



Prevalence of Intimate Partner Violence among Women Veterans who Utilize Veterans Health Administration Primary Care

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OBJECTIVES: The objectives of this study were to identify the prevalence of past-year intimate partner violence (IPV) among women Veterans utilizing Veterans Health Administration (VHA) primary care, and to document associated demographic, military, and primary care characteristics.

DESIGN: This was a retrospective cohort design, where participants completed a telephone survey in 2012 (84% participation rate); responses were linked to VHA administrative data for utilization in the year prior to the survey.

PARTICIPANTS: A national stratified random sample of 6,287 women Veteran VHA primary care users participated in the study.

MAIN MEASURES: Past-year IPV was assessed using the HARK screening tool. Self-report items and scales assessed demographic and military characteristics. Primary care characteristics were assessed via self-report and VHA administrative data.

KEY RESULTS: The prevalence of past-year IPV among women Veterans was 18.5% (se=0.5%), with higher rates (22.2% - 25.5%) among women up to age 55. Other demographic correlates included indicators of economic hardship, lesbian or bisexual orientation, and being a parent/guardian of a child less than 18 years old. Military correlates included service during Vietnam to post-Vietnam eras, less than 10 years of service, and experiences of Military Sexual Trauma (MST). Most (77.3%, se = 1.2%) women who experienced IPV identified a VHA provider as their usual provider. Compared with women who did not report past-year IPV, women who reported IPV had more primary care visits, yet experienced lower continuity of care across providers.

CONCLUSIONS: The high prevalence of past-year IPV among women beyond childbearing years, the majority of whom primarily rely on VHA as a source of health care, reinforces the importance of screening all women for IPV in VHA primary care settings. Key considerations for service implementation include sensitivity with respect to sexual orientation, race/ethnicity, and other aspects of diversity, as well as care coordination and linkages with social services and MST-related care.

KEY WORDS: domestic violence; women's health; veterans; primary care.

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INTRODUCTION

Intimate partner violence (IPV) is a major public health concern, with a broad range of negative mental, physical, and economic consequences for women.¹⁻⁵ The US Preventive Services Task Force (USPSTF) recommends screening women of childbearing age for current IPV experiences, as early intervention can mitigate the health impact of IPV.⁶ These services are among the essential preventive services for women's health identified by the Institute of Medicine (IOM),⁷ and are covered by health plans without cost-sharing under the Affordable Care Act.^{8,9} Approximately 6.5% (362,014) of all Veteran VHA users today are women, and the size of this population is rapidly increasing with an influx of younger, reproductive-aged women recently returned from conflicts in Iraq and Afghanistan.¹⁰ The Veterans Health Administration (VHA), the nation's largest integrated health care system, is in the early stages of implementing a national IPV screening program, which includes screening, risk evaluation, safety planning, supportive services, and community linkages, integrated with a broad range of health care programs across the system.¹¹

Identifying the prevalence of past-year IPV among this patient population can inform the development and evaluation of screening and intervention programs by helping providers better anticipate the scope of the problem and tailor IPV training programs in this context. Because VHA providers have identified a lack of knowledge regarding IPV prevalence and its correlates in the women Veteran population as barriers to implementation of IPV screening,¹² information that speaks to these issues may encourage the adoption of IPV screening practice.

A recent systematic review estimates the past-year prevalence of IPV among women seeking primary care to be 19.9%;¹³ no studies to date have investigated the national prevalence of recent IPV in VHA primary care settings. National health surveillance data indicate that women Veterans are at increased risk for IPV

over the lifespan as compared to civilian women (33.0% vs. 23.8%).¹⁴ Regional studies examining VHA users found even higher rates of IPV, with up to 28.8% of partnered women reporting past-year IPV in mail survey studies.^{15,16}

