

Kidney Health Inequities in Scotland

Simon Sawhney, Aberdeen, UK

“From today, the policy of this department is that the NHS is broken” – July 2024

New Prime Minister: the state the NHS is in now “is unforgiveable”

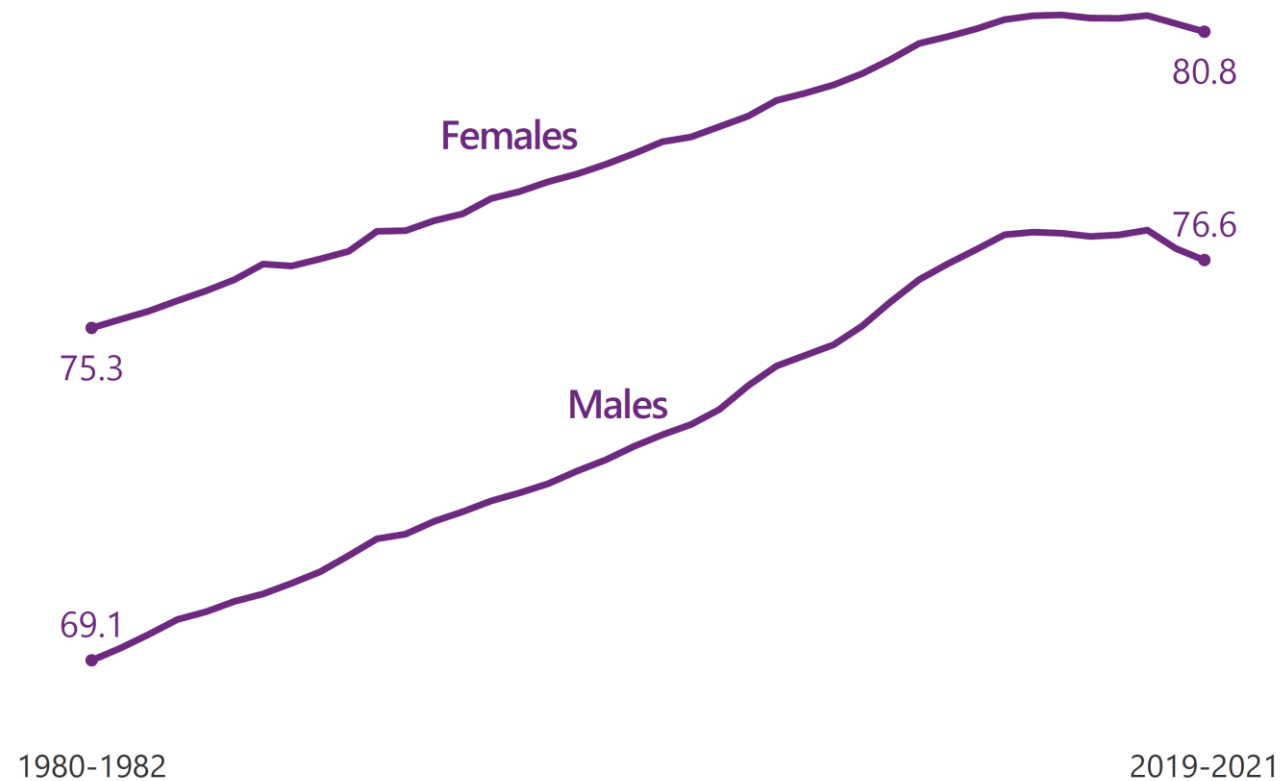
Telegraph: “the GP system is on brink of collapse”

Scottish GP: “I can’t even make sense of what to prioritise anymore”

