

# **National Naloxone Programme Scotland**

**Monitoring Report 2016/17**

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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. Intramuscular<sup>1</sup> 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 in order to help prevent overdose deaths.

Since 1997, statistics published by National Records of Scotland (NRS) have identified a long-term upward trend in the number of Drug-Related Deaths (DRDs) in Scotland, most of which have been 'accidental poisonings' related to opioid drugs (NRS, 2017). The National Drug Related Death Database (NDRDD) was set up to help understand the circumstances of DRDs and the individuals vulnerable to them. NDRDD findings have shown that most DRDs occurred when others were present and over two-thirds 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*, 2016). 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 contribute to a reduction in fatal opioid overdoses in Scotland. To help achieve this, 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 in order to reduce the risk of death from accidental overdose among opioid users. During this period, NHS Boards were responsible for local delivery of the programme and the cost of THN kits was reimbursed by the Scottish Government (NHS Western Isles did not participate). While the Scottish Government continues to fund some aspects of the National Naloxone Programme, from 2016/17 NHS Boards assumed responsibility for funding THN supplies. As a consequence, following changes 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 the monitoring data on kit distribution. This report presents information on the number of THN kits issued as part of the programme (from 2011/12 to 2016/17). Data are presented separately for kits issued in the community, kits issued in prisons at the point of prisoner release and (for the first time) kits dispensed via community prescription. ISD continue to monitor THN kit distribution in 2017/18 and plan to report upon these data in autumn 2018.

In previous publications, information has been presented on the number and percentage of opioid-related deaths that occurred within four weeks of prison release or within four weeks of hospital discharge. These data were not available for inclusion in this report at the time of publication. ISD will produce a revised version of this report containing this information in early 2018.

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<sup>1</sup> 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.

### Main points

- A total of 8,159 take-home naloxone kits were issued in Scotland in 2016/17, a decrease of 1% on the previous year. A total of 37,609 take-home naloxone kits were supplied in Scotland between 2011/12 and 2016/17.
- In 2016/17, 6,497 kits were issued in the community, 700 kits were issued in prisons upon release and 962 kits were dispensed via community prescription.
- In 2016/17, 3,471 (48%) take-home naloxone kits distributed in the community and prisons were repeat supplies. Of these, 882 (25%) repeat supplies were made because the previous kit was reported as having been used to treat an opioid overdose.
- In 2016/17, it is estimated that 3,386 kits were issued as a first supply to an individual at risk of opioid overdose. Cumulatively, 21,189 'at risk' individuals are estimated to have been supplied with take-home naloxone between 2011/12 and 2016/17.
- At the end of 2016/17, the 'reach' of take-home naloxone (based on the number of 'at risk' individuals supplied with kits between 2011/12 and 2016/17) was estimated to be 345 kits per 1,000 problem drug users.

## Results and Commentary

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

#### 1.1: Introduction

This section presents information on the number of 'take home' naloxone (THN) kits issued in the community through the National Naloxone Programme in Scotland. This includes breakdowns by time period, NHS Board and 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 is for 2016/17 and data from previous years are included for comparison.

#### 1.2: Number of kits issued in the community

In Scotland in 2016/17, 6,497 THN kits were issued in the community. This was an 11% decrease compared with 2015/16. A total of 31,520 THN kits were issued in the community in Scotland over the six years from 2011/12 to 2016/17 (Table 1.1).

In each year except 2013/14, the monthly number of kits supplied in the community was highest in December (Table 1.1 and Figure 1.1). This coincides with festive overdose prevention campaigns (this being a recognised high risk period for this group). The number of kits supplied in each quarter by financial year and NHS Board is shown in Table 1.2.

**Figure 1.1: Number of THN kits supplied in the community, by month and financial year (Scotland; 2011/12 to 2016/17)**

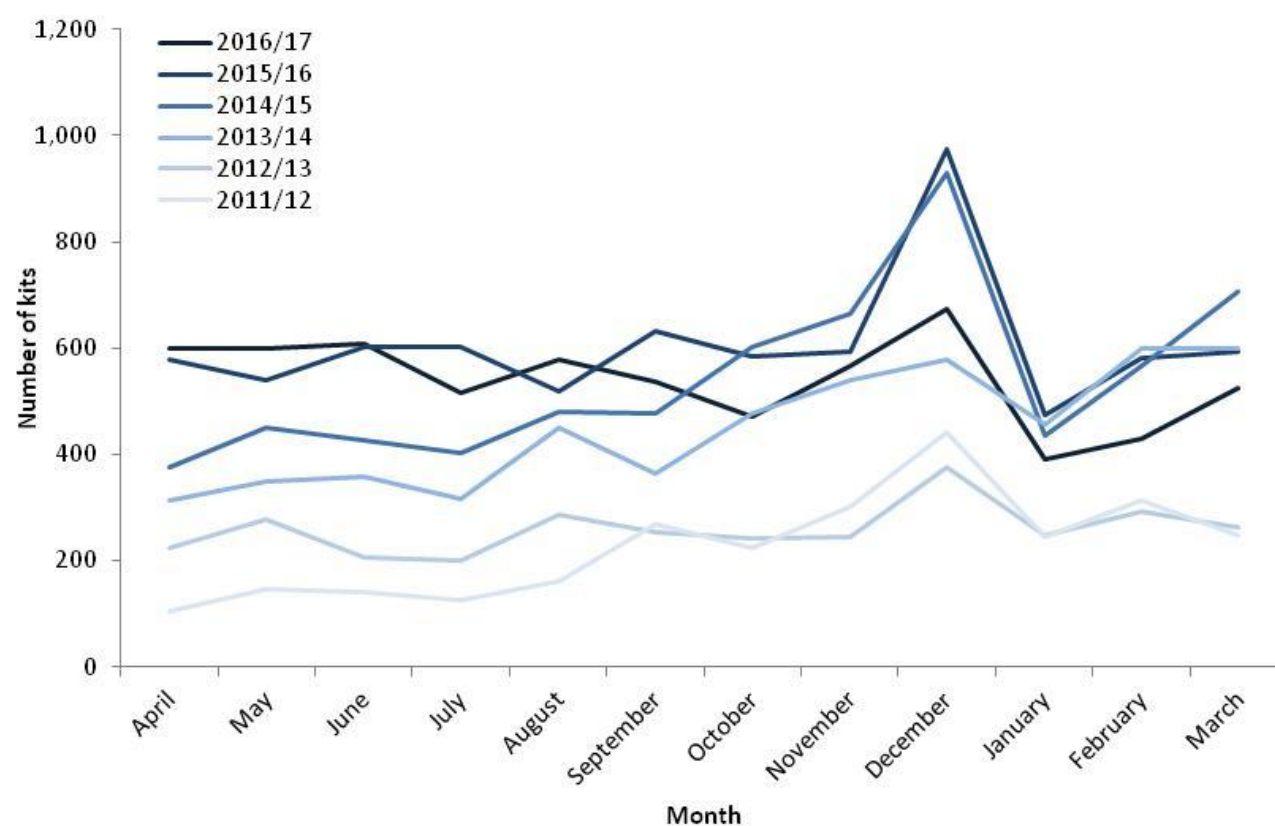
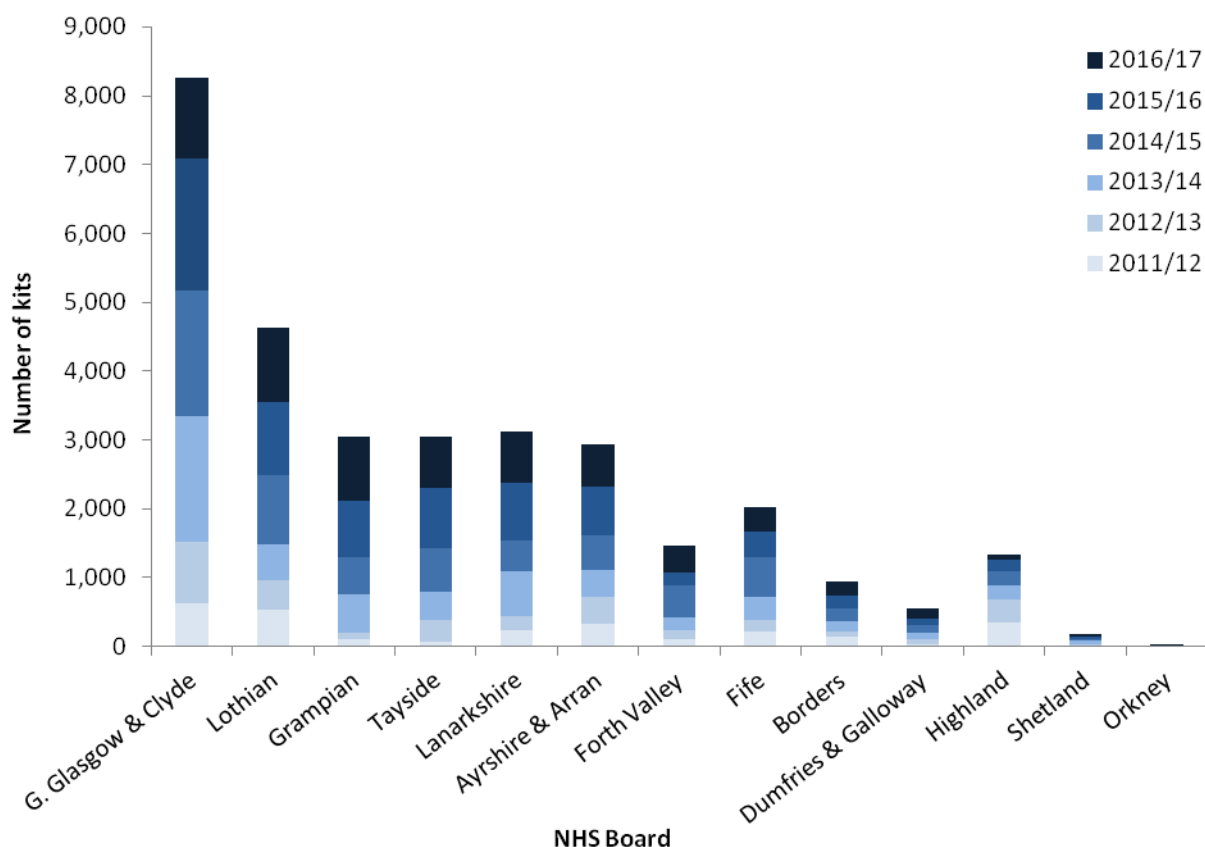


Table 1.2 and Figure 1.2 show the number of THN kits issued in the community in each NHS Board from 2011/12 to 2016/17 (and the cumulative total over the six years). In 2016/17, Greater Glasgow & Clyde supplied the largest number of kits (1,174), followed by Lothian (1,085) and Grampian (920).