Understanding patient-level factors that are associated with past-year IPV may help tailor programs to patients most at risk. The USPTF cites IPV risk factors such as younger age, substance abuse, and economic hardship.⁶ VHA serves as a safety net system to many users, and IPV risk factors such as economic hardship, homelessness or housing instability, or disability are over-represented among women using VHA services.^{17,18} Similarly, lesbian/bisexual women are at elevated risk for IPV,¹⁹ and are over-represented in the military.²⁰ Little data can attest to whether military service confers a generalized risk for IPV exposure, or whether military experiences such as recent deployments, or military sexual trauma (MST)^{21,22} confer specific risk for IPV following military service. In addition, there is little data to inform whether other aspects of military service, such as age at joining the military, branch or unit of service, or length of time served, act as either risk or protective factors with respect to IPV. Furthermore, as women Veteran patients are more likely to disclose IPV to a VHA provider in the context of an ongoing relationship with that provider,²³ understanding variation in VHA primary care service receipt as a function of IPV can further inform screening and response programming. The current study utilizes a large nationally representative sample of women Veteran primary care users to: 1) determine the prevalence of past-year IPV; 2) identify demographic and military risk factors and correlates of IPV; and 3) explore primary care characteristics relevant to implementation of universal screening for IPV.

METHODS

This is a retrospective cohort study utilizing data from the WOMAN (Women's Overall Mental Health Assessment of Needs) survey, a telephone survey conducted with a national population-based, sample of 6287 women Veterans. Sampling was stratified by age and race/ethnicity, with an over-sample of non-white women and women below age 44. The sampling frame was drawn from medical records of women veterans with at least one VHA primary care visit within the 50 United States or the District of Columbia during fiscal year 2011.²⁴ Surveys were conducted by trained interviewers from July through September 2012 and 84% percent of eligible women with verified contact information participated in the study. The survey was linked to past-year VA administrative data sources to characterize health care utilization. This study was approved by the Stanford University Institutional Review Board. Oral consent was obtained prior to telephone interviews, and a waiver of documentation was obtained to protect confidentiality.

Past-year IPV was assessed using the Humiliation, Afraid, Rape, Kick (HARK) screening instrument, which includes four dichotomous (yes/no) items that assess emotional/

psychological violence, fear of partner/ex-partner, sexual violence, and physical violence.²⁵ For telephone administration, behaviorally specific prompts were added (partner or ex-partner: "This includes a date or someone you have dated"; emotional abuse: "By this we mean things like called names, criticized, not allowed to see family or friends, humiliated, or put on an allowance by a partner or ex-partner?"). The item for sexual violence was also modified to include threats of force in addition to forced sex. An affirmative response to any of the four items was scored as positive for past-year IPV. The HARK is recommended by the USPSTF⁶ and IOM²⁶ for screening due to high levels of sensitivity and specificity for identification of IPV. Participants were first asked if they were in a "safe or private place" to respond to questions about "relationships with intimate partners," and for the 3.6% of women who indicated that they were not, the HARK was not administered.

Demographic and military characteristics were obtained from the survey except for rural residence, which was obtained from VA Planning Systems Support Group enrollment files.²⁷ Demographic characteristics included sexual orientation ("Do you think of yourself as straight or heterosexual, as gay, lesbian, or homosexual, or as bisexual?"), housing ("In the past year, have you been without your own housing for any period of time? This can include living on the street, or in a car, or temporary shelter for any period of time, or temporarily staying with friends or family"), and use of public assistance ("Do you currently receive food stamps, Temporary Assistance for Needy Families (TANF), Supplemental Security Income (SSI), general assistance, government rent subsidies, Medicaid, or other public assistance not related to your Veteran status?"). Parent/guardian status was defined as having one or more children younger than 18 years of age in the household, and considering oneself a parent, step-parent, guardian, or primary care-giver for the child(ren). Combat exposure was assessed with four items from the Department of Defense Post-Deployment Health Assessment,²⁸ assessing service in a combat or conflict zone that included any of the following exposures: exposure to dead or wounded; discharging a weapon; or feeling "in great danger of being hurt or killed." MST was assessed using the seven-item sexual harassment subscale of the Deployment Risk and Resilience Inventory,²⁹ and was coded positively if a woman reported any of the following: repeated crude or offensive sexual remarks or rumors; coercive sexual activity as a result of rewards or special treatment, or as a result of threats of harm or retaliation; sexual assault; or rape.

