

# Reproductive Health in Women with Chronic Kidney Disease and Kidney Transplant: A Cross-Sectional Survey Study of US Nephrologists

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**Introduction:** Chronic kidney disease (CKD) presents significant reproductive health challenges for women, with pregnancy requiring specialized management. Despite the prevalence of CKD among women of childbearing age and the potential impact on both maternal and fetal health, nephrologists' perspectives on addressing reproductive health and contraception in this population remain relatively underexplored. This study utilizes survey data to examine nephrologists' beliefs, practices, and perceived barriers related to discussing and managing reproductive health and contraception in women with CKD.

**Methods:** This cross-sectional study utilized a 52-item electronic survey disseminated to adult nephrologists across the United States. Recruitment employed a snowball sampling technique through professional networks, public directories, and private clinics. The survey, designed to maintain respondent anonymity, assessed nephrologists' beliefs, practices, and perceived barriers related to reproductive health and contraception counseling for women with CKD. Descriptive and bivariate analyses were performed to characterize responses and explore associations between provider demographics and survey responses.

**Results:** The initial implementation of the survey garnered responses from 48 nephrologists, 87.5% of which completed the survey in its entirety. Among the respondents, 56.5% were women, 82.6% practice in an academic setting, 50% had encountered over 15 women of childbearing age with kidney disease in their practice within the last year, and the median age was 41-50 years. 40% of participating nephrologists indicated that patients of childbearing age only sometimes bring up contraception, while another 40% stated patients rarely or never initiate these conversations. Nephrologists self-reported as being more proactive, with 57.8% of participants reporting that they often or always initiated discussions about contraception, and only 8.9% indicated that they never initiated the topic. Nephrologists' confidence in managing specific reproductive health concerns varied, with lower confidence reported in areas such as sexual dysfunction (46.7% not at all confident) and menstrual disorders (35.6% not at all confident). Areas such as management of antihypertensive medications during pregnancy (53.3% quite confident, 20% very confident) had higher reported confidence. Finally, 55.6% stated that lack of guidelines either strongly decreased (25.7%) or slightly decreased (28.9%) their likelihood to counsel women on reproductive health.

**Conclusion:** Initial survey results indicate that among U.S. nephrologists, a significant proportion express limited confidence and inconsistent practices in addressing reproductive health issues with their female patients with kidney disease. Identifying perceived barriers to effective reproductive health counseling, such as insufficient guidelines and a lack of

interdisciplinary support, is essential for enhancing the quality of care provided to this specific patient population.

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**Key Words:** Chronic Kidney Disease (CKD), Reproductive Health, Contraception, Nephrology

# Reproductive Health and Contraceptive Use in Women with Chronic Kidney Disease and Kidney Transplant: A Qualitative Study of US Nephrologists



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## Purpose

This study investigates nephrologists' perspectives on reproductive health management in women with CKD and those with kidney transplants, while further examining the barriers they face in providing contraceptive counseling.

## Background

- Women with chronic kidney disease (CKD) are at high risk for adverse pregnancy outcomes, including preeclampsia, premature birth, low birth weight, and progression of CKD.
- Studies show that nephrologists often do not consistently address reproductive health, with only 45% providing prenatal counseling and 35% discussing fertility with their female patients.
- Confidence in managing women's health issues among nephrologists remains low, with over 65% lacking confidence in preconception counseling, pregnancy management, and addressing menstrual disorders.
- Prior studies highlight low nephrologist confidence, but few have explored their perspectives on managing reproductive health and contraception for women with CKD directly.

## Methods and Participants

- Semi-structured interview questions were developed based on a literature review and refined through team discussions and pilot feedback.
- U.S. nephrologists managing women with CKD were recruited through professional networks and snowball sampling.
- Interviews, lasting 20 to 40 minutes, were transcribed verbatim, anonymized, and analyzed using thematic analysis; key concepts were organized into themes and coded.

Participants (N=25)

- Average Age: 41.88 years
- Average Years of Practice: 8.88 years

## Physician Quotes

"Everybody works in their own specialties. Sometimes it's hard to even get the progress note because it's not an interconnected system... Most of the time, if things are stable, you just presume the other providers are taking care of matters themselves."

"I am not doing a great job with collaboration. So either I will say, go talk to your OB about it, or I will send [the patient] to my OB nephrology colleague, who may send [the patient] to another person."

"Unless they [patients] bring up the topic, generally, it's not on the list of things we [nephrologists] would like to discuss..."

