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## December e-letter featured article

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Schillinger D, Piette J, Grumbach K, Wang F, Wilson C, Daher C, Leong-Grotz K, Castro C, Bindman A. **Closing the Loop: Physician Communication With Diabetic Patients Who Have Low Health Literacy.** Arch Intern Med. 2003 Jan 13;163(1):83-90.

### Commentary from Tom Bodenheimer:

This brilliant article has relevance to all patients of all clinicians. The article focuses on diabetic patients who have low health literacy, but its significance is far broader. The article says three things: 1) physicians are not checking with their patients (“closing the loop” or “teach-back”) to make sure that the patients understand the physician’s advice, 2) patients correctly understand a physician’s advice only half the time, and 3) if physicians do “close the loop,” clinical outcomes are better. The article’s message: when clinicians advise a patient to do something (change an unhealthy behavior or take a new medication), the teach-back method should be utilized. In the study, closing the loop did not increase the duration of the visit.

### Commentary from Dean Schillinger:

**WHAT?** I employ the “teach-back method” in all of my encounters with patients, particularly those with chronic disease, for whom self-management is a central component. In this interactive technique, the clinician prioritizes amongst the information exchange that has occurred in a visit and **explicitly** asks the patient to “teach-back” what he/she has *recalled and understood* from the discussion in those high-priority domains. Similarly, clinicians can use the strategy to assess patient’s *perceptions* of the information or advice given.

**SO WHAT?** In the context of a busy office visit, clinicians frequently overwhelm patients with information and advice, and patients only recall or comprehend as much as half of what was said. In addition, physician’s advice and instruction is often delivered out of context, is based on assumptions of shared meaning, and rarely is tailored to the individual patient’s needs. I have found that the “teach-back” method, if used early and often, can -

- Ensure information is **understood/integrated** into memory
- Check for **lapses** in communication
- Open dialogue re **health beliefs** and **barriers** to self-management
- Reinforce and **tailor** health messages
- Promote a common understanding or “**shared meaning**”
- Elicit **patient participation/activation**
- Maintain your curiosity in the patient as **a unique person**, with unique stories to tell- thereby promoting a genuine **alliance**

**HOW?** Here are some examples of how to initiate a “teach-back”:

Example 1 (*medication change*):

Doctor (to patient): *“I want to make sure I did a good job explaining your blood pressure medications, because this can sometimes be confusing. Can you tell me what changes we decided to make and how you now will take the medications?”*

Note especially how the physician places the onus of any possible miscommunication on him/herself. In other words, the “teach-back” task is conveyed **not as a test of the patient**, but of how well the physician explained the concept.

Example 2:

Nurse Educator (to patient): *“ We’ve spent the last few minutes discussing how you are going to exercise and how you are going to change what you eat. Can you repeat back to me these new plans on exercise and eating, and can you tell me how easy or difficult these will be for you to do and what problems you might have in doing them? This will help me give you the best advice?”*

Note again how the nurse normalizes any possible disagreement re the plan or future non-adherence to the agreed-upon plan by framing such disclosures as one means to improve on the nature of any advice. It is also important to give the patient time and space to respond; avoid interrupting the patient before he/she has a chance to respond.

How NOT to initiate a “teach-back”:

Example 3:

Doctor (to patient): *“Do you understand what we just talked about?”* or *“Do you understand the plan regarding your blood pressure medications?”* or *“Did that make sense?”*

These routine queries, which do not require explicit articulation of recall, comprehension, or perceptions on the part of the patient, will universally be met with an uninformative (and possible falsely re-assuring) “Yes, doctor”.

**WHAT NEXT?** I would like to see the routine incorporation of this technique across health disciplines and across modes of communication, e.g. telephone advice; interactive computer instruction/tailoring. Teach-back is currently being rolled out as National Quality Forum Safe Practice #10 for informed consent discussions

**TAKE HOME** A simple communication tool – the “teach-back method”, a.k.a. “Closing the Loop” - if used early, often, and at strategic moments, can help promote more effective two-way discourse between clinicians and patients without lengthening the chronic care visit.

