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Missed Opportunities for Health Education on Pap Smears in Peru

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Abstract

Despite cervical cancer being one of the leading causes of cancer-related deaths among women in Peru, cervical Pap smear coverage is low. This article uses findings from 185 direct clinician observations in four cities of Peru (representing the capital and each of the three main geographic regions of the country) to assess missed opportunities for health education on Pap smears and other preventive women's health behaviors during women's visits to a health care provider. Various types of health establishments, provider settings, and provider types were observed. Opportunities for patient education on the importance of prevention were rarely exploited. In fact, health education provided was minimal. Policy and programmatic implications are discussed.

Keywords

cervical cancer; patient education; international health (Peru)

Introduction

Although cervical cancer is treatable if detected early, it remains one of the leading causes of cancer-related mortality among Peruvian women (Coalición Multisectorial Perú Contra el Cáncer [Peru Multisectoral Coalition Against Cancer], 2007; World Health Organization (WHO)/Institut Catala d'Oncologia (ICO) Information Centre on HPV and Cervical Cancer, 2007). The cervical cancer incidence in Peru is one of the highest in the Americas at 48.2 per 100,000 women, resulting in a cause-specific mortality rate of 24.6 per 100,000 women (Ferlay, Bray, Pisani, & Parkin, 2004). Evidence shows that early detection through cervical Pap smears has had a huge impact on the incidence and mortality associated with this cancer

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globally (WHO, 2002). In Peru, reduction of cervical cancer incidence has been a priority for the Ministry of Health for more than a decade, with recommendations for Pap smear screenings every 3 years for women between 30 and 49 years of age, and starting at age 25 if possible. In spite of these long-standing efforts, estimates of Pap smear coverage remain low, ranging from 7% to 42.9% (Albujar, 1995; Asociación de Médicos Ex-Residentes del Instituto Nacional de Enfermedades Neoplásicas, 1994; Lewis, 2004; Ministerio de Salud, 2000; Paz Soldan et al., 2008; Solidoro et al., 2004). As in other Latin American countries, lack of organization and quality control in screening programs has led to an inability to meet program objectives and the persistence of high cervical cancer incidence and mortality (Arrossi, Sankaranarayanan, & Parkin, 2003).

The factors associated with this low screening coverage are numerous, ranging from problems in the health care system, such as inadequate resources for screening and follow-up, to low awareness and knowledge among women about the importance of seeking this screening and the failure of providers to recommend Pap smears to women. Two recent studies using mostly qualitative data examined barriers and perceived benefits to cervical cancer screening in Latin America. They identified four types of knowledge-related barriers: (a) a lack of understanding about prevention in general: many people felt one goes to a health center when one feels ill (Alliance for Cervical Cancer Prevention [ACCP], 2004; Bingham et al., 2003); (b) many women and men did not know what the exam was for, and many people associated cervical cancer screening with sexually transmitted infections (STIs; ACCP, 2004; Agurto, Bishop, Sánchez, Betancourt, & Robles, 2004); (c) women expressed anxiety, loss of modesty, and fear associated with pelvic exams (Agurto et al., 2004; Bingham et al., 2003); and (d) there was a lack of knowledge about, or negative feelings regarding, cancer and cervical cancer: namely, a diagnosis indicating an abnormality was associated with death (Agurto et al., 2004; Bingham et al., 2003).

Although efforts to increase Pap smear coverage must include interventions directed at the health care system (such as availability of equipment, trained health personnel to take samples, trained lab technicians, appropriate follow-up and treatment protocol), women's lack of knowledge and fears regarding Pap smears can, and should, be addressed through health education at the time of a health care visit, in which they are a "captive audience" to a provider who can educate them on the issue. In many countries, women are educated about the importance of preventive individual health behaviors and preventive health care during their health care visits. Every visit to a provider—whether for a child's illness or a family planning visit—can be used to educate patients on important and relevant health care issues and address misconceptions or fears. Provider's recommendations carry weight: in fact, a recent study on factors affecting the uptake of cervical cancer screening in Jamaica found that women who had received a recommendation to get a Pap smear in their last provider visit were 8 times more likely to have ever had a Pap smear and twice as likely to have had a Pap smear in the last year, as compared to women who did not receive this recommendation from their providers (Bessler, Aung, & Jolly, 2007). These visits are an opportunity to encourage women to get Pap smears, and provide health education, but when these "teachable moments" do not occur, they constitute missed opportunities. This study examined the types of health education messages given, if any, by health care providers in Peru to their female patients, with a specific focus on Pap smears and cervical cancer, and assessed the missed opportunities for health education.

