National Naloxone Programme Scotland
Monitoring Report 2017/18
27 November 2018
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Introduction

Accidental overdose is a common cause of death among users of heroin, morphine and similar drugs, which are referred to as opioids. Naloxone is a drug which reverses the effects of a potentially fatal overdose with these drugs. Intramuscular¹ injection of naloxone provides time for emergency services to arrive and for further treatment to be given. Following suitable training, ‘take home’ naloxone kits (hereafter referred to as ‘THN’ or ‘kits’) are issued to people at risk of opioid overdose, their friends and family and service workers in order to help prevent overdose deaths.

Since 1997, statistics published by National Records of Scotland (NRS) have shown a long-term upward trend in the number of Drug-Related Deaths (DRDs) in Scotland, most of which have been ‘accidental poisonings’ related to opioids (NRS, 2018). The National Drug Related Deaths Database (NDRDD) was set up to help understand the nature and circumstances of DRDs and the individuals vulnerable to them. NDRDD findings from DRDs in 2016 showed that 56% of DRDs occurred when others were present at the scene of overdose. Further, 77% of individuals had been in drug treatment, in prison or police custody or discharged from hospital in the six months prior to death (Barnsdale et al, 2018). Other research has shown that the risk of accidental overdose is substantially increased after release from prison (Bird & Hutchinson, 2003) or discharge from hospital (Merrell et al, 2010), in part because users may lose their tolerance of opioids during periods when illicit drug use is reduced.

The overall aim of the National Naloxone Programme is to prevent fatal opioid overdoses in Scotland. In the five years from April 2011 to March 2016, the National Naloxone Programme co-ordinated distribution of THN kits from community outlets (usually specialist drug treatment services) and prisons. During this period, NHS Boards² were responsible for local delivery of the programme and the cost of THN kits was reimbursed by the Scottish Government. While the Scottish Government continues to fund some aspects of the National Naloxone Programme, from 2016/17 NHS Boards assumed direct responsibility for funding THN supplies. Following this change and revisions to the regulatory framework, some NHS Boards have also started to dispense THN via community prescription. See Appendix 1 for further information on the background and development of the National Naloxone Programme.

Since the beginning of the National Naloxone Programme, the Scottish Government has commissioned Information Services Division (ISD) to report on THN kit distribution using monitoring data supplied by NHS Boards. This report presents information on the number of THN kits issued from 2011/12 to 2017/18. Data are presented separately for kits issued from community outlets, kits issued in prisons at the point of prisoner release and kits dispensed via community prescription. The number and percentage of opioid-related deaths that occurred within four or twelve weeks of prison release or hospital discharge are also presented. ISD continue to monitor THN kit distribution in 2018/19 and plan to report upon these data in autumn 2019.

¹ NHS Highland undertook a local pilot, distributing intranasal (IN) naloxone kits outwith the National Naloxone Programme. These kits are excluded from the figures reported in this publication.
² NHS Western Isles did not participate in the programme until 2017/18.
Main Points

- A total of 8,397 take-home naloxone kits were issued in Scotland in 2017/18, an increase of 3% from the previous year. A total of 46,037 take-home naloxone kits were supplied in Scotland between 2011/12 and 2017/18.

- In 2017/18, 6,924 kits were issued from community outlets, 664 kits were issued in prisons upon release and 809 kits were dispensed via community prescription.

- In 2017/18, 3,996 (53%) take-home naloxone kits distributed from community outlets and prisons were repeat supplies. Of these, 1,017 (25%) repeat supplies were made because the previous kit was reported as having been used to treat an opioid overdose.

- In 2017/18, it is estimated that 2,458 kits were issued as a first supply to an individual at risk of opioid overdose. Cumulatively, 23,096 ‘at risk’ individuals are estimated to have been supplied with take-home naloxone between 2011/12 and 2017/18.

- At the end of 2017/18, the ‘reach’ of take-home naloxone (based on the number of ‘at risk’ individuals supplied with kits between 2011/12 and 2017/18) was estimated to be 376 kits per 1,000 problem drug users.

- In 2017, 4.4% (31) of people whose death was opioid-related had been released from prison in the previous four weeks. This was significantly lower than the 9.8% observed in the five years before implementation of the National Naloxone Programme (2006-10). These figures should be treated with caution due to the small number of opioid-related deaths within four weeks of prison release.

- In 2017, 11.0% (78) of people whose death was opioid-related had been discharged from hospital in the previous four weeks. This was not significantly different to the percentage observed in the five years before implementation of the National Naloxone Programme (2006-10: 9.7%).
Results and Commentary

1. Take-home naloxone (THN) supply from community outlets

1.1: Introduction
This section presents information on the number of ‘take home’ naloxone (THN) kits issued from community outlets (usually specialist drug treatment services) through the National Naloxone Programme in Scotland. This includes breakdowns by time period, NHS Board, numbers of first and repeat supplies and reasons for repeat supply. Age and gender breakdowns are provided for individuals at risk of opioid overdose who were supplied with THN (where the person consented to the sharing of their personal data). The most recent available data are for 2017/18. Data from previous years are included for comparison.

1.2: Number of kits issued from community outlets
In Scotland in 2017/18, 6,924 THN kits were issued from community outlets. This was an increase of 397 kits (6%) compared with 2016/17. A total of 38,475 THN kits were issued from community outlets over the seven years from 2011/12 to 2017/18 (Table 1.1).

Information from the National Drug-Related Deaths Database (Barnsdale et al, 2018) shows that, between 2009 and 2016, drug-related deaths were most commonly observed in May. For most years since 2011/12, the supply of THN kits from community outlets was highest in December (Table 1.1 and Figure 1.1). However, in 2013/14 and 2017/18, the number of THN kits supplied peaked in March and November respectively. The number of kits supplied in each quarter by financial year and NHS Board are shown in Table 1.2.

Figure 1.1: Number of THN kits supplied from community outlets, by month and financial year (Scotland; 2011/12 to 2017/18)
Table 1.2 and Figure 1.2 show the number of THN kits issued from community outlets in each NHS Board from 2011/12 to 2017/18 (and the cumulative total over the seven years). In 2017/18, NHS Greater Glasgow & Clyde supplied the largest number of kits (1,829), followed by NHS Lothian (1,117) and NHS Grampian (1,019).

Figure 1.2: Cumulative number of THN kits supplied from community outlets, by NHS Board\(^1,2\) and financial year (Scotland; 2011/12 to 2017/18)

1. NHS Western Isles did not participate in the programme until 2017/18.
2. Intranasal naloxone kits distributed by NHS Highland are not included. For more information see Table 1.2.

**Supply type**

THN kits may be issued as a first, repeat or spare\(^3\) supply. In 2017/18, of the 6,924 kits issued from community outlets, 39% were reported as a first supply, 55% as a repeat supply, 5% as a spare supply\(^4\) and 1% as unknown. Comparable figures for 2016/17 were 40%, 50%, 7% and 3% respectively (Table 1.3 and Figure 1.3). Since the beginning of the programme, it was anticipated that there would be an increasing demand for repeat supplies as THN kit supply and usage increased. The percentage of kits distributed as a repeat supply from community outlets increased each year from 13% in 2011/12 to 55% in 2017/18.

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\(^3\) Spare supply of take-home naloxone kits was first recorded in 2012/13.

\(^4\) Whilst the naloxone dataset includes a number of data items that may aid the calculation of the number of ‘individuals’ who were supplied kits, due to gaps in data and/or variations in how data are recorded between records (e.g. recording of slightly different initials, postcode sector information and/or date of birth) it is not possible to conclusively identify the number of individuals involved.
Figure 1.3: Number of THN kits supplied from community outlets, by supply type and financial year (Scotland; 2011/12 to 2017/18)

Figure 1.4 shows the reasons for repeat supply of naloxone (based on self-report) from community outlets between 2011/12 and 2017/18. Throughout the programme, kit loss and use in treating overdoses have been the main reasons for issuing a repeat supply. Repeat supply due to kit expiry increased from 2013/14 to 2016/17 (THN kits have a maximum expiry date of three years). Compared to 2016/17 (847, 26%), there was a decrease in the number and percentage of re-supplies due to kit expiry in 2017/18 (712, 18%).

In 2017/18, there was a substantial increase in the number of repeat supplies from community outlets with no reason for re-supply provided. From 2012/13 to 2016/17, ‘unknown’ reason for re-supply was observed in between 8% and 11% of relevant cases. In 2017/18, the reason for 20% (768) of re-supplies was ‘unknown’. This was due to data quality issues in three NHS Boards (NHS Ayrshire & Arran, NHS Grampian and NHS Greater Glasgow & Clyde).
**Figure 1.4: Number of THN kits supplied from community outlets as a repeat supply, by reason for repeat supply and financial year (Scotland; 2011/12 to 2017/18)**

Table 1.3 provides information on numbers of kits issued as repeat supplies from community outlets and the reason for supply, including breakdowns according to the recipient of the kit. In 2017/18, of the 3,804 cases noted as a repeat supply, the following responses were most common:

- 30% (1,155) were reported as due to ‘previous kit lost’;
- 24% (897) ‘kit used on another’;
- 20% (768) ‘unknown’ reason for repeat supply;
- 19% (712) ‘previous kit expired’ (i.e. the pharmaceutical product (naloxone) had expired);
- 4% (164) ‘previous kit damaged’; and,
- 2% (92) ‘kit used on self’.

In 2017/18, there were 989 cases where a community outlet repeat supply was reported as due to use of the previous kit on a person during an opioid overdose. Of these cases, 91% (897) comprised ‘kit used on another’ and 9% (92) ‘kits used on self’, i.e. administered to self.

**Recipient type**

THN kits issued from community outlets may be supplied to:

- the person at risk of opioid overdose;
- to family/friends (with the recorded consent of the person at risk – the named patient); or,
- to a service worker.
Figure 1.5 shows that, of the 6,924 kits issued from community outlets in Scotland in 2017/18, the majority (81%) were issued to people at risk of opioid overdose. A further 11% were supplied to service workers and 8% to family/friends (with the recorded consent of the named patient). Table 1.4 provides a quarterly breakdown of community outlet kits supplied by recipient type (at Scotland level), while Table 1.5 shows figures for each financial year, by NHS Board.