**Figure 1.2: Cumulative number of THN kits supplied in the community, by NHS Board<sup>†</sup> and financial year (Scotland; 2011/12 to 2016/17)**



<sup>†</sup>Note that Western Isles is not participating in the programme.

### Supply type in the community

THN kits may be issued as a first, repeat or spare<sup>2</sup> supply. In 2016/17, of the 6,497 kits issued in the community, 40% were reported as a first supply, 50% as a repeat supply and 7% as a spare supply<sup>3</sup>. Comparable figures for 2015/16 were 51%, 40% and 7% respectively (Table 1.3 and Figure 1.3). The percentage of THN kits distributed as a repeat supply increased each year from 13% in 2011/12 to 50% in 2016/17.

<sup>2</sup> Spare supply of take-home naloxone kits was first recorded in 2013/14.

<sup>3</sup> 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 in the community, by supply type and financial year (Scotland; 2011/12 to 2016/17)**

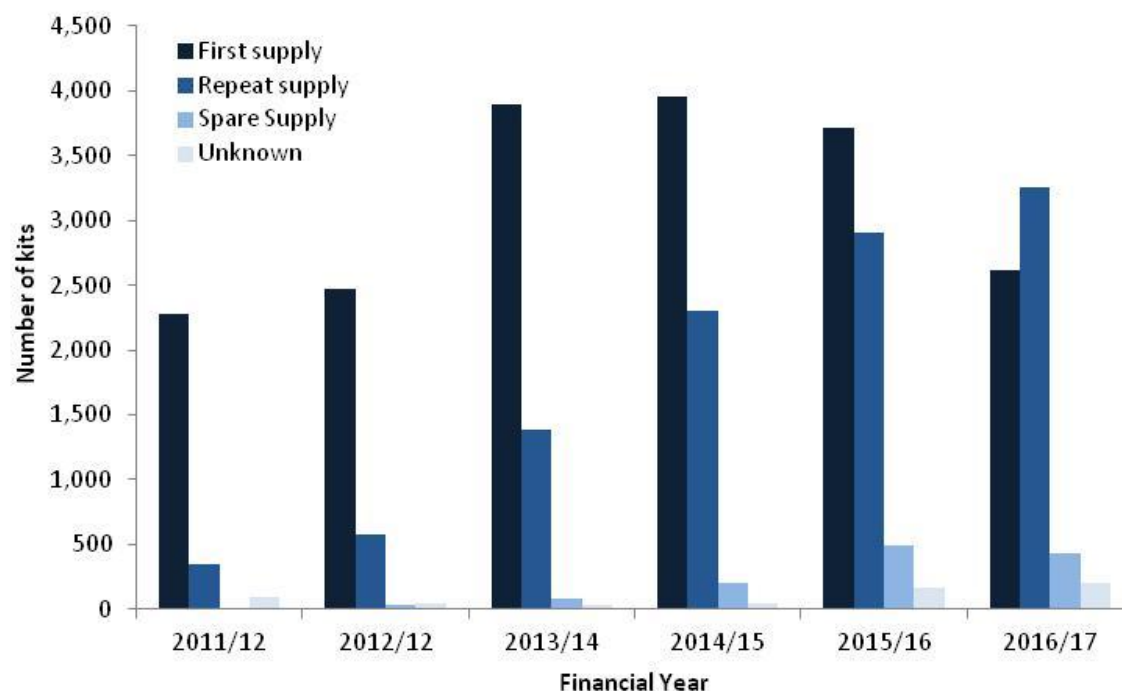


Figure 1.4 shows the reasons for repeat supply of naloxone (based on self-report) from 2011/12 to 2016/17. Since the beginning of the programme, it was anticipated that there would be an increasing demand for repeat supplies as total numbers of available THN kits increased. While repeat supply due to kit loss and use in treating overdoses have occurred throughout the programme, repeat supply due to kit expiry was initially uncommon and increased in prevalence from 2013/14 onwards (THN kits have a maximum expiry date of three years).

**Figure 1.4: Number of THN kits supplied in the community as a repeat supply, by reason for repeat supply and financial year (Scotland; 2011/12 to 2016/17)**

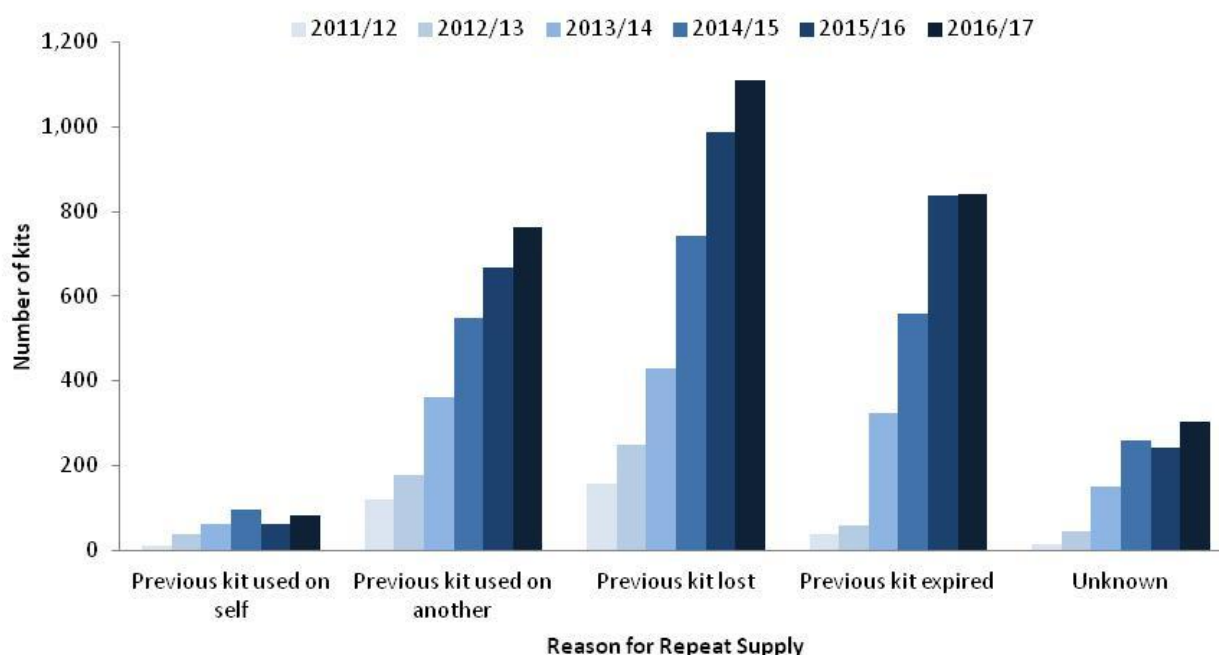


Table 1.3 provides information on numbers of kits issued as repeat supplies and the reason for supply, including breakdowns according to the recipient of the kit. In the 3,252 cases noted as repeat issue of a kit in the community in 2016/17, the following responses were most common:

- 34% (1,111) were reported as due to 'previous kit lost';
- 26% (842) 'previous kit expired' (i.e. the pharmaceutical product (naloxone) had expired);
- 23% (762) 'kit used on another';
- 9% (304) 'unknown' reason for repeat supply;
- 4% (129) 'previous kit damaged'; and,
- 3% (82) 'kit used on self'.

In 2016/17, there were 844 cases where repeat supply was reported as due to use of the previous kit on a person during an opioid overdose. Of these cases, 90% (762) comprised 'kit used on another' and 10% (82) 'kits used on self', i.e. administered to self.

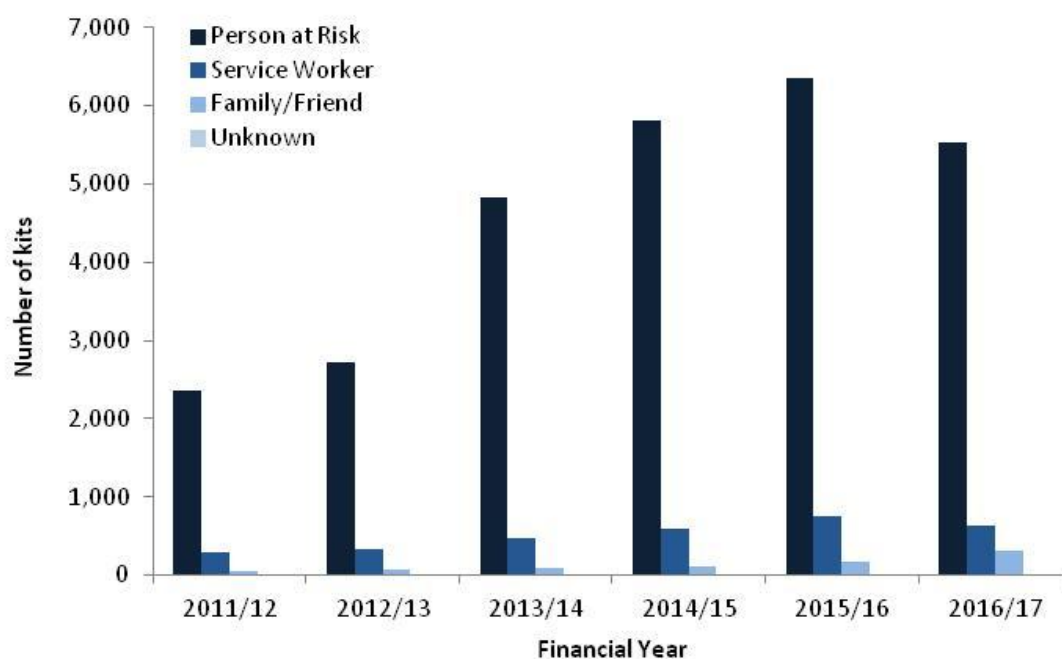
### ***Recipient type for kits issued in the community***

THN kits issued in the community 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 6,497 kits issued in the community in Scotland in 2016/17, the majority (85%) were issued to people at risk of opioid overdose. A further 10% were supplied to service workers and 5% to family/friends (with the recorded consent of the named patient). Table 1.4 provides a quarterly breakdown of kits issued by recipient (at Scotland level), while Table 1.5 shows figures for each financial year, by NHS Board.