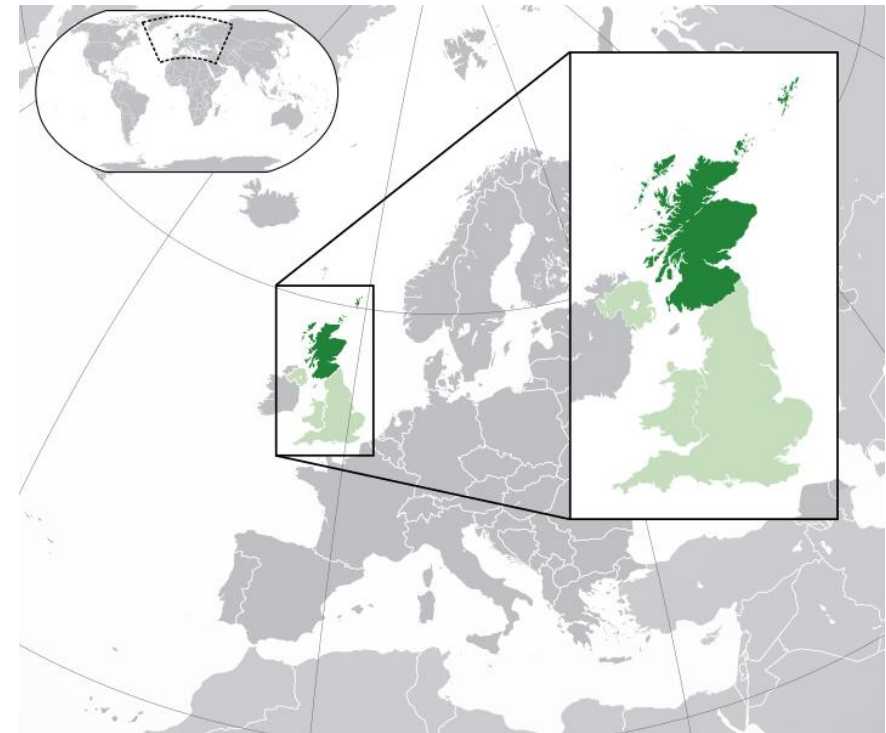
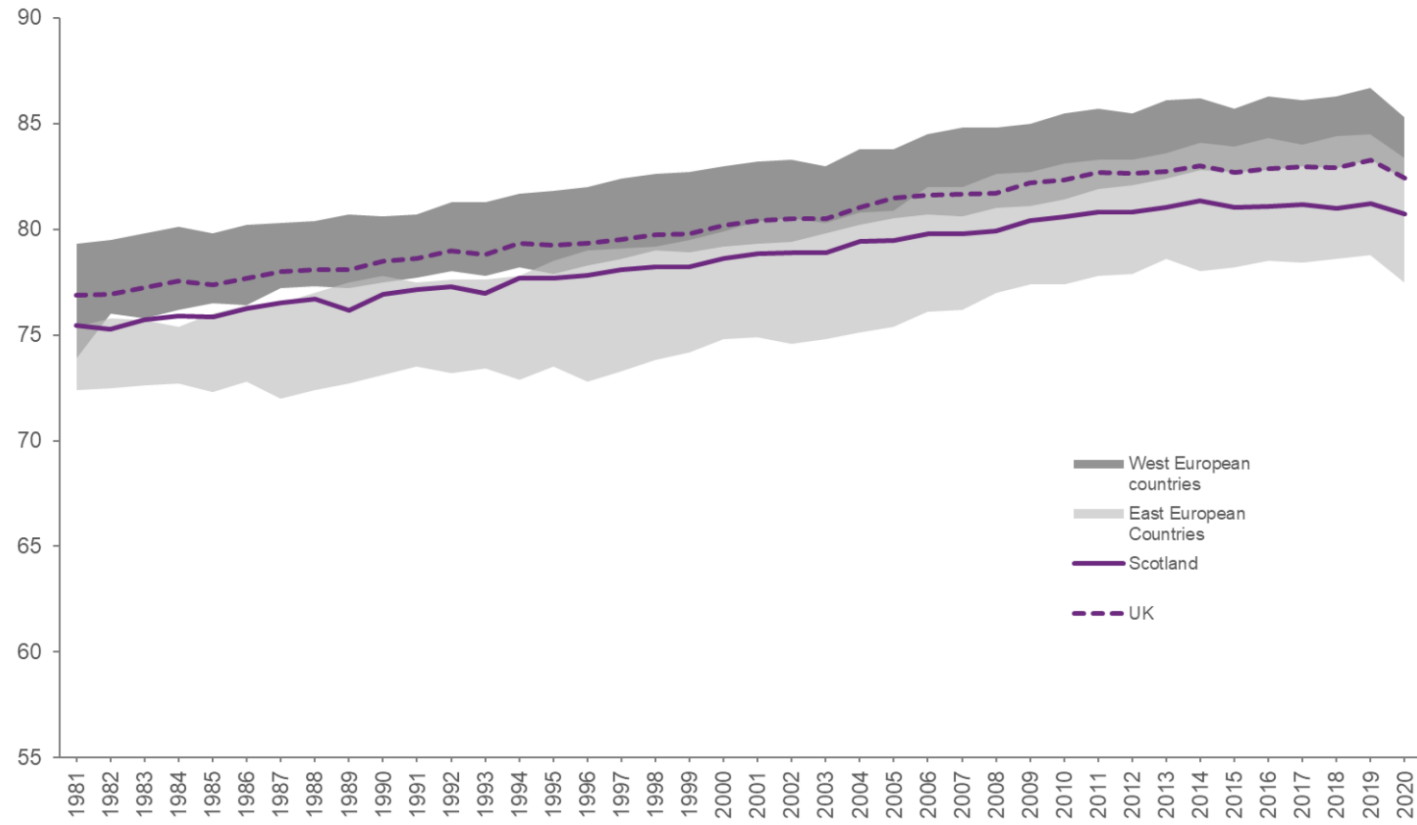


