



Government of **Western Australia**
Department of **Health**

Needle and Syringe Distribution in Western Australia, 2011 to 2020.

Acknowledgments

We acknowledge the needle and syringe exchange programs and pharmaceutical suppliers that have provided the needle and syringe distribution and sales data upon which this report is based.

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Disclaimer

Every endeavour has been made to ensure that the information provided in this document was accurate at the time of writing. However, needle and syringe distribution data may be subject to change.

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Executive Summary

This report describes needle and syringe distribution data and trends for Western Australia (WA) over the ten-year period from 2011 to 2020.

Data is collected across all types of needle and syringe programs (NSPs) operating in WA, including needle and syringe exchange programs (NSEPs), other NSP outlets (such as regional and rural hospitals, public health units, community health centres and non-government agencies), pharmacy-based NSPs, and needle and syringe vending machines/dispensing machines (NSVM/NSDMs). Depending on the type of NSP, data is derived from either stock ordered or stock distributed. Data is entered into an on-line database (FITS2K database) and was extracted to and analysed for this report using Microsoft® Excel.

Over the reporting period, increases in overall needle and syringe distribution were observed in WA, from 4,248,807 needles and syringes in 2011 to 5,600,329 in 2020, denoting a 31.8% increase. Whilst an overall increase was experienced, the upward trajectory was more significant up to 2019, where a peak in distribution was reached at 6,782,199. In 2020 there was a significant decrease in overall distribution, coinciding with the arrival of COVID19, and its associated restrictions, in WA.

Per capita distribution also increased, and WA began to exceed the national per capita rate from 2012, continuing to surpass the national rate up until 2019. Within WA, a shift was seen in per capita distribution; from 2013 the non-metropolitan area surpassed the metropolitan and continues to do so.

Shifts in distribution between the different outlet types also occurred, with pharmacy distribution steadily decreasing whilst an increasing proportion of needle and syringe distribution is occurring from publicly funded NSEPs, which in 2020 accounted for 73% of total distribution. This may reflect the development of eight new NSEP services in WA over the 2011 to 2020 period. Prior to 2011, only two regions had established NSEPs, however by 2020 this had increased to six of the eight WA regions having an NSEP.

This is also reflected in the proportion each outlet type contributes to needle and syringe distribution, which varies considerably across regions.

Introduction and methods

This report is the third stand-alone report of needle and syringe distribution in WA produced by the Communicable Disease Control Directorate (CDCD), WA Department of Health. The report describes the number of needles and syringes distributed in WA from 2011 to 2020.

Data sources

The *Medicines and Poisons Act 2014* (the Act) authorises approved organisations to provide sterile injecting equipment to people who inject drugs. Any organisation that operates a needle and syringe program (NSP) must meet specific requirements as stated in the Medicines and Poisons Regulations 2016 and be approved under the Act by the Chief Executive Officer of the Department of Health (or their delegate).

Data is collected across all types of NSPs operating in WA:

- Needle and syringe exchange programs (NSEPs) – supply free sterile needles and syringes conditional on the return of used items (i.e. exchanged) or a cost recovery may apply.
- NSPs – outlets such as regional and rural hospitals, public health units, community health centres and non-government agencies that provide access to free sterile needles and syringes as a component of their service.
- Pharmacy-based NSPs – run on a commercial basis via the retail of sterile needles and syringes.
- Needle and syringe vending machines/dispensing machines (NSVM/NSDMs) – a self-service device which either vends sterile injecting equipment on a cost-recovery basis (NSVM) or dispenses sterile injecting equipment for no-cost (NSDM).

There are limitations of the needle and syringe distribution data that are presented in this report. NSEPs are the only NSP outlet type which provide data to the CDCD that directly indicates the quantity of needles distributed to clients each month. Data for all other NSP types is derived from stock ordered. For example, if an NSP hospital site orders stock that lasts two years, the data shows 'distribution' only once in that two-year period. However, this method is considered the most reliable and most administratively feasible given the number of NSPs operating in WA, of which there were 106 NSP approvals (excluding pharmacies) by the end of 2020.

Pharmaceutical wholesalers, from which pharmacies order stock of pre-packaged needle and syringe kits, provide data for these outlets each month. In 2020, there were 592 NSP pharmacy outlets approved to retail needles and syringes in WA.

Data is entered into an on-line database (FITS2K database) and was extracted to and analysed for this report using Microsoft® Excel.

While most needles and syringes distributed by NSPs in WA are 1mL needle and syringes, entered as one unit in the database, some outlets also distribute different sized needles and syringes. For the purposes of data collection, where needles and syringes are distributed separately, needles are considered one unit, and syringes are not entered into the database.

Regional boundaries

WA is divided into ten health administrative regions. Three of the regions are in the Perth metropolitan area (East, North and South metropolitan) and seven are in the regional areas of WA (Kimberley, Pilbara, Midwest, Wheatbelt, Goldfields, South West and Great Southern). For the purposes of this report, the three metropolitan regions have been combined into one 'metropolitan' region.

COVID19

The COVID-19 pandemic led to physical distance restrictions and travel restrictions interstate and intrastate. The first reported case of COVID-19 in WA was 21 February 2020, which led to several restrictions being put in place across WA¹. This included social distancing restrictions and the forced closure of certain facilities. Three NSP sites were unable to operate during COVID19 restrictions, whilst 23 NSP sites made changes to service delivery to ensure compliance with restrictions.

Data revision

Data presented in this report may vary from previous publications. This is because the database maintained by the Department used to compile this report may have been revised due to data cleaning, recoding and/or updates of systems.

Strategic context

The Fifth National Hepatitis C Strategy 2018–2022 aims to make significant progress towards eliminating hepatitis C as a public health threat². Similarly, the Third National Hepatitis B Strategy 2018-2022 has an overarching goal of making significant progress towards eliminating hepatitis B as a public health threat³. Both strategies include the priority area of improving equitable access to successful preventative measures, with a focus on provision of sterile injecting equipment through NSPs.

A goal of the Eighth National HIV Strategy 2018-2022 is sustaining the virtual elimination of HIV transmission among people who inject drugs. A priority in the strategy is to ensure priority populations, including people who inject drugs, have access to successful means of prevention⁴.

WA has its own set of strategies to address blood-borne viruses in the local community, the [WA Hepatitis B Strategy 2019-2023](#), [WA Hepatitis C Strategy 2019–2023](#) and [WA HIV Strategy 2019–2023](#). Similar to the national strategies, these strategies include goals to make significant progress towards hepatitis C elimination, increasing the use of sterile injecting equipment, and to maintain the virtual elimination of HIV among people who inject drugs.

¹ Government of Western Australia, Media Statements, accessed 7 December 2021 at:

<https://www.mediastatements.wa.gov.au/Pages/McGowan/2020/03/Important-new-COVID-19-measures-come-into-effect-.aspx>

² Australian Government Department of Health, *Fifth National Hepatitis C Strategy 2018–2022*, 2018, accessed 10 September 2021 at: [https://www1.health.gov.au/internet/main/publishing.nsf/Content/ohp-bbvs-1/\\$File/Hep-C-Fifth-Nat-Strategy-2018-22.pdf](https://www1.health.gov.au/internet/main/publishing.nsf/Content/ohp-bbvs-1/$File/Hep-C-Fifth-Nat-Strategy-2018-22.pdf)

³ Australian Government Department of Health, *Third National Hepatitis B Strategy 2018-2022*. 2018, accessed 10 January 2021 at: [https://www1.health.gov.au/internet/main/publishing.nsf/Content/ohp-bbvs-1/\\$File/Hep-B-Third-Nat-Strategy-2018-22.pdf](https://www1.health.gov.au/internet/main/publishing.nsf/Content/ohp-bbvs-1/$File/Hep-B-Third-Nat-Strategy-2018-22.pdf)

⁴ Australian Government Department of Health, 2018. *Eighth National HIV Strategy 2018-2022*, accessed 10 September 2021 at: <https://www1.health.gov.au/internet/main/publishing.nsf/Content/ohp-bbvs-1>

Interpretation of data

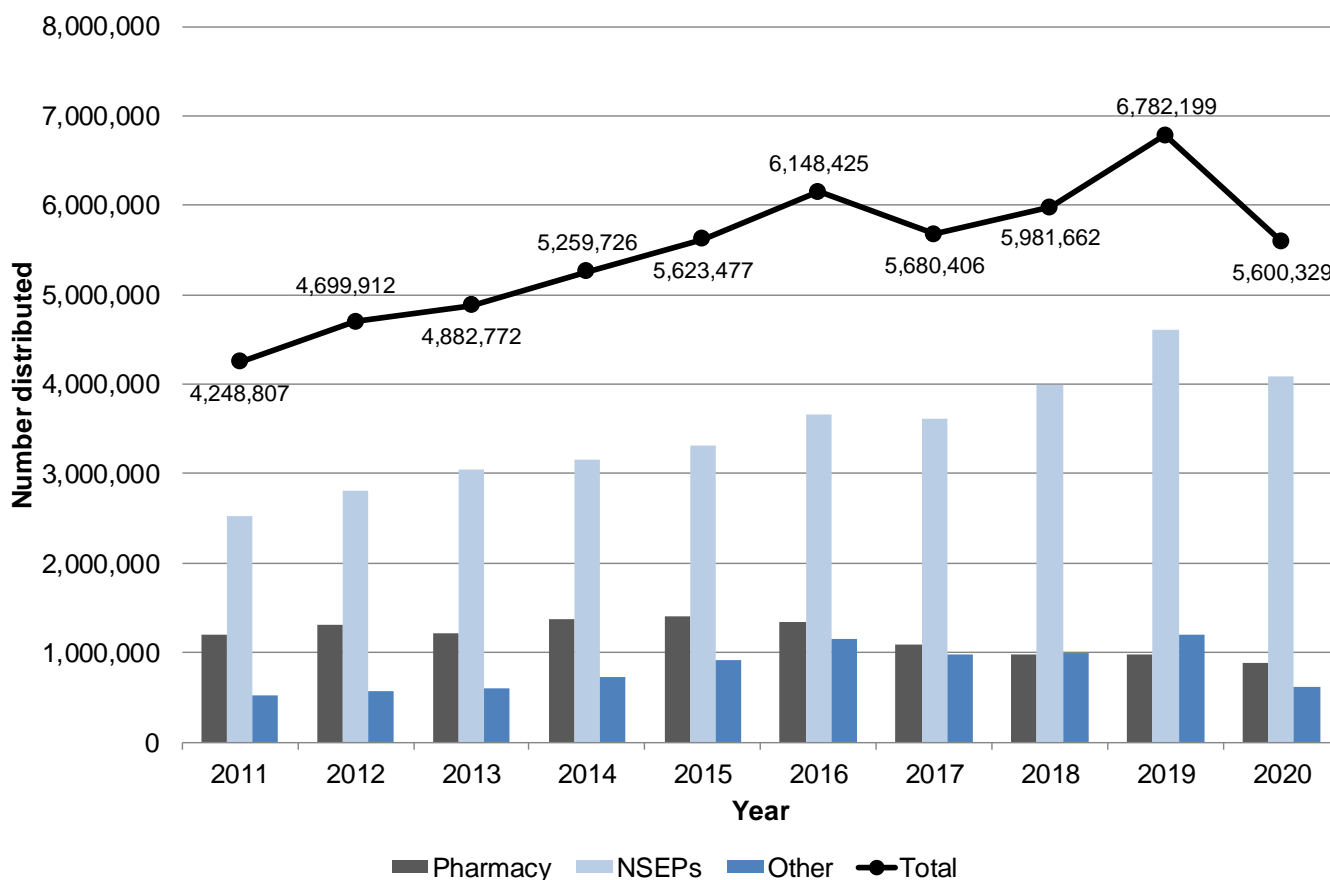
Data in this report only represents numbers and rates of needle and syringe distribution and does not necessarily reflect changes in drug use trends in any area or region. Needle and syringe distribution may be variable according to a range of factors that are not included in these calculations, for example, increased service availability. Enhanced NSEP services were established in Mandurah, Geraldton, Fremantle, Bunbury, Albany, Kalgoorlie, South Hedland, and Katanning between 2011 and 2020. This may have contributed to increased needle and syringe distribution in these areas since the establishment of these services, indicating previously unmet demand.