**Figure 1.5: Number of THN kits supplied in the community, by recipient type and financial year (Scotland; 2011/12 to 2016/17)**





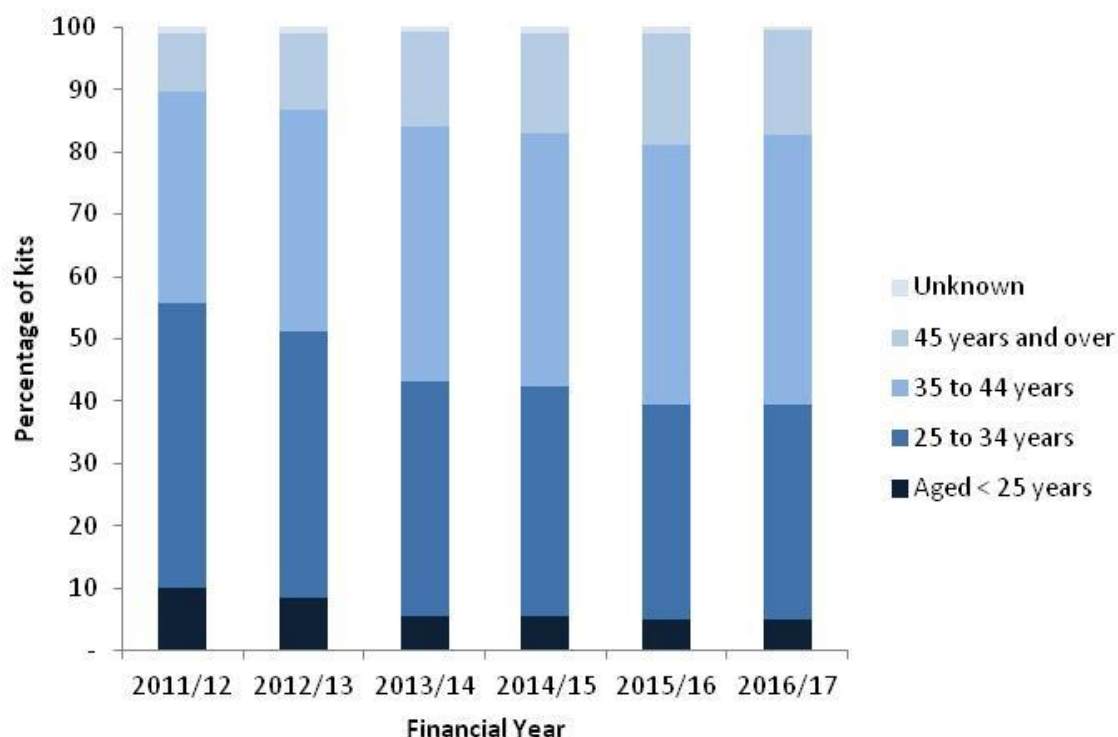
### 1.3: Characteristics of ‘at risk’ recipients of community kits

There were 5,533 kits supplied in the community in 2016/17 to a person at risk. In 5,302 (96%) of these cases, the person consented to the sharing of their personal data for monitoring purposes (Table 1.7). 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 2016/17, over two-thirds (68%) of THN kits supplied by a community outlet to a person at risk were to males (Table 1.8). The relative proportion of kits supplied by gender has remained broadly the same since the beginning of the programme (across the time series, 66% of community 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 shows the age distribution of persons at risk supplied with a kit by a community outlet for years 2011/12 to 2016/17. In 2016/17, 43% of kits were supplied to individuals aged 35-44 and 34% 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 5% in 2015/16 and 2016/17) and the percentage aged 45 years and over increased from 9% in 2011/12 to 18% in 2015/16 and 17% in 2016/17 (in line with evidence about the ageing problem drug use population (Kerssens *et al*, 2014, Scottish Drugs Forum, 2017)). Table 1.8 provides Scotland-level; breakdowns by gender and age for 2011/12 to 2016/17.

**Figure 1.6: Percentage of THN kits supplied to persons at risk in the community, by age group of recipient and financial year (Scotland; 2011/12 to 2016/17)**



### 1.4: 'Reach' of community THN supply

In addition to monitoring the number of THN kits supplied via community outlets, it is important to describe how many individuals at risk of opioid overdose have been supplied with THN and therefore have the training and equipment to enable them or others to intervene and potentially save a life. 'Reach' can be estimated by attempting to quantify how many individuals 'at risk' of opioid overdose have been supplied with THN. This is done by counting 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). 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 A1.4](#) for further information about the calculation of 'reach' based on first supplies to individuals at risk of accidental opioid overdose.

Table 1.6 shows the number of THN kits issued by community outlets as a first supply to individuals at risk in each NHS Board from 2011/12 to 2016/17 (and the cumulative total over six years). In 2016/17, NHS Greater Glasgow & Clyde supplied the largest number of first supplies to people at risk (401), followed by NHS Lothian (369) and NHS Tayside (295).

## 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<sup>4</sup>. 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 community supply, the most recent available information is for 2016/17 and figures for previous years have been included for comparison.

### 2.2: Number of kits issued in prisons

In Scotland in 2016/17, 700 THN kits were issued in prisons. This was a 25% decrease compared with 2015/16 and the lowest annual number of THN kits issued in prisons since the beginning of the National Naloxone Programme. A cumulative total of 5,043 THN kits were issued in prisons in Scotland from 2011/12 to 2016/17 (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. Four establishments increased the number of THN kits supplied between 2015/16 and 2016/17 and supply decreased in eleven establishments. HMP Kilmarnock issued the highest number of kits in 2016/17 (107) followed by HMP Edinburgh (83).

### ***Supply type in prisons***

Naloxone kits may be issued as a first, repeat or spare supply<sup>5</sup>. Where a repeat supply was made, this could be following initial supply in the community, or following a 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 700 kits issued in prisons in 2016/17, 52% were recorded as a first supply, 31% a repeat supply and 1% a spare supply. Status was unknown for 16% of cases (Table 2.3 and Figure 2.1). The percentage of prison kits that were repeat supplies (31%) has increased from 6% in 2011/12 but remains lower than in the community (50% in 2016/17).

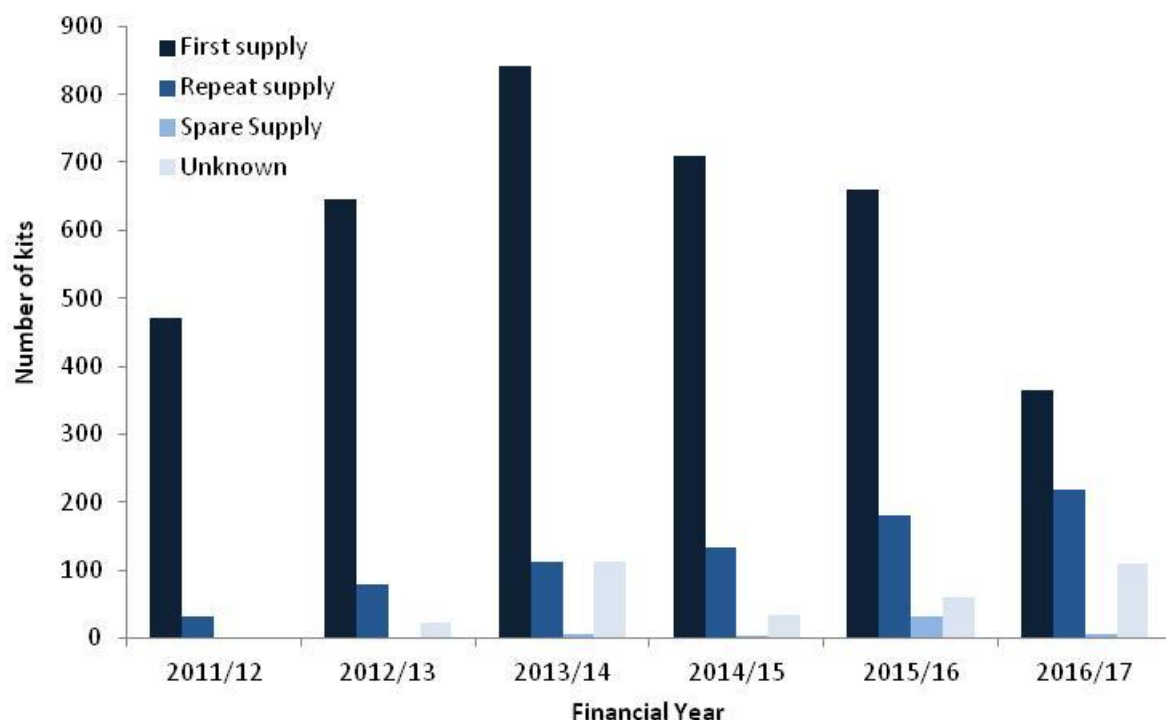
Table 2.3 provides a breakdown of the reasons for repeat supply of naloxone in prisons from 2011/12 to 2016/17. Of the 219 cases noted as a repeat supply in 2016/17, the reason for replacement was unknown in 37% of cases and the previous kit was reported as having been lost in 32% of cases<sup>6</sup>. In a total of 38 cases in 2016/17, repeat supply was due to use of the previous kit on a person at risk.

<sup>4</sup> 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.

<sup>5</sup> Spare supply of take-home naloxone kits was first recorded in 2013/14.

<sup>6</sup> 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'.

