

Deaths in State Custody

BACKGROUND STATISTICAL RELEASE 2015

INDEPENDENT ADVISORY PANEL ON DEATHS IN CUSTODY



Ministry
of Justice



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**Independent Advisory Panel on Deaths in Custody
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Foreword

Deaths in state custody are rightly a matter of national concern. The Independent Advisory Panel exists to offer advice to Ministers and operational leads on how to minimise deaths in all forms of state custody, and is concerned by all such deaths – and particularly the recent rise in deaths in prisons. This statistical report contains a wealth of numbers and findings. The Panel is conscious that each death was that of an individual with relationships – rather than simply a plot on a graph. This report includes all types of deaths in state custody¹. There is a significant focus on self-inflicted deaths, given the responsibilities on the state to safeguard life. Every self-inflicted death is a matter of sadness and especially so for those family and friends left to come to terms with their loss. Suicide is preventable in many cases and the state needs to be more effective in ensuring that all avoidable deaths are indeed avoided.

This report is based chiefly upon data from 2014 and 2015. We also present some comparisons since 2000. This allows for greater data integrity than is available for 2016's figures. That said the data is necessarily older than some in the public domain and the IAP is mindful of the differences some of the figures will have with recently released figures due to statistical methodologies and reclassification of certain deaths.

One new element of the report, in terms of the data and analysis, is that we have looked at mortality rates beyond simply self-inflicted deaths, and compared these rates to the ones observed in the general population.

It is notable – and commonly commented upon within the field - that the rates of suicide are significantly greater in prisons than in the community. These differences are particularly marked by gender, where the situation appears to be worse for women. In the general population, self-inflicted death rates for women are roughly three times lower than for men. However, within prisons, this difference is much lower and the rates for women are much closer to the ones observed for men. Such a comparison seems strongly to indicate that the variable of 'prison' is far more toxic for women than for men, and has a significantly more negative impact on them.

A potentially counter-intuitive finding comes when we control for age - overall mortality rates (accounting for all causes of deaths) for prisoners are, on the whole, lower for prisoners than for those in the community. However, this statistical finding has broadly similar caveats to those above, the fundamental point being that prisoners are not a representative sample of the general population. We may further hypothesize that there will be some protective features in prisons to

¹ However, it should be noted that this does not include those who have died while subject to Deprivation of Liberty Safeguards (DoLS).

reduce the risk of death. For example, shelter and food are provided and there is no access to cars and, most probably, markedly less access to alcohol.

Another new area that we have introduced on a trial basis is in relation to making statistical predictions around deaths in custody. We regard this as an important area for further exploration and examination – but one requiring caution - especially in view of the statistically low overall numbers involved. We would stress the exploratory nature of this territory, but we believe that it could form a key part of any analysis for the future and may be of especial interest for those with responsibility for measuring progress in the operational services.

But what are the key lessons for this year that we may draw from the data? Looking across the last 15 years, the overall rate of deaths in prisons has been largely on an upwards trajectory – unlike the other places of state custody. Part of this difference is reflected in the changing makeup of the prisoner population. There is a growing number and proportion of older prisoners. Older prisoners have higher rates of self-inflicted deaths than younger prisoners, and provide many of the growing number of deaths from natural causes. Although not covered directly in this report, there is a higher proportion and number of sex offenders in prison now. Sex offenders also have higher rates of self-inflicted deaths than the average for prisoners as a whole. Furthermore, prison seems to have disproportionately negative impacts upon women in terms of their risk of completing suicide than men.

Thankfully, there have been no deaths in secure children's homes and secure training centres since 2004. Overall there seems, on the face of it, to be an overall reduction in the deaths of those detained under the Mental Health Act (MHA) but it is uncertain how much this reflects changes in practice or population or instead can be explained by cutbacks in services such as the numbers of available beds. Indeed for a future report it may be worth exploring more fully the impact of the variation in numbers of available beds for those detained under the MHA. The apparent decline in deaths in police custody may warrant further investigation too to see what lessons may be learned and to better understand the factors behind such welcome reductions.

There is no shortage of research data (such as this one) and other reports on lessons learned on how to reduce suicides. We are clear that the preservation of life should be given the very highest priority for those working in the challenging area of providing society with the capacity and facilities to keep fellow citizens in state custody, and we are committed to work with them to achieve this aim.

Professor Graham Towl²

On behalf of the IAP

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Introduction

The Independent Advisory Panel (IAP) on Deaths in Custody is the second tier of the Ministerial Council on Deaths in Custody. The role of the Panel is to provide independent advice and expertise to the Ministerial Board, including guidance on policy and best practice across sectors, and making recommendations to Ministers and heads of key agencies. More information about the IAP and a list of publications, including previous reports, can be found at their [website](#) (IAP, 2016).

This report provides a breakdown of all recorded deaths in the following custodial sectors:

- Police Custody³;
- Approved Premises⁴;
- Immigration Removal Centres;
- Prisons and Young Offender Institutions (YOIs)⁵;
- Secure Children's Homes (SCH) and Secure Training Centres (STC)⁶; and
- Patients detained in hospitals under the Mental Health Act (MHA).

The data used in this report has been provided, through the Secretariat of the IAP on Deaths in Custody, by the different custodial sectors, and is produced with the permission of the following organisations:

- National Offender Management Service (NOMS) – for data on adult estates, YOIs, and residents of Approved Premises;
- The Independent Police Complaints Commission (IPCC) – for data on deaths in police custody;
- UK Immigration – for data from the Immigration Removal Centres;
- Care Quality Commission (CQC) and the Healthcare Inspectorate Wales (HIW) – for data on those detained under the Mental Health Act (MHA);
- Youth Justice Board – for data on all young people (under the age of 17) in Secure Training Centres (STCs) and Secure Children's Homes (SCHs).

³ These figures include deaths of persons who have been arrested or otherwise detained by the police. It includes deaths that occur while a person is being arrested or taken into detention. The death may have taken place on police, private or medical premises, in a public place or in a police or other vehicle. These figures do not include fatal shootings, road traffic accidents involving police vehicles and 'other' deaths following police contact, which are not custody related.

⁴ Approved Premises are premises approved under Section 13 of the Offender Management Act 2007. They are managed either by the National Probation Service or independent organisations and offer residential provision to selected offender and some bailees in order to provide enhanced levels of protection to the public and reduce the likelihood of further offending.

⁵ These figures include all prisoners within public and private sector prisons, but exclude deaths in NOMS run Immigration Removal Centres. YOIs are run by both the HM Prison Service and the private sector and can accommodate 15-21 year olds, although the estate is split between establishments that take 15-17 year olds and 18-21 year olds.

⁶ Secure Children's Homes (SCHs) are for the youngest offenders (aged between 10 and 14) and those who may have been in care or have mental health problems. SCHs are run by local councils. Secure Training Centres (STCs) hold young people up to the age of 17 and are run by private companies under contract with a detailed set of operational requirements.

Some of the figures in the tables will have changed from other statistical releases as previous deaths, where the cause of death was unknown, may have been subsequently reclassified. The datasets provided by the CQC have also been submitted to a number of data cleansing exercises in previous years which has changed some of the figures from previous reports.

An overall caveat is that caution should be taken when interpreting the reported figures for causes of death due to the statistically small numbers, and due to potential different methods of classification for causes of death other than natural causes and self-inflicted deaths.

Summary of Deaths in Custody

We start by looking at the breakdown of deaths in state custody in England and Wales between 2000 and 2015. Table 1 contains the number of recorded deaths in state custody by custodial setting per year. Some of the figures in this table will have changed from previous years as deaths that have been previously listed as unknown may have subsequently been reclassified. The datasets for deaths of patients detained under the Mental Health Act (2012-2015) for England and Wales have been supplied separately by the Care Quality Commission and Health Inspectorate Wales, respectively.

