Adherence Improvement Efforts are Popping Up All Over

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Spring came early this year to the mid-Atlantic region. In mid-March, the temperature reached over 80 degrees.

With spring comes renewal, growth, and change – including for the issue of medication nonadherence. Medication nonadherence, an historically under recognized, and often thought to be intractable public health problem, extracts significant personal health and national economic costs\(^1\). How and why are adherence improvements now taking root? It’s not by happenstance or the coming of warmer weather earlier than usual due to global warming. It’s because the spadework done over recent decades to prepare the soil (as it were) is now paying off.

Toiling in the Fields

The seeds for such growth were planted almost two decades ago, when medication nonadherence (then dubbed “non-compliance”) popped up on, and then quickly receded, from the public health radar. In the mid- 1990’s, the National Council on Patient Information and Education (NCPIE), a patient safety coalition formed in 1982, convened an invitational meeting of diverse stakeholders representing medicine, pharmacy, nursing, public health, government, and health communication. These experts examined medication nonadherence and its consequences, and then developed stakeholder-specific recommendations for action to promote better medicine adherence. This 1994 meeting, “Advancing Prescription Medicine Compliance: New Paradigms, New Practices,” resulted in the development and broad dissemination of multiple adherence-focused work products by NCPIE and invited authors, including the following, which were subsequently published in the Journal of Pharmacoepidemiology, (Vol. 3, Number 2, 1995):

- Advancing the Physician’s Contribution to Enhancing Compliance;
- Advancing the Pharmacist’s Contribution to Enhancing Compliance;
- Advancing the Contribution of the Patient and the Caregiver to Prescription Medicine Compliance;
Déjà vu All Over Again: Adherence Re-examined

In October 2007, as part of NCPIE’s annual national health observance “Talk About Prescriptions” Month, the Council released its second report on medication adherence, “Enhancing Prescription Medicine Adherence: A National Action Plan.” The report was intended as a renewed nationwide call to action for improving medication adherence through patient information and education, health professional intervention, expanded research, and supportive government policies. Included in the report was a suggested 10-step plan of action for diverse stakeholders’ consideration.

Unfortunately, NCPIE’s 2007 report found that that little had changed since it issued its previous report, Prescription Medicine Compliance: A Review of the Baseline Knowledge, which advocated for a coordinated approach to improved medication adherence. The 2007 report presented 10 national priorities that can have the greatest impact in improving prescription medicine adherence in the US:

1. Elevate patient adherence as a critical health care issue.
   The report states that until health care policy makers, practitioners and other stakeholders recognize the extent of non-adherence, its cost, and its contribution to negative health outcomes, this problem will not be solved.

2. Agree on a common adherence terminology that will unite all stakeholders.
   Because a number of common terms -- compliance, adherence, persistence, and concordance -- are now being used concurrently, the report calls on the public health community to reach agreement on standard terminology that will unite stakeholders around the common goal of improving the self-administration of medical treatments.

3. Create a public/private partnership to mount a unified national education campaign to make patient adherence a national health priority.
   With the goal of motivating patients and practitioners to take steps to improve medication adherence, the report advocates a national education campaign where all stakeholders coordinate resources and speak with one voice. This will entail creating a national clearinghouse to share information and coordinate activities managed by NCPIE, a professional society, or an academic institution.

4. Establish a multidisciplinary approach to compliance education and management.
   There is a growing recognition that a multidisciplinary approach to medication taking behavior is necessary for patient adherence to be sustained. This has led NCPIE to promote a new model – the Medicine Education Team -- in which the patient and all members of the
health care team work together to treat the patient’s condition, while recognizing the patient’s key role at the center of the process.

5. **Immediately implement professional training and increase the funding for professional education on patient medication adherence.**
   To give practitioners hands-on information about adherence management, the report calls on professional societies and recognized medical sub-specialty organizations to translate existing research findings into professional education through continuing education courses and lecture series on patient adherence issues.

6. **Address the barriers to patient adherence for patients with low health literacy.**
   Because low health literacy and limited English proficiency are major barriers to adherence and deserve special consideration, the report calls for widespread adoption of existing tools to convey medicine instructions to the estimated 90 million Americans who have difficulty reading, understanding and acting upon health information.

