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PURLS— Translating research into reality

You likely do not read many (or any) of the thousands of medical research studies published each month. That's understandable, given the demands of patient care and the joys of our personal lives. You have probably tried many approaches to keeping up, but have yet to discover a method that systematically distills the literature to those few articles that are relevant, practice-changing, and able to be implemented immediately.

Numerous efforts to disseminate research findings to practicing physicians share 2 major weaknesses.¹⁻⁷ First, most of the studies disseminated through these channels fall into the category of interesting but not essential knowledge from the practitioner's perspective. Second, those that do meet this standard are summarized as single studies. Key questions relevant to the adoption of a new practice generally remain unanswered. The result is that the gap between what is known through research and what we do in practice remains, underscoring the need for knowledge translation as a formal scientific activity.^{8,9}

Priority Updates from the Research Literature Surveillance system. We have developed a knowledge translation system called PURLS that exclusively targets newly published research expected to actually change family medicine and primary care practice. The PURLS system was developed in a collaborative partnership of the Family Physicians Inquiries Network (FPIN) and *The Journal of Family Practice* as an objective of the University of Chicago Institute for Translational Medicine, funded through a Clinical Translational Science Award from the National Institutes of Health.¹⁰⁻¹² In this issue of *JFP*, we publish 3 PURLs, new research findings that ought to change the way we practice.

How did we distill the huge volume of research published monthly into just 3 must-read practice changers?

■ How does the system work?

Many steps and many people are involved in selecting and producing a PURL. The methodology includes surveillance of primary and secondary literature; critical appraisal of the potential PURLs identified; review of the related literature; and a vigorous peer review, clinical review, and editorial review process.

Primary and secondary literature surveillance

We monitor the journals that are most likely to publish research that changes practice: *New England Journal of Medicine*, *Journal of the American Medical Association*, *British Medical Journal*, *Lancet*, *Annals of Internal Medicine*, *Pediatrics*, *Obstetrics & Gynecology*, *Archives of Internal Medicine*, and

Archives of Diseases of Children. We also monitor 3 “second-order” sources that identify important and relevant research from journals and other sources: BMJ Online Evidence Updates (130 journals),⁷ DynaMed Weekly Update (170 journals and other sources),² and InfoPOEMs Daily Dose of Knowledge (105 journals).¹

Critical appraisal

Once identified through surveillance, potential PURLs are approved by an FPIN editor and assigned to a reviewer, who completes a standardized critical appraisal for validity and relevance, and an initial review of the literature to learn if the findings might change current practice. The notes from this appraisal are published at www.jfponline.com/purls. The reviewer’s conclusions are presented orally to 3 to 5 FPIN peer reviewers and 1 or 2 FPIN editors. If the study meets our criteria for validity and relevance and appears to be practice-changing, additional literature review is completed, with a primary focus on related prior research.

Peer review and clinical review

Each PURL is written by a minimum of 2 authors, one of whom is an experienced author and expert in critical appraisal. Additional peer review is sought as needed, and 2 editors—1 FPIN editor and the *JFP* editor-in-chief—review and ultimately approve the final manuscript.

We actively engage practicing family physicians around 3 issues that help confirm whether the study qualifies as a priority update, and if so, what challenges to implementation need to be addressed in the PURL manuscript:

1. Is the practice supported by this study a current practice for you?
2. If not, how likely are you to adopt the practice?
3. What are the challenges to applying this change in your practice?

3 key factors

We believe that, by answering 3 key questions, this system’s thorough and rigorous

approach to identifying potential PURLs can bring you only the most relevant and trustworthy PURLs:

1. Are the conclusions robust?
2. Should they change practice?
3. Can this innovation be diffused into the real world?

We hope to engage you in a virtual learning community organized around the selection, translation, and dissemination of PURLs.¹¹

We have already crossed off numerous studies from the potential PURLs list, based on clinical reviewers’ observations that the study would not change their practice or would be impossible to implement in the real world.

How we found 3 PURLs, with your help

To illustrate the system, let’s briefly review the 3 PURLs published in this issue.

Azithromycin for PID beats doxycycline on all counts (page 1006). This was an easy choice, a well-done randomized trial on a common family medicine problem for which 1 commonly available drug was found significantly superior to another commonly available drug. Azithromycin was not recommended in any of the frequently updated and well-referenced electronic knowledge resources that we regularly consult (UpToDate,¹³ DynaMed,² PEPID PCP¹⁴), nor was it mentioned in the Centers for Disease Control’s Recommendation for Treatment of Sexually Transmitted Diseases.¹⁵

• **Our clinician reviewers** agreed that this was clearly a practice changer.

Is it DVT? Wells score and D-dimer may avert costly workup (page 1010). A lot of research has been published, both on the Wells criteria and D-dimer testing. We were impressed that this study integrated that research, and systematically identified and assessed 18 strategies for evaluating suspected DVT. Diligent readers could have come to the same conclusions and many have. We liked that this conclusion was based on a rigorous systematic review,

FAST TRACK

Interested in being
a PURLS
clinical reviewer?
Please e-mail
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meta-analysis, and decision analysis.

