



Prison Officer and Operational Support Grade (OSG) Recruitment, diversity statistics

Experimental Official Statistics

Quarterly estimates: 1 January 2017 to 30
September 2018

Main Findings

Around one-fifth of applicants in the period covered by this report were from BAME backgrounds	Between 1 January 2017 and 30 September 2018, 20.3% of Prison Officer applicants and 18.1% of Operational Support Grade (OSG) applicants were from BAME backgrounds.
Around five percent of applicants in the period Q1 2017 to Q3 2018 declared themselves disabled	For the period covered, 3.2% of Prison Officer applicants and 5.1% of Operational Support Grade applicants declared themselves as disabled.
There is evidence of a disparity in outcomes when comparing BAME applicants to white applicants	The Relative Rate Index (RRI) was 0.50 for Prison Officer applicants and 0.70 for OSG applicants for the 21-month period to September 2018.
There is some evidence of an adverse impact on the outcomes for disabled applicants, depending on the role applied for	The Relative Rate Index (RRI) was 0.91 for Prison Officer applicants and 0.68 for OSG applicants for the 21-month period to September 2018.
The percentage of applicants from a BAME background tends to drop at each stage of the recruitment process, whereas it is fairly stable for disabled candidates	By the final stage, 11.4% of Prison Officer applicants who accepted the formal offer were BAME compared to 20.3 % at application. In contrast the proportion of applicants who were disabled remained at 3%, for the period covered by this report. For OSGs however, it dropped slightly throughout the process.

Feedback on this experimental official statistics release should be sent to:
statistics.enquiries@justice.gsi.gov.uk

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Background

- Following the Lammy review¹, HMPPS made a public commitment that 14% of new recruits will come from BAME backgrounds by December 2020.
- As at 30 September 2018, 9.0% of HMPPS staff declared themselves to be from a BAME background. On the same date Public Sector Prisons employed 6.9% BAME staff.
- Campaigns are run in different parts of the country, recruiting from local populations, at different times. It should therefore be expected that the percentage of BAME applicants will fluctuate over time.
- The Lammy review also recommended that new data should be collected and published with a full breakdown by ethnicity. This experimental statistical release sets out to meet that recommendation.

This is the second publication of this experimental official statistics Annex which presents recruitment statistics by diversity. The first concerned ethnicity only, and with this second release analysis by disability has been added for the first time.

Statistics are shown for the following stages of the Prison Officer and Operational Support Grade application process, for campaigns that were run between 1 January 2017 and 30 September 2018:

- applications;
- invitations to assessment/interview;
- provisional offers;
- formal offers; and
- acceptances of formal offer.

These experimental official statistics are used to monitor and evaluate the diversity of applications and appointments. These are newly developed statistics and are currently considered experimental so that users and stakeholders can be involved in the assessment of their suitability and quality.

It is important to note that some candidates are still working their way through the recruitment pipeline. Where this is the case, the candidates' progress is shown up to the last stage they passed prior to 30 September 2018. As a result, the numbers relating to recent quarters will show lower totals for all the stages after initial application.

In the next release of this series on 21 February 2019, numbers relating to recent quarters will be updated to reflect candidates' further progress. This means that data for more recent quarters is based on fewer cases and should therefore be treated with some caution as it will be updated in future editions of this publication. It also means that the Relative Rate Index (RRI – please see below) which is used to compare the rate of success between groups may be updated in future publications. The estimates for the latest quarter will give an early indication of the latest position, but as they are subject to change in subsequent publications, should be treated with some caution and viewed as provisional.

In some cases campaigns may hold a merit list, whereby candidates are successful at assessment/interview, but are put onto a waiting list until a suitable vacancy opens up. Where this is the case, a candidate may not be offered a post until sometime after the initial application and assessment/interview stages.

¹ www.gov.uk/government/organisations/lammy-review

The diversity of candidates is monitored at various stages throughout the recruitment process. To assess the relative levels of success we examine the progress of all the candidates who have applied for posts on a quarterly basis. Candidates may apply for multiple roles but only one application per candidate per quarter is considered, and the application that is considered is the one that made it furthest through the process.

A cohort approach is used in the accompanying data tables, with the progress of people through all later stages of the recruitment process shown in the quarter the candidate applied in. However, the subsequent stages of the process may have occurred in later quarters than the one in which the candidate applied. For example, if a candidate applied in March 2018 their progress would be represented in Q1 2018 in the data tables, even if the later stages happened in Q2 2018. If the candidate applied at the very end of the quarter they are likely to only be in the application stage and not represented in any of the later stages of the process.

