

Nephrology referral for chronic kidney disease patients—authors' reply

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Okabayashi and colleagues raise the important point of nephrologist accessibility for CKD patients.¹ They argue that two geographical factors are important when determining the accessibility of nephrologists: i) the distance between nephrologist and patient, and ii) the number of nephrologists per population.

In our study, nephrologist density was calculated as the number of nephrologists per population, but the distance between patient and nephrologist also influenced the results, as the nephrologist density was calculated on the county level in our mixed model.² This means, that in geographical terms, nephrologist density was calculated at a highly granular geographical resolution, as counties in Germany have a mean size of 890 km² (357,022 km²/401 counties). (In contrast, Japanese prefectures have a mean size of 8043 km² [377,975 km²/47 prefectures].) As neither the variable “nephrologist density” (per population) nor the intra-class coefficient of the county-level showed a meaningful association with the endpoint in our study, we conclude that the nephrologist density does not affect the referral rate of CKD patients in Germany.

Importantly, nephrologist density is relatively even across Germany, because the number of nephrologists per population is determined by a capacity planning process based on a guideline issued by the Federal Joint Committee (*Bedarfsplanung des Gemeinsamen Bundesausschusses*)³ and the partners in the federal health insurance contracts. This aims to ensure that the number of office-based nephrologists per population meets local demand as defined by broad criteria within 97 geographical units which usually comprise cities plus surrounding areas,⁴ and contributes to the relative uniformity of nephrologist availability across Germany. In countries without regulated physician supply local

disparities in accessibility could play a more pronounced role in referral rates. This highlights two important issues: i) national healthcare policies are crucial in mitigating accessibility issues and ii) cross-national research must consider individual country-specific factors, which might limit comparability.

Contributors

FAvSH and ES wrote the original draft of the letter. BK, HW, TC, RS, DvS, and KS reviewed and edited the letter.

Declaration of interests

FAvSH reports receiving lecturing fees from AstraZeneca and travel support from AstraZeneca and Chiesi GmbH. BK reports research grants to his institution from Baxter, Fresenius Medical Care, Sanofi, and Astellas. HW reports receiving travel support from Amgen and AstraZeneca, receiving financial compensation for participating in an advisory board for Novartis, and receiving equipment from Fresenius Medical Care and Baxter for educational purposes (to institution). ES, TC, RS, DvS, and KS report no conflict of interest.

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