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Pregnancy Risk Screening and Counseling for Women Veterans: Piloting the One Key Question® in the Veterans Healthcare Administration

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Abstract

Objectives: Women Veterans have a high prevalence of comorbidities that increase risk of adverse pregnancy outcomes. Screening for pregnancy desires in primary care provider (PCP) visits offers an opportunity to optimize preconception health. This pilot quality improvement initiative sought to assess Veterans Healthcare Administration (VHA) provider preferences on One Key Question® (OKQ®) implementation, identification of Veteran reproductive needs, and the effect of training on documentation in a women's primary care clinic in Salt Lake City, UT.

Methods: We hosted OKQ® training sessions for providers and staff, audio-recorded group discussions on implementation barriers and explored themes. Women Veterans presenting for a PCP visit in July 2018 self-completed a paper OKQ® screening tool. We calculated summary statistics on responses. We conducted a pre-post analysis, with respect to training sessions, to measure for changes in family planning documentation during PCP visits.

Results: Nineteen providers and staff completed training. They acknowledged the importance, but felt the screening tool should be completed by Veterans and not provider-prompted. Forty-two women Veterans completed the screening tool: 21% desired pregnancy in the next year and 26% desired contraceptive information. Chart reviews found a non-significant increase in current contraceptive method documentation between periods (20% vs. 37%; p= 0.08), a decline in documentation of reproductive goals (22% vs. 3%; p=0.02), and no significant change in counseling.

Conclusions: Veterans identify reproductive needs via the OKQ® screening tool, but provider documentation did not reflect changes in care following training. Further study is necessary to develop an optimal, patient-centered tool and implementation plan to support women Veterans in their reproductive goals.

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Introduction

Family planning is important for all women to achieve the families they desire and to mitigate risks of adverse maternal and child outcomes, such as preterm birth.[1–6] Nearly half of all pregnancies in the U.S. are unintended, defined as unwanted or mistimed, and women with chronic health conditions are more likely to experience an unplanned pregnancy than healthy women.[7,8] The most effective way to prevent unintended pregnancy and allow for time to optimize preconception health is through consistent and correct contraceptive use.[7,9] A lack of access to family planning services and incorrect or inconsistent use of contraceptive methods all contribute to unintended pregnancy.[10] The Centers for Disease Control (CDC) and the Office of Population Affairs of the U.S. Department of Health and Human Services published Quality Family Planning (QFP) recommendations to highlight opportunities to address these issues.[11] These recommendations stress the inclusion of family planning with other preventive services.[11] Encouraging primary care providers (PCPs) to discuss pregnancy intentions and support access to effective contraceptive methods is one opportunity to improve QFP in the U.S.

Women Veterans are the fastest growing Veterans Healthcare Administration (VHA)-eligible population and meeting their healthcare needs is a top VHA priority.[12,13] Women Veterans have a high prevalence of medical, mental health, and substance use disorders that increase risk of adverse pregnancy outcomes.[14] Despite VHA coverage for reproductive care, women Veterans with high-risk health conditions have low rates of contraceptive utilization and infrequently seek preconception counseling to optimize disease control prior to a pregnancy.[15–17] A recent survey of women Veterans found low contraceptive knowledge in those who use the VHA.[18] Additionally, significant racial and ethnic disparities in both contraceptive knowledge and self-efficacy impact method use.[18,19] Many women Veterans only seek specific services at the VHA, such as mental healthcare, resulting in missed opportunities to connect them to preventive reproductive care, if screening does not occur in this setting.[12]

Evaluating women's pregnancy intentions and contraceptive use in the primary care setting is feasible and important to avoid unsafe prescribing practices in women at risk for pregnancy.[20] Contraceptive counseling in primary care is acceptable to women Veterans and increases effective hormonal contraceptive use.[21,22] Despite the topic importance, VHA PCPs may not care for a high volume of women Veterans, lack time when addressing other issues, or may not feel comfortable in family planning discussions.[23,24] The VHA employs several nationwide screening tools embedded into the electronic health record (EHR) aimed at providing timely and concise point-of-care services. This is the case for smoking, homelessness and other scenarios; however, family planning screening is lacking. Consequently, family planning-focused care may be overlooked during a routine primary care visit.