For prison officer recruitment in the Public Sector Prisons we examine the volumes of candidates who have progressed through each of the following stages of the recruitment process:

Public Sector Prison Officer Recruitment Stage	Description
Application	The candidate submits an online application for a role as a prison officer. To progress to the next stage the candidate will have to pass an online test, which tests candidates' situational judgement and the mathematical skills needed for the role. Some prisons also invite candidates to attend a familiarisation tour prior to their invitation to the assessment day.
Applicants invited to assessment	All candidates who pass the online tests will be invited to attend an assessment day. The assessment day consists of a literacy and language test, a fitness test, role-playing tests with actors playing the part of prisoners, and retake the situational judgement and mathematical skills test.
Applicant successful at assessment	If the assessment is passed the candidate will then either immediately be made a provisional offer, or if there is not an immediate vacancy at the prison, the candidate may be placed on a merit list until a vacancy arises and will be made a provisional offer when one does.
Applicant made provisional offer	Candidates who have been made a provisional offer will now undergo pre-employment checks including security vetting.
Applicant made formal offer	A candidate will be made a formal offer when they pass all the pre-employment checks.
Applicant accepts formal offer	Candidate has confirmed acceptance of Formal Offer and this has been recorded on the recruitment system.

For OSG recruitment there are the following stages:

OSG Recruitment Stage	Description
Application	The candidate submits an online application for a role as an OSG.
Applicants invited to interview	Applications are reviewed through a sift process and successful applicants will be invited to Interview.

Applicant successful at interview	If the candidates pass the interview they will then either immediately be made a provisional offer, or if there is not an immediate vacancy at the prison, the candidate may be placed on a merit list until a vacancy arises and will be made a provisional offer when one does.
Applicant made provisional offer	Candidate who have been made a provisional offer will now undergo pre-employment checks including security vetting.
Applicant made formal offer	A candidate will be made a formal offer when they pass all the pre-employment checks
Applicant accepts formal offer	Candidate has confirmed acceptance of Formal Offer and this has been recorded on the recruitment system.

Representation percentages

Within the bulletin, representation percentages are presented for the following stages of the recruitment process:

- Initial applications;
- invitations to assessment/interview;
- provisional offers;
- formal offers; and
- acceptances of formal offer.

The diversity statistics in this report are based on self-declared information that applicants have provided on the Oleeo recruitment system. Completion of the data on Oleeo is voluntary, and the information is not considered during the recruitment process. The declaration rates are high at above 98 per cent. Some applicants choose not to declare their ethnicity or disability status, or do not complete the information – these applicants are grouped together and included in the ‘Unknown’ group. This is not a meaningful category, and accordingly those who do not declare their information are not included within the analysis.

The **declaration rate** is therefore calculated as the total number of valid declarations divided by the total number of declarations. Where the declaration rate of a diversity characteristic is in excess of 60 per cent, we also present a **representation rate** which is calculated as the known declarations from the particular group divided by the total number of valid declarations of the characteristic. This represents the best estimate of the true level of representation among all candidates. To date, declaration rates in this data have far exceeded the 60 per cent threshold to allow us to present representation percentages for every stage in the recruitment process. However, it should be noted that for some campaigns in some quarters, the numbers involved can be very small, and where there are two or fewer individuals in a cell in the accompanying Excel tables, these numbers have been suppressed to avoid disclosure.

Representation percentages allow comparison of the distribution of diversity at the various recruitment stages outlined above. This is particularly useful for the application stage, providing a clear picture of the diversity of the pool of applicants, and how closely they represent the general population, or the diverse make-up of local populations where a recruitment campaign is localised to a particular geographic area. It is also particularly useful at the formal offer stage to illustrate distribution of diversity at the final stage. However, representation among those receiving a formal offer is the result of both the representation among applicants and rates of success for each group at the preceding stages.

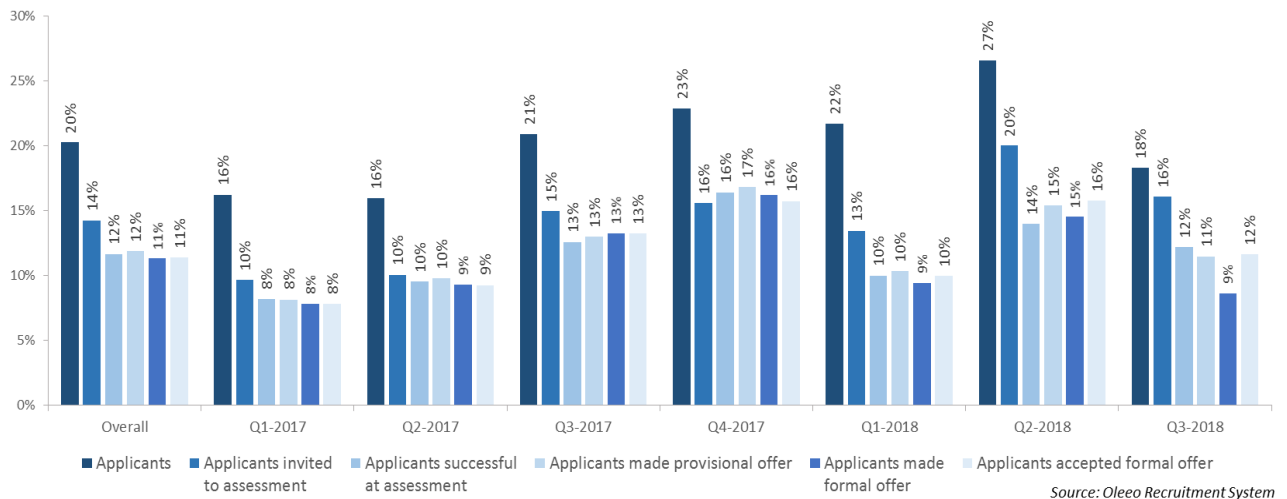
To make valid comparisons across time or across different exercises requires a measure of disparity of outcomes on a standard scale. This standardised measure of disparity of outcomes is described as the **Relative Rate Index (RRI)**.