Life expectancy in Scotland over 40 years

Life expectancy at birth (years)



Scotland has the worst life expectancy in Western Europe



10-year gap between rich and poor areas

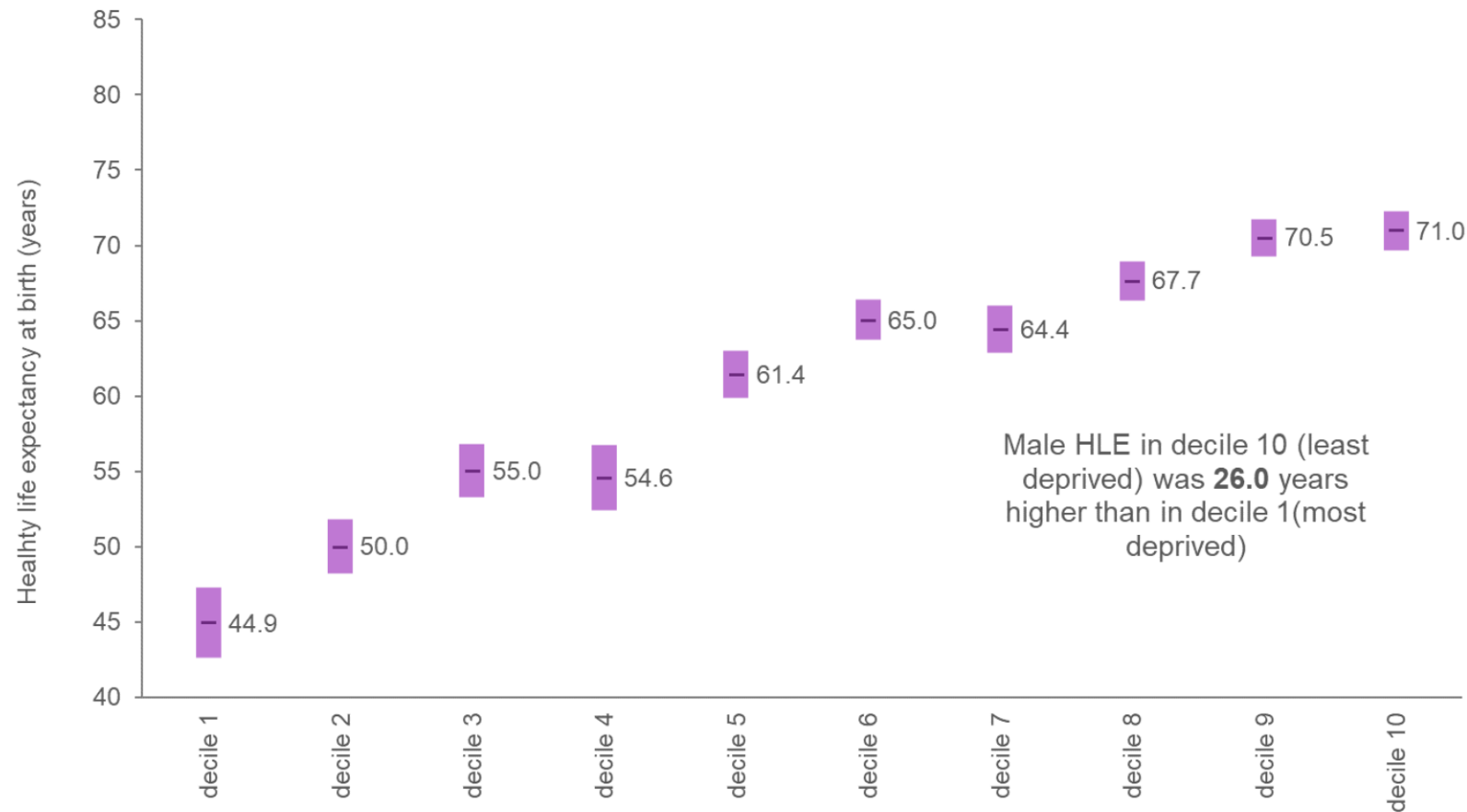
Females



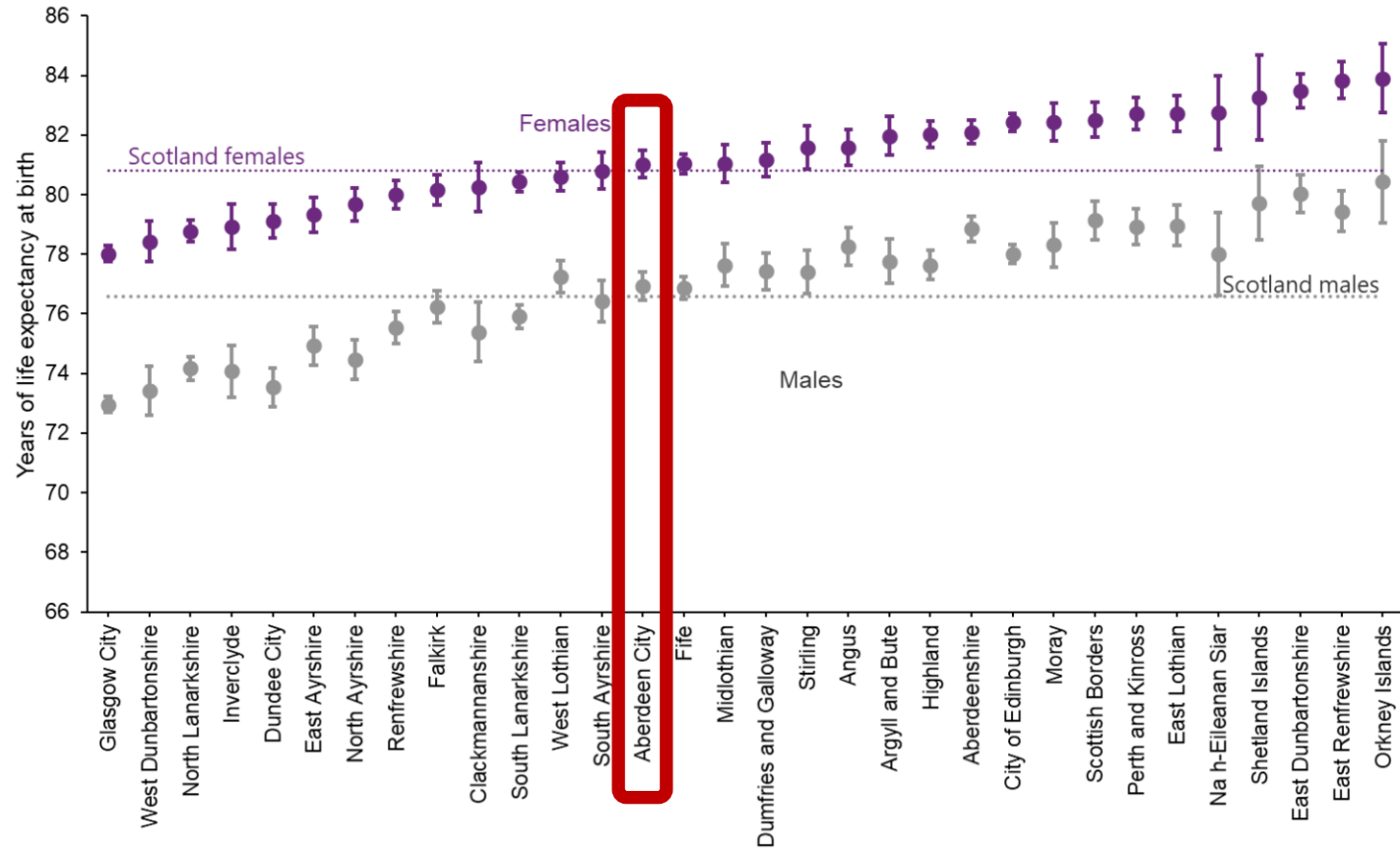
Males



The gap in “healthy life expectancy” is even larger



