

Prostate Cancer Research Centre's Patient Voice Project aims to engage men from hard-to-reach areas, with high levels of deprivation and low levels of prostate cancer support available. In selecting the location(s) where we would first focus delivery of the project, we analysed a series of factors within the 20 local authority districts with the highest proportion of their neighbourhoods in the most deprived 10 per cent of neighbourhoods nationally, as determined by the Department for Communities and Local Government's 'The English Indices of Deprivation 2015'. We assessed the incidence rates of prostate cancer in these areas, levels of ethnic diversity, and levels of support available for men diagnosed with prostate cancer.

Incidence Rates of Prostate Cancer¹

Prostate cancer is the most common male cancer in the UK and accounts for 26% of all new cancer cases in males. Prostate cancer incidence rates are significantly higher than the UK average in Wales, significantly lower than the UK average in Scotland, and similar to the UK average in England and Northern Ireland.

New Cases of Prostate Cancer (2016):

- England: 40,489
- Scotland: 3,226
- Wales: 2,760
- Northern Ireland: 1,165

Age Standardised Rate (AS Rates) are the most common way of reporting cancer statistics. They are used to compare populations and overcome the problems caused by different age profiles. They identify real differences between populations which are not because of age.

AS Incidence Rates per 100,000 Population (2016) – UK Average 171:

- England: 173.7
- Scotland: 136.5
- Wales: 186.9
- Northern Ireland: 164.8.

Although the AS Incidence Rate is highest in Wales, it was decided that PCRC would focus this project on England. This was due to the fact that the English Incidence Rate is higher than the UK average and that the number of new cases is significantly higher than the rest of the UK, therefore allowing us to reach a much larger number of men.

Prostate Cancer Incidence by Ethnicity²

¹ <https://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/prostate-cancer/incidence>

² Ibid.

AS rates for White males with prostate cancer range from 96 to 99 per 100,000. Rates for Asian males are significantly lower ranging from 28.7 to 60.6 per 100,000 whereas rates for Black males are significantly higher, ranging from 120.8 to 247.9 per 100,000. Ranges are given because of the analysis methodology used to account for missing and unknown data. For prostate cancer, of the cases identified 37% had no known ethnicity.

The lifetime risk of being diagnosed with prostate cancer is 13-15% for White males, while in Black males it is 23-27%. The risk for Asian men is significantly lower at 6-10%.

Deprivation Gradient in Prostate Cancer³

There is evidence for a small association between prostate cancer incidence and deprivation in England, with prostate cancer being one of the few cancers where **incidence rates are lower for more deprived males**.

It is still important for PCRC to focus this project in areas of higher deprivation, as the levels of engagement in health-research are low, as discussed in the 'Community engagement report for the Health Foundation'

English Indices of Deprivation⁴

The 'English Indices of Deprivation 2015' calculates local measures of deprivation in England. These statistics are a measure of relative deprivation and not affluence, and therefore not every people in a highly deprived area will themselves be deprived.

The Indices of Deprivation are based on 37 separate indicators, organised across seven distinct domains of deprivation which are combined using appropriate weights, to calculate the Index.

Table 1: The twenty most deprived areas in England:

The 20 local authority districts with the highest proportion of neighbourhoods in the most deprived 10% of neighbourhoods national on the Index of Multiple Deprivation	
Area	Percentage of neighbourhoods
Middlesbrough	48.8
Knowsley	45.9
Kingston upon Hull	45.2
Liverpool	45
Manchester	40.8
Birmingham	39.6
Blackpool	38.3
Nottingham	33.5
Burnley	33.3
Hartlepool	32.8
Bradford	32.6
Blackburn with Darwen	30.8
Hastings	30.2
Stoke-on-Trent	30.2
North East Lincolnshire	29.2
Salford	28.7
Rochdale	28.4

³ Ibid

⁴ <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015>

Pendle	28.1
Halton	26.6
Great Yarmouth	26.2

These twenty areas were further analysed based on prostate cancer statistics and availability of services.

Prostate Cancer Prevalence

The prevalence of prostate cancer has been analysed according to the age at which men are diagnosed, their ethnic group and the number of men diagnosed in terms of population. Please see the below tables (Tables 2 and 3).

