



Ministry
of Justice

Statistical Notice

Methodological changes to the calculation of statistics on First Time Entrants to the Criminal Justice System in England and Wales

30th January 2014

Background

This ad-hoc statistical notice presents updated figures on first time entrants to the Criminal Justice System in England and Wales following a methodological change.

Statistics on first time entrants to the Criminal Justice System in England and Wales can be found in the Criminal Justice Statistics Quarterly bulletin. www.gov.uk/government/collections/criminal-justice-statistics-quarterly

Specifically, the methodological change outlined here updates the figures in the following tables from the quarterly bulletin: Q7.1, Q7.2, Q7.3, Q7a, Q7b, Q7c(i), Q7c(ii), Q7d, Q7e, Q7f, Q7g, Q7h, Q7i and Q7j

Statistics about first time entrants are taken from the Ministry of Justice's extract from the Police National Computer (PNC), the operational database used by all police forces in England and Wales. Penalty notices for disorder, other types of penalty notice, cannabis warnings and other sanctions given by the police are not counted. The rates of first time entrants per 100,000 people in the population are based on Office for National Statistics mid-year population estimates.

Details of the methodological change

The Criminal Justice Statistics Bulletin defines a first time entrant to the Criminal Justice System as an offender who has received their first caution or conviction¹ for an offence processed by a police force in England or Wales or by the British Transport Police.

The measure is intended to exclude any offenders who, at the time of their first conviction or caution, were resident outside England or Wales. Each offender's home address as recorded by the police on the PNC is used to identify whether the offender was resident in England and Wales at the point of receiving their caution or conviction.

In order to identify the addresses that fall within England and Wales, a matching process is used whereby the address given is matched to different local authorities and countries using a dedicated piece of matching software². This matching process identifies whether the offender's address is either within or outside of England and Wales and, in doing so, also identifies a number of offenders for which either no address was recorded or where it is not possible to link the address with a specific country.

¹ Includes juvenile reprimands and warnings prior to their removal in April 2013

² Matchcode software, GBPGroup PLC

The existing methodology for calculating the number of first time entrants includes all of those offenders who were matched conclusively to an address in England and Wales **and** all of those offenders who could not be matched to any address or country. The methodology therefore assumes that all offenders who could not be matched to an address reside in England and Wales.

The new methodology aims to improve the way that these unmatched offenders are dealt with by calculating, for those offenders who were conclusively matched to an address either within or outside of England and Wales, the proportion that were matched to an address in England and Wales. This proportion is calculated for each year and then applied to the pool of offenders for whom it was not possible to match conclusively. The new method therefore no longer assumes that all unmatched offenders reside in England and Wales, but that the proportion residing in England and Wales for those that were matched is equivalent to the proportion for those that were not.

See an example below for the cohort of first time entrants in the year ending March 2013:

Step 1: Match offenders' postcode to local authorities in England and Wales and countries using a piece of matching software.

No of offenders matched to England and Wales	168,547
No of offenders matched to a foreign postcode	1,400
No of offenders' with no postcode match	8,080
Total number of offenders	178,027

Step 2: Calculate the proportion of matched offenders with a foreign postcode

$$\frac{\text{Number of offenders matched to a foreign postcode}}{\text{Total number of matched offenders}} = \frac{1,400}{(168,547 + 1,400)} \times 100 = 0.82\%$$

Step 3: Assume offenders with no postcode match will have the same proportion of offenders with a foreign postcode; therefore remove these offenders from our cohort by applying the proportion calculated in Step2.

$$8,080 \times 0.82\% = 67 \text{ offenders to be removed}$$

Step 4: Calculate total number of first time entrants residing in England and Wales

$$168,547 + (8,080 - 67) = 176,560 \text{ first time entrants in the year ending March 2013}$$

Unfortunately, whilst making this methodological improvement, an error was identified in how the existing calculation methodology was applied within the last 3 quarterly statistical bulletins, namely those containing data for the years ending December 2012, March 2013 and June 2013. More details about this processing error and its impact on the published statistics are given at Annex A.