The article's abstract, a shortened discussion section, and a few key references:

**Background:** Patients recall or comprehend as little as half of what physicians convey during an outpatient encounter. To enhance recall, comprehension, and adherence, it is recommended that physicians elicit patients' comprehension of new concepts and tailor subsequent information, particularly for patients with low functional health literacy. It is not known how frequently physicians apply this interactive educational strategy, or whether it is associated with improved health outcomes. **Methods:** We used direct observation to measure the extent to which primary care physicians working in a public hospital assess patient recall and comprehension of new concepts during outpatient encounters, using audiotapes of visits between 38 physicians and 74 English-speaking patients with diabetes mellitus and low functional health literacy. We then examined whether there was an association between physicians' application of this interactive communication strategy and patients' glycemic control using information from clinical and administrative databases. **Results:** Physicians assessed recall and comprehension of any new concept in 12 (20%) of 61 visits and for 15 (12%) of 124 new concepts. Patients whose physicians assessed recall or comprehension were more likely to have hemoglobin A1c levels below the mean (<8.6%) vs patients whose physicians did not (odds ratio, 8.96; 95% confidence interval, 1.1-74.9) (P=.02). After multivariate logistic regression, the 2 variables independently associated with good glycemic control were higher health literacy levels (odds ratio, 3.97; 95% confidence interval, 1.09-14.47) (P=.04) and physicians' application of the interactive communication strategy (odds ratio, 15.15; 95% confidence interval, 2.07-110.78) (P<.01). **Conclusions:** Primary care physicians caring for patients with diabetes mellitus and low functional health literacy rarely assessed patient recall or comprehension of new concepts. Overlooking this step in communication reflects a missed opportunity that may have important clinical implications.

**Discussion:**

Our study attempts to measure the extent to which physicians assess patients' recall and understanding of information conveyed during an outpatient encounter, and examines the association of this communication strategy with patient outcomes. Primary care physicians caring for patients with low FHL and diabetes mellitus assessed patients' recall and comprehension in only 1 of 5 visits and for fewer than 1 of 8 new concepts. In addition, the rare physician who did assess the patient's comprehension never completely closed the loop for patients who demonstrated lack of understanding, by failing to reassess recall and comprehension of the tailored explanation to ensure a common understanding. Most new concepts conveyed during the encounters involved a change in the patient's medication regimen. Despite the importance of medication adherence in diabetes mellitus care, 32 physicians in our study ensured comprehension of medication changes only 13% of the time.

Our finding that interactive communication was associated with improved glycemic control is consistent with prior research in physician-patient communication. Patients whose physicians asked them to restate the main concepts at the end of the encounter were more likely to retain the information than patients who received usual care. A randomized controlled trial of patient-directed communication skills training that included the promotion of information-verifying behavior by patients demonstrated that trained patients were more likely to be adherent with medications, behavioral treatments, and follow-up appointments than untrained patients. Increased information giving on the part of the physician and increased involvement on the part of the patient are

associated with improved functional and physiologic status among diabetic patients. Such strategies may be particularly beneficial for populations with low FHL and chronic diseases, because health outcomes for these patients may be particularly sensitive to improvements in communication.

There may be several reasons why physicians underused the interactive educational strategy. Most physicians have not received training about how to maximize teaching efforts and tend to underestimate patients' information needs and overestimate their own effectiveness in conveying information. Physicians may also avoid explicitly assessing patients' recall and comprehension for fear of opening a Pandora's box and of needing to spend more time with the patient. However, we found that encounters that included an assessment of patients' recall or comprehension were not longer than those that did not.

A few references:

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## December e-letter abstracts

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Wilson IB, Landon BE, Hirschhorn LR, McInnes K, Ding L, Marsden PV, Cleary PD. **Quality of HIV Care Provided by Nurse Practitioners, Physician Assistants, and Physicians.** *Ann Intern Med.* 2005 Nov 15;143(10):729-36.