Similarly, NSDMs, which dispense needle and syringes at no cost to consumers, were introduced in WA during the reporting period. The first NSDM was introduced in Katanning in 2015 and then the second in Geraldton in 2019. The introduction of these machines may have contributed to an increase in distribution in these regions.

Needle and syringe distribution in WA, 2011 to 2020

Distribution by outlet type

Figure 1: Number of needles and syringes distributed by outlet type, WA, 2011 to 2020



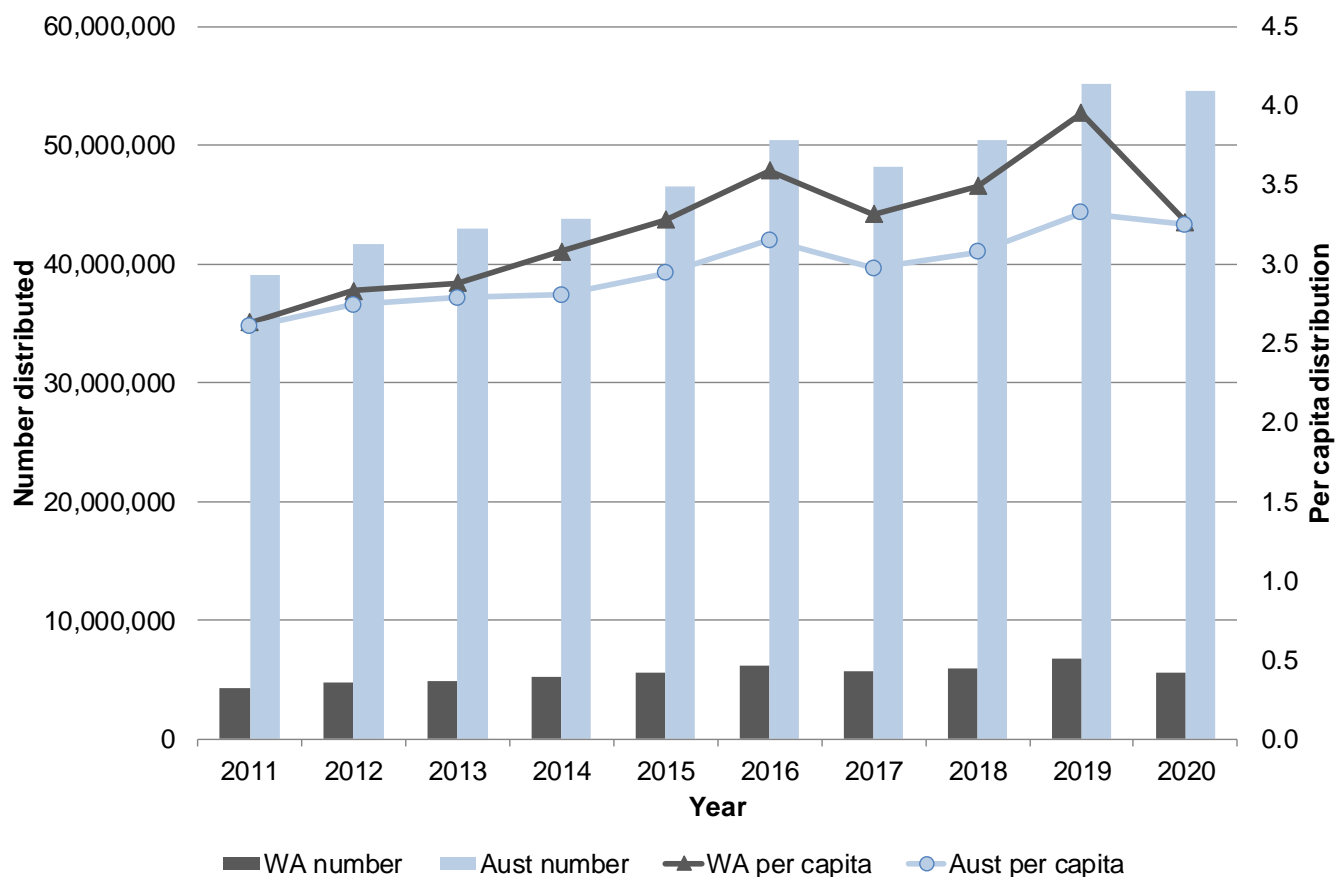
Notes: 'Other' for the purposes of this figure includes NSVM/NSDM and NSP outlets as described in data sources (page 1.).

The number of needles and syringes distributed in WA has increased by 1,351,522 over the ten-year reporting period, from 4,248,807 in 2011 to 5,600,329 in 2020 (Figure 1 and Appendix A). This denotes a 31.8% increase. A peak in distribution was seen in 2019 with 6,782,199 needles and syringes distributed, a 13.4% increase from 2018 (5,981,662) and a 59.6% increase from 2011. Much of the increase in 2019 can be attributed to NSEP outlet distribution, accounting for 4,603,024 needles and syringes distributed (Figure 1 and Appendix A). Similarly, 'Other' outlets experienced a 19.9% increase in 2019 (1,199,308) compared to 2018 (1,000,546) and a 129.1% increase compared to 2011 (523,533). However, as seen in Figure 1, distribution in 2020 decreased across all outlet types, with total distribution being at its lowest quantity since 2014. Pharmacy NSP outlets maintained a relatively stable quantity of distribution for the first half of the reporting period, then a gradual decline for the latter half. Pharmacy needle and syringe distribution was 1,204,883 in 2011 and by 2020 had declined to 887,541; a 26.3% decrease (Figure 1 and Appendix A).

Per capita needle and syringe distribution

Per capita needle and syringe distribution is calculated by dividing the number of needles and syringes distributed by the population aged 15-64 years. The denominator excludes children (aged less than 14 years) and older people (65 years and older) as injecting drug use is less prevalent in these age groups.

Figure 2: Number and per capita distribution of needles and syringes in WA and Australia, 2011 to 2020

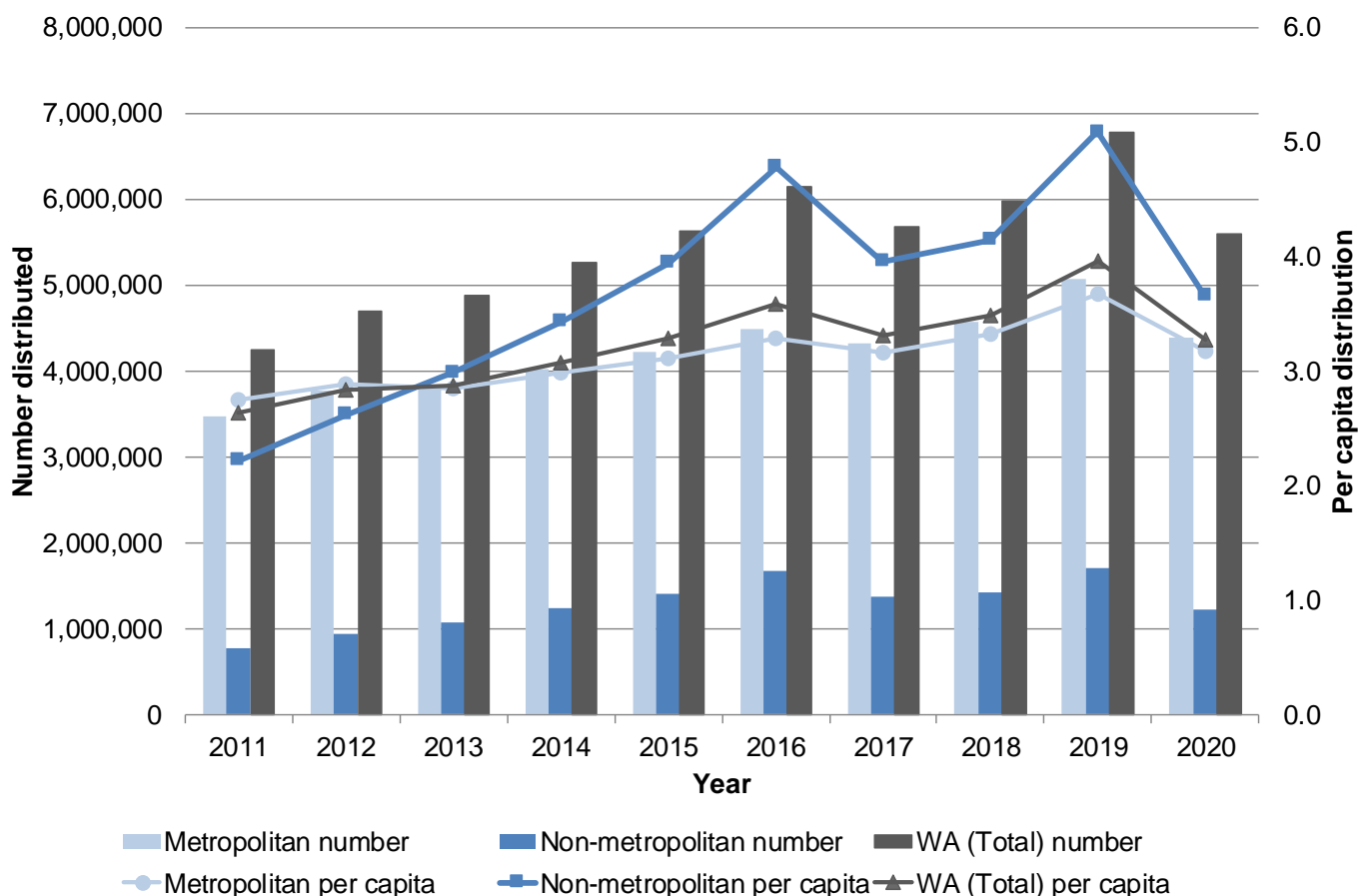


In Australia, more than 54.5 million needles and syringes were distributed in 2020, a 39.6% increase from the 39.1 million distributed in 2011 (Figure 2 and Appendix A). The per capita rate of needles and syringes distributed nationally also increased over the reporting period, from 2.6 in 2011 to 3.2 in 2020, an increase of 23.1% (Figure 2 and Appendix A)⁵.

In 2020, WA accounted for 10.3% of Australia's national needle and syringe distribution. At the start of the reporting period in 2011, the WA and the national per capita rate were equal at a rate of 2.6. However, from 2012, WA began to exceed the national rate, and by 2019 the WA per capita rate stood at 4.0 compared to the national rate of 3.3. As seen in Figure 2, the WA per capita rate experienced a significant decrease in 2020, with a rate of 3.3, similar to the national per capita distribution rate of 3.2 (Appendix A, Table 2).

⁵ Needle Syringe Program National Minimum Data Collection, Kirby Institute, UNSW Sydney.

