



# The Teaching Physician

for those who teach students and residents in family medicine

Volume 6, Issue 3

July 2007

## Teaching Points—A 2-minute Mini-lecture

### Well-child Checkups (and Beyond)

By Joshua Steinberg, MD, University of Cincinnati

*Editor's Note: The process of the 2-minute Mini-lecture is to get a commitment, probe for supporting evidence, reinforce what was right, correct any mistakes, and teach general rules. In this scenario, Dr Steinberg (Dr S) works with a third-year student (MS3) who is seeing a young patient for a well-child exam.*

**MS3:** It looks like our first patient this afternoon will be another well-child checkup (WCC).

**Dr S:** Yes, she is a 9-month-old girl. We did a couple WCCs this morning

together. Are you starting to feel comfortable doing them?

**MS3:** Kind of. I did some on my peds rotation, too. But they're still confusing because there's so much to keep straight, and I'm never quite sure of what gets done at each age's visit.

**Dr S:** Hey, I hear you. To me, it felt like a ton of issues to memorize and check until I figured out an overall approach to the WCC. If you'd like, we can talk about it now and help you be prepared for this next one.

**MS3:** That would be great.

**Dr S:** Let's start by looking at the list

for our morning schedule. Most of these patients came in with the reason for the visit. This man was here for "shoulder pain." And that mom brought in her toddler for "fever and earache." What's your game plan for visits like those?

**MS3:** Chief complaint, history of present illness, pertinent background history, focused physical exam, come up with possible diagnoses, and propose a plan.

**Dr S:** Excellent. That is the agenda for a common kind of visit, the acute problem visit. For those visits, the patient brings the agenda wrapped up within the chief complaint. But there are a couple of visits we did this morning where folks came without this kind of agenda—the WCCs. Mom and dad brought in their kids because they believe that if they bring their children

*(continued on page 2)*

## Information Technology and Teaching in the Office

### Safe Browsing for Health: Helping Patients and Learners Find Trustworthy Information

By Thomas Agresta, MD, University of Connecticut

Mrs Smith comes to your office and tells the student caring for her, "Can you prescribe this herbal remedy? I did a Web search and Dr Jones from the KAVA-KAVA clinic states that it will restore my youth and energy." Or "I looked online and found a support group for my Crohn's disease, what do you think?"

Doubtless we have all had the experience by now of a patient or family member coming to us with a question or article that they have found on the Internet related to their medical conditions or complaints. Do you have a for-

mal approach to helping them sort out the wheat from the chaff? What about you—how do you decide what advice delivered in the Internet medium is from high-quality, trustworthy sites? Certainly, as primary care clinicians we recognize that there is great value, as well as great peril, when our patients get actively engaged in learning about their health. Yet we should just as easily realize we can't control the information presented to them. And there is a lot to worry about.

*(continued on page 3)*

July 2007

Volume 6, Issue 3

An Evidence-based Approach to the Management of Chronic Constipation in North America .....	5
FPIN HelpDesk .....	7
POEMs for the Teaching Physician.....	8
Using the RIME Model for Learner Assessment and Feedback .....	10

(continued from page 1)

## Well-child and Well-adult Checkups

to the doctor for regular checkups, we're going to do good things for their health. They're counting on us to have an agenda of good things to do. So we have to come up with that agenda. What good things do you think we should do at a WCC?

**MS3:** Well, I've never thought of it that way. I'm not really sure.

**Dr S:** How about if I help you get started? What are some of the things we did this morning at our WCCs?

**MS3:** For the 4 month old, we measured height, weight, and head circumference.

**Dr S:** Right. Why did we do that?

**MS3:** We could have found failure to thrive or a growth abnormality.

**Dr S:** Which would have suggested that there is a problem, perhaps a disease. What else did we do?

**MS3:** For the newborn, we listened to the heart, and we checked the red reflex.

**Dr S:** Right again. Why did we do those?

**MS3:** We were trying to find a murmur or cataract.

**Dr S:** Exactly. Also, an abnormal red reflex can reveal a rare disease: retinoblastoma. What else did we do?

**MS3:** We asked about development, like rolling over and talking.

**Dr S:** Why?

**MS3:** If there was developmental delay, it would suggest a disease that we could work on.

**Dr S:** Precisely. All the stuff you've named so far fit into the first category of stuff that we do at WCCs—screening for disease. At different ages, we check for different diseases with history questions, exam findings, and even labs like a hemoglobin or a lead level. But that's just one category of three worthwhile things on the WCC agenda. What else do we do?

**MS3:** Hmm. Oh, how could I forget? I gave shots!

**Dr S:** Did you enjoy doing that with my nurse?

**MS3:** Yeah, I had never gotten to do that before.

**Dr S:** Well, then, you personally accomplished the entire second category of worthwhile things on the WCC agenda—preventive measures. Some docs call this category “chemoprophylaxis.” We could just call it “shots” because most of it is immunizations. But let's not forget that there are some other preventive things we prescribe, such as fluoride for our rural patients with well water to prevent dental cavities.

**MS3:** So we've got screening for disease and preventive measures. You said there's a third category?

**Dr S:** We did history, physical, and labs screening for disease; we gave shots; and we talked. Take that mom and 4 month old we saw. I take care of mom, and I delivered this baby, so we certainly did chat socially. But we also did some medical talk. What did we talk about?

**MS3:** You gave advice on breast- and bottle-feeding as mom prepares to head back to work. And you mentioned the risks of walkers. And you asked about the baby's car seat. And I even answered some questions about first solid foods for the baby.

**Dr S:** Exactly. There are medical advice things we talk about to promote the health of children. I'd group these into the category of advice, patient education, and anticipatory guidance. Now, this talk stuff about diet, safety, and second-hand smoke could seem fluffy and not squarely medical. But let me pose a little question. What's the number one thing that kills children in this country?