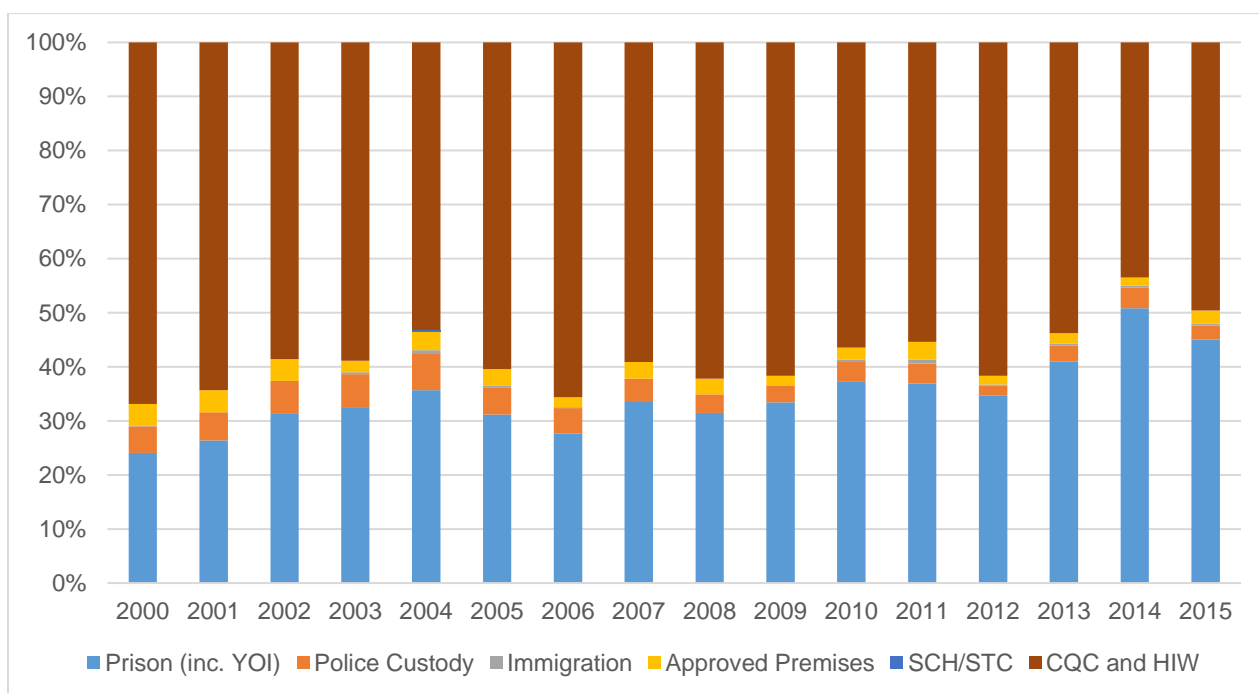
Table 1: All deaths (including all causes) in state custody in England and Wales by custodial setting per year (2000 - 2015)

Custodial Setting	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Prison (inc. YOIs)	146	142	164	183	208	174	153	185	165	169	197	192	192	215	243	257
Police Custody	30	28	32	34	39	28	26	23	18	16	19	19	10	15	18	15
Immigration	1	0	0	2	4	2	1	0	0	0	2	4	1	2	2	2
Approved Premises	24	22	21	12	20	17	10	17	15	9	12	17	9	10	7	14
SCH/STC	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
MHA detentions	406	346	307	331	310	337	363	325	326	312	298	288	341	282	208	283
Wales (HIW)	-	-	-	-	-	-	-	-	-	-	-	-	17	16	14	18
England (CQC)	-	-	-	-	-	-	-	-	-	-	-	-	324	266	194	265
Total	607	538	524	562	583	558	553	550	524	506	528	520	553	524	478	571

In total there were 8,679 deaths recorded between 2000 and 2015. Deaths of patients detained under the Mental Health Act account for 58% of the total observed over these 16 years. There has been an overall increase in the numbers of deaths in prisons and a decrease in deaths in police custody with approved premises also showing an overall decrease over the 16-year period tabulated above. There have been no recorded deaths in SCHs or STCs since 2004.

Figure 1 shows the distribution of recorded deaths by custodial setting over this 16-year period. It is clear that the majority of deaths in state custody throughout the years are of patients detained under the Mental Health Act, followed by the deaths of persons detained in prisons/YOIs.

Figure 1: Distribution of deaths in custody in England and Wales by custodial setting per year (2000 - 2015)



1. Ethnicity

The distribution of deaths by ethnicity and gender are shown in Figure 2 and Table 2 for 2014 and 2015. In 2014, from the 478 individuals who died in state custody, 417 (82.7%) were in the white ethnicity group. In 2015, there was an increase of 19.4% in the total number of deaths to 571, and an increase of 11.3% in the number of deaths of individuals in the white ethnicity group to 464 (81.3% of 571). While the variations in proportions in the Black and Asian groups are noticeable, the difference in distribution by ethnicity between 2014 and 2015 is not statistically significant.

Most of the deaths for which ethnicities are categorized as not known are derived from the data provided by the CQC (9 out of 18 in 2014, and 30 out of 43 in 2015). In prisons/YOIs, deaths in the white ethnicity group account for 90.1% and 88.6% of all deaths for 2014 and 2015, respectively;

the Asian subgroup accounts for 2.5% and 5.4% in 2014 and 2015, respectively; and the Black ethnicity group accounts for 5.8% and 3.9% of deaths in 2014 and 2015, respectively.

Figure 2: Distribution of deaths (including all causes and all custodial settings) in England and Wales by ethnicity, gender and year (2014 and 2015)

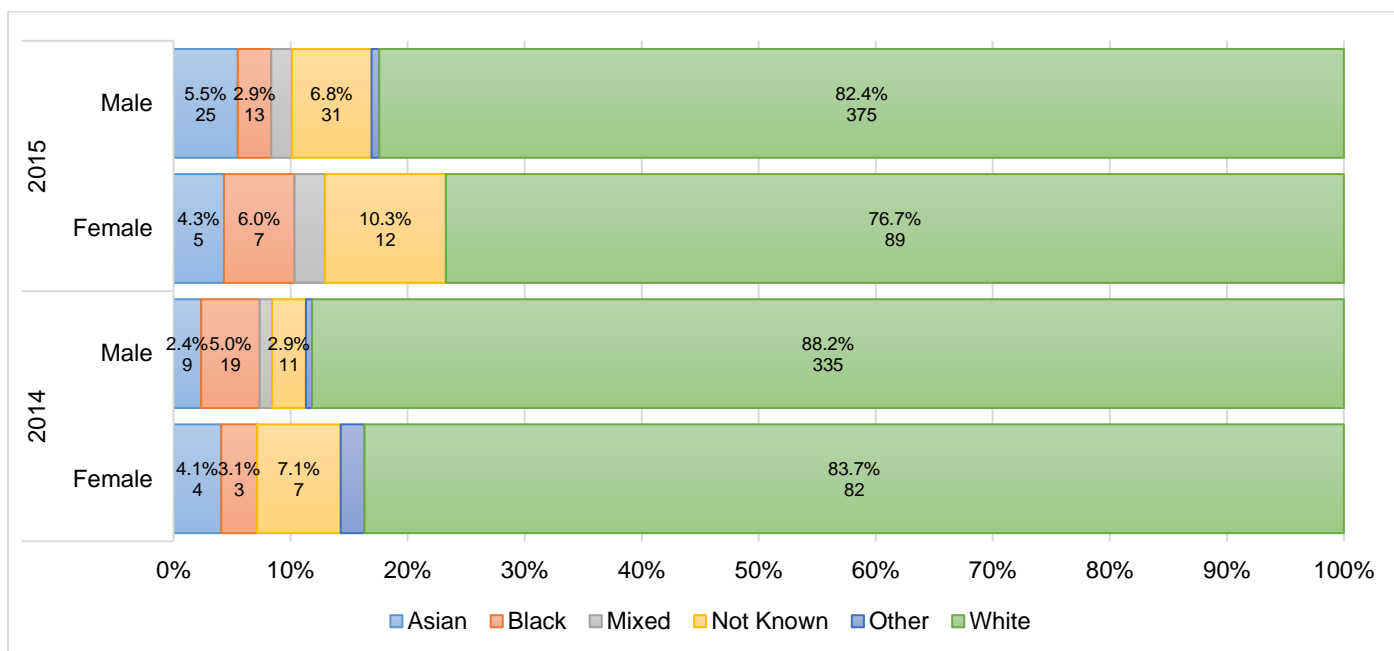


Table 2: All deaths (including all causes and all custodial settings) in England and Wales by ethnicity, gender and year (2014 and 2015)

Deaths by Ethnicity	2014			2015		
	Male	Female	All	Male	Female	All
Asian	9	4	13	25	5	30
Black	19	3	22	13	7	20
Mixed	4	0	4	8	3	11
Not Known	11	7	18	31	12	43
Other	2	2	4	3	0	3
White	335	82	417	375	89	464
All	380	98	478	455	116	571

2. Causes of Death

The distribution of deaths by cause are shown in Table 3 and Figure 3. The following custodial settings were included in this summary: approved premises, MHA deaths in Wales, police custody, and Prisons and YOIs. The data provided by the CQC was removed due to inconsistencies on the labelling of causes of death. There were no deaths registered in SCH and STCs for 2014 and 2015. The breakdown by gender and cause of death was not provided for Immigration.