Figure 3: Number and per capita distribution of needles and syringes in WA by area, 2011 to 2020



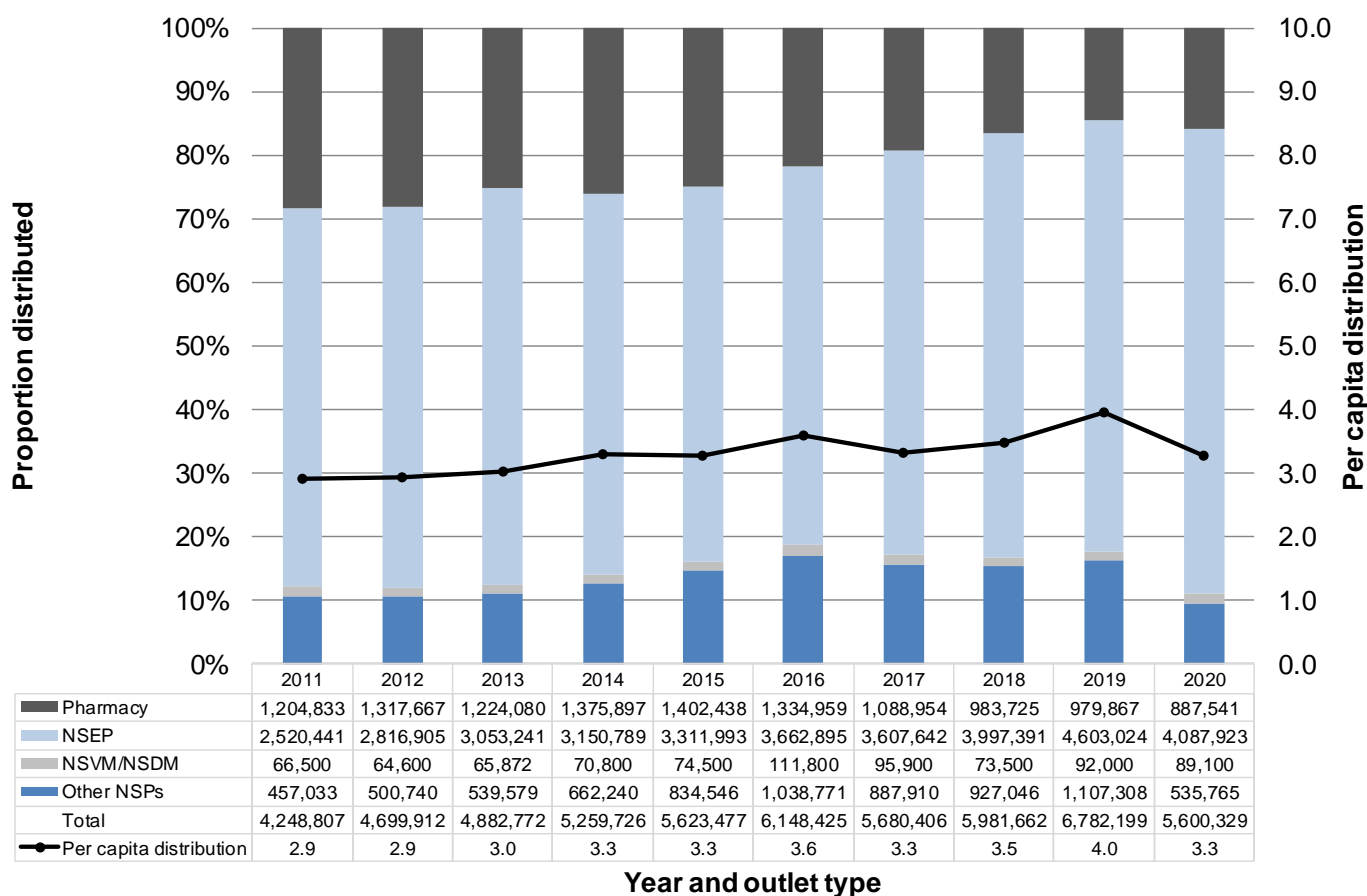
Over the ten-year period, the majority of needle and syringes were distributed in the metropolitan area. During the reporting period the metropolitan area experienced a 26.2% increase in distribution, from 3,474,412 in 2011 to 4,383,586 in 2020 (Figure 3). The per capita rate of distribution for the metropolitan area correspondingly increased, from 2.7 in 2011 to 3.2 in 2020.

Non-metropolitan regions followed a similar trajectory, with a more substantial increase to that of the metropolitan area. During the ten-year period, non-metropolitan regions experienced a distribution increase of 57.1%, from 774,395 in 2011 to 1,216,743 in 2020 (Figure 3). The per capita distribution rate across non-metropolitan regions increased significantly from 2.2 in 2011 to 3.6 in 2020.

As seen in Figure 3, there has been a shift in per capita distribution between the metropolitan and non-metropolitan areas. At the beginning of the reporting period in 2011, the metropolitan per capita rate exceeded that of the non-metropolitan. However, from 2013 the non-metropolitan per capita rate began to exceed the metropolitan rate. In 2016 and 2019, peaks in non-metropolitan per capita distribution were seen, at 4.8 and 5.1 respectively. The metropolitan per capita distribution for the same years stood at 3.3 and 3.7. In 2020, both the metropolitan and the non-metropolitan experienced a significant decline in per capita distribution.

Per capita and distribution by outlet type

Figure 4: Number, proportion and per capita distribution of needles and syringes in WA by outlet type, 2011 to 2020



Notes: 'Other NSPs' refers to NSPs as described in data sources (page 1).
 Midwest Community Drug Service Team (CDST) Geraldton changed from NSP to NSEP September 2011.
 WAAC (formerly the WA AIDS Council) Fremantle changed from mobile NSEP to fixed site NSEP October 2011.
 Palmerston Mandurah fixed site NSEP commenced (replacing WAAC mobile NSEP in Mandurah) April 2012.
 Peer Based Harm Reduction WA (previously called WA Substance Users Association) Bunbury changed from mobile NSEP to fixed site NSEP April 2012.
 Goldfields Population Health Unit NSEP established August 2015.
 Great Southern Population Health Unit in Albany changed from NSP to NSEP October 2019.
 Hedland Health Campus NSEP established December 2019.
 Katanning NSEP established August 2020.

The proportion of needles and syringes distributed from the different types of NSP outlets has steadily changed over the reporting period. Over the ten-year period, pharmacy NSP outlets experienced a decline in distribution. In 2011, the proportion of needles and syringes distributed by pharmacies accounted for 28.4% of all needles and syringe distributed, with this proportion declining to 15.8% by 2020 (Figure 4).

Conversely, the proportion of needles and syringes distributed by NSEPs has progressively increased. In 2011, NSEP outlets accounted for 59.3% of needle and syringe distribution and by 2020 had increased to account for 73.0% of all needles and syringes distributed in WA (Figure 4). This may reflect the development of eight new NSEP services in WA over the 2011 to 2020 period. New NSEP services were established in Geraldton, Fremantle, Mandurah and Bunbury in 2011 and 2012, and were an enhancement of existing services. In Fremantle, Mandurah and Bunbury, the service delivery model changed from a mobile NSEP to a fixed site NSEP, allowing for an increase in hours of service delivery. In Geraldton, the service model was changed from an NSP (only providing pre-packaged needle and syringe kits) to an NSEP

(providing a wider range of injecting equipment, disposal facilities and increased opportunity for provision of information and education). In 2015 an NSEP was established in Kalgoorlie to better service the Goldfields region. In 2019 an NSEP outlet was established in South Hedland, which replaced an existing NSP service, and in 2020 there was the establishment of an NSEP outlet in Katanning.

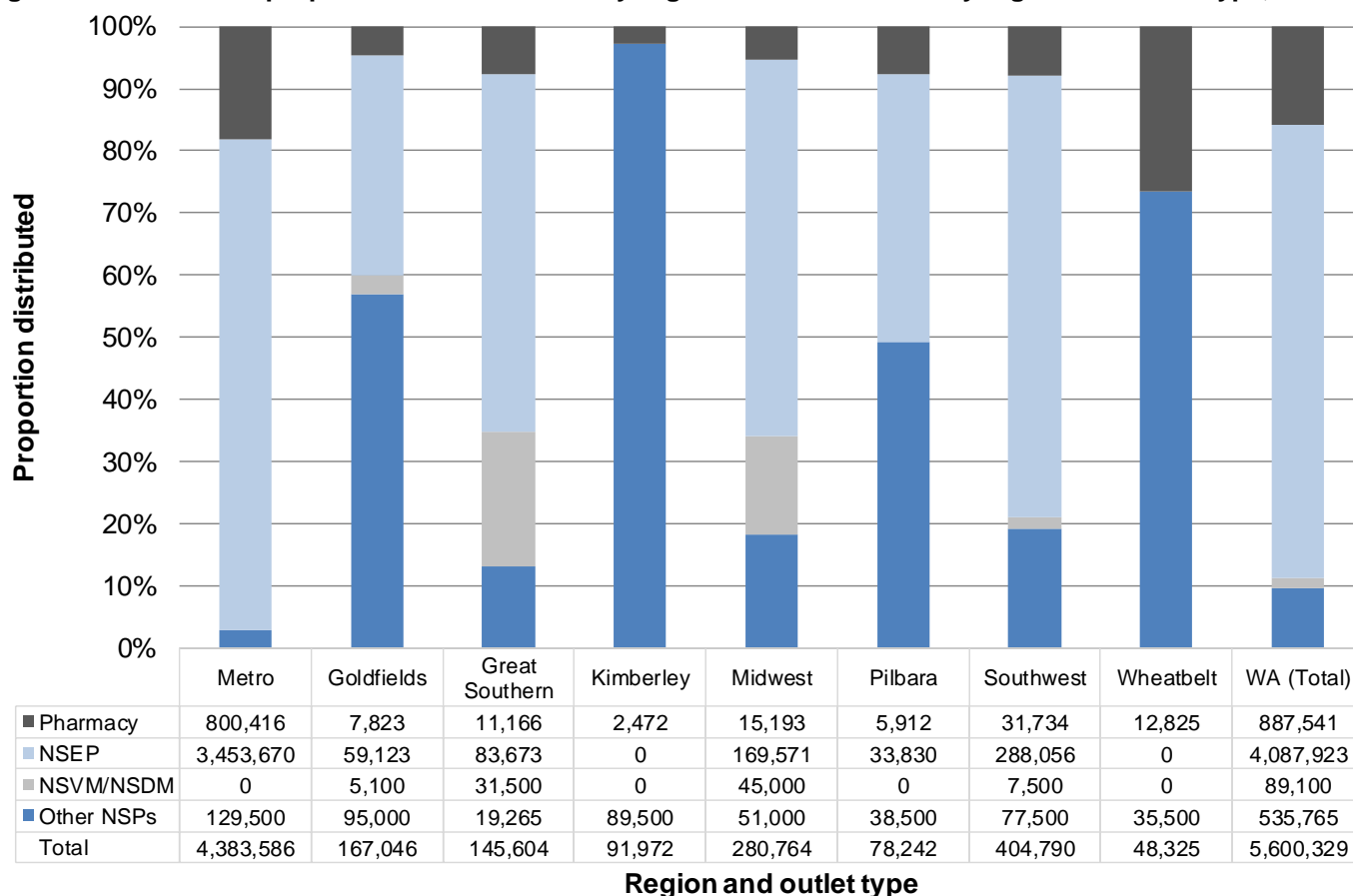
The proportion of distribution via NSVM/NSDM has remained stable over the reporting period, comprising around 1.6% of the total needles and syringes distributed in both 2011 and 2020 (Figure 4). In 2011, only NSVMs were available in WA and were located at six regional hospital sites: Busselton, Nickol Bay, Carnarvon, Kalgoorlie, Esperance and Geraldton. An NSVM was introduced in Manjimup in 2014. During the report period, three NSVM were decommissioned, Geraldton (2017), Manjimup (2018) and Carnarvon (2019). The first NSDM introduced in WA was at Katanning Regional Hospital in 2015, with a second introduced at Geraldton Regional Hospital in 2019. By the end of 2020, there were four NSVM (Kalgoorlie, Esperance, Karratha [unit previously located at Nickol Bay] and Busselton) and two NSDM (Katanning and Geraldton) available across the state.