**MS3:** We learned that on peds. Accidents.

**Dr S:** Right. So if we're doing a visit focused on maintaining the health of children, it could be pretty high yield to prevent the biggest problem: accidents. We do it by asking questions and giving advice about infant car safety seats, bike helmets, and smoke detectors. If you think about it, it's really rare that we find a disease by examining the lungs and abdomen of a healthy 5 year old, so sometimes the highest yield things we do for a child's health at a

WCC are advising and educating about safety issues, diet issues, development issues, and the like. And think about a teen. The biggest health risks for a teen are probably not in undiagnosed diseases of the chest, but rather in the smoking, the alcohol, the relationships, and the sex that they may or may not engage in. We have a modest but real opportunity to influence how those health things work out through our advice/patient-education category. I'm only pointing this out because it's easy to see the other categories as medical and the advice category as nonmedical, but they are each equally important contributors to maintaining the health of children.

**MS3:** So the agenda for the WCC is screening for disease, preventive measures, and advice/patient education.

**Dr S:** Let me ask you one more question, which I can't resist as a doctor who takes care of folks both young and old. If the agenda for a visit to maintain the health of a child is screening for disease, preventive measures, and advice/patient education, what do you think the agenda for a well 24-year-old woman is or a well 74-year-old woman is?

**MS3:** Um, well, I guess it might be screening for disease, preventive measures, and advice/patient education?

**Dr S:** Bingo! The issues at different ages are a bit different, like screening for STDs (sexually transmitted diseases), hypertension, and cervical cancer in a 24 year old, osteoporosis and breast cancer in the 74 year old. The anticipatory guidance might include family planning for the young woman and advanced directives for the elderly woman. A tetanus booster might be chemoprophylaxis for the 24 year old, pneumovax and a daily baby aspirin is for the aging patient. And what if I asked you the agenda for a prenatal visit, which would be a woman's visit to maintain and promote the health of her pregnancy?

(Continued on page 4)

(Continued from page 1)  
**Safe Browsing for Health**

If, however, we have some principles to guide how we direct our patients, we can teach both them and our learners how to approach the ever-expanding Internet resources more effectively. Fortunately, there are a large number of people and organizations who have a vested interest in assuring that quality information is presented. An Internet e-Health Code of Ethics was developed in 2001 by a combination of nonprofit organizations and health care companies that directly addresses these issues. A brief synopsis of ideas espoused by this group is outlined below.

- **Candor**—Disclose information that might affect how consumers view the Web site.

- **Honesty**—Be truthful in claims regarding any information or products discussed.

- **Quality**—Qualified professionals should provide accurate, up-to-date information.

- **Informed consent**—Users determine how personal information gathered is used.

- **Privacy**—Protect how data is stored and used to protect privacy.

- **Professionalism in online care**—Have qualified professionals provide ethical care when indicated and clearly describe the limitations of online services.

- **Responsible partnering**—Verify the trustworthiness of any other Internet partners.

- **Accountability**—Actively seek feedback about the site and monitor for continued compliance to this code of ethics.

You can see [www.ihealthcoalition.org/ethics/code0524.pdf](http://www.ihealthcoalition.org/ethics/code0524.pdf) for the complete document. A consumer version of these same principles can be a helpful tool for you to direct your patients to

or develop your own handouts. This can be found at [www.ihealthcoalition.org/content/tips.html](http://www.ihealthcoalition.org/content/tips.html).

In addition to knowing the principles regarding ethical Internet e-Health, it can be quite helpful to use tools that have been developed to help clarify which sites meet these principles. Health On the Net (HON) Foundation is an international nongovernmental, nonprofit organization formed in 1995 for the explicit purpose of promoting and deploying the useful and reliable online medical and health information. It is accredited by the United Nations and has its own code of ethics similar to those above that it uses to review Web sites. Individual sites can apply for review, and if accepted, then they can use the HON accreditation signature code on their Web site. You can learn to look for this when you review a site and can similarly teach patients and learners to do so as well. As might be expected, most of the highly trusted sites such as [Medline.gov](http://Medline.gov), which is an excellent patient education site, are approved with this status.

Additional tools are also available for use at HON, such as a search toolbar that can be downloaded into your browser for medical information. This works in a similar fashion to the Google or Yahoo toolbars that many are familiar with, except it returns only HON-approved sites. Another online tool provides one with the ability to enter an Internet URL and have an automatic determination of whether it meets the HON code. Several other unique features exist that are worth exploring when you have time. In addition, the site can be viewed in several languages, including Spanish and French. The downside for US physicians and patients is the large number of international Web sites that can be returned during a search. The HON Foundation Web site can be found at [www.hon.ch/index.html](http://www.hon.ch/index.html).

**Action Items for You as a Teaching Physician**

- Review the Internet ethics sites provided. Consider having learners associated with your practice review them as well.

- Explicitly ask your patients to discuss what their Internet sources, if any, are for health information.

- Consider having patients show you new sites or information directly in the exam room. Look for the HON seal and show patients this site.

- Keep a current list of preferred Web sites for your patient to visit regarding specific common conditions that you see.

- Develop a handout/brochure or attachment to your practice Web site for your patients that lists the good approaches to Web sites viewing.

- Engage your learners as active participants in this process by having them review your Web site links and/ or patient handouts, and use the above-noted principles to update them periodically (perhaps every 6 months).

As we are all aware by now, the Internet and the advice and services offered through this medium are fast becoming a major part of many of our patients' daily lives. Taking some of the steps outlined above may improve your ability to participate in this process a little more effectively while promoting quality in information-seeking by our patients.

**Richard Usatine, MD, University of Texas Health Science Center at San Antonio, Editor**

**Thomas Agresta, MD, University of Connecticut, Coeditor**

(Continued from page 3)  
**Well-child and Well-adult  
 Checkups**

**MS3:** I guess it really is the same agenda: screening for disease, advice/guidance, and preventive measures.

**Dr S:** Right, it's just that the issues are different. We screen for preeclampsia

with blood pressure. We screen for fetal growth restriction and macrosomia with fundal heights. We give RhoGam to our Rh-negative patients as chemoprophylaxis. And we give plenty of anticipatory guidance throughout pregnancy.