Further details on the RRI can be found in the Further Information section at the end of this publication. RRIs calculated on a quarterly basis are presented for information only. Caution should be used interpreting these figures as in many cases they may not be statistically significant, particularly where they are based on very low number of applicants.

Detailed Results

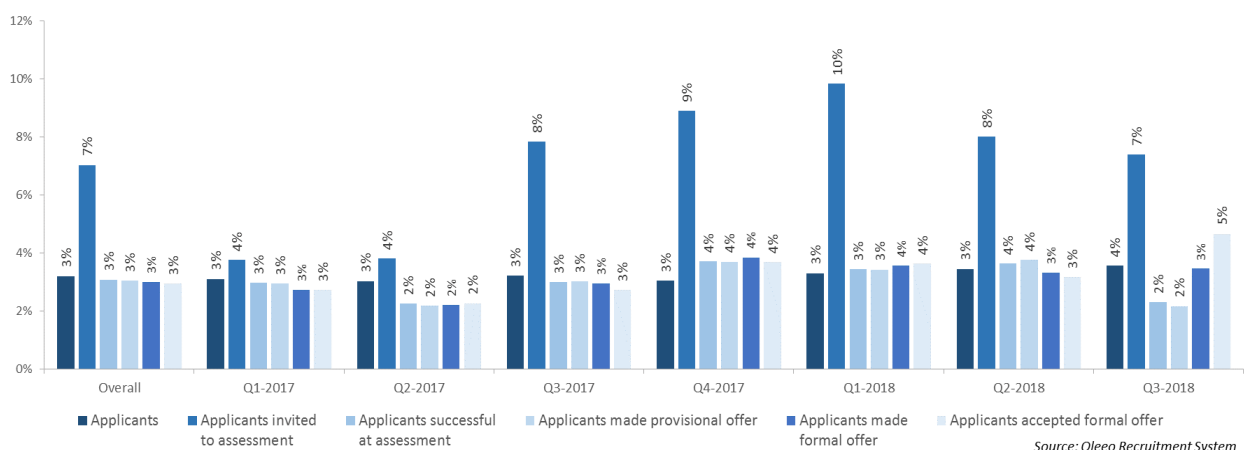
Prison Officers (Summary Table 1a and Table 2)

Figure 1: BAME representation for prison officer candidates at each stage of the application process, Q1 2017 to Q3 2018



BAME candidates made up 20.3% of all applicants, and 11.4% of formal offers accepted between January 2017 and September 2018. These proportions have varied over the quarters of the 21-month period covered by this report, and generally the proportion increased from 16.2% to 26.6% in Q2 2018 for applicants, and similarly from 7.8% to 15.8% for offers formally accepted. However, there was a drop in the latest quarter to 18.3% and 11.6% respectively. In part this variation will be due to where in the country the campaigns were being run at any particular time, and the BAME makeup of the local working populations being recruited from.

Figure 2: Disability representation for prison officer candidates at each stage of the application process, Q1 2017 to Q3 2018



Disabled candidates made up 3.2% of all applicants, and 2.9% of formal offers accepted between January 2017 and September 2018. These proportions generally remained the same over the quarters of the 21-month period.

In general, the proportion represented by BAME candidates decreased during the selection process from application, whereas for disabled candidates a higher proportion was invited to assessment, after which it dropped and remained stable for the remainder of the process.

