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Short paper for Birmingham City Council

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Prostate Cancer

Implications for the Birmingham population

The prostate is a walnut sized gland found at the base of the bladder that envelops the urethra. It is part of the male genital tract and contributes about 40% of the seminal fluid. Unlike all other tissues, it continues to grow as the male ages beyond puberty, driven by testosterone.

Like all glands, it is at risk of developing cancer. The lifetime risk for this event is expected to be 1:7 in today's generation. In 2013 there were 43,436 new diagnoses of prostate cancer with 10,837 deaths in the UK (51,103 in breast with 11,716 deaths). Prostate cancer is the uncontrolled growth of cells within the gland that cause local problems to the flow of urine from the bladder and kidneys. If these cells spread to other organs (secondaries or metastases) they will grow there resulting in the failure of those organs and subsequent death of the patient. If caught early, the disease is curable with surgery or radiotherapy which would suggest a lot of the deaths we see could have been avoided. Those with secondaries are incurable but their disease can be controlled for many years. The average life expectancy of these patients have gone from 3 to over 7 years. Combined with the increasing prevalence we are seeing (fig 1), this is posing real resourcing challenges that need to be recognised and planned for by Government.

The prostate produces PSA, a protein in the ejaculate. A little amount of this leaks into the blood and we can test for this with a simple blood test. This test goes up in patients with large prostates, infection

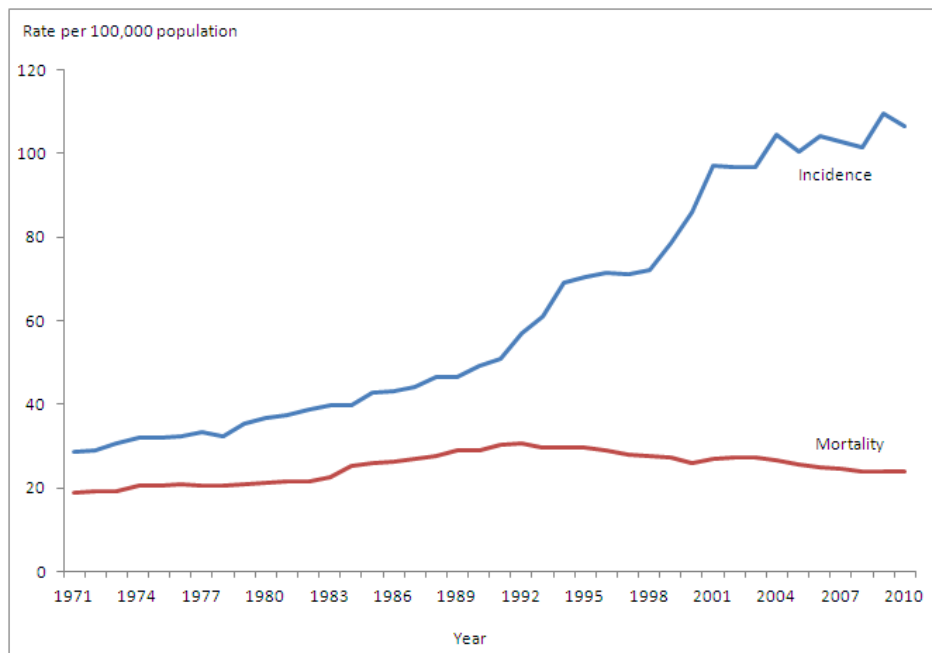


Fig 1 - Incidence and mortality rates for prostate cancer in the UK

or inflammation in the prostate and prostate cancer making the test a potential screening tool. Unfortunately it is not specific for cancer.

Considerable work is being undertaken to establish whether PSA screening would benefit a population with two huge studies, one in Europe and one in USA. As it stands, their recommendations are not for screening as the costs and complications of over treatment outweigh the benefits of earlier diagnosis and the possibility of a life saving intervention.

Prostate cancer is a very slow disease process in many cases and this makes studying the condition a challenge as the time gap between intervention and outcome can be significant. As the study cohorts are followed forward, this balance in risks and benefits of screening is likely to shift and there is a real possibility that the guidance on screening may change. As it stands, there is no formal prostate screening programme in place.

Most population based studies focus on Western, predominately caucasian groups. When other ethnic groups are looked at we see interesting differences in prevalence and outcomes. Of particular note is the Afro-caribbean population. This group have a lifetime risk of 1:4 and their outcomes are far worse. There is a temptation to suspect that this may be down to inequalities in healthcare access and provision but in a free at point of care system such as the NHS, the problems are clearly more fundamental than that. Likely contributing factors include poor awareness within the communities (due to a lack of relevant health education), often inner city populations which can have poorer primary health care provision as well as a very real cultural issue with rectal examination (part of the assessment of the prostate). When these issues are corrected for, the difference in outcomes still exists and this is down to fundamental differences in the biology of the disease in this population being far more aggressive.

Given the fact that Birmingham has the largest Jamaican community outside of Kingston, prostate cancer awareness in the City is very important. There are local initiatives (such as, 'hear me now') to try and address this and these are largely driven by cancer survivors and their families rather than Government funded and supported initiatives which is disappointing.

Prostate cancer is the most common cancer in men and affects a large number of individuals and their families. Earlier diagnosis benefits outcome and reduces the complications of the disease. There is a real need and opportunity for better collaboration between primary and secondary care with local communities and government.