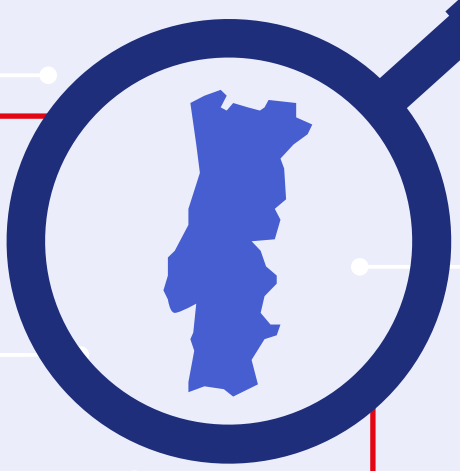
ECONOMIST IMPACT

Country profile: Portugal



Supported by AstraZeneca

Key takeaways

- **Health plans for Portugal should prioritise chronic kidney disease (CKD).** We did not find a national CKD-specific guidance in Portugal that considers the country's unique context and challenges. Adapting the evidence-based recommendations of international guidelines, such as those published by KDIGO (Kidney Disease Improving Global Outcomes), could be used to improve detection and care in the country.[1] We did not find a Portugal Health Plan that includes CKD as a priority. Addressing the needs of communities directly and improving consistency of delivery across specialties could be addressed strategically in an updated Health Plan.[1]
- **Capture more early-stage data in national registries for monitoring.** Portugal has a large number of people diagnosed with late-stage CKD, but few diagnosed with the earlier stage disease.[2] This suggests that people are going undiagnosed or underdiagnosed at the earlier stages of CKD. Improved diagnosis and early detection could improve clinical outcomes, and capturing this data systematically could facilitate monitoring. This suggests inadequate early testing and that renal registries or other routine data collection programmes should be expanded to include the earlier stages of CKD, making prevalence and outcome data more available to evaluate early detection, care and other policies.
- **Consider incentives to encourage CKD testing.** Portugal may wish to join a range of other countries in Europe, including Belgium and France, which provide incentives for family physicians to carry out CKD testing among high-risk patients.
- **Update digital health infrastructure.** During the covid-19 pandemic, an advanced and open electronic health record (EHR) infrastructure was implemented, but it has not yet reached its full potential.[3] This limits innovations in CKD detection and care.
- **Improve awareness and knowledge of CKD among healthcare providers.** Researchers have identified the significant gap in CKD awareness among primary care doctors.[4] Training packages should focus on the knowledge and skills required by a broader workforce outside of nephrology.
- **Consider public health media campaigns.** There is a lack of awareness about the importance of early testing and prevention in communuities.[5] There is an opportunity to implement a range of activities, including spreading awareness via social media and campaigns such as World Kidney Day.

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Guidelines

We could not identify a national set of CKD guidelines for disease management in Portugal. Therefore practitioners may rely on international guidelines that have not been formally adapted for use in Portugal and could lead to variations in practice. As an example, albuminuria and creatinine urine and blood tests collected three months apart are recommended for staging kidney disease, with the results potentially triggering a referral to a nephrologist.[1] In Portugal, these are not always taken into account as a referral indicator by GPs.[6]

Portugal could consider formally adopting KDIGO guidelines as a basis for national guidance on referrals and to ensure consistency of testing for the early detection of CKD across the population.[1]

Policies

Despite having one of the largest populations of people with stage five CKD in Europe, there are no national initiatives dedicated to improving CKD care delivery and early detection.[7,8]

Past attempts to improve health outcomes include introducing a National Health Plan for 2004-10. However, the plan only gave priority to four national health programmes focused on cardiovascular diseases, cancer, HIV/AIDS and mental health.[9] In the National Health Plan of 2012-16, there was no mention of CKD either.[10]

However, Portugal has introduced strategies for other major chronic conditions including the National Diabetes Plan.[11] Despite diabetes being a common risk factor and having comorbidity with CKD, the plan does not mention CKD, illustrating that the integration of chronic diseases is weak. Portugal could integrate CKD care and management into existing strategies as a priority.

Registries

The Portuguese Society of Nephrology registry (Table 1), the country's main kidney registry is a promising start, a registry that captures data across all stages of CKD would be most beneficial. It would help policymakers, clinicians and researchers uncover any gaps in care, as well as opportunities for better prevention and management.[13]

Digital health and integrated health information systems

Not all EHRs used by health professionals in Portugal are designed for shared access.[14] Attempts are being made to address this lack of interoperability. In 2020, for example, the Centro Hospitalar Universitario do Porto's healthcare institution, in the northern region of Portugal, adopted an OpenEHR system to integrate with the institution's existing information systems.[15] A proof of concept study shows that a secure environment based on interoperability can also support the clinical decision-support practices that CKD may require.[16,17] The system is popular due to its comprehensive and robust architecture as well as its interoperability.[17,18]

CKD awareness

Raising awareness can increase demand for education and training and primary care is said to be fundamental to reduce the risks and for early detection of renal disease.[1] When primary care doctors attending a seminar on CKD were asked a simple question about the stages of CKD, only 42% responded correctly, highlighting the potential size of the knowledge gap in Portugal.[4]

Nephrologist-led training sessions for primary care and other specialities may be especially useful for improving awareness across the whole system. The Portuguese