Because 44% of women reported dual use of VA and non-VA health care, we included a variable for the usual source of primary care, coded as a usual provider in VA, non-VA, or no usual source of care,³⁰ in response to the item "Do you have one person who you think of as your regular doctor or primary care doctor?" Past-year primary care visits¹⁰ were obtained from VA Medical SAS Outpatient Event files. Categories of low (≤ 2), moderate (3–5) and high (6+) utilization were

created using a tertile split of the total number of visits. Among women with moderate to high utilization, usual provider continuity,³¹ representing the proportion of primary care visits with same provider, was calculated as an indicator of continuity of care, and categorized as perfect (100%), high (75–99%), moderate (50–74%), or poor (< 50%).

Data Analyses

Data were weighted in analysis to adjust for complex sampling and survey non-response, with post-stratification weighting to reflect the population of women Veteran primary care users. Logistic regressions were used to model age-adjusted odds of past-year IPV as a function of demographic and military characteristics. Multinomial logistic regression was used to model usual source of primary care, level of primary care utilization, and continuity of care as a function of IPV, adjusting for age group, race, and ethnicity, as well as clustering within VHA facilities. IPV non-response (3.6%) was significantly associated with non-white race, low income, lack of housing in the past year, Navy service, and no MST experiences. Sensitivity analyses³² to assess the impact of IPV nonresponse were conducted using 1) assumptions of all missing values as positive, and then 2) all missing values as negative responses. Analyses were conducted in 2014 and 2015 using Stata SE version 12.³³

had an annual income of less than \$25,000 were more likely to have experienced IPV. Women who identified as lesbian or bisexual were also more likely to report IPV than heterosexual women. In addition, women who reported being married or cohabitating and those that were divorced/separated/widowed, were more likely to report IPV than women who had never been married, as were those who reported being a parent or guardian. Table 2 presents the prevalence of IPV according to military characteristics. Women who served during Vietnam to Post-Vietnam era, who had experienced MST, or who had served in the military for less than 10 years were more likely to report past-year IPV. Sensitivity analyses for positive non-response assumptions revealed associations of IPV with “other” race (AOR = 1.3; 95% CI = 1.1–1.6), and significantly lower effect sizes for MST (AOR = 1.9; 95% CI = 1.7–2.2); sensitivity analyses for negative nonresponse assumptions revealed significantly lower effect sizes for past-year lack of housing (AOR = 2.6; 95% CI = 2.1–3.2) and low income (AOR = 1.5; 95% CI = 1.3–1.7).

Table 3 shows primary care characteristics by IPV status. Reliance on a VHA provider as the usual source of care was more common among women who reported past-year IPV. Moderate to high levels of primary care utilization were also more common among women who reported IPV, as was poorer continuity of care.

RESULTS

Overall, 18.5% (se = 0.51%) of women Veteran VHA primary care users reported experiencing IPV in the past year (sensitivity analyses: 21.7% (se = 0.54%) – 17.8% (se = 0.49%). Figure 1 displays the prevalence of IPV, by violence type and age group, with the highest rates among women aged 18–30 (25.5%, se = 1.82%). Table 1 reports the age-adjusted prevalence of past-year IPV according to demographic characteristics. Women who were not employed full-time, received public assistance, had been homeless within the past year, or

DISCUSSION

This is the first study to examine the prevalence of past-year IPV among a nationally representative sample of women Veterans using VHA care. Nearly one in five women in VHA primary care have experienced IPV in the past year. Even higher rates of IPV were identified among younger women, as one in four women under the age of 30 reported IPV and similarly high rates of IPV were reported by women up to age 55. These prevalence rates provide VHA policy makers and providers with much-needed data on the scope

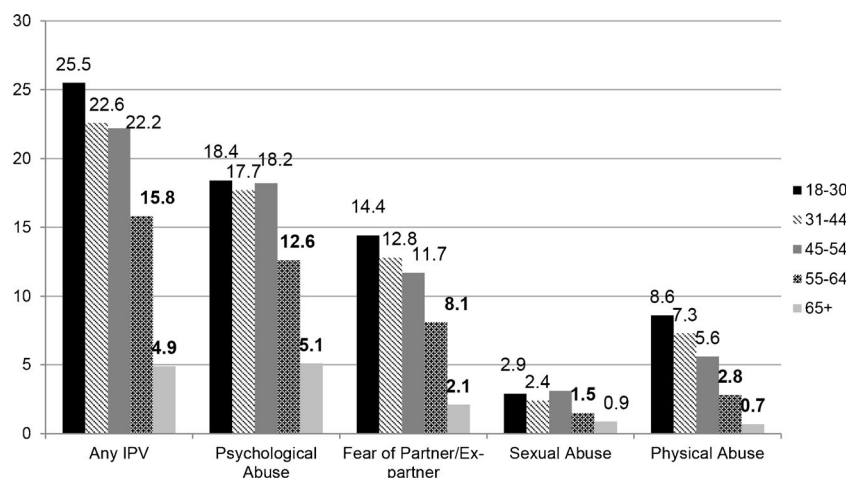


Figure 1. Prevalence of past-year IPV by age group among women VHA primary care users. Numbers in bold significantly differ from the preceding age group at $p < 0.05$.