**MS3:** So I got it, the agenda for all well visits is screening for disease, advice/patient education, and chemoprophylaxis.

**Dr S:** Great, because we've got this WCC and then two adult annual physicals and a prenatal visit on our afternoon schedule. The more you do, the more you'll see how these visits are so similar.

**MS3:** I can't wait!

**Alec Chessman, MD, Medical University of South Carolina, Editor**

*The Teaching Physician* is published by the Society of Teachers of Family Medicine, 11400 Tomahawk Creek Parkway, Suite 540, Leawood, KS 66211. 800-274-2237, ext. 5420. Fax: 913-906-6096. [tnolte@stfm.org](mailto:tnolte@stfm.org)

*STFM Web site:* [www.stfm.org](http://www.stfm.org)

*Managing Publisher:* Traci S. Nolte ([tnolte@stfm.org](mailto:tnolte@stfm.org))  
*Editorial Assistant:* Jan Cartwright ([fmjournal@stfm.org](mailto:fmjournal@stfm.org))  
*Subscriptions Coordinator:* Jean Schuler ([jschuler@stfm.org](mailto:jschuler@stfm.org))

*The Teaching Physician* is published electronically on a quarterly basis (July, October, January, and April). To submit articles, ideas, or comments regarding *The Teaching Physician*, contact the appropriate editor.

**Clinical Guidelines That Can Improve Your Care**  
 Caryl Heaton, DO, editor—[heaton@umdnj.edu](mailto:heaton@umdnj.edu)

**Family Physicians Inquiries Network (FPIN)  
 HelpDesk**  
 Jon Neher, MD, editor—[ebpeditor@fpin.org](mailto:ebpeditor@fpin.org)

**For the Office-based Teacher of Family Medicine**  
 William Huang, MD, editor—[williamh@bcm.tmc.edu](mailto:williamh@bcm.tmc.edu)

**Information Technology and Teaching  
 in the Office**  
 Richard Usatine, MD, editor—[usatine@uthscsa.edu](mailto:usatine@uthscsa.edu)  
 Thomas Agresta, MD, coeditor—[Agresta@nso1.uchc.edu](mailto:Agresta@nso1.uchc.edu)

**POEMs for the Teaching Family Physician**  
 Mark Ebell, MD, MS, editor—[ebell@msu.edu](mailto:ebell@msu.edu)

**Teaching Points—A 2-minute Mini-lecture**  
 Alec Chessman, MD, editor—[chessmaw@musc.edu](mailto:chessmaw@musc.edu)  
 Betty Gatipon, PhD, coeditor—[bgatip@lsuhsc.edu](mailto:bgatip@lsuhsc.edu)

Copyright 2007 by the Society of Teachers of Family Medicine

# Clinical Guidelines That Can Improve Your Care

## An Evidence-based Approach to the Management of Chronic Constipation in North America

By Caryl Heaton, DO, UMDNJ-New Jersey Medical School

With apologies to our international readers, and yes, there are a few, this guideline deals with chronic constipation from a North American perspective, recognizing that definitions and treatments may vary based on culture and geography. This is unusual, but appropriate, and I must congratulate the American College of Gastroenterology Chronic Constipation Task Force (think of that on your CV!) on a well-put-together guideline.<sup>1</sup>

The writers use a recommendation system that is a little more relaxed than the SORT Criteria<sup>2</sup> used by family medicine publications or the criteria used by the US Preventive Services Task Force.

That means that the Grade A and Grade B are still their best recommendations, just not as rigorous. They do, however, use explicit, clear criteria for their rating system, they do not support anything that has not been studied with randomized controlled trials (RCTs), and they are clear when they make a recommendation based on non-randomized trials, case series, and expert opinion (Grade C recommendations).

The definition of chronic constipation (CC) includes a time frame (over 3 months or  $\geq 12$  weeks/year) and an indication for treatment (if symptoms diminish the quality of life) and a description of constipation that is pretty

much what you would expect. There is a formal definition of chronic constipation known as the “Rome Criteria,” used primarily to identify study patients for constipation treatment trials. The expert panel suggests that in daily practice a formal definition is not necessary and that “treatment should be instituted when both the patient and physician have determined that the symptoms diminish the patient’s quality of life.”

Alarm symptoms or signs in patients with chronic constipation include hemochezia, family history of colon cancer or inflammatory bowel disease, anemia, positive fecal occult blood test, weight loss of  $\geq 10$  pounds, severe persistent constipation that is unresponsive to treatment, and new onset constipation in an elderly patient without any evidence of a possible primary cause. A diagnostic series should be considered in the subgroup of patients with alarm signs or symptoms. Based on expert opinion (Grade C recommendation), the routine