Table 2: Age at diagnosis and Ethnicity (10 years) by Local Authority:⁵

Local authority	Age at diagnosis				Ethnicity - 10 year prevalence							
	40-59	60-74	75+	Total	Asian	Black	Chinese	White	Mixed	Other	Unknown	10 yr Total
Middlesbrough	151	471	181	803	10	-	-	524	-	-	15	549
Knowsley	126	404	157	687	-	-	-	508	-	-	6	514
Kingston upon Hull	255	833	278	1366	6	-	-	971	-	6	90	1073
Liverpool	-	1229	440	2026	-	44	-	1437	14	11	29	1535
Manchester	-	933	353	1567	50	141	14	958	19	19	22	1223
Birmingham	-	3513	1344	5915	274	589	6	3149	47	39	200	4304
Blackpool	93	534	226	853	-	-	-	638	-	-	10	648
Nottingham	189	647	214	1050	25	64	-	701	-	13	109	912
Burnley	78	293	104	475	6	-	-	359	-	-	-	365
Hartlepool	86	255	111	452	-	-	-	316	-	-	-	316
Bradford	351	1406	478	2235	104	36	-	1519	-	6	51	1716
Blackburn	98	387	129	614	20	-	-	427	-	-	-	447
Hastings	72	339	81	492	-	-	-	336	-	-	47	383
Stoke-on-Trent	130	658	374	1162	17	11	-	855	-	-	23	906
North East Lincolnshire	113	536	218	867	-	-	-	663	-	-	10	673
Salford	-	665	227	1081	-	13	-	818	-	-	6	837
Rochdale	139	718	301	1158	22	8	-	877	-	7	6	920
Pendle	-	304	96	479	14	-	-	343	-	-	-	357
Halton	82	364	113	559	-	-	-	440	-	-	12	452
Great Yarmouth	74	476	185	735	-	-	-	530	-	8	62	600

⁵ Cancer Prevalence: TCST-Macmillan-PHE Partnership Document

Table 3: Population levels and Incidence Rates by Local Authority:⁶

Local Authority	Population	Male Population	Incidence
Middlesbrough	138,400	67,816	0.81
Knowsley	148,560	71,309	0.7
Kingston upon Hull	284,321	142,161	0.75
Liverpool	552,267	270,611	0.6
Manchester	510,746	255,373	0.5
Birmingham	1,860,000	911,400	0.5
Blackpool	139,720	68,463	0.9
Nottingham	289,301	147,544	0.6
Burnley	87,705	42,975	0.8
Hartlepool	92,028	45,094	0.7
Bradford	349,561	171,285	1
Blackburn	117,963	88,982	0.5
Hastings	90,254	44,224	0.8
Stoke-on-Trent	270,726	135,363	0.6
North East Lincolnshire	159,826	78,315	0.8
Salford	251,332	125,666	0.7
Rochdale	281,459	137,915	0.7
Pendle	90,696	44,441	0.80
Halton	126,500	63,250	0.7
Great Yarmouth	99,417	49,708	1.2

⁶ Ibid.

The areas of Great Yarmouth, Bradford, Blackpool and Middlesbrough were selected for further analysis due to the incidence rates. Birmingham was selected due to high levels of ethnic diversity, having high percentages of both Black and Asian men being diagnosed.

Analysis by Area

Great Yarmouth

Great Yarmouth is the twentieth most deprived area in England. It has a generally older population, with around 50% being over the age of 45 (UK population over 45: 44%). Furthermore, in 2016 the borough found that the proportion of residents that are of pensionable age is relatively high and growing.⁷

Of the 20 most deprived areas, Great Yarmouth has the highest incidence rate of prostate cancer.⁸

The area is not particularly diverse in terms of ethnicity, with the population of those from ethnic backgrounds at around 3.2%⁹ (compared with UK population from non-White ethnic backgrounds: 13%)¹⁰. None of the men diagnosed with prostate cancer in 2006-15 are shown to be from ethnic minority backgrounds, with over 88% of men diagnosed identifying as white (the rest being 'other' or 'unknown').¹¹

There is one support group which is open to residents of Great Yarmouth: the Norfolk and Waveney Prostate Cancer Support Group. The group is, however, based in Norwich which is approximately 21 miles from Great Yarmouth.¹²

Bradford

Bradford is the eleventh most deprived area in England. Bradford has one of the youngest populations in England, with the third largest amount of under- 16s in the country. The population of those aged over 50 is 31.6%.¹³

Bradford has the second largest number of men diagnosed with prostate cancer in 2006-15 out of the twenty most deprived areas in England.¹⁴

Bradford is ethnically diverse, with 64% identifying as White British¹⁵ (UK population: 87%)¹⁶. Men of both Asian and Black ethnic origin have been diagnosed with prostate cancer in Bradford in 2006-15. Of those diagnosed, 6% were from Asian backgrounds.¹⁷ In the UK, the Asian population makes up around 7.5% of the population. Men from Asian backgrounds have a lower chance of being diagnosed with prostate cancer, therefore, there is a higher than expected number of Asian men diagnosed in Bradford.