Table 1. Prevalence of intimate partner violence by demographic characteristics of women veteran primary care users (N=6046)

	Total	IPV		AOR*	95% CI
		n	% (95% CI)		
Race					
White	4032	763	17.7 (16.6–18.9)	1.00	—
Black	1364	240	18.8 (16.7–21.1)	0.89	0.75–1.05
Other	603	138	23.9 (20.4–27.8)	1.24	1.00–1.55
Hispanic Ethnicity					
Hispanic	489	105	21.0 (17.6–24.9)	1.01	0.79–1.27
Non-Hispanic	5533	1039	18.3 (17.3–19.4)	1.00	—
Employment					
Full time	1745	270	15.2 (13.6–17.1)	1.00	—
Part time /self-employed	730	149	20.5 (17.7–23.8)	1.66	1.32–2.10
Out of work	659	163	24.6 (21.3–28.2)	1.94	1.54–2.45
Out of labor force	2893	559	18.5 (17.1–19.9)	1.95	1.64–2.32
Receiving Public Assistance					
Yes	1248	345	26.6 (24.2–29.2)	1.90	1.63–2.21
No	4771	800	16.3 (15.3–17.4)	1.00	—
Geographic Residence					
Rural	2383	471	19.0 (17.5–20.7)	1.13	0.98–1.30
Urban	3657	675	18.1 (16.9–19.5)	1.00	—
Without Housing in Past Year					
Yes	535	205	38.7 (34.4–43.0)	2.75	2.25–3.36
No	5503	942	16.5 (15.6–17.6)	1.00	—
Income					
Less than \$25,000	2490	537	21.0 (19.5–22.7)	1.53	1.33–1.76
More than \$25,000	3212	554	16.8 (15.5–18.2)	1.00	—
Sexual Orientation					
Heterosexual	5477	1021	18.0 (17.0–19.1)	1.00	—
Lesbian/Bisexual	433	103	24.7 (20.7–29.2)	1.37	1.07–1.75
Marital Status					
Married/Cohabiting	2656	480	17.6 (16.1–19.1)	1.28	1.03–1.58
Divorced/Separated/Widowed	2398	522	20.7 (19.1–22.4)	1.89	1.52–2.36
Never married	972	145	15.5 (13.2–18.1)	1.00	—
Parent/Guardian					
Yes	1770	453	25.1 (23.1–27.2)	1.35	1.15–1.57
No	4273	693	15.7 (14.7–16.9)	1.00	—

IPV, Intimate partner violence; AOR, Adjusted odds ratio; CI, Confidence interval

*AOR adjusts for age

Boldface indicates statistical significance ($p < 0.05$)

of IPV exposure that can inform planning and guidelines for a national rollout of IPV screening programs. For example, it is noteworthy that VHA does not currently designate an upper age limit for screening, and the current findings suggest that VHA providers should consider screening all women for IPV, especially women under age 55.

Findings revealed several important demographic and military characteristics that were associated with increased odds of reporting past-year IPV. Consistent with studies among both Veteran and civilian women, younger age was associated with the highest prevalence of IPV,^{17,22} though Vietnam-Era women may merit additional attention in understanding IPV among VHA's older women. Race and ethnicity were not associated with past-year IPV, as other Veteran studies have found.^{22,34} Studies of screening implementation should attend to race, however, as non-white race was associated with non-response to IPV items. Past-year IPV was associated with indicators of economic hardship, including lower levels of employment, receipt of public assistance, low income and past-year homelessness. Although we are not able to discern the temporal nature of these relationships, there is a substantial literature that suggests unemployment,³⁵ reliance on public assistance,³⁶ and homelessness^{37–39} to be consequences of

