

Renal Health Disparities in the United Kingdom: A Focus on Ethnicity

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Summary: The increased rate of type 2 diabetes among minority ethnic groups compared with Caucasians in the United Kingdom has been well documented. Diabetes complications, such as end-stage renal failure, are much more prevalent among the South Asian and African-Caribbean population in the United Kingdom. Inequalities do currently exist in diabetes and renal services and the solutions to rectifying this situation are complex, focusing both on disease prevention and disease management. However, the financial and human burden of not addressing these inequalities encourage some immediate action.

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The development and provision of renal services for minority ethnic groups has become a particularly important area of debate in the United Kingdom. (For the purposes of this article and availability of data, the term *minority ethnic groups* is used to refer to South Asian and African-Caribbean populations in the United Kingdom). This is in part owing to the observation of high rates of type 2 diabetes among South Asian (those originating from the Indian subcontinent—India, Sri Lanka, Pakistan, and Bangladesh) and African-Caribbean populations in the United Kingdom and the disproportionately higher numbers of South Asians and African-Caribbeans progressing toward diabetic nephropathy.

According to the census, 4.6 million people are from minority ethnic groups. This represents a total of 7.9% of the total population of the United Kingdom. Seventy-five percent of the minority ethnic populace are classified as either black/black British (24.8%) or Asian/Asian British (50.2%).¹

Diabetes is becoming one of the greatest health problems facing the UK today. The recent All Parliamentary Group for Diabetes and Diabetes UK reported that more than 3 million people are expected to be diagnosed with diabetes by the year 2010 and that half of these cases will be people from disadvantaged communities. According to the Diabetes National Service Framework, people of South Asian, African, and African-Caribbean descent have a higher than average risk of developing type 2 diabetes as compared with the white population.² Type 2 diabetes is up to 6 times more common in people of South Asian descent and up to 3 times more common in those of African-Caribbean descent (Table 1). Burden³ reported an estimated 15.2% of the South Asian population had diabetes as compared with 3.8% of the white population. The risk of death resulting from the complications of diabetes is between 3 and 6 times higher within minority ethnic groups.

EPIDEMIOLOGY OF DIABETES AMONG MINORITY ETHNIC GROUPS IN THE UNITED KINGDOM

South Asians and African-Caribbean communities have a high prevalence of type 2 diabetes: recent studies indicate a prevalence rate 4 times greater than whites. It has been reported that

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Table 1. Relative Risk of Diabetes and Diabetic Nephropathy Among South Asians and African Caribbeans in the United Kingdom

Condition	Relative Risk
Diabetes	>4
Diabetic nephropathy	>6

20% of South Asians aged 40 to 49 have type 2 diabetes, and by the age of 65 the proportion increases to a third.⁴ Clearly, this has significant consequences for planning diabetes services for the elderly in areas of the United Kingdom where there are higher proportions of minority ethnic groups.

A further complication is that diabetic nephropathy is the major cause of end-stage renal failure (ESRF) in South Asian and African-Caribbean patients receiving renal replacement therapy (RRT), either by dialysis or transplantation. Nationally, this higher relative risk, when corrected for age and sex, has been calculated in England as 4.2 for the South Asian community and 3.7 for those with an African-Caribbean background.⁵ Data from Leicester show that South Asians with diabetes are at 13 times the risk of developing ESRF compared with white Caucasians.⁶ Thus, not only are South Asians and African-Caribbeans more prone to diabetes than whites, they are more likely to develop ESRF as a consequence.

Importantly, the South Asian and African-Caribbean populations in the United Kingdom are relatively young compared with the white population. Because the prevalence of ESRF increases with age, this has major implications for the future need for RRT and highlights the urgent need for preventive measures.⁷ The incidence of ESRF has significant consequences for both local and National Health Service (NHS) resources. The National Renal Review estimated an increase over the next decade of 80% in the 20,000 or so patients receiving RRT and a doubling of the current cost, about 600 million pounds a year, of providing renal services.⁴

Consequently, there is an urgent need to invest in renal services as well as diabetes ser-

vices given the greater propensity of diabetes complications among diabetics from minority ethnic groups.

IMPROVING ACCESS TO SERVICES

The Diabetes National Service Framework highlights the importance of access to services, in particular to meet the needs of minority ethnic groups.² The Renal Services National Service Framework (NSF) also focuses on renal disease complicating diabetes and emphasizes inequalities experienced by minority ethnic groups.⁸ There is evidence that knowledge of diabetes and renal disease and its complications is poor among South Asians and African-Caribbeans.^{9,10} Preliminary evidence also suggests that quality of health care for South Asians and African-Caribbeans is inadequate and compliance is poor.^{4,10} There is also a low uptake of hospital-based diabetes services, with growing evidence that South Asians subsequently are referred later for renal care, and are more likely to be lost to follow-up evaluation.¹¹ Late referral may reduce opportunities to implement measures to slow progression of renal failure, or to prepare adequately for RRT, adding to morbidity and mortality.

The World Health Organization study group on diabetes noted that resources should be directed to improving the quality of preventive care in primary care settings and to public health interventions for controlling diabetes. Education, early diagnosis, and effective management of diabetes is important for safeguarding the health of susceptible populations and for long-term savings for the NHS.⁴ Most encouragingly, recent studies from the United States and Finland have shown that modest lifestyle changes can reduce the risk by more than 58% of developing overt type 2 diabetes in susceptible groups.^{12,13} Furthermore, various interventions, such as tight blood pressure control, effective use of angiotensin converting enzyme inhibitors or angiotensin receptor blockers, and tight blood sugar control significantly can delay the progression of diabetic nephropathy.¹⁴⁻¹⁹

LOOKING TO THE FUTURE

It is clear that minority ethnic groups are affected disproportionately by diabetes and con-

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