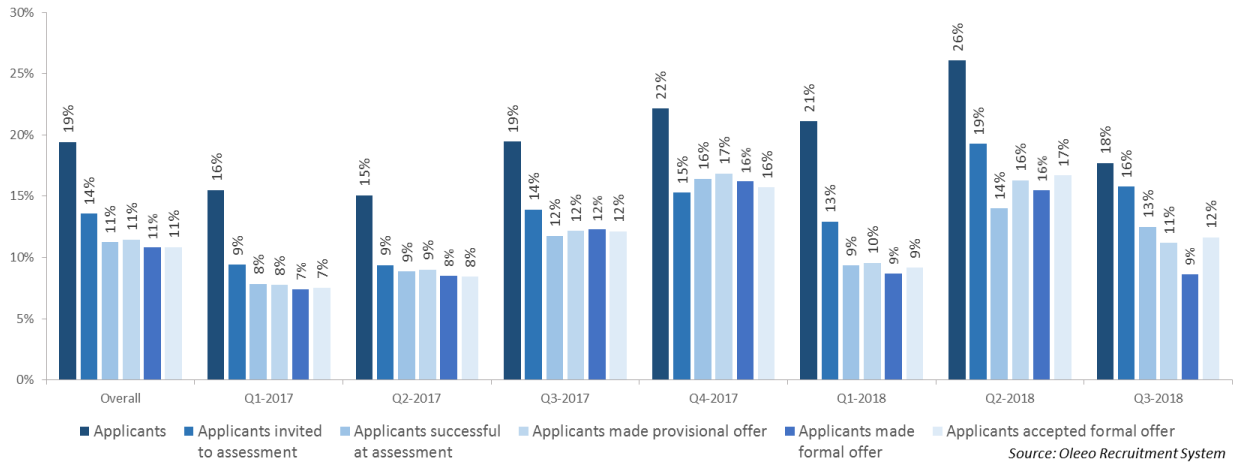
Relative comparison of the overall rates for the 21-month period by ethnicity gives a statistically significant RRI value of 0.50, which represents a significant disparity of outcomes², with BAME candidates having around half the rate of success compared with white candidates.

In comparison, the RRI value for disability over the same period was 0.91, but this is not statistically significant and so does not provide evidence of an adverse impact on the success of disabled candidates.

² RRI values falling outside the range 0.80 to 1.25 are outside the range within which the magnitude of the difference in rates would not normally represent evidence of adverse impact on one group.

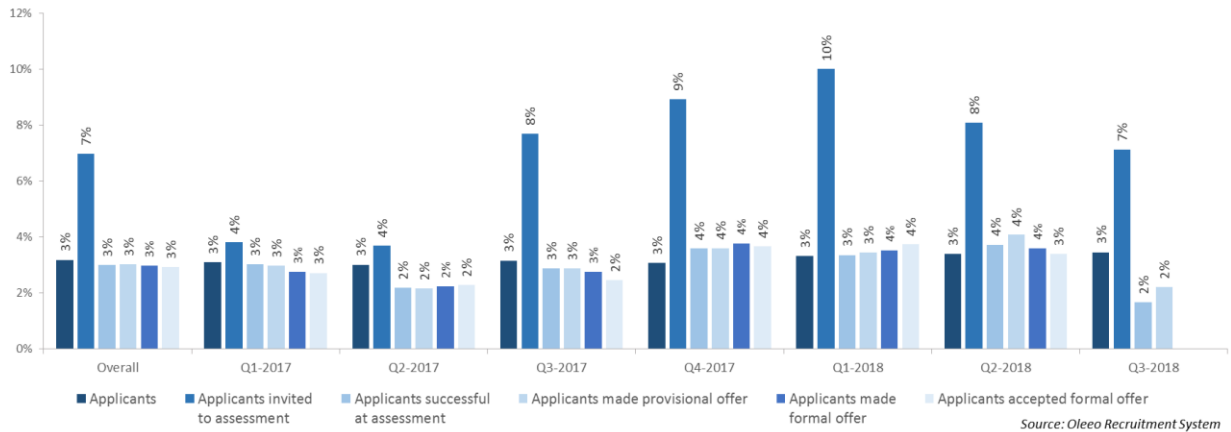
Public Sector Prisons Prison Officers (Summary Table 1b and Table 2a)

Figure 3: BAME representation for PSP prison officer candidates at each stage of the application process, Q1 2017 to Q3 2018



BAME applicants made up 19.4% of applicants and 10.8% of formal offers accepted over the last 21 months. This has varied over the quarters (applicants from 15.1% to 26.1%, offers accepted from 7.5% to 16.7%), in part due to where campaigns were being run across the country and the BAME makeup of the local working populations being recruited from. For example, in Q2 2018 with the highest percentages covered in this report, there was large-scale recruitment for inner-London prisons.

Figure 4: Disability representation for PSP prison officer candidates at each stage of the application process, Q1 2017 to Q3 2018