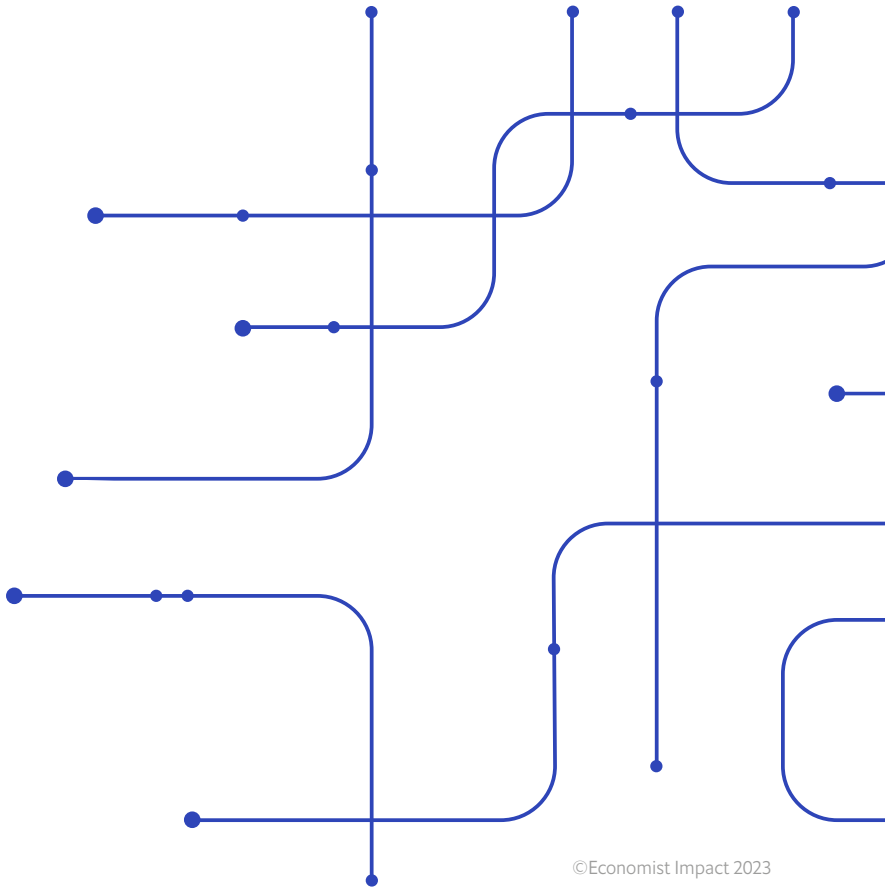
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Table 1. Portuguese Society of Nephrology Registry [12]

Renal Registry	Portuguese Society of Nephrology Registry
Year established	1997
Accessibility	Accessibility is classed as moderate. Information is either available in local language or it is limited publicly
Stages included	Captures data on renal replacement therapy
Outcome data	Mortality/survival and/or hospitalisation/complications data available
Data collected	N/A

Society of Nephrology is leading two training initiatives, the "Nefro GPS" and "Renal4ALL", which are virtual and have the potential to be scaled up.[19,20]

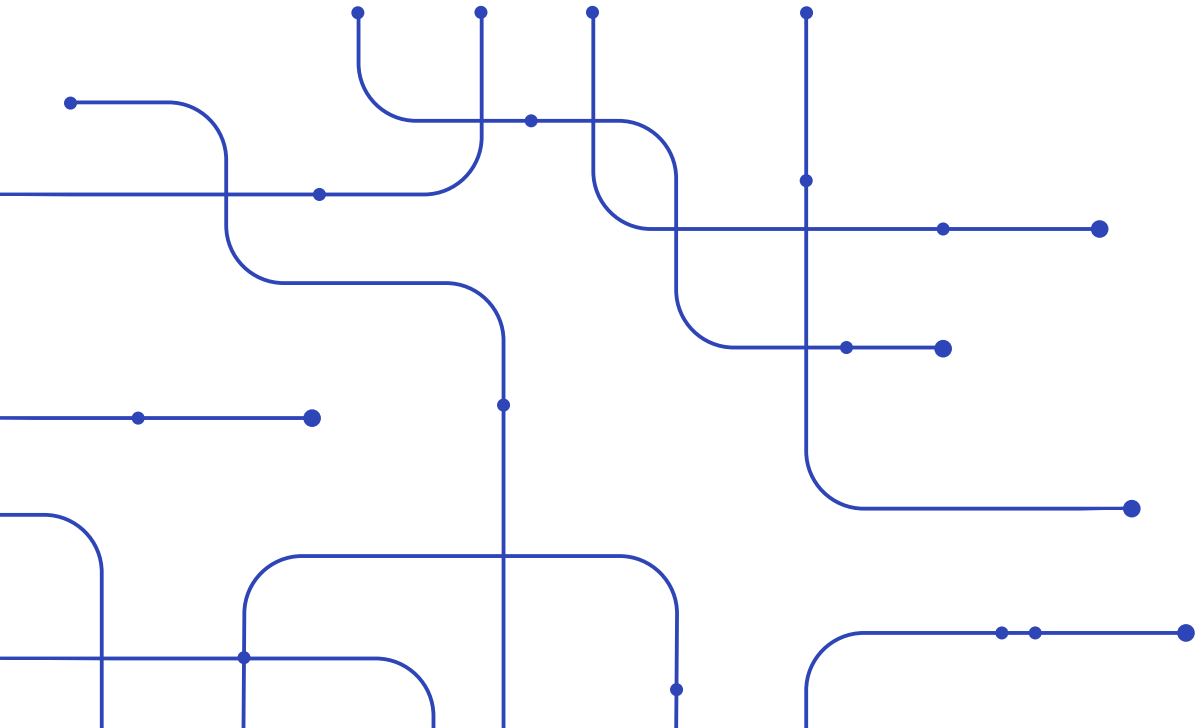
Community awareness of CKD is low. In one study that interviewed 107 individuals, 51% said they did not know about CKD, while 36% knew how to prevent it. Only 24% knew about its risk factors and only 22% had heard of creatinine.[5]



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