Moreover, the content of the health education message provided can also matter: It is an opportunity to change a woman's knowledge and attitudes about this preventive practice, which could affect her decision to seek Pap smears in the future and share this information with others. However, it is important to note that although the study in Jamaica found that the provider recommendation was associated with an increase in cervical cancer screening,

there are no criterion standard interventions that have successfully increased women's Pap smear-seeking behaviors in developing countries (Forbes et al., 1999). The Health Belief Model (HBM), developed in the 1950s by the U.S. Public Health Service in an attempt to explain the lack of participation of individuals in medical screening programs, is the most commonly used theory in health education and health behavior (Glanz, Rimer, & Lewis, 1997; Ulin, Robinson, & Tolley, 2005). The HBM, which is now extensively used to guide sexual and reproductive health programs and research, describes six concepts to be addressed in health education for behavior change: (a) perceived susceptibility, (b) perceived severity, (c) perceived barriers, (d) perceived benefits, (e) cues to action, and (f) self-efficacy (Glanz et al., 1997). Although the predictive ability of the HBM with adults has been questioned (Harrison, Mullen, & Green, 1992), in lacking a criterion standard for health education that would increase women's Pap smear-seeking behaviors, we used the HBM as a guiding framework for the data collection and analysis for this study.

Various methods are used to study the provision of health education during a health care visit, including provider interviews, client exit interviews, retrospective reports by simulated clients, video- and audiotaping, and observations by researchers. Provider interviews engage providers directly about the health education they provide, asking them about both the content and communication style they use and whether and how they target education to different clients (Leiva et al., 2001; Youssef, Hassan, & Nawar, 2001; Zhou, Shi, Chen, Wei, & Zhao, 2002). The limitations of provider interviews are that providers might overreport their provision of health education information because most know the standards and expectations of both the health authority and the research study. In some studies, patients leaving a health provider's office have been asked to fill out a checklist or form to determine, retrospectively, whether certain information was provided during the clinic visit (Pbert et al., 2006; Youssef et al., 2001; Zhou et al., 2002). Limitations of this method include the retrospective collection of information and the bias associated with a wide range of people filling out these checklists, namely, that their responses may be influenced by general care experience, relationship and interaction with provider, and personal perceptions and knowledge about prevention, as well as perceived susceptibility and risk. Past studies in Latin America have also examined missed opportunities related to women's health and/or sexual and reproductive health, using simulated or mystery clients (Chin-Quee, Cuthbertson, & Janowitz, 2006; Lara, Abuabara, Grossman, & Díaz-Olavarrieta, 2006; Wolfe, 2005). The use of simulated clients ensures that the information is collected with more consistency by one or more trained people, but there are still limitations because of the ability to analyze only predetermined health scenarios (e.g., how a provider responds to a request for the injectable contraceptive) in order to have uniformity across trainees and because of retrospective reporting (León, Monge, Zumarán, García, & Ríos, 2001). Although audio- or videotaping patient-clinician interactions would have been the most objective measure, and could have offered providers data that they could use to improve their practice, it was hard enough to obtain permission to watch clinicians' interactions with patients in a confidential manner, where clinician names were not recorded. Thus, we did not attempt that method, though we recognize it would have been ideal. The method chosen for this study, direct clinician observation, allows for consistency across the trained observers, data are gathered prospectively, and observers can directly observe the presence and absence of specific health education information in a typical health care visit, instead of having to tailor the education provided to ensure uniformity across observers. Although direct clinician observation is subject to the Hawthorne Effect, where clinicians may be on "their best behavior" while being observed, this effect decreases as the number of observations increases (Leonard & Masatu, 2006).

The purpose of this article is to examine the types of health education messages, if any, given by health care providers in Peru to their female patients, specifically focusing on

cervical cancer and Pap smears. This research took place in four cities of Peru, in a variety of types of public health facilities and with a range of providers.

Method

Study Setting

Peru, with an approximate population of 29.2 million (U.S. Census Bureau, 2008), is divided into three main regions: the coast, the mountains, and the rainforest. The official language of Peru is Spanish, but other languages are widely spoken in different regions. This study took place in the capital city of Lima, home to one third of the population, and three provincial cities, each representing one of the three distinct geographic regions of Peru: the coast (Chincha), the mountains (Huancayo), and the rainforest (Iquitos). These sites are not meant to be representative of all other cities of these geographic regions, but they allowed us to observe facilities in each of the distinct regions.

In each city, local health facility authorities from both the public ministry of health system (MOH) and the semipublic social security system (EsSalud) were approached for permission to observe clinician–patient interactions for 2 days. It was much more difficult to obtain approval to observe the EsSalud facilities. In fact, approval was granted for only one facility in one of the four cities in the study (Chincha). The observations were conducted in the gynecology, obstetrics, and family planning units at three facility levels: hospitals, health centers, and health posts. A range of health facility levels was sought specifically in order to provide a detailed description of care at different levels. The distribution of facilities included in the study varied across cities because we found that although health facilities might be of the same level, their staffing and offering of services varied by region. For example, certain health posts only had technical staff whereas others had professional staff, and health posts in some cities offered Pap smears, whereas these were provided only at health centers or hospitals in other cities. It is important to note that the structure of service provision also differs by type of health establishment. The health posts and health centers where the observations were carried out had one setting for reproductive health care: obstetrics, which included prenatal care, family planning, and basic gynecological issues, all of which were provided by nurse-midwives. The hospitals had three settings for reproductive health care: obstetrics, which is primarily prenatal care, provided by nurse-midwives; family planning, provided by nurse-midwives; and gynecology, including all gynecological issues and high-risk obstetrics, provided by gynecologists.

Clinician–patient interactions were observed at the following facilities between June and August 2006: in Lima, one public health center and one public hospital; in Chincha, one public health center, one public hospital, and one semi-public hospital; in Huancayo, one public health center and one public hospital; and in Iquitos, one public health post and one public hospital (see Table 1).