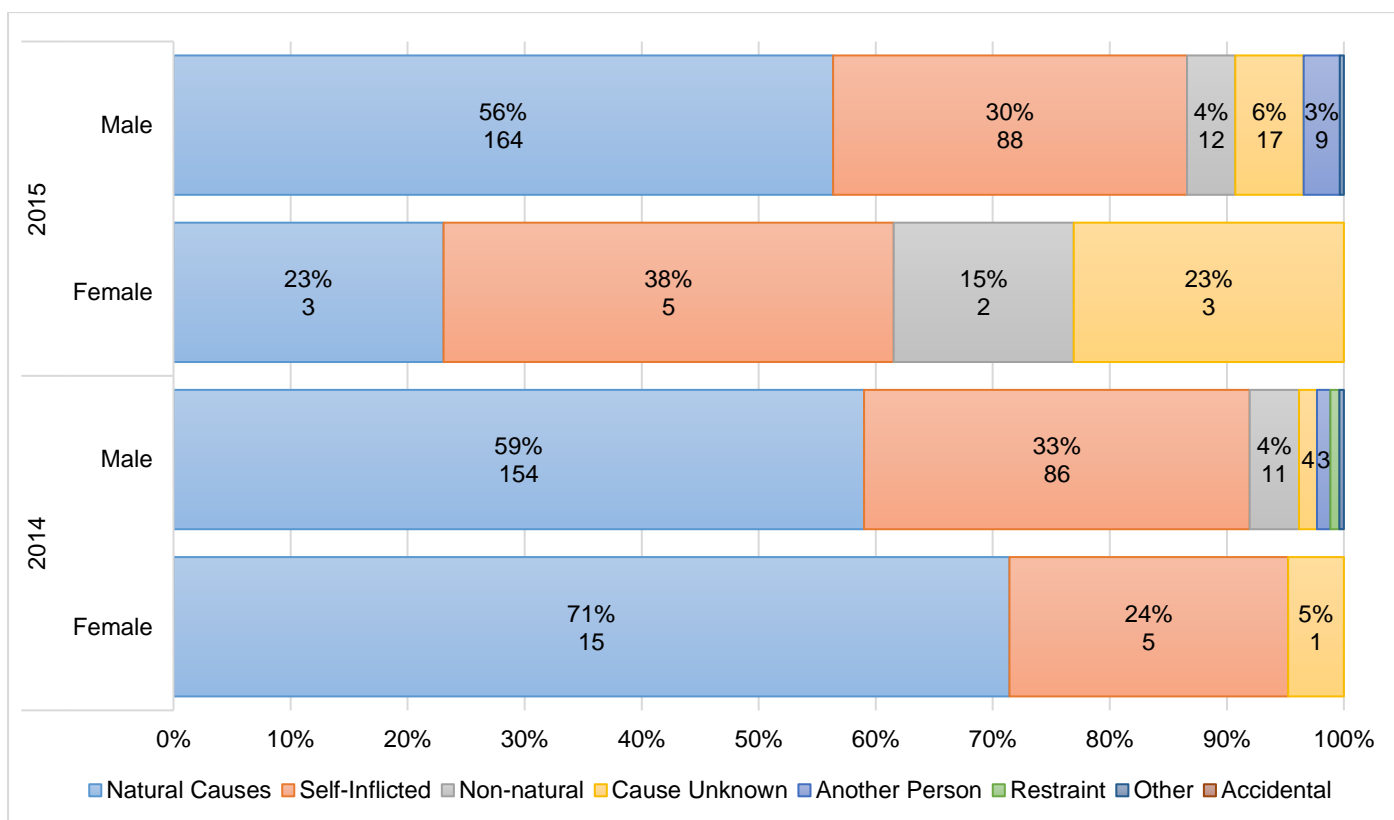
From the summaries below, we can see that natural causes and self-inflicted deaths account for most of the casualties registered. Later, and new to these reports, we will further investigate the

overall mortality rates and self-inflicted mortality rates in prisons/YOIs. We also draw a comparison to the general UK population.

Table 3: Deaths by cause, gender, custodial setting and year (2014 and 2015) for MHA deaths in Wales, prisons/YOIs, approved premises and police custody

	Natural causes	Self-Inflicted	Accidental	Person	Another	Unknown	Cause	Non-natural	Other	Restraint	Total
2014 Total	169	91	0	3	5	11	1	2	282		
Female	15	5	0	0	1	0	0	0	21		
Approved Premises	0	0	0	0	0	0	0	0	0		
MHA in Wales	4	1	0	0	1	0	0	0	6		
Police Custody	2	1	0	0	0	0	0	0	3		
Prisons and YOIs	9	3	0	0	0	0	0	0	12		
Male	154	86	0	3	4	11	1	2	261		
Approved Premises	5	0	0	0	0	2	0	0	7		
MHA in Wales	6	0	0	0	2	0	0	0	8		
Police Custody	7	0	0	0	2	3	1	2	15		
Prisons and YOIs	136	86	0	3	0	6	0	0	231		
2015 Total	167	93	0	9	20	14	1	0	304		
Female	3	5	0	0	3	2	0	0	13		
Approved Premises	0	0	0	0	0	0	0	0	0		
MHA in Wales	1	0	0	0	2	0	0	0	3		
Police Custody	0	0	0	0	1	1	0	0	2		
Prisons and YOIs	2	5	0	0	0	1	0	0	8		
Male	164	88	0	9	17	12	1	0	291		
Approved Premises	7	3	0	0	0	4	0	0	14		
MHA in Wales	9	1	0	1	4	0	0	0	15		
Police Custody	4	0	0	0	6	2	1	0	13		
Prisons and YOIs	144	84	0	8	7	6	0	0	249		

Figure 3: Distribution of deaths by cause and gender for 2014 and 2015 (Approved premises, MHA in Wales, police custody and prisons/YOIs)



3. Age and Cause of Death

Self-inflicted and natural deaths accounted for 92% and 84% of the reported causes of death in 2014 and 2015 respectively. The split by age group and gender of natural and self-inflicted deaths for 2014 and 2015 can be seen in Figure 4 and Table 4. We will investigate these groups further when analysing the data from prisons and YOIs.

In Figure 4, we can see that there is a distinct difference between age distributions for natural deaths and self-inflicted deaths. While natural deaths predominantly occur in older age groups (61 and plus), self-inflicted deaths are, in terms of absolute frequencies (but not mortality rates), concentrated in the younger groups, mostly between 21 and 40 years or age. This behaviour is similar to the one observed in the general population for both causes of death.