The annual percentage of community outlet THN kits supplied to family/friends was 2% from 2011/12 to 2015/16, but increased to 5% (323) in 2016/17 and 8% (570) in 2017/18. Increased supply to family/friends has been particularly noteworthy in NHS Greater Glasgow & Clyde (83 kits in 2016/17, 413 kits in 2017/18). The reason for this increase was the use of powers granted in the 2015 revision to the 2012 Human Medicines Regulations, which allowed injectable naloxone to be supplied directly to people likely to witness an overdose (see Appendix A1.1 for further information). Consequently, community outlet THN supply has been expanded to groups who may encounter an overdose (e.g. staff working with people who use drugs) and via peer support networks within the NHS Board.

1.3: Characteristics of ‘at risk’ recipients of community outlet kits
There were 5,594 kits supplied from community outlets in 2017/18 to a person at risk. In 5,300 (95%) cases, the person consented to the sharing of their personal data for monitoring purposes (Table 1.6). Information about the person receiving the kit was available only for those who consented to the sharing of their data. (Further information about the dataset is given in Appendix A1.2).
In 2017/18, over two-thirds (69%) of THN kits supplied to a person at risk from a community outlet were to males (Table 1.7). The relative proportion of kits supplied by gender has remained broadly the same since the beginning of the National Naloxone Programme (across the time series combined, 67% of community outlet supplies were made to males). For comparison, in 2012/13, it was estimated that 71% of people with problem drug use in Scotland were male (Kerssens et al, 2014).

Figure 1.6: Percentage of THN kits supplied to persons at risk from community outlets, by age group of recipient and financial year (Scotland; 2011/12 to 2017/18)

Figure 1.6 shows the age distribution of persons at risk supplied with a THN kit from a community outlet for years 2011/12 to 2017/18. In 2017/18, 44% of kits were supplied to individuals aged 35-44 and 32% were supplied to individuals aged 25-34. Over the time series, the percentage of recipients aged under 25 decreased (from 10% in 2011/12 to 4% in 2017/18) and the percentage of recipients aged 45 years and over increased from 9% in 2011/12 to 19% in 2017/18. This trend is in line with evidence about the ageing population of people with a drug problem (Kerssens et al, 2014, Scottish Drugs Forum, 2017). Table 1.7 provides Scotland-level breakdowns of community outlet supplies by gender and age for 2011/12 to 2017/18.

1.4: ‘Reach’ of community outlet THN supplies
In addition to monitoring the number of THN kits supplied, it is important to describe the ‘reach’ of the National Naloxone Programme. ‘Reach’ is estimated by quantifying how many individuals ‘at risk’ of opioid overdose have been supplied with THN. In order to do this, only first supplies (excluding repeat supplies and spare supplies) to people at risk of opioid overdose (excluding supplies made to service workers and family/friends) are counted. Within a specific time period, ‘reach’ effectively corresponds to the number of ‘at risk’
individuals newly supplied with THN and is therefore lower than the total number of kits distributed during that period. See Appendix A1.5 for further information.

Table 1.8 shows the number of THN kits issued from community outlets as a first supply to individuals at risk in each NHS Board from 2011/12 to 2017/18 (and the cumulative total over seven years). In 2017/18, NHS Greater Glasgow & Clyde supplied the largest number of first supplies to people at risk (470), followed by NHS Lothian (334) and NHS Grampian (289).
2. Take-home naloxone (THN) supply in prisons

2.1: Introduction
THN kits are supplied to prisoners, along with their personal belongings, on release from custody. This section presents information on the number of THN kits issued in prisons in Scotland by time period, prison establishment and NHS Board. Data on gender and age are presented for those cases where the person agreed to the sharing of their personal data for monitoring purposes. Additionally, data are presented on numbers of first and repeat supplies and reasons for the repeat supply. As with supply from community outlets, the most recent available information is for 2017/18 and figures for previous years have been included for comparison.

2.2: Number of kits issued in prisons
In Scotland in 2017/18, 664 THN kits were issued in prisons. This was a 5% decrease compared with 2016/17 and the lowest annual number of THN kits issued in prisons since the beginning of the National Naloxone Programme. A cumulative total of 5,707 THN kits were issued in prisons in Scotland from 2011/12 to 2017/18 (Table 2.1).

Statistics on the number of kits supplied in each prison establishment by financial year and quarter are shown in Table 2.2. THN supply by establishment often varied considerably from year to year. The number of THN kits supplied between 2016/17 and 2017/18 increased in five prisons and decreased in ten prisons. HMP Polmont issued the highest number of kits in 2017/18 (123) followed by HMP Grampian (88).

Supply type
Naloxone kits may be issued as a first, repeat or spare supply. Where a repeat supply was made, this could be following initial supply from a community outlet, or following supply on release from a previous stay in prison (i.e. issued in a prison). It is not possible, using the current naloxone monitoring dataset, to determine where the previous supply was made.

Of the 664 kits issued in prisons in 2017/18, 46% were recorded as a first supply, 29% a repeat supply and 2% a spare supply. Status was unknown for 23% of kits issued (Table 2.3 and Figure 2.1). The percentage of prison kits that were repeat supplies (29%) has increased from 4% in 2011/12 but remains lower than for community outlet supplies (55% in 2017/18).

Table 2.3 provides a breakdown of the reasons for repeat supply of naloxone in prisons from 2011/12 to 2017/18. Of the 192 cases noted as a repeat supply in 2017/18, the reason for replacement was unknown in 46% of cases and the previous kit was reported as having been lost in 27% of cases. In a total of 28 cases (15%) in 2017/18, repeat supply in prison was due to use of the previous kit on a person at risk.

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5 One exception to this is HMP Castle Huntly (an open prison), which provides training and THN to prisoners at risk who leave the establishment on home leave prior to their liberation.
6 Spare supply of take-home naloxone kits was first recorded in 2012/13.
7 Kits supplied in prisons are issued on prisoner release (or for home leave, in the case of Castle Huntly open prison), not ‘in prison’, therefore any reference to loss of the previous kit, use of the previous kit on self or on another, kit confiscated etc. would not have occurred ‘in prison’.
Recipients type
In 2017/18, 94% of THN kits issued in prisons in Scotland were supplied to persons at risk of opioid overdose. This percentage was lower than in the period from 2011/12 to 2015/16, when between 99% and 100% of THN kits issued in prisons were to ‘at risk’ individuals (Table 2.3).

2.3: Characteristics of ‘at risk’ recipients of kits supplied in prisons
In 2017/18, 622 THN kits supplied in prisons in Scotland were issued to people at risk of opioid overdose. In 604 of these cases (97%) the recipient consented to the sharing of their personal data for monitoring purposes (Table 2.4).

In Scottish prisons, 71% of kits issued to persons at risk of opioid overdose in 2017/18 were to males and 29% to females (Table 2.5 and Figure 2.2). Across the time series, the percentage of prison THN kits supplied to females ranged from 18% (2013/14) to 32% (2011/12). According to the latest Annual Report by Scottish Prison Service (Scottish Prison Service, 2018); females accounted for 5% of the average daily sentenced prison population in Scotland in 2017/18. This suggests a relatively higher uptake of THN among female prisoners compared with male prisoners.

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8 The disproportionately high percentage of kits supplied to female prisoners may be partly explained by the high level of engagement with the National Naloxone Programme at Scotland’s only all-female establishment (HMP Cornton Vale). As it is currently being refurbished, THN distribution from HMP Cornton Vale was low in 2017/18. However, while this work is underway an increase in supply was observed in establishments holding female prisoners (e.g. HMP Polmont).
Figure 2.2: Percentage of THN kits supplied to persons at risk in prisons, by gender of recipient and financial year (Scotland; 2011/12 to 2017/18)

Figure 2.3 and Table 2.5 describe the age distribution of persons at risk of opioid overdose receiving kits in prisons between 2011/12 and 2017/18. In 2017/18, 37% of kits supplied in prisons were to those aged 35-44 and 36% were to those aged 25-34. The age distribution of THN recipients has changed since the beginning of the National Naloxone programme (2011/12) when 53% of kits supplied in prisons were to those aged 25-34 and 23% were to those aged 35-44. This change reflects a wider trend towards increasing age among the problem drug use and prison populations (Scottish Drugs Forum, 2017 and Figure 8 Consultancy Services, 2014).

Compared with prisons, community outlets distributed a smaller percentage of kits (32%) to those aged 25-34 and a larger percentage (44%) to those aged 35-44 in 2017/18 (Table 1.7). Therefore, while the age of individuals receiving THN from community outlets and in prisons increased over time, prison recipients were comparatively younger than community outlet recipients.\(^9\)\(^10\)

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9 For comparison, the percentage of kits supplied to females via community outlets (31% in 2017/18) was broadly representative of the estimated percentage of females (29%) among the population of problem drug users in Scotland (Kerssens et al, 2014).

10 Scottish prison statistics (Scottish Government, 2015) also show that the age profile of prisoners was relatively younger than the general population.
2.4: ‘Reach’ of prison THN supplies

In addition to monitoring the number of THN kits supplied, it is important to describe the ‘reach’ of the National Naloxone Programme. ‘Reach’ is estimated by quantifying how many individuals ‘at risk’ of opioid overdose have been supplied with THN. In order to do this, only first supplies (excluding repeat supplies and spare supplies) to people at risk of opioid overdose (excluding supplies made to service workers and family/friends) are counted. Within a specific time period, ‘reach’ effectively corresponds to the number of ‘at risk’ individuals newly supplied with THN and is therefore lower than the total number of kits distributed during that period.