Table 1

### Effectiveness of Therapeutic Agents for Chronic Constipation

<i>Therapy of Chronic Constipation</i>	
<i>Type of Agent</i>	<i>Grade of Recommendation</i>
<b>Bulking Agent</b>	
Psyllium (eg, Metamucil <sup>®</sup> , Konsyl <sup>®</sup> ) <b>increases</b> stool frequency in patient with chronic constipation (CC)	B
Calcium Polycarbophil (eg, Perdiem Fiber Therapy <sup>®</sup> , Fibercon <sup>®</sup> )—there are <b>insufficient data</b> to make a recommendation about the effectiveness	B
Methylcellulose (eg, Citrucel <sup>®</sup> )—there are <b>insufficient data</b> to make a recommendation about the effectiveness	B
Bran—there are <b>insufficient data</b> to make a recommendation about the effectiveness	B
<b>Stool Softeners</b>	
Docusate Sodium (eg, Colace <sup>®</sup> ) and Docusate Calcium (eg, Surfak <sup>®</sup> )—there are <b>insufficient data</b> to make a recommendation about the effectiveness	B
<b>Osmotic Laxatives</b>	
Polyethylene glycol (PEG) is <b>effective</b> at improving stool frequency and stool consistency in patients with CC	A
Lactulose is <b>effective</b> at improving stool frequency and stool consistency in patients with CC	A
Milk of Magnesia (MOM)—there are <b>insufficient data</b> to make a recommendation about the effectiveness	B
<b>Stimulant Laxatives</b>	
Senna (eg, Senokot <sup>®</sup> , Ex-Lax <sup>®</sup> )—there are <b>insufficient data</b> to make a recommendation about the effectiveness	B
Bisacodyl (eg, Dulcolax <sup>®</sup> , Correctol <sup>®</sup> , Carter’s Pills <sup>®</sup> )—there are <b>insufficient data</b> to make a recommendation about the effectiveness	B
<b>Tegaserod</b>	
Tegaserod (Zelnorm <sup>®</sup> ) is <b>effective</b> at improving the frequency of complete spontaneous bowel movements, straining, stool frequency, and stool consistency	A
<b>Herbal Supplements, Alternative Treatments, Lubricants, and Combination Laxatives</b>	
There are <b>insufficient data</b> to make a recommendation about the effectiveness	B

approach to a patient with symptoms of CC without alarm signs or symptoms should be empiric treatment without the performance of diagnostic testing.

The recommendations of the task force are listed in Table 1. Most of the randomized controlled trials that evaluate bulking agents were small and/or poorly designed. There were no placebo-controlled studies of calcium polycarbophil or methylcellulose in the treatment of chronic constipation. There were a small number of poorly done studies on stools softeners that showed conflicting results when compared to placebo and inferior results when compared to psyllium. Polyethylene glycol (PEG) and lactulose have the greatest effect, and a few higher-quality studies show a clear benefit when compared to placebo. One small well-designed study showed greater improvement with PEG (Movicol®) compared to lactulose at a dose of 13 g in 125 ml BID. Adverse effects, ie, electrolyte abnormalities and diarrhea were “not adequately reported” in the PEG or lactulose studies, for example, discontinuation rates due to diarrhea were not reported. Yet the authors state, apparently from what they had, that “no statistically significant differences in adverse events were reported

<i>Agent Name</i>	<i>Usual Dose Used in Highest-quality Studies</i>
Psyllium	10–24 gm per day
Polyethylene glycol (PEG)	13 gm in 125 ml BID—17.5 gm in 250 ml once or twice daily
Lactulose	15–60 ml per day
Docusate calcium	240 mg BID

among patients taking PEG, placebo, or lactulose.” Stimulant laxatives could also not be recommended because of a lack of well-done studies.

Table 2 describes the range of dosages used in the higher quality studies that were cited in the guideline. Prescribing these doses to patients with chronic constipation makes sense. The guideline was published in 2005 and has not been updated. It’s possible that a few other studies have been done since that time, most notably, the guideline makes no references to colchicine, an oldtime gout medication that was reported to be successful at around the same time this guideline came out. But a check of

www.guidelines.gov and Infotriever have nothing more new to report on chronic constipation.

#### REFERENCES

1. American College of Gastroenterology Chronic Constipation Task Force. An evidence-based approach to the management of chronic constipation in North America. *Am J Gastroenterol* 2005;100:S1-S4.
2. www.aafp.org/online/etc/medialib/aafp\_org/documents/news\_pubs/afp/afpsort.Par.0001.File.dat/sortdef05.pdf or Anonymous. SORT: the strength-of-recommendation taxonomy. *Am Fam Physician* 2005;71(1):19-20.

**Caryl Heaton, DO, UMDNJ-New Jersey Medical School, Editor**

**From the "Evidence-based Practice" HelpDesk  
Published by Family Physicians Inquiries Network  
(FPIN)**

## **How Safe and Effective Is Metoclopramide for Increasing Milk Production in Lactating Women?**

*By Rebekka Dow and Connie Kraus, PharmD, University of Wisconsin*

### **Evidence-based Answer**

*Metoclopramide enhances milk production for women with documented inadequate milk production who are nursing term infants. (SOR B, based on small randomized controlled trials [RCTs]). The drug does not appear to be effective for women who delivered preterm or who have had an interruption in lactation. Adverse effects include fatigue, headache, and nausea.*

A placebo-controlled crossover trial was conducted with 45 lactating women with term deliveries (8–62 days postpartum) who had average milk yields at least 30% below the normal daily level of 165 mL/infant kg.<sup>1</sup> Placebo or metoclopramide (5, 10, or 15 mg three times daily) were each given to three groups of 15 women for 2 weeks, with a 7-day washout. Doses of 10 or 15 mg significantly raised breastmilk production (42.5±34.7 and 50.0±35.9 mL per feeding, respectively;  $P<.001$ ) and prolactin levels. Supplemental feedings were discontinued for 33% of women receiving the 10- or 15-mg doses. Seven women who received metoclopramide reported adverse effects, such as tiredness, headache, anxiety, hair loss, and intestinal disorders; three women who received placebo reported similar adverse effects. One infant was reported to have experienced intestinal discomfort.

The efficacy of metoclopramide was evaluated in a randomized, double-blind study of 33 women who wanted to increase milk production.<sup>2</sup> Of these women, 13 had confirmed lactational deficiency, with daily milk yields less

than 500 mL. Metoclopramide 10 mg three times daily for 3 weeks increased the daily milk yield from 285±75 to 530±162 mL ( $P<.01$ ) in the eight women with lactational deficiency randomized to active medication; placebo (n=5) was ineffective. Of the 25 women who finished the trial, six receiving metoclopramide reported adverse effects: tiredness (four), tiredness and headache (one), and tiredness and nausea (one). Three in the placebo group complained of tiredness and one of dizziness and sweating.