Figure 4: Self-inflicted and natural deaths by age group and gender for 2014 and 2015

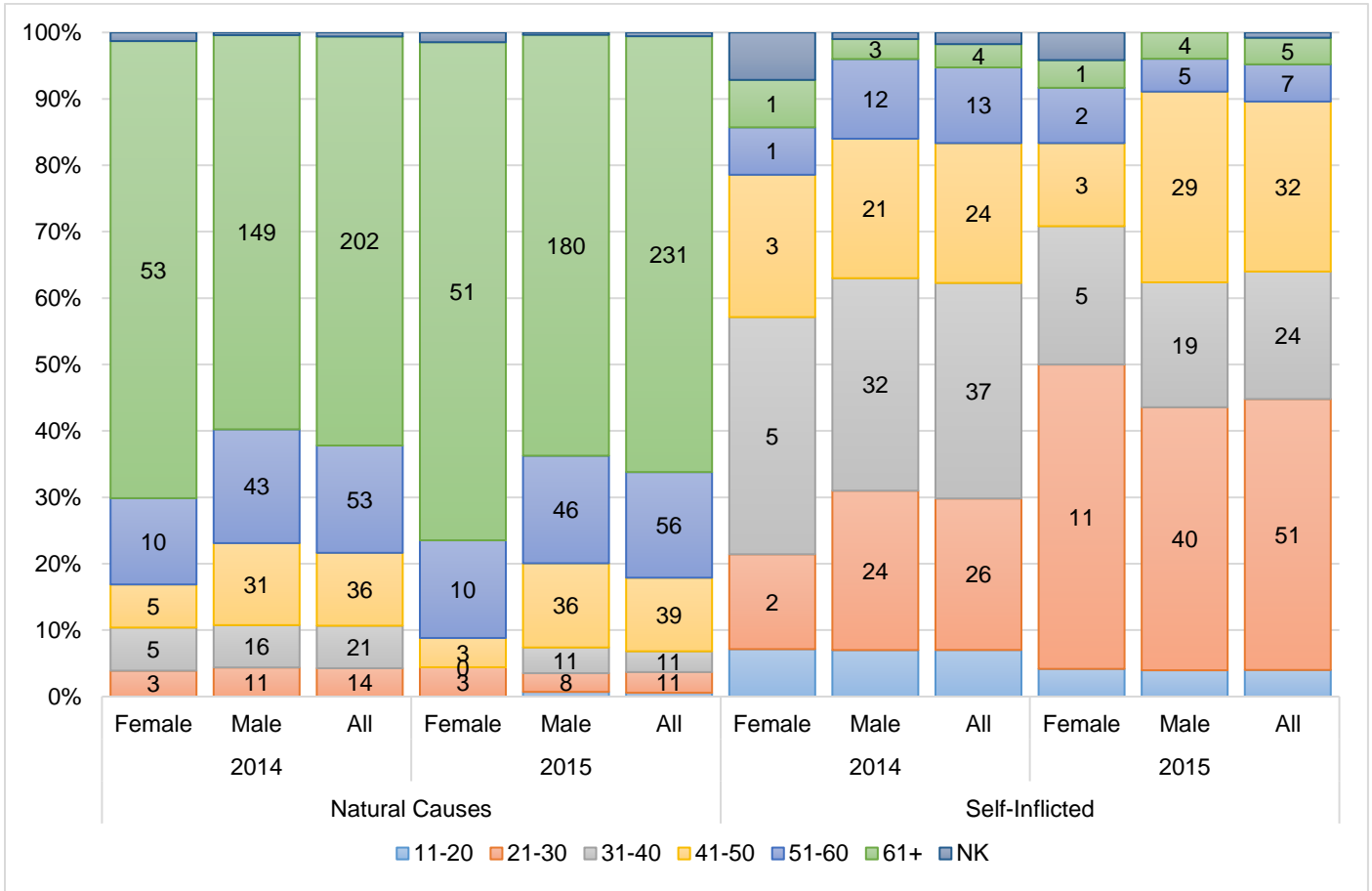


Table 4: Self-Inflicted and natural deaths by age-group and gender for 2014 and 2015

	2014			2015			Grand Total
	Female	Male	All	Female	Male	All	
Natural causes	77	251	328	68	285	353	681
11-20	0	0	0	0	2	2	2
21-30	3	11	14	3	8	11	25
31-40	5	16	21	0	12	12	33
41-50	5	31	36	3	36	39	75
51-60	10	43	53	10	46	56	109
61+	53	149	202	51	180	231	433
NK	1	1	2	1	1	2	4
Self-Inflicted	14	100	114	24	101	125	239
11-20	1	7	8	1	4	5	13
21-30	2	24	26	11	40	51	77
31-40	5	32	37	5	19	24	61
41-50	3	21	24	3	29	32	56
51-60	1	12	13	2	5	7	20
61+	1	3	4	1	4	5	9
NK	1	1	2	1	0	1	3
Total	91	351	442	92	386	478	920

Mortality Rates in Prisons and Young Offender Institutions

Deaths in prisons/YOIs account for approximately 34% of the total number of deaths in state custody over the past 16 years. In 2014 and 2015, deaths in prisons/YOIs accounted for 50.8% and 45.0% of the total number of deaths in those years respectively. We now compare the mortality profile observed for 2014 and 2015.

1. All deaths including deaths by natural causes in prisons/ YOIs

In Table 5, we have the breakdown of deaths by age group and gender for 2014 and 2015. These figures show an overall relatively steady number of deaths in prisons albeit with a relatively large increase in deaths of those (chiefly men – 20%) aged 61 and over. This perhaps in part reflects an increasingly overall aging prison population. In 2014, the group aged 61 and over represented 4.5% (3,647 out of 81,401) of the male prison population while, in 2015, the same group represented roughly 5.2% (4,199 out of 81,143).

Table 5: Deaths in prisons and young offender institutions by gender and age group (2014 and 2015)

Deaths by age group	2014			2015		
	Male	Female	All	Male	Female	All
11-20	6	0	6	6	0	6
21-30	31	1	32	40	2	42
31-40	44	2	46	27	2	29
41-50	41	3	44	56	1	57
51-60	36	5	41	32	2	34
61 and over	73	1	74	88	1	89
Not available	0	0	0	0	0	0
All	231	12	243	249	8	257

Table 6: Age-specific mortality rates in prisons and young offender institutions by gender and age group (2014 and 2015)

Age-specific mortality (per 100,000)	2014			2015		
	Male	Female	All	Male	Female	All
11-20	97.86	0.00	95.19	115.43	0.00	112.04
21-30	113.62	89.37	112.67	153.48	193.99	155.02
31-40	190.81	149.70	188.56	114.37	145.67	116.09
41-50	287.50	370.83	291.97	387.95	121.21	373.53
51-60	512.89	1392.76	555.71	418.79	527.70	423.94
61 and over	2001.65	1041.67	1977.02	2095.74	952.38	2067.84
All (Crude death rate)	283.78	308.40	284.90	306.87	206.72	302.31

In table 6, we have the crude mortality rates by gender and age group, that is, the proportion of deaths observed for each age group by gender per 100,000. Table 6 gives further evidence of what appear to be higher than would be anticipated increase in mortality rates for male prisoners aged 61 and over when comparing 2014 and 2015 data.

For the younger age groups, the observed age-specific mortality rates are considerably higher than the ones observed in the general population as reported by the ONS; however, for older groups, those rates are similar or lower.

Table 7: Age standardized mortality rates, corresponding confidence intervals, and England and Wales age-standardized rates (per 100,000) for prisons and YOIs by gender (2014 and 2015)

Mortality Rates (per 100,000)	2014			2015		
	Male	Female	All	Male	Female	All
2.5% Lower limit (per 100,000)	480.54	219.41	484.15	496.78	101.02	492.11
Age-standardized (per 100,000)	551.69	505.32	553.78	567.24	329.02	560.66
97.5% Upper limit (per 100,000)	622.83	791.23	623.41	637.69	557.02	629.20
England and Wales age-standardized rate (per 100,000)	1121	822	953	1156	863	993

Interestingly, and perhaps surprisingly, Table 7 and Figure 5 show that, when we control for age, the overall mortality rates for prisoners are, on the whole, lower than they are for the general population (ONS).

When calculating the age-standardized mortality rates and corresponding confidence intervals, we use the 2013 Revised European Standard Population (ESP) following the guidelines provided

by the Office for National Statistics (ONS) and World Health Organisation (WHO). The ESP is an artificial population structure that is used to re-weight and standardize rates such as mortality facilitating comparability between distinct populations. The 95% confidence intervals listed represent the range of most likely values for each rate. They represent the values for the true population rates (age-standardized) for which the difference between the true rate and our calculated rate is not statistically significant at the 5% level.