In order that they can be counted alongside numbers of community outlet and community prescription supplies for comparison with the estimated ‘at risk’ populations in each area, prison ‘reach’ figures are described on the basis of the NHS Board in which the prison is located. While most prisons accommodate individuals as close as possible to their area of residence and therefore reflect the population in that area, some establishments are national facilities, accommodating prisoners from across Scotland. Therefore, while prison ‘reach’ effectively describes an aspect of harm reduction activity by an NHS Board, it may introduce potential inaccuracies when comparing with local area estimates of the number of problem drug users. There is zero prison ‘reach’ in areas with no establishments (NHS Borders, NHS Fife, NHS Orkney, NHS Shetland and NHS Western Isles), producing a potential underestimate of the numbers of resident ‘at risk’ individuals with a THN supply. Prison ‘reach’ in areas with national facilities may lead to an overestimation of the numbers of resident ‘at risk’ individuals with a THN supply. See Appendix A1.5 for further information about the calculation of ‘reach’.

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Figure 2.3: Percentage of THN kits supplied to persons at risk in prisons, by age group of recipient and financial year (Scotland; 2011/12 to 2017/18)
Table 2.6 shows the number of THN kits issued as a first supply to people at risk in prisons in each NHS Board from 2011/12 to 2017/18 (and the cumulative total over the seven years). In 2017/18, prisons issued 286 individuals with their first THN supply. The highest number of first supplies to people at risk in prisons in 2017/18 were made in NHS Greater Glasgow & Clyde (103), followed by NHS Lothian (60).
3. Take-home naloxone (THN) supply via community prescription

3.1: Introduction
Prescribing take-home naloxone (THN) to people at risk of opioid overdose has always been technically possible via a community/hospital prescription. However, the absence of a suitable product for administration by lay persons before 2013, along with central reimbursement of THN costs in the first five years of the National Naloxone Programme, meant that THN was rarely prescribed using this mechanism. Following changes in medicines regulation and government policy (for further information see Appendix A1.1) some NHS Boards have also started to dispense THN via community prescription.

The number of THN kits dispensed via community prescription can be monitored using data from ISD’s Prescribing Information System. The number of prescriptions issued in an area may differ from the number of kits actually dispensed to individuals: prescriptions may not be presented to a pharmacy or multiple kits may be dispensed on the basis of a single prescription. For comparability with other figures presented in this report, data presented are restricted to the recommended THN product for administration by lay persons (Prenoxad-inj-1mg/ml)\(^{11}\). THN kits may be dispensed in community pharmacies via four types of community/hospital prescription\(^{12}\):

- GP10 (GP Standard Prescription Form),
- GP10N (Nurse Prescription Form),
- GP10P (Pharmacy Prescription Form) and
- HBPA (Hospital Addict Form).

This section presents information on the number of THN kits dispensed via community prescription. This includes breakdowns by quarter, NHS Board and type of prescription. The most recent available information is for 2017/18. Monitoring data from previous years are included for comparison.

3.2: Number of kits dispensed via community prescription
In Scotland in 2017/18, 809 THN kits were dispensed via community prescription. This was a reduction in the number of THN kits dispensed via community prescription compared to the previous year (2016/17: 962), yet the number remains substantially higher than in 2015/16 (70) and preceding years. In 2017/18, the number of kits dispensed via community prescription was highest in Quarter 3 (270). The majority (592, 73%) of kits dispensed via community prescription in 2017/18 were supplied in the NHS Greater Glasgow & Clyde area.

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\(^{11}\) Prenoxad is the recommended product for administration by lay persons in the community as this is currently the only product containing the correct patient information leaflet and dosage instructions. Technically, while other naloxone products can be supplied, this is rarely done because instruction leaflets are for medical professional use only. Reflecting this, these data relate to Prenoxad-inj-1mg/ml only. In 2017/18, a total of 63 generic Naloxone Hydrochloride-inj-1mg/ml supplies were excluded from the data.

\(^{12}\) Kits dispensed on the basis of GP10A (Stock Order Form) and CPUS (Community Pharmacy Urgent Supply) forms are not included.
A total of 1,855 THN kits were dispensed via community prescription in Scotland over the five years from 2013/14 to 2017/18 (Table 3.1). During this time period, the highest percentage of kits (1,475, 79%) was dispensed in the NHS Greater Glasgow & Clyde area followed by the NHS Lothian area (372, 20%).

**Prescription type for kits dispensed via community prescription**

Of the 809 kits dispensed via community prescription in 2017/18, 90% were issued on the basis of a medical prescriber prescription (GP10), 6% using hospital-based drug treatment prescriptions (HBPA), 3% on the basis of nurse prescriptions (GP10N) and 1% by supplementary/independent pharmacist prescriptions (GP10P) (Table 3.2).

Between 2013/14 and 2017/18, the largest number of kits (1,561, 84%), were dispensed on the basis of a medical prescriber prescription, followed by hospital-based drug treatment prescriptions (197, 11%), supplementary/independent pharmacist prescriptions (55, 3%) and nurse prescriptions (42, 2%).

**3.3: ‘Reach’ of THN dispensing via community prescription**

As one of the purposes of dispensing THN via community prescription was to expand the ‘reach’ of THN provision, it is important to describe the contribution of these supplies to the ‘reach’ of the National Naloxone Programme. ‘Reach’ is estimated by quantifying how many individuals ‘at risk’ of opioid overdose have been supplied with THN. For community prescriptions, this is based on the number of THN prescriptions fulfilled, rather than the number of kits dispensed (a single prescription may specify that multiple kits are dispensed).

Due to information on recipient type and supply type not being available, it was assumed in last year’s report that all community prescriptions were first supplies to persons ‘at risk’ of opioid overdose. Discussions with an expert short life working group and relevant NHS Board leads about the use of community prescriptions for the issue of THN identified a need to modify this assumption in this year’s report. Therefore, for THN dispensed via community prescription, it is now assumed that the percentage of first supplies to people at risk of opioid overdose would be approximately the same as that for community outlets (Section 1). Community prescribing ‘reach’ is calculated by multiplying the observed number of prescriptions in each financial year by a factor based on the percentage of first supplies to people at risk of opioid overdose from community outlets in the preceding 3-year period. Other kits supplied on the basis of community prescriptions are assumed to be re-supplies to people at risk of opioid overdose or supplies to family members etc. See Appendix A1.5 for further information.

Using this new method of calculating reach, Table 3.3 shows the estimated number of THN kits issued as a first supply to people at risk via community prescription in each NHS Board.
area from 2013/14 to 2017/18 (and the cumulative total over that period). Of the estimated 264 first supplies to people at risk of opioid overdose dispensed in 2017/18, 72% (191) were supplied in the NHS Greater Glasgow & Clyde area and 27% were supplied in the NHS Lothian area (72).
4. Combined take-home naloxone (THN) supply from community outlets, in prisons and via community prescription

4.1: Introduction
This section describes the combined number of kits distributed from community outlets and in prisons from 2011/12 to 2017/18 and dispensed via community prescription from 2013/14 to 2017/18. Estimates of the total number of kits and ‘reach’ per 1,000 adults with problem drug use (PDUs) in each NHS Board are also presented.

4.2: Number of kits supplied (all sources)
The National Naloxone Programme issued a total of 46,037 kits over the seven years from 2011/12 to 2017/18 (Figure 4.1 and Table 4.1). The majority of those kits (38,475, 84%) were supplied from community outlets.

A total of 8,397 kits were issued in Scotland in 2017/18 (a 3% increase compared with 2016/17 (8,189)). This was the highest annual total of THN kits supplied since the start of the National Naloxone Programme. In 2017/18, 82% of kits (6,924) were supplied from community outlets, 10% (809) were dispensed via community prescription (12% in 2016/17) and 8% (664) were supplied in prisons.

Figure 4.1: Cumulative number of THN kits supplied, by source and financial year (Scotland; 2011/12 to 2017/18)

Supply and recipient type
Figure 4.2 and Table 4.2 show the number of community outlet and prison kits issued in Scotland from 2011/12 to 2017/18 according to whether these were a first or repeat supply
(information on supply type and recipient type was not available for kits dispensed via community prescription).

In 2017/18, 3,996 (53%) THN kits distributed from community outlets and prisons were repeat supplies. As anticipated, repeat supplies increased over time as overall THN supplies increased. The percentage of community outlet and prison THN kits distributed as a repeat supply increased each year from 11% in 2011/12 to 53% in 2017/18. This was accompanied by a decrease in the percentage of first supplies from 80% in 2011/12 to 40% in 2017/18.

**Figure 4.2: Number of THN kits supplied from community outlets and prisons combined, by supply type and financial year (Scotland; 2011/12 to 2017/18)**

Table 4.2 provides a breakdown of the reasons for repeat supply of naloxone from community outlets and prisons from 2011/12 to 2017/18. In 2017/18, 1,017 kits (25% of repeat supplies) were issued due to the previous kit being used to reverse an opioid overdose\(^\text{15}\). From 2011/12 to 2017/18, the number of community outlet or prison repeat supplies made following use of the previous kit to reverse an opioid overdose was 4,107 (26% of repeat supplies).

Other information on the characteristics of combined community outlet and prison supplies\(^\text{16}\) (2011/12 to 2017/18) is available in the Excel tables:

- Table 4.3 provides a quarterly breakdown of kits issued, by recipient type.
- Table 4.4 shows the number of ‘at risk’ recipients who consented to share their personal information.
- Table 4.5 shows the gender and age characteristics of ‘at risk’ individuals receiving THN.

\(^{15}\) Includes resupplies due to use of previous kit on self and on other person.

\(^{16}\) THN kits dispensed via community prescription are not included as this type of information is not available for these supplies.
4.3: Kit expiry
The National Naloxone Programme has been operational for seven years (supply commenced in April 2011). However, as THN kits have an expiry date from production of three years, supplies distributed at the start of the National Naloxone Programme will have now passed their expiry date. In addition, THN kits may be retained in the supply chain for varying periods before being received by NHS Boards for onward supply. Taking this into account, along with advice from an expert short life working group, it was estimated that THN kits will have an average of two years remaining before date of expiry at the time of supply. In order to comply with licensing laws, NHS Boards are obliged to offer replacements for medicines which have passed their expiry date.

The following analysis (included in the report for the first time) provides an indication of the numbers of THN kits potentially in circulation which are unexpired. See Appendix A1.4 for further information.