Study Participants

A total of 9 gynecologists and 13 nurses and midwives were observed. Most of the gynecologists were male, with the exception of two female gynecologists, one in Lima and one in Chincha. Most of the nurses and midwives were female, with the exception of two, one in Lima and one in Iquitos. All of the providers were accompanied by a range of one to four assistants, including interns, residents, and nurses. A summary of the provider–patient interactions are presented in Table 1, by both establishment characteristics (type of establishment, sector, and provider setting) and provider characteristics (type, sex, and number of interactions observed).

Before describing the other study participants—the female patients—it is important to describe the nurse-midwife. In Peru, *obstetras*, which literally translates to obstetricians, are university-trained health professionals who provide comprehensive reproductive health services for women during preconception, conception, and in the postnatal period. They tend to provide the majority of preventive women's and reproductive health services such as family planning, as well as most prenatal care, with a focus on preventive dimensions such as nutrition, prophylaxis, and birth plans. They take 4 years of courses followed by a 1-year internship. For the purposes of translation, they will be referred to as nurse-midwives in this article. Gynecologists in Peru are members of the obstetrician-gynecologist profession that exists worldwide. They take 6 years of university-level courses, followed by a 1-year internship and 3-year residency to obtain the specialization in gynecology and obstetrics.

A total of 185 female patients participated in the clinic observations. In studies with nonprobabilistic sampling such as this one, saturation is a commonly used threshold for sample size. The difficulty with this method is that one does not know before the study starts how many interviews it will take before saturation is reached, and this also varies by topic (Guest, Bunce, & Johnson, 2006). Hence, we had estimated that by observing approximately 10 interactions per day for 2 days in 12 facilities (1 public hospital, 1 public health center or post, and 1 semipublic facility in each of the four cities), for a total of approximately 240 observations, we would start seeing a trend by type of provider and facility. However, we were unable to obtain permission at the semipublic facilities in three of the cities. Fortunately, saturation on our main topic of interest was reached.

Patient age was recorded whenever it emerged as a natural part of the exam, so it is only available for 111 patients. At health posts and health centers, most patients were from areas close to the health facility: within 10 min on foot or using an inexpensive form of transportation. At hospitals, however, many patients traveled long distances to reach the health facility, often referred from a health center or health post in their community. Even if patients have an appointment, all of the health facilities observed require patients to come early in the morning in order to obtain a number for the queue for gynecology, obstetrics, or family planning services, depending on the structure of the health facility. Most public and semipublic health facilities in Peru have only one shift for ambulatory care per day, in the morning, although select facilities have a second shift.

Sampling and Recruitment

Purposive sampling, a nonprobabilistic sampling method commonly used in qualitative research in which study participants are selected because of a specific criterion or characteristic that will enable the exploration of a research objective, was used to select participants (Guest et al., 2006; Patton, 2002). Namely, in this study, all participants waiting to be attended in the gynecology, obstetrics, and family planning consultation rooms who looked (and then confirmed) to be 18 years of age or older were asked to participate. Specific participants were not selected, but rather, every woman of reproductive age to be seen by the selected clinician was asked for consent for the observation, regardless of the purpose of the visit. For this, a member of the research team discreetly approached the patients in the waiting area to explain the study and obtain their permission to observe the provider–patient interaction. All patients were informed that only the conversational component of the clinic visit would be included in the observation and that the observer would not watch any part of the physical examination, but rather simply listen. If patients agreed to participate, the research team member reviewed the consent form and allowed time for any questions before asking the woman to provide her written consent. Although the team did not document the number of refusals, the two research assistants separately estimated an approximately 15% refusal rate.

Procedures

The clinic visit observation form for this study was created based on the Consultation and Counseling form developed by the International Planned Parenthood Federation/Western Hemisphere Region to evaluate quality of care in reproductive health (International Planned Parenthood Federation/Western Hemisphere Region, 2000). The observation form was modified significantly to address the issues of greatest interest to this study and specifically, issues related to cervical cancer prevention and screening. The observation instrument included a checklist of yes/no responses for issues such as type of visit, time spent per visit, quality of care, and health topics addressed, particularly prevention of cervical and breast cancers, pregnancy, and STIs. The instrument included a section on whether the provider asked the date of the last Pap smear and details on the provider's follow-up to the client's response. Detailed notes were also taken by the observers, focusing on health education messages provided (or lack thereof), extensiveness of these messages, and appropriateness of the message at that time.

The observations were conducted by two well-trained female researchers who shared findings after each round of observations to ensure consistent documentation of issues observed. At the beginning of the observations with each provider, the researchers provided a broad description of the study to avoid enabling providers to predict what they would be observing. Specifically, the researchers stated they would be observing the various types of reproductive health care needs of women seeking services at the facility. The specific focus on Pap smears and other preventive care was not mentioned to avoid the possibility that providers would be alerted to this and might change their behaviors and the health education messages that they provided, or even target their provision of care and health education to the interests of the study. Observations were carried out for a minimum of one full 3-hr session to ensure that the clinician would lose some of his or her self-consciousness because of the presence of an observer and/or bias toward tailoring care provision around the perceived observer areas of interest.

