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Original Research

Language-Appropriate Appointment Reminders: Assessing the Communication Preferences of Women With Limited English Proficiency

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Introduction: The purpose of this study was to assess the communication preferences and the telephone, text, and e-mail usage of women with limited English proficiency who attended an outpatient women's health clinic.

Methods: This study surveyed a convenience sample (N = 220) of Spanish- and Arabic-speaking women in an obstetrics and gynecology clinic. The survey instrument was designed to capture the experience of women with limited English proficiency who received automated English-only telephone appointment reminders. We evaluated how these women currently use short message service (SMS) technology and/or access e-mail, the costs they incur for these services, and their preferences for and receptiveness to receiving appointment reminders through a variety of modalities including text, e-mail, phone, or direct mail.

Results: More than half of women surveyed reported either not receiving an appointment reminder or reported difficulty understanding the reminder they did receive. Of all women surveyed, 91% preferred appointment reminders in their primary language regardless of their ability to read, write, speak, or understand English. Significant variation in preferences was found within and between the 2 language groups.

Discussion: The data suggest that the current appointment-reminder system is both inefficient and linguistically inappropriate for female clients with limited English proficiency. This project offers preliminary data on the preferences of Spanish- and Arabic-speaking women. Creating language-appropriate appointment reminders in both phone and text formats reflects an institutional commitment to the language preferences of all women, not just those who speak the dominant language, in accordance with accreditation guidelines defined by the Centers for Medicare and Medicaid Services and The Joint Commission.
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INTRODUCTION

When a patient does not keep a scheduled appointment, there is a break in continuity of care that complicates timely follow-up and quality care.[1] Continuity of care is particularly important in the context of women's health clinics, as they are a primary source of preventive care (eg, prenatal care, routine health screenings).[2] Moreover, for the health care system, a missed appointment represents lost revenue and an increase in the costs of subsequent care.[3] Additionally, providers may develop negative attitudes toward patients who miss appointments, which may erode trust, empathy, and the therapeutic alliance.[4] The implications of appointment nonadherence are particularly problematic among women with limited English proficiency, who are more likely to experience disparities in quality and continuity of health care compared to patients who speak and read English.[5–8]

A 2003 systematic review of the literature found that forgetting an appointment or being confused or mistaken about the time or date of the appointment are the most frequently reported primary reasons why patients miss appointments.[9] A 2014 systematic review of the effectiveness of different appointment reminder systems reported that appointment reminder systems were consistently effective at reducing nonattendance independent of health care setting or patient subgroups.[10] However, the review's authors noted that there are no studies investigating whether reminder factors (eg, language, content) influence the accessibility or comprehensibility of the reminder message for particular patient groups.

Another meta-analysis indicates that text reminders increase appointment adherence by up to 50%, are effective in both pediatric and older populations, and are more cost-effective than personal or automated telephone calls.[11] However, there was significant variation in the relative effectiveness of different appointment reminder systems across a variety of patient populations, suggesting that the most effective reminders reflect patients' preferences (ie, communication mode, language). Only one study included in this review indicated that telephone reminders were more effective than text messages, possibly because the text reminder was sent only in the population's primary language, while the phone reminders were sent in 4 different languages adapted to individual patients' known language preference.[12] A 2013 study reported greater reduction in patient nonadherence when patients were contacted according to their preferred mode (eg, telephone, text, e-mail), suggesting that no single modality will be a panacea to the problem of appointment nonadherence.[13]

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Quick Points

- English-only appointment reminder systems are not understood by many patients with limited English proficiency and may be contributing to appointment nonadherence.
- The vast majority of women with limited English proficiency attending a women's health clinic preferred to be contacted in their primary language, regardless of their ability to read, write, or speak English.
- Communication mode preferences (eg, voice, text, e-mail) varied across and within primary language groups, suggesting that appointment reminders may be more effective if individually tailored.

Though the advent of new technology offers potential solutions to appointment nonadherence, there is a gap in the literature on appointment reminders for patients with limited English proficiency. Responding to the call to improve appointment adherence and follow-up care among women from disadvantaged minorities,[7,8] the current study aimed to better understand the communication preferences and capabilities of women with limited English proficiency seeking care from an outpatient women's health clinic.