Figure 4.3 takes account of expiry dates in relation to THN kits distributed to all recipients, showing the cumulative total number of kits supplied since the beginning of the National Naloxone Programme and the cumulative total of THN kits supplied less than two years ago. Since 2016/17 Quarter 1, the total number of THN kits supplied less than two years ago has been approximately stable, ranging between 16,243 and 16,586 (Table 4.6).

**Figure 4.3: Cumulative number of THN kits and number of THN kits supplied less than two years ago to all recipients (all supply types combined), by financial year (Scotland; 2011/12 to 2017/18)**
Figure 4.4 and Table 4.7 take account of expiry dates in relation to THN kits distributed to people at risk of opioid overdose (the ‘at risk’ population). Since 2016/17 Quarter 2 (14,654), the total number of THN kits supplied less than two years ago to people at risk of opioid overdose has decreased slightly (13,948 in Quarter 4 of 2017/18).

**Figure 4.4: Cumulative number of THN kits and number of THN kits supplied less than two years ago to people at risk of opioid overdose (all supply types combined), by financial year (Scotland; 2011/12 to 2017/18)**

![Graph showing cumulative number of THN kits and number of THN kits supplied less than two years ago](image)

4.4: ‘Reach’ of THN supplies (all sources)

Before 2016/17, the penetration of the National Naloxone Programme among the population ‘at risk’ of an opioid overdose was measured by comparing the total number of THN kits supplied with the estimated number of problem drug users (PDUs). This measure helps to quantify NHS Board harm reduction activity and the total number of THN kits supplied per ‘at risk’ individual, but does not estimate THN penetration among the ‘at risk’ target population.

Previous sections of this report have described the number of first supplies to people at risk of opioid overdose via specific supply routes. By combining these data and comparing with the estimated number of PDUs, the overall ‘reach’ of THN supply among the population ‘at risk’ of an opioid overdose can be estimated. Due to a) the allocation of prison THN supplies to the NHS Board where the prison is located and b) the assumption that the percentage of first supplies to people at risk of opioid overdose dispensed via community prescription is similar to the percentage observed in community outlets supplies, some uncertainty is

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17 This new assumption, agreed with an expert short life working group, differs from the assumption used in the 2016/17 report, that all THN kits supplied on the basis of a community prescription were first supplies to people at risk of opioid overdose.
associated with these estimates. However, an estimate of numbers of ‘at risk’ individuals supplied with THN provides a better means of assessing ‘reach’ among the target population (PDU) than the overall number of THN kits distributed. See Appendix A1.5 for further information.

Figure 4.5 shows the estimated cumulative number of THN kits issued as a first supply to people at risk of opioid overdose from community outlets, in prisons and dispensed via community prescription from 2011/12 to 2017/18. Table 4.8 provides a breakdown of these data by NHS Board.

**Figure 4.5: Cumulative number of THN kits distributed as first supply to people at risk, by source, financial year (Scotland; 2011/12 to 2017/18)**

An estimated total of 23,096 individuals at risk of opioid overdose were supplied with THN over the seven years from 2011/12 to 2017/18. Due to the exclusion of repeat supplies and kits supplied to family/friends and service workers, this is lower than the combined total number of kits supplied (Figure 4.1 and Table 4.1). Seventy nine per cent (18,238) of estimated first supplies to ‘at risk’ individuals were from community outlets.

Annual estimated numbers of first supplies to people at risk of opioid overdose increased from 2,624 in 2011/12 to 4,338 in 2013/14 and have since decreased to 2,458 THN kits in 2017/18.

Figure 4.6 compares both the total number of THN kits supplied and the estimated total number of first supplies to people at risk of opioid overdose with the estimated number of PDU. Both measures are presented as cumulative figures over time per 1,000 PDU.
Cumulatively, a total of 46,037 kits (equivalent to 749 kits per 1,000 PDUs aged 15-64) were supplied by the National Naloxone Programme up to the end of 2017/18 (Table 4.9). In 2017/18, 8,397 THN kits were issued from community outlets, in prisons and dispensed via community prescription. Comparing with the most recent estimate of the number of problem drug users in Scotland (61,500) (Kerssens et al, 2015), this was equivalent to an annual rate of 137 kits per 1,000 PDUs (the highest rate observed since the beginning of the National Naloxone Programme).

By the end of 2017/18, an estimated cumulative total of 23,096 kits (equivalent to 376 kits per 1,000 PDUs) had been issued/dispensed as a first supply to people at risk (Table 4.10). In 2017/18, an estimated 2,458 THN kits were issued as a first supply to people at risk (equivalent to an annual rate of 40 kits per 1,000 PDUs). Since the peak of an estimated 71 kits per 1,000 PDUs in 2013/14, there has been a general decrease in the annual number of people supplied with THN for the first time, with 2017/18 being the lowest annual ‘reach’ rate observed since the start of the National Naloxone Programme. This may indicate that the

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18 The Needle Exchange Surveillance Initiative (NESI) found that 51% of 2015-16 respondents had been supplied with THN in the previous year. However, NESI includes only injecting drug users, potentially a high overdose risk group with higher rates of THN provision than non-injecting opioid users. This report estimated that THN supply among PDUs was lower (376 kits per 1,000 PDUs, or 38%, since the start of the programme), but this was based on comparison with a wider group of problem drug users (including non-injecting opioid users and benzodiazepine users). It is not possible to determine whether individuals were injecting or non injecting opioid users on the basis of the naloxone monitoring dataset.
number of people at risk of overdose who do not possess a THN kit is gradually reducing due to effective supply mechanisms. Alternatively, it may indicate that supply mechanisms are proving increasingly ineffective at identifying individuals at risk without a THN kit.

Figure 4.7 shows the cumulative total number of THN kits and estimated number of first supplies to people at risk issued from community outlets, in prisons and dispensed via community prescription from 2011/12 to 2017/18 as a rate per 1,000 estimated PDUs in each NHS Board.

**Figure 4.7: Cumulative number of THN kits and first supplies to people at risk of opioid overdose (all supply types combined) per 1,000 PDUs aged 15-64, by NHS Board**

NHS Borders issued the highest total number of kits compared to estimated numbers of PDUs (1,489 per 1,000 PDUs) followed by NHS Forth Valley (1,128) \(^\text{19}\). NHS Western Isles (which did not participate in the programme until 2017/18) issued the lowest number of kits per 1,000 PDUs (64), followed by NHS Lanarkshire (531).

NHS Forth Valley issued the highest estimated number of THN kits as a first supply to people at risk (636 per 1,000 PDUs) followed by NHS Tayside (505). The high ‘reach’ rate in NHS

\(^{19}\) In NHS Borders and NHS Forth Valley, more than 1,000 THN kits were distributed per 1,000 PDUs from 2011/12 to 2017/18. High levels of service provider engagement and support for THN provision in NHS Borders and the small size of the ‘at risk’ population helped support effective delivery. However, potential inaccuracies in PDU estimates, changes in the size of the ‘at risk’ population and repeat/spare supplies may also have contributed to this high supply rate.
Forth Valley may partly be associated with the presence of three prisons within the NHS Board area. NHS Western Isles had issued the lowest number of kits as first supply to people at risk (9 per 1,000 PDUs), followed by NHS Orkney (200).
5. Comparison of take-home naloxone (THN) distribution with opioid-related deaths

5.1: Introduction
In addition to monitoring the supply of take-home naloxone (THN) kits in Scotland, the National Naloxone Advisory Group (NNAG) had agreed that the number and percentage of opioid-related deaths that occurred shortly after prison release or after hospital discharge would be used as measures of the impact of the National Naloxone Programme.

Changes since the implementation of the National Naloxone Programme are estimated by comparing the following time periods:

- **Pre-implementation or ‘baseline’**: the percentage of opioid-related deaths that occurred within four weeks of prison release or hospital discharge during the period 2006 to 2010\(^{20}\).
- **Post-implementation**: the percentage of opioid-related deaths that occurred within four weeks of prison release or hospital discharge in each year from 2011 to 2017.

Annual data are broken down by age and gender. The tables accompanying this report include comparable data on opioid-related deaths within 12 weeks of prison release and within 12 weeks of hospital discharge. These additional tables are included in this publication based on a NNAG recommendation that patterns of deaths within this longer timeframe should also be monitored to assess the timing of mortality risk throughout the 12-week period. Details of how these data are collected are included at Appendix A1.6.

While differences in the percentage of post-prison or post-hospital deaths between the baseline (pre-implementation) and post-implementation periods are described below, attributing any changes to the National Naloxone Programme is complex, in part because this type of ‘before and after’ comparison is not able to take account of secular trends. The comparison also assumes that the total number of opioid users at risk of death and the number of opioid users at risk of death during the four-week period following prison release or hospital discharge either do not change over time, or else show the same changes.

5.2: Opioid-related deaths post-prison release
This indicator is defined as:

- **Numerator**: the number of drug-related deaths (including suicides) reported by National Records of Scotland (NRS) that were opioid-related\(^{21}\) and occurred within the first four weeks following release from prison custody.

- **Denominator**: the number of opioid-related deaths (defined as for the numerator).

The baseline for this indicator is the percentage of opioid-related deaths that occurred within the first four weeks following release from prison custody during the period 2006-10 (based on year of registration of death\(^{19}\)).

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\(^{20}\) As per the definition used by National Records of Scotland (NRS), this is based on year of registration of death. In Scotland this is, for the most part, year of death because all deaths must be registered within eight days of death having been ascertained.

\(^{21}\) That is, where one or more of heroin, morphine, methadone or buprenorphine was implicated in, or potentially contributed to death.
**Results**

In 2017, there were 934 drug-related deaths, of which 709 were opioid-related. The number of opioid-related deaths rose by 9% from 2016 (650). In 2017, the number of opioid-related deaths within four weeks of prison release was 31 (an increase of eight compared to 2016 (23)). The percentage of opioid-related deaths that occurred within four weeks of prison release was 4.4% (compared to 3.5% in 2016).

Opioid-related deaths within four weeks of prison release are shown in Table 5.1 and Figure 5.1, along with the total number of opioid-related deaths. The number of opioid-related deaths during the baseline period 2006 to 2010 was 1,970 (an average annual number of 394), of which 193 (an average of 39 per year) occurred within four weeks of prison release. The average percentage of opioid-related deaths that occurred within four weeks of prison release during the baseline period 2006 to 2010 was 9.8%.

