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U.S. clinicians' perspectives on less frequent routine gynecologic examinations ☆

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ABSTRACT

Objective. With newer recommendations for less frequent cervical cancer screening, longer intervals between routine gynecologic examinations might also be considered.

Methods. A nationally representative mailed survey of U.S. obstetrician–gynecologists ($n = 521$, response rate 62%) was conducted in 2010–11. Clinicians were asked their views on annual gynecologic examinations and on the consequences of extending the interval from annually to every 3 years for asymptomatic patients.

Results. Over two-thirds considered annual gynecologic examination very important for women in their reproductive years (69%); fewer consider it very important for women in menopause (55%). Most anticipated that shifting examinations to every 3 years would result in lower patient satisfaction (78%), contraceptive provision (74%), and patient health and well-being (74%). Decreases in clinic volume (93%) and financial reimbursement (78%) were also expected. Anticipated effects of longer intervals varied by provider characteristics, geography, and practice setting.

Conclusion. Obstetrician–gynecologists in the U.S. believed that longer intervals between routine examinations would have negative repercussions for patients and medical practice, but there were differences by region, practice, and personal characteristics. Redefining annual gynecologic visits as contraceptive counseling and health maintenance visits could address financial and patient volume concerns, and perspectives from patients and other providers might reveal possible benefits of less frequent gynecologic examinations.

Introduction

Pelvic exams with Papanicolaou (Pap) tests have long been a cornerstone of annual well-woman visits to reproductive health specialists. Obstetrician–gynecologists are important providers of routine and preventive health care in the United States, and can be seen without referral for primary care (Valderas et al., 2009). Current guidelines recommend initiation of cervical cancer screening no earlier than age 21, screening every three years until age 29 when results are normal, and even less frequently for women aged 30 and older with human papillomavirus co-testing (American College of Obstetricians and Gynecologists, 2009; U.S. Preventive Services Task Force, 2012). Following these changes, the purpose of annual pelvic exams in asymptomatic women has been questioned (Sawaya, 2011; Westhoff et al., 2011). Whether gynecological examinations remain necessary for asymptomatic women at times when cervical cancer screening is not recommended is an increasingly important question in women's primary health care.

The Institute of Medicine recommends that women's preventive services include at least one well-woman visit annually, but does not establish whether this should include a pelvic examination (Institute of Medicine, 2011). The American College of Obstetricians and Gynecologists (ACOG) recommends annual health assessments as well, including screening, evaluation and counseling, and immunizations based on age and risk factors. ACOG further recommends that pelvic examinations, including speculum and bimanual examinations, be performed on an annual basis in all patients aged 21 years and older (American College of Obstetricians and Gynecologists, 2012). Despite the recommendation, ACOG also recognized that "no evidence supports or refutes the annual pelvic examination or speculum and bimanual examinations for asymptomatic, low-risk patients". Reproductive health specialists' perspectives are highly influential in health care delivery and policy decisions related to women's preventive services. We surveyed a random sample of practicing obstetrician–gynecologists to investigate their perspectives on providing less frequent gynecologic examinations for asymptomatic women.

Materials and methods

Sample

A national probability sample of obstetrician–gynecologists currently working in the United States was drawn from the American Medical Association's

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(AMA) Physician Masterfile, a comprehensive database of nearly one million physicians that include members and non-members of the AMA updated weekly. We aimed for a sample of 500 eligible respondents to achieve population estimates with ±5% precision. A simple random sample of 1020 practicing obstetrician–gynecologists was drawn using a random number generator. The response rate was calculated using a standard formula in which ineligible clinicians were subtracted and adjustments made for an estimated proportion of eligible participants among unknown respondents (American Association for Public Opinion Research, 2011; Henderson et al., 2013).

Data collection and measurement

Clinicians were sent a letter introducing the study, followed 10 days later by a survey and cover letter, postage-paid return envelope and $10 cash. A reminder postcard was mailed one week later. A second cover letter, a copy of the survey and a postage-paid return envelope were sent two weeks after the postcard if the original survey had not yet been returned. If mail was returned as undeliverable, research staff used online state medical boards, directories, and search engines to locate current information and confirm the correct mailing address. After the final mailing, recruitment efforts were continued by telephone. Data were collected from May 2010 through January 2011. The Committee on Human Research at the University of California, San Francisco approved the study protocol.

Measures

Obstetrician–gynecologists were asked to define what a gynecologic exam includes by selecting all that apply from the options of visual inspection of the external genitalia, visual inspection of the cervix with a speculum, bimanual pelvic examination without rectal examination, bimanual pelvic examination with rectal examination, and others (to specify). Next, respondents were asked about the importance of gynecologic examinations for asymptomatic women at different stages of life: before they come sexually active, during their reproductive years, and after menopause. Importance was evaluated with 4 response categories: very important, moderately important, a little important, and not important.