Data Analysis

All numeric data from the clinic visit observation instruments was entered into Microsoft Excel and subsequently transferred into Stata 9.0 in order to carry out quantitative analyses. For the univariate and bivariate analyses, we calculated means and standard deviations for continuous variables and generated frequencies and percentages for binary and categorical variables. We tested differences across groups using *t* tests and analysis of variance (ANOVA) for continuous variables and Pearson's chi-square tests for categorical variables. The groups compared are those presented in Table 1: establishment sector, establishment type, provider setting, provider type, and provider gender. Presence of health education, the primary variable of interest, was also analyzed by length of clinic visit and client age. Finally, open-ended comments that further explained the yes/no checklist answers provided in the observation instrument were reviewed to provide further depth to the quantitative data.

Human Subjects

Institutional review board (IRB) approval for this study was obtained from Tulane University School of Public Health and Tropical Medicine in the United States, and a local nongovernmental organization in Peru, Asociación Benéfica PRISMA.

Health Establishments and Providers

The number of interactions observed in each city varies—67 in Lima, 59 in Chincha, 35 in Iquitos, and 24 in Huancayo. This variation depended on the client flow in each facility. For

example, most facilities in Lima and Chíncha have a large number of patients each day, particularly in the case of the hospital in Lima, which has both morning and afternoon shifts. In Huancayo and to a lesser degree in Iquitos, patients are fewer. During one of the shifts at the health center in Huancayo, for example, the provider saw only two patients.

Results

Overview of Provider–Patient Interactions

A total of 185 provider–patient interactions were observed (see Table 1 for breakdown of number of observations by various categories, and Table 2 for distribution per type of establishment or provider).

Across the 111 patients for whom age came up during the appointment, the average patient age was 30.2 years (median age: 27 years; age range: 18–67 years). Of the 185 patients observed, most went for family planning (41.1%) or prenatal care (28.7%) and one fifth (18.9%) went for general gynecological issues such as vaginal discharge and infections, pelvic inflammation, and abnormal bleeding. A minimal proportion of visits (5.9%) were specifically related to Pap smears: eight patients had Pap smears and three patients came for Pap smear results. The remaining visits were related to postnatal care and pregnancy tests.

Time Spent With Provider

Although we did not record the average length of time that each woman spent waiting in the waiting room, we recorded our observations of what happened in the waiting rooms. In the facilities observed, the patient arrives as early as possible to wait in a line with all of the other people who are seeking any type of health service that day in order to obtain a ticket with a number for their specialty. Based on the number, the person can estimate how long she will wait before being seen: some people leave and return later, whereas others stay at the facility for several hours waiting to be seen. The waiting time for patients observed ranged from 1 to 4 hr, after arriving at the gynecology-obstetrics waiting area, which did not include the early-morning wait for a number. The average length of time spent with the provider among those we observed was 11 min (median: 9 min; range: 2–61 min). More than half of the clinic visits (54.1%) lasted less than 10 min. About one fourth (26.4%) lasted 10 to 14 min, and one fifth (19.5%) lasted 15 min or more.

The time spent with provider differed by type of consult, with the longest average visits in obstetrics, followed by family planning, and gynecology (see Table 2). The amount of time the patient spent with the provider also varied by type of provider: on average, nurses and midwives spent significantly more time with patients than gynecologists, and female providers spent significantly more time with their patients than their male counterparts. For all of these analyses, the total time of interruptions, if any, was subtracted from the total time spent with the provider.

It is important to note that one quarter of providers (26.5%) interrupted their clinic visits, for as short as 1 min and as long as 13 min. Hospital-based providers were nearly 4 times as likely as providers in health centers or health posts to interrupt their patients' clinic visits (see Table 2). Providers in gynecology services were most likely to interrupt clinic visits, followed by providers in family planning, and many fewer providers in obstetrics. Gynecologists were more than twice as likely as obstetricians to interrupt clinic visits.

A description of the nature of some of the interruptions is also instructive because it may explain why interruptions were much more common among hospital-based providers. Two hospital-based providers attended multiple patients simultaneously. They would obtain basic demographic and medical information from a client, and while that client prepared to be

examined in the physical exam area, the provider would obtain the introductory information from a second client. While the second client was getting ready for the exam, the provider would examine the first client and then start asking a third client for her demographic and medical information. All of this occurred in the same exam room. It is important to note, however, that in the public setting, the physical exam area was separated from the rest of the exam room by a small portable curtain, providing some visible privacy and no audible privacy. In the semipublic setting, on the other hand, the physical exam area was in a separate room, providing both visible and audible privacy. This pattern of interruptions, attending patients simultaneously, continued throughout the providers' shifts and accounts for approximately half of the interruptions observed during the study. Additional interruptions ranged from the provider taking time to respond to a personal cell phone call (twice for the same provider), to consult with another doctor or write a prescription for another patient, or to leave and get an item (a shot or information) that was not stocked in the exam room. About one third of the interruptions involved the provider leaving for 1 min or more and providing no explanation to the patient. Because we did not want to interrupt or interfere with the clinic visit, we do not know the cause of these interruptions.