Impact of methodological change on First Time Entrant Statistics

The methodological change outlined above has a minimal effect on the overall first time entrant figures, particularly those calculated for the most recent years. This is because the number of offenders who it was not possible to match conclusively on the basis of their recorded address on the PNC is relatively low and has been falling over time as data quality has improved.

As an example, the number of first time entrants of all ages to the criminal justice system in the 12 months ending March 2013 falls by around 60 cases under the new methodology, whereas the reductions for the 12 months ending March 2007 is slightly higher at around 210 cases. In percentage terms, however, both differences are small, affecting the overall numbers by less than 0.01 percent. Similar percentage changes were found when comparing the proportion of first time entrants of all ages to the criminal justice system per 100,000 population and for the juvenile and adult breakdowns of these statistics.

The tables presented below outline the impact of the methodological change in more detail, while updated versions of all affected tables from the last 2 bulletins have been provided at:

www.gov.uk/government/uploads/system/uploads/attachment_data/file/275919/offending-histories-March-2013.xls

www.gov.uk/government/uploads/system/uploads/attachment_data/file/275921/offending-histories-june-2013.xls

It should be noted that this methodological change will be used for all subsequent releases of the quarterly criminal justice statistics bulletin.

Table 1: First time entrants to the criminal justice system⁽¹⁾ by age group, 12 months ending March 2003 to 12 months ending March 2013

Numbers of offenders						
12 month period to the end of March	Existing Methodology			New Methodology		
	Juveniles	Adults	All ages	Juveniles	Adults	All ages
2003	83,369	187,806	271,175	83,312	187,676	270,989
2004	88,448	195,197	283,645	88,399	195,080	283,479
2005	96,199	193,578	289,777	96,145	193,458	289,602
2006	107,686	216,663	324,349	107,626	216,517	324,143
2007	110,813	220,466	331,279	110,748	220,315	331,063
2008	100,392	219,773	320,165	100,353	219,670	320,023
2009	80,363	204,393	284,756	80,340	204,317	284,656
2010	62,576	191,215	253,791	62,559	191,144	253,703
2011	45,963	181,184	227,147	45,950	181,120	227,070
2012	36,929	165,595	202,524	36,920	165,536	202,456
2013	27,862	148,765	176,627	27,854	148,706	176,560

(1) Offenders recorded on the Police National Computer by an English or Welsh police force as having received their first conviction, caution, reprimand or warning. Offences resulting in Penalty Notices for Disorder are not counted as first offences.

Table 2: First time entrants to the criminal justice system⁽¹⁾ as a rate per 100,000 of the population⁽²⁾, by age group, 12 months ending March 2003 to 12 months ending March 2013

Rates per 100,000 of the population						
12 month period to the end of March	Existing Methodology			New Methodology		
	Juveniles	Adults	All ages	Juveniles	Adults	All ages
2003	1,527	460	586	1,526	460	586
2004	1,615	475	609	1,614	475	609
2005	1,754	468	618	1,753	467	618
2006	1,964	518	686	1,963	518	685
2007	2,026	522	695	2,025	522	695
2008	1,834	516	666	1,833	516	666
2009	1,474	475	588	1,473	475	587
2010	1,157	441	520	1,157	441	520
2011	858	414	462	857	414	462
2012	695	375	409	695	375	409
2013	533	334	355	533	334	355

(1) Offenders recorded on the Police National Computer by an English or Welsh police force as having received their first conviction, caution, reprimand or warning for offences committed in England and Wales. Offences resulting in Penalty Notices for Disorder are not counted as first offences.

(2) Population has been based on mid-year population estimates for each age group supplied by the Office for National Statistics. The previous year's estimate has been used for calculating the rate in the subsequent year. For example, the 2001 mid-year estimate has been used for calculating the rate for 2002 and so on.