Aberdeen City lies mid-table within Scotland



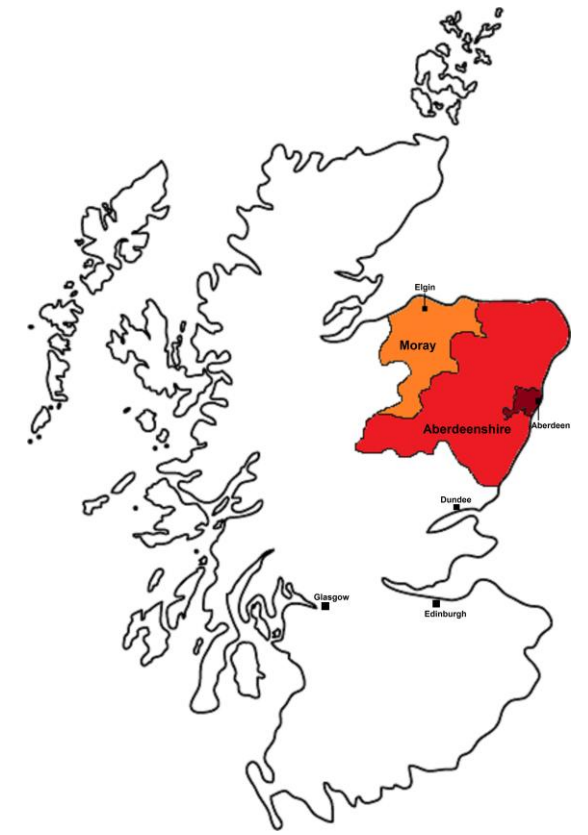
Aberdeen and Aberdeenshire

Population 600,000

Universal health & social care in the NHS

Home to farmers, fishermen, oil workers
... and the Royal Family

Once the second happiest city in the UK





Aberdeen 2010-2020