**Figure 2.1: Number of THN kits supplied in prisons, by supply type and financial year (Scotland; 2011/12 to 2016/17)**



### ***Recipient type for kits issued in prisons***

In 2016/17, almost all (96%) THN kits issued in prisons in Scotland were supplied to persons at risk of opioid overdose. This percentage was lower than in previous years, when between 99% and 100% of THN kits issued in prisons have been to 'at risk' individuals (Table 2.3).

### **2.3: Characteristics of 'at risk' recipients of kits supplied in prisons**

In 2016/17, 669 THN kits supplied in prisons in Scotland were issued to people at risk of opioid overdose. In 645 of these cases (96%) the recipient consented to the sharing of their personal data for monitoring purposes (Table 2.5).

In Scottish prisons, 76% of kits issued to persons at risk of opioid overdose in 2016/17 were to males and 24% to females (Table 2.6 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 most recent Scottish prison statistics (Scottish Government, 2015); females comprised 5% of the average daily sentenced prison population in Scotland in 2013/14. This suggests a relatively higher uptake of THN among female prisoners compared with male prisoners<sup>7</sup>. The percentage of kits supplied to females in the community was higher (33% between 2011/12 and 2016/17) than in prisons and was more representative of the estimated percentage of females (29%) among the population of problem drug users in Scotland (Kerssens *et al*, 2014).

<sup>7</sup> 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). In 2016/17, 61% of kits issued in prison were from Cornton Vale, while the remainder were issued in other establishments including HMP Edinburgh, HMP Greenock, HMP Polmont and HMP Grampian (data not shown in tables).

**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 2016/17)**

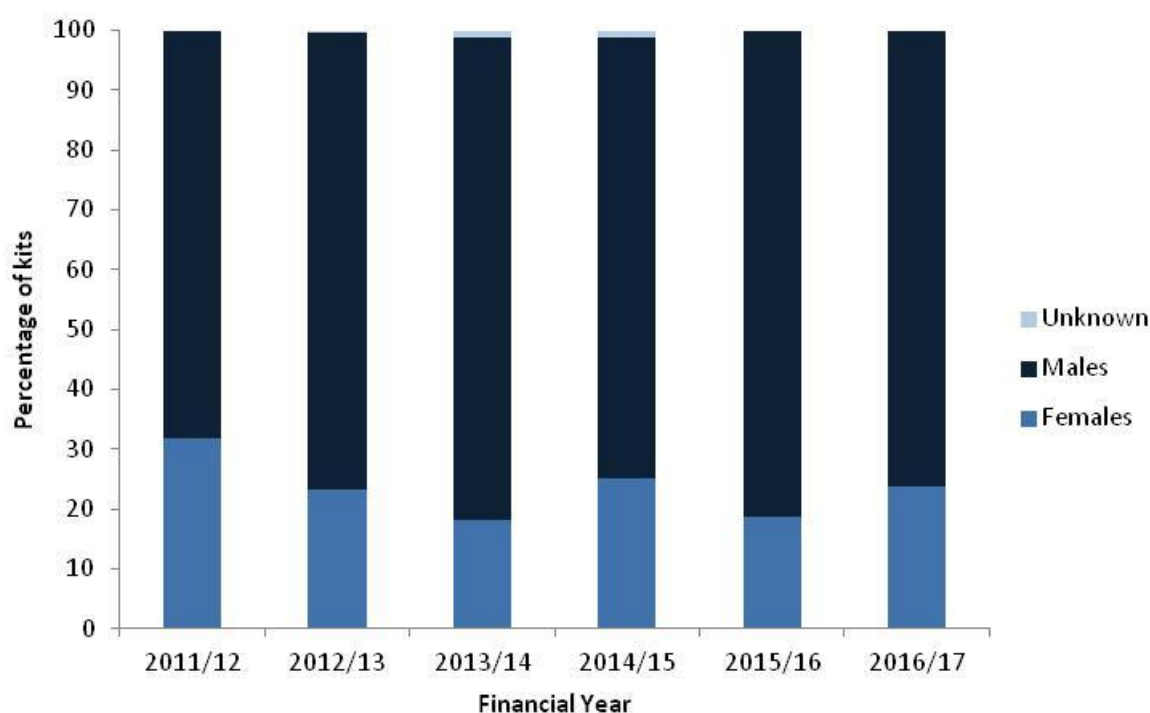
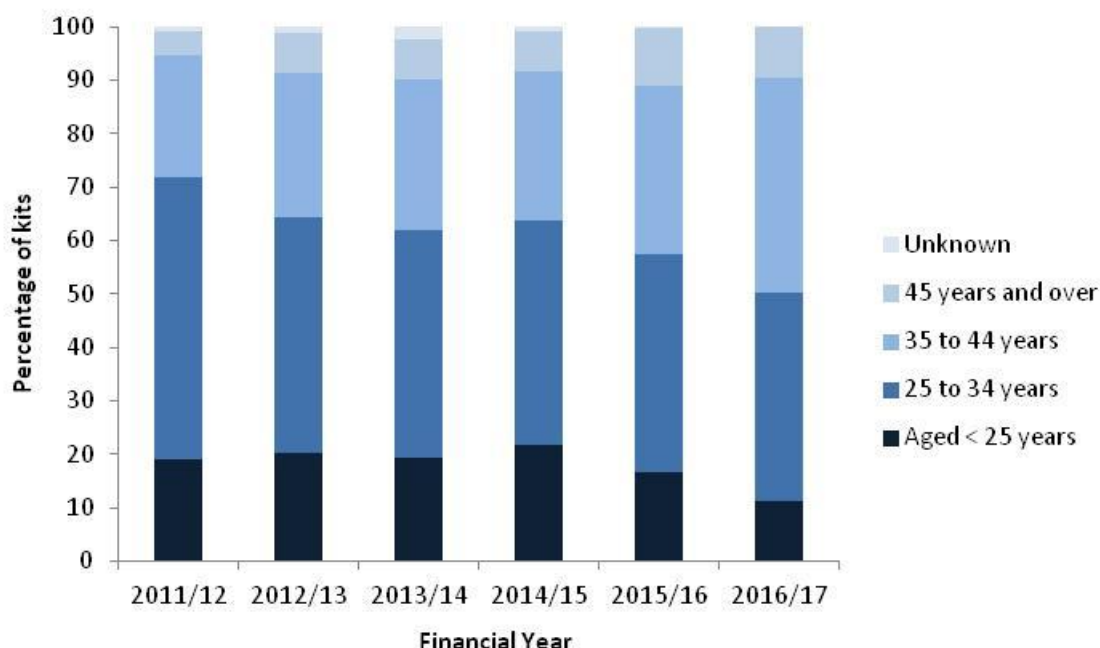


Figure 2.3 and Table 2.6 describe the age distribution of persons at risk receiving kits in prisons between 2011/12 and 2016/17. In 2016/17, 40% of kits supplied in prisons were to those aged 35-44 and 39% were to those aged 25-34. The age distribution of prison THN recipients has changed since the beginning 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 (34%) to those aged 25-34 and a larger percentage (43%) to those aged 35-44 in 2016/17 (Table 1.8). Therefore, while the age of THN recipients increased over time for both community and prison supplies, prison THN recipients were comparatively younger than community THN recipients<sup>8</sup>.

<sup>8</sup> Scottish prison statistics (Scottish Government, 2015) also show that the age profile of prisoners was relatively younger.

**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 2016/17)**



## 2.4: 'Reach' of prison THN supply

In addition to monitoring the number of THN kits supplied in prisons, it is important to describe the contribution of prison supplies to the overall number of individuals trained and equipped to intervene in the event of an accidental opioid overdose. 'Reach' is an estimation of how many individuals 'at risk' of opioid overdose have been supplied with THN. This is quantified by counting only first supplies (excluding repeat supplies and spare supplies) to people at risk of opioid overdose (excluding supplies to service workers and family/friends). 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 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 and NHS Shetland), 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 A1.4](#) for further information about the calculation of 'reach'.

Table 2.4 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 2016/17 (and the cumulative total over the six years). In 2016/17, prisons issued 346 individuals with their first THN supply. The highest number of first supplies to people at risk in prisons in 2016/17 were made in the Lothian area (98), followed by the Forth Valley area (79).



### 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 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 it was rarely prescribed using this mechanism. However, THN dispensing via community prescription has become increasingly common due to two key changes in the regulatory and policy frameworks (for further information see [Appendix A1.1](#)):

- From 1 October 2015, changes to the 2012 Human Medicines Regulations came into force, allowing direct THN supply (without the consent of the individual at risk) 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 funding THN supply to opioid users at risk of accidental overdose.

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 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)<sup>9</sup>. THN kits may be dispensed in community pharmacies via four types of community/hospital prescription<sup>10</sup>:

- 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 to individuals at risk of opioid overdose. This includes breakdowns by quarter, NHS Board and type of prescription. The most recent available information is for 2016/17. Monitoring data from previous years are included for comparison.

#### 3.2: Number of kits dispensed via community prescription

In Scotland in 2016/17, 962 THN kits were dispensed via community prescription. This was the highest annual number of THN kits dispensed via community prescription to date (2015/16: 70). The number of kits dispensed via community prescription was markedly higher in Quarter 3 of 2016/17 (587) than in any other time period. Almost all (571, 97%) of the kits dispensed

<sup>9</sup> 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. Reflecting this, these data relate to Prenoxad-inj-1mg/ml only. A total of 82 generic Naloxone Hydrochloride-inj-1mg/ml supplies were excluded from the data.

<sup>10</sup> Kits dispensed on the basis of GP10A (Stock Order Form) and CPUS (Community Pharmacy Urgent Supply) forms are not included.

via community prescription in Quarter 3 of 2016/17 were supplied by NHS Greater Glasgow & Clyde.

A total of 1,046 THN kits were dispensed via community prescription in Scotland over the four years<sup>11</sup> from 2013/14 to 2016/17 (Table 3.1). During this time period, NHS Greater Glasgow & Clyde dispensed the highest percentage of kits (883, 84%), followed by Lothian (160, 15%).

