

woman presenting to the emergency department places her at increased risk of complications from missed diagnoses.

Kathleen Mealey, MD, MPH
Department of Internal Medicine–Pediatrics
University of Massachusetts Medical School–Baystate
Springfield, MA

Paula K. Braverman, MD
Department of Pediatrics
Division of Adolescent Medicine
University of Massachusetts Medical School–Baystate
Springfield, MA

Laura M. P. Koenigs, MD
Department of Pediatrics
Pediatric Residency Program
University of Massachusetts Medical School–Baystate
Springfield, MA

<https://doi.org/10.1016/j.annemergmed.2018.11.028>

Funding and support: By *Annals* policy, all authors are required to disclose any and all commercial, financial, and other relationships in any way related to the subject of this article as per ICMJE conflict of interest guidelines (see www.icmje.org). The authors have stated that no such relationships exist.

1. Farrukh S, Sivitz AB, Onogul B, et al. The additive value of pelvic examinations to history in predicting sexually transmitted infections for young female patients with suspected cervicitis of pelvic inflammatory disease. *Ann Emerg Med.* 2018;72:703-712.
2. Centers for Disease Control and Prevention. Sexually transmitted diseases treatment guidelines, 2015. *MMWR Recomm Rep.* 2015;64:1-137.
3. ACOG. The utility of and indications for performing a pelvic exam. Available at: <https://www.acog.org/Clinical-Guidance-and-Publications/Committee-Opinions/Committee-on-Gynecologic-Practice/The-Utility-of-and-Indications-for-Routine-Pelvic-Examination>. Accessed September 23, 2018.
4. Braverman P, Breech L. Clinical report—gynecologic examination for adolescents in the pediatric office setting. Available at: <http://pediatrics.aappublications.org/content/pediatrics/126/3/583.full.pdf>. Accessed July 28, 2018.

In reply:



We appreciate the response from Mealy et al¹ in regard to our article “The Additive Value of Pelvic Examinations to History in Predicting Sexually Transmitted Infections for Young Female Patients With Suspected Cervicitis or Pelvic Inflammatory Disease.”

We agree that not performing a pelvic examination during the evaluation of an adolescent with vaginal

discharge and lower abdominal pain is a departure from the current recommendations put out by the Centers for Disease Control and Prevention, the American College of Obstetricians and Gynecologists, and the American Academy of Pediatrics. However, important technologic advances have occurred in recent years, including the advent of urine sexually transmitted infection nucleic testing and the availability of urine point-of-care sexually transmitted infection testing.² Without these tools, the pelvic examination was relied on to diagnose cervicitis and pelvic inflammatory disease, but our study and other publications indicate that the pelvic examination lacks the sensitivity, specificity, and interrater reliability found in current laboratory testing modalities.^{3,4} Relying on these subjective examination findings may inappropriately dissuade a clinician or hospital from using highly accurate sexually transmitted infection testing and delay a diagnosis. Although the authors mention including vaginal fluid WBC counts for diagnosis, this is an operator-dependent test that has a low positive predictive value and is not routinely available in most clinical settings.

Although there are other causes for cervicitis and pelvic inflammatory disease besides chlamydia, gonorrhea, and trichomonas, visualization on a pelvic examination will not distinguish one cause from another and therefore not guide toward a focused antibiotic choice. Current recommendations call for different treatments for cervicitis and pelvic inflammatory disease, but the pelvic examination findings of cervical motion tenderness and adnexal tenderness lack interrater reliability and do not correlate well with sexually transmitted infection tests.^{5,6} Finally, foreign bodies will be missed without the pelvic examination, but these are rare findings, and in our study the number of pelvic examinations needed to be performed to find 1 foreign body was 288.

As physicians, we all believe in the physical examination, but we should acknowledge when the examination lacks sensitivity compared with more accurate diagnostic techniques. Other diseases for which testing or imaging has superseded the diagnostic accuracy of the clinical examination include pneumonia, group A streptococcal pharyngitis, adnexal masses, and appendicitis. Our study clearly demonstrates the lack of discriminative utility in the routine evaluation of adolescents with vaginal discharge and lower abdominal pain.