METHODS

A cross-sectional survey design was used to capture the current usage of mobile technology and communication preferences of a metropolitan hospital system's 2 largest groups with limited English proficiency, Spanish- and Arabic-speaking patients (B. Wood, MBA, Operations Engineer at Vanderbilt University Medical Group Performance Improvement Office, written communication, October 2013). The study was approved by the Vanderbilt University institutional review board.

Setting

In 2012, the system-wide missed appointment rate was estimated to be between 8% and 10%, with a documented disparity between patients who speak English (9%) and those who do not (14.6%) (P. Schmitz, MA, Director of Capacity Planning Vanderbilt University Medical Center, written communication, July 2013). At the time of this study, an English-only automated voice messaging system was the standard appointment reminder for all patients. The surveyed sample was drawn from the Center for Women's Health, the outpatient clinic within the hospital system identified as having the highest missed appointment rate (14.8%) among Spanish- and Arabic-speaking patients in 2012. The Center for Women's Health has 36 providers who complete about 60,000 client contacts per year, 16% of which represent contacts made with women who require the support of interpreter services.

Patient Population

The first author approached clients attending the clinic for regularly scheduled appointments (eg, prenatal, postpartum, and well-woman care) or those enrolled in group prenatal care, to determine interest and eligibility. Women were eligible to complete the survey if they were aged 18 years or older; self-reported their primary language as Spanish or Arabic; and requested, based on language preference at intake, to be accompanied by a staff interpreter. Data were collected on 220 women between December 2013 and April 2014. An a priori determined cluster quota sample of 100 Arabic-speaking participants and 120 Spanish-speaking participants was achieved, representing 10% of each population served by the Center in 2012 (B. Wood, MBA, Operations Engineer at Vanderbilt University Medical Group Performance Improvement Office, written communication, July 2013).

Measures

A 23-item survey instrument (see Supporting Information: Appendix S1) was created for use in this study, including both original questions and questions adapted from an existing tool.[14] Finkelstein and Liu granted permission for the adaptation and use of their survey in this study. The adapted survey was designed to capture the experience of receiving automated appointment reminder calls in English (3 items), use of short message service (SMS) technology and/or e-mail (8 items), costs incurred for these services (2 items), reasons for missing scheduled appointments (one item), and preferences for and receptiveness to receiving appointment reminders through a variety of modalities including text, e-mail, phone, or direct mail (6 items). Questions about clients' demographic characteristics (eg, age, preferred language, self-reported English proficiency) were also included. The self-reported English proficiency items assessed aptitude and comprehension for both spoken and written English on a 4-point scale, with "not very well" representing less than 25% comprehension, "so-so" representing 25% to 50%, "well" representing 50% to 75%, and "very well" representing greater than 75% comprehension.

The content and face validity of survey items were established in a meeting of key stakeholders. The survey instrument was evaluated for item accuracy and interpretability as well as survey formatting, and pretested in a focus group of 10 English-speaking clients in group prenatal care. Certified medical interpreters from the medical center's Office of Interpreter Services translated the survey into both Spanish and Arabic. A second certified medical interpreter of each language verified the translations.

Procedures

Eligible women were invited to complete the Web-based[15] survey using a mobile tablet in a private room to ensure confidentiality. Informed consent was conducted in the client's