**Figure 5.1: Number of opioid-related deaths and percentage within four weeks of prison release, by calendar year (Scotland; 2006 to 2010 (baseline) & 2011 to 2017)***

1. White bars indicate percentages in post-implementation period which are significantly below the baseline value from the pre-implementation period (red line).

Apart from in 2013 (383), the annual number of opioid-related deaths (indicated by the blue line in Figure 5.1) in each year since the implementation of the National Naloxone Programme in 2011 has been higher than the average annual number of opioid-related deaths for the baseline period (394). However, since the implementation of the National Naloxone Programme, the annual number of opioid-related deaths within four weeks of prison release has been lower than the comparable average annual number in the baseline
period (39). Therefore, since 2012, the annual percentage of opioid-related deaths within four weeks of prison release has been substantially lower than the annual percentage observed during the baseline period (the 2017 percentage (4.4%) was less than half of that observed during the baseline period (9.8%)). It should be noted that these percentages are based on relatively small numbers (for example, 23 deaths in 2016 and 31 deaths in 2017) and should therefore be treated with caution. In Figure 5.1, the white bars indicate years in which the percentage figures were statistically significantly lower than the average percentage during the baseline period.

Table 5.2 provides comparable information for opioid-related deaths within 12 weeks of prison release. During the baseline period, 73% (193/265) of all opioid-related deaths within 12 weeks of prison release occurred in the first four weeks after release. This percentage decreased after implementation of the National Naloxone Programme, ranging between 48% and 55% from 2012 onwards (53% (31/58) in 2017). Recent reductions in the number and percentage of deaths within four weeks of prison release may indicate that the risk of opioid-related death during this period has decreased (potentially due to THN supply at prison release). However, this also means that the numbers of deaths observed within the four-week timeframe are small and falling, relative to deaths observed within the 12-week period.

5.3: Opioid-related deaths post-hospital discharge

An additional indicator based on the percentage of opioid-related deaths within four weeks of hospital discharge (general acute/psychiatric) has been included in the naloxone monitoring report since 2013. The National Naloxone Programme did not oversee distribution of THN kits from general acute or psychiatric hospitals and ISD did not receive separate monitoring data for hospital provision of THN kits. Use of THN for overdoses occurring after hospital discharge may therefore be largely dependent on kits supplied from community outlets, prisons and dispensed on the basis of community prescriptions.

This indicator is defined as:

- **Numerator:** the number of drug-related deaths (including suicides) reported by National Records of Scotland (NRS) that were opioid-related and occurred within the first four weeks following discharge from general acute/psychiatric hospital.
- **Denominator:** the number of opioid-related deaths (defined as for the numerator).

The baseline for this indicator is the percentage of opioid-related deaths that occurred within the first four weeks following discharge from general acute/psychiatric hospital during the period 2006-10 (based on year of registration).

**Results**

Opioid-related deaths within four weeks of hospital discharge are shown in Table 5.3 and Figure 5.2. The percentage of opioid-related deaths within four weeks of hospital discharge has fluctuated around the baseline since implementation of the National Naloxone Programme in 2011. There was no year where the percentage was significantly different from the baseline. The total number of opioid-related deaths during the baseline period 2006 to 2010 was 1,970 (an average annual number of 394), of which 191 (an average of 38 per year) were within four weeks of hospital discharge. As a result the percentage observed
during the baseline period 2006 to 2010 was 9.7%. In 2017, the number of opioid-related deaths was 709, of which 78 were within four weeks of hospital discharge, resulting in a percentage of 11.0% of deaths that occurred within four weeks of hospital discharge.

**Figure 5.2: Number of opioid-related deaths and percentage within four weeks of hospital discharge, by calendar year (Scotland; 2006 to 2010 (baseline) & 2011 to 2017)**

Table 5.4 provides comparable information for the period within 12 weeks of hospital discharge. In 2017, 52% (78/151) of opioid-related deaths within 12 weeks of hospital discharge occurred within the first four weeks. While the percentage has varied over time (from 41% to 56%), the 2017 percentage was the same as the percentage observed during the baseline period (191/367, 52%).

It is noteworthy that the relative decrease in early deaths among one vulnerable population (ex-prisoners) has not been accompanied by a similar fall in early deaths among another vulnerable population (those discharged from hospital). Both of course are relative to rising overall numbers of opioid-related deaths. Given these differences, it would be worthwhile exploring the reasons for the different findings for hospitals and prisons.
# Glossary

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADP</td>
<td><strong>Alcohol and Drug Partnership.</strong> Multi-agency partnership formed to take strategic responsibility to address problems caused by substance use in each locality. This responsibility is devolved from the Scottish Government and includes commissioning evidence-based, person-centred and recovery-focused services, improving quality within these services based on outcomes for service users and developing policies to intervene early and prevent the development of problems with substance use.</td>
</tr>
<tr>
<td>DRD</td>
<td>Drug-Related Death</td>
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<tr>
<td>IM</td>
<td>Intramuscular</td>
</tr>
<tr>
<td>IN</td>
<td>Intranasal</td>
</tr>
<tr>
<td>ISD</td>
<td><strong>Information Services Division of NHS National Services Scotland</strong></td>
</tr>
<tr>
<td>NNAG</td>
<td><strong>National Naloxone Advisory Group.</strong> The body responsible for oversight of the National Naloxone Programme during its first five years of operation (2011/12 to 2015/16).</td>
</tr>
<tr>
<td>NNP</td>
<td><strong>National Naloxone Programme</strong></td>
</tr>
<tr>
<td>NRS</td>
<td><strong>National Records of Scotland</strong></td>
</tr>
<tr>
<td>Opioids</td>
<td>Drugs similar to heroin or morphine. Opioids include opiates (drugs derived from opium, including morphine and heroin (diamorphine)) and semi-synthetic and synthetic drugs such as hydrocodone, oxycodone and fentanyl. Opioids are most often used medically to relieve pain. The side effects of opioids may include itchiness, sedation, nausea, respiratory depression, constipation, and euphoria. The euphoria attracts recreational use, and frequent, escalating recreational use of opioids typically results in addiction. Tolerance and dependence will develop with continuous use, requiring increasing doses and leading to a withdrawal syndrome upon abrupt discontinuation. Accidental overdose or concurrent use with other depressant drugs commonly results in death from respiratory depression. Due to their association with addiction and fatal overdose, most opioid drugs are controlled substances.</td>
</tr>
<tr>
<td>PADS</td>
<td><strong>Partnership for Action on Drugs in Scotland.</strong> An expert group (with subgroups) responsible for advising the Scottish Government in relation to drug misuse. The PADS Harms subgroup became responsible for oversight of the National Naloxone Programme after its first five years of operation (2016/17 to present).</td>
</tr>
<tr>
<td>SPS</td>
<td><strong>Scottish Prison Service</strong></td>
</tr>
<tr>
<td>THN</td>
<td><strong>Take Home Naloxone</strong></td>
</tr>
</tbody>
</table>
## List of Tables

<table>
<thead>
<tr>
<th>File name</th>
<th>File and size</th>
</tr>
</thead>
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<tr>
<td>Naloxone data tables</td>
<td>Excel 539 Kb</td>
</tr>
</tbody>
</table>
Contact

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Further Information

Further Information can be found on the ISD website.

For more information on drug and alcohol misuse see the drug and alcohol section of our website.

The Scottish Public Health Observatory (ScotPHO) provides information on various aspects of drug misuse in Scotland: ScotPHO drug misuse section.

The next release of this publication will be in November 2019.

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Appendices

Appendix 1 – Background information

A1.1: Policy context
Since 1997, there has been a long-term upward trend in the number of Drug-Related Deaths (DRDs) in Scotland. National Records of Scotland (NRS) reported that there were 574 DRDs in Scotland in 2008. Although there have been year-to-year fluctuations, the number of DRDs increased to 934 in 2017 (the highest figure yet recorded) (NRS, 2018).

Scotland’s national drugs strategy The Road to Recovery: A New Approach to Tackling Scotland’s Drug Problem was launched in May 2008 and included specific actions required to address DRDs in Scotland.

A National Drug Related Deaths Database (NDRDD) was set up to aid understanding of the nature of, and circumstances surrounding DRDs and the individuals vulnerable to them. To date, ISD have published seven NDRDD reports (for calendar years 2009 to 2016), establishing that the majority of DRDs were among males, living in the most deprived areas, and aged 25 to 44 years (the average age increased from 34 in 2009 to 41 in 2016). Someone else was present at the scene of death in 56% of DRDs in 2016, thus offering an important window of opportunity for someone to intervene and potentially save a life.

Findings from the NDRDD for 2016 deaths show that 77% of individuals were in drug treatment, in prison or police custody or discharged from hospital in the six months prior to their death, demonstrating that in the majority of cases there may have been an opportunity to engage with and support those vulnerable to a DRD. Such descriptions of the characteristics of individuals at risk of overdose and periods of high overdose risk have helped inform training for practitioners, service users and family/friends in how to identify and respond to overdose situations, with the goal of reversing the upward trend in DRDs.

Following the recommendations from two independent expert forums and the successful outcomes of local take-home naloxone pilots in Scotland, the Scottish Government supported the rollout of the National Naloxone Programme in Scotland from November 2010.

Naloxone is a drug which reverses the effects of a potentially fatal overdose with opioid drugs such as heroin or morphine. Intramuscular injection of naloxone provides time for emergency services to arrive and for treatment to be given. Under the National Naloxone Programme, naloxone was provided to those at risk of opioid overdose once they had undergone training. This training was also available to family, friends and service workers.