Table 3: First time entrants to the criminal justice system⁽¹⁾⁽²⁾, by age group, 12 months ending June 2003 to 12 months ending June 2013
Numbers of offenders

12 month period to the end of June	Existing Methodology			New Methodology		
	Juveniles	Adults	All ages	Juveniles	Adults	All ages
2003	83,409	189,081	272,490	83,355	188,956	272,311
2004	90,634	195,151	285,785	90,583	195,032	285,616
2005	100,167	199,255	299,422	100,111	199,128	299,239
2006	107,997	218,839	326,836	107,935	218,689	326,624
2007	111,021	220,905	331,926	110,960	220,764	331,724
2008	94,475	217,306	311,781	94,443	217,211	311,654
2009	76,489	200,305	276,794	76,467	200,231	276,698
2010	56,753	188,183	244,936	56,738	188,116	244,855
2011	43,191	177,365	220,556	43,179	177,300	220,478
2012	34,107	160,791	194,898	34,098	160,732	194,830
2013	26,078	146,988	173,066	26,071	146,929	173,000

(1) Offenders recorded on the Police National Computer by an English or Welsh police force as having received their first conviction, caution or the youth caution. Offences resulting in Penalty Notices for Disorder are not counted as first offences.

(2) Since 8th April 2013 there have been a number of changes in the out of court disposals. The previously known reprimand and warning have been replaced with a new out of court disposal: The Youth Caution for young offenders. The guidance is published at the link <http://www.justice.gov.uk/out-of-court-disposals>.

Table 4: First time entrants to the criminal justice system⁽¹⁾ as a rate per 100,000 of the population⁽²⁾, by age group, 12 months ending June 2003 to 12 months ending June 2013

Rates per 100,000 of the population

12 month period to the end of June	Existing Methodology			New Methodology		
	Juveniles	Adults	All ages	Juveniles	Adults	All ages
2003	1,528	463	589	1,527	463	588
2004	1,655	475	614	1,654	475	613
2005	1,826	481	639	1,825	481	638
2006	1,969	523	691	1,968	523	691
2007	2,030	523	696	2,029	523	696
2008	1,726	510	649	1,725	510	648
2009	1,403	466	571	1,402	466	571
2010	1,049	434	502	1,049	434	502
2011	806	405	449	806	405	449
2012	642	364	394	642	364	394
2013	499	330	348	498	330	348

(1) Offenders recorded on the Police National Computer by an English or Welsh police force as having received their first conviction, caution, reprimand or warning for offences committed in England and Wales. Offences resulting in Penalty Notices for Disorder are not counted as first offences.

(2) Population has been based on mid-year population estimates for each age group supplied by the Office for National Statistics. The previous year's estimate has been used for calculating the rate in the subsequent year. For example, the 2001 mid-year estimate has been used for calculating the rate for 2002 and so on.

Annex A

Whilst making this methodological change, an error was identified in how the existing methodology was applied to identify first time entrants. This affected statistics within the last 3 quarterly statistical bulletins, namely those containing data for the years ending December 2012, March 2013 and June 2013. Details of this processing error and its impact are provided below.

First time entrants are identified by excluding offenders who, at the time of their first conviction or caution, were resident outside England or Wales. Each offender's home address as recorded by the police on the PNC is used to identify whether the offender was resident in England and Wales at the point of receiving their caution or conviction.

In order to identify the addresses that fall within England and Wales, a matching process is used whereby the address given is matched to postcode directory with different local authorities and countries using a dedicated piece of matching software.

Since 2011, a series of new country codes were introduced to the Office for National Statistics postcode directory used to identify offenders residing in England and Wales. Offender's with postcodes that mapped to these new country codes were inadvertently excluded from the statistics, as these new codes were not included in the existing methodology. Figures published prior to the year ending December 2012 were not affected.

As a result, the first time entrant statistics published after this quarter were underestimated – see Tables A1 and A2 below for statistics in the year ending March 2013.