**BACKGROUND:** Nurse practitioners (NPs) and physician assistants (PAs) are primary care providers for patients with HIV in some clinics, but little is known about the quality of care that they provide. **OBJECTIVE:** To compare the quality of care provided by NPs and PAs with that provided by physicians. **DESIGN:** Cross-sectional analysis. **SETTING:** 68 HIV care sites, funded by Ryan White Comprehensive AIDS Resources Emergency (CARE) Act Title III, in 30 different states. **PARTICIPANTS:** The authors surveyed 243 clinicians (177 physicians and 66 NPs and PAs) and reviewed medical records of 6651 persons with HIV or AIDS. **MEASUREMENTS:** 8 quality-of-care measures assessed by medical record review. **RESULTS:** After adjustments for patient characteristics, 6 of the 8 quality measures did not statistically significantly differ between NPs and PAs and either infectious disease specialists or generalist HIV experts. Adjusted rates of purified protein derivative testing and Papanicolaou smears were statistically significantly higher for NPs and PAs (0.63 and 0.71, respectively) than for infectious disease specialists (0.53 [P = 0.007] and 0.56 [P = 0.001], respectively) or generalist HIV experts (0.47 [P < 0.001] and 0.62 [P = 0.025], respectively). Nurse practitioners and PAs had statistically significantly higher performance scores than generalist non-HIV experts on 6 of the 8 quality measures. **Limitations:** These results may not be generalizable to care settings where on-site physician HIV experts are not accessible or to measures of more complex clinical processes. **CONCLUSIONS:** For the measures examined, the quality of HIV care provided by NPs and PAs was similar to that of physician HIV experts and generally better than physician non-HIV experts. Nurse practitioners and PAs can provide high-quality care for persons with HIV. Preconditions for this level of performance include high levels of experience, focus on a single condition, and either participation in teams or other easy access to physicians and other clinicians with HIV expertise.

Xakellis, G. **Are Patients Who Use a Generalist Physician Healthier Than Those Who Seek Specialty Care Directly?** *Fam Med.* 2005 Nov-Dec;37(10):719-26.

**BACKGROUND:** American health care consumers want the option of seeing specialists whenever they wish, but given this option, do they in fact use it without consideration of their health status? This paper reports on a cross-sectional analysis that compares the demographics and health status of fee-for-service Medicare enrollees who exhibited four different patterns of physician access. **METHODS:** The Medicare Beneficiary Survey data from 1998 were used. Subjects ages 65 and older were categorized into one of four groups: those with no physician claim, those who saw a generalist only, those who saw a specialist only, and those who saw both. Age, income, education, health status, level of impairment, and disease burden for the four patient groups were compared using ANOVA. Urban/rural status, race, ethnicity, mortality rates, and gender for the four patient groups were compared using chi-square. A predictive model using multinomial logistic regression was created. **RESULTS:** Twelve percent of subjects saw no physician in 1998, 11.6% saw a generalist only, 14.2% visited a specialist only, and 62.1% visited both types of physicians. Subjects who saw both physician types had significantly worse health status and more chronic diseases than

the other groups. Subjects who saw generalists only or specialists only had intermediate levels of health status and disease burden that were not significantly different from each other. Subjects who saw a specialist only were the most affluent and highly educated group. Subjects who saw no physician had the best health status and the fewest chronic diseases of all subject groups. Urban residents were more likely to visit some type of physician than were rural residents and were more likely to see a specialist only. Regional differences were noted, with New England showing the highest rates of specialist only use. **DISCUSSION:** As expected, the healthiest subjects were least likely to visit any health care provider. Subjects with the worst health status were likely to access both generalists and specialists for their care. Subjects who visited a specialist only had higher incomes, more education, and urban residence but no difference in health status when compared to subjects who visited a generalist only.

### **Have paper records passed their expiry date?**

CMAJ. 2005 Sep 27;173(7):725, 727. Erratum in: CMAJ. 2005 Oct 25;173(9):1071 Canadian Medical Association Journal 2005;173:725.

The manager of your local grocery store can instantly determine how many kilos of Ida Red apples are still on the shelves, the use-before dates of every carton of soy milk, the total cash in the cash registers and the dollar value of unsold loaves of bread that will be distributed that evening to the local food bank. Her best friend, a doctor, doesn't know that the elderly patient in his office had a chest x-ray last night when he visited the emergency department, what laboratory tests were ordered — let alone the results — or the type and dose of prescribed medications, if any. His patient remembers having an x-ray, but doesn't know the results. He is foggy about the tests and the meds. Neither patient nor doctor knows the date of the patient's last cardiology consultation or recalls off-hand whether he received influenza and pneumococcal vaccines last year. The clinical encounter grinds to a halt while the doctor thumbs through a bulging paper file of barely legible notes.

Why haven't electronic medical records replaced clumsy paper records in offices and hospitals around the country? A recent US survey revealed that 84% of physicians did not have sufficient electronic access to their patients' records to produce a list of patients by the medications they are taking,<sup>1</sup> a useful tool to have when regulatory authorities issue "Dear Doctor" warnings.