Aberdeen set to lose another 5,500 jobs through oil downturn

Oil price





BBC News: “Homelessness applications on the rise”

P&J: “Aberdeen’s hidden homelessness crisis as ‘extreme’ gap between rich and poor widens”

“A tale of two cities”



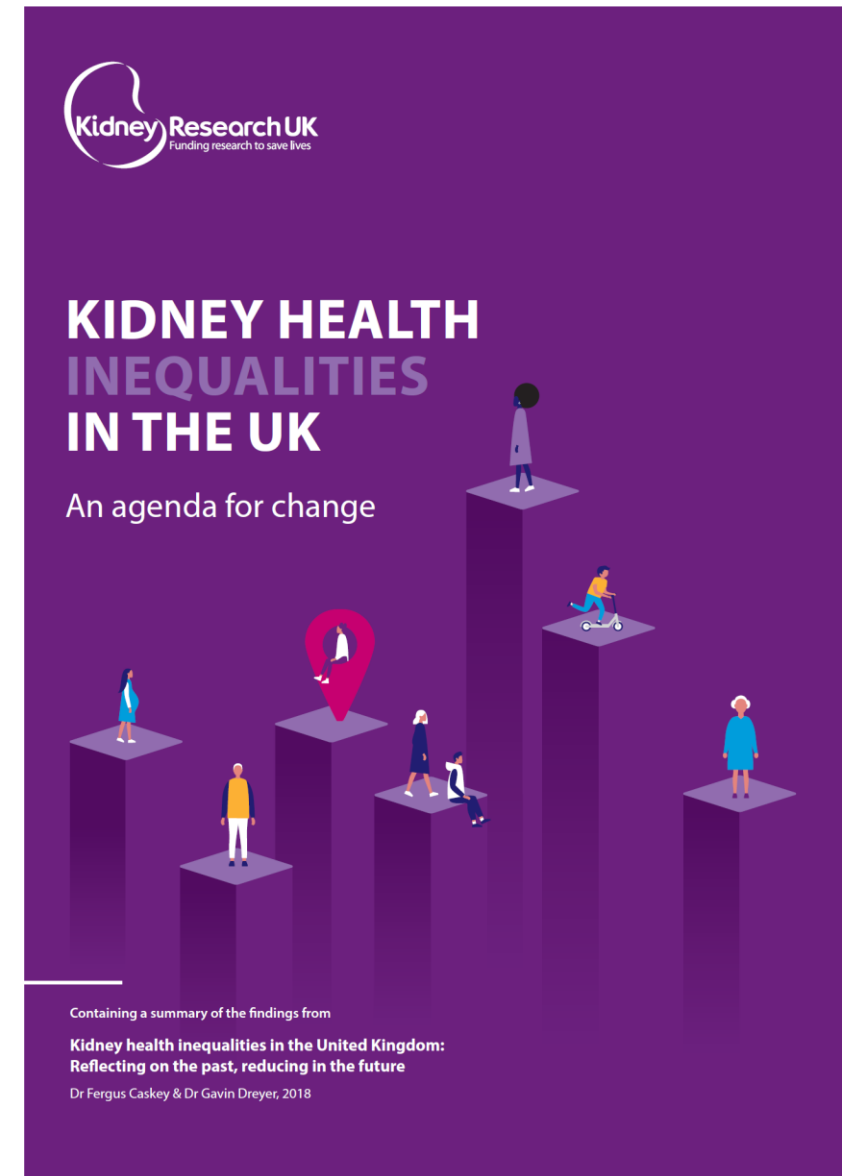
What about kidney health?