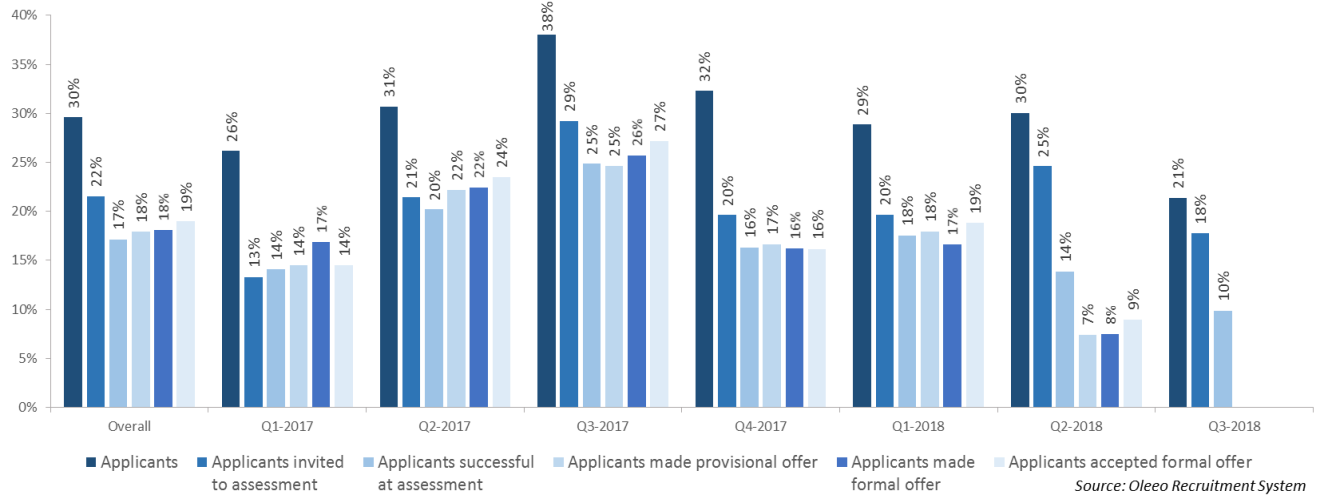
As for all Prison officers, disabled PSP candidates made up 3.2% of all PSP applicants, and 2.9% of formal offers accepted between January 2017 and September 2018. These proportions generally remained the same over the quarters of the 21-month period, with the exception of the stage where applicants are invited to assessment, where the proportion of candidates who declared themselves disabled increased from 4% to 7% between January 2017 and September 2018.

The RRI for ethnicity was the same for PSP applicants as for all Prison officers, with a statistically significant value of 0.5 for the period as a whole, meaning that BAME candidates had around half the rate of success compared with white candidates.

The overall RRI value for disability over the same period was 0.91, but is not statistically significant and so does not indicate that there is an adverse impact on the success of disabled candidates.

Youth Custody Service (YCS) Prison Officers (Summary Table 1c and Table 2b)

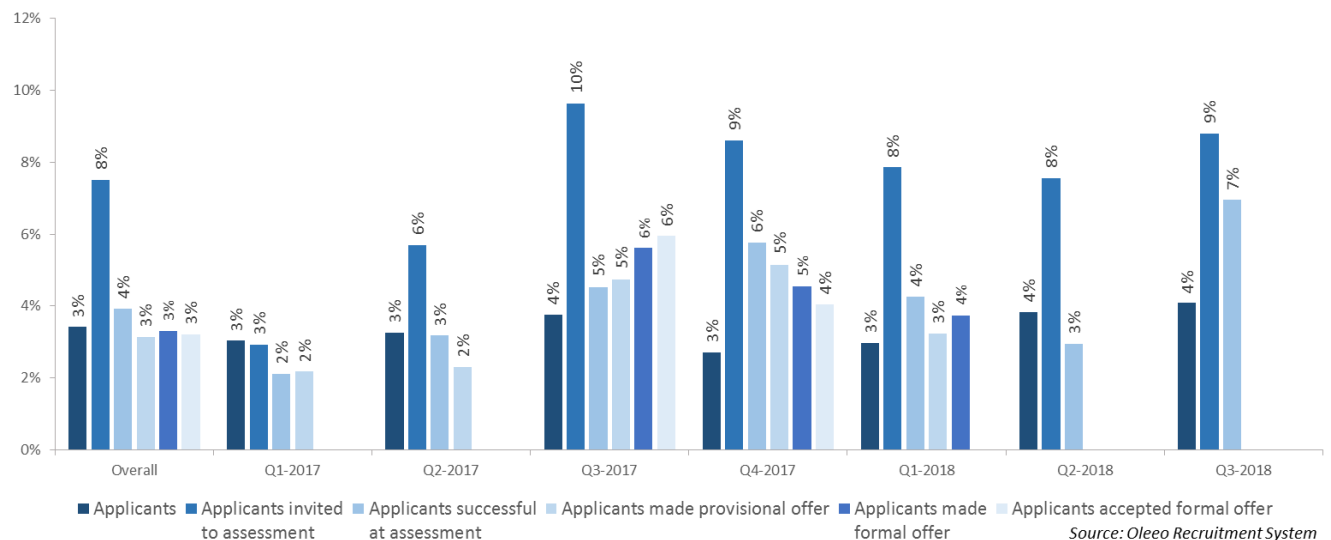
Figure 5: BAME representation for YCS prison officer candidates at each stage of the application process, Q1 2017 to Q3 2018



BAME applicants made up 29.6% of applicants and 19.0% of formal offers accepted over the whole period. This is a higher proportion than in Public Sector Prisons, but the number of overall applications is much smaller (there were 16,242 applicants to the YCS compared with 175,167 applicants to Public Sector Prisons).

