomized trial comparing a "standard" versus "plain language" version of Patient Instructions for Use
Meredith Y. Smith, Lorraine S. Wallace
This study compared the effectiveness of a "standard" Patient Instructions for Use (PIFU-standard) with a "plain language" Patient Instructions for Use (PIFU-PL) by testing user comprehension and ability to administer a biologic agent with an auto-injector ("pen"). Participants given “plain language” instructions had a significantly better understanding of how to prepare for and self-administer medication with a pen and were consistently more accurate in demonstrating how to self-inject.

Exploring patient expectations for pharmacist-provided literacy-sensitive communication
Jessica L. Collum, Todd R. Marcy, Eric L. Stevens, Craig F. Burns, Michael J. Miller
Investigators found that patients at high risk for medication errors did not expect nearly as much from pharmacists as the effectiveness research suggests they should. They propose that part of the health literacy improvement agenda should include educating patients to raise their expectations for effective communication with providers.
Application of the content expert process to develop a clinically useful low-literacy Chronic Kidney Disease Self-Management Knowledge Tool (CKD-SMKT)

Radhika Devraj, Lorraine S. Wallace

The work by Radhika Devraj and Lorraine S. Wallace on developing the Chronic Kidney Disease Self-Management Knowledge Tool reflects an interest in patients’ mastery of the body of knowledge they need to manage chronic kidney disease. A knowledge test can help assess how well clinicians are doing in communicating key self-management information in a way that patients can understand.

COMMENTARY

User testing in developing patient medication information in Europe

D.K. Raynor

David K. Raynor of the University of Leeds describes the European practice of including mandatory patient-tested package inserts in all manufactured medicines and underscores the value of user testing as a means to create more usable patient information. He suggests the US and other countries also adopt mandatory user testing to make information more accessible to all.

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