7. **Create the means to share information about best practices in adherence education and management.**
   Today, stakeholders have access to more than 30 years of research measuring the outcomes and value of adherence interventions. Building on this foundation, the report calls for the collection of data on best practices in the assessment of patient readiness, medication management and adherence interventions, incentives that produce quality outcomes from adherence interventions, and measurement tools so that this information can be quantified and shared across specialties and health care facilities.

8. **Develop a curriculum on medication adherence for use in medical schools and allied health care institutions.**
   To address the lack of awareness among clinicians about basic adherence management principles, the report advocates required courses at medical, nursing, pharmacy and dental schools as well as courses for faculty members that focus on adherence advancement and execution of medication-related problem solving.

9. **Seek regulatory changes to remove roadblocks for adherence assistance programs.**
   A number of federal and state laws and policies limit the availability of adherence assistance programs. These barriers must be identified for lawmakers and regulators to address.

10. **Increase the federal budget and stimulate rigorous research on medication adherence.**
    Although the National Institutes of Health created the Adherence Research Network to identify research opportunities at its 18 Institutes and Centers, the Network has been inactive since 2002. Moreover, in 2000, when the Network was funding adherence research, the actual NIH dollars earmarked for testing interventions to improve medication-taking behavior was only $3 million in a budget of nearly $18 billion. Thus, a key priority is advocating for significant increases in research funding to test adherence interventions and measure their effectiveness.

Sowing the Cyber Seeds: Promoting Medication Adherence Online

Also in 2007, NCPIE launched the Medication Use Safety Training for Seniors™ program (MUST for Seniors) – a standalone web-based program to empower and equip older adults and their caregivers with information, knowledge, and skills necessary to better ensure safe and appropriate use of medications, including prescription and nonprescription medicines and dietary supplements or herbal remedies. A key component of the MUST for Seniors program is a series of video vignettes depicting real-life medicine-use problems as lead-ins for discussion during the MUST for Seniors program. The site, redesigned in 2011, includes a new educational module addressing safe use of acetaminophen-containing products. See: www.mustforseniors.org.


Many Hands on the Tiller -- Collaboration is Key

In January 2011, the National Association of Chain Drug Stores (NACDS) Foundation released a request for proposals (RFP) soliciting submissions from research teams, led by a non-profit research partner, to analyze and improve Primary Medication Non-Adherence (PMN). PMN represents a largely unaddressed public health challenge, and research in this arena has been prioritized as an important piece of the medication adherence research agenda. The advent of electronic prescribing has facilitated the ability to capture PMN data. A recent study of over 195,000 e-prescriptions found that more than 1 in 4 new prescriptions were never filled by patients. This percentage was especially high for new medications treating chronic conditions. For example, 31.4% of new prescriptions for common diabetes medications went uncollected. The Foundation’s research initiative is addressing two primary objectives:

a. Measure PMN: Develop a metric that can be efficiently implemented across a wide range of pharmacies for benchmarking PMN rates.

b. Develop and Test PMN intervention(s): Utilize the PMN metric to determine the effectiveness of one or more pharmacy-based interventions to improve primary medication adherence rates.

The Foundation partnered with the Pharmacy Quality Alliance (PQA) to develop the PMN measure in partnership with an expert panel. The Foundation has also selected two sets of research collaboratives to implement the aforementioned PMN measures in a real-world setting to assess the practicality and utility of these measures for benchmarking of PMN rates and to assess the effectiveness of PMN interventions. The selected research teams will be led by Harvard University and the University of Mississippi, and are both on track to launch the PMN intervention in 2012.

In May 2011, the National Consumers League (NCL), a long-time NCPIE board member launched the Script Your Future national medication adherence public awareness campaign. In so doing, they effectively advanced one of NCPIE’s 10 recommendations for action to enhance prescription, per its 2007 Action Plan report. NCPIE serves on the Script Your Future campaign operating committee, responsible for overseeing this collaborative project that engages multiple public and private stakeholders. See: [www.scriptyourfuture.org](http://www.scriptyourfuture.org)

In August 2011 the National Alliance of State Pharmacy Associations (NASPA) – Alliance for Patient Medication Safety (APMS) funded six Adherence Discovery Project proposals from state pharmacy associations seeking to identify ways in which pharmacists can assist patients to improve adherence. The goal of this research effort was to select projects intended to produce measurable, scalable, replicable and sustainable programs in community pharmacy to improve adherence or methods to identify non-adherent patients.