⁷ <https://www.great-yarmouth.gov.uk/CHttpHandler.ashx?id=988&p=0>

⁸ See Table 3.

⁹ Ibid No.7.

¹⁰ <https://www.ethnicity-facts-figures.service.gov.uk/uk-population-by-ethnicity/national-and-regional-populations/population-of-england-and-wales/latest>

¹¹ See Table 2.

¹² <https://prostatecanceruk.org/get-support/find-local-support/norfolk-and-waveney-prostate-cancer-support-group>

¹³ <https://www.bradford.gov.uk/open-data/our-datasets/population/>

¹⁴ See Table 2.

¹⁵ Ibid No.13

¹⁶ Ibid No.10

¹⁷ See Table 2.

There are no prostate cancer-specific support groups in Bradford, only one general cancer support centre. The nearest prostate cancer-specific group is based in Leeds, approximately 15 miles from Bradford.¹⁸ Furthermore, there is only one hospital providing prostate cancer services in Bradford, and it is currently in the 'requires improvement' category of the Care Quality Commission inspection ratings.¹⁹

Birmingham

Birmingham is the sixth most deprived area in England and has the highest population of the top 20 most deprived areas. It does not have a particularly old population, with 12.9% being pension-aged and 17% being over the age of 50²⁰ (compared to Great Yarmouth: 50% over 45.)

Birmingham has the highest number of men diagnosed with prostate cancer of the top 20 most deprived areas. However, this does not translate to a high incidence rate.²¹

Birmingham is ethnically diverse, with the West Midlands being the second most ethnically diverse area in England, following London.²² The city has high populations of both men from Black backgrounds and those from Asian backgrounds. In the past 10 years, 14% of men diagnosed with prostate cancer were of Black ethnic backgrounds. As shown above, the population of people from Black ethnic backgrounds is around 3.3% and Black men have a far higher chance of being diagnosed with prostate cancer. Therefore, the percentage of 14% is around what would be expected. As with Bradford, 6% of men diagnosed with prostate cancer were of Asian backgrounds, a higher than expected rate.

Birmingham has two support groups for prostate cancer, one of which is based in Solihull and the other being an LGBTQ prostate cancer support group.²³ The Birmingham Prostate Clinic²⁴ is a centre of excellence for treatment of prostate cancer, and other prostate-related diseases. The Queen Elizabeth Hospital in Birmingham treats prostate cancer and has good inspection ratings, 95.6% of people with suspected cancer are seen within two week.²⁵ Prostate Cancer UK promoted their 1 in 4 Campaign (awareness raising of the higher statistical likelihood of a prostate cancer diagnosis for Black men) in Birmingham in 2015.²⁶

Middlesbrough

Middlesbrough is listed as the most deprived area in England. The population of Middlesbrough is younger than the average rate for England and for the North East. Those over 65 make up 15.9% of the local population.²⁷

The population of Middlesbrough is the second most ethnically diverse area in the North East, but has a lower rate of diversity compared to England as a whole. 11.82% of the population are from ethnic minority

¹⁸ <https://prostatecanceruk.org/get-support/find-local-support/leeds-prostate-cancer-support-association>

¹⁹ <https://www.nhs.uk/service-search/Prostate-cancer/Bradford/Results/345/-1.759/53.796/210/2541?distance=25>

²⁰ https://www.birmingham.gov.uk/info/20057/about_birmingham/1294/population_and_census

²¹ See Tables 2 and 3.