As above, the proportions of BAME applicants varied between quarters, from 21.4% to as high as 38.1%. Those who accepted a formal offer also varied from 9.0% to 27.2%, but the low number of individuals involved in some quarters should be noted.

Figure 6: Disability representation for YCS prison officer candidates at each stage of the application process, Q1 2017 to Q3 2018



Disabled YCS prison officer candidates made up 3.4% of all YCS applicants and 3.2% of formal offers accepted between January 2017 and September 2018. Again, these proportions (where shown) generally remained the same over the quarters of the 21-month period. Again, the exception was at the second stage, where the proportion of candidates

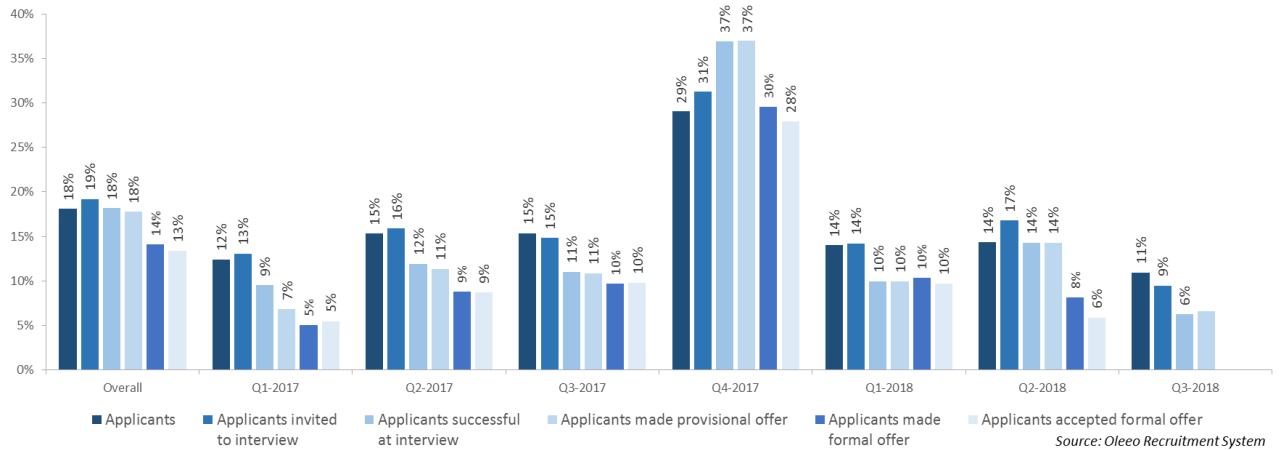
who declared themselves disabled increased from 3% to 9% between January 2017 and September 2018.

Looking at the RRI, the overall ethnicity value was 0.56 for the whole period, which again is statistically significant, indicating that BAME candidates had just over half the rate of success compared with white candidates.

The overall RRI value for disability for YCS prison officers over the same period was 0.94. This is not statistically significant and there is no evidence of any adverse impact on disabled candidates.

Operational Support Grades (Summary Table 1d and Table 3)

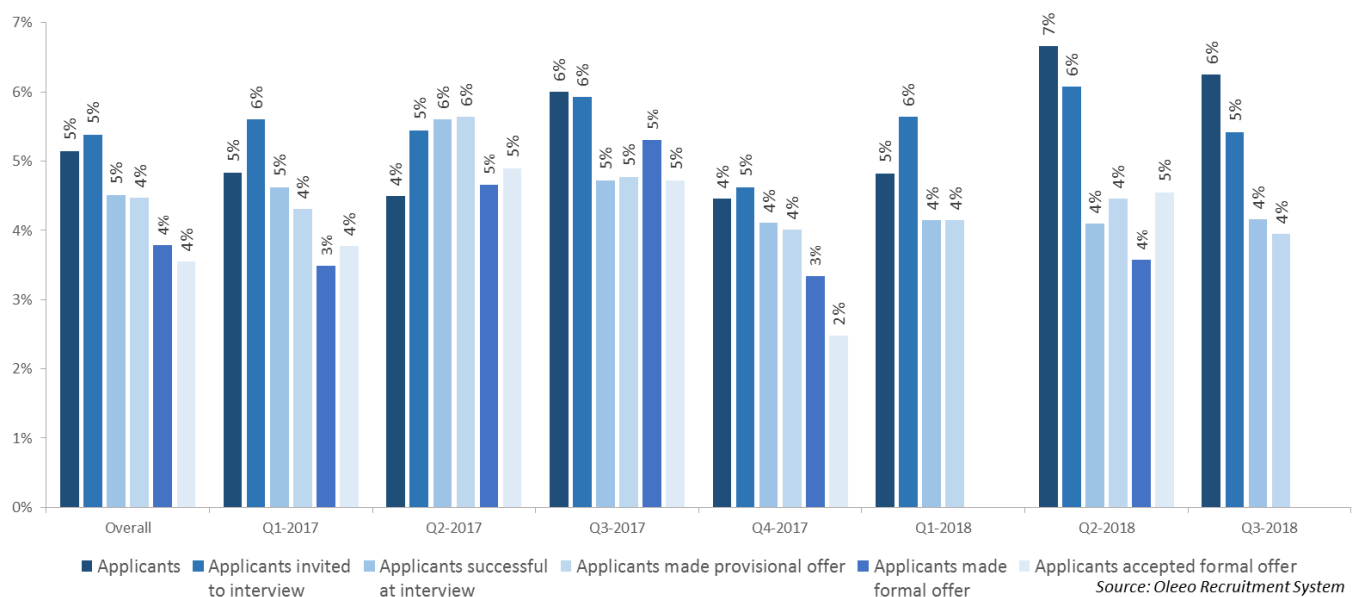
Figure 7: BAME representation for Operational Support Grade (OSG) candidates at each stage of the application process, Q1 2017 to Q3 2018