We asked about the effects of extending the intervals between examinations on various medical practice outcomes. Respondents were asked, "If you were to lengthen the recommended interval between gynecologic examinations for all asymptomatic patients to every three years, how would it affect the following aspects of your medical practice": clinic volume, visit length, your job satisfaction, contraceptive service provision, financial reimbursement, the health and well-being of patients, and patients' satisfaction with care. The response categories of these outcome variables were as follows: increase, stay the same, and decrease.

Provider characteristics included age, gender, and race/ethnicity. The practice setting was measured with an item that permitted multiple responses, which were coded such that clinicians practicing in private solo and group settings were compared to those associated with a hospital, university, managed care organization, or community clinic. Additional measures describing the practice setting include clinic volume, the proportion of patients having public health insurance, and region of the country.

We examined factors associated with negative perceptions of extending examination intervals using multivariable binary logistic regression analysis to assess the adjusted associations on expected decreases in contraceptive service provision, patient health and well-being, patient satisfaction, provider satisfaction, and financial reimbursement.

The personal and practice characteristics included in multivariable analysis were informed by prior research on provider practices (Henderson et al., 2010; U.S. Preventive Services, 2005). Personal characteristics of clinicians tested for association with perceived negative consequences were age, race/ethnicity, and gender. The practice characteristics included were as follows: region of the country, clinical setting, number of gynecologic exams conducted each week (≥30 versus <30); and, the extent to which publically insured patients are served in the practice (<25% versus ≥25% patients with public insurance).

Analysis

Comparisons for categorical variables were conducted with Fisher's exact tests. We report adjusted odds ratios and 95% confidence intervals from multivariable binary logistic regression models examining the independent associations of provider characteristics and practice setting with negative consequences expected to occur with extended bimanual pelvic examination intervals. Variables relevant to clinical practices were included in the model, and parsimony was achieved by excluding some variables that were not significant in any of the models or were highly correlated to another variable (e.g., teaching hospital admitting privileges, urban location, proportion of patients with low-income). Log-likelihood tests were used to assess model fit and differences in the variance explained for nested multiple variable models. Significance was reported at $p \leq 0.05$. We used STATA statistical software version 11.2 (Stata Corp, College Station, TX).

Results

Of 1020 surveys mailed, eligibility could be determined for 716. Of these, 590 were eligible, 63 declined participation, and 6 submitted incomplete surveys. Assuming a similar proportion of eligible respondents among the unknowns (82%, $n = 304$), 250 eligible respondents were added to the denominator for the response rate calculation (590 + 250). The survey response rate was 62%, with 521 eligible respondents. Respondents were no different than nonrespondents by region of the country, urban location, or gender, but were younger (34% of the nonrespondents' age ≥60 years vs. 23% of the respondents). Study participants have previously been described in our investigation of the specific clinical and non-clinical reasons clinicians conduct bimanual pelvic examination of asymptomatic patients (American Association for Public Opinion Research, 2011). Ninety percent of the respondents were members of ACOG, and there was good representation across providers' ages and region of country. Seventy percent of physicians performed >30 gynecologic examinations per week and the mean number of gynecologic patients per week was 85.

Almost all obstetrician–gynecologists (98%) consider bimanual pelvic examination part of the annual gynecologic examination. Ninety-four percent also included the speculum examination in their definition. Approximately one quarter of the respondents defined the annual gynecologic exam more broadly to include general health content, most commonly a clinical breast exam (20%).

Over a third (37%) of the respondents reported that a gynecologic examination is not important for women to receive before becoming sexually active (Fig. 1). Over a quarter (29%), however, viewed the gynecologic exam as moderately or very important for this population. In contrast, for women in their reproductive years, the annual gynecologic examination was viewed as moderately or very important by nearly all obstetrician–gynecologists (94%). A high proportion, 89%, also viewed annual gynecologic examinations as very or moderately important for women after menopause.

Obstetrician–gynecologists expect negative consequences for their patients if the interval between routine gynecological examinations were lengthened to every three years (Table 1). Approximately

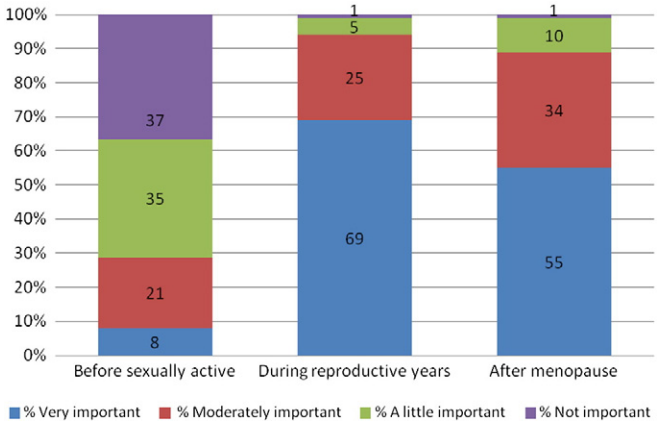

Fig. 1. Importance of annual gynecological examinations for women at different reproductive life stages, $n = 521$. Percentage of obstetrician–gynecologists reporting whether annual gynecologic examination is very important, moderately important, a little important, or not important for patients before becoming sexually active, during their reproductive years, and after menopause.