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Primary care physicians' awareness and adherence to cervical cancer screening guidelines in Texas

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Abstract

Background. Cervical cancer screening guidelines were created to help healthcare professionals in appropriate screening utilizing the PAP test. However, significant variation in cervical cancer screening among primary care physicians has been noted. Knowledge of the awareness of and adherence to cervical cancer screening guidelines by primary care physicians will help determine how best to disseminate and educate these physicians regarding the guidelines in hopes of reducing unnecessary screening and improving screening for under screened populations.

Methods. A cross-sectional, mailed survey involving Family Medicine (FP), Community Internal Medicine (CIM), and Obstetrics/Gynecology (OB) physicians practicing in a large University-affiliated, multi-specialty group practice associated with an 186,000-member HMO in Central Texas (n = 177) was conducted in 2001–2002.

Results. Most physicians performed PAP testing (50.4%). PAP screening was noted to vary significantly by specialty ($P < 0.0001$). All OBs were aware of at least one published guideline, compared to 96% of FPs and 91% of CIMs ($P < 0.05$). A wide variation was reported regarding adherence to published guidelines. In addition, there was significant intraspecialty variation regarding adherence to the physicians' own specialty's guidelines.

Conclusions. While most physicians in the primary care setting perform PAP tests and are aware of published guidelines for PAP screening, adherence to the published guidelines varies considerably even in the same clinical setting.

Keywords: Cervical cancer screening; PAP testing; Prevention; Primary care setting; Guidelines

Introduction

Screening for cervical cancer has been a routine recommendation since 1957 when the American Cancer Society (ACS) endorsed annual screening with the Papanicolaou (PAP) smear. Worldwide, cervical cancer is the second most frequently diagnosed cancer with more than 450,000 new cases identified and 200,000 deaths annually (American Cancer Society, 1999). In 1999, the burden of suffering in the United States due to cervical cancer was estimated to include 16,000 new cases diagnosed with 4800 deaths (U.S. Preventive Services Task Force, 1996). The lifetime risk of developing cervical cancer is 1.0%, with a 0.3% lifetime risk of dying (U.S. Preventive Services Task Force, 1996). Over the last 10 years, a steady disease state has been noted in relation to the detection of cervical cancer. Cellular changes in the cervical epithelium can typically be seen in women from their teens to their forties; whereas invasive cervical cancers are more common in women over 45 years. This relatively long latency period provides the opportunity for early detection of epithelial changes, including dysplasia and cervical cancer, and thus the opportunity for early intervention. Despite the fact that there are no randomized controlled trials to demonstrate the effectiveness of PAP testing, it has received an "A" recommendation from the United States

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Preventive Services Task Force (USPSTF) largely due to 40–75% reduction in cervical cancer deaths from screening (U.S. Preventive Services Task Force, 1996).

Screening for a health problem, such as cervical cancer for which an appropriate treatment exists, is not only ethical but also a means of enhancing patients' quality of life and reducing healthcare costs. Though the cost of one PAP test is only $50–$60, the cost of screening all women has been estimated to be close to $1 billion dollars annually. Therefore, some authorities contend that the current cost of the PAP test is justifiable to prevent the cost associated with invasive cervical cancer. However, women in whom cervical cancer has been detected generally have never undergone screening or have not been screened in the last 5 years. To overcome this issue, the creation of clinical practice guidelines in the last 40 years has provided physicians some direction in their screening for, and management of, cervical cancer. However, in our experience, wide variation exists regarding knowledge of, and adherence to, cervical cancer screening guidelines. Determining the pattern of cervical cancer screening in a physician population can help to identify unnecessary screening and barriers to screening. After these patterns are identified, our belief is that educational efforts will not only enhance and increase screening in the most appropriate patients but may also help decrease inappropriate screening.

The current guidelines regarding the timing and frequency of PAP testing in specific patient populations are published by several different medical organizations including the American Medical Association (AMA, 1994), the USPSTF (1996), the American College of Obstetricians and Gynecologists (ACOG, 1995, 1998, 2002), the American Academy of Family Physicians (AAFP, 1994), the ACS (ACS, 1993, 2003; Smith et al., 2000; ACS, 2003), the American College of Physicians (ACP, 1991a,b), and the National Cancer Institute (Table 1). Above and beyond these specific guidelines, a consensus recommendation has also been issued by all the above organizations in conjunction with AMA that all women who have been sexually active or have reached the age of 18 years should have annual PAP smears. This consensus recommendation permits PAP testing at less frequent intervals after three or more annual PAP smears have been normal (U.S. Preventive

Table 1
Criteria for current pap testing guidelines by specialty organization, Scott and White Clinic, Temple, Texas, 2001–2002

Guideline criteria	Specialty organization					
	ACOG	AAFP	ACS	USPSTF	AMA	ACP
Age of onset	18 years or at onset of sexual activity	18 years or at onset of sexual activity	18 years or at onset of sexual activity	Within 3 years of onset of sexual activity or at age 21	18 years or at onset of sexual activity	N/A
Frequency of screening	Low risk: at the discretion of patient and physician High Risk: annually	Annually until 3 or more negative tests, then every 3 years	Annually until 3 or more negative tests, then less frequently	Every 3 years	Annually until 3 or more negative tests, then every 3 years	N/A
At age 30 or older	N/A	N/A	Every 3 years if no risk	Every 3 years	N/A	N/A
When to discontinue screening	N/A	Can discontinue screening at 65 if previous Paps are negative	At 70 years of age	Stop at 65 if adequate recent screening and no risk factors	N/A	N/A
Women with Hyst for benign reasons	Every three to 5 years	N/A	Not Indicated	No screening necessary	N/A	N/A
Women with supracervical Hyst	N/A	N/A	Every 3 years	N/A	N/A	N/A
Women with total Hyst but h/o CIN II-III or no documented reason for Hyst	N/A	N/A	Annually until three negative smears	N/A	N/A	N/A
CIN II-III as reason for Hyst	N/A	N/A	Every 4–6 months until three negative	N/A	N/A	N/A
DES-exposed patient	Onset of menarche and every 6–12 months	N/A	Annually	N/A	N/A	N/A
After Tx for preinvasive cervical disease	Every 4- 6 months	N/A	N/A	N/A	N/A	N/A
After Tx for invasive cervical cancer	Every 3 months for 2 years, then every 6 months after	N/A	N/A	N/A	N/A	N/A

N/A—not addressed; Tx—treatment.
Hyst—hysterectomy; DES—diethylstilbestrol; CIN—cervical intraepithelial neoplasia; ACOG—American College of Obstetrician/Gynecologists; AAFP—American Academy of Family Physicians; ACS—American Cancer Society; USPSTF—United States Preventive Services Task Force; AMA—American Medical Association; ACP—American College of Physicians.