Another randomized, double-blind, placebo-controlled study enrolled 69 women who had delivered preterm.<sup>3</sup> Women were randomized to receive metoclopramide 10 mg (n=34) or placebo (n=35) three times daily for 10 days starting within 96 hours of birth. They recorded the volume of breast milk expressed at each pumping for 17 days. All women received standardized educational materials from a trained lactation specialist and were seen by a trained nurse at 3 to 7 days postpartum. Six women in the treatment group and six in the placebo group left the study. In the treatment group, one woman had a facial rash and itching and one neonatal death occurred. Other reasons for discontinuation in both groups included being too stressed and busy. No significant change was noted in breast-milk volumes over time (24 hours) on days 10 and 17 in the metoclopramide group (519±60 and 459±63 mL;  $P=.72$ ) versus the placebo group (519±60 and 497±64 mL;  $P=.60$ ).

An RCT was conducted with 50 mothers whose babies ages less than 4

months were hospitalized with varying illnesses and who had either partial or complete lactation failure.<sup>4</sup> All 50 women received structured education as well as support from mothers who had success in relactation. Twenty-five of these women also were randomized to receive metoclopramide 10 mg orally three times daily for 10 days. Relactation was successful in 49 mothers (98%), and no significant difference was noted between the groups in time to appearance of first breast-milk secretion (mean 3.13±1.06 days), time to partial relactation (mean 11.89±5.83 days), and time to complete relactation (mean 32.50±12.5 days).

### REFERENCES

1. Kaupilla A, Kivinen S, Ylikorkala O. A dose response relation between improved lactation and metoclopramide. *Lancet* 1981; 1(8231):1175–7. [LOE 2b]
2. Kaupilla A, Anunti P, Kivinen S, Koivisto M, Ruokonen A. Metoclopramide and breast feeding: efficacy and anterior pituitary responses of the mother and the child. *Eur J Obstet Gynecol Reprod Biol* 1985;19:19–22. [LOE 2b]
3. Hansen WF, McAndrews S, Harris K, Zimmerman MB. Metoclopramide effect on breastfeeding the preterm infant: a randomized trial. *Obstet Gynecol* 2005;105:383–9. [LOE 2b]
4. Seema, Patwari AK, Satyanarayana L. Relactation: an effective intervention to promote exclusive breastfeeding. *J Trop Pediatr* 1997; 43:213–6. [LOE 2b]

LOE—level of evidence

**Jon O. Neher, MD, University of Washington, Editor**

HelpDesk answers are provided by *Evidence-Based Practice*, a monthly publication of the FPIN Consortium ([www.ebponline.net](http://www.ebponline.net))

## POEMs for the Teaching Physician

### Surgery Superior to Conservative Treatment for First-time Anterior Shoulder Dislocation

**Clinical Question:** Should patients with a first-time anterior shoulder dislocation and injuries to the capsule or labrum receive surgical repair or conservative therapy?

**Setting:** Emergency department

**Study Design:** Randomized controlled trial (nonblinded)

**Allocation:** Uncertain

**Synopsis:** Appropriate treatment following first-time anterior shoulder dislocation remains an area of controversy. Currently, most patients receive conservative therapy, with surgical repair reserved for subsequent dislocations. These investigators enrolled 80 consecutive patients presenting to the emergency department with traumatic anterior shoulder dislocation. Patients were ages 15 years to 39 years and had no history of previous shoulder injury. After initial reduction, patients underwent arthroscopy within 1 week. A total of 76 patients (93.5%) with confirmed capsular and/or labral injury randomly received (uncertain allocation concealment) either open surgical repair or conservative therapy (immobilization in a fixed sling for 2 days, followed by a non-fixed sling for 1 week). Both groups received similar rehabilitation. Complete follow-up occurred for 98% of patients for 10 years. Blinding of outcome assessors to group assignment is uncertain, but primary outcomes (recurrent dislocation and patient-reported satisfaction) were unlikely to be affected. Using intention-to-treat analysis, recurrent dislocation within 10 years was significantly less likely with primary surgical repair than with conservative treatment (9% versus 62%; number needed to treat=2; 95% confidence interval [CI]=1–3). Overall, 72% of patients in the surgi-

cal group reported good or excellent results, while 74% of patients in the control group reported unsatisfactory results. No significant complications were seen in the surgical group. It remains to be seen whether primary surgical repair will result in a similar benefit in populations at a higher risk of surgical complications, such as elderly and inactive patients with a lower baseline rate of redislocation.

**Bottom Line:** In this study, primary open surgical repair in patients ages 15 years to 39 years after a first-time traumatic anterior shoulder dislocation results in fewer subsequent dislocations, decreased instability, and improved patient satisfaction. This represents a major change in the current standard of care of conservative therapy for first dislocations and surgery for recurrent dislocations only. (LOE = 1b-)

Source article: Jakobsen BW, Johannsen HV, Suder P, Sojbjerg JO. Primary repair versus conservative treatment of first-time traumatic anterior dislocation of the shoulder: a randomized study with 10-year follow-up. *Arthroscopy* 2007;23:118-23.

### Women More Likely to Use EC With Advance Provision

**Clinical Question:** Are women who receive advance provision or pharmacy access to emergency contraception more likely to use it than those who have access through a clinic visit only?