No standardized family planning screening tool exists for women Veterans or other high-risk populations. One approach to address the competing challenges experienced in PCP visits and still prioritize family planning screening is the One Key Question® (OKQ®) Initiative developed by the Oregon Foundation of Reproductive Health.[25,26] The initiative sought

to address diminishing access to contraception in primary care by centering pregnancy intention screening as routine preventive care. The OKQ® screening algorithm starts with "Would you like to become pregnant in the next year?" and prompts counseling based upon responses of "yes", "no", "unsure", or "ok either way." Depending upon response, the provider will review chronic health conditions and medications, prescribe prenatal vitamins, discuss contraceptive use, and offer or refer for counseling on safe, effective contraceptive methods. The screen has different options for administration, such as a written survey that is patient-facing or verbal screening by a healthcare provider. Responses may be documented through an EHR clinical reminder, note template, or free-text.

Reproductive health experts and medical societies, including the American College of Obstetricians and Gynecologists, have recommended integration of pregnancy intention screening tools, such as the OKQ®, into healthcare systems.[10,25,27] While implementation has occurred in certain health systems[28], evaluation of the training process or provider/staff preferences for implementation are lacking. One study in a non-VHA setting evaluated the impact of the screening on clinical documentation and found increased contraceptive counseling, but no change in preconception metrics.[29] Two other studies compared the OKQ® to other screening tools and found the OKQ® effectively improved patient communication about reproductive health with providers[30] and identified women desiring contraceptive counseling for pregnancy avoidance[31]. As pregnancy intention screening is important in high-risk women Veterans and the OKQ® has not been implemented or evaluated in VHA clinical settings, we undertook this pilot initiative to: 1) implement OKQ® training in a VHA Women's Primary Care Clinic based on provider feedback, 2) conduct pilot OKQ® screening among women Veterans to assess reproductive needs, and 3) assess whether the OKQ® training impacts family planning counseling and care based on clinical documentation.

Materials and Methods

We completed this pilot initiative under an umbrella Institutional Review Board exemption for quality improvement (QI) projects within the Salt Lake City VA Specialty Care Center of Innovation (COI). The COI was one of 4 regional Centers funded for five years (2014–19) to support physicians from medical specialties in evaluating and diffusing QI projects. The initiative included three primary components. First, we collaborated with the Health Promotion Coordinator at the Utah Department of Health who had completed the required "train the trainer" curriculum by the Oregon Foundation of Reproductive Health, in order to implement the standardized OKQ® educational program.[26] We hosted OKQ® training sessions during a Salt Lake VHA primary care meeting that included 11 PCPs and in a Women's Clinic staff meeting, which included 3 PCPs, 4 nurses and 1 pharmacist. These trainings reviewed the importance of family planning and preconception care, the OKQ® algorithm, guidance on patient-centered counseling, and options for VHA referrals to a reproductive healthcare provider. We asked providers during training to incorporate this information into their patient care and clinical notes, but documentation practices were not mandated, as we desired to assess general practice changes over time and not individual patient care based on survey responses. As provider and staff perspectives on OKQ® training and implementation preferences have not previously been evaluated, we asked attendees

to complete a survey on current family planning screening and comfort and preferences for OKQ® implementation. We audio recorded the meetings and reviewed the content for dominant discussion themes on screening barriers and implementation preferences.

Provider and staff feedback during training sessions led to the decision to implement the OKQ® as a Veteran-facing, written screening tool for the 2nd component of the pilot. All 18–45 year old women Veterans who presented to the Salt Lake VHA Women's Primary Care Clinic for a primary care visit during July 2018 received the screening tool to self-complete in the waiting room. The providers and staff who participated in the training all have a minimum of a half day of office visits in this clinic per week. Participants were informed that the self-completed survey was part of a QI project, did not have any identifying information, and would not be part of their permanent medical record. The rooming nurse collected the OKQ® paper survey and gave it to the provider for review before the provider entered the exam room. The completed, anonymous surveys were collected for data analysis by project staff and not linked to the medical record. No data were collected from any Veteran who did not submit a survey to the nurse.

Finally, we sought to assess the clinical impact and sustainability of the education through retrospective pre- post- chart reviews. We identified all reproductive age women Veterans with a VHA Women's Primary Care Clinic PCP office visit in a pre-training month (January 2018) and again in the month post OKQ® screening tool administration (August 2018). We excluded those seen for a specialty care visit, such as musculoskeletal or gynecology clinic focused on problem-based care. The lead author conducted an explicit chart review using an abstraction guide aimed at identifying the presence or absence of the following documentation based on the OKQ® training metrics[26]: a) notation of preconception and contraception counseling, b) referrals for relevant preconception and/or contraception needs, c) consideration of medications or treatment plans to optimize health for those desiring pregnancy, d) recommendations for the use of prenatal vitamins/folic acid, and e) initiation of contraception and method type in the primary care encounter. We calculated descriptive statistics (counts and percentages) and compared pre-and post-training proportions using a chi-square test on MedCalc Statistical Software. We considered p-values of less than 0.05 to be statistically significant.