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

Of the 962 kits dispensed in 2016/17, 78% were issued on the basis of a medical prescriber prescription (GP10), 15% using hospital-based drug treatment prescriptions (HBPA), 5% by supplementary/independent pharmacist prescriptions (GP10P) and 2% on the basis of nurse prescriptions (GP10N) (Table 3.2).

Between 2013/14 and 2016/17, the largest number of kits (832, 80%), were dispensed on the basis of a medical prescriber prescription, followed by hospital-based drug treatment prescriptions (147, 14%), supplementary/independent pharmacist prescriptions (48, 5%) and nurse prescriptions (19, 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 naloxone provision, it is important to describe the contribution of these supplies to the overall number of individuals trained and equipped to intervene in the event of an accidental opioid overdose. 'Reach' is an estimation of how many individuals 'at risk' of opioid overdose have been supplied with THN. For community prescriptions, this is quantified by counting the number of THN prescriptions fulfilled, rather than the number of kits dispensed (a single prescription may specify multiple kits are dispensed). Due to the unavailability of information on recipient type and supply type<sup>12</sup>, it is assumed that all community prescriptions relate to first supplies to persons 'at risk' of opioid overdose. However, as this supply route facilitates direct supply to family members etc. without the consent of the person at risk and it is not presently possible to take account of previous supply, inclusion of THN dispensing via community prescription may lead to slight overestimation of numbers of first supplies to individuals at risk.

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 from 2013/14 to 2016/17 (and the cumulative total over the four years). Of the estimated 923 first supplies dispensed in 2016/17, 90% (830) were supplied in Greater Glasgow & Clyde and 10% were supplied in Lothian (92).

<sup>11</sup> THN supplies issued via community prescription started in April 2013.

<sup>12</sup> Data on THN dispensing via community prescription were collated from ISD's Prescribing Information System. This system includes the recipient's Community Health Index (CHI) which can be used to calculate the number of individuals to whom prescriptions are dispensed. 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 community prescription data to determine if individuals had previously been supplied with naloxone. Further, unlike community and prison data collected in ISD's agreed national dataset for National Naloxone Programme monitoring, prescribing records do not indicate recipient type (person at risk, friends/family, service worker).



## 4. Combined take-home naloxone (THN) supply through prisons, community and community prescription

### 4.1: Introduction

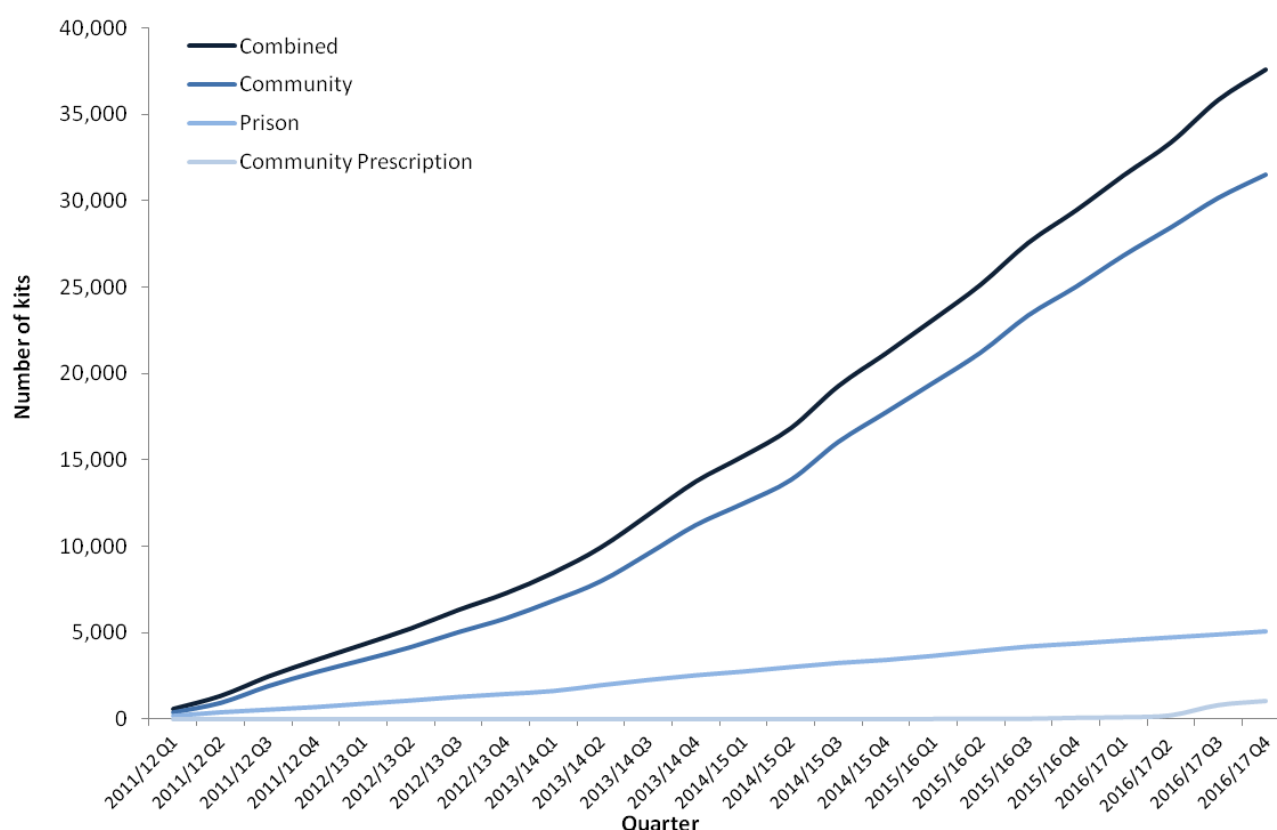
This section describes the combined number of kits distributed in prison and community settings from 2011/12 to 2016/17 and dispensed via community prescription from 2013/14 to 2016/17. Estimates of the total number of kits and 'reach' per 1,000 adults with problem drug use (PDUs) in each NHS Board are also presented.

### 4.2: Number of kits supplied (all sources)

The National Naloxone Programme issued a total of 37,609 kits over the six years from 2011/12 to 2016/17 (Figure 4.1 and Table 4.1). Most of those kits (31,520, 84%) were supplied by community outlets.

A total of 8,159 kits were issued in Scotland in 2016/17 (a 1% decrease compared with 2015/16 (8,273)). In 2016/17, four-fifths of kits (6,497, 80%) were supplied by community outlets, 12% (962) were dispensed via community prescription (an increase compared to 1% of kits in 2015/16) and 9% (700) were supplied in prisons.

**Figure 4.1: Cumulative number of THN kits supplied, by source, financial year and quarter (Scotland; 2011/12 to 2016/17)**



### Supply and recipient type

Figure 4.2 and Table 4.2 show the number of community and prison kits issued in Scotland from 2011/12 to 2016/17 according to whether these were a first or a repeat supply (information on supply type and recipient type was not available for community prescriptions).

As anticipated, demand for repeat supplies increased as numbers of available THN kits increased. The percentage of THN kits distributed as a repeat supply increased each year from 12% in 2011/12 to 48% in 2016/17. This was accompanied by a decrease in the percentage of first supplies from 85% in 2011/12 to 41% in 2016/17.

**Figure 4.2: Number of THN kits supplied in community and prisons combined, by supply type and financial year (Scotland; 2011/12 to 2016/17)**

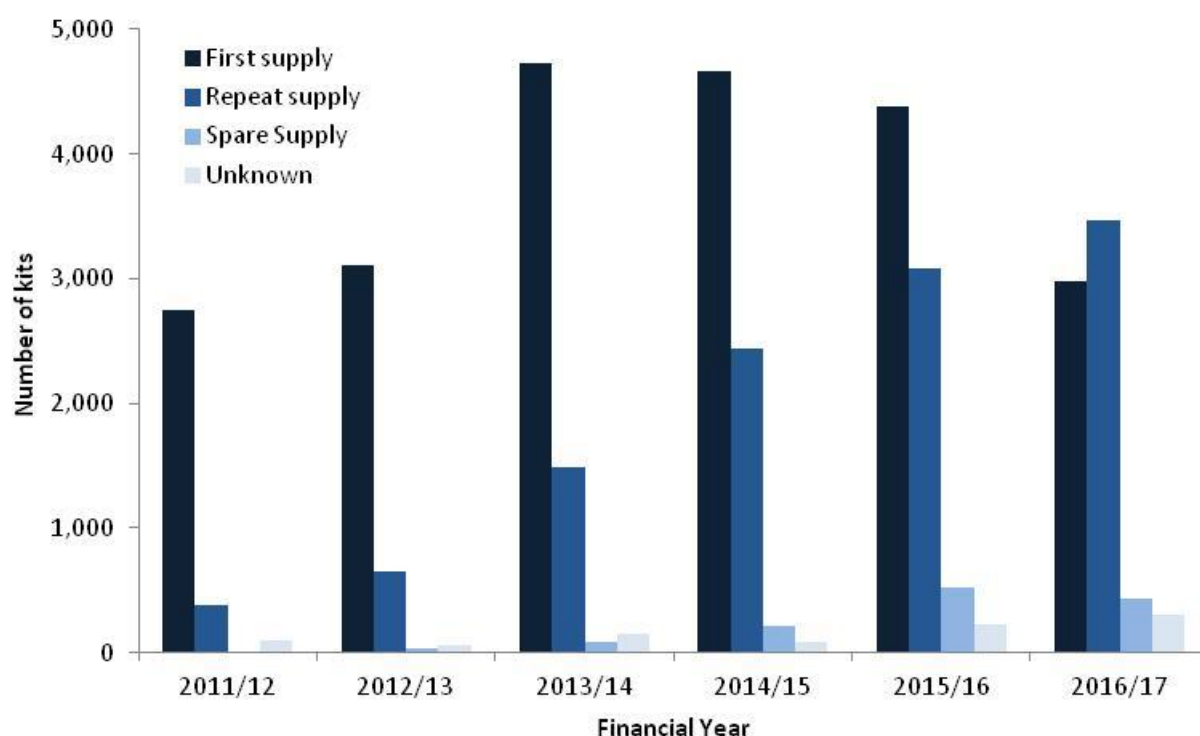


Table 4.2 provides a breakdown of the reasons for repeat supply of naloxone in community and prison outlets from 2011/12 to 2016/17. In 2016/17, 882 repeat supplies were issued due to the previous kit being used on the self or on another. From 2011/12 to 2016/17, the number of repeat supplies made following use of the previous kit on the self or on another was 3,088.