Due to the very small numbers involved, we have combined campaigns for Public Sector Prisons and the Youth Custody Service for Operational Support Grades. Even having done this, the numbers involved in each quarter are still small so any conclusions should be treated with caution.

For the time period as a whole, **BAME applicants made up 18.1% of applicants and 13.4% of formal offers accepted.** There was a large variation between quarters –the proportion of applicants who were BAME was 29.1% in Q4 2017 (when there was large-scale OSG recruitment in Inner and Outer London), but much less for all other quarters. The same is seen for those BAME candidates who were formally offered a post, with a high of 27.5% in Q4 2017 and much lower proportions in all other quarters.

Figure 8: Disability representation for Operational Support Grade (OSG) candidates at each stage of the application process, Q1 2017 to Q3 2018



Disabled OSG candidates made up 5.1% of all OSG applicants, and 3.6% of formal offers accepted between Q1 2017 and Q3 2018. Again, these proportions (where shown) were generally the same across the quarters of the period covered by this report.

The ethnicity RRI for OSG candidates over the period overall was 0.70, whilst the disability RRI was 0.68, both of which are statistically significant. This suggests that there is some evidence of an adverse impact on both BAME and disabled candidates applying for an Officer Support Grade post.

Further information

Technical information

The diversity statistics in this report are based on self-declared information that applicants have provided on the Oleeo recruitment system. Completion of the data on Oleeo is voluntary. Some applicants choose not to declare their details or do not complete the information – these applicants are grouped together and included in the ‘Unknown’ group. This is not a meaningful category, and accordingly those who do not declare their information cannot be included within analysis of the outcomes.

Any records downloaded from the Oleeo system with a time stamp after 23:59 on the last day of September 2018 have been removed. Some records do not have a timestamp for some of the recruitment stages. Where this is the case we have assumed that where a candidate has reached a particular stage, he or she passed all the previous stages, even if they don’t actually have the relevant timestamps for all those earlier stages.

A single candidate can make multiple applications. Where this is the case duplicates have been removed to leave a single instance of each candidate in each quarterly cohort (an individual can appear a maximum of 6 times in the table). The application which got furthest in the process is selected. In the case of several from each quarter at the same stage the earliest submission is selected. This selection is done before we split the data into Public Sector Prisons and Youth Custody Service; this is done to ensure that individuals are not counted twice in the overall totals, and if an individual applies to both PSP and YCS in the same quarter only one application is reported. This ensures that the volumes in PSP and YCS tables sum to give the volumes in the overall table.

Applications are categorised as Youth Custody Service (YCS) if the Oleeo ‘building/site’ field corresponds to Cookham Wood, Feltham, Medway Secure Training Centre, Werrington or Wetherby. All other applications are considered to be for a PSP. Oleeo does not separate Feltham A and B sites, so all Feltham applications are categorised as YCS in the tables in this report.

Within the prison officer applications, the vast majority of roles are advertised as “Prison Officer”; however, recently there have been a small number that are advertised as “youth officer”. This is a prison officer role that aimed particularly at prison officers who will work with juvenile offenders in the YCS. This Youth Office role has been included with Prison Officers in this publication.

Relative Rate Index (RRI)

The RRI, or Relative Risk³ is a standard statistical metric, which provides a standardised, comparable measure of disparity of outcomes between groups. This metric is independent of variation in the overall rate of successful outcomes in different time periods in binary comparisons. This has been adopted in line with the Judicial Appointments Commission use of the RRI for presenting similar data, and the RRI was widely used within the Lammy Review⁴. These statistics use this metric to give a standardised, meaningful and straightforward view of any disparity of outcomes on recruitment by diversity.