"I think it's the lack of knowledge, not just from the patient side, but from the physician side. We are not really equipped to talk about these things."

So when we form that team, you know, it may be an institution or maybe outside the institution, having that to-go person, you know, and that person to collaborate with and know that you can communicate with is so crucial. It makes the work easier. It makes communication better and it definitely amplifies patient care."

"Out of network, it's sometimes hard to get to the provider and you have to jump through a lot of hoops... and it may not happen in a timely fashion...so you may forget and move on."

"If you're all in the same health system, it's easier to just talk to each other and collaborate. But sending the notes, I don't know if they get read or not, but that's what we do. And then through the patient, basically, I think the patient becomes the source of communication."

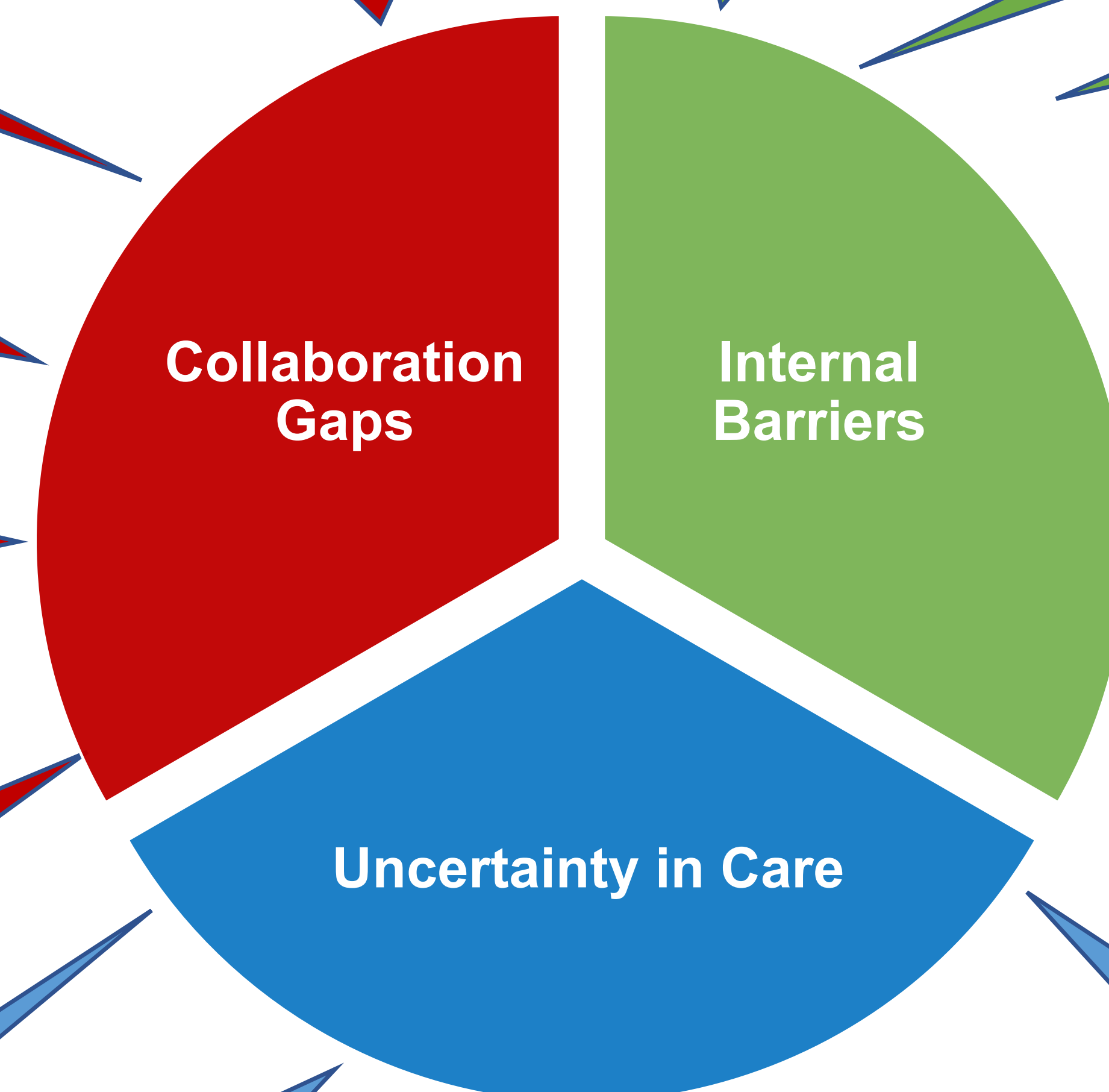
"I feel like a lot of what [physicians] know [about sexual and reproductive health in CKD patients] is probably outdated and probably not as fact-based as I wished it was."