Results

Healthcare Team Training

Eight providers (57%) completed pre-training surveys. Only one provider reported a practice of routine pregnancy intention assessments in all visits prior to the training. While most providers were interested in integrating routine screening for all women into their practice, two felt screening should not occur during urgent care or problem-based visits. All respondents felt reminders in the EHR would be helpful, but varied on preference for screening processes, such as having the nurse screen the patient or having women fill out a paper survey to give to the nurse prior to the visit.

We audio-recorded the training sessions and prompted participants to discuss barriers and facilitators to use of the OKQ® in routine practice. Three main themes emerged in the discussions:

1. All participants felt the knowledge of pregnancy risk and training on OKQ® were important for clinical care: “This information can change what I do for a woman or how I prioritize things.” (PCP)
2. Women’s Clinic staff and providers felt screening needed to occur more in other VHA settings, such as in mental health for women who are not accessing primary care: “We already do this here. When people fall through the cracks it is in other clinics.” (Nurse)
3. Providers felt overwhelmed by clinical reminders already in the electronic health record and desired the screening to be “Veteran-facing”, so women could bring up the issue when they wanted to discuss it with the provider: “Is there a way for women to do this at home, before their appointments? Then we already know if we need to address it.” (PCP)

Veteran OKQ® Screening

A total of 42 women Veterans completed a paper OKQ® screening tool and many reported reproductive counseling or care needs. Nine women (21%) reported a desire for pregnancy within the next year, but only three of these women were taking folic acid. Two women did not desire pregnancy, but were sexually active with a man and not using any form of contraception. Of the 42 women, eleven (26%) had questions or concerns regarding their contraception that they wanted to discuss with a provider or desire for a more effective method. Two women did not have a partner, but used the survey to ask about options for achieving pregnancy. While we did not specifically ask women what they thought of the screening tool, they were receptive to completing it per the receptionist and nurse feedback, and five wrote positive comments, such as “thank you for asking!!” in the margins.

Retrospective Chart Reviews

We included 41 women Veterans (24% of all clinic visits met inclusion criteria) in the pre-training month and 52 women Veterans (31% of visits) in the post-training month. We found no significant differences in Veteran health characteristics by month. While not statistically significant, a greater proportion of women Veterans saw an advanced practice clinician (APC) in the pre-training than in the post-training (54% vs. 37%) due to changes in clinic staffing. The change in provider type (APC to MD) accounted for a decrease in reproductive plan documentation between the pre- and post-training months (22% vs. 6%; p= 0.02). Although not statistically significant, there was an increase in documentation of current contraceptive method type between periods (20% vs. 37%; p= 0.08). (Table 1)

Discussion

This pilot study introduced the OKQ® within a VHA primary care women’s clinic as one option for family planning screening. The healthcare team acknowledged the importance of screening and the potential to integrate it across VHA access points where women

Veterans are not as commonly cared for. Women Veterans presenting to PCP visits reported pregnancy desires and contraceptive needs that are important considerations for comprehensive care. Though our sample was small and not powered to detect clinically meaningful changes in documentation, our findings are similar to a previous civilian study which showed the OKQ® tool may improve contraceptive care more so than preconception counseling.[29] Unfortunately, outcome evaluations to date are difficult to interpret or replicate until the OKQ® training, implementation, and evaluation process is clarified.

The OKQ® is one family planning screening tool available for PCPs to administer in different ways. In this study, based on provider preferences we used a Veteran-facing, paper-based screening tool. Despite using the screening method most acceptable to PCPs, OKQ® training did not significantly change family planning documentation, even though over half of the Veterans had a medical diagnosis that would be high-risk in the setting of unintended pregnancy. A previous study found higher rates of documented contraceptive counseling in Veterans with prescriptions for teratogenic medications.[32] This difference may be a result of pharmacy alerts at the time of teratogen prescription, while medical conditions alone may not prompt providers to counsel on reproductive planning. Additionally, documentation does not consistently capture all components of a clinical visit and family planning discussions could still be occurring in these settings.