**Setting:** Outpatient (primary care)

**Study Design:** Randomized controlled trial (nonblinded)

**Funding:** Foundation

**Allocation:** Concealed

**Synopsis:** This is the report of a follow-up questionnaire from a randomized controlled trial of emergency

contraception (EC) using levonorgestrel (Plan B). Sexually active females ages 15 years to 24 years were recruited from four clinics in the San Francisco Bay area that offer family planning services. Women using condoms, oral contraceptives, or no contraceptives were eligible. Women who were pregnant, intended to conceive, or were using a highly effective contraceptive method were excluded. Highly effective methods were defined as depo-medroxyprogesterone (Depo-Provera), intrauterine devices, and sterilization. The 2,117 participants were randomized into three groups: pharmacy access to EC, clinic access to EC, or advance provision of EC. EC was provided free of charge to all groups. More women in the advance provision group used EC during the 6-month study period (37% versus 24% in the pharmacy group and 21% in the clinic group;  $P < .001$ ). Women with advance provision were more likely to use EC within 24 hours (odds ratio [OR]=2.43; 95% CI=1.24–4.80). Women with pharmacy access were no more likely than those with clinic access to use EC within 24 hours. Only in the subgroup of women using condoms for contraception was pharmacy access more likely to result in use of EC within 24 hours compared with clinic access (OR=1.81; CI=1.23–2.65). Women with advance provision and pharmacy access were more likely to give EC to a friend than those with clinic access (29%, 14%, and 5%, respectively). Almost all women believed that EC was effective and safe. The most common reason for not using EC when warranted was that it was too inconvenient to obtain.

**Bottom Line:** Women who receive advance provision of EC are more likely to use it, and to use it within 24 hours, than those with pharmacy access or clinic access to EC. (LOE = 1b)

Source article: Rocca CH, Schwarz EB, Stewart FH, Darney PD, Raine TR, Harper CC. Beyond access: acceptability, use, and nonuse of emergency contraception among young women. *Am J Obstet Gynecol* 2007;196:29e1-29e6.

**One week=2-week Treatment for HP Eradication**

**Clinical Question:** Is 1 week of treatment sufficient to eradicate *Helicobacter pylori*?

**Setting:** Outpatient (specialty)

**Study Design:** Randomized controlled trial (double-blinded)

**Funding:** Industry

**Allocation:** Concealed

**Synopsis:** A variety of regimens of varying durations are used to eradicate *Helicobacter pylori* (HP), from as short as 1 day to as long as 14 days. One of the most widely used regimens uses omeprazole 20 mg, amoxicillin 1 g, and clarithromycin 500 mg each (OAC) twice daily. It is usually given for 7 days in Europe, but most American physicians prescribe it for 10 to 14 days (the similar and widely used PreVPac is also labeled for 14 days). Meta-analyses have found higher eradication rates with a longer duration of therapy, but only a few studies have directly compared

these two durations of therapy. In this study, 909 adults (mean age=46 years; 68% were male) with a symptomatic duodenal ulcer and positive rapid urease test for HP were randomized to receive OAC for 1 week, OAC for 2 weeks, or omeprazole and amoxicillin alone. They were endoscoped at the end of the 2-week treatment period to assess healing. If the ulcer was not healed, they underwent endoscopy again at 4 weeks. All patients with a healed ulcer underwent yet another endoscopy at least 4 weeks after the end of treatment to confirm eradication and also had urea breath testing at that time. HP was considered eradicated if both biopsy specimens and the urea breath test were all negative. Groups were similar at baseline, and analysis was by intention to treat. A similar number of patients in each group (17–23) were lost to follow-up. The HP eradication rate was similar for the 1- and 2-week groups (79.7% versus 81.7%); both OAC groups had a higher eradication rate than the omeprazole and amoxicillin alone group (44.6%). Adverse events and discontinuation of treatment were similar between the 1- and 2-week groups.

**Bottom Line:** One week of omeprazole, amoxicillin, and clarithromycin given twice daily is as effective at eradicating HP as 2 weeks of treatment. It also costs less and is less burdensome for patients. (LOE = 1b)

Source article: Zagari RM, Bianchi-Porro G, Fiocca R, Gasbarrini G, Roda E, Bazzoli F. Comparison of 1 and 2 weeks of omeprazole, amoxicillin, and clarithromycin treatment for *Helicobacter pylori* eradication: the HYPER study. *Gut* 2007;56:475-9.

LOE—level of evidence. This is on a scale from 1a (best) to 5 (worst). 1b for an article about treatment is a well-designed randomized controlled trial with a narrow confidence interval.

**Mark Ebell, MD, MS, Michigan State University, Editor**

POEMS are provided by  
InfoPOEMS Inc  
(www.info poems.com)  
Copyright 2007

**Excerpted from "For the Office-based Teacher of Family Medicine"**

**Using the RIME Model for Learner Assessment and Feedback**

By Dan Sepdham, MD; Manjula Julka, MD; Laura Hofmann, MD; Alison Dobbie, MD, University of Texas Southwestern Medical Center at Dallas (Fam Med 2007;39(3):161-3.)

Office-based teachers contribute greatly to residents' and students' clinical learning. Ambulatory preceptors enjoy teaching,<sup>1</sup> but many struggle to develop standard methods to assess learners and give timely, nonjudgmental feedback.<sup>2</sup> In this paper, we describe a practical tool, the RIME model, to help office-based teachers address these challenges.

Pangaro first described the RIME model in 1999 as a developmental framework for assessing learners in clinical settings.<sup>3</sup> The model describes a progressive continuum of four performance levels: reporter, interpreter, manager, and educator. In 2002, Battistone and colleagues proposed a fifth level, observer, to serve as an introductory stage for the model.<sup>4</sup> For a pictorial representation of the RIME model, see Figure 1.