In its first five years of operation (from April 2011 to March 2016), the National Naloxone Programme co-ordinated distribution of THN kits in two settings - community outlets (usually specialist drug treatment services) and prisons:

• The supply of THN in prisons was introduced incrementally from February 2011 and by June 2011 all Scottish prisons were participating in the programme. From 1 November 2011, responsibility for prisoner health care transferred from the Scottish Prison Service (SPS) to the NHS. Although this report refers throughout to ‘THN kits provided in prisons’, it should be noted that kits are provided by NHS staff in prisons to prisoners on liberation.22

In addition to supporting the rollout of the National Naloxone Programme, between 2010 and 2016, Scottish Government funding was made available to support the continued delivery of the programme by Alcohol and Drug Partnerships and NHS Boards. Support to the programme included:

• Specific support to the Scottish Prison Service (where medical services are now provided by NHS Boards), in recognition of the increased risk of overdose following release from prison custody.
• A national naloxone training resource and information materials to support the development of local take-home naloxone programmes.
• A national coordinator and peer trainer based at the Scottish Drugs Forum.
• Reimbursement of THN kit costs.
• Independent and robust monitoring led by ISD Scotland.

The National Naloxone Programme was overseen by the National Naloxone Advisory Group (NNAG), a multi-disciplinary group including stakeholders from Scottish Government, NHS Boards, Scottish Prison Service, Information Services Division (ISD) of NHS National Services Scotland, voluntary sector organisations and academia. The NNAG concluded its work in March 2016 and the remaining National Naloxone Programme activity is now overseen by the Partnership for Action on Drugs in Scotland (PADS) Harms Group.

In late 2015, THN supply via a third route (dispensing in a community pharmacy via prescription) increased in some NHS Boards following two key changes in the regulatory and policy frameworks:

• From 1 October 2015, changes to the 2012 Human Medicines Regulations came into force, allowing injectable naloxone to be supplied by lawful drug treatment services (defined as specialist secondary services, primary care addiction services, needle exchanges and community pharmacies). These amendments aimed to make THN more widely available by allowing direct THN supply to family members or carers for administration in the event of opioid overdose.
• From 1 April 2016, central reimbursement of the cost of THN kits ceased and NHS Boards assumed responsibility for the funding of THN supplies to opioid users at risk of accidental overdose.

The practical effects of these changes were to a) remove constraints on THN supply to those not at risk of opioid overdose and b) to facilitate NHS Board level diversification of THN supply routes. Data from ISD’s Prescribing Information System are included in this report in order to count the number of THN kits dispensed via community prescription.

22 One exception to this is HMP Castle Huntly (an open prison), which provides training and THN to prisoners at risk who leave the establishment on home leave prior to their liberation.
**A1.2: National Naloxone Programme supply monitoring – dataset items**

The data items in the agreed national dataset for monitoring of the National Naloxone Programme are detailed below. Questions one to five apply to all kit supplies from community outlets or in prisons. Question six asks if consent has been given to the sharing of the individual’s personal data. If yes, then questions seven to 12 (forename and surname (initials only are submitted to ISD), date of birth, age, postcode sector of residence and gender) should be completed. Questions 13 and 14 apply only to the supply of kits by prisons.

Data were submitted quarterly to ISD (six-monthly during 2012/13) via secure data transfer, from the Naloxone Lead in each NHS Board and a Lead Officer in each prison establishment. Data were supplied in the form of a completed Excel spreadsheet, for secure storage and analysis at ISD.

<table>
<thead>
<tr>
<th>Data item</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1a. ADP of Supply</strong></td>
<td><strong>Definition:</strong> This is the location of the service provider. <strong>Purpose:</strong> This data item will be used to monitor returns for each service participating in the National Naloxone Programme.</td>
</tr>
<tr>
<td><strong>1b. Prison Name</strong></td>
<td><strong>Definition:</strong> This is the name of the prison where the naloxone is issued. <strong>Purpose:</strong> This data item will be used to monitor returns for each prison participating in the National Naloxone Programme.</td>
</tr>
<tr>
<td><strong>(applicable to supply of kits in prisons)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>2. Date of Issue</strong></td>
<td><strong>Definition:</strong> This is the date on which the kit was issued and should be entered in the format DD/MM/YYYY. <strong>Purpose:</strong> This data item will be used to monitor the distribution of kits throughout the year. The dates of issue, together with other data items will also be used to quality assure the data. E.g. Date of issue, name and date of birth will help identify possible duplicate entries.</td>
</tr>
<tr>
<td><strong>3. Naloxone is provided to:</strong></td>
<td><strong>Definition:</strong> This records whether the kit is provided to the person at risk, family members, friends, partners, etc. or a service worker. The drop down list gives the options:</td>
</tr>
<tr>
<td></td>
<td>• Person at risk</td>
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<td></td>
<td>• Family/Friend</td>
</tr>
<tr>
<td>Data item</td>
<td>Notes</td>
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</tbody>
</table>
| **Service Worker** | Purpose: This data item will be used to monitor the ‘reach’ of THN distribution (how many individuals ‘at risk’ have access to a kit) and the total numbers of individuals receiving THN in addition to those persons ‘at risk’.

**Please note this is from the person’s perspective. It is not expected that the option for Family/Friends or Service Worker will be used within the SPS.** |

<table>
<thead>
<tr>
<th>4. Naloxone is provided as:</th>
<th>Definition: This records whether the kit is the person’s first supply or if they have previously been provided with a supply of naloxone. The drop down list gives the options:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- First Supply</td>
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<tr>
<td></td>
<td>- Repeat Supply</td>
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<tr>
<td></td>
<td>- Spare Supply</td>
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<tr>
<td></td>
<td>- Not Known</td>
</tr>
</tbody>
</table>

**Purpose:** This data item will be used to monitor the ‘reach’ of THN distribution (how many first supplies made to individuals ‘at risk’), the total numbers of individuals receiving THN in addition to those persons ‘at risk’ (inc. spare supplies) and the frequency of THN re-supply due to use, damage etc.

**Please note this is from the person’s perspective.** |

<table>
<thead>
<tr>
<th>5. Last naloxone supply:</th>
<th>Definition: This records what happened to the last supply that was provided. The drop down list contains the options:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Used on Self</td>
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<tr>
<td></td>
<td>- Used on Other</td>
</tr>
<tr>
<td></td>
<td>- Lost Kit</td>
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<td></td>
<td>- Confiscated</td>
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<td></td>
<td>- Expired</td>
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<td>- Damaged Kit</td>
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<td>- Not Applicable – First Supply</td>
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<tr>
<td></td>
<td>- Not Applicable – Spare Supply</td>
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<td></td>
<td>- Not Known</td>
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</table>

**Purpose:** This data item will assist in evidencing reasons for re-supply...
<table>
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<tr>
<th>Data item</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>(e.g. how many kits were used on those at risk of opioid overdose). Please note that this is from the person’s perspective.</td>
<td></td>
</tr>
<tr>
<td>6. Consent to Data Recording</td>
<td>Definition: A Yes/No field indicating whether consent to share their personal data has been given.</td>
</tr>
<tr>
<td>7. Forename</td>
<td>Definition: The forename of the person at risk. 1st letter of forename to be recorded. Purpose: For ISD internal use only. To evidence the number of individuals at risk who had been supplied with THN.</td>
</tr>
<tr>
<td>8. Surname</td>
<td>Definition: The surname of the person at risk. 1st and 4th letters of person’s surname to be recorded. Purpose: For ISD internal use only. To evidence the number of individuals at risk who had been supplied with THN.</td>
</tr>
<tr>
<td>9. Date of Birth</td>
<td>Definition: This is the date of birth of the person at risk and should be entered in the format DD/MM/YYYY. Purpose: This data item will be used to determine the age profile of individuals at risk receiving THN.</td>
</tr>
<tr>
<td>10. Age</td>
<td>Definition: The age in years of the person at risk. Purpose: In the absence of a date of birth (e.g. client refuses to supply their DOB), then age alone can be recorded in order to determine the age profile as in Q9.</td>
</tr>
<tr>
<td>11. Postcode of Residence</td>
<td>Definition: The partial postcode of the person at risk’s usual private residence.</td>
</tr>
<tr>
<td>Data item</td>
<td>Notes</td>
</tr>
<tr>
<td>-----------</td>
<td>-------</td>
</tr>
<tr>
<td><strong>Purpose:</strong></td>
<td>This data item will be used to assess geographic coverage of THN as well as determine areas with increasing use.</td>
</tr>
</tbody>
</table>
| **12. Gender** | **Definition:** This records the person at risk's gender. The drop down list contains the options:  
• Not Known  
• Male  
• Female  
• Not Specified  
**Purpose:** This data item will be used to assess the gender profile of those at risk receiving THN. |
| **13. Prison Release Date (if applicable)** | **Definition**  
This is the date the person at risk is due for release from prison and should be entered in the format DD/MM/YYYY.  
**Purpose:** This will assist in evidencing the impact of THN on prisoners who are vulnerable to overdose within 4 weeks and 12 weeks following liberation.  
*It is recognised that the four-week period following prison release is a crucial period for former prisoners with regard to risk of death from overdose.* |
| **14. Court Date** | **Definition**  
The date of court appearance if liberation/release date is not known.  
**Purpose:** In the absence of a liberation date, court date will assist in evidencing the impact of THN on prisoners who are vulnerable to overdose within 4 weeks and 12 weeks following liberation. |

**A1.3: Prescribing Information System data on THN supply via community prescription**  
Community prescription data are supplied quarterly by the ISD Prescribing Team. Data on number of kits (Quantity) and number of prescriptions (Items) dispensed by Financial Year and Quarter for all NHS Boards dispensing THN kits via community prescription are received.
by prescribable item name (Prenoxad- inj – 1mg/ml/Naloxone Hydrochloride - inj - 1mg/ml) and prescription type:

- GP10 (GP Standard Prescription Form),
- GP10N (Nurse Prescription Form),
- GP10P (Pharmacy Prescription Form); and,
- HBPA (Hospital Addict Form).

While only Prenoxad-inj-1mg/ml data are reported, the number of prescriptions for Naloxone Hydrochloride-inj-1mg/ml are also routinely monitored by the PADS Harms Group in order to identify inappropriate prescribing (as Prenoxad is the only THN product for administration by lay persons, all relevant prescriptions should specify this as the item to be dispensed).