IPV. This set of findings suggests that policies to promote economic empowerment among women who experience IPV are relevant to meeting the needs of women Veterans.¹ In addition, study findings point to the importance of coordination of a range of health and social services for women who experience IPV. Women Veterans who disclose IPV may benefit from referrals to other relevant VHA programs, such as homelessness and supported employment programs. Such post-disclosure interventions have significantly enhanced social service usage in non-VA settings.⁴⁰

Elevated rates of IPV among women identifying as lesbian or bisexual are consistent with national surveillance data.¹⁹ It is important to note that non-heterosexual sexual orientation does not necessarily indicate perpetration of IPV by a same-sex partner, as bisexual and lesbian women may have experienced IPV from male partners. The important take-away for clinical care is to ensure that providers do not make assumptions about IPV experiences based on a patient's identified sexual orientation, or about heterosexual orientation in responding to IPV experiences. Outreach and response efforts, including materials, programs, and language used in clinical encounters, should be sensitive to diversity in gender identity and sexual orientation, as well as to (dis)ability, race, ethnicity,

Table 2. Prevalence of intimate partner violence by military service characteristics of women veteran primary care users (N=6046)

	Total	IPV		AOR*	95% CI
		n	% (95% CI)		
Branch					
Army	3058	591	18.7 (17.4–20.2)	1.0	—
Navy	1343	259	18.9 (16.8–21.1)	1.07	0.90–1.27
Air Force	1267	224	17.4 (15.4–19.7)	0.96	0.80–1.15
Marines	376	74	18.7 (15.1–23.1)	1.05	0.79–1.39
Unit					
Active Duty	5138	978	18.5 (17.4–19.6)	1.0	—
National Guard/Reserve	880	169	19.2 (16.6–22.1)	0.94	0.78–1.15
Period of Service					
Pre-Vietnam	364	21	4.0 (2.5–6.6)	0.62	0.32–1.19
Vietnam to Post Vietnam	2190	377	17.4 (15.8–19.1)	1.35	1.07–1.71
Persian Gulf before 9/30/01	1590	325	20.2 (18.3–22.4)	1.07	0.88–1.29
Gulf War after 9/30/01	1881	421	22.1 (20.3–24.1)	1.0	—
OEF/OIF Deployment among those serving after 9/30/01					
Yes	1245	277	22.0 (19.7–24.5)	0.96	0.75–1.23
No	630	138	21.6 (18.5–25.1)	1.0	—
Combat Exposure					
Yes	1283	295	22.5 (20.2–24.9)	1.11	0.94–1.31
No	4750	851	17.4 (16.4–18.6)	1.0	—
Military Sexual Trauma					
Yes	3134	742	25.8 (24.1–27.5)	2.27	1.97–2.62
No	2856	396	12.2 (11.1–13.4)	1.0	—
Age Entered Military					
≤18	2204	425	19.3 (17.7–21.1)	1.0	—
19–25	2970	560	17.9 (16.6–19.4)	1.00	0.86–1.16
25+	821	157	18.8 (16.2–21.8)	1.14	0.91–1.42
Years of Military Service					
<2	514	107	18.5 (15.4–22.1)	1.83	1.38–2.42
2–4	2263	443	18.9 (17.3–20.6)	1.58	1.29–1.92
5–10	1815	383	21.2 (19.3–23.2)	1.39	1.14–1.71
10+	1440	213	14.7 (12.9–16.7)	1.0	—

IPV, Intimate partner violence; AOR, Adjusted odds ratio; CI, Confidence interval; OEF/OIF, Operation Enduring Freedom/Operation Iraqi Freedom
*AOR adjusts for age.

Boldface indicates statistical significance ($p < 0.05$)

religion, and other characteristics as IPV affects individuals from all communities.