³ Altman DG (1991) Practical statistics for medical research. London: Chapman and Hall

⁴ www.gov.uk/government/organisations/lammy-review

The RRI is calculated by dividing the rate of success for one group by the rate of success for the other group, thus creating a single standardised ratio measure of relative disparity. If the rates were the same, the result would be a value of 1, which would indicate identical rates for both groups (that is a parity of outcomes). Deviation from 1 in either direction suggests a difference in the rates of outcomes.

Considering differences in the two rates on a relative basis on a standard scale, enables direct comparison of any disparity of outcomes between groups across exercises and across time. By convention, the RRI has been calculated with the under-represented group as the numerator, with the baseline reference group as the denominator. However, calculation in the reverse direction is equivalent and would result in the same interpretation.

When comparing rates and the RRI, it is important to consider uncertainty, to avoid the over-interpretation of fluctuations in outcomes that may be the result of chance alone.

Tests of statistical significance have been conducted on the estimates in this publication that are based on the full 21-month period in order to ensure the interpretation of the RRI values take full account of the probability that the observed outcome may be the result of chance alone. Where a RRI is significant at the 95% confidence level, this has been denoted against the RRIs in Table 1 with a ‘***’.

In addition to consideration of the extent to which chance variation is involved in any apparent difference in the rates, it is important to consider what is known as the effect size – whether the actual magnitude of the apparent difference in the rates is sufficient to have a material impact, or whether the difference is small and of little material impact. To represent a meaningful disparity of outcomes, an apparent difference must be both statistically significant (unlikely to be the result of chance alone), and of sufficient magnitude to be of material effect.

As well as significance testing the RRIs in table 1, this bulletin has also adopted a simple rule of thumb with a long history of use with the RRI in establishing whether an apparent disparity may be of sufficient magnitude to be representative of evidence of adverse impact. From the basis of a 1971 US Supreme Court ruling⁵, in 1978 the US government adopted the ‘Uniform Guidelines for Employee Selection Procedures’⁶ that were developed by the Technical Advisory Committee for Testing (TACT) for testing employment and personnel processes for disproportionality, taking into account the likelihood that effects were not the result of chance variation, and that the magnitude of such effects were sufficient to represent disadvantage. This is the **4/5 rule of thumb for adverse impact**⁷.

From this rule, **an RRI within the range of 0.8 to 1.25 should generally not be considered as evidence of an adverse impact**. This sets a range around parity, within which fluctuations at least in part due to natural variation would not be taken as evidence of a disparity of outcomes representative of adverse impact to one group.

An important note is that while values falling within the range 0.8 to 1.25 are not considered as evidence of adverse impact, it does not necessarily follow that values outside of this range would be considered evidence of adverse impact, should the RRI not differ significantly from parity. This is particularly pertinent with smaller samples, where the margin of error (the range of natural volatility that would be anticipated due to chance variation alone) will be wider. As such, both statistical significance and an effect size where an RRI

⁵ Griggs v. Duke Power Co., 401 U.S. 424, 431-2 (1971).

⁶ [uniformguidelines.com/uniformguidelines.html#18](https://www.eeoc.gov/technical-guidelines/uniform-guidelines.html#18)

⁷ [adverse-impact.com/research/](https://www.eeoc.gov/technical-guidelines/uniform-guidelines.html#18)

falls outside of the range 0.8 to 1.25 should be generally required to establish evidence of a disparity.

Findings suggestive of adverse impact do not necessarily imply issues within the selection exercise process and may reflect other differences between groups, such as level of experience. As rates are the combined result of representation among applicants and application success, it is essential that a disparity of outcomes is interpreted in conjunction with a view on representation among applicants and success at each stage of the process.

This is a framework within which to consider outcomes. However, it should not be applied prescriptively without fully considering the context. Systematic trends in one direction, where significant results of small effect are found, may also be considered evidence of an underlying issue.

Notes and Conventions

The following symbols are used within the tables in this experimental statistics release:

~	values of two or fewer which have been suppressed
*	percentage suppressed due to small numbers. Where small numbers are present, percentages are highly volatile and potentially misleading.
-	denotes relative rate index not calculated due to suppressed values

Experimental Statistics

The statistics in this report are classified as experimental official statistics. Experimental statistics are statistics that are in the testing phase and not yet fully developed. This report has been designated experimental as it is the first time the methodology has been used and the results published. As such, the methods and approach used in this report are subject to modification. More information about the different types of Official Statistics can be found here:

www.statisticsauthority.gov.uk/about-the-authority/uk-statistical-system/types-of-official-statistics/

Feedback relating to the content of this release should be sent to:
statistics.enquiries@justice.gsi.gov.uk

Related statistics

These experimental Official Statistics have been published alongside Her Majesty's Prison and Probation Service (HMPPS) Workforce Statistics Bulletin, as at 30 September 2018.

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Next update: 21 February 2019

URL: www.gov.uk/government/collections/national-offender-management-service-workforce-statistics

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