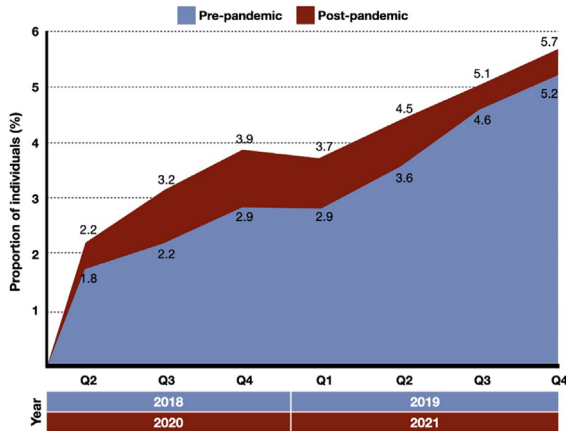
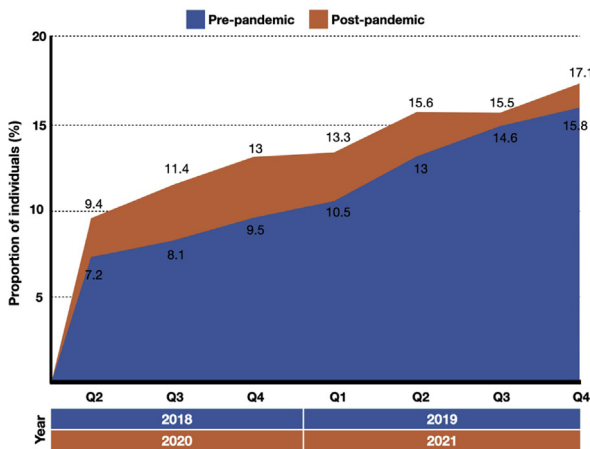


years, and 43% were male. At baseline, 16.5% and 17.3% of individuals had a reduced eGFR of <60 ml/min/m<sup>2</sup> before and during the pandemic. The proportion of individuals with an eGFR decline was higher during the pandemic compared to before the pandemic, particularly in the third and fourth quarters of 2020 (Q3: 3.2% vs 2.2%, Q4 3.9% vs 2.9%) (Figure 1). Of individuals with reduced baseline eGFR, the proportion of individuals who progressed to advanced stages of kidney dysfunction was higher during the pandemic, especially in all quarters of 2020 (Q2: 9.4% vs 7.2%, Q3: 11.4% vs 8.1%, Q4: 13% vs 9.5%) and the first and second quarter of 2021 (Q1: 13.3% vs 10.5%, Q2 15.6% vs 13%) (Figure 2).



**Figure 1** Proportion of individuals with eGFR decline in each quarter of before and during pandemic periods

**Conclusions:** This study revealed a higher proportion of individuals experiencing eGFR declines and progression to advanced stages of kidney dysfunction during the COVID-19 pandemic compared to before the pandemic. These findings highlight the potential impact of the COVID-19 pandemic on kidney function and emphasize the need for ongoing monitoring and management of kidney function in affected populations.



**Figure 2** Proportion of individuals with reduced baseline eGFR who progressed to advanced stages of kidney dysfunction in each quarter of before and during pandemic periods

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KIDNEY HEALTH INEQUALITIES DURING THE COVID-19 PANDEMIC: FINDINGS FROM A SCOPING REVIEW OF EVIDENCE FROM THE UK



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**Introduction:** Evidence from the UK highlights the stark reality that disparity exists in the risk, diagnosis, progression, and outcomes of kidney disease even though healthcare is free at the point of access. The COVID-19 pandemic is widely recognised to have amplified inequalities in society, but less is known about its specific impact on kidney patients in the UK. In this scoping review, we examined what is known about kidney health disadvantages during this period to inform future, equity-oriented priority setting.

**Methods:** Searches were conducted in PubMed, CENTRAL, and the WHO COVID-19 Research Database. Articles were limited to publication in English, between March 2020 and January 2024. Search terms covered the concepts of chronic kidney disease (CKD); COVID-19; and health inequalities. Titles and abstracts were screened for inclusion with full texts of relevant articles retrieved. Data were summarised narratively to help explore the nature of research undertaken on kidney health inequalities during the pandemic and key findings within.

**Results:** A total of 1336 articles were screened, with thirty articles included in the final synthesis. Collectively, the studies reported data from more than a million patients with CKD in the UK. Most evidence was drawn from observational studies and based on research undertaken in the London region (42%).

There was variable reporting on patient level factors that are related to health inequalities. Data were only complete for age and sex of patients across all studies. Just over half of the studies excluded reporting on deprivation (55%), and the majority did not include the ethnicity of patients.

Included studies were themed into 5 types: Those on incidence/risk of COVID infection; understanding vaccination rates amongst kidney patients; impact of vaccination on infection risk; outcomes (hospitalisation, death, long COVID) with and without vaccination; and other.

Significant inequalities were reported primarily by age, with most studies showing that older patients had greater risk of infection and adverse outcomes. There was mixed evidence about risk and outcomes based on ethnicity and deprivation. Vaccine hesitancy was more frequent in younger patients, those identifying as men, minority ethnicity, and higher deprivation. There was evidence from some small scale studies that specific interventions to enhance vaccine uptake in underserved communities was advantageous. Overall, paediatric communities were poorly represented.

**Conclusions:** The scoping review has helped to clarify that age, ethnicity, and deprivation continue to complicate the experience of CKD, including in the pandemic context. However, there are inconsistencies in the extent to which such variables are modifying factors in outcomes, which may be better considered through further techniques such as meta-analysis. Understanding of CKD in the pandemic context is mainly drawn from studies in adult populations, with fewer studies considering how children and their families have been impacted. The review underscores the importance of (1) a shared framework for patient level reporting of attributes that can help better understand the intersectionality of social determinants of health in this population; (2) future-oriented education and health interventions being scalable to avoid specific patient communities continuing to be disadvantaged in health improvement initiatives.

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