Elucidations of military risk factors for recent IPV also pose implications for VHA programs. That fewer years of military service was associated with past-year IPV experience is

Table 3. Association of intimate partner violence with primary care characteristics (N=6046)

	IPV	No IPV	AOR*	95% CI
	% (se)	% (se)		
Usual Provider				
VHA	77.3 (1.2)	70.5 (0.6)	Ref	—
Non-VHA	9.4 (0.9)	14.4 (0.5)	0.65	0.53–0.80
None	13.2 (1.0)	15.1 (0.5)	0.70	0.57–0.86
Primary Care Utilization				
Low (≤2)	41.2 (1.5)	51.4 (0.7)	Ref	—
Moderate (3–4)	29.7 (1.4)	26.9 (0.7)	1.46	1.23–1.73
High (5+)	29.1 (1.4)	21.7 (0.6)	1.72	1.50–2.10
Continuity of Care†				
Perfect	10.8 (1.2)	14.1 (0.8)	Ref	—
High	14.5 (1.4)	14.7 (0.8)	1.40	1.01–1.95
Moderate	45.15 (2.0)	45.8 (1.1)	1.27	1.01–1.63
Poor	29.57 (1.9)	25.4 (0.9)	1.45	1.10–1.92

AOR, Adjusted odds ratio; CI, Confidence interval; IPV, Intimate partner violence; se, Standard error; VHA, Veterans Health Administration

*AOR adjusts for age, race, ethnicity, and clustering by VHA facility

†Continuity of Care is calculated for women with moderate and high primary care utilization (N=3021)

Boldface indicates statistical significance ($p < 0.05$)

consistent with research finding that gender-based interpersonal violence leads to premature separation from military service⁴¹ and prior interpersonal violence poses significant risk for revictimization.^{42–45} Thus, women may have prematurely separated from military service due to violence and then also be at risk for future violence. This study replicated findings from smaller samples of women Veteran VHA patients^{22,34} indicating that women who experienced MST were more than twice as likely to report past-year IPV relative to women who did not have a MST history. As such, MST prevention and response programs may be particularly fruitful points of intervention for more generalized violence prevention. In VHA, there may be benefits to cross collaboration between MST coordinators and IPV coordinators, who serve as points of contact for programs with overlapping populations of Veterans.

Analysis of the health care context of women Veterans who experience IPV may be especially helpful in continuing to shape screening and counseling programs across the system. Women who reported past-year IPV were more likely to rely on VHA as their usual source of primary care. These findings emphasize the importance of detecting and responding to IPV within the VHA system. Consistent with non-VA data demonstrating elevated health care utilization and costs associated with recent IPV,^{46,47} past-year IPV was associated with higher

primary care utilization. However, women with past-year IPV were over-represented among women with lower continuity of care. Such fragmented care may limit opportunities to develop a trusting and connected relationship that would facilitate disclosure.^{23,48} Thus, a focus on enhanced continuity of primary care may be a particularly relevant systems-level factor to promote effective screening programs in VHA. In addition, more research regarding VHA specialty care settings where women who have experienced recent IPV are likely to seek care, such as mental health services,⁴⁹ may also yield important insights into opportunities for care coordination as well as opportunities to facilitate disclosure.

These results should be interpreted with several caveats. Data were collected via telephone survey, and IPV non-response associated with privacy or safety concerns resulted in a small degree of uncertainty around prevalence estimates. Additionally, despite the use of a sensitive and specific screen,²⁵ recall bias could have impacted IPV prevalence estimates. Most importantly, screening measures are not a substitute for a comprehensive assessment of violence history and current safety afforded by a clinical encounter. Our study was focused on VHA primary care users in an effort to inform VHA programs. Results may not be generalizable to women Veterans treated in other health care settings, though rates of IPV¹³ and primary care utilization^{50,51} appear commensurate with other health care settings. Demographic correlates, such as sexual orientation and economic hardship, also replicate findings from other health care studies, and several implications of our results may be relevant for implementation of IPV screening outside VHA.

VHA has an opportunity to improve the health of women Veterans by implementing a comprehensive response to IPV. That nearly 20% of women Veteran VHA patients experience IPV within the past year underscores the importance of provider comfort with detection, sensitive response to disclosure, and effective, patient-centered intervention²³ as a fundamental aspect of women Veterans health care. The higher primary care utilization among women who experienced IPV suggests there is ample opportunity. The elucidation of demographic and military characteristics associated with IPV in VHA provides the basis for tailoring detection and intervention efforts for women VHA users. Alongside community partners, VHA is developing training materials and processes of care to guide and support providers in implementing patient-centered IPV screening and response procedures. Although the implementation of these services is in its early stages, ongoing research will continue to inform VHA IPV programs.

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