Table A1: Changes to statistics on first time entrants to the criminal justice system⁽¹⁾ by age group, 12 months ending March 2003 to 12 months ending March 2013

Numbers of offenders									
12 month period to the end of March	Figures published with error			Corrected figures using existing methodology			% Change		
	Juveniles	Adults	All ages	Juveniles	Adults	All ages	Juveniles	Adults	All ages
2003	75,058	178,097	253,155	83,369	187,806	271,175	11%	5%	7%
2004	79,494	184,785	264,279	88,448	195,197	283,645	11%	6%	7%
2005	87,663	183,957	271,620	96,199	193,578	289,777	10%	5%	7%
2006	100,320	206,390	306,710	107,686	216,663	324,349	7%	5%	6%
2007	104,822	209,916	314,738	110,813	220,466	331,279	6%	5%	5%
2008	96,346	210,660	307,006	100,392	219,773	320,165	4%	4%	4%
2009	77,442	197,305	274,747	80,363	204,393	284,756	4%	4%	4%
2010	60,303	184,725	245,028	62,576	191,215	253,791	4%	4%	4%
2011	44,635	175,484	220,119	45,963	181,184	227,147	3%	3%	3%
2012	35,913	160,096	196,009	36,929	165,595	202,524	3%	3%	3%
2013	27,102	144,005	171,107	27,862	148,765	176,627	3%	3%	3%

(1) Offenders recorded on the Police National Computer by an English or Welsh police force as having received their first conviction, caution, reprimand or warning. Offences resulting in Penalty Notices for Disorder are not counted as first offences.

Table A2: Changes to statistics on first time entrants to the criminal justice system⁽¹⁾ as a rate per 100,000 of the population⁽²⁾, by age group, 12 months ending March 2003 to 12 months ending March 2013

Rates per 100,000 of the population									
12 month period to the end of March	Figures published with error			Corrected figures using existing methodology			% Change		
	Juveniles	Adults	All ages	Juveniles	Adults	All ages	Juveniles	Adults	All ages
2003	1,375	436	547	1,527	460	586	-10%	-5%	-7%
2004	1,451	450	567	1,615	475	609	-10%	-5%	-7%
2005	1,598	444	579	1,754	468	618	-9%	-5%	-6%
2006	1,829	494	648	1,964	518	686	-7%	-5%	-5%
2007	1,917	497	660	2,026	522	695	-5%	-5%	-5%
2008	1,760	495	639	1,834	516	666	-4%	-4%	-4%
2009	1,420	459	567	1,474	475	588	-4%	-3%	-4%
2010	1,115	426	502	1,157	441	520	-4%	-3%	-3%
2011	833	401	448	858	414	462	-3%	-3%	-3%
2012	676	362	396	695	375	409	-3%	-3%	-3%
2013	518	324	344	533	334	355	-3%	-3%	-3%

(1) Offenders recorded on the Police National Computer by an English or Welsh police force as having received their first conviction, caution, reprimand or warning for offences committed in England and Wales. Offences resulting in Penalty Notices for Disorder are not counted as first offences.

(2) Population has been based on mid-year population estimates for each age group supplied by the Office for National Statistics. The previous year's estimate has been used for calculating the rate in the subsequent year. For example, the 2001 mid-year estimate has been used for calculating the rate for 2002 and so on.

The error identified impacts the year's prior to 2008 more than the most recent years' data because the police recording of postcode on the Police National Computer has improved over time, therefore the reduction in the number of first time entrants over recent years is now slightly sharper than originally published. However the overall trend is similar both before and after the revision with the number of first time entrants rising to a peak in 2007 and then falling away sharply. The revised figures show that, since the 2007 peak, the number of juvenile first time entrants has fallen by 75% instead of the 74% reduction originally reported.

The methodology has been fully quality assured and thorough quality assurance processes and checks have been introduced to avoid similar mistakes in the future.

Contacts

Press enquiries should be directed to the Ministry of Justice press office:

Tel: 020 3334 3536

Email: newsdesk@justice.gsi.gov.uk

Other enquiries about these statistics should be directed to the Justice Statistics Analytical Services division of the Ministry of Justice:

Mike Elkins
Chief Statistician
Ministry of Justice
7th Floor
102 Petty France
London
SW1H 9AJ
Email: statistics.enquiries@justice.gsi.gov.uk

General enquiries about the statistical work of the Ministry of Justice can be e-mailed to: statistics.enquiries@justice.gsi.gov.uk

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