More people developing kidney failure in lower socioeconomic and minority groups

Challenges in access to dialysis and transplantation

“So long as we continue to fight the battle downstream...we are doomed to frustration, repeated failure, and perhaps ultimately to a sicker society”

McKinlay JB. A case for refocusing upstream: the political economy of illness. *American Heart Association* 1975



Care processes and outcomes of deprivation across the clinical course of kidney disease: findings from a high-income country with universal healthcare

Background

This study contrasts the extent and consequences of inequity of care among people newly presenting across the full clinical course of kidney disease, independent of comorbidities.

Methods



Routine population data
Grampian, UK

Care processes – people in deprived areas...



Present more
urgently

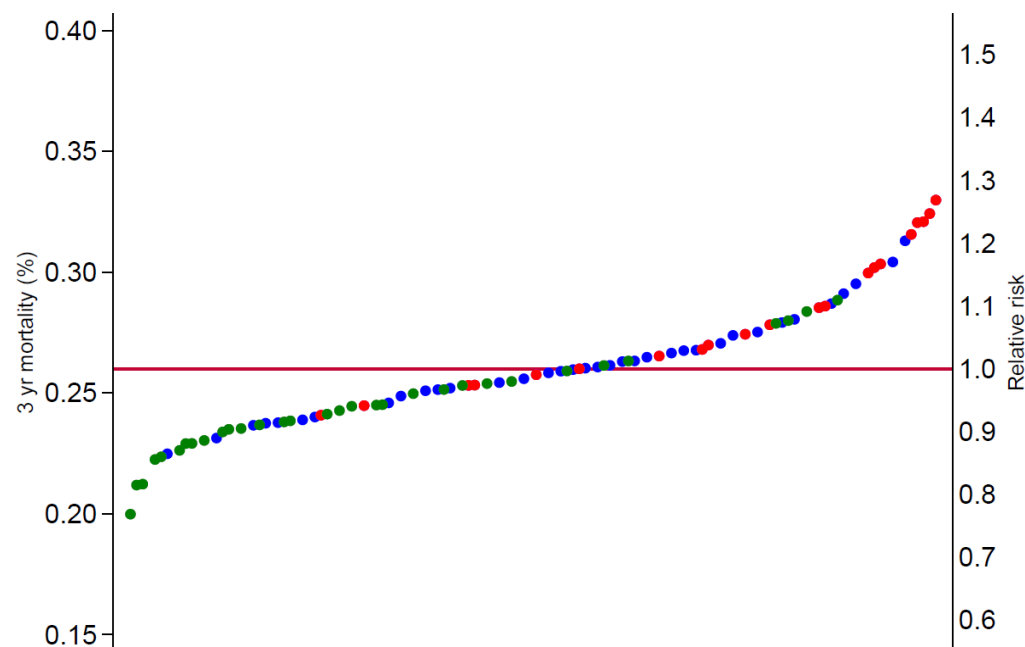


Less blood
monitoring



More missed
appointments

3-year survival
of 50,000 people
with early
kidney disease

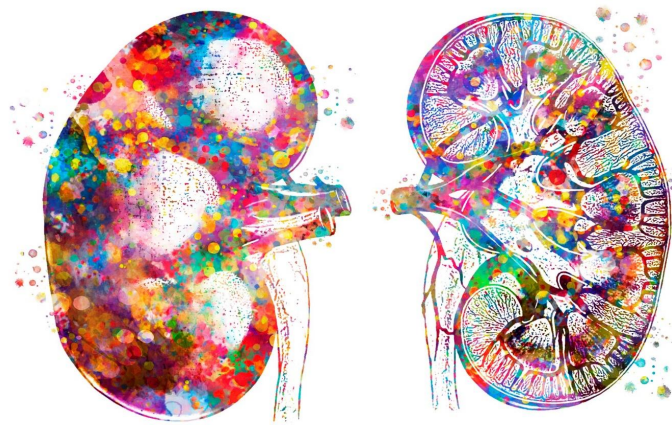


Most deprived

Intermediate

Most affluent

Understanding and reducing inequalities in kidney health care and outcomes in Scotland



KINDER study – Kidney Inequalities: Needs, Data, Experiences, Response

Tom Blakeman, Eilidh Cowan, Audrey Hughes, Buse Keskindag, Magda Rzewuska Dias



We aim to address kidney healthcare inequalities in Scotland by understanding...