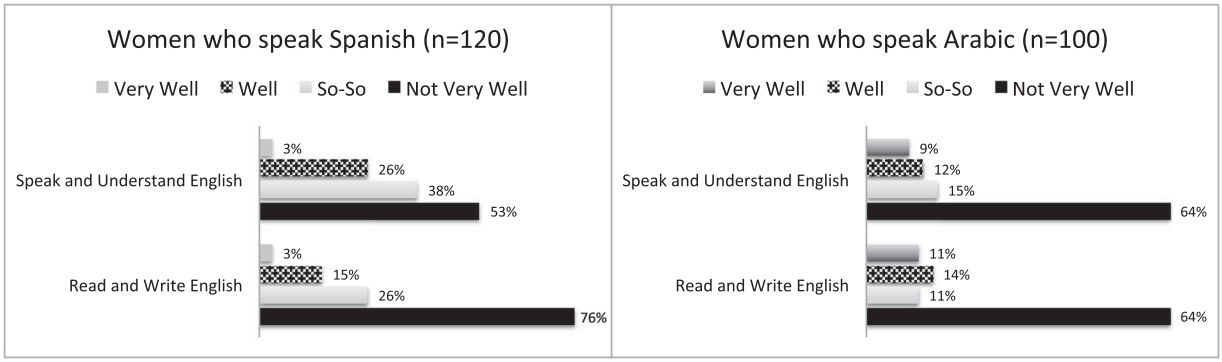

Figure 1. Self-reported English Proficiency of 220 Women in an Outpatient Women's Health Clinic who Report Spanish or Arabic as their Primary Language.
The majority of Spanish-speaking participants reported reading or writing in English "not very well," with slightly fewer having such difficulty speaking and understanding English. The vast majority of Arabic-speaking participants reported speaking or understanding and reading or writing in English "not very well."

primary language. All questions were read aloud to the participant by bilingual research staff to account for any literacy limitations. The survey generally lasted about 10 minutes, and participants were not compensated for their participation.

Data Analysis

Descriptive statistics (ie, means, frequency counts, percentages) were computed separately for Spanish- and Arabic-speaking women, with frequencies reported for client demographics, self-reported language proficiency, use of technology modalities, and appointment reminder preferences.

RESULTS

Demographics and English Proficiency

Spanish

The average age of Spanish-speaking women was 26 years (range 18-48). Eighty-five percent reported speaking English "so-so" or "not very well" (Figure 1), and 40% reported speaking "Spanish only" at home. Spanish-speaking women consistently rated their spoken English as more proficient than their English literacy.

Arabic

The average age of Arabic-speaking women was 30 years (range 19-51). Seventy-nine percent of Arabic-speaking women reported speaking English "so-so" or "not very well" (Figure 1), and 74% reported speaking "Arabic only" at home. The majority of Arabic-speaking participants reported speaking or understanding and reading or writing in English "not very well" (64%).

Access to and Use of Technology

Spanish

Very few Spanish speakers reported having a telephone landline, while the vast majority had active cell phone service (Table 1). Of those with a cell phone (n = 118), 20% shared it with other family or household members, 73% had plans with unlimited minutes, and almost all had text messaging service (only one of whom incurred extra charges for texting). About half of those with texting capabilities (n = 115) reported texting in Spanish alone. Fifty-eight percent reported regular access to e-mail, with two-thirds of those accessing e-mail most frequently on a smartphone or other handheld mobile device.

Table 1. Access to and Use of Communication Technology Among Women With Limited English Proficiency Attending a Women's Health Clinic

	Spanish-Speaking Women (n = 120)	Arabic-Speaking Women (n = 100)
Active landline, n (%)	2 (1.6)	13 (13)
Active cell phone, n (%)	118 (98)	98 (98)
Active e-mail account, n (%)	70 (58)	53 (53)
Shared cell phone, n (%)	25 (21)[a]	38 (39)[b]
Unlimited minutes, n (%)	86 (73)	64 (65)
Texting capability, n (%)	115 (97)	63 (64)
Charge for texting, n (%)	1 (<1)[c]	4 (6)[d]
Text in [primary language] only, n (%)	56 (49)	19 (30)
Text in [primary language] and English, n (%)	58 (50)	5 (8)
Text in English only, n (%)	1 (<1)	39 (62)

[a]n = 118 due to missing data.
[b]n = 98 due to missing data.
[c]n = 115 due to missing data.
[d]n = 63 due to missing data.