²² <https://www.ukpopulation.org/birmingham-population/>

²³ <https://prostatecanceruk.org/get-support/find-local-support?address=Birmingham%2C+UK&lat=52.48624299999999&lng=-1.8904009999999971&distance=#event-form>

²⁴ <https://www.birminghamprostateclinic.co.uk/>

²⁵ <https://www.nhs.uk/service-search/Prostate-cancer/Birmingham/Results/345/-1.89/52.486/210/1910?distance=25>

²⁶ <https://prostatecanceruk.org/about-us/news-and-views/2015/8/1-in-4-tour-diary-birmingham>

²⁷ <https://www.middlesbrough.gov.uk/open-data-foi-and-have-your-say/about-middlesbrough-and-local-statistics/local-population-diversity>

backgrounds.²⁸ There were no men from Black backgrounds diagnosed in Middlesbrough in 2006-15, and only a small number of Asian men.²⁹

However, overall, Middlesbrough has the fourth highest incidence rate for prostate cancer of the 20 most deprived areas in England.³⁰

There is one prostate cancer support group based in Middlesbrough and one hospital which provides prostate cancer services.³¹ There is also one hospital and two support groups in Sunderland, approximately 30 miles from Middlesbrough. Middlesbrough F.C. promote Prostate Cancer UK's 'March for Men'.³²

Blackpool

Blackpool is the 7th most deprived area in England. Blackpool has a fairly old population with 37.4% of the population aged over 45.³³ The over 65 population is projected to rise and by 2041 will make up over a quarter of Blackpool's total population.³⁴

The population of Blackpool is not very ethnically diverse with 96.7% of the population identifying as White British.³⁵ This is also reflected in the fact that not a single man from a BAME background was diagnosed in Blackpool in 2006 to 2015.

There is one support group based in Blackpool, the Blackpool and Fylde Prostate Cancer Support Group.³⁶ There is one hospital, the Blackpool Victoria Hospital, which offers prostate cancer services. It is currently rated as 'needs improvement' by the Quality Care Commission.³⁷ Blackpool Teaching Hospitals also offer a 'Urology Cancer Services' that provides support in the form of specialist nurses, urologists, palliative care specialists, and help lines.³⁸

Conclusions

We have identified **Bradford** and **Great Yarmouth** as being key locations for project delivery due to:

1. **Levels of deprivation:** Great Yarmouth is the 20th most deprived area in England. Bradford is the 11th.
2. **Local services:** Great Yarmouth has only one support group available for men to access, it is located approximately 21 miles away, in Norwich. Bradford is in a similar situation, with access to a support group in Leeds, 15 miles away. The hospital services in Bradford that provide prostate cancer care are rated as 'needs improvement'.
3. **Incidence rates:** Great Yarmouth has the highest incidence rate of prostate cancer amongst the 20 most deprived areas in England.

²⁸ Ibid.

²⁹ See Table 2.

³⁰ See Table 3.

³¹ <https://www.nhs.uk/service-search/Prostate-cancer/Middlesbrough/Results/345/-1.235/54.574/210/14335?distance=25>

³² <https://www.mfc.co.uk/news/march-for-men-this-june-for-prostate-cancer-uk>

³³ <http://www.blackpooljsna.org.uk/Blackpool-Profile/Population.aspx>

³⁴ Ibid.

³⁵ <http://www.blackpooljsna.org.uk/Blackpool-Profile/Ethnicity.aspx>

³⁶ <https://prostatecanceruk.org/get-support/find-local-support/blackpool-and-fylde-prostate-cancer-support-group>

³⁷ <https://www.nhs.uk/service-search/Prostate-cancer/Blackpool/Results/345/-3.055/53.821/210/2056?distance=25>

³⁸ <https://www.bfwh.nhs.uk/wp-content/uploads/2015/08/PL336.pdf>

- a. **Incidence rates in BAME males:** Bradford is highly ethnically diverse, with only 64% of the population identifying as White British (81.9% U.K.). The incidences rates of Asian men is lower than those of White and Black males, the lifetime risk for Asian males is around 10%, opposed to 14% and 25% for White and Black males respectively. The number of Asian men diagnosed in Bradford over in 2006-15 is 6% of the total. The Asian population makes up around 7.5% of the U.K. population. Therefore, considering that Asian males have far lower incidence rates of prostate cancer, there is a higher than expected prevalence of prostate cancer amongst Asian men in Bradford.

4. **Population by age:** Great Yarmouth has an older than average population, with 23% over the age of 65 (18% U.K.). The population of those of pensionable age in Great Yarmouth is expected to continue to rise. The average age of men diagnosed with prostate cancer is between 66 and 69, meaning Great Yarmouth is likely to continue to have a high incidence rate, due to its aging population. Bradford has a significantly lower population of over 65's at 12.2%. However, the age of the population has continued to increase over recent years and is predicted to steadily rise.