Given the importance of this information for clinical decision-making and Veteran desire to discuss family planning, provider prompts need to be further studied. The OKQ® may not be an ideal screening tool for all populations. OKQ® is a feasible screening tool for busy providers to incorporate into practice, and can be patient-centered if used in accordance with the somewhat lengthy training guidelines. However, the question if asked alone is restricted to a narrow timeframe (1 year) and is closed ended. To address these limitations, reproductive health researchers have invested effort into improving options for alternative patient-centered family planning assessments.[33] Other approaches for initiating a patient-centered conversation about reproductive intentions include The PATH questions (Parenthood/pregnancy Attitude, Timing, and How important is pregnancy prevention), which ask about timeframes and intentions in an open ended fashion and also address the strength of women's desire to prevent pregnancy, which can inform patient-centered contraceptive counseling.[34] A randomized controlled trial in a civilian setting compared the OKQ® to the Family Planning Quotient (FPQ) decision aid and found they were similar in facilitating communication, although providers noted the FPQ was less helpful than the OKQ®.[30] In a different study, the authors compared women's responses to the OKQ® and the Desire to Avoid Pregnancy (DAP) screen. They reported both tools identify desire to avoid pregnancy and contraceptive needs, but that the OKQ® tool may need more follow-up questions to understand patients' responses and needs.[31]

Within the VHA, several efforts are currently underway or being tested to increase delivery of family planning screening and counseling. First, the national VA Office of Women's Health is developing a clinical reminder for assessment of women's reproductive intentions and a banner indicating women's pregnancy and lactation status.[35] However, there are several barriers to consistent clinical reminder use in VHA, as described in previous studies.[36–40] Overcoming these barriers requires coordination and concurrence across a

diverse set of stakeholders, as well as evaluation and restructuring of clinical workflow to divvy responsibilities by staff role.[36,39] Given the challenges with changing provider behavior using health record prompts, an alternative strategy for increasing delivery of family planning counseling is to activate and empower patients through patient-facing educational and decision support tools.[41] Callegari, et al. have developed and are testing a patient-facing decision support tool ("MyPath") for use in VA primary care settings to increase delivery of reproductive health counseling and services, improve provider-patient communication, and promote informed, high quality family planning health decisions.[35,42] In addition, incorporating structured note templates as part of a point-of-care visit can improve the quality of clinical examination, thereby supporting shared decision making.[43] Additional research on each tool is important, as there is likely no ideal option for all women in all settings.

This pilot intervention has several limitations, as it was a preliminary introduction to family planning screening to build future quality improvement interventions. The small sample of Veterans and VHA healthcare team members during the pilot lead to limited generalizability. We did not require all attendees at training sessions to complete the surveys and not all participants voiced their preferences in the audio recording. We did not track the number of surveys handed to women Veterans to assess completion rate or follow-up with Veterans after their visits. We assessed implementation of the education of providers through chart reviews before and after training and survey implementation, but did not review charts during the month of the screening tool distribution to Veterans. We used documentation as a proxy for clinical counseling, which may underreport actual discussions in a visit. Finally, the OKQ® initiative and training are now facilitated through "Power to Decide: the campaign to prevent unintended pregnancy"[44] and while the training may by more robust than the materials previously offered through Oregon Foundation for Reproductive Health, they will need evaluation of best practices for implementation.

Conclusion

Integration of family planning screening into routine healthcare visits is important to address the issues of unintended pregnancy and preconception health optimization in high-risk women Veterans, but also help achieve individual reproductive goals. Additional research on best practices and Veteran preferences is essential to develop a standardized screening approach. In the interim, healthcare providers just need to start the conversation and the OKQ® is one option to incorporate family planning discussions into health care goals. Through ongoing Veteran feedback and partnership, the VHA can provide high quality, patient-centered reproductive healthcare.

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Table 1.

Characteristics of women Veterans and frequency of reproductive health documentation in a Veterans Healthcare Administration Women's Clinic primary care provider visit over one month pre- and post- One Key Question® training

	Pre-training (N=41)	Post-training (N=52)	p-value
Median Veteran age (range)	34 (21–44)	34 (22–45)	0.92
Medical diagnosis	24 (59%)	28 (54%)	0.63
Mental health diagnosis	34 (83%)	38 (73%)	0.16
Current tobacco use	12 (29%)	9 (17%)	0.17
Prior hysterectomy or sterilization	5 (12%)	4 (8%)	0.52
Currently pregnant	0 (0%)	3 (6%)	n/a
Provider type			0.19
Attending physician	7 (17%)	16 (31%)	
Advanced Practice Clinician	22 (54%)	19 (37%)	
Resident	12 (29%)	17 (33%)	
Reproductive Documentation			
Reproductive plan	9 (22%)	3 (6%)	0.02
Contraceptive method	8 (20%)	19 (37%)	0.08
Contraceptive counseling	8 (20%)	7 (13%)	0.36
Preconception counseling	3 (7%)	2 (4%)	0.78