Arabic

Thirteen percent of Arabic speakers reported having a landline, and almost all had active cell phone lines (Table 1). Of those with a cell phone, 39% reported sharing it with

Table 2. Experience With Appointment Reminder System Among Women With Limited English Proficiency

	Spanish-Speaking Women (n = 120)	Arabic-Speaking Women (n = 100)
Missed appointments in 6 months, n (%)	34 (28)	33/100 (33)
Received reminder for today's appointment, n (%)	102 (85)	71/100 (71)
Difficulty understanding appointment reminder, n (%)	48 (47)[a]	38 (54)[b]
Confused about how to cancel or reschedule	19/120 (16)	24/100 (24)

[a]Denominator = 102 due to missing data.
[b]Denominator = 71 due to missing data.

other family or household members, two-thirds had plans that include unlimited minutes, and two-thirds reported the ability to send and receive text messages. Of those able to text (n = 63), most had plans that included unlimited texting; 62% texted in English only, and 30% texted in Arabic only. Half reported regular access to e-mail, three-quarters of whom primarily accessed their e-mail on a home computer, and only 10% on a smartphone or other handheld mobile device.

Missed Appointments and Appointment Reminders

Spanish

Nearly one-third of Spanish speakers reported having missed an appointment in the past 6 months, with more than half reporting that they were confused about the date and time of the appointment or that they forgot about the appointment (Table 2). Eighty-five percent of the total sample confirmed that they had received an appointment reminder for their current visit. However, one-half reported trouble understanding the message: 69% because the message was in English, 24% because the woman speaking spoke too quickly, and 7% because there was too much information in the message. Ninety-three percent reported that they would prefer to receive their reminder in Spanish. Half preferred a text reminder, 28% preferred a telephone reminder, and 19% preferred to be e-mailed (Figure 2).

Arabic

One-third of Arabic speakers reported having missed an appointment in the past 6 months, with more than half reporting that they were confused about the date and time of the appointment or that they forgot about the appointment (Table 2). Seventy-one percent confirmed having received a reminder for the current appointment, with more than half of these reporting difficulty understanding the reminder (97% of these reported difficulty understanding because the message was in English). Eighty-four percent preferred to receive their appointment reminder in Arabic. Seventy-four percent preferred a reminder call to their cell phone, 16% preferred a text message, and 9% requested an e-mail reminder (Figure 2).

DISCUSSION

This study highlights that appointment nonadherence is common among minority women with limited English proficiency, as approximately one-third of both Spanish- and Arabic-speaking groups self-reported having missed an appointment in the past 6 months. While appointment reminders can help reduce no-show rates,[10] 60% of women with limited English proficiency in this study reported that they did not receive or could not understand the current system's automated English telephone reminder. The vast majority of women requested reminders in their primary language (93% of Spanish and 84% of Arabic), and more Spanish speakers (51%) wanted text reminders than did Arabic speakers (16%).

A potential means of enhancing the efficacy of appointment reminders would be to personalize them based on patient language and modality preferences.[11,13] Since this study's inception, hospital-system schedulers have begun presenting patients with an option to receive appointment reminders by text message rather than the standard automated call. In the 6 months since this option was made available, about 25% of patients scheduling new appointments opted for the text reminder. Recent statistics reflect a 20% higher response rate—confirming appointment or rescheduling—to the text reminders than to the automated voice message, which translates to approximately 50 fewer no-shows per day for the medical center (P. Schmitz, MA, Director of Capacity Planning VUMC, written communication, March 2014). These preliminary data support the assertion that eliciting patient preferences and then tailoring reminders to those preferences can directly contribute to a decrease in the no-show rate. However, of note is that this SMS technology is currently being offered only in English and is therefore not appropriate for all patients, particularly those with limited English proficiency.

The current appointment reminder system also relies on the assumption that women receive telephone calls directly. However, an unanticipated finding of this survey was that 39% of Arabic-speaking women reported sharing a cell phone with a family member. A common observation made during the conduct of the survey was that Arabic women frequently attended appointments with their husbands, who in many cases dominated communication during the interview. In the Arabic-speaking subgroup, the number listed on the client's account was typically the husband's cell phone, and communication regarding the patient's visit, including appointment reminders, lab results, and follow-up, were channeled to the patient through her husband. The Arabic-speaking women may have been less likely to prefer text reminders, relative to Spanish-speaking women, in part because these messages would be less often passed on to them than a voice reminder. This indirect communication pattern, while not representative of all Arabic-speaking women, may inform the ways in which Arabic women are able to participate in their own health care and could guide future research seeking to optimize their engagement.