The orange dots in Figure 5 show the general population age-standardized averages for England and Wales (ONS) which we may compare with the calculated mortality rates for prisoners. The confidence intervals for women across the two years are wider because of the relatively small population sizes. When analysing the intervals displayed, if an estimated interval (dashed lines) does not include the population rates (orange dots), then we have an indication that the two groups (general population and Prison and YOIs) are statistically different. It is interesting to note that there are around 20 times as many men in prison as there are women; however, there is still evidence that the age-standardized mortality rates in Prisons and YOIs for women (and men) are lower than the ones observed in the general population.

Figure 5: Age standardized mortality rates, corresponding confidence intervals, and England and Wales age-standardized rates (per 100,000) for prisons and YOIs by gender (2014 and 2015)

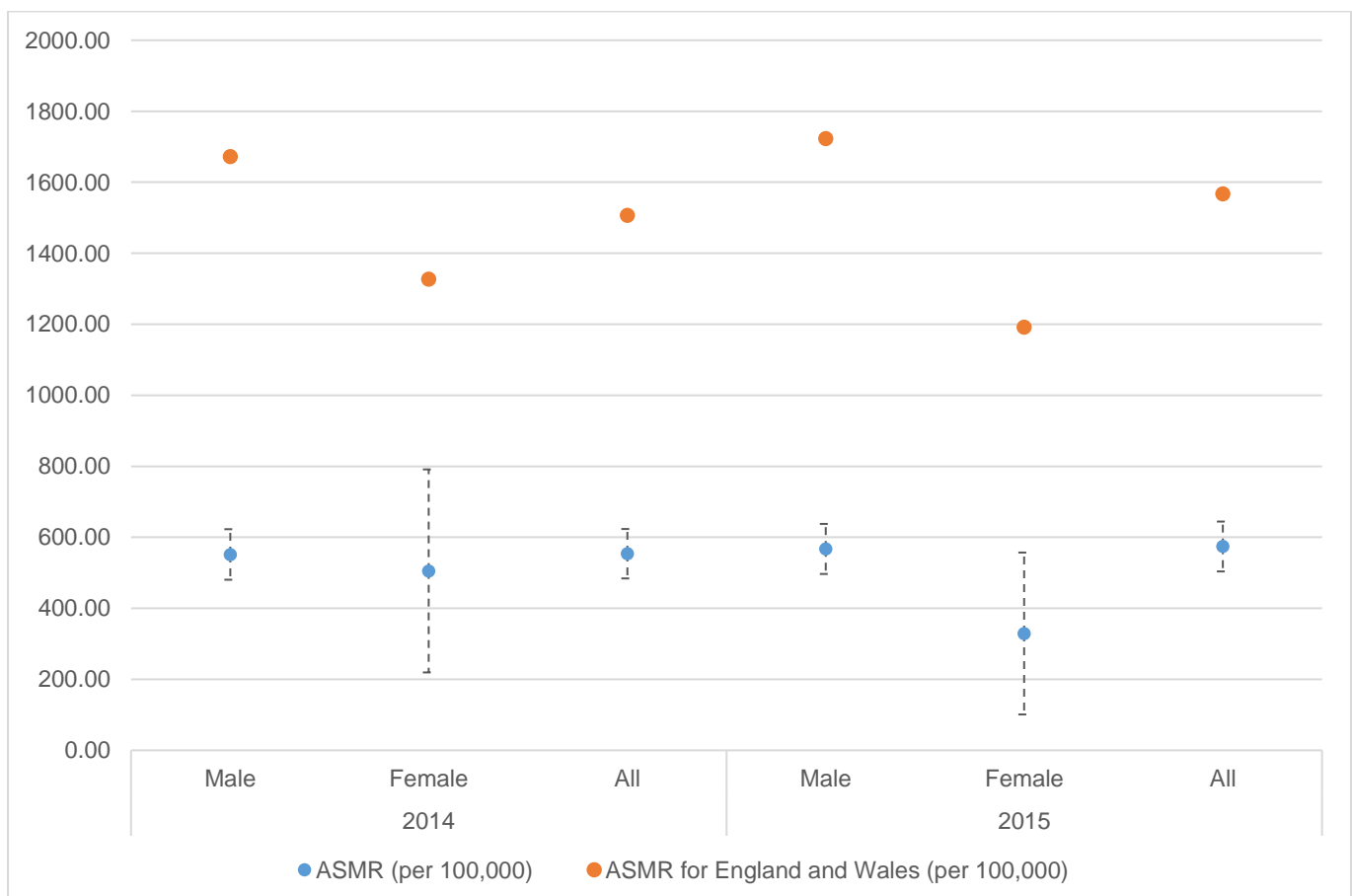


Table 8: Natural deaths in prisons and Young Offender Institutions by gender and age group (2014 and 2015)

Deaths by age group	2014			2015		
	Male	Female	All	Male	Female	All
11-20	0	0	0	2	0	2
21-30	6	0	6	7	0	7
31-40	10	1	11	3	0	3
41-50	22	3	25	24	0	24
51-60	28	4	32	25	1	26
61 and over	70	1	71	83	1	84
Not available	0	0	0	0	0	0
All	136	9	145	144	2	146

In Table 8, we have the observed deaths by natural causes in Prisons and YOIs by gender for 2014 and 2015. The numbers of deaths by natural causes for men over 61 have increased from 2014 to 2015. There were two deaths reported as natural causes in the 11-20 age group.

Table 9: Age-specific mortality rates for deaths by natural causes in prisons and YOIs by gender and age group (2014 and 2015)

Age-specific mortality (per 100,000)	2014			2015		
	Male	Female	All	Male	Female	All
11-20	0.00	0.00	0.00	38.48	0.00	37.35
21-30	21.99	0.00	21.13	26.86	0.00	25.84
31-40	43.37	74.85	45.09	12.71	0.00	12.01
41-50	154.27	370.83	165.89	166.26	0.00	157.27
51-60	398.92	1114.21	433.72	327.18	263.85	324.19
61 and over	1919.39	1041.67	1896.87	1976.66	952.38	1951.67
All (Crude death rate)	167.07	231.30	170.00	177.46	51.68	171.74

As it would be expected, the age specific mortality rates broadly increased with age in 2014 (see Table 9). The pattern, although still very broadly the case, appears to have changed, for those in the very lower age categories in 2015.

Table 10: Age standardized mortality rates for deaths by natural causes and corresponding confidence intervals (per 100,000) for prisons and YOIs by gender (2014 and 2015)

Mortality Rates (per 100,000)	2014			2015		
	Male	Female	All	Male	Female	All
2.5% Lower limit (per 100,000)	366.87	150.57	372.16	371.52	0.00	392.62
Age-standardized (per 100,000)	440.99	434.35	444.51	444.05	211.03	468.64
97.5% Upper limit (per 100,000)	515.10	718.12	516.86	516.58	503.50	544.65

The age-standardized figure is the estimated average with - in some cases - quite wide confidence intervals around them, which largely reflect the group population sizes. One illustration of this would be of men (with relatively large numbers) and women (with relatively low numbers). There needs to be some caution around the figures for women in particular in view of the relatively small population size. Caution should be taken when interpreting the age-standardized mortality rates for women as the observed number of deaths and the female population size are small.

2. Self-inflicted deaths in Prisons and YOIs

The number of self-inflicted deaths (SIDs) of men in 2014 was 86 and in 2015 it was 84. The number of self-inflicted deaths for women was 3 in 2014 and 5 in 2015. There has been an increase in the numbers of self-inflicted deaths among 21-30 year olds and 41-50 year olds, with a marked decrease in SIDs with the 31-40 age group (45% decrease). In Table 11 we have the distribution of self-inflicted deaths by gender and age group for 2014 and 2015.

Table 11: Self-inflicted deaths in prisons and YOIs by gender and age group (2014 and 2015)

Deaths by age group	2014			2015		
	Male	Female	All	Male	Female	All
11-20	6	0	6	4	0	4
21-30	22	1	23	30	2	32
31-40	30	1	31	17	1	18
41-50	17	0	17	25	1	26
51-60	8	1	9	5	1	6
61 and over	3	0	3	3	0	3
Not available	0	0	0	0	0	0
All	86	3	89	84	5	89

As stated previously, crude mortality rates are the overall rates of death for the prison population without standardisation for any variables other than age. The chief findings here are the decrease in the mortality rate for 31-40 year olds, and the increase for 41-50 year olds, when comparing

2014 with 2015. In Table 12 we have the age-specific mortality rates for self-inflicted deaths by gender for 2014 and 2015. In Table 13, we calculate the age-standardized mortality rates based on the 2013 revised European Standard Population.