Missed Opportunities for Health Education in the Clinic Visit

The focus of the clinic observations was to explore the type of health education provided on cervical cancer and Pap smears, or the missed opportunities for this within the provider–patient interactions. Given the notable absence of health education from most interactions, any type of health education message, regardless of length, quantity or quality of information, provider communication style, or possible affective response in patients, was categorized as health education. Even given this generous categorization, only one third of interactions (36.8%) included any type of health education related to cervical cancer, breast cancer, or pregnancy prevention or prevention of STI and HIV. It is important to note, however, that although health education was often absent, providers performed uniformly high on different quality of care measures, including asking clients if they had questions, making eye contact with clients, using simple language, and explaining details. It is unclear to us if this may be associated to the fact that they were being observed and they might have thought this was what was being observed, or if indeed, their interactions with patients were of good quality. Because we observed the same provider with several different patients, and this quality of care measure remained constant for the provider, we tend to believe that the nature of interactions may generally be of good quality.

In terms of health education related to cervical cancer, only one in five visits observed included some type of health education on the disease and its prevention (see Table 3). Most of the limited health education on this topic included only general mentions of the disease itself (17.8%, data not shown in table). Many fewer providers gave information about the seriousness of cervical cancer (3.8%), the treatability of the disease (3.8%), or information about human papilloma virus (HPV, 2.2%). Similarly, most health education about Pap smears only briefly mentioned the purpose of the exam: detection of cervical cancer (11.9%). A lower percentage of providers talked about how often women should get Pap smears (9.7%), with the great majority (72.2%) of these stating that screening should take place once a year, though Peruvian guidelines state it should be done every 3 years. Fewer than 1 in 10 providers (7.0%) gave general guidelines for what the patient should and should not do prior to the Pap smear and very few providers (7.0%) discussed who should be screened for Pap smears with their patients. Of the few providers who gave this information, most (69.2%) recommended screening for all women who have had sexual intercourse.

Overall, health education messages about cervical cancer prevention were either nonexistent or quite limited. For example, one gynecologist provided no follow-up when two patients mentioned that they had Pap smears, one in the past few months and one 2 years before, and

never received their results. The provider did not provide information about how to obtain results and, in the case of the woman who had her Pap 2 years earlier, did not encourage her to get a new test. Most providers gave brief information, and when any information was given at all, providers usually addressed only one or two dimensions of how to prevent the disease during each clinic visit. For example, one provider suggested to a patient that she should get a Pap smear in order to detect cervical cancer at an early stage, with no further explanation except that it is important. Another provider encouraged a patient to get her Pap smear saying all women who have had sex should do so. A third provider listed the guidelines for getting a Pap smear for the patient, without any accompanying encouragement: She should conduct her routine hygienic practices, not have her period, and not have sexual intercourse or use suppositories or creams internally in the 24 to 48 hr before the exam.

A minority of providers presented more detailed prevention information. For example, one nurse-midwife recommended getting a Pap smear to a patient and then explained how the speculum works and that there is no cutting or pain associated with the exam. She closed by adding that cervical cancer is painful, making explicit the contrast between the lack of pain with the exam and the pain of the disease. One of the male gynecologists used the client's hand to explain how there might be bacteria and viruses present in skin cells that the human eye cannot see and that can only be seen under a microscope. He then described how the cells in the cervix work in a similar way and that viruses and changes there are even harder to see because the cervix is inside the body. These were the closest examples of providers' increasing a woman's perception of risk and addressing one of women's fears or barriers—pain associated to Pap smears—associated with getting an exam. Only two providers, and only with one patient each, described the Pap smear process, including showing the speculum and how it works. Only one nurse-midwife provided and detailed health education about HPV.

We also documented our observations regarding the use of health education materials. During the provider visit, some form of health education material, broadly interpreted as such, was used in only 31 (16.8%) of the visits. The most common material shown to women was a packet of birth control pills or an IUD (4.0%), whereas all the other materials that were used consisted of either a hand-drawn image, an information sheet, or a brochure (each in less than 2% of visits). Although most women spent a few hours in the waiting area, there was no type of preventive information provided, whether in the form of someone from the staff presenting or giving out information or an educational video. The majority of the materials observed in waiting areas were posters about healthy and safe pregnancies, family planning, and HIV prevention. The sole exception was the family planning waiting area in the hospital in Huancayo, where a hand-made poster encouraged women to get their Pap smears soon.

Pap smears were mentioned in only 46.5% of the clinic visits, and in most cases in the limited context of the provider asking for the date of the woman's last Pap smear (38.4%) or the patient bringing up the date of her last Pap (3.8%). In total, 79 women provided information about the date of their last Pap smear. Of these, 30.4% had never had a Pap smear, 11.4% had not had a Pap smear in the past 3 years, and 6.3% were uncertain about the date of their last Pap smear. Only one half of women reported having a Pap smear in the past 2 years: 36.7% in the past year and 15.2% 1 to 2 years before.