In describing their motivation for going electronic, 4 physicians in a small group practice in Philadelphia hoped that medical records might eliminate or reduce "frustrating repetitive processes (such as prescription refills) and minimize some of the ways in which we routinely failed to meet patient expectations (such as one of us not knowing what another had said the previous day to a patient on the telephone)."<sup>2</sup> They also expected and wanted to prepare for working in a future health care system where payment for services would be based on performance, including routine assessments of quality of care.

There are 2 broad requirements for an electronic health records system. First, functionally, the system must be capable of storing and retrieving essential information. This includes storing patient hospital and office records, laboratory results and diagnostic imaging, tracing physician orders, enabling electronic prescriptions, securing electronic communication of voice and email, and performing administrative functions such as submitting claims, booking appointments and performing routine audits of quality of care. Second, a health information system must permit easy

communication (interoperability) among health care providers so that an individual patient's information can be shared and used in real time. Systems must be secure and robust so that patients and physicians are confident that patient confidentiality is assured.

As reported by the Philadelphia physicians, patient care does improve, and physician frustration with common repetitive and bothersome tasks such as renewing prescriptions and finding test results is lowered, at least after an initial stressful phase of implementation.

But there are significant barriers to the adoption of electronic patient care records and systems. Perhaps most important among these is that the financial rewards inherent in greater efficiency (say, less duplication of laboratory tests and x-rays) accrue to health insurers, not physician providers. Other barriers are substantial capital investments, varying and untested vendor quality and life expectancy (there are many small companies offering services), and products that are not tailored to specific practice needs. There are also inherent problems in assuring interoperability between practices, hospitals and laboratories that almost always function completely independently of one another.

If implementation is left solely to individual providers of care, then we will never have electronic health records. There is a clear role for governments to provide leadership and to remove financial barriers that place the burden almost exclusively on providers of health care. In the United States, it is estimated that an additional investment of US\$400 billion is needed to create a patient-centred electronic health record that would meet minimal standards of functionality and interoperability.<sup>3</sup> Assuming the same standards in Canada, an additional investment of Can\$18.7 billion is needed. Health Infoway, which was established by Health Canada to promote the implementation of electronic health care records, will receive about Can\$200 million annually over the next 4 years. This falls far short of what we need, even if the provinces contribute an equal amount.

Because access to health information about specific patients in real time by different providers is the central component of an electronic health record, it is an absolute requirement that funding for the adoption of this technology be provided simultaneously to hospitals, clinics, pharmacists and the offices of practising physicians. This is a federal role that will need considerably more investment than has been forthcoming. — *CMAJ*

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## Democrats Divided Over Medicaid Budget Cuts

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Democrats in Congress and some Democratic governors are divided over a House budget plan (HR 4241) that would reduce Medicaid spending, the Washington Post reports. Although congressional Democrats universally oppose the plan, some Democratic governors are "quietly supporting" the bill and "questioning the party's reflexive denunciations," the *Post* reports. The plan, which was approved by the House Nov. 18, would reduce Medicaid spending by \$12 billion through 2010 and \$48 billion over the next 10 years, in part by making it more difficult for seniors to transfer assets to qualify for Medicaid nursing home care coverage.

The plan would save \$2.4 billion over five years by permitting states to charge beneficiaries higher copayments, premiums and deductibles and \$3.9 billion by reducing preventive care and screenings for children and pregnant women. According to the *Post*, the divide demonstrates the "differing interests" of congressional Democrats -- who are "out of power and struggling to capitalize on the declining popularity of their adversaries" -- and the "more pragmatic approach" of Democratic governors.

Democrats in Congress say the House budget plan undermines the party's ideals, while some governors say the provisions are necessary to ease states' rising Medicaid costs.

Ray Scheppach, executive director of the National Governors Association, said some of the most divisive provisions in the House bill were adapted from a plan created over the summer by a bipartisan task force of governors, led by Virginia Gov. Mark Warner (D). "The House has worked very closely with us," Scheppach said, adding, "From our standpoint, Republicans and Democrats saw this very similarly at the state level." The *Post* notes that gubernatorial support of the Medicaid cuts "may not be universal," as Oregon Gov. Ted Kulongoski (D) asked Sen. Gordon Smith (R-Ore.) to oppose increased cost-sharing.

Thomas Khan, Democratic staff director of the House Budget Committee, said, "All Democrats agree strongly that cuts in Medicaid, especially those that hurt poor beneficiaries, should not be used to pay for tax cuts, especially those geared toward those at the top" (Weisman, *Washington Post*, 11/28).