RESEARCH LETTER

LESS IS MORE

The Pelvic Examination as a Screening Tool: Practices of US Physicians

According to the Centers for Disease Control and Prevention (CDC), approximately 63.4 million pelvic examinations were performed in US physicians' offices and US clinics in 2008.[1] Traditionally, this procedure has been performed in conjunction with annual Papanicolaou tests but since the American College of Obstetricians and Gynecologists extended its recommended cervical cancer screening interval to no more than every 3 years with human papillomavirus cotesting,[2] there are questions about whether an annual pelvic examination is needed.

Pelvic examinations have been performed on asymptomatic women to screen for sexually transmitted infections, to screen for ovarian and other gynecologic cancers, and to determine whether women should receive hormonal contraceptives. However, use of pelvic examinations for these purposes is not supported by scientific evidence and is not recommended by any US organization.[3-6]

See Invited Commentary at end of letter

Little is known about physicians' pelvic examination practices. In a recent Australian study, reasons general practitioners gave for performing pelvic examinations of asymptomatic women ranged from detecting pathologic conditions to simply performing this procedure "out of habit."[7] In this study, we sought to determine the purposes for which US physicians conduct pelvic examinations.

Methods. We analyzed data collected from internists, family/general practitioners (FP/GPs), and obstetrician/gynecologists (OB/GYNs) who participated in the 2009 DocStyles survey of US physicians. Because personal identifiers were not included in the data set, institutional review board approval was not required. Sampling quotas for the 2009 DocStyles survey were 1000 primary care physicians (internists and FP/GPs combined) and 250 OB/GYNs. In July 2009, e-mail invitations to take part in the survey were sent to 2325 internists or FP/GPs and 500 OB/GYNs, who were randomly selected from the Epocrates Honors Panel (156 000 US physicians) to match the proportion of physicians in the American Medical Association Physician Masterfile by age, sex, and region. Survey responses were obtained from 391 internists, 609 FP/GPs, and 250 OB/GYNs who met the following 2009 DocStyles survey inclusion criteria: practiced in the United States; treated at least 10 patients a week; worked in an individual or group practice, hospital, or clinic; and had practiced medicine for at least 3 years.

Participants were asked how often they performed the pelvic examination "as part of a well-woman exam," "to screen for ovarian cancer," "to screen for other gynecologic cancers," "to screen for STIs [sexually transmitted infections]," and "as a requirement for starting oral or other hormonal contraception." Response options were "always," "most of the time," "some of the time," "rarely," and "never." In our analyses, we defined "routine use" as "always" or "most of the time."

Results. The mean (SD) age of participants was 45.3 (9.1) years and most were male (70.2%), white (74.3%), and worked in a group practice (63.4%). All pelvic examination practices studied differed by specialty ($P<.001$), with most OB/GYNS (71.6%-98.4%) and FP/GPs (55.2%-89.5%) reporting that they routinely perform pelvic examinations for each of the stated purposes and the minority of internists (29.7%-41.2%) reporting routine use of pelvic examinations for these purposes with the exception of "as part of a well-woman exam" (54.0%) (**Table**).

Table. Physicians Reporting Routine Use of Pelvic Examinations for Selected Purposes, by Specialty (DocStyles Survey, 2009)[a]

Reported Use	Physicians, No. (%)			*P* Value
	FP/GPs (n=609)	Internists (n=391)	OB/GYNs (n=250)	
As part of a "well-woman exam"	545 (89.5)	211 (54.0)	246 (98.4)	<.001
To screen for ovarian cancer	336 (55.2)	116 (29.7)	238 (95.2)	<.001
To screen for other gynecologic cancers	414 (68.0)	161 (41.2)	240 (96.0)	<.001
To screen for STIs	444 (72.9)	152 (38.9)	229 (91.6)	<.001
As a requirement for hormonal contraception	412 (67.7)	157 (40.2)	179 (71.6)	<.001

Abbreviations: FP/GPs, family/general practitioners; OB/GYNs, obstetrician/gynecologists; STIs, sexually transmitted infections.
[a] Pearson χ^2 asymmetrical 2-sided tests were used to compare percentages across specialties. "Routine use" is defined as performing pelvic examinations for each stated purpose "always" or "most of the time."

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Comment. Current American College of Obstetricians and Gynecologists guidelines on cervical cancer screening[2] represent a paradigm shift in clinical practice: not only is the Papanicolaou test no longer recommended on an annual basis, but the need for the pelvic examination has been called into question. Most physicians across specialties reported routinely performing pelvic examinations as part of well-woman exams; however, the conditions pelvic examinations hope to detect during these annual visits are unclear, since scientific evidence does not support their use for any specific purpose.

Most FP/GPs and OB/GYNs reported performing pelvic examinations to routinely screen for sexually transmitted infections and as a requirement for the prescription of hormonal contraception, for which a pelvic examination is not recommended. This is concerning because the invasive nature of pelvic examinations may deter some women from using hormonal contraceptives and those who are 25 years or younger from being routinely screened for *Chlamydia*.[3,5]

The accuracy of pelvic examinations for the early detection of ovarian cancer is poor and no US organization endorses using them for cancer screening,[3,4] yet our findings suggest that pelvic examinations are still routinely performed for this purpose, especially by OB/GYNs. The high percentage of OB/GYNs who continue to use pelvic examinations to screen average-risk women for ovarian cancer is particular cause for concern, given that an estimated 98% of positive screening results among such women are false positives.[8] More effective dissemination of guidelines for ovarian cancer screening and emphasis on the harmful consequences of false-positive findings, including overtesting and undue anxiety, may be useful in addressing the misuse of pelvic examinations to screen for this type of cancer.

Pelvic examination practices among US physicians are not evidence based. Increased education efforts are needed to emphasize the limitations and harms associated with the use of pelvic examinations.

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INVITED COMMENTARY

Pelvic Examinations in Asymptomatic Women: Tipping a Sacred Cow

In our effort to practice evidence-based medicine, the benefits and harms of all medical interventions have come under scrutiny. Stormo and colleagues[1] begin an exploration of one of the most prevalent yet largely unquestioned practices in women's health: the pelvic examination. Using a Web-based survey targeting a variety of clinicians, they posed a fundamental question: how often do you perform pelvic examinations for a given set of purposes?

The most commonly reported purpose, and the least clear, seemed to be rooted in habit alone: as "part of a well-woman exam." It is not surprising that nearly all obstetrician/gynecologists who responded cited this purpose, since the American College of Obstetricians and Gynecologists includes pelvic examinations as a component of periodic assessments for women aged 21 to 64 years.[2] The American College of Obstetricians and Gynecologists states that it is reasonable to discontinue pelvic ex-

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