How and why they exist

How we can best mitigate the harms



PLANNED STEPS



WP1: linked health data and Scottish Census from 2011 to 2020



Bi-directional relationships between
socioeconomic circumstances and kidney health



WP2: interviews with people of working age with KD
& group discussion with primary care professionals



WP3: workshops with patients and professional experts to identify priority
strategies and actions

Individual and neighbourhood-level deprivation, kidney disease, and long-term mortality in the “Core determinants and Equity Grampian Laboratory Outcomes Morbidity and Mortality Study” (GLOMMS-CORE)

kidney
INTERNATIONAL



New cohort formation (GLOMMS-CORE):

Linkage of kidney records and a census of 458,897 North Scotland residents



Incident kidney disease presentations

eGFR <60	n= 48,546
eGFR <45	n= 29,081
eGFR <30	n= 16,116
AKD	n= 28,097

% residents presenting with early disease (eGFR <60):

By household:

Professionals (lawyers)	7.9 %
Unskilled (cleaners)	13.4 %
Unemployed (no job)	13.5 %

By neighbourhood quintile:

Most affluent	8.9 %
Most deprived	10.0 %

Followed up 2011-2021

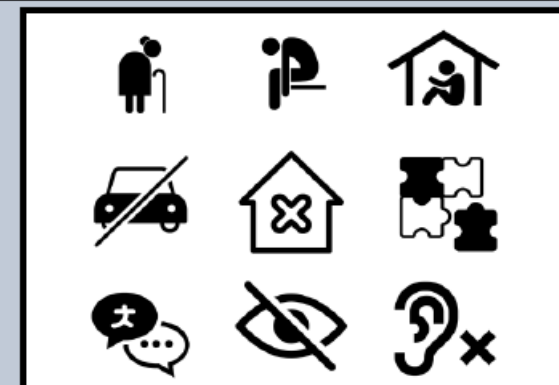
People with early kidney disease in deprived (unskilled / unemployed) households:

Greater mortality even in affluent areas

Household socioeconomic position	Neighbourhood deprivation quintile				
	5 (affluent)	4	3	2	1 (deprived)
managers/professionals	1.00	1.06	1.18	1.14	1.31
intermediate/small employer	1.16	1.16	1.11	1.26	1.39
lower supervisory/technical	1.23	1.23	1.24	1.29	1.91
semi-skilled	1.29	1.24	1.27	1.36	1.65
unskilled	1.36	1.29	1.37	1.41	1.70
never worked/unemployed	1.98	1.89	1.87	2.04	2.06

Reported more difficult living circumstances

“Limited a lot” by ill health; mental health; living alone; no access to car; basic housing; learning; English language; vision & hearing



Sawhney et al., 2024

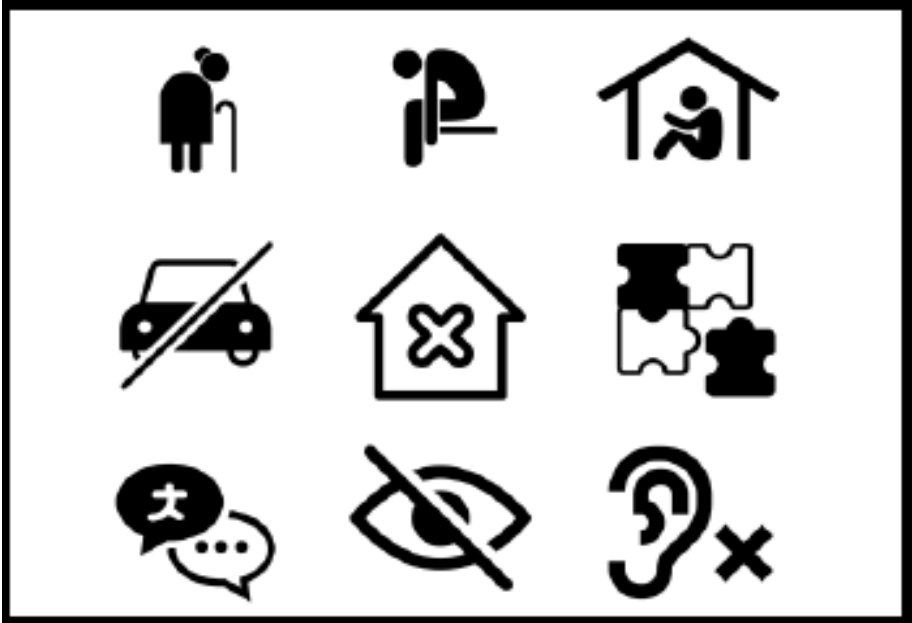
CONCLUSION

The impacts of deprivation in kidney disease are spread throughout society, complex, serious, and not confined to deprived neighbourhoods.