The proportion of distribution from 'Other' NSP's (which includes regional and rural hospitals, public health units, community health centres and non-government agencies) remained relatively stable over the reporting period. In 2011, Other NSPs accounted for 10.8% of the total number of needles and syringes distributed in WA and by 2020, the proportion had decreased slightly to 9.6%. However, fluctuations were experienced during the reporting period, including in 2016 where 'Other' NSP's contributed to 16.9% of total needle and syringe distribution.

Individual regional proportion and per capita data can be found in Appendix B.

Distribution by region and outlet type

Figure 5: Number and proportion of needles and syringes distributed in WA by region and outlet type, 2020



Notes: 'Other NSPs' refers to NSPs as described in data sources (page 1).

The proportion each outlet type contributes to needle and syringe distribution varied considerably across regions in 2020. As seen in the 2020 data in Figure 5, the percentage to which Pharmacy NSP outlets contributed to distribution varied from 26.5% of total distribution in the Wheatbelt, to 2.7% of the Kimberley distribution in 2020. In interpreting the data, it should be noted that for two regions, the Kimberley and the Wheatbelt, pharmacies are one of only two NSP outlet types available.

In the metropolitan area, NSEP outlets are responsible for the majority of distribution, accounting for 78.8% of needles and syringes distributed in 2020 (Figure 5). Similarly, in the Great Southern, Midwest and South West regions, where an NSEP service is available, most distribution was via the NSEP, at 57.5%, 60.4% and 71.2% respectively. In the Goldfields and Pilbara regions however, the proportion of needles and syringes distributed from NSEP outlets was considerably lower, at 35.4% and 43.2%.

In 2020, the proportion that NSVM/NSDM contributed to distribution varied between regions which had the service/s available. For example, in the South West, the NSVM/NSDM only contributed to 1.9% of the total needle and syringe distribution for the region. Conversely in the Great Southern, NSVM/NSDM contributed to 21.6% of all distribution. Considerations of this data should include that at some sites the self-service device vends sterile injecting equipment on a cost-recovery basis (NSVM), whilst other sites dispense sterile injecting equipment for no cost (NSDM).

Other NSP outlets accounted for a significant amount of needle and syringe distribution in some of the non-metropolitan regions. For the Kimberley and Wheatbelt, where these outlets are the only NSP services available aside from pharmacies, the proportion was particularly high, at 97.3% and

73.5% respectively. However, in other regions the contribution was considerably less, with the lowest in the metropolitan area, at 3.0% of total needle and syringe distribution.

Regional distribution and outlet type data can be found in Appendix B.

Appendix A: WA and national needle and syringe distribution 2011–2020

Table 1: Number of needles and syringes distributed in WA by outlet type, 2011 to 2020

Outlet type	Year									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Pharmacy	1,204,833	1,317,667	1,224,080	1,375,897	1,402,438	1,334,959	1,088,954	983,725	979,867	887,541
NSEPs	2,520,441	2,816,905	3,053,241	3,150,789	3,311,993	3,662,895	3,607,642	3,997,391	4,603,024	4,087,923
Other	523,533	565,340	605,451	733,040	909,046	1,150,571	983,810	1,000,546	1,199,308	624,865
Total	4,248,807	4,699,912	4,882,772	5,259,726	5,623,477	6,148,425	5,680,406	5,981,662	6,782,199	5,600,329

Notes: 'Other' for the purposes of this figure includes NSVM/NSDM and NSP outlets as described in data sources (page 1).

Table 2: Number and per capita distribution of needles and syringes in WA and Australia, 2011 to 2020

Area	Year									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
WA number	4,248,807	4,699,912	4,882,772	5,259,726	5,623,477	6,148,425	5,680,406	5,981,662	6,782,199	5,600,329
WA per capita	2.6	2.8	2.9	3.1	3.3	3.6	3.3	3.5	4.0	3.3
Aust number	39,104,925	41,646,023	43,009,494	43,786,209	46,471,315	50,416,563	48,166,173	50,397,304	55,175,802	54,574,078
Aust per capita	2.6	2.7	2.8	2.8	2.9	3.1	3.0	3.1	3.3	3.2

Notes: Australian data sourced from: Needle Syringe Program National Minimum Data Collection, Kirby Institute, UNSW Sydney.

Appendix B: Regional needle and syringe distribution by outlet type

Goldfields

Figure 1: Number, proportion and per capita distribution of needles and syringes in the Goldfields region by outlet type, 2011 to 2020

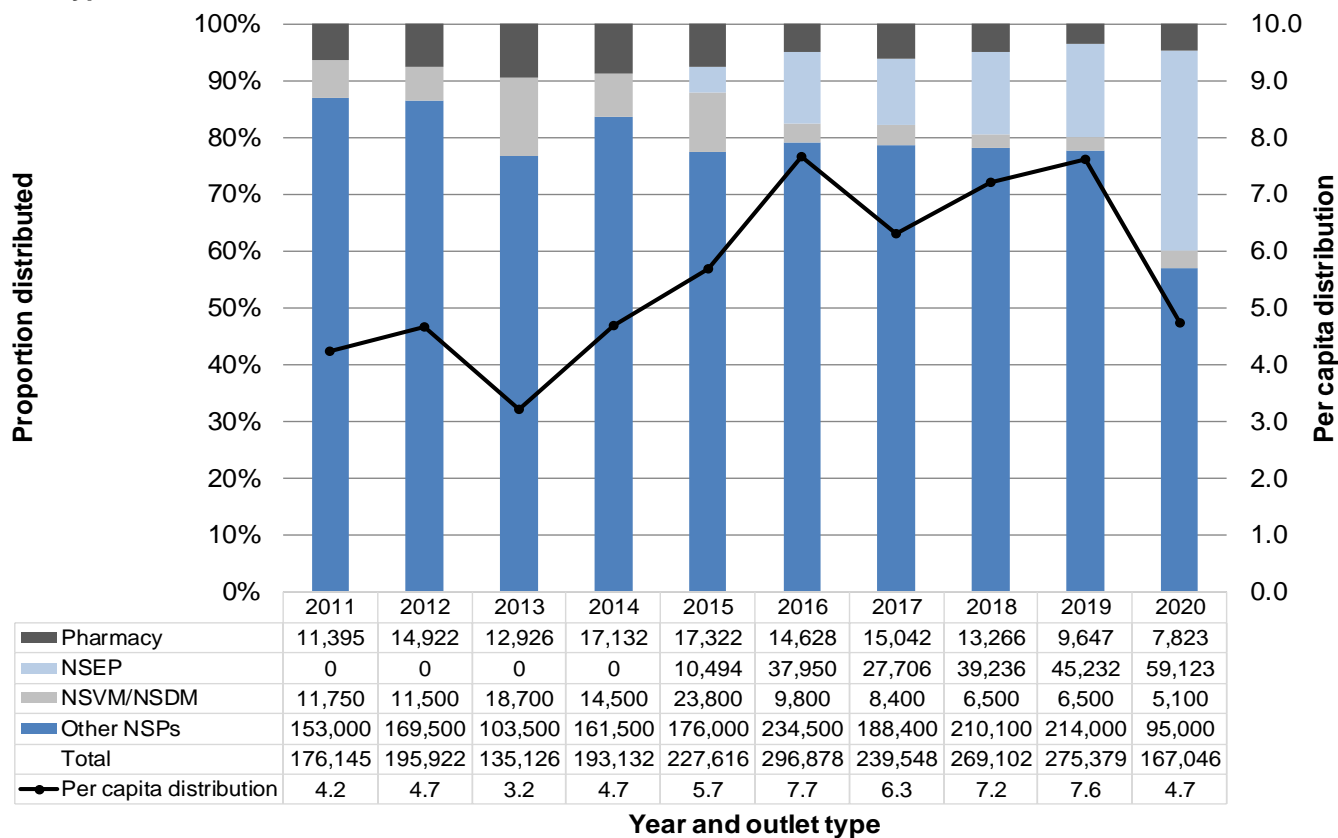


Figure 2: Number of needles and syringes in the Goldfields region by outlet type, 2011 to 2020

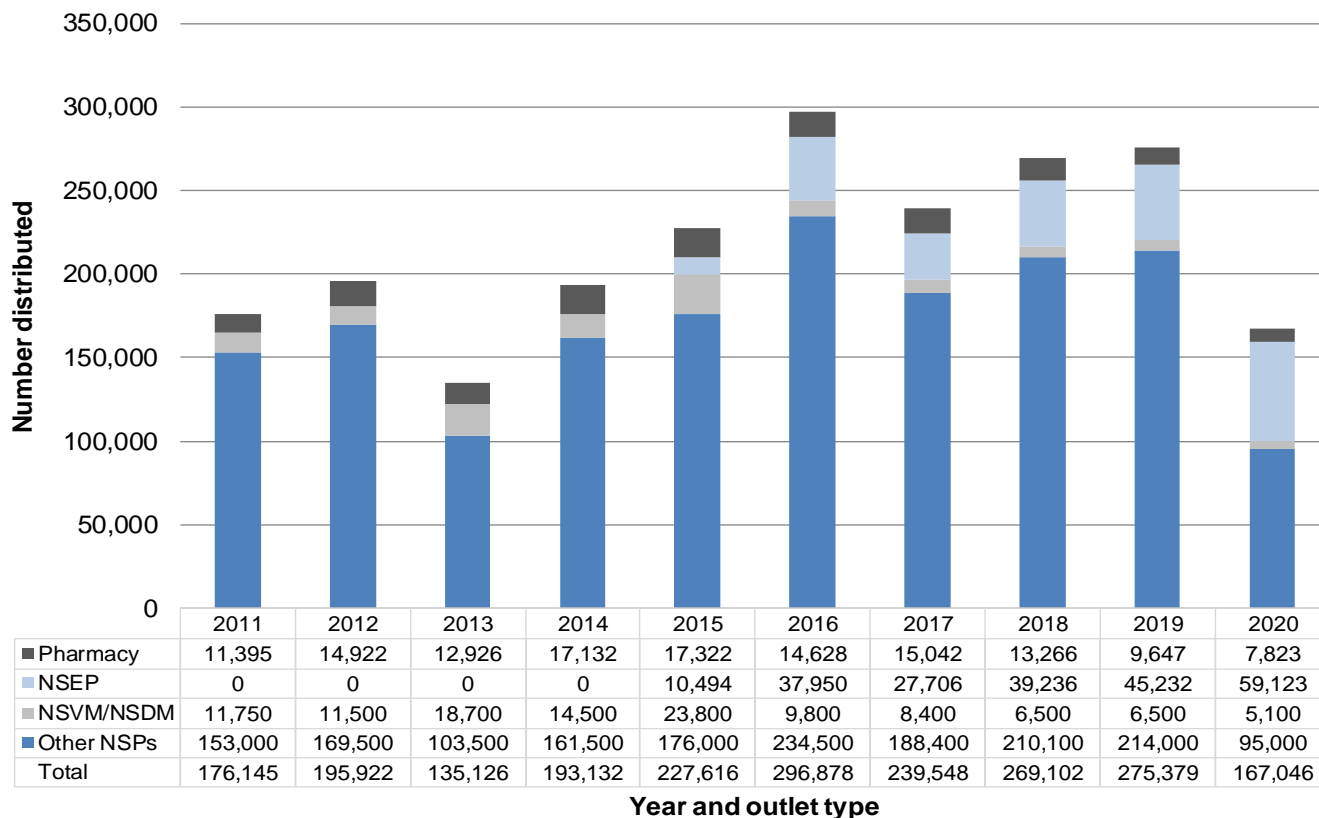


Figure 3: Number, proportion and per capita distribution of needles and syringes in the Great Southern region by outlet type, 2011 to 2020