I did not have any specific training. I built my own training and practice...like, I'm going to make sure this is a part of my practice, so when I see women in their childbearing age group, I know what to do."

"[Sexual and reproductive health] have to be incorporated into the curriculum during training. If [nephrologists] are not sensitized during their training, they are not going to get sensitized ever. So, the basics of reproductive health and its impact on kidney disease, what are the dos, what are the don'ts, and what are things [nephrologists] need to talk about should be heavily discussed during the training of a nephrology fellow."

"You can ask other nephrologists, but I doubt if anybody is interested to be involved in contraceptives, or reproductive health – that, we leave to somebody else who has more expertise and is able to handle those matters."

"From a training perspective, I may have had some lectures in residency or even medical school on [reproductive and sexual health among CKD patients]...but it's pretty much all been independent study... to get to the point where I feel semi-comfortable...but definitely not an expert...I think if there were resources...or reference manuals, then [physicians] would be better able and better equipped to [discuss with patients]."



## Thematic Analysis

- **Internal Barriers, Whispers in the Clinic**  
-Under-discussed or sensitive topics that often impede effective counseling.
- **Uncertainty in Care, Quiet Journeys through the Haze**  
-Lack of knowledge, uncertainty, perceived inadequacy, and complexity associated with managing CKD patients.
- **Collaboration Gaps, Echoes in the Silence**  
-Communication and collaboration challenges that arise when managing patient care across multiple specialties.

## Acknowledgments

This research was supported by the UC Department of Internal Medicine's IMSTAR Student Research Experience.

## Conclusion

- The thematic analysis in this study identifies potential underlying factors contributing to the low rates of reproductive health counseling among nephrologists.
- Key barriers include inadequate training, obstacles to collaboration, and ambiguity regarding roles and responsibilities.
- The findings emphasize the necessity for future discussions to define nephrologists' roles in providing reproductive health care to women of childbearing age.
- Implementing strategies to standardize contraceptive counseling may reduce unintended pregnancies and enhance overall reproductive health outcomes.