Table 12: Crude mortality rates for self-inflicted deaths in prisons and YOIs by gender and age group (2014 and 2015)

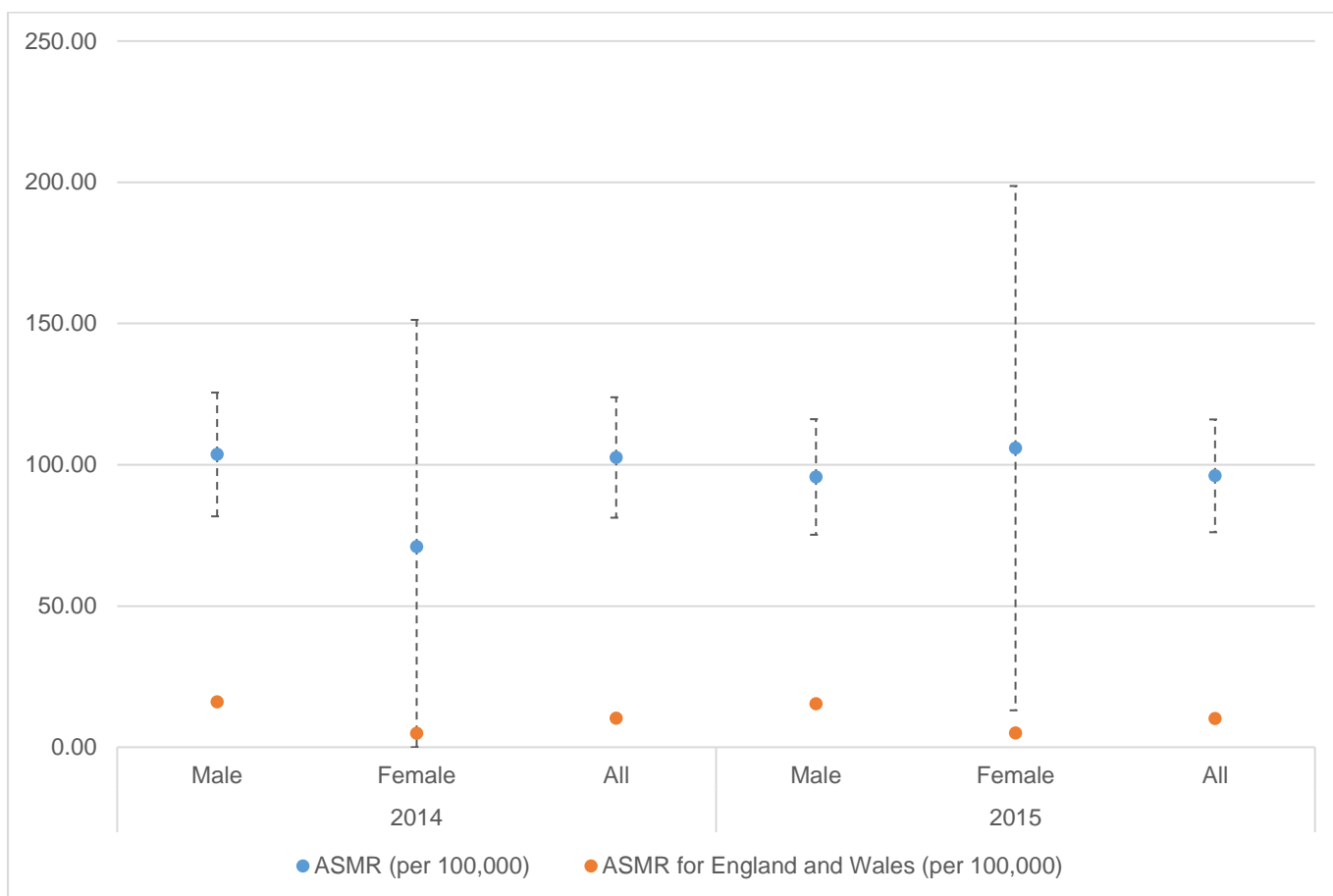
Age-specific mortality (per 100,000)	2014			2015		
	Male	Female	All	Male	Female	All
11-20	97.86	0.00	95.19	76.95	0.00	74.70
21-30	80.64	89.37	80.98	115.11	193.99	118.11
31-40	130.10	74.85	127.07	72.01	72.83	72.05
41-50	119.21	0.00	112.81	173.19	121.21	170.38
51-60	113.98	278.55	121.98	65.44	263.85	74.81
61 and over	82.26	0.00	80.15	71.45	0.00	69.70
All (Crude death rate)	105.65	77.10	104.35	103.52	129.20	104.69

Table 13: Age standardized mortality rates for self-inflicted deaths, and their corresponding confidence intervals, (per 100,000) for prisons and YOIs, and age-standardized suicide rate in England and Wales (per 100,000) by Gender (2014 and 2015)

Mortality Rates (per 100,000)	2014			2015		
	Male	Female	All	Male	Female	All
2.5% Lower limit (per 100,000)	81.75	0.00	81.27	75.23	13.07	76.46
Age-standardized (per 100,000)	103.65	70.97	102.58	95.69	105.88	96.51
97.5% Upper limit (per 100,000)	125.56	151.29	123.89	116.15	198.69	116.57
England and Wales age-standardized rate (per 100,000)	16.0	4.9	10.3	15.4	5.0	10.1

The above table has an important caveat (Table 13). A comparison is being made with the general population implying potentially higher mortality rates for self-inflicted deaths within prisons and YOIs. It is important to note that prisoner populations are not representative of the general population. Prisoner populations have been found to be disproportionately disadvantaged on a number of dimensions; socio-economic groups and in terms of mental and overall physical health. However, these caveats are statistically less relevant if we compare the age-standardised rates for men and women assuming a similar level of disadvantage for women and men. Thus, we see that women appear to be at a significantly higher level of risk of suicide as a function of imprisonment than men.

Figure 6: Age standardized mortality rates for self-inflicted deaths, and their corresponding confidence intervals, (per 100,000) for prisons and YOIs, and age-standardized suicide rate in England and Wales



The greater range of the confidence intervals above from women over men reflects their smaller population sizes. If we were to assume that the age-controlled prison population is comparable to the general population, we would conclude that men are at a higher risk of self-inflicted deaths when in prison custody. In the same way that prisons seem to be a safer environment as a whole when accounting for all causes of death and at the same time a riskier environment for self-inflicted deaths, these results are likely to be a reflection of the differences in demographics and other factors reflecting e.g. organisational dynamics and service configurations.

3. Crude Mortality Rates by Custodial Setting

While the population breakdown by age is not available for all custodial settings, it is still interesting to look at the variation in mortality rates (non age-standardized). We have focused on deaths by natural causes and self-inflicted deaths as the classification for these two sets is mostly consistent for different services. In Table 15, we have the mortality rates by natural causes for five custodial settings.

Table 14: Crude mortality rates (per 100,000) for deaths by natural causes by custodial settings excluding immigration centres, and police custody by gender (2014 and 2015)

Natural causes crude mortality rate (per 100,000)	2014			2015		
	Male	Female	All	Male	Female	All
<i>Approved Premises</i>	291.2	0	278.9	400.9	0	384.0
<i>MHA – CQC data</i>	810.5	1000.3	875.3	1126.7	723.1	942.0
<i>MHA – HIW data</i>	585.4	446.4	520.6	805.0	113.3	499.8
<i>Prisons (inc. YOI)</i>	167.1	231.3	170.0	177.5	51.7	171.8
<i>SCH/STC</i>	0	0	0	0	0	0
<i>All above custodial settings</i>	253.1	675.1	296.7	295.0	490.8	319.9

Table 15: Crude mortality rates (per 100,000) for self-inflicted deaths by custodial settings excluding immigration centres, and police custody by gender (2014 and 2015)

Self-inflicted crude mortality rate (per 100,000)	2014			2015		
	Male	Female	All	Male	Female	All
<i>Approved Premises</i>	0	0	0	171.8	0	164.6
<i>MHA – CQC data</i>	117.0	145.2	126.6	122.1	211.4	162.9
<i>MHA – HIW data</i>	0	111.6	52.1	89.5	0	50.0
<i>Prisons (inc. YOI)</i>	105.7	77.1	104.4	103.5	129.2	104.7
<i>SCH/STC</i>	0	0	0	0	0	0
<i>All above custodial settings</i>	103.7	117.0	105.1	106.4	173.2	114.9

As we can see in Tables 15 and 16, there have been no self-inflicted deaths in Secure Children's Homes or Secure Training Centres for 2014 and 2015. We also note that the deaths under the Mental Health Act (MHA) supplied by the CQC have the highest mortality rates for all subgroups in 2014 and 2015. However, caution should be taken here due to the challenges of applying the data provided by the CQC. .