Other information on the characteristics of combined community and prison supplies<sup>13</sup> (2011/12 to 2016/17) 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.

<sup>13</sup> THN kits dispensed via community prescription are not included as this type of information is not available for these supplies.

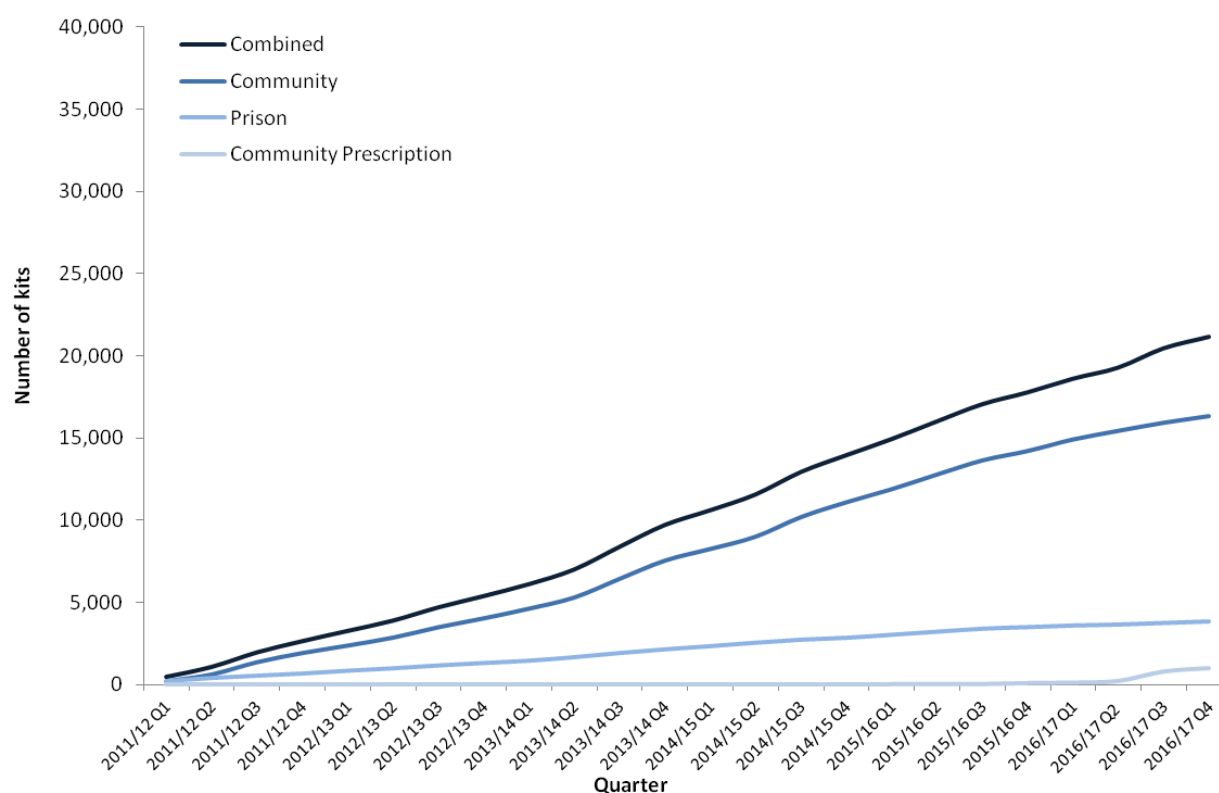
### 4.3: 'Reach' of THN supplies (all sources)

In previous reports, the penetration of the National Naloxone Programme among the 'at risk' population was measured by comparing the total number of THN kits supplied with the estimated number of problem drug users (PDUs). This measure (also included in this report) helps to quantify NHS Board harm reduction activity and offers some insight into the number of THN kits supplied per 'at risk' individual, but is less valuable in estimating THN penetration among the 'at risk' target population.

Previous sections of this report have described how many individuals at risk of opioid overdose were supplied with THN via specific supply routes. By combining these data and comparing with the estimated number of PDUs, the overall 'reach' of THN supply among the 'at risk' population can be estimated. Due to a) the assignation of prison supplies to the NHS Board in which the establishment was located and b) the assumption that all kits dispensed via community prescription were first supplies to people at risk, some uncertainty is 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 (PDUs) than the overall number of THN kits distributed. Therefore, this analysis adds value by quantifying the proportion of PDUs (the group most likely to witness or experience an opioid overdose) who possess the necessary training and equipment to potentially intervene and save a life.

Figure 4.3 shows the estimated cumulative number of THN kits issued as a first supply to people at risk of opioid overdose in the community, in prisons and dispensed via community prescription from 2011/12 to 2016/17. Table 4.6 provides a breakdown of these data by NHS Board.

**Figure 4.3: Cumulative number of THN kits distributed as first supply to people at risk, by source, financial year and quarter (Scotland; 2011/12 to 2016/17)**

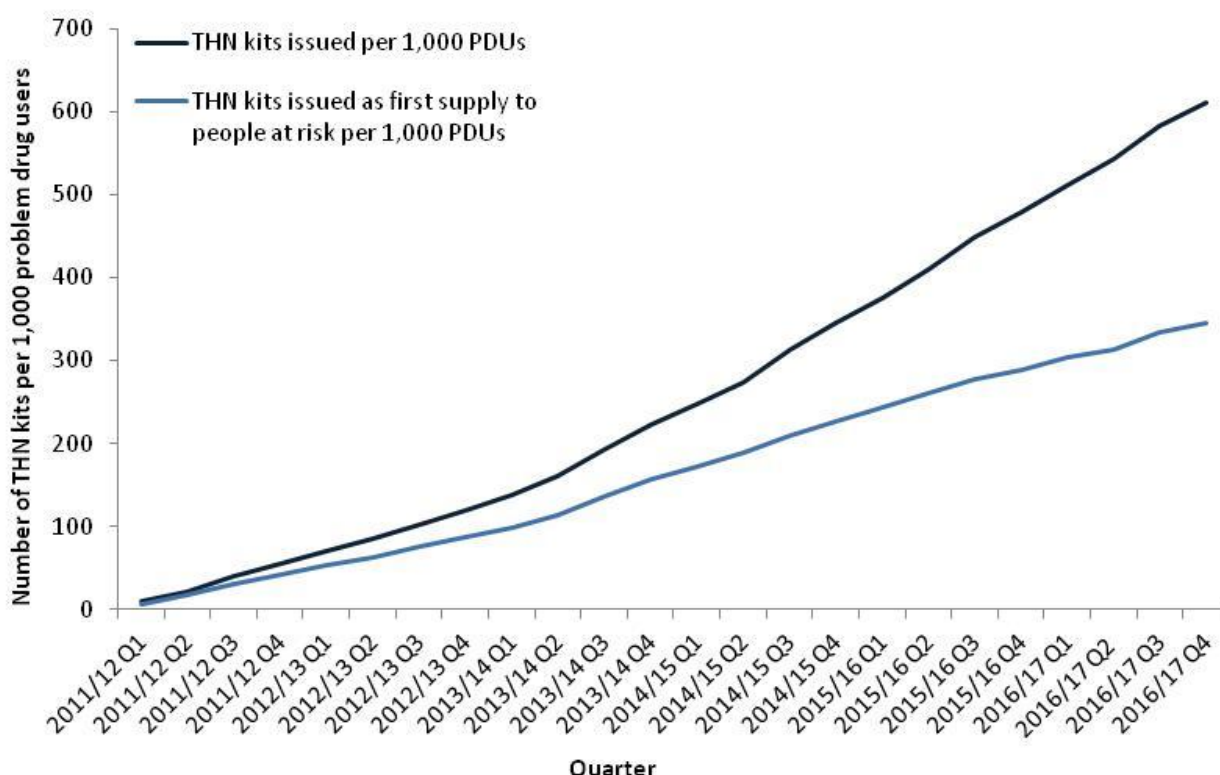


An estimated total of 21,189 individuals at risk of opioid overdose were supplied with THN over the six years from 2011/12 to 2016/17. Due to the exclusion of repeat supplies and kits supplied to family/friends and service workers, this was lower than the combined total number of kits supplied (Figure 4.1 and Table 4.1). Seventy seven per cent (16,318) 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 3,386 THN kits in 2016/17.

Figure 4.4 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 PDUs. Both measures are presented as cumulative figures over time per 1,000 PDUs.

**Figure 4.4: Cumulative total number of THN kits and number of first THN supplies to people at risk of opioid overdose in community and prisons, and dispensed via community prescription per 1,000 PDUs aged 15-64, by financial year and quarter (Scotland; 2011/12 to 2016/17)**



Cumulatively, a total of 37,609 kits (equivalent to 612 kits per 1,000 PDUs aged 15-64) were supplied by the National Naloxone Programme up to the end of 2016/17 (Table 4.7). In 2016/17, 8,159 THN kits were issued in community, 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 133 kits per 1,000 PDUs, which was similar to the annual rate observed in 2015/16 (135 per 1,000 PDUs).