- **Clinicians who have adopted** this practice already should feel validated by this evidence, and we hope that those who have not yet done so will seriously consider doing so.

Annual zoledronic acid infusion lowers risk of fracture, death (page 1013). We found this study clearly relevant given the need for fracture prevention in patients with osteoporosis and the challenges of using oral bisphosphonates.

- **Our clinical reviewers** were concerned about the high cost of acquisition. Others, in larger multispecialty groups, thought they might be able to offer the service. We plan to re-survey our clinician reviewers in the future to see if we can learn if this practice has been adopted and if so, how it was accomplished. Whether implemented in your own practice or as a referral option, annual zoledronic acid infusion looks like a good option for some patients.

■ Other goals

Our primary goal is nothing short of providing you the most efficient, engaging, and reality-based resource for staying up-to-date with practice-changing research.

- The PURLS system is evolving and will expand to include additional departments and residency programs from the Family Physicians Inquiries Network.

- We will be building a Web-based system to get as much input from practicing clinicians as possible in selection, review, writing, and dissemination of PURLs.

- Secondary goals are to provide a vehicle for continuous professional development in learning critical appraisal, literature review, and writing skills; a clinically useful publication opportunity for members of the Family Physicians Inquiries Network; and systematic updating of the Portable Electronic Physicians Information Database (PEPID) for Primary Care Practice (PCP), the handheld and Web-based electronic knowledge resource edited by FPIN consortium mem-

bers (www.pepidonline.com).¹⁴

- We also believe the review of possible PURLs and the publication of PURLs will be meet Residency Review Committee scholarship requirements and publications needs of faculty and residents.¹⁶ ■

References

1. InfoPOEMS. Available at: www.infopeoms.com. Accessed on November 12, 2007.
2. Dynamed. Available at: www.ebscohost.com/dynamed. Accessed on November 12, 2007.
3. Global Family Doctor: WONCA Online. Available at: www.globalfamilydoctor.com. Accessed on November 12, 2007.
4. McMaster Online Rating of Evidence (MORE). Available at: hiru.mcmaster.ca/MORE/AboutMORE.htm. Accessed on November 12, 2007.
5. QuickScan Reviews—Family Practice with KeyINFO Manager. Available at: findarticles.com/p/articles/mi_m0689/is_n5_v45/ai_20116292. Accessed on November 12, 2007.
6. Medscape. Available at: www.medscape.com/home. Accessed on November 12, 2007.
7. BMJ Evidence Updates. Available at: bmj-updates.com. Accessed on November 12, 2007.
8. NIH Roadmap for Medical Research. Available at: nihroadmap.nih.gov/clinicalresearch/overview-translational.asp. Accessed on November 12, 2007.
9. International Development Research Center. Knowledge Translation: Basic Theories, Approaches and Applications. Available at: www.idrc.ca/en/ev-90105-201-1-DO_TOPIC.html. Accessed on November 12, 2007.
10. Family Physicians Inquiries Network. Available at: www.fpin.org. Accessed on November 12, 2007.
11. Susman J. Diving for PURLs: Introducing Priority Updates from the Research Literature. *J Fam Pract* 2007; 56:878.
12. National Center for Research Resources. Clinical and Translational Science Awards. Available at: www.ncrr.nih.gov/clinical_research_resources/clinical_and_translational_science_awards. Accessed on November 12, 2007.
13. UpToDate. Available at: www.uptodate.com. Accessed on November 12, 2007.
14. PEPID Online. Available at: www.pepidonline.com. Accessed on November 12, 2007.
15. Centers for Disease Control and Prevention. Sexually Transmitted Diseases Treatment Guidelines 2002. Available at: www.cdc.gov/std/treatment/5-2002TG.htm#Treatment. Accessed on November 12, 2007.
16. Accreditation Council for Graduate Medical Education (ACGME). ACGME Program Requirements for Graduate Medical Education in Family Medicine. Available at: www.acgme.org/acWebsite/downloads/RRC_progReq/120pr07012007.pdf. Accessed on November 12, 2007.

3 practice-changing studies*

- Use azithromycin, 2 doses 1 week apart, rather than doxycycline twice daily for 14 days, when treating pelvic inflammatory disease. Azithromycin is more effective and compliance is likely to be better.

Page 1006

- A negative D-dimer rules out deep vein thrombosis. Substantial unnecessary testing can be avoided with this simple blood test.

Page 1010

- Consider an annual infusion of zoledronic acid to prevent fractures in your patients with osteoporosis. Compliance with oral bisphosphonates is less than 20%.

Page 1013

* As identified by the Priority Updates from the Research Literature Surveillance system—PURLS