Table 16: Crude mortality rates (per 100,000) for all deaths by custodial settings excluding immigration centres, and police custody by gender (2014 and 2015)

Crude mortality rate (per 100,000) – all causes	2014			2015		
	Male	Female	All	Male	Female	All
<i>Approved Premises</i>	407.7	0	390.4	801.8	0	768.0
<i>MHA – CQC data</i>	986.0	1226.2	1067.9	1521.0	1145.8	1349.3
<i>MHA – HIW data</i>	780.5	669.6	728.8	1341.7	339.8	899.6
<i>Prisons (inc. YOI)</i>	283.8	308.4	284.9	306.9	206.7	302.3
<i>SCH/STC</i>	0	0	0	0	0	0
<i>All above custodial settings</i>	377.6	846.2	426.0z	463.5	822.8	509.3

Mortality rates under state custody within the health service remain much higher than rates in prisons.

Trends and projections

For the first time we have conducted a forecasting exercise to investigate the overall trend of the number of deaths recorded in custody. In this section, we use a basic statistical model⁷. For example, using the recorded totals from 2000 to 2005 for 2006, we then predicted 95% confidence intervals of 492 to 633 deaths with a forecast of 562 deaths in average. In fact, in 2006, a total of 553 deaths were recorded which is well within the statistically predicted bounds. We then repeated this exercise up to 2015 and produce forecasts for the upcoming three years. These results can be seen in Figure 7.

In 2014, there is a sharp decrease in the total number of deaths followed by a sharp increase in 2015. When referring to Table 1, we can see that this erratic pattern can be accounted for statistically, by fluctuations in the numbers of deaths of patients detained under the Mental Health Act (MHA) in England and Wales. Indeed, if we repeat the forecasting exercise restricted to the patients detained under the MHA, we can see a similar pattern as shown in Figure 8. This fluctuation can be partially explained by changes in data collection conducted by the CQC and HIW; however, further investigation is necessary to assess discrepancies with the 2014/2015 CQC report (CQC, 2015).

When investigating the mortality rate trend (per 100,000) for patients detained under the MHA, we can see that the rates have been on a steady decline (see Figure 9). Even though the rate

⁷ We use an exponential smoothing time series model without seasonality. At a given year Y (e.g. 2006), we use all historical data available prior to the observed year (e.g. 2000 to 2005 for 2006) to produce an estimate for the expected number of deaths in year Y with its associated 95% confidence intervals.

observed in 2014 appears to be anomalous, the overall trajectory is still consistent. In 2012, there appears to be an unexpected increase in the number of deaths of patients detained under the MHA but this increase is consistent with a sharp increase of 13.72% in the total population detained (from 16,647 to 18,931).

Overall the projected figures indicate the need for earlier intervention and cross-departmental action to reduce deaths in custody.

Figure 7: Total number of deaths in England and Wales, and forecasts (2000 - 2015).

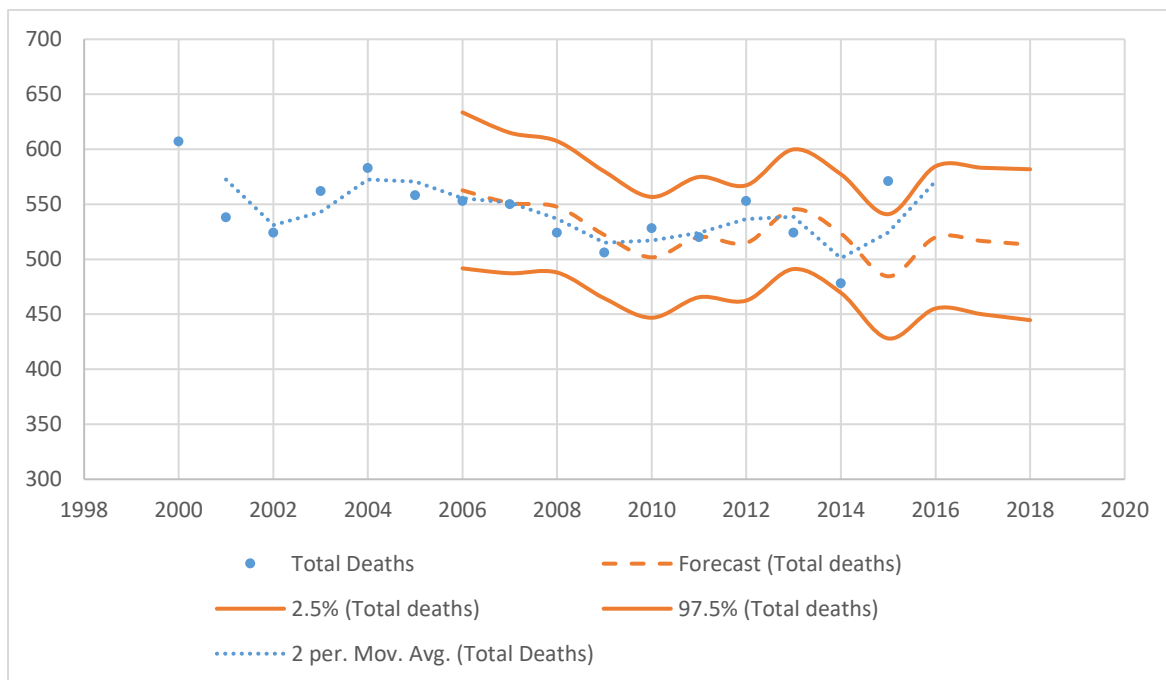


Figure 8: Deaths of patients detained under the MHA in England and Wales, and forecasts (2000 - 2015)

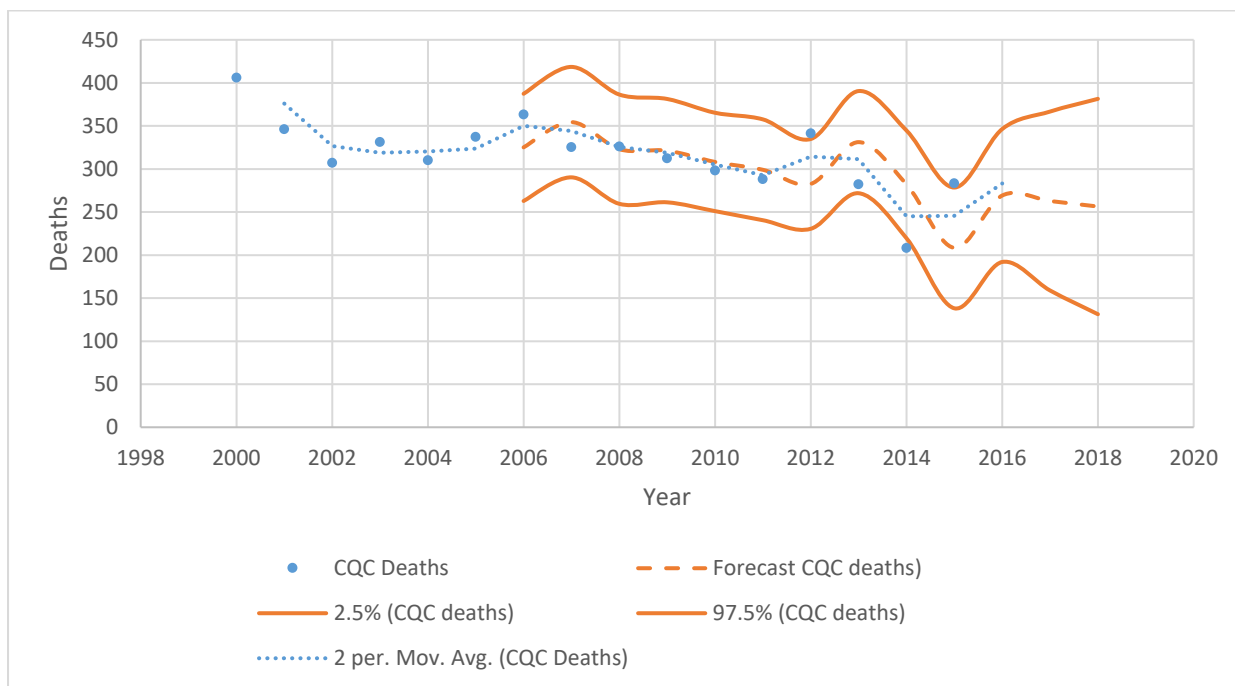


Figure 9: Observed and forecasted crude mortality rates for patients detained under the MHA in England and Wales (2000 - 2015)