Of the six projects, one researched a new adherence toolkit for use by the pharmacist and patient, two used a telephone model, and three used either a health coaching or modified health coaching system. For the final report and details about each project, see: [http://naspa.us/documents/grants/NASPAAdherenceDiscoveryProjectProcess.pdf](http://naspa.us/documents/grants/NASPAAdherenceDiscoveryProjectProcess.pdf)

In September 2011, NEHI, a not-for-profit, independent health policy institute unveiled The Medication Adherence Roadmap: A Path Forward, laying out multiple over-arching routes for addressing medication adherence improvement by addressing broad megatrends and high-level opportunities as key to adherence advancement. NCPIE served as a member of the NEHI Conference Advisory Committee and participated in development of the Adherence Roadmap. See: [http://www.nehi.net/publications/58/roadmap_to_improved_patient_medication_adherence](http://www.nehi.net/publications/58/roadmap_to_improved_patient_medication_adherence)

In January 2012, the National Association of Chain Drug Stores (NACDS) Foundation announced a research opportunity to study the health impact of pharmacist-provided medication management in care teams to explore strategies to improve medication use in Accountable Care Organizations and Patient-Centered Medical Homes. The NACDS Foundation intends to fund, over a two year period, approximately two grants to non-profit research organizations or academic institutions. This research will help identify whether pharmacist-led interventions within team-based healthcare delivery systems improve patient health outcomes. Selected research projects are anticipated to begin this fall (2012) and last approximately two years in duration to capture long-term health outcomes and the impact of medication management services. See: [Request for Proposal](http://www.nehi.net/publications/58/roadmap_to_improved_patient_medication_adherence).
In February 2012, NCL, the National Association of Chain Drug Stores (NACDS) Foundation, and the American Association of Colleges of Pharmacy (AACP), organizations represented on NCPIE’s Board of Directors, awarded five pharmacy schools Script Your Future Medication Adherence Challenge Awards to recognize pharmacy students’ public education efforts to help patients understand the importance of taking medications as directed. The awardees, selected from 81 participating colleges and schools of pharmacy, were:

- University of Maryland School of Pharmacy;
- Harding University College of Pharmacy;
- Creighton University School of Pharmacy and Health Professions;
- Lake Erie College of Osteopathic Medicine School of Pharmacy, and
- University of Missouri-Kansas City School of Pharmacy.

The goal of the Script Your Future Medication Adherence Challenge Awards is to educate the next generation of pharmacists to take a proactive role in encouraging patients to follow the instructions for taking their medication through medication adherence education. See: http://www.aacp.org/news/media/Documents/SYFAwardsFINAL.pdf

In the Hopper: The NCPIE Adherence Action Agenda

In 2012, NCPIE will convene an invitational, broad-based stakeholder project advisory team (PAT) to provide input into the formulation of a multi-year Adherence Action Agenda (NCPIE A³ Project). The A³PAT will provide input into:

1. Overall project design;
2. Framing parameters of an comprehensive adherence environmental assessment and gap analysis;
3. Formulation of specific action steps for healthcare providers (collaborative and profession / sector specific), government policy advocates, consumer / patient organizations, health IT developers; the pharmaceutical industry; insurers, major employers, and media;

Watch www.talkaboutrx.org for details.
Keeping a Weather Eye

The above reflections are evidence of NCPIE’s dedication to the “3C’s” -- its long-standing role as catalyst, convener, and clearinghouse of information and ideas to promote medication adherence and safe and appropriate medicine use through improved medicine communication. Almost thirty years after NCPIE’s founding, medication adherence and enhanced medicine communication is poised to benefit patients, clinicians, consumers and caregivers alike.

Here’s looking toward a bountiful harvest.

References


NEHI estimates that nonadherence has been shown to result in $100 billion each year in excess hospitalizations alone. NEHI estimates that nonadherence along with suboptimal prescribing, drug administration, and diagnosis could result in as much as $290 billion per year in avoidable medical spending or 13 percent of total health care expenditures.

About the National Council on Patient Information and Education (NCPIE): Formed in 1982, NCPIE is a non-profit coalition of diverse member organizations representing healthcare professionals, consumer and patient advocacy organizations, businesses, voluntary health organizations, pharmaceutical manufacturers, and government agencies working together to fulfill NCPIE’s mission – stimulating and improving communication of information to promote safe and appropriate medicine use to consumers and healthcare professionals. For information about NCPIE, visit www.talkaboutrx.org.