Chaperone Use by Family Physicians During the Collection of a Pap Smear

Pamela Rockwell, DO1
Terrence E. Steyer, MD2
Mack T. Ruffin IV, MD, MPH1
1Department of Family Medicine, University of Michigan, Ann Arbor, Mich
2Department of Family Medicine, Medical University of South Carolina, Charleston, SC

ABSTRACT

BACKGROUND We wanted to determine whether variations exist in use of a chaperone during the performance of a pelvic examination by family physicians.

METHODS A self-administered questionnaire was mailed to 5,000 randomly selected active members of the American Academy of Family Physicians.

RESULTS There were 3,551 survey responses (71% response rate) and 2,748 usable questionnaires. Most respondents (75.4%) reported routinely using a chaperone in the room during the collection of a Papanicolaou (Pap) smear. Significantly (P < .00001) more male physicians (84.1%) than female physicians (31.4%) reported using a chaperone. Physicians reporting routine use of a chaperone were significantly younger (P = .01) and did fewer Pap smears per month (P < .00001). Regional reporting of chaperone use varied significantly (P < .00001), with 71.6% reporting use in the Northeast, 89.0% in the South, 65.7% in the Midwest, and 72.4% in the West.

CONCLUSION Family physicians vary considerably in the reported use of a chaperone during the collection of a Pap smear. The variation could reflect different regional or local norms, efficiency or resource issues in high-volume clinical settings, or other interpersonal factors. These issues need to be explored in more depth.

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INTRODUCTION

Historically, chaperone use during pelvic examinations was first encouraged for the comfort of the patient, and gradually chaperones were advocated for the purpose of legal protection. Additional rationales for use of chaperones are convenience and time efficiency, although there are no supporting data. Little consistency and uniformity, however, are found in the use of chaperones during a pelvic examination.

Relatively few studies have explored the issue of chaperone use based on physician variables. Published data suggest that physician specialty and physician sex might contribute to the variation in chaperone use, but these data are limited to small samples, one geographic location, or one medical society. No existing study has a sample population that is representative of practicing family physicians.

We proposed to test the hypothesis that family physicians’ use of a chaperone during a routine pelvic examination to collect a Papanicolaou (Pap) smear would vary by physician sex but not by age, other physician characteristics, number of Pap tests done, or geographic location of the practice.

To address this hypothesis, we used data previously collected with the primary intent to gather information on Pap smear collection and processing techniques. One aspect of the study queried physicians about their routine use of chaperones during the collection of a Pap smear.
METHODS

Data Collection Instrument
A self-administered questionnaire was developed to gather information on Pap smear collection and processing techniques. The reliability was determined for each item of the questionnaire using kappa statistics for categorical data and correlation coefficients for continuous data. The reliability was excellent, with a kappa statistic range of .75 to .90 and a correlation coefficient range of .83 to .90. The questionnaire was sequenced to follow the steps in collecting a Pap smear to facilitate completion. The issue of using chaperones during a Pap smear was a secondary item.

The self-administered questionnaire was mailed with a cover letter that included an introduction of the project, quotes from nationally recognized leaders in family practice supporting the study, and an envelope with return postage. Six waves of mailed contacts at 2-week intervals (2 surveys and 2 reminder cards) were followed by a telephone call to any remaining nonrespondents.

The study sample was 5,000 randomly selected active members of the American Academy of Family Physicians (AAFP). The total population at the time of sampling was 38,095 active members, 33,141 men and 4,950 women.

Data Analysis
Data analysis was performed using STATA Release 6.0 statistical analysis software. Initially, frequencies and summary statistics were calculated on all variables. Next, bivariate analysis was performed using chi-square and t tests, as appropriate, with the outcome of use of a chaperone (yes/no). Variables with significant association in the bivariate analysis with chaperone use ($P \leq .05$) were used in logistic regression analysis. Logistic regression models were developed using both forward and backward stepwise regression. Both unadjusted and adjusted logistic regression models were created to determine odds ratios for the independent variables. A Hosmer-Lemeshow goodness-of-fit test was performed to ensure the appropriateness of the model.

RESULTS

The responses to the mailed physicians’ survey were 3,551 (71% response rate) with 2,748 (55%) usable questionnaires. The reasons for excluding the 803 responses were that cervical cancer screening was not part of the physician’s clinical practice, 466 (58%); the physician was no longer involved in patient care, 249 (31%); or the physician was no longer alive, 88 (11%). Differences were not found between respondents (3,551) and nonrespondents (1,449) by age (mean age 44.6 years) and sex (82.7% male compared with 85.2% female). Table 1 highlights the demographics of the participants in this survey.