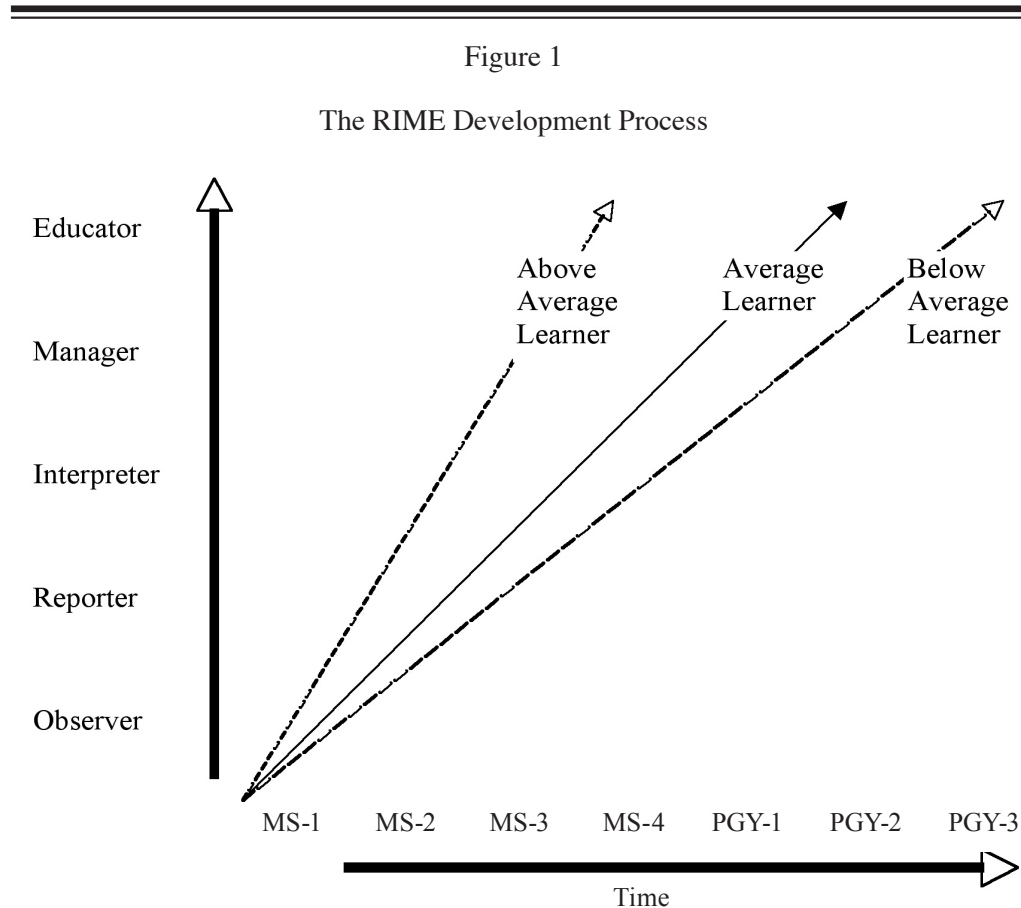
**Description of the Stages of the RIME Model**

Preceptors can use this model to assess the level of an individual learner's clinical performance during ambulatory case presentations. See Table 1 for an example. Learners at the observer level, typically an early first-year medical student, will not yet have the skills to take a pertinent history or pres-

ent a patient. Learners at the reporter level, typically most second-year medical students, will be able to reliably, respectfully, and honestly gather information, write basic notes, differentiate normal from abnormal, and present their findings. Interpreters, typically most early third-year students, will be able to present a patient case, select the important issues, offer differential diagnoses, and support arguments for or against various diagnoses. Learners

at the manager level, typically most late third-year and early fourth-year students, will be able to present the case, offer a differential diagnosis, and formulate diagnostic and therapeutic plans. Learners who have reached the educator level will be able to do all of the above plus define important questions, research information regarding the topic, and educate others. Some students will attain educator level skills by the time they graduate from medical school, while others may not achieve this level until they are residents.

The RIME model can be equally useful to residency faculty in conducting a baseline assessment of new interns and also in tracking residents through their postgraduate training. Interns should at least be accurate, concise reporters and competent interpreters,<sup>3</sup> becoming effective



Modified from "The Learning Vector" by Stritter and colleagues.<sup>9</sup>

MS—medical student  
PGY—postgraduate year

Table 1  
Case Example: A Young Woman With a Urinary Tract Infection

RIME Level	Description	Case Presentation by RIME Level	Preceptor Coaching Response
Observer	Bystander	"Ms XX is a 23-year-old female. The nurse reports she is complaining of burning on urination."	"Good. Now, go in and ask the patient herself to describe to you what she is feeling."
Reporter	Understands "what" is wrong	"... and the patient reports dysuria, hematuria, and pyuria for 3 days. She denies nausea/vomiting, fevers/chills, or flank pain. Her vital signs are stable, and her physical exam is normal. She has no abdominal tenderness or flank tenderness. Her urine dip is notable for positive nitrites, blood, and leukocyte esterase."	"Excellent report. Now, "Interpret" these symptoms and signs for me. What do you think could be going on? Let's come up with a differential diagnosis."
Interpreter	Understands "why" it is wrong	"... Based on her symptoms and abnormal urine dip, I believe she has a urinary tract infection. Other possibilities might include bacterial vaginosis, vaginal candidiasis, or an STD."	"Excellent differential diagnosis. Now, how will we proceed to "Manage" the workup?"
Manager	Understands "how" to address the problem	"... I'll complete the workup by sending her urine for microscopic examination and culture. I'll also perform a vaginal exam and obtain specimens for KOH/wet prep, and GC/chlamydia. I plan to treat with drug XX for 3 days."	"That sounds like a first-class workup and an excellent plan. Why would you choose this particular antibiotic instead of drug YY, and why treat for 3 days rather than 5 or 7?"
Educator	Committed to self-learning and education of the team	"This case meets the criteria for a simple UTI, and the latest research indicates that for cases of simple UTI, drug XX is more cost-effective and efficacious than drug YY."	"Good job, you are right on top of the latest literature. Now let's get you a more complicated case"

managers for more complex patients than those they managed as a student. As they assume supervisory duties in their second year, residents should demonstrate refined manager skills of increasingly more difficult patients and also take initiative to educate patients, students, and residents. In general, senior residents should not graduate without demonstrating the ability to independently manage a wide variety of clinical problems and supervise and educate patients and other learners.