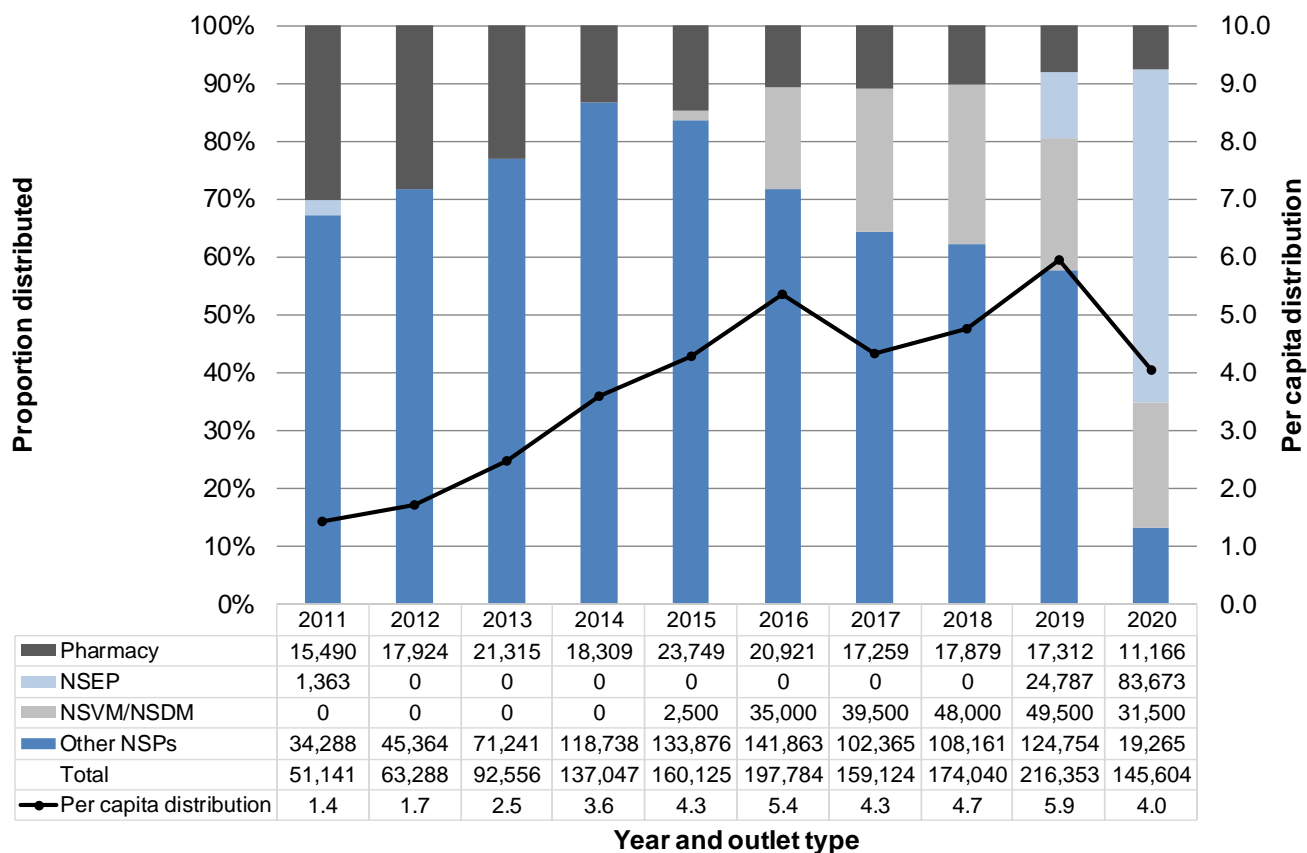
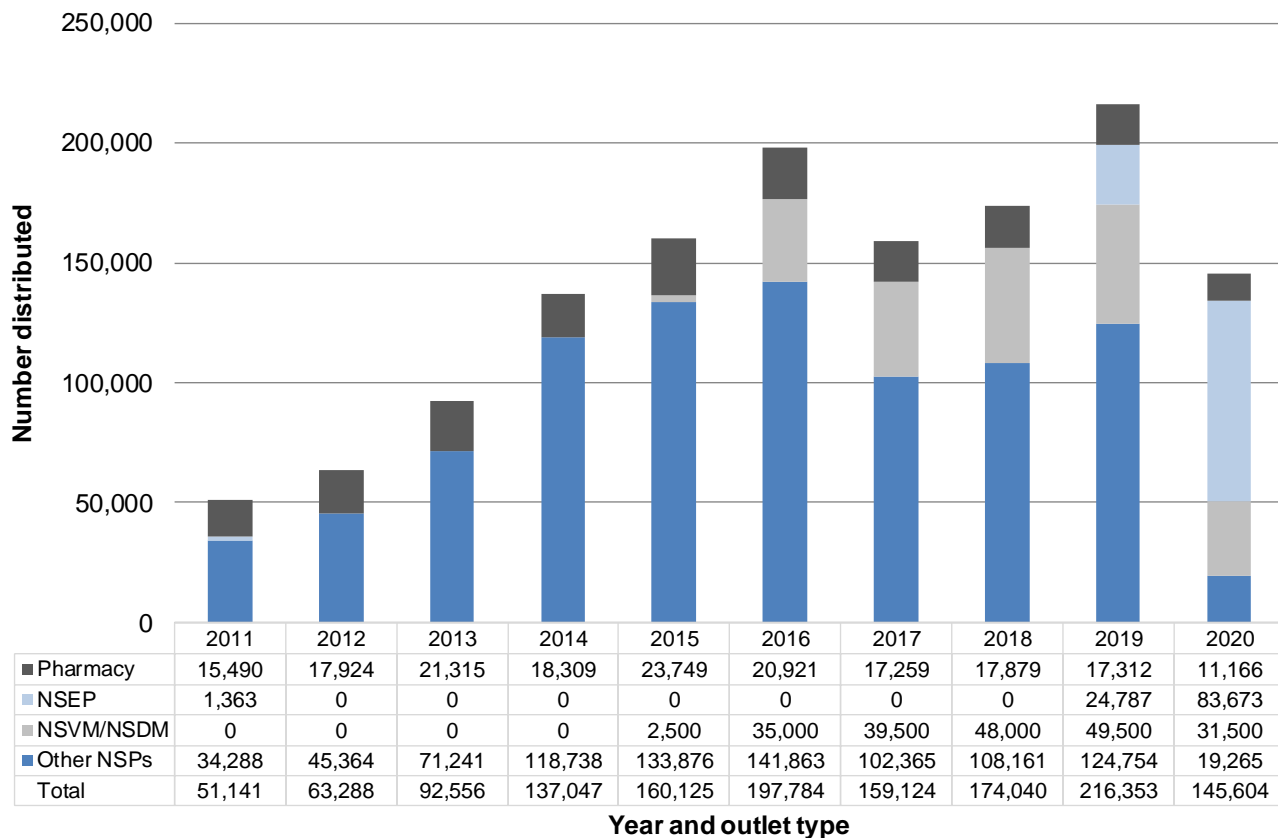


Figure 4: Number of needles and syringes in the Great Southern region by outlet type, 2011 to 2020



Kimberley

Figure 5: Number, proportion and per capita distribution of needles and syringes in the Kimberley region by outlet type, 2011 to 2020

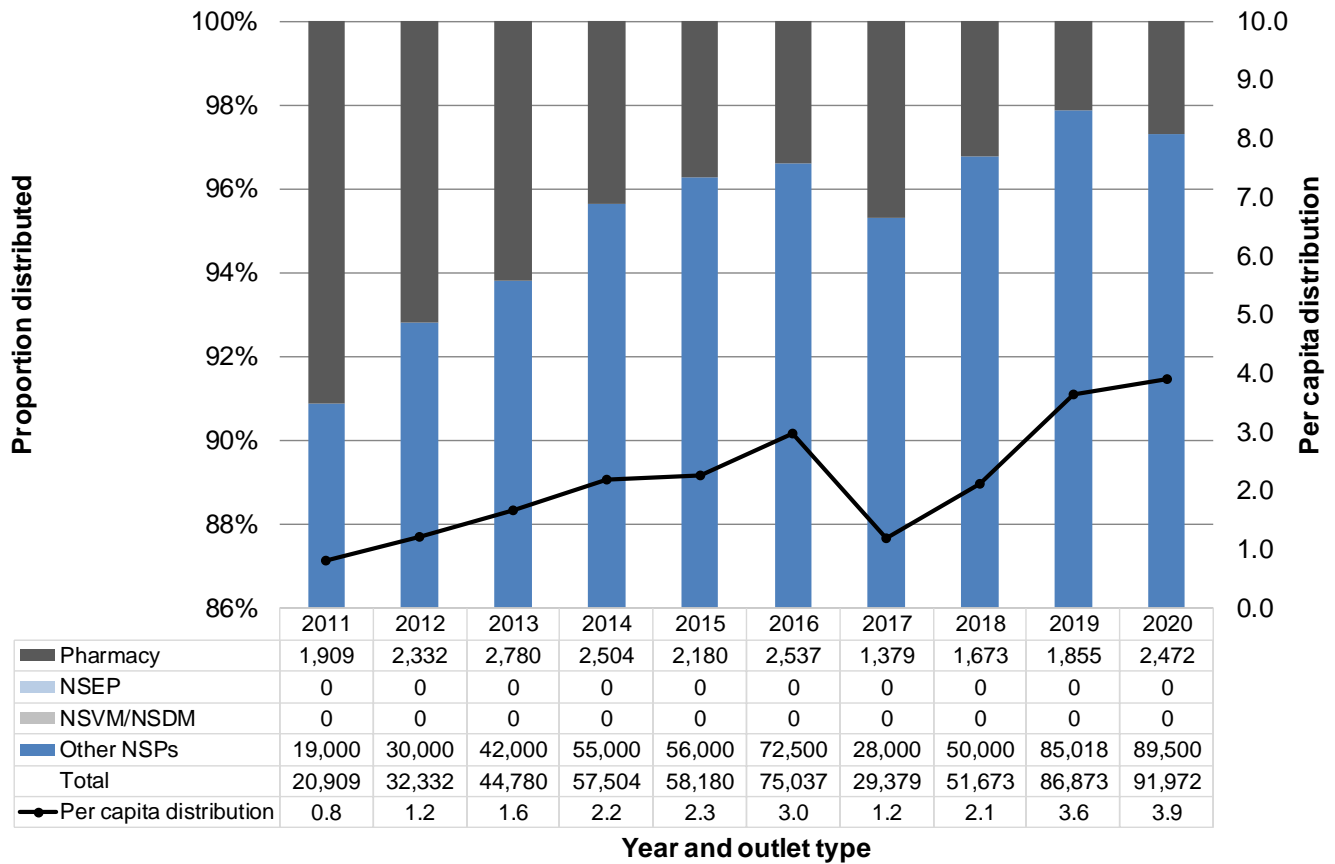
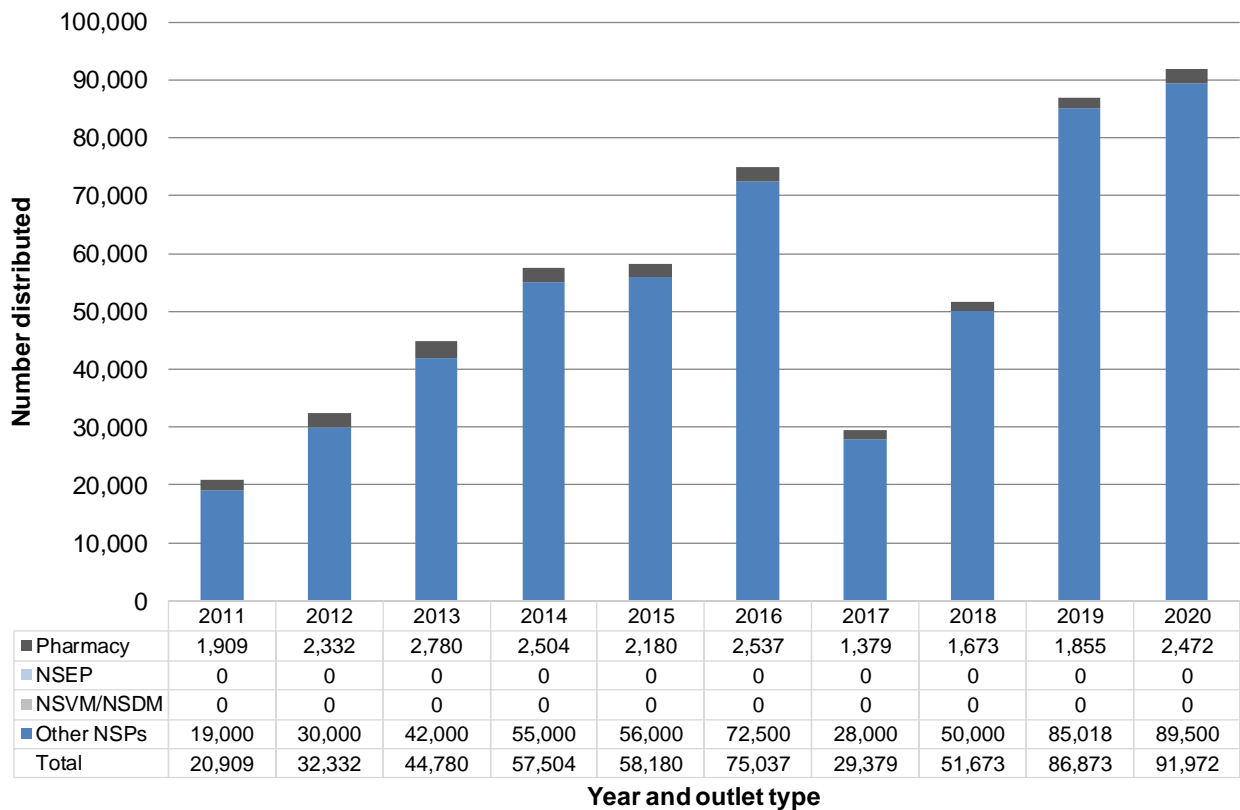