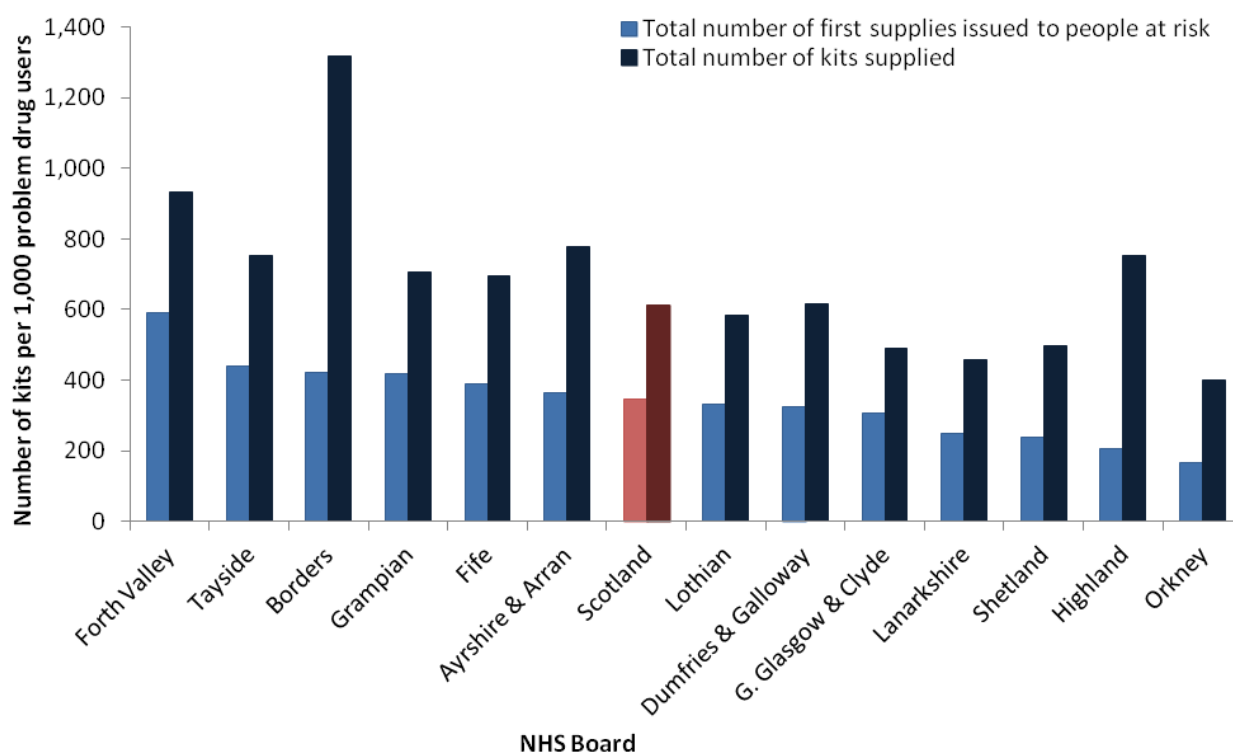
By the end of 2016/17, an estimated cumulative total of 21,189 kits (equivalent to 345 kits per 1,000 PDUs) had been issued/dispensed as a first supply to people at risk (Table 4.8)<sup>14</sup>. In

<sup>14</sup> 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 found that THN supply among people at risk was lower (around 35% since the start of the programme), but this was based on

2016/17, 3,386 THN kits were issued as a first supply (an annual rate of 55 kits per 1,000 PDUs). This was lower than the highest annual rate of 71 kits per 1,000 PDUs in 2013/14.

Figure 4.5 shows the cumulative total number of THN kits and estimated number of first supplies to people at risk issued in the community, prison and dispensed via community prescription from 2011/12 to 2016/17 as a rate per 1,000 estimated PDUs in each NHS Board.

**Figure 4.5: Cumulative number of THN kits and first supplies to people at risk issued in community and prisons and dispensed via community prescription combined per 1,000 PDUs aged 15-64, by NHS Board<sup>†</sup> (Scotland; 2011/12 to 2016/17)**



<sup>†</sup> Western Isles is not participating in the programme.

NHS Borders issued the highest total number of kits compared to estimated numbers of PDUs (1,317 per 1,000 PDUs)<sup>15</sup> followed by Forth Valley (931). NHS Orkney issued the lowest number of kits per 1,000 PDUs (400).

NHS Forth Valley issued the highest estimated number of THN kits as a first supply to people at risk (590 per 1,000 PDUs) followed by Tayside (439). The high 'reach' rate in Forth Valley may partly be associated with the presence of three prisons within the NHS Board area. NHS Orkney issued the lowest number of kits as first supply to people at risk (167 per 1,000 PDUs).

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.

<sup>15</sup> In NHS Borders, more than 1,000 THN kits were distributed per 1,000 PDUs from 2011/12 to 2016/17. 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.

## Glossary

ADP	Alcohol and Drug Partnership. 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
DRD	Drug-Related Death
IM	Intramuscular
IN	Intranasal
ISD	Information Services Division of NHS National Services Scotland
NNAG	National Naloxone Advisory Group. The body responsible for oversight of the National Naloxone Programme during its first five years of operation (2011/12 to 2015/16).
NNP	National Naloxone Programme
NRS	National Records Scotland
Opioids	Drugs similar to heroin or morphine. Opioids include opiates (drugs derived from <i>opium</i> , 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.
PADS	Partnership for Action on Drugs in Scotland. The set of groups 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).
SPS	Scottish Prison Service
THN	Take Home Naloxone



## List of Tables

Table No.	Name	Time period	File & size
	<a href="#">Naloxone data tables</a>		Excel [962kb]
1.1	Number of Take Home Naloxone kits (THN) issued each month in the community.	Financial years 2011/12 - 2016/17	
1.2	Number of Take Home Naloxone kits (THN) issued each quarter in the community by NHS Board.	Financial years 2011/12 - 2016/17	
1.3	Number of Take Home Naloxone kits (THN) issued in the community by type of supply and recipient.	Financial years 2011/12 - 2016/17	
1.4	Number of Take Home Naloxone kits (THN) issued each quarter in the community by recipient.	Financial years 2011/12 - 2016/17	
1.5	Number of Take Home Naloxone kits (THN) issued in the community by recipient and NHS Board.	Financial years 2011/12 - 2016/17	
1.6	Number of Take Home Naloxone kits (THN) issued as first supply to people at risk in the community by quarter and NHS Board.	Financial years 2011/12 - 2016/17	
1.7	Number of Take Home Naloxone kits (THN) issued in the community to people at risk of opioid overdose, where the person consented to share their personal data for monitoring purposes.	Financial years 2011/12 - 2016/17	
1.8	Number of Take Home Naloxone kits (THN) issued in the community to people at risk of opioid overdose by gender and age.	Financial years 2011/12 - 2016/17	
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2.2	Number of Take Home Naloxone kits (THN) issued each quarter in prisons by prison establishment.	Financial years 2011/12 - 2016/17	
2.3	Number of Take Home Naloxone kits (THN) issued in prisons by type of supply and recipient.	Financial years 2011/12 - 2016/17	
2.4	Number of Take Home Naloxone kits (THN) issued as first supply to people at risk in prisons by quarter and NHS Board.	Financial years 2011/12 - 2016/17	

2.5	Number of Take Home Naloxone kits (THN) issued in prisons to people at risk of opioid overdose, where the person consented to share their personal data for monitoring purposes.	Financial years 2011/12 - 2016/17	
2.6	Number of Take Home Naloxone kits (THN) issued in prisons to people at risk of opioid overdose by gender and age.	Financial years 2011/12 - 2016/17	
3.1	Number of Take Home Naloxone kits (THN) dispensed each quarter via community prescription by NHS Board	Financial years 2013/14 - 2016/17	
3.2	Number of Take Home Naloxone kits (THN) dispensed each quarter via community prescription by NHS Board and type of prescription	Financial years 2013/14 - 2016/17	
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4.1	Number of Take Home Naloxone kits (THN) issued each quarter in the community, prisons and dispensed via community prescription	Financial years 2011/12 - 2016/17	
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4.3	Number of Take Home Naloxone kits (THN) issued each quarter in the community and prisons by recipient.	Financial years 2011/12 - 2016/17	
4.4	Number of Take Home Naloxone kits (THN) issued in the community and prisons to people at risk of opioid overdose, where the person consented to share their personal data for monitoring purposes.	Financial years 2011/12 - 2016/17	
4.5	Number of Take Home Naloxone kits (THN) issued in the community and prisons to people at risk of opioid overdose by gender and age.	Financial years 2011/12 - 2016/17	
4.6	Number of Take Home Naloxone kits (THN) issued as first supply to people at risk in the community, prisons and dispensed via community prescription by quarter and NHS Board.	Financial years 2011/12 - 2016/17	
4.7	Number of Take Home Naloxone kits (THN) issued in the community, prisons and dispensed via community prescription per 1,000 estimated people with problem drug use aged 15-64 by NHS Board.	Financial years 2011/12 - 2016/17	
4.8	Number of Take Home Naloxone kits (THN) issued as first supply to people at risk in the community, prisons and dispensed via community prescription per 1,000 estimated people with problem drug use aged 15-64 by NHS Board.	Financial years 2011/12 - 2016/17	



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## Further Information

Other ISD publications on drug and alcohol misuse can be found at the [drug and alcohol topic pages](#) on the ISD website.

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

If you would like further information relating to drug misuse, please contact the Health & Social Care – Drug & Alcohol Team at [nss.isdsubstance misuse@nhs.net](mailto:nss.isdsubstance misuse@nhs.net).

The next update of this publication will be in October 2018.

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## Appendices

### A1 – 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 867 in 2016 (the highest figure yet recorded) (NRS, 2017).

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 circumstances surrounding DRDs and the individuals vulnerable to them. To date, ISD have published six NDRDD reports (for calendar years 2009 to 2014), 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 39 in 2014). Also, the majority of deaths occurred in a home environment where there was often someone nearby, thus offering an important window of opportunity for someone to intervene and potentially save a life.

Findings from the NDRDD also show that over two-thirds of individuals have been in drug treatment, in prison or police custody or discharged from hospital in the six months prior to their death, demonstrating that in most 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:

- During April 2011, Greater Glasgow & Clyde and Highland NHS Boards started THN distribution and piloted the data collection processes for the community-based element of the National Naloxone Programme. Rollout of the programme and associated data collection continued throughout Scotland from April 2011. By January 2012, 13 of 14 NHS Boards in Scotland participated in the National Naloxone Programme.
- 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.<sup>16</sup>

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.
- National naloxone information materials.
- 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, and continues to be supported by Scottish Government.

Since late 2015, a further THN supply route (dispensing in a community pharmacy via prescription) has been added to existing supply routes in some NHS Boards due to 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 for the first time in order to count the number of THN kits dispensed via community prescription.