#### Value of the RIME Model

The model provides a common descriptive terminology that is highly acceptable to learners and preceptors.<sup>4,5</sup> The RIME descriptors are nonjudgmental and assist teachers in giving meaningful feedback. The RIME model may promote consistent evaluation by encouraging teachers to compare learners against a set of standardized criteria rather than against other learners (criterion versus peer referencing). The model may also help preceptors detect learners at academic risk. In one study, Hemmer and colleagues reported that formal feedback sessions using the

RIME model had the highest predictive value of several measures used to identify at-risk students.<sup>6</sup>

#### Using RIME in the Office Setting

We suggest that office-based teachers use the RIME model in the following manner. During an orientation session with the learner, present the model to establish a shared vocabulary for feedback. Confirm that you will give routine, daily feedback using this vocabulary. Be specific about expectations. For example, with an early third-year student, state, "By the end of the clerkship, I expect you to present all but the most complex patients at a 'Manager' level." When assessing a learner's presentation, ask yourself questions such as "What is the RIME level of this presentation?" "Is it appropriate for this learner's developmental level?" "How can I coach the learner to advance his/her skill level?" Target your feedback and coaching specifically to enhance the learner's current performance. One example of a case presentation by RIME levels, with associated "coaching" questions, is displayed in Table 1.

#### Limitations of the RIME Model

The RIME model is practical and useful, but it has some limitations. Its validity has not been established as the sole summative method for awarding grades,<sup>7,8</sup> and therefore we do not recommend its use as the only means of assessment. Instead, we recommend that preceptors add this model to their "tool box" of assessment methods and continue to use additional tools such as direct observation to assess their learners. Also, while the RIME model helps teachers to assess how well learners accomplish complex tasks and multiple skills to formulate a patient presentation, it does not specifically address individual skills, especially procedural skills such as the ability to suture a wound.

#### Conclusions

We recommend that office-based teachers add the RIME model to their teaching armory and use it to establish a shared, nonjudgmental vocabulary to assess learner's presentation skills and coach them to improve. The evidence is that it is a practical, useful assessment and feedback tool that is highly acceptable to learners and teachers.

*Corresponding Author:* Address correspondence to Dr Sepdham, University of Texas Southwestern Medical Center at Dallas, Department of Family and Community Medicine, 6263 Harry Hines Boulevard, Dallas, TX 75390. 214-648-1399. Fax: 214-648-1307. dan.sepdham@utsouthwestern.edu.

## REFERENCES

1. Starr S, Ferguson WJ, Haley HL, Quirk M. Community preceptors' views of their identities as teachers. *Acad Med* 2003;78(8):820-5.
2. Quirk M, Stone S, Chuman A, Devaney-O'Neil S, Mazor K, Starr S, Lasser D. Using differences between perceptions of importance and competence to identify teaching needs of primary care preceptors. *Teach Learn Med* 2002;14(3):157-63.
3. Pangaro L. A new vocabulary and other innovations for improving descriptive in-training evaluations. *Acad Med* 1999;74(11):1203-7.
4. Battistone MJ, Milne C, Sande MA, Pangaro LN, Hemmer PA, Shomaker TS. The feasibility and acceptability of implementing formal evaluation sessions and using descriptive vocabulary to assess student performance on a clinical clerkship. *Teach Learn Med* 2002;14(1):5-10.
5. Ogburn T, Espey E. The R-I-M-E method for evaluation of medical students on an obstetrics and gynecology clerkship. *Am J Obstet Gynecol* 2003;189(3):666-9.
6. Hemmer PA, Grau T, Pangaro LN. Assessing the effectiveness of combining evaluation methods for the early identification of students with inadequate knowledge during a clerkship. *Med Teach* 2001;23(6):580-4.
7. Lavin B, Pangaro L. Internship ratings as a validity outcome measure for an evaluation system to identify inadequate clerkship performance. *Acad Med* 1998;73(9):998-1002.
8. Roop SA, Pangaro L. Effect of clinical teaching on student performance during a medicine clerkship. *Am J Med* 2001;110(3):205-9.
9. Stritter FT, Baker RM, Shahady EJ. Clinical instruction. In: McGaghie WC, Frey JJ, eds. *Handbook for the academic physician*. New York: Springer-Verlag, 1986:98-124.

**William Huang, MD, Baylor College of Medicine, Editor**

## STFM Is Now an Amazon.com Associate

**IMPORTANT**  
Be sure to use the  
STFM Portal at

[www.stfm.org/  
bookstore](http://www.stfm.org/bookstore)

for STFM to  
receive credit  
for your purchases.

Thank you for  
your support  
of STFM.



Visit the STFM On-line Bookstore and Amazon Portal  
[www.stfm.org/bookstore](http://www.stfm.org/bookstore)

- **Your Purchases Help STFM**

STFM receives a percentage of the total purchases (books, electronics, or anything that Amazon.com sells) made through STFM's portal at [www.stfm.org/bookstore](http://www.stfm.org/bookstore). These proceeds will help STFM to continue our financial commitments to important activities like the *Annals of Family Medicine* and *Future of Family Medicine* programs.

- **Great Selection and Service**

At [www.stfm.org/bookstore](http://www.stfm.org/bookstore) you will find the same great selection previously offered through STFM but with the added bonus of everything Amazon.com has to offer—books, electronics, apparel, housewares, and more. You will benefit from the advanced technology that Amazon.com uses to expedite and track shipments and recommend related books and other items.

- **Enhanced Marketing**

STFM will maintain its book review process that allows members to add new books to its recommended offerings listed at [www.stfm.org/bookstore](http://www.stfm.org/bookstore). STFM will also continue to market its members' books at its conferences and on the STFM Web site.

For more information, contact Traci Nolte, 800-274-2237, ext. 5420, [tnolte@stfm.org](mailto:tnolte@stfm.org).