A1.4: Calculation of kit expiry

The National Naloxone Programme has been operational for seven years (supply commenced in April 2011). However, as the pharmaceutical product supplied by the National Naloxone Programme (Prenoxad) has an expiry date from production of three years, supplies distributed at the start of the National Naloxone Programme will have now passed their expiry date. In addition, THN kits may be retained in the supply chain for varying periods and therefore there may be a reduction in the three year lifespan period when supplies are received by NHS Boards for onward supply. Taking this into account, along with advice from an expert short life working group, it was estimated that THN kits will have an average of two years remaining before date of expiry at the time of supply. In order to comply with licensing laws, NHS Boards are obliged to offer replacements for medicines which have passed their expiry date.

This report includes, for the first time, an analysis of a) the number of THN kits supplied less than two years ago and b) the number of THN kits supplied less than two years ago to people at risk of opioid overdose (i.e. the ‘at risk’ population). Taking account of the duration of the National Naloxone Programme, this analysis estimates the numbers of THN kits in circulation which are unexpired.

In the analysis of kit expiry for supplies to all recipients, the following assumption was made:

- Prison data from 2011/12 Quarter 1 (213 THN kits) were submitted as an aggregate return by SPS and did not include information on date of supply. In order to include these data in the analysis, an assumed supply date of 1 April 2011 was used as the basis of calculating the kit expiry date.

In the analysis of kit expiry for supplies to people at risk of opioid overdose, the following assumptions were made:

- Prison data from 2011/12 Quarter 1 (213 THN kits) were submitted as an aggregate return by SPS and did not include information on date of supply. In order to include these data in the analysis, an assumed supply date of 1 April 2011 was used as the basis of calculating the kit expiry date.
- Additionally, prison data from 2011/12 Quarter 1 did not include information on recipient type. In order to include these kits in the analysis, it was assumed that the percentage of
prison THN kits supplied to people at risk of opioid overdose during this period was equal to the percentage observed during Financial Year 2012/13 (99.7%).

- Community prescribing data does not include information on recipient type. In order to include these kits in the analysis, it was assumed that the percentage of community prescribing THN kits supplied to people at risk of opioid overdose was equal to the percentage observed among community outlet supplies. Community prescribing supplies to people at risk of opioid overdose was calculated by multiplying the observed number of THN kits dispensed in each financial year by a factor based on the percentage of community outlets supplies to people at risk of opioid overdose in the preceding 2-year period. For example:
  - 82.9% (% of community outlet supplies to people at risk) for the period 2016/17 to 2017/18 is applied to community prescribing data from 2017/18; and,
  - 86.3% (% of first supplies to people at risk from community outlets) for the period 2015/16 to 2016/17 is applied to community prescribing data from 2016/17.

Please note it is not possible to combine analysis of kit expiry with the ‘reach’ analysis described below. As community outlet and prison THN supply data is not person identifiable, ‘reach’ analysis is based on the numbers of kits supplied to people at risk of overdose where supply type was indicated as ‘first’. As first supplies have decreased in number and prevalence over the course of the National Naloxone Programme, exclusion of kits supplied more than two years ago would entail the exclusion of the majority of first supplies to people at risk, resulting in a substantial underestimation of the proportion of the ‘at risk’ population supplied with THN.

**A1.5: Calculation of THN ‘reach’**

Calculation of the ‘reach’ of the National Naloxone Programme is based on the number of first supplies made to people ‘at risk’ of opioid overdose. The data items necessary to make these exclusions are available in the agreed national dataset for National Naloxone Programme monitoring of THN supplies from community outlets and prisons (see Appendix A1.2). However, some assumptions made during the calculation of community outlet and prison ‘reach’ require further elaboration. Also, as information on recipient type and supply type is not available for community prescriptions, an alternative method for estimating ‘reach’ was used for this supply route. This approach is explained below, detailing relevant assumptions.

**Community Outlet and Prison ‘reach’**

For both community outlet and prison supplies, ‘reach’ is based on the count of the number of THN kits issued as a first supply (excluding repeat supplies and spare supplies) to people ‘at risk’ of opioid overdose (excluding supplies to service workers and family/friends). This functions as a proxy estimate of the number of ‘at risk’ individuals supplied with THN and, as such, is a more suitable figure to compare with the estimated number of problem drug users than the total number of THN kits distributed (used in previous reports and included in this report for comparison). By eliminating counts of repeat/spare supplies, and focusing on supplies to people ‘at risk’ of opioid overdose (i.e. the target population for this intervention, who are most likely to witness an opioid overdose), this approach adds value by more
robustly quantifying how many problem drug users have the opportunity, training and equipment to intervene and potentially save a life.

Whilst the naloxone dataset includes some demographic data that may aid the calculation of the number of ‘individuals’ who were supplied kits, due to gaps in data and/or variations in data recording (e.g. recording of slightly different initials, postcode sector information and/or date of birth) it is not possible to use these to conclusively identify the number of individuals involved. Instead, the details recorded on recipient type and supply type are used to determine the number of ‘at risk’ individuals supplied.

In relation to ‘first supply’, it is assumed that individuals report accurately about previous THN supply and that that information is accurately recorded and submitted to ISD. It is also assumed that individuals will seek or be offered a repeat supply when their initial supply is used, lost etc and that they continue to be exposed to the risk of opioid overdose (i.e. they do not die, they continued to use opioids) after initial supply was made.

In relation to the selection of ‘at risk’ individuals, first supplies made to service workers are not included as it is assumed these staff would only witness opioid overdoses during their working hours and distributions to such staff could not be meaningfully compared with estimated numbers of problem drug users. Community outlet supplies to friends/family are not counted because these are generally supplied in addition to an existing first supply to, and with the consent of, a specific individual ‘at risk’. There may be a small number of cases in which an individual at risk provides consent for friends/family members to receive a supply, but chooses not to accept a THN supply themselves, but it is not possible to identify these cases using the monitoring information supplied to ISD. Prisons supplied very few THN kits to persons other than those at risk of opioid overdose (99 supplies from 2011/12 to 2017/18).

Prison data from 2011/12 Quarter 1 were submitted as an aggregate return by SPS and did not include information on supply type or recipient type. However, as this was the first quarter of National Naloxone Programme operation, it is assumed that all were first supplies to people at risk of opioid overdose and are therefore included in the analysis of ‘reach’.

As discussed in Section 2, prison ‘reach’ estimates are based on the NHS Board where the prison was located in order that they can be counted alongside numbers of community outlet and community prescription supplies and compared with the estimated ‘at risk’ populations in each area. While most prisons accommodate individuals as close as possible to their area of residence and therefore reflect the population resident in that area, some are national facilities, accommodating prisoners from across Scotland. Therefore, there may be inaccuracies in prison ‘reach’ estimates when comparing with local area estimates of the number of problem drug users. There is zero prison ‘reach’ in areas with no establishments (NHS Borders, NHS Fife, NHS Orkney, NHS Shetland and NHS Western Isles), producing a potential underestimate of the numbers of resident ‘at risk’ individuals with a THN supply (upon release, individuals may transport a prison THN supply to their area of residence). However, due to supply to non-residents, prison ‘reach’ in NHS Boards with national facilities may overestimate the numbers of resident ‘at risk’ individuals with a THN supply.
Community prescription ‘reach’
For dispensing via community prescription, ‘reach’ is based on the count of the number of THN prescriptions fulfilled, rather than the number of kits dispensed (a single prescription may specify multiple kits to be dispensed).

Information on recipient type and supply type are not available from ISD’s Prescribing Information System. Prescribing data includes the recipient’s Community Health Index (CHI) number which could be used to calculate the number of individuals to whom prescriptions were dispensed by excluding multiple prescriptions to the same individual. However, due to the high number of THN prescriptions which did not include a valid CHI, it was not possible to perform person-level analysis for these data. Community prescription ‘reach’ estimates may be revised if person-level analysis is facilitated by future improvements in CHI capture. However, prescribing data do not indicate recipient type (person at risk, friends/family, service worker) and, due to the limited potential for linking community prescription CHIs to the personal identifiers collected in the national dataset, this is not considered a feasible future refinement.

Discussions with relevant NHS Board leads about the use of this supply route identified a need to modify an assumption made in last year’s report, namely that all community prescriptions related to first supplies to persons ‘at risk’ of opioid overdose. It is now assumed that the percentage of first supplies to people at risk of opioid overdose would be approximately the same as that for community outlet supplies (Section 1). Community prescribing ‘reach’ is calculated by multiplying the observed number of prescriptions in each financial year by a factor based on the percentage of first supplies to people at risk of opioid overdose from community outlets in the preceding 3-year period. For example:

- 34.5% (% of first supplies to people at risk from community outlets) for the period 2015/16 to 2017/18 is applied to community prescribing data from 2017/18; and,
- 43.2% (% of first supplies to people at risk from community outlets) for the period 2014/15 to 2016/17 is applied to community prescribing data from 2016/17.

Other kits supplied on the basis of community prescriptions are assumed to be re-supplies to people at risk of opioid overdose or supplies to family members etc. It is assumed that all prescriptions were submitted to a pharmacy.

Comparison with estimated numbers of PDUs
‘Reach’ of THN supplies among the target population is expressed as a rate per 1,000 estimated PDUs. National and NHS Board estimates of the size of the PDU population based on 2012/13 data, were published by ISD in 2014 (Kerssens et al, 2014). These estimates are based on a definition of problem drug use as ‘the problematic use of opiates (including illicit and prescribed methadone use) and/or the illicit use of benzodiazepines’. Single-substance prevalence estimates (i.e. opioids only) are not published and therefore, a small number of individuals using only benzodiazepines are included in PDU estimates, leading to a potential overestimation of the size of the target population. However, the numbers of such individuals are thought to be small and PDU estimates remain the best comparator for estimating ‘reach’.
ISD have been commissioned by Scottish Government to produce updated PDU prevalence estimates based on 2015/16 data. Publication of estimates has been delayed until early 2019, to allow data collections from all external providers to be concluded. The modelled prevalence estimates, made up of known and hidden populations, will continue to define ‘problem drug use’ as based on opioid and/or benzodiazepine use. Opioid and benzodiazepine distributions will be described separately for the known population components of the estimates. If available before the next routine update of this report, 2015/16 opioid only estimates will be used in the calculation of THN ‘reach’.