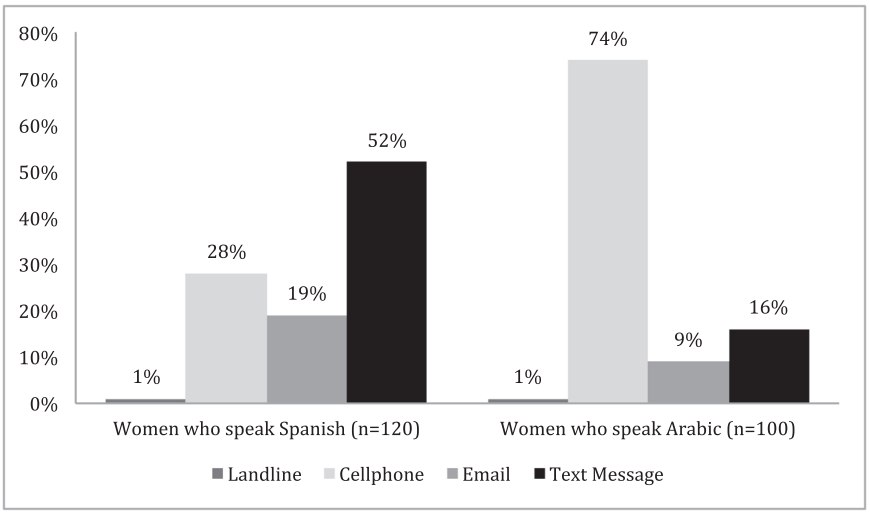

Figure 2. Preferences for Appointment Reminder Modality Among Spanish- and Arabic-speaking Women Attending a Women's Health Clinic. Half of Spanish-speaking women with limited English proficiency preferred to receive appointment reminders via text message. Most Arabic-speaking women preferred receiving appointment reminders via cell phone calls.

Also of note, the Arabic-speaking women who reported texting in English only also self-reported their English literacy as "so-so" or "not very good." An explanation for this finding is the observation that texting in Arabic requires a phone with greater sophistication. Therefore, women with texting capability who have less sophisticated devices may not have the option to text in Arabic even though they may not be fluent enough to text in English.

Another noteworthy finding is that the 42% of Spanish-speaking women and 47% of Arabic-speaking women who reported not having access to e-mail were also those with the most limited English proficiency. This group is arguably the most linguistically isolated group of women surveyed, for whom access to and use of Web-based patient portals will be most limited. Creative ideas about how to engage these women will protect them from suffering the disadvantages of unequal access to health information technology.

LIMITATIONS

Generalizability of these findings is limited due to the sample's restriction to women of childbearing age recruited from a single clinical site. Findings are also only representative of the hospital system's 2 largest language groups, Arabic- and Spanish-speaking. The sample was also probably biased toward a lower no-show rate because recruiting occurred in the clinic; thus, the sample represents women who attended at least one of their appointments. It may not reflect the preferences of those women who repeatedly miss their appointments and for whom linguistically appropriate personalized reminders may have an even greater potential benefit. The variation in preferences between and within language groups in this sample suggests that preferences may also vary by other demographic characteristics. However, understanding subpopulation differences in preferences is of less import than individually tailoring reminder message modality and language.

CONCLUSION

If appointment adherence is the gateway to improved patient care, sending appointment reminders to women in their own languages in response to their expressed preference is a way of demonstrating inclusiveness and an intention to serve. This study's findings on the reminder experiences and preferences of Spanish- and Arabic-speaking women suggests that creating and using language-appropriate appointment reminders in both phone and text formats could improve the no-show rate among minority women with limited English proficiency. Additionally, creating and offering these options reflects an institutional commitment to honoring the preferences of all women and not just those who speak the dominant language. Such mindfulness is in accordance with accreditation guidelines defined by the Centers for Medicare and Medicaid Services and The Joint Commission and decreases the risk of widening existing disparities by insisting that technological innovations are designed to respond to the unique preferences of all patients.[16,17]

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CONFLICT OF INTEREST

The authors have no conflicts of interest to disclose.

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SUPPORTING INFORMATION

Additional Supporting Information may be found in the online version of this article at the publisher's Web site:

Appendix S1: Survey Instrument

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