Figure 6: Number of needles and syringes in the Kimberley region by outlet type, 2011 to 2020



Metropolitan

Figure 7: Number, proportion and per capita distribution of needles and syringes in the metropolitan region by outlet type, 2011 to 2020

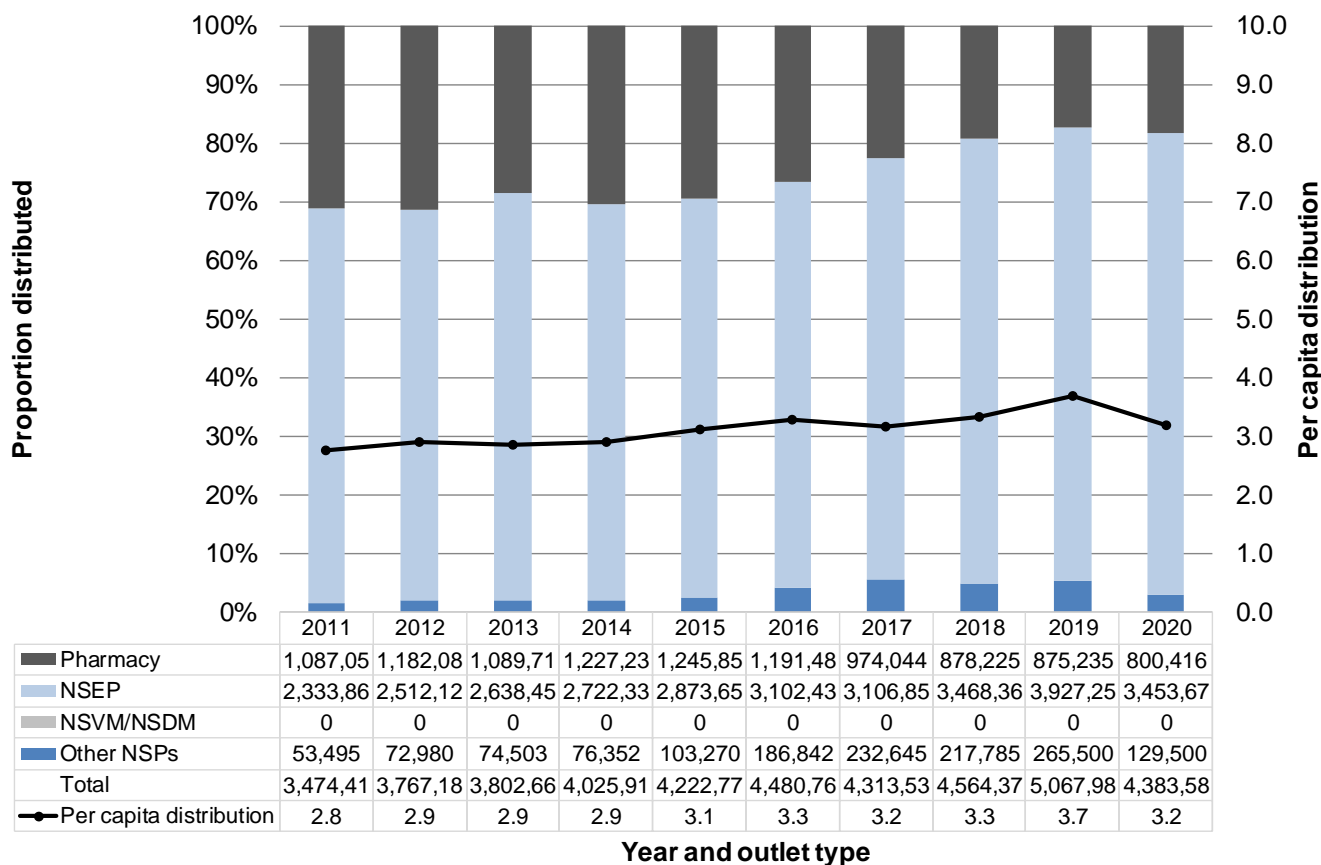
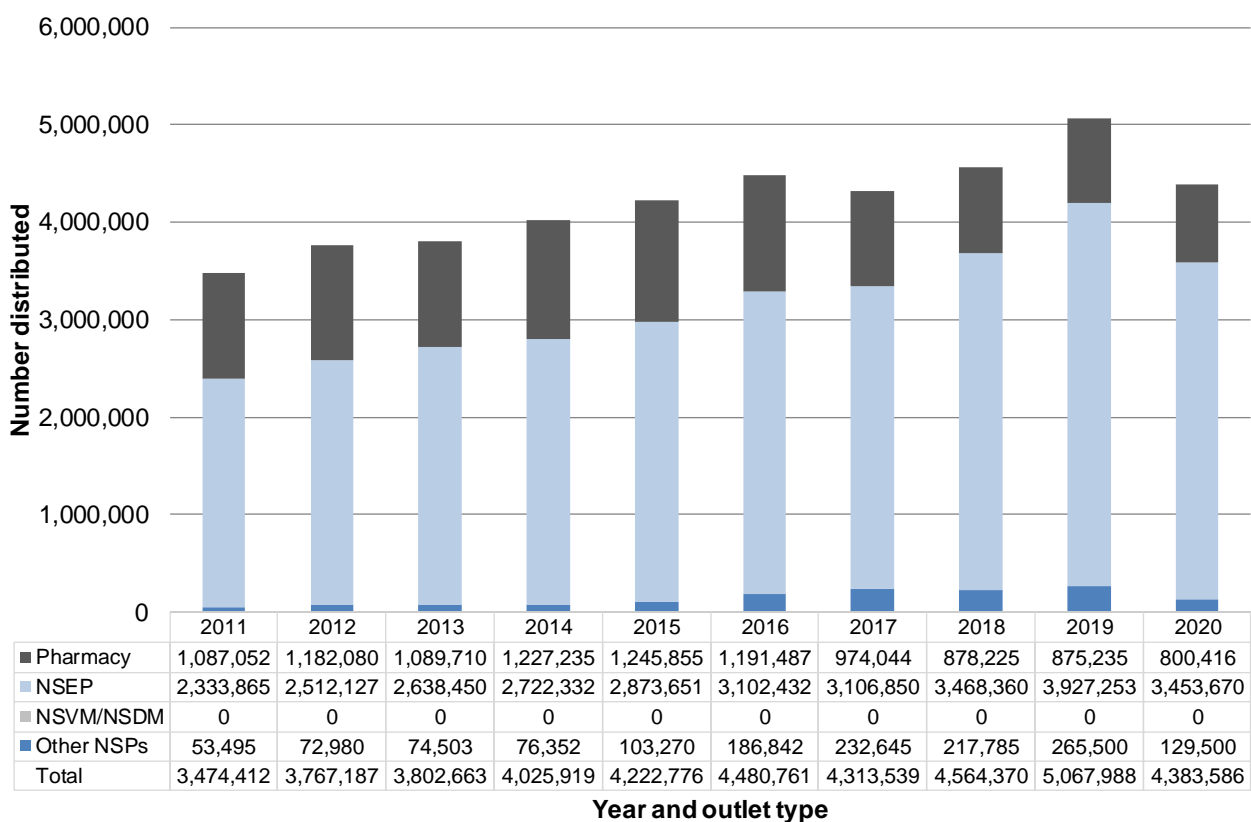


Figure 8: Number of needles and syringes in the metropolitan region by outlet type, 2011 to 2020



Midwest

Figure 9: Number, proportion and per capita distribution of needles and syringes in the Midwest region by outlet type, 2011 to 2020