In the case of the 38 patients who were clearly overdue for a Pap smear, most received no type of Pap-related recommendation from their provider or were simply told that they should get their Pap smear at some point in the future (see last column of Table 3). Only 29% of these patients ($n = 11$) were asked if they would be willing to do their Pap smear

immediately, as in during that visit. Of these 11 women, most agreed to have their Pap smear that day ($n = 6$), 3 women were unable to do their Pap smear that day because of lack of money or having their period, and in the 2 other cases, there was no further follow-up after the women declined to get a Pap smear at that time. In the case of the 41 clients who were not overdue for a Pap smear and who had their last Pap more than 3 months prior to the clinic visit observed, only 4 were reminded to get another Pap exam within the next year.

Differences were also observed when comparing the semi-public and public health facilities. We would like to note at this point that these differences are based on observations at only one semipublic hospital, versus eight public health facilities, but 26 interactions at this one semipublic hospital were observed. There were no statistically significant differences in visit length across the two sectors (data not shown in tables), but more than two thirds of interactions (69.2%) in the semi-public sector were interrupted, compared to only 19.5% in the public sector ($p < .001$). In the semipublic sector, all of the interruptions were due to one provider seeing multiple patients at the same time, whereas in the public sector, this accounted for only 27.7% of interruptions. Cervical cancer prevention messages were more than 3 times as common in public facilities (24.5%) as in semipublic facilities (7.7%), although this result only approached statistical significance ($p = .058$). No differences emerged across sectors for asking date of last Pap smear or follow-up with Pap-promoting messages.

Factors Influencing Missed Opportunities for Health Education

Missed opportunities for health education were also analyzed by time spent with provider and client age. Clients whose provider visits lasted 14 min or less were less likely to receive health education related to cervical cancer prevention than clients with provider visits of 15 min or more (17.5% vs. 41.7%, respectively; $p = .002$). There was no statistically significant difference in whether providers asked clients about the date of their last Pap smears based on length of the time spent with the provider (less than 15 min: 34.9%; 15 min or more: 55.6%; $p = .076$), but it did affect missed opportunities to mention Pap smears. Providers in clinic visits of 15 min or more were also more likely than providers in clinic visits shorter than 15 min in length to provide some mention of Paps (61.1% vs. 43.0%, respectively; $p = .05$).

Client age did not influence the likelihood of receiving health education related to cervical cancer prevention or of being asked about the date of last Pap smear.

Discussion

Our findings demonstrate that counseling and health education are seriously lacking in the provider settings we studied. In two thirds of the clinic visits observed, health education on prevention of cervical cancer, breast cancer, pregnancy, or STIs was completely absent. Regarding cervical cancer specifically, health education to address any dimension of disease prevention was present in only one in five clinic visits. In the few cases where there was some “health education message” provided—generously designated as such—the message centered on the suggestion that women should get a Pap smear in order to detect cervical cancer at an early stage because disease onset is slow.

Although it is positive that a few providers offered encouragement to get Pap smears, it is clear that women need more comprehensive health education. As in many places where seeking preventive medical care is not the norm, research in Peru reveals that many women only seek reproductive health services with the onset of symptoms (Agurto et al., 2004; Garcia et al., 2004). The concept of prevention is not strong in this population, and yet education alone is often not sufficient: Winkler, Bingham, Coffey, and Handwerker’s (2008) study on Pap smears in north central Peru found that 53.4% of unscreened women in their

study had attended four educational sessions and still did not seek screening. It is critical that providers communicate in a simple, effective manner how noncancerous cells can become cancerous cells without women presenting symptoms, hence encouraging women to seek out preventive visits with a provider. The Health Belief Model provides guidance on what key concepts these health education messages could contain to create behavior change, although it is important to note here that the Health Belief Model is simply being mentioned as a guide at the lack of any other criterion standard interventions for increasing women's Pap smear-seeking behaviors (Forbes et al., 1999). By increasing women's perceived susceptibility to cervical cancer and describing the severity of an untreated cervical cancer, women's motivation for getting screened may increase. However, in this study we did not find any provider who discussed women's susceptibility to the disease and only seven cases in which providers mentioned, in varying degrees, the seriousness of cervical cancer. Moreover, a provider can quickly assess a woman's barriers to screening, and by addressing these barriers and reinforcing the benefits of screening, provide the support that women may need to seek Pap smears. We did not see any provider assess women's perceived barriers to Pap smears, and only seven mentioned that cervical cancer is treatable. This lack of provision of information and appropriate tailoring of this information to the individual serve as an indication that more emphasis could be placed on highlighting the potential benefits of screening. Personalizing the message to the specific needs of each woman should not be time consuming, but may be the additional motivator that some women need to change their behaviors associated with seeking Pap smears. However, further research is needed to develop and pilot an effective health education strategy.