Figure 1. Gender

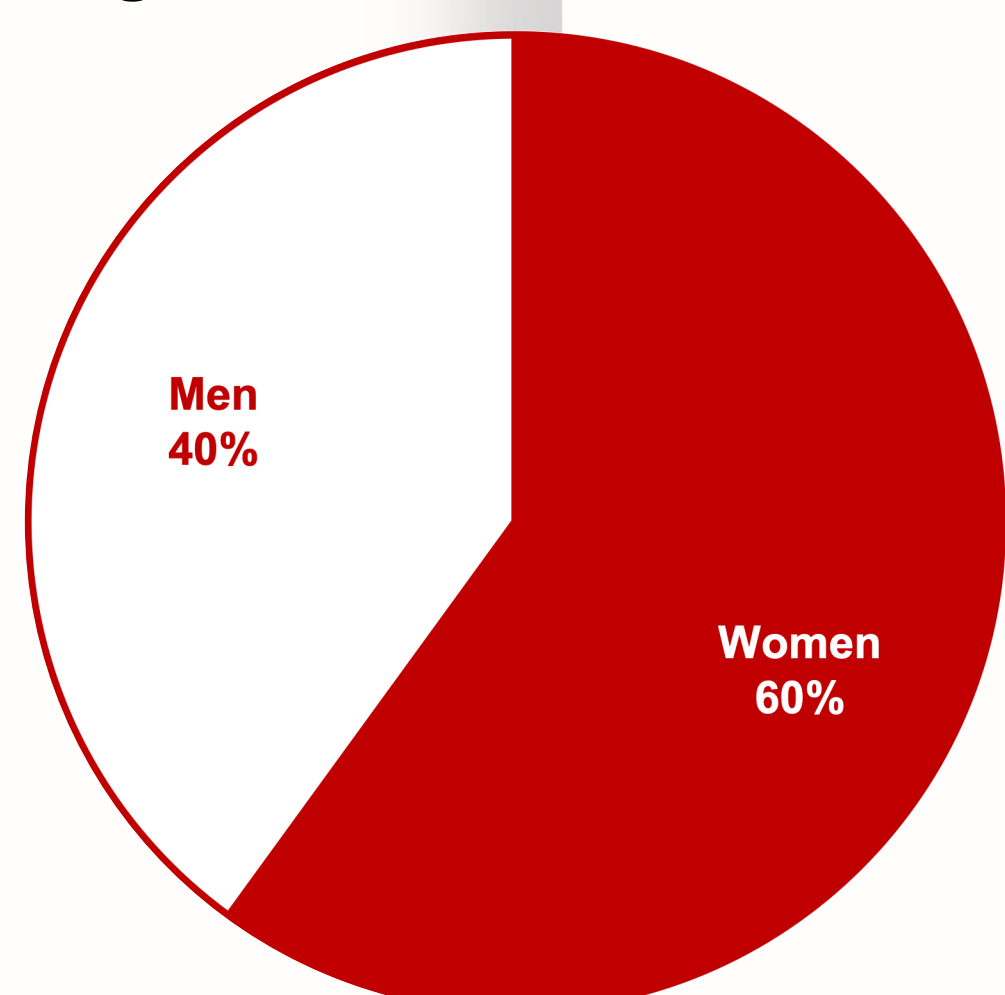


Figure 2. Clinical Scope

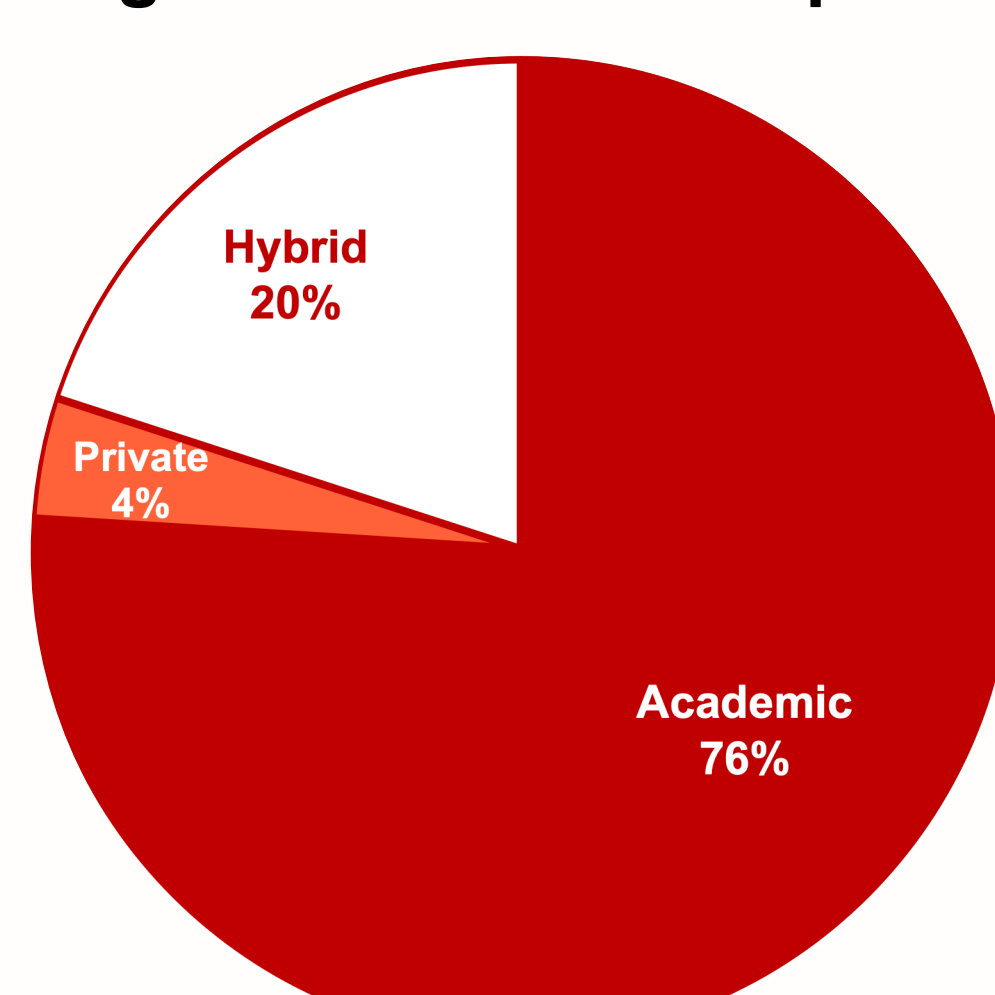


Figure 3. Practice Setting