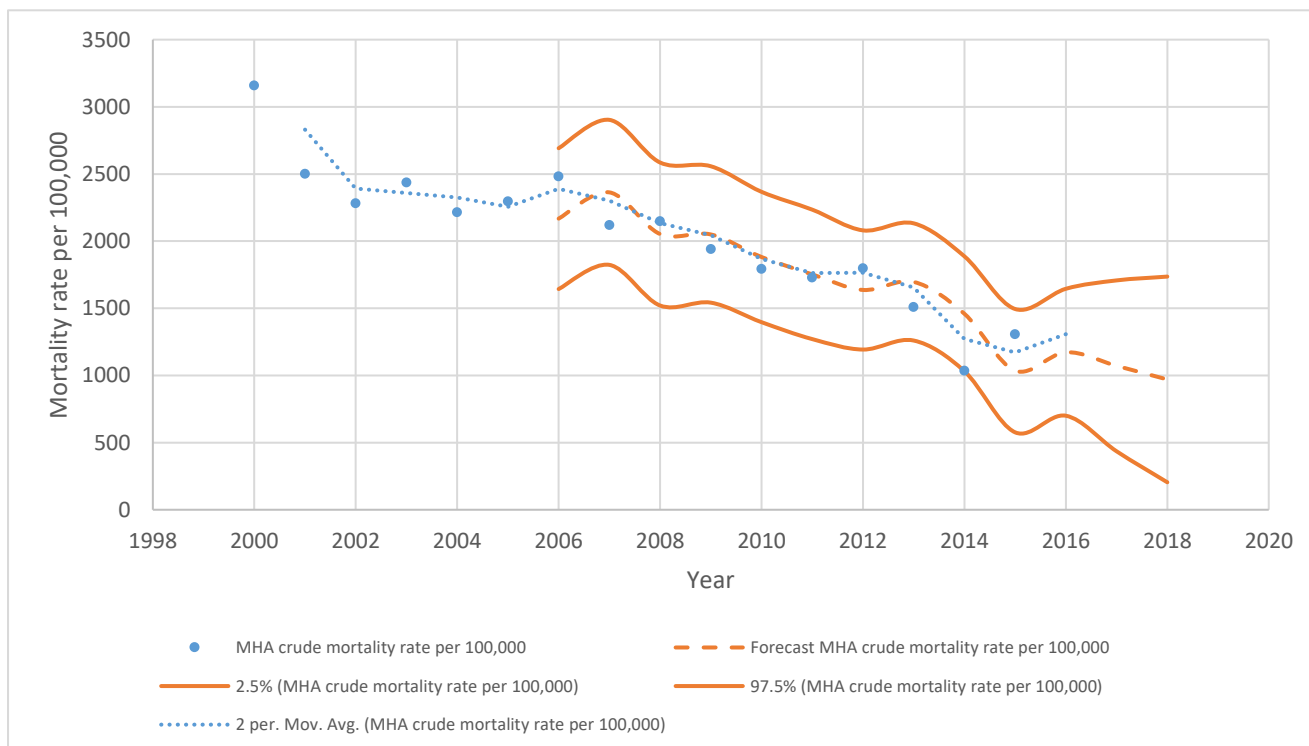


Figure 10: Observed and forecasted crude mortality rates for prisons and YOIs in England and Wales (2000-2015)

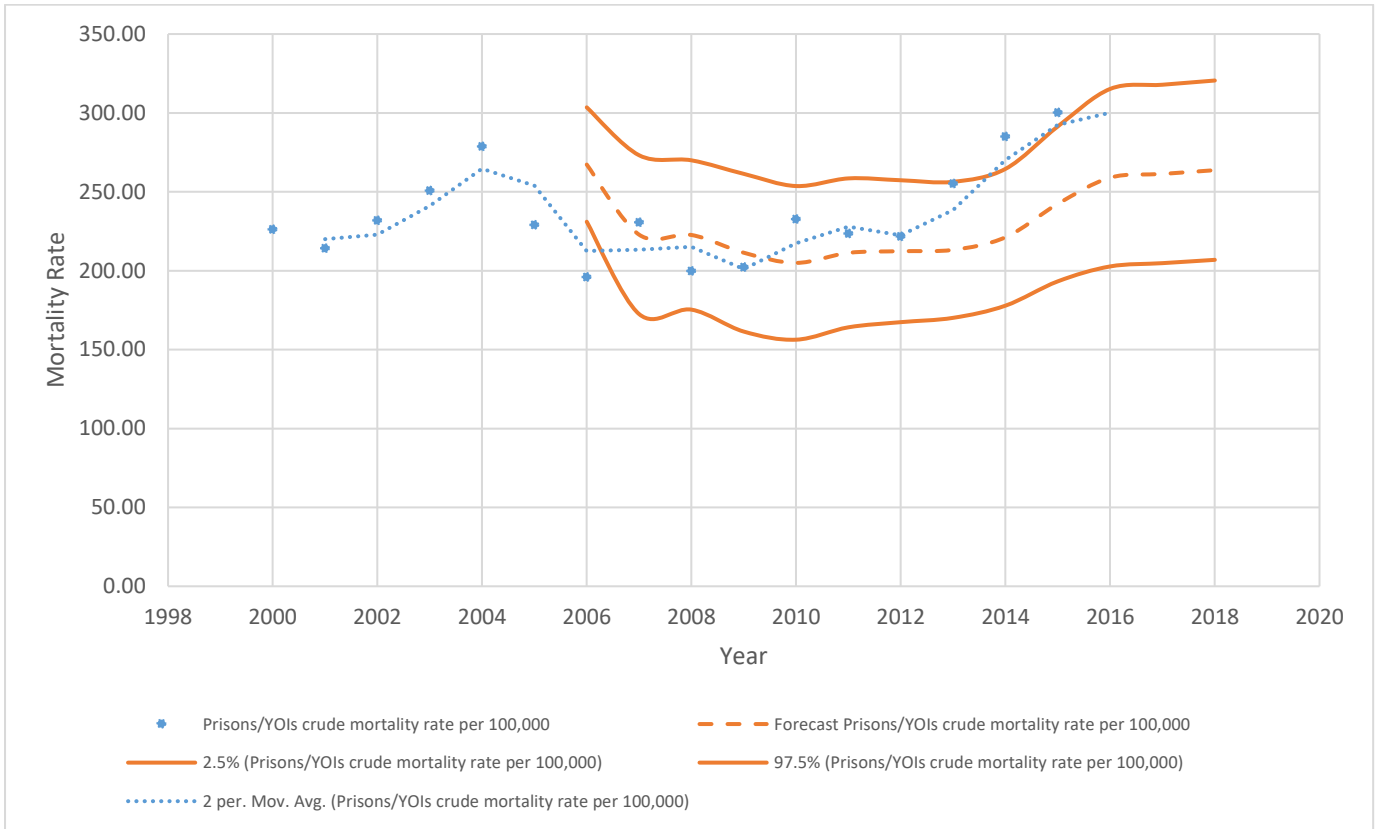


Figure 11: Observed and forecasted crude mortality rates for self-inflicted deaths in prisons and YOIs in England and Wales (2000 - 2015)