This study also provides insight into the provision of cervical cancer prevention information by different types of providers and in different provider settings, an issue not examined in past research. Findings show that nurses and midwives provide more information about cervical cancer prevention and more recommendations for Pap smears than gynecologists. We also find that nurses and midwives are more likely to give this information in the family planning setting than in the obstetrics setting. It would be important to study the type of training that nurse-midwives and gynecologists obtain, and how much training they receive on providing patient education, to determine whether some of the differences observed can be attributed to a different focus during their professional development. Moreover, it would also be important to determine why general women's preventive care is emphasized in family planning consults but not in other settings such as obstetrics and gynecology. It is possible that family planning consults tend to focus on educating patients and helping them make choices about their reproductive health, whereas obstetrics and gynecology visits may be more focused on pregnancy and the birth process and the diagnosis and treatment of reproductive health problems—a more medical focus. Regardless of the reasons for these observed differences, the result was that a significant number of women observed in this study received no information about cervical cancer screening. Furthermore, it implies that women who access the health care system may not have access to information about screening if they do not see a certain type of provider in a certain type of consult. This scenario is likely given the division of services in Peru, where it is possible that a woman could receive repeated care in the system without ever having a family planning consult or receiving care from a nurse-midwife. Moreover, higher level providers may be assuming that lower level providers (such as nurses and midwives) are providing more of the preventive health education messages, without realizing that it is possible that a patient might never see a nurse-midwife. This confirms the need for comprehensive training of all service providers, particularly hospital-based providers and gynecologists, on quality health education about cervical cancer prevention and screening and the need for all providers to use patient visits to provide important health education messages.

Another important finding in this study is the lack of follow-up by providers for women who were overdue for their Pap smear. Approximately 20% of women received no type of follow-up and 50% of women were only reminded to get the exam at some point in the future. Hospital-based providers were much more likely to provide follow-up than providers in health centers or health posts, providers in gynecology consults were more likely to do so than those in family planning and obstetrics, and male providers were more likely to do so than female providers. These trends are surprising because they are the inverse of those for the provision of cervical cancer prevention information and Pap smear recommendations; this may be related to the type of facilities and providers who can offer this type of procedure (i.e., not all health centers and health posts provide the screening test). However, the other findings regarding type of visit and gender of provider are less easily explained. These findings suggest, therefore, that provider training needs to focus on the entire counseling process, including not only the provision of standard information but also appropriate responses to each individual client's situation. More comprehensive training would provide gynecologists and providers at higher level facilities the skills to educate patients with appropriate, effective introductory information and would instruct nurses and midwives and providers at lower level facilities about providing follow-up for overdue Pap smears.

Final considerations relate to the length of the clinic visit and interruptions to the care provided. One study conducted in Peru used simulated clients to examine the comprehensiveness of contraceptive counseling provided in urban Ministry of Health facilities. The study found that there was a 43% increase in whether relevant information was provided when visits went up from 2–8 min to 9–14 min in length, but that visits longer than 14 min provided no further benefit (León et al., 2001). The current study had different findings: health education related to cervical cancer prevention and Pap-related recommendations for women that were overdue for screening both increased in longer visits (15 min or more) as compared to shorter ones (less than 15 min). It would be important in future research to document the point during the visit at which the relevant information was provided, particularly given the limited amount of health education that took place across all observations. In terms of interruptions to the clinic visit, one quarter of the visits contained disruption to care and, in many of these cases, to patient privacy and confidentiality. A recent review of qualitative studies on cervical cancer screening found lack of privacy and interruptions during pelvic examinations to be a barrier to women seeking prevention services (Agurto et al., 2004). This suggests the importance of addressing and eliminating such interruptions, particularly when they involve talking with and examining clients in the presence of other clients, which was observed in two of the hospitals in our study. Efforts should focus on hospital-based providers and gynecologists, because they were more likely to interrupt patient care. Alternately, the process of examining various patients at once probably developed out of the necessity to see many patients in a limited amount of time. Although it is understandable that providers do this, then the exam room must be equipped for this type of situation by placing physical barriers that provide patients more privacy or ensuring that the initial intake of personal patient information is conducted in a private room where the patient cannot be heard by others.

Before turning to our conclusions, it is important to discuss the limitations of the current study. Because of difficulties with permissions, we were only able to include one semipublic facility in the study. A larger number of semipublic facilities would have allowed us to have a more representative sample of women's and reproductive health care in this sector. Although one could conjecture that the lack of permission given could indicate inadequate care or quality, the reality is that different health facilities have different processes for allowing researchers to conduct research at their facility, and it is probably simply related to this. Another limitation is the variation in the number of clinic visits observed per region.

Although we observed the same number of days in health facilities in the four cities, differences in patient flow produced a range in the number of visits observed. Other limitations relate to the methodology of clinic visit observations. The presence of a member of the research team in the clinic visit may cause providers to be on their “best behavior,” knowing that they are observed. We attempted to minimize this effect by observing the same provider over time, allowing for providers’ “typical behavior” to emerge. The use of two different observers is also a limitation, because their observations may not have been uniform. We worked to standardize observations through extensive training and sharing of results after each round of observations. Finally, we did not document the patient refusals, and thus, the number presented in the study design section is an estimate, as mentioned there.

Conclusions

This study highlights the many missed opportunities for health education on cervical cancer prevention in women’s health services in four cities of Peru and underscores the importance of integrating health education into regular visits. Possible mechanisms to ensure that nurse-midwives and gynecologists throughout Peru provide effective health education are as follows: (a) offer provider refresher workshops, which emphasize the importance of having providers ask women for the date of their last Pap smear, and performing one in the same visit or scheduling one for the near future if it is past due and offered at that facility; (b) train providers on techniques for providing effective health education messages for patients; and (c) develop and pilot different types of health education techniques to select the most effective methods and messages for different populations. Provision of health education in the waiting area, whether in person, print, or through video, may also be another means to improve the amount of cervical cancer prevention information reaching women. This is a realistic alternative considering that provider time is limited and yet women are a captive audience in the waiting rooms, sometimes waiting from 1 to 4 hours to be seen. However, appropriate health education materials would need to be developed and tested for the population. For this, further research is needed to examine women’s knowledge and attitudes related to cervical cancer and its screening, and their barriers to seeking Pap smears, in order to specifically address these knowledge gaps and barriers in health education activities and materials.