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Mortality **greater** among people in deprived neighbourhoods and households
Mortality **greater still** if deprived in both dimensions

50k people with early CKD	Professional	Low skill job	Unemployed
“Limited a lot” by health	12%	20%	30%
Mental health condition	3%	5%	12%
Living alone	22%	30%	56%
No access to a car	11%	33%	62%
Learning difficulty	3%	6%	15%
Language difficulty	3%	10%	14%
Hearing difficulty	15%	18%	21%



Deprivation associated with **more challenging living circumstances**

Deprivation
associated with
**worse self-
reported health
and
greater limitation
of daily activities**

		Age-sex adjusted		+ comorbidities		+ mental health	
		OR	95% ci	OR	95% ci	OR	95% ci
Neighbourhood							
	(most affluent) SIMD 5	1	(ref)	1	(ref)	1	(ref)
	SIMD 4	1.24	(1.17,1.32)	1.22	(1.15,1.29)	1.22	(1.15,1.30)
	SIMD 3	1.53	(1.43, 1.63)	1.47	(1.38,1.57)	1.48	(1.38,1.58)
	SIMD 2	1.86	(1.73,1.99)	1.7	(1.58,1.82)	1.67	(1.55,1.80)
	(most deprived) SIMD 1	2.49	(2.21,2.81)	2.07	(1.83,2.34)	2.05	(1.81,2.32)
Household classification							
	Professional	1	(ref)	1	(ref)	1	(ref)
	Intermediate	1.18	(1.10,1.26)	1.15	(1.08,1.23)	1.15	(1.07,1.23)
	Technical	1.72	(1.58,1.86)	1.59	(1.47,1.73)	1.6	(1.47,1.73)
	Semi-skilled	1.65	(1.54,1.77)	1.54	(1.43,1.65)	1.51	(1.40,1.62)
	Unskilled	1.91	(1.78,2.05)	1.72	(1.61,1.85)	1.7	(1.58,1.82)
	Unemployed	2.45	(2.10,2.87)	2.01	(1.71,2.36)	1.93	(1.64,2.26)

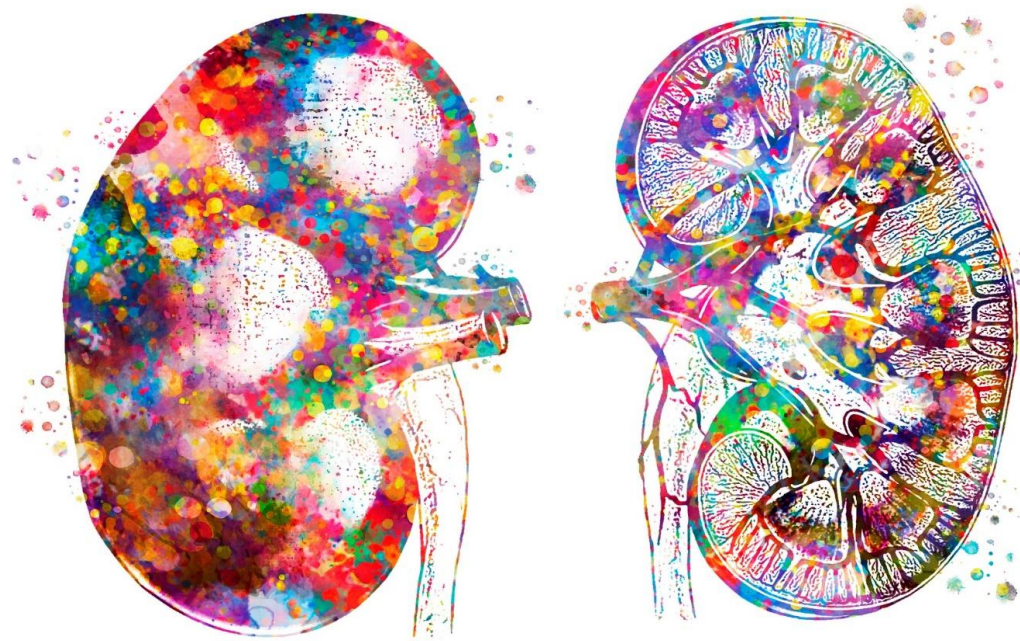
What we have learned so far

Kidney health and care is inequitable across the clinical and life course

Socioeconomic disadvantage has both household and neighbourhood components

People with early kidney disease in deprived communities report more limited ability to do day-to-day activities due to ill health and worse physical well-being

Where next with the KINDER study?



Audrey Hughes PKD Charity
Patient Involvement and
Engagement Officer

Trustworthy interpretations are possible “*...only by understanding the stories behind the numbers*”

our public and patient partners