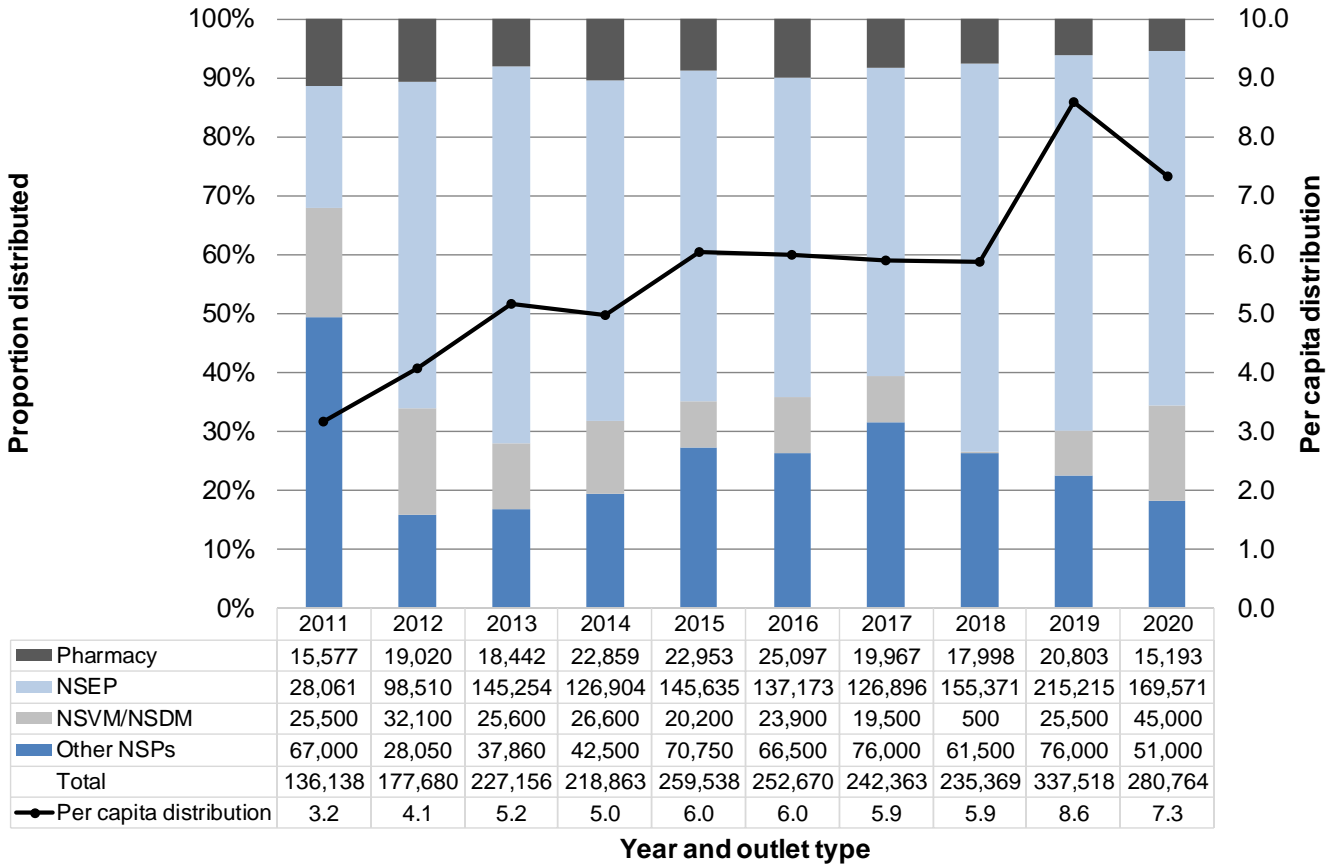
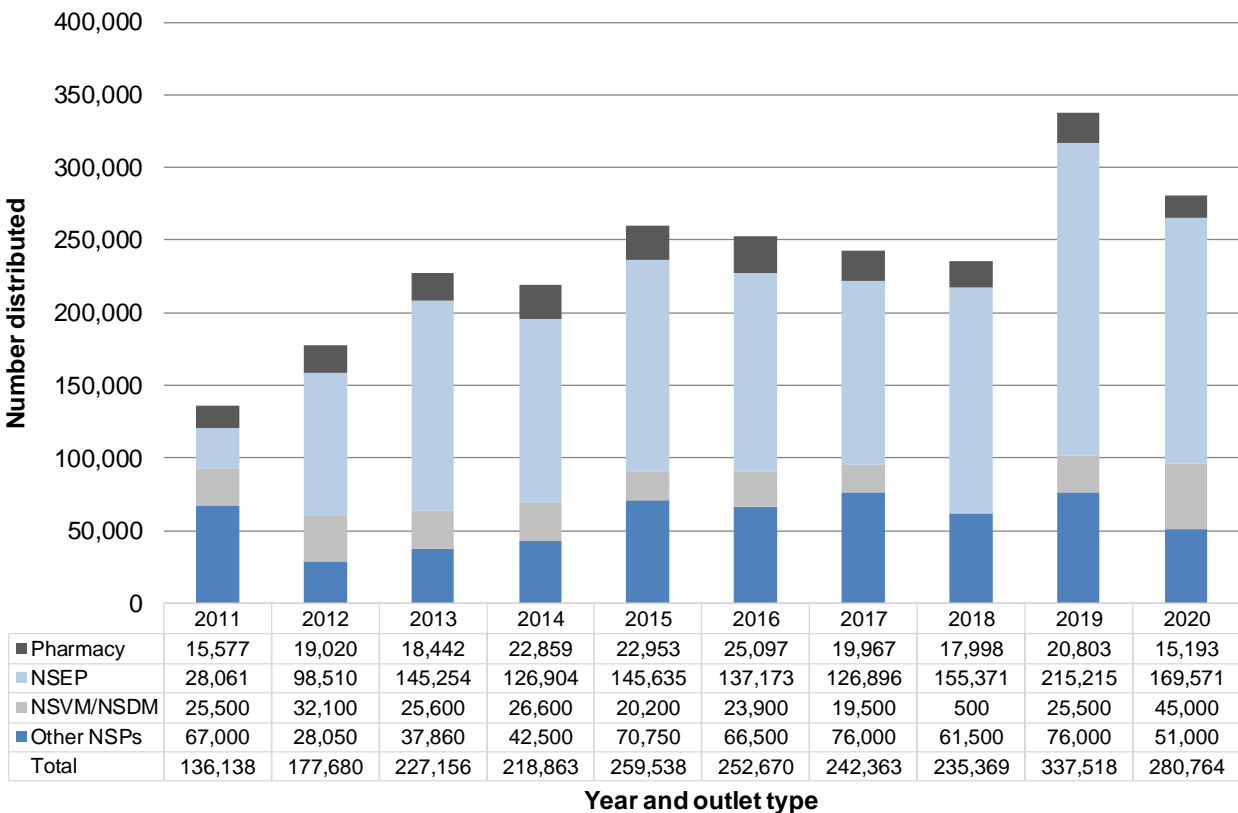


Figure 10: Number of needles and syringes in the Midwest region by outlet type, 2011 to 2020



Pilbara

Figure 11: Number, proportion and per capita distribution of needles and syringes in the Pilbara region by outlet type, 2011 to 2020

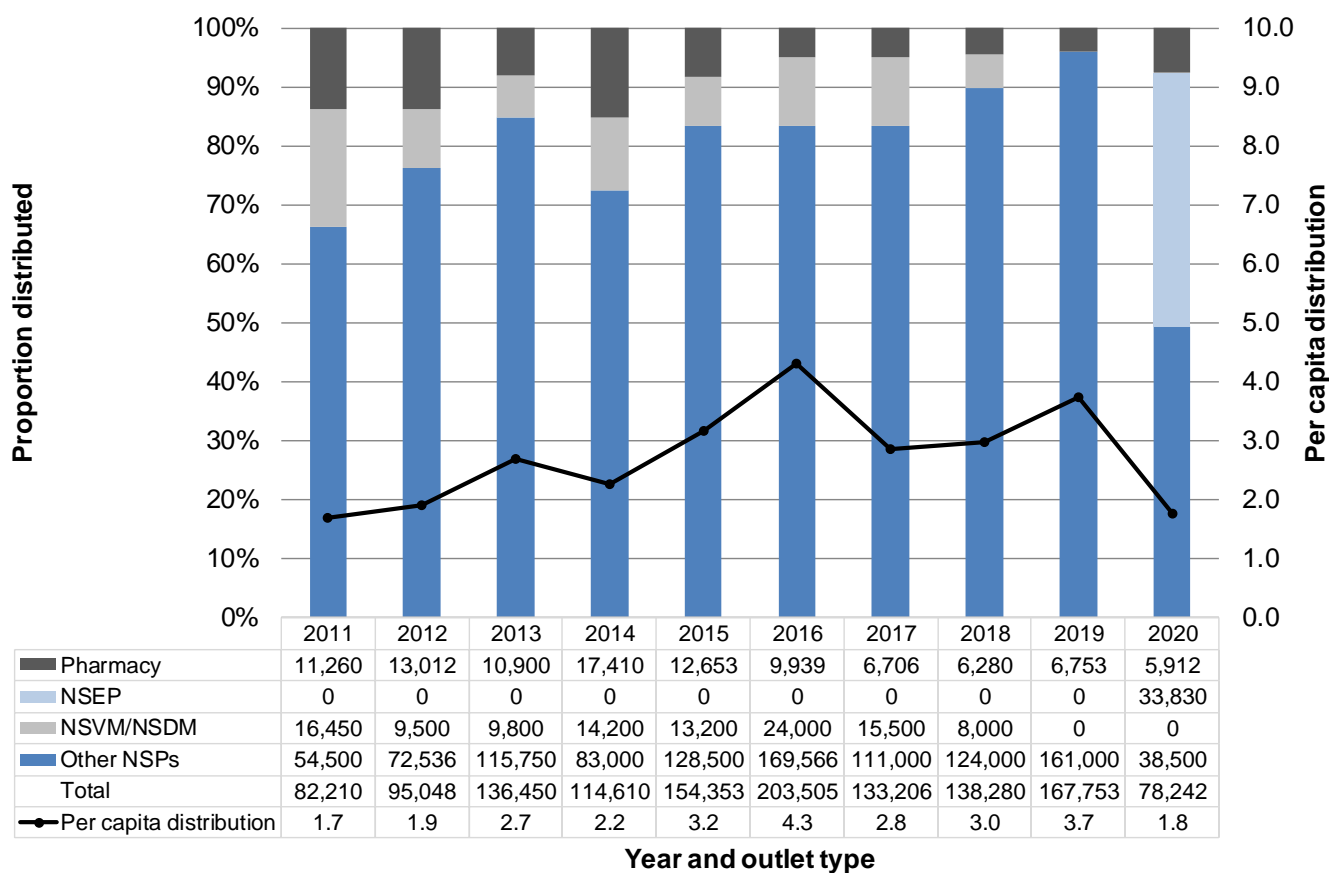
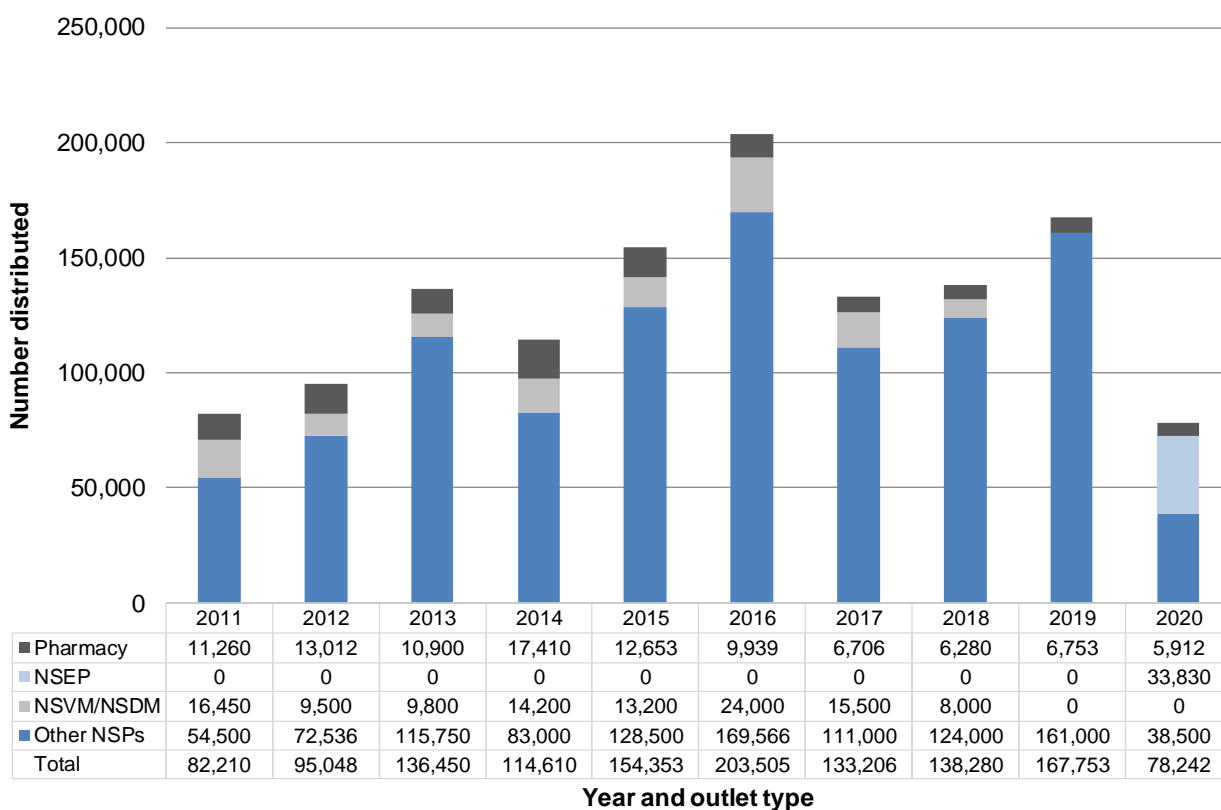