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<sup>16</sup> 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

Detailed below are the dataset items that comprise the agreed national dataset for the National Naloxone Programme monitoring. Questions one to five apply to all instances of a kit being supplied (community supply or prison supply). 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 subsequent storage and analysis at ISD.

Data item	Notes
<b>1a. ADP of Supply</b>	<p><b>Definition:</b></p> <p>This is the location of the service provider.</p> <p><b>Purpose:</b></p> <p>This data item will be used to monitor returns for each service participating in the National Naloxone Programme.</p>
<b>1b. Prison Name (applicable to supply of kits in prisons)</b>	<p><b>Definition:</b></p> <p>This is the name of the prison where the naloxone is issued.</p> <p><b>Purpose:</b></p> <p>This data item will be used to monitor returns for each prison participating in the National Naloxone Programme.</p>
<b>2. Date of Issue</b>	<p><b>Definition:</b></p> <p>This is the date on which the kit was issued and should be entered in the format DD/MM/YYYY.</p> <p><b>Purpose:</b></p> <p>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.</p>
<b>3. Naloxone is provided to:</b>	<p><b>Definition:</b></p> <p>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:</p> <ul style="list-style-type: none"> <li>• Person at risk</li> <li>• Family/Friend</li> <li>• Service Worker</li> </ul> <p><b>Purpose:</b></p> <p>This data item will be used to monitor the 'reach' of THN distribution (how many individuals 'at risk' have access to a</p>

Data item	Notes
	<p>kit) and the total numbers of individuals receiving THN in addition to those persons 'at risk'.</p> <p><b>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.</b></p>
<b>4. Naloxone is provided as:</b>	<p><b>Definition:</b></p> <p>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:</p> <ul style="list-style-type: none"> <li>• First Supply</li> <li>• Repeat Supply</li> <li>• Spare Supply</li> <li>• Not Known</li> </ul> <p><b>Purpose:</b></p> <p>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.</p> <p><b>Please note this is from the person's perspective.</b></p>
<b>5. Last naloxone supply:</b>	<p><b>Definition:</b></p> <p>This records what happened to the last supply that was provided. The drop down list contains the options:</p> <ul style="list-style-type: none"> <li>• Used on Self</li> <li>• Used on Other</li> <li>• Lost Kit</li> <li>• Confiscated</li> <li>• Expired</li> <li>• Damaged Kit</li> <li>• Not Applicable – First Supply</li> <li>• Not Applicable – Spare Supply</li> <li>• Not Known</li> </ul> <p><b>Purpose:</b></p> <p>This data item will assist in evidencing reasons for re-supply (e.g. how many kits were used on those at risk of opioid overdose).</p> <p><b>Please note that this is from the person's perspective.</b></p>
<b>6. Consent to Data Recording</b>	<p><b>Definition:</b></p> <p>A Yes/No field indicating whether consent to share their personal data has been given.</p>
<b>7. Forename</b>	<p><b>Definition:</b></p> <p>The forename of the person at risk. 1<sup>st</sup> letter of forename to</p>

Data item	Notes
	<p>be recorded.</p> <p><b>Purpose:</b></p> <p>For ISD internal use only. To evidence the number of individuals at risk who had been supplied with THN.</p>
<b>8. Surname</b>	<p><b>Definition:</b></p> <p>The surname of the person at risk. 1<sup>st</sup> and 4<sup>th</sup> letters of person's surname to be recorded.</p> <p><b>Purpose:</b></p> <p>For ISD internal use only. To evidence the number of individuals at risk who had been supplied with THN.</p>
<b>9. Date of Birth</b>	<p><b>Definition:</b></p> <p>This is the date of birth of the person at risk and should be entered in the format DD/MM/YYYY.</p> <p><b>Purpose:</b></p> <p>This data item will be used to determine the age profile of individuals at risk receiving THN.</p>
<b>10. Age</b>	<p><b>Definition:</b></p> <p>The age in years of the person at risk.</p> <p><b>Purpose:</b></p> <p>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.</p>
<b>11. Postcode of Residence</b>	<p><b>Definition:</b></p> <p>The partial postcode of the person at risk's usual private residence.</p> <p><b>Purpose:</b></p> <p>This data item will be used to assess geographic coverage of THN as well as determine areas with increasing use.</p>
<b>12. Gender</b>	<p><b>Definition:</b></p> <p>This records the person at risk's gender. The drop down list contains the options:-</p> <ul style="list-style-type: none"> <li>• Not Known</li> <li>• Male</li> <li>• Female</li> <li>• Not Specified</li> </ul> <p><b>Purpose:</b></p> <p>This data item will be used to assess the gender profile of those at risk receiving THN.</p>

Data item	Notes
<b>13. Prison Release Date (if applicable)</b>	<p><b>Definition</b></p> <p>This is the date the person at risk is due for release from prison and should be entered in the format DD/MM/YYYY.</p> <p><b>Purpose:</b></p> <p>This will assist in evidencing the impact of THN on prisoners who are vulnerable to overdose within 4 weeks and 12 weeks following liberation.</p> <p><b><i>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.</i></b></p>
<b>14. Court Date</b>	<p><b>Definition</b></p> <p>The date of court appearance if liberation/release date not known.</p> <p><b>Purpose:</b></p> <p>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.</p>

### 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 supplying 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 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 on the agreed national dataset for National Naloxone Programme monitoring of community and prison THN supplies (see [Appendix A1.2](#)). However, some assumptions utilised during the calculation of community 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 form of supply. This approach is also explained below, detailing relevant assumptions.

### ***Community and Prison 'reach'***

For both community 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. It is also assumed that individuals 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. A further proposed assumption that kits are removed from the count of active THN supplies after three years (the pharmaceutical product naloxone has a recommended product life of three years) was discussed with expert colleagues but was not implemented as kits may be supplied with fewer than 36 months before expiry and may also remain clinically effective after their recommended expiry date.

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 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 (57 supplies from 2011/12 to 2016/17).

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 establishment was located in order that they can be counted alongside numbers of community 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 and NHS Shetland), 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 are dispensed). It is assumed that all community prescriptions relate to first supplies to persons 'at risk' of opioid overdose. However, as this supply route facilitates direct supply to family members etc. without the consent of the person at risk and it is not presently possible to take account of previous supply, inclusion of THN dispensing via community prescription may lead to slight overestimation of numbers of first supplies to individuals at risk.

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) 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 community prescription 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.

THN supplies issued via community prescription started in April 2013. As with community and prison supplies, the proposed assumption that kits were removed from the count of active THN supplies after three years (the pharmaceutical product naloxone has a recommended product life of three years) was not implemented.

### ***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. These figures may include substance-specific prevalence estimates (i.e. opioid only). If available before the next routine update of this report, 2015/16 opioid only estimates will be used in the calculation of THN 'reach'.

## A1.5: References

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- Scottish Government (2015) *Prison statistics and population projections Scotland: 2013-14* [online]. Available at: <http://www.gov.scot/Resource/0049/00491398.pdf>
- Scottish Drugs Forum (2017) 'Older People with Drug Problems in Scotland: Addressing the Needs of an Ageing Population'. Available online at: <http://www.sdf.org.uk/wp-content/uploads/2017/06/Working-group-report-OPDPs-in-2017.pdf>

**A2 – Publication Metadata (including revisions details)**

Metadata Indicator	Description
Publication title	National Naloxone Programme Scotland – Monitoring Report 2016/17
Description	<p>Data are presented on the supply of naloxone ‘take home’ kits in Scotland. Data are presented separately for kits issued in the community, kits issued by prisons, kits dispensed via community prescription, as well as combined totals.</p> <p>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).</p>
Theme	Health and Social Care
Topic	Lifestyles and Behaviours
Format	PDF report and <a href="#">Excel tables</a> .
Data source(s)	<p>Community and prison data are provided by services (community and prisons) to naloxone leads in NHS Boards and submitted to ISD’s Naloxone Monitoring database.</p> <p>Data on dispensing via community prescription is part of ISD’s Prescribing Information System and is provided by the ISD Prescribing Team.</p>
Date that data are acquired	<p>Community and Prisons: April 2017</p> <p>Community prescription: June 2017</p>
Release date	7 November 2017
Frequency	Annual
Timeframe of data and timeliness	The timeframe for this publication is the financial year 2016/17 (data for 2011/12 to 2015/16 are also shown). Note that some figures may have changed from previous years due to the late submission of data from NHS Boards.
Continuity of data	This is the sixth year of release of these data. Community and prison data are presented in a similar format to previous years. Community prescription data are presented for the first time.
Revisions statement	<p>In previous publications, information has been presented on the number and percentage of opioid-related deaths that occurred within four weeks of prison release or within four weeks of hospital discharge. These data were not available for inclusion in this report at the time of publication. ISD will produce a revised version of this report containing this information in early 2018.</p> <p>Future versions of this publication may show revised figures due to the late submission of data from NHS Boards.</p>

Revisions relevant to this publication	None.
Concepts and definitions	See A1 – Background information.
Relevance and key uses of the statistics	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.
Accuracy	The naloxone lead in each NHS Board was given the opportunity to check their 2016/17 supply figures prior to publication.
Completeness	Community 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 was assumed to be complete.  Community prescription: supply data were provided by the ISD Prescribing Team.
Comparability	No comparable published data outwith Scotland.
Accessibility	It is the policy of ISD Scotland to make its web sites and products accessible according to <a href="#">published guidelines</a> .
Coherence and clarity	The report is available as a PDF file.
Value type and unit of measurement	Counts, numbers and percentages. Also, rates per 1,000 people aged 15-64 with problem drug use.
Disclosure	The <a href="#">ISD protocol on Statistical Disclosure Protocol</a> is followed.
Official Statistics designation	Official Statistics
UK Statistics Authority Assessment	n/a
Last published	25 October 2016
Next published	October 2018
Date of first publication	31 July 2012
Help email	<a href="mailto:leebarndale@nhs.net">leebarndale@nhs.net</a>
Date form completed	10 October 2017

### **A3 – Early Access details (including Pre-Release Access)**

#### **Pre-Release Access**

Under terms of the "Pre-Release Access to Official Statistics (Scotland) Order 2008", ISD are 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:**

- NHS Board naloxone leads

### A4 – 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](#).