Cena Tejani, MD
Adam Sivitz, MD
Department of Emergency Medicine
Children's Hospital of New Jersey at Newark Beth Israel
Medical Center
Newark, NJ

Shamyla Farrukh, MD
Staten Island University Hospital
Staten Island, NY

Kavita Patel, MD
Department of Emergency Medicine
Hassenfeld Children's Hospital at New York
University Langone
New York, NY

<https://doi.org/10.1016/j.annemergmed.2018.11.027>

Funding and support: By *Annals* policy, all authors are required to disclose any and all commercial, financial, and other relationships in any way related to the subject of this article as per ICMJE conflict of interest guidelines (see www.icmje.org). The authors have stated that no such relationships exist.

1. Mealy K, Braverman PK, Koenigs LMP. Why a pelvic exam is needed to diagnose cervicitis and pelvic inflammatory disease. *Ann Emerg Med.* 2019;73:424-425.
2. Gaydos CA, Pol BVD, Jett-Goheen M, et al. Performance of the Cepheid CT/NG Xpert rapid PCR test for detection of *Chlamydia trachomatis* and *Neisseria gonorrhoeae*. *J Clin Microbiol.* 2013;51:1666-1672.
3. Close RJH, Sachs CJ, Dyne PL. Reliability of bimanual pelvic examinations performed in emergency departments. *West J Med.* 2001;175:240-244.
4. Brown J, Aristizabal J, Fleming R, et al. Does pelvic exam in the emergency department add useful information? *West J Med.* 2011;12: 208-212.
5. Pattishall AE, Rahman SY, Jain S, et al. Empiric treatment of sexually transmitted infections in a pediatric emergency department: are we making the right decisions? *Am J Emerg Med.* 2012;30:1588-1590.
6. Breslin K, Tuchman L, Hayes KL, et al. Sensitivity for sexually transmitted infections in a pediatric emergency department. *J Pediatr.* 2017;189:48-53.

Should There Now Be a Geriatric BRUE?



To the Editor:

In 2016, the American Academy of Pediatrics created the diagnosis of brief resolved unexplained event (BRUE) to replace the less descriptive diagnosis of apparent life-threatening event. The American Academy of Pediatrics recognized that infants could display extremely concerning behaviors that were difficult to attribute to any existing diagnoses. Rather than force these spells into any accepted diagnoses, they elected to create a specific descriptive term with a novel diagnosis.¹

In many ways, geriatric patients present like a pediatric patient with a BRUE. They may have self-limited periods with alterations in consciousness, breathing, or muscle tone, and other symptoms that defy classification under any existing diagnoses. Like pediatric patients with BRUE, by

the time they present to the emergency department (ED) all signs of the event may have resolved, with a return to their baseline status. Even with careful questioning, witnesses of the event may be unable to identify the problem.

Unlike pediatric patients, geriatric patients frequently have a complex medical and psychosocial history, leading to a broader source of causes for an event. However, even with accurate histories and physical examinations, along with access to rapid diagnostic studies, a significant number of geriatric presentations will not clearly fit an existing diagnosis.^{2,3} The consequences of seeking definitive diagnoses can include prolonged hospitalizations and likely overtesting.⁴

Given the uncertainties associated with many confusing ED presentations in older patients, the concept of a geriatric BRUE is justified. Unlike the pediatric BRUE, which was built on the existing apparent life-threatening event, a geriatric BRUE will require synthesizing a totally new diagnosis and will likely require characteristics based on exclusion criteria from diagnoses such as syncope, transient ischemic attacks, arrhythmias, seizure, and delirium.

From a patient population perspective, the creation of a geriatric BRUE will lead to cleaner data collection on patients receiving existing diagnoses. For example, a patient may receive a diagnosis of transient ischemic attack simply because that diagnosis was the “closest fit” to the patient’s briefly resolved symptoms. Data from patients assigned a diagnosis in this manner will skew diagnostic accuracy studies and observational outcomes because these individuals will not benefit from a therapy designed to treat a condition they did not actually have. Creating a diagnosis of geriatric BRUE provides a more appropriate interim diagnosis for these patients and alleviates problems resulting from the practice of closest-fit diagnosis. When fully defined, like the original BRUE, a geriatric BRUE will provide direction to limit unnecessary diagnostic studies and therapeutic interventions.¹

One criticism of geriatric BRUE is that it is only a placeholder diagnosis until a more definitive cause declares itself. This may be true, but this same problem is present with a number of other nonspecific diagnoses, such as schizoaffective disorder, ambulatory dysfunction, and even chronic obstructive pulmonary disease.⁵

Multiple clinicians are likely to encounter patients with geriatric BRUE symptoms, including emergency physicians, internists, neurologists, and family physicians. As such, the creation of a geriatric BRUE diagnosis will best be accomplished through a multidisciplinary committee.