Figure 12: Number of needles and syringes in the Pilbara region by outlet type, 2011 to 2020



South West

Figure 13: Number, proportion and per capita distribution of needles and syringes in the South West region by outlet type, 2011 to 2020

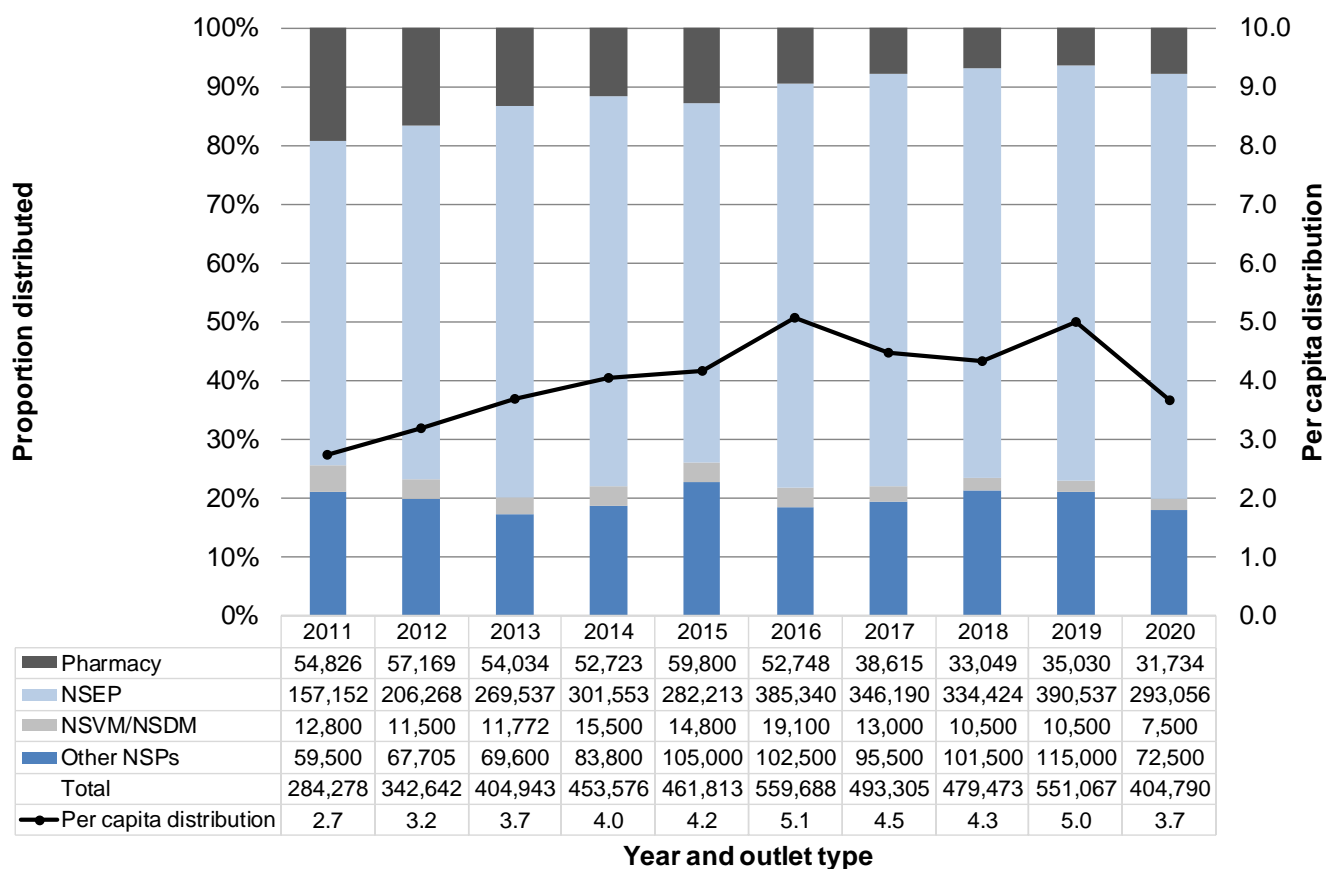
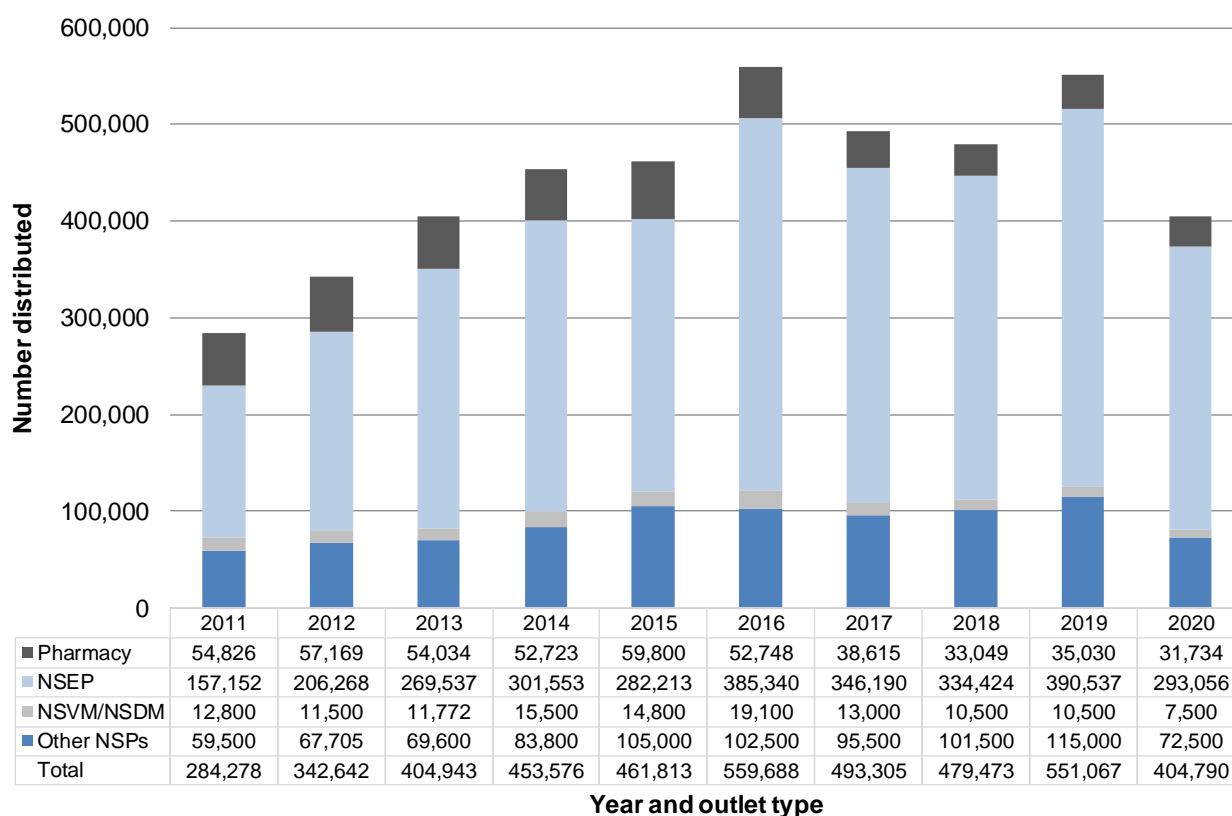


Figure 14: Number of needles and syringes in the South West region by outlet type, 2011 to 2020



Wheatbelt

Figure 15: Number, proportion and per capita distribution of needles and syringes in the Wheatbelt region by outlet type, 2011 to 2020

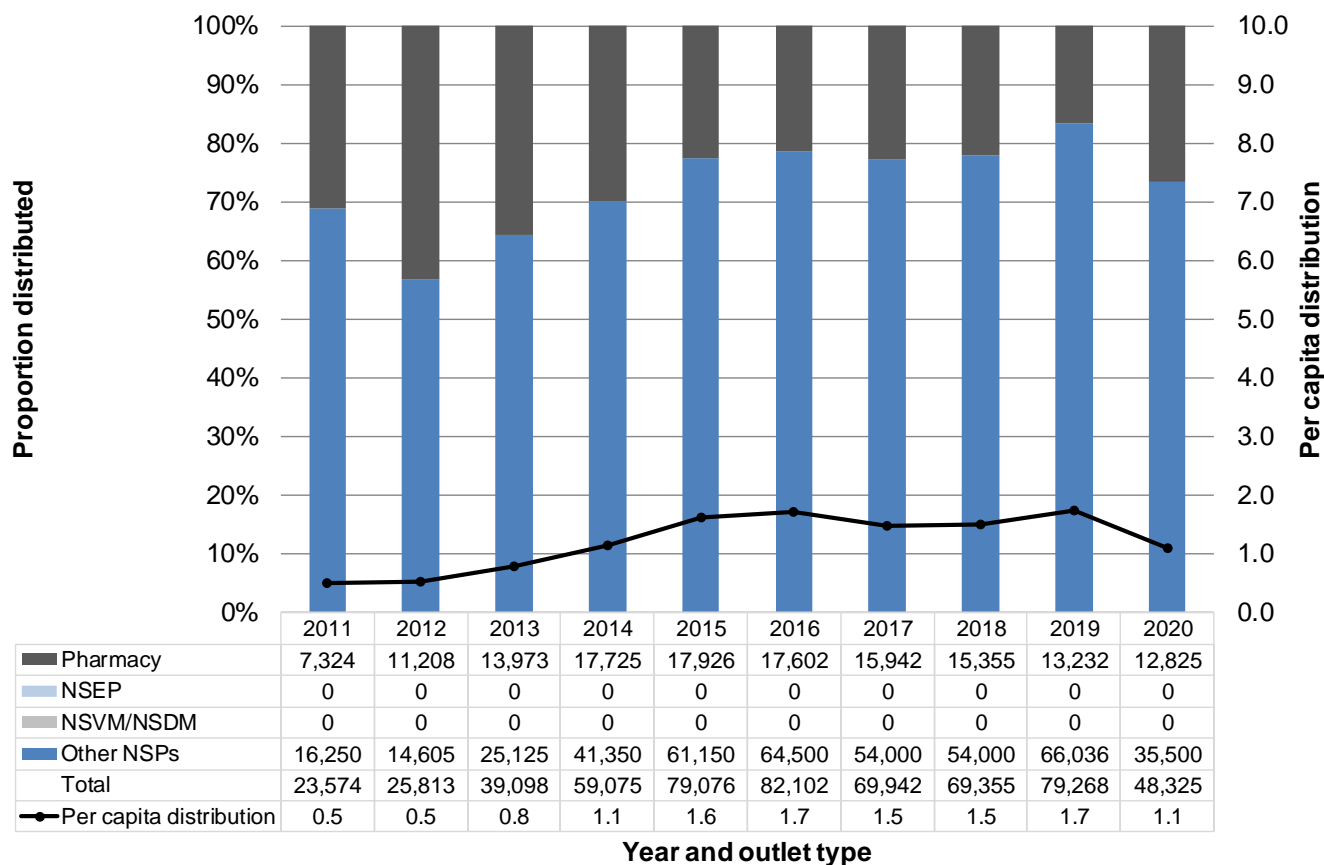