Our finding that women are often seen in the same exam room, with a curtain as the only physical barrier between each other, reveals that their desire for privacy is warranted. Health care facilities need to provide greater privacy for their patients, either through separate examination areas or at the very least, efforts to accommodate patient privacy with given resources. We cannot expect that women will feel confident discussing personal issues with their providers if others might be listening, especially in locations where many know one another.

Scaring women about cervical cancer may keep women away. Further research and programmatic efforts are needed to determine what women want and need to hear to adopt behaviors that will prevent cervical cancer—and how the messages should vary by region of the country and woman’s age or background—and to train providers in how to provide effective health education messages in a private, interruption-free setting. Only then will women come confidently and frequently to request their Pap smear.

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Table 1
Number of Observed Provider–Patient Interactions, by Establishment and Provider Characteristics

City and Type of Facility	Sector	Provider Setting	Provider Type	Provider Sex	Number of Interactions
Lima: total	All	All	All	All	67
Health center	Public	Obstetrics	Nurse-midwife	Female	14
Hospital	Public	Gynecology	Gynecologist	Female	8
			Gynecologist	Male	11
		Obstetrics	Nurse-midwife	Female	16
		Family planning	Nurse-midwife	Female	15
			Nurse-midwife	Male	3
Chincha: total	All	All	All	All	59
Health center	Public	Obstetrics	Nurse-midwife	Female	4
Hospital 1	Public	Gynecology	Gynecologist	Male	7
			Gynecologist	Male	9
		Family planning	Nurse-midwife	Female	13
Hospital 2	Semipublic	Gynecology	Gynecologist	Female	15
		Family planning	Nurse-midwife	Female	11
Huancayo: total	All	All	All	All	24
Health center	Public	Obstetrics	Nurse-midwife	Female	4
			Nurse-midwife	Female	2
Hospital	Public	Gynecology	Gynecologist	Male	8
			Gynecologist	Male	6
		Family planning	Nurse-midwife	Female	4
Iquitos: total	All	All	All	All	35
Health post	Public	Obstetrics or Family planning	Nurse-midwife	Female	9
Hospital	Public	Gynecology	Gynecologist	Male	7
			Gynecologist	Male	13
		Family planning	Nurse-midwife	Female	2
			Nurse-midwife	Male	4
Total: all cities					185

Table 2

Mean Time of Clinic Visits and Percentage Interrupted, by Establishment and Provider Characteristics ($n = 185$)

	Percentage of Interactions Observed	Mean Time of Visit (in minutes)	Percentage of Visits Interrupted
All	100	11.0	26.5
Establishment sector			
Ministry of health	86.0	10.9	19.5 ***
Semipublic	14.0	11.5	69.2
Type of establishment			
Hospital	53.5	10.4	39.4 ***
Health center or health post	46.5	11.6	11.6
Provider setting			
Family planning	26.5	11.2 ^a	25.0 ** ^a
Obstetrics	28.1	14.3	10.2
Gynecology	45.4	8.8	36.9
Provider type			
Nurse-midwife	54.6	12.7 ***	17.8 **
Gynecologist	45.4	8.8	36.9
Provider gender			
Female	63.2	12.3 **	28.2
Male	36.8	8.6	23.5

^aPearson's chi square used for this analysis, versus t tests for all others.

**
 $p < .01$.

 $p < .001$.

Table 3

Health Education and Missed Opportunities, by Establishment and Provider Characteristics

	Provided a Cervical Cancer Prevention Message (<i>n</i> = 185)	Asked Date of Last Pap Smear ^a (<i>n</i> = 185)	Missed Opportunity for Follow-Up to Overdue Pap Smear (<i>n</i> = 38)
Total	22.2	43.8	21.1
Type of establishment			
Hospital	24.2	44.8	5.9 [*]
Health center or health post	19.8	40.7	33.3
Provider setting			
Family planning	46.2 ^{***b}	78.4 ^{***b}	15.0
Obstetrics	22.5	40.8	38.5
Gynecology	7.1	22.0	0
Provider type			
Nurse-midwife	34.6 ^{***}	60.0 ^{***}	24.2
Gynecologist	7.1	22.0	0
Provider gender			
Female	23.9	50.0 ^{**}	30.8 [*]
Male	19.1	30.3	0

Note: Values are percentages.

^aThere were three cases of women who were at the health establishment specifically for a Pap smear follow-up, and seven cases in which women brought up the date of their last Pap without being asked by provider. In all these cases, we counted them in the numerator and denominator, giving the benefit of the doubt to the provider.

^bPearson's chi-square used for this analysis, versus *t* tests for all others.

^{*}*p* < .05.

^{**}*p* < .01.

^{***}*p* < .001.