A1.6: Comparison with opioid-related deaths – data collection
Data for the analysis of opioid-related deaths within four or 12 weeks of prison release are collected as follows:

- National Records of Scotland (NRS) supply ISD with an extract of drug-related death records for each relevant year with ‘opioid’ deaths (defined by one or more of heroin/morphine, methadone and/or buprenorphine being implicated in, or potentially contributing to, the cause of death (rather than only being present) flagged. These are securely sent to ISD, matched with personal identifiers from the NRS deaths database held by ISD. An ISD analyst with clearance to access the Scottish Prison Service record system (PR2) then collects data on individuals who had an opioid-related death and who had a custody record on the Scottish Prison Service system. The results from this process are securely transferred to ISD, validated and analysed.

Data for the analysis of opioid-related deaths within four or 12 weeks of hospital discharge are collected as follows:

- The NRS drug-related deaths extract described above, having been securely sent to ISD is matched with personal identifiers from the NRS deaths database held by ISD. It is then further matched against the general acute inpatient and day case (SMR01) and mental health inpatient and day case (SMR04) datasets routinely submitted to ISD by NHS Boards to identify general acute or psychiatric discharges within the relevant time periods prior to death. The results from this process are then validated and analysed.

Relevant permissions are in place for these analyses, which are subject to oversight by the information governance teams within the relevant organisations.
A1.7: References


Figure 8 Consultancy Services (2014) Evaluation of High Care Needs within the Scottish Prisoner Population: Report prepared for the Scottish Prison Service [online]. Available at: http://www.sps.gov.uk/Corporate/Publications/Publication-3083.aspx


## Appendix 2 – Publication Metadata (including revision details)

<table>
<thead>
<tr>
<th>Metadata Indicator</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Publication title</strong></td>
<td>National Naloxone Programme Scotland – Monitoring Report 2017/18</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>Data are presented on the supply of naloxone ‘take home’ kits in Scotland. Data are presented separately for kits issued from community outlets, in prisons, and dispensed via community prescription, as well as combined totals. Information presented includes the number of kits issued each month, the number of kits issued in each NHS Board/prison establishment, who the kits have been issued to and whether the kit was issued as a first or a repeat supply (and reasons for repeat supply). Data on the percentage of opioid-related deaths occurring within four or twelve weeks of prison release or hospital discharge are presented, contrasting 2011-17 performance against a 2006-10 baseline.</td>
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<tr>
<td><strong>Theme</strong></td>
<td>Health and Social Care</td>
</tr>
<tr>
<td><strong>Topic</strong></td>
<td>Lifestyles and Behaviours</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>PDF report and Excel tables</td>
</tr>
<tr>
<td><strong>Data source(s)</strong></td>
<td>Community outlet and prison data are provided by services (community and prisons) to naloxone leads in NHS Boards and submitted to ISD’s Naloxone Monitoring database. Data on dispensing via community prescription is part of ISD’s Prescribing Information System and are provided by the ISD Prescribing Team. For opioid-related death analysis, National Records of Scotland drug-related deaths were linked to information from the Scottish Prison Service custody database and Acute General (SMR01) and Psychiatric (SMR04) hospital inpatient and day case admissions data.</td>
</tr>
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| **Date that data are acquired** | Community outlets and Prisons: August 2018  
Community prescription: August 2018  
Opioid-related death prison release/hospital discharge data: July 2018 |
<p>| <strong>Release date</strong> | 27 November 2018 |
| <strong>Frequency</strong> | Annual |
| <strong>Timeframe of data and timeliness</strong> | The timeframe for this publication is the financial year 2017/18 (data for 2011/12 to 2016/17 are also shown). Note that some figures may have changed from previous years due to the late submission of data from NHS Boards. |</p>
<table>
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<tr>
<th>Continuity of data</th>
<th>This is the seventh annual publication of these data. Community outlet and prison data are presented in a similar format to previous years. Community prescription data are included for the second time.</th>
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</thead>
<tbody>
<tr>
<td>Revisions statement</td>
<td>Future versions of this publication may show revised figures due to the late submission of data from NHS Boards.</td>
</tr>
<tr>
<td>Revisions relevant to this publication</td>
<td>For analysis of ‘reach’ of community prescribing supplies, last year’s report included an assumption that all community prescriptions related to first supplies to persons ‘at risk’ of opioid overdose. It is now assumed that the percentage of first supplies to people at risk of opioid overdose is the same as that for community outlet supplies. Community prescribing ‘reach’ is calculated by multiplying the observed number of prescriptions in each financial year by a factor based on the percentage of first supplies to people at risk of opioid overdose from community outlets in the preceding 3-year period. This revision reduced the overall number of first supplies to people at risk dispensed via community prescription by 60% (period 2013/14-2017/18). The impact on the overall number of first supplies to people at risk issued during 2013/14-2017/18 from all sources (i.e. community outlets, prisons and community prescription) was a 6% reduction. Tables 3.3, 4.8 and 4.10 are affected by this change.</td>
</tr>
<tr>
<td>Concepts and definitions</td>
<td>See A1 – Background information.</td>
</tr>
<tr>
<td>Relevance and key uses of the statistics</td>
<td>The analyses presented in this report provide evidence of the number of ‘take home’ naloxone kits supplied by the National Naloxone Programme in Scotland, reasons for supply and the characteristics of recipients. Additionally, data on the number of first supplies to individuals ‘at risk’ of opioid overdose provides information on the ‘reach’ of THN supply among the ‘at risk’ population. Data on the percentage of opioid-related deaths occurring within four or 12 weeks of prison release or hospital discharge provide important contextual information on deaths within periods of high opioid overdose risk.</td>
</tr>
<tr>
<td>Accuracy</td>
<td>The naloxone lead in each NHS Board was given the opportunity to check their 2017/18 supply figures prior to publication. For the section on opioid-related deaths, the accuracy of the data presented are dependent on the accuracy of the relevant National Records of Scotland and Scottish Prison Service datasets.</td>
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<td>Completeness</td>
<td>Community outlets and Prisons: supply data were provided by the naloxone lead in each NHS Board. Not excepting the possibility of late data submission, following validation by NHS Board leads, information</td>
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Community prescription: supply data were provided by the ISD Prescribing Team. As this information is derived from a payment processing system, it is assumed to be a complete record of dispensed medicines. Any inaccuracies in reporting are likely to arise from the specific forms and products included within the definition (see Appendix A1.3), which was agreed in collaboration with expert pharmacists.

For the section on opioid-related deaths, the quality of the linkage between National Records of Scotland and Scottish Prison Service data was tested by comparing the results with National Records of Scotland statistics on drug-related deaths. The results indicated a high degree of accuracy and completeness in relation to the post-prison opioid-related death analysis.

<table>
<thead>
<tr>
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<th>No comparable published data outwith Scotland.</th>
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<td>Accessibility</td>
<td>It is the policy of ISD Scotland to make its web sites and products accessible according to published guidelines.</td>
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<tr>
<td>Coherence and clarity</td>
<td>The report is available as a PDF file.</td>
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<tr>
<td>Value type and unit of measurement</td>
<td>Counts, numbers and percentages. Rates per 1,000 people aged 15-64 with problem drug use.</td>
</tr>
<tr>
<td>Disclosure</td>
<td>The ISD protocol on Statistical Disclosure Protocol is followed.</td>
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<tr>
<td>Official Statistics designation</td>
<td>Official Statistics</td>
</tr>
<tr>
<td>UK Statistics Authority Assessment</td>
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<tr>
<td>Last published</td>
<td>7 November 2017</td>
</tr>
<tr>
<td>Next published</td>
<td>November 2019</td>
</tr>
<tr>
<td>Date of first publication</td>
<td>31 July 2012</td>
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Appendix 3 – Early access details

Pre-Release Access
Under terms of the "Pre-Release Access to Official Statistics (Scotland) Order 2008", ISD is obliged to publish information on those receiving Pre-Release Access ("Pre-Release Access" refers to statistics in their final form prior to publication). The standard maximum Pre-Release Access is five working days. Shown below are details of those receiving standard Pre-Release Access.

Standard Pre-Release Access:
Scottish Government Health Department
NHS Board Chief Executives
NHS Board Communication leads
Scottish Prison Service Health and Wellbeing leads

Early Access for Quality Assurance
These statistics will also have been made available to those who needed access to help quality assure the publication:
NHS Board naloxone leads
Appendix 4 – ISD and Official Statistics

About ISD
Scotland has some of the best health service data in the world combining high quality, consistency, national coverage and the ability to link data to allow patient based analysis and follow up.

Information Services Division (ISD) is a business operating unit of NHS National Services Scotland and has been in existence for over 40 years. We are an essential support service to NHSScotland and the Scottish Government and others, responsive to the needs of NHSScotland as the delivery of health and social care evolves.

**Purpose:** To deliver effective national and specialist intelligence services to improve the health and wellbeing of people in Scotland.

**Mission:** Better Information, Better Decisions, Better Health

**Vision:** To be a valued partner in improving health and wellbeing in Scotland by providing a world class intelligence service.

Official Statistics
Information Services Division (ISD) is the principal and authoritative source of statistics on health and care services in Scotland. ISD is designated by legislation as a producer of ‘Official Statistics’. Our official statistics publications are produced to a high professional standard and comply with the Code of Practice for Official Statistics. The Code of Practice is produced and monitored by the UK Statistics Authority which is independent of Government. Under the Code of Practice, the format, content and timing of statistics publications are the responsibility of professional staff working within ISD.

ISD’s statistical publications are currently classified as one of the following:

- National Statistics (ie assessed by the UK Statistics Authority as complying with the Code of Practice)
- National Statistics (ie legacy, still to be assessed by the UK Statistics Authority)
- Official Statistics (ie still to be assessed by the UK Statistics Authority)
- other (not Official Statistics)

Further information on ISD’s statistics, including compliance with the Code of Practice for Official Statistics, and on the UK Statistics Authority, is available on the ISD website.