Of the 1,449 nonresponders, 800 were reached by telephone. Among these 800 physicians, 384 (48%) did not see women, 240 (30%) did not

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**Table 1. Characteristics of Family Physicians Reporting the Use of Chaperones During the Collection of a Pap Smear and Logistic Regression Model**

| Variable                      | Percent Reporting Use of Chaperone | Logistic Regression |
|-------------------------------|-----------------------------------|--------------------|
|                               | Unadjusted Odds Ratio (95% CI)    | Adjusted Odds Ratio (95% CI) |
| Sex                           |                                   |                    |
| Female*                       | 31.4                              | 1                  |
| Male                          | 84.1                              | 11.6 (9.2–14.7)    | 15.4 (11.7–20.1) |
| Age of physician†             |                                   |                    |
| ≤35 years                     | 55.6                              | 1                  |
| 36–50 years                   | 74.0                              | 0.89 (0.70–1.12)   | 0.60 (0.43–0.84) |
| ≥51 years                     | 78.2                              | 1.16 (0.89–1.51)   | 0.60 (0.34–1.04) |
| Region of practice*           |                                   |                    |
| South                        | 89.0                              | 4.2 (3.2–5.5)      | 6.1 (4.5–8.3)    |
| Northeast                     | 71.6                              | 1.3 (1.0–1.7)      | 1.5 (1.1–2.0)    |
| Midwest                       | 65.7                              | 1                  |
| West                          | 72.4                              | 1.4 (1.1–1.7)      | 1.6 (1.1–2.1)    |
| Number of Pap smears performed per month* |                                   |                    |
| ≤20                           | 81.4                              | 1                  |
| ≥20                           | 69.5                              | 0.52 (0.43–0.62)   | 0.76 (0.59–0.96) |
| Board certification†          |                                   |                    |
| Certified                     | 74.9                              | 1                  |
| Pending                       | 79.2                              | 1.24 (0.93–1.64)   | 1.29 (0.87–1.91) |
| Not certified                 | 78.7                              | 1.27 (0.63–2.57)   | 2.02 (0.68–6.06) |
| Years in practice             |                                   |                    |
| ≤15 years                     | 74.3                              | 1                  |
| >15 years                     | 78.1                              | 1.23 (1.02–1.50)   | 0.67 (0.43–1.04) |
| Location of practice*         |                                   |                    |
| Rural                         | 77.5                              | 1.23 (1.03–1.47)   | 1.05 (0.82–1.33) |
| Urban                         | 73.7                              | 1                  |

Note: As of January 2003, the American Academy of Family Physicians had 52,906 active members: 72% were men, 61% were white, 87% were board certified, and the regional distribution was Northeast 14.1%, Midwest 28.2%, West 20.4%, and South 32.5%. The mean age was 44.6 years.

Pap = Papanicolaou; CI = confidence interval.

* $P < .001$.

† $P < .01$. 

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Among a random sample of active members of the AAFP, the hypothesis that male physicians would report use of a chaperone more often than female physicians was confirmed. Other physician characteristics were found to be associated with reported chaperone use, refuting our other hypothesis. Those family physicians who performed fewer than 20 Pap smears per month were significantly less likely to use chaperones (OR = 0.76; 95% CI, 0.59–0.96). Finally, the geographic location of a practice was significantly associated with the use of a chaperone. Physicians in the South were significantly more likely to use chaperones than those in the Midwest (OR = 6.1; 95% CI, 4.5–8.3).

**DISCUSSION**

Among a random sample of active members of the AAFP, the hypothesis that male physicians would report use of a chaperone more often than female physicians was confirmed. Other physician characteristics were found to be associated with reported chaperone use, refuting our other hypothesis. Those family physicians who performed fewer than 20 Pap smears per month were significantly less likely to use chaperones (OR = 0.76; 95% CI, 0.59–0.96). Finally, the geographic location of a practice was significantly associated with the use of a chaperone. Physicians in the South were significantly more likely to use chaperones than those in the Midwest (OR = 6.1; 95% CI, 4.5–8.3).

Some limitations to this study can be noted. First, physician behavior was self-reported, which might not be valid. The primary focus of the survey, however, was on Pap smear collection and processing, not the use of chaperones, so the responses might be less biased than had the primary intent of the survey been to target the issue of chaperone use. Second, the study population was 5,000 randomly selected active members of the AAFP. This group might not reflect the practices of all family physicians; AAFP members might be more informed because of required continuing medical education. Third, although the response rate to the survey was 71%, which is quite good, variation in chaperone use might still be significantly different among the nonresponders.

The use of chaperones during gynecologic examinations remains a controversial issue with no formal guidelines or legal mandates. The topic is poorly addressed by the medical literature and by our current medical education system. No consensus is found among state medical and osteopathic boards on the use of a chaperone. From the legal perspective, the recommendations are nearly unanimous in strongly supporting the use of chaperones. Many questions related to this issue are unanswered. Does chaperone use decrease malpractice claims? Does chaperone use have an impact on clinical efficiency, as the inverse relationship with the volume of Pap smears performed suggests? What are the regional influences contributing to the geographic variation in reported use of a chaperone? We believe the question with highest priority is, What is the perspective of patients?

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Key words: Cervical intraepithelial neoplasia; professional practice; vaginal smears

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