

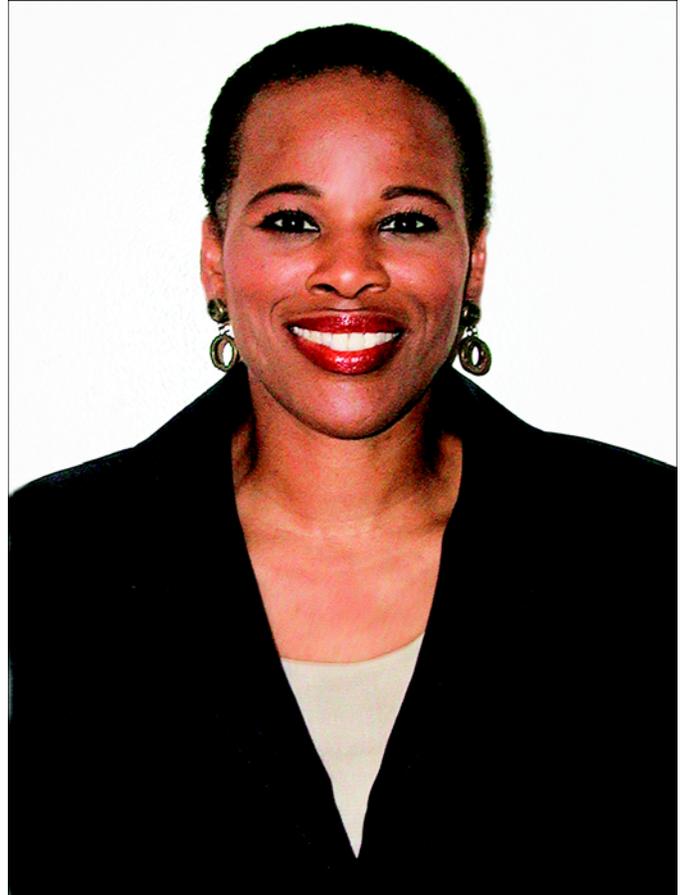
## Guest Editorial

### Challenges to studying and delivering care to special populations—The example of women veterans

Women veterans comprise a small, but rapidly growing, segment of the total veteran population. Because of their relatively low numbers and unique needs, women are designated a special population within the Department of Veterans Affairs (VA). Determining the characteristics of VA and non-VA ambulatory care used by women veterans is crucial for VA women's health program planning. However, researchers and clinicians focused on health and healthcare delivery issues for women veterans, similar to rehabilitation researchers and clinicians, must address the challenges of conducting research in and delivering care to numerically sparse special-needs populations. A number of research sampling strategies and healthcare delivery strategies have evolved in response.

Research on women veterans poses a number of methodological challenges. Cross-sectional studies of veterans generally have small sample sizes of women or often are not designed to include detailed gender-related measures and therefore may lack the statistical power to detect gender differences. This may contribute to an erroneous assessment that access barriers and other factors affecting VA healthcare use for women veterans do not differ significantly from that of male veterans. This concern demonstrates the need for studies that focus solely on the perspectives and experiences of female veterans.

Studies of women veterans often are not designed to examine intragroup variations in the effects of the factors under study. Though women are a minority within the VA, they are a heterogeneous group with respect to factors, such as period of military service, that may influence healthcare use or serve as barriers to VA care [1,2]. The sampling frame used in studies of women veterans must account for this variation to ensure sufficient power to meaningfully compare subgroups. Employing an appropriate sampling frame is particularly important given evidence documenting risk factors and healthcare needs associated with period of military service [3–5]. The diversity among women veterans makes them a complex population to serve; this level of analysis is necessary to assure that



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services and recommendations that arise from research findings match women veterans' healthcare needs.

Recent research on women veterans' health and VA healthcare use, while successfully highlighting challenges faced by users of the VA, raises questions about the influences on and barriers to VA ambulatory care use that women veterans who do not use VA care have experienced [1]. For some, barriers to VA care may be so great that they rely solely on non-VA systems of care. Barriers to VA ambulatory care access, and influences that foster VA use, are demonstrated by contrasting their presence in VA and non-VA ambulatory care users. Sampling frames used in studies of

women veterans' ambulatory care use include VA ambulatory care user samples, other electronic database-derived samples, cross-sectional population-based samples, and combinations of these methods.

VA ambulatory care user samples have been derived from VA clinic-based samples and from Veterans Health Administration (VHA) databases. These databases include local Veterans Health Information Systems and Technology Architecture databases [6], the Outpatient Clinic (OPC) File, and the National Patient Care Database, which consolidates four VHA national patient data systems, including OPC. VA ambulatory care user samples are easily accessible, but findings in these populations are not generalizable to veterans who do not rely on VA healthcare. Administrative database-derived samples omit certain segments of the non-VA healthcare user population. In addition, the accuracy and availability of contact information for people included in these databases are limited.

Several electronic databases include veterans who do not use VA healthcare services. The National Enrollment Database includes applicants for enrollment, regardless of whether the enrollment process was completed or VHA services used. However, it is limited to veterans who were interested enough in VHA benefits to apply for enrollment. The Veterans Benefits Administration (VBA) Compensation and Pension File includes veterans and their families who receive compensation and/or pension. Beneficiary Identification and Records Locator Subsystem (BIRLS) includes veterans who have applied for VA benefits, veterans discharged from military service since March 1973, Medal of Honor recipients, and service members with accounts for VA education benefits. The Defense Manpower Data Center's Defense Enrollment Eligibility Repository System database contains contact information for military personnel who have been discharged; however, this initial contact information is only updated for veterans with a military retirement.

Population-based studies have employed a variety of sampling strategies. Community-based recruitment strategies have been successfully employed to recruit heterogeneous populations of veterans for focus group studies [7]. These recruitment strategies

include contacting veteran service organizations, newspaper and newsletter advertisements in publications geared toward the target research population, and flyers posted in community locations. Though convenience samples are useful in exploratory hypothesis-developing studies, their inherent bias limits the generalizability of findings from these studies. Random digit dialing has been used to locate representative samples. However, random samples for sparse populations have small sampling yields. For example, for the 1985 Survey of Female Veterans, over 880,000 telephone numbers were dialed, using random digit dialing, to reach 3,925 female veterans [8]. Secondary analyses of general population studies that inquire about veteran status are another data source used in studies of women veterans. An example is the National Center for Health Statistics Health Interview Surveys. These large databases include large numbers of veterans who use healthcare services other than VA, and they allow for comparisons between women veterans or other special populations and comparison populations of interest. However, they generally do not include detailed veteran-specific or gender-related measures that may be important influences on VA ambulatory care use.

While providing useful data on VA users, few empirical studies have comprehensive sampling frames, sufficient women veteran-specific focus, or statistical power to draw conclusions about healthcare access and use for all segments of the women veteran population. Cross-sectional studies that addressed these concerns required significant resources to create a sampling frame that included VA nonusers. A reasonable balance between resource constraints and design limitations requires tailoring methods to the specific research question. Applying different sampling frames for VA users and nonusers is one such approach [8]. Current research on special populations such as women veterans can take advantage of the administrative databases that have been developed in recent years. Administrative databases that include both users and nonusers of VA healthcare should be considered.

There is considerable debate within VA about how best to organize the delivery of healthcare services for women veterans. As with healthcare

service delivery to other special populations, this debate often centers on the costs of developing a parallel system of care (such as women's health clinics) within the VA, and the potential cost, quality, and patient satisfaction trade-offs involved with delivering this care within the existing system. Models for healthcare delivery to women veterans, similar to research models for studying women veterans, have evolved along a number of different paths. These include—

1. Separate women's health clinics providing specialty services, such as preventive health screenings or gynecology services.
2. Designated women's healthcare teams within larger general primary care clinics.
3. The full integration of women's health into existing primary care services.
4. The development of comprehensive women's health programs that provide both gender-specific primary care and specialized services for women [10,11].

No one model for healthcare delivery for women dominates in the VA, and no one model necessarily predicts success in delivery of services [12]. Future research should be directed toward measuring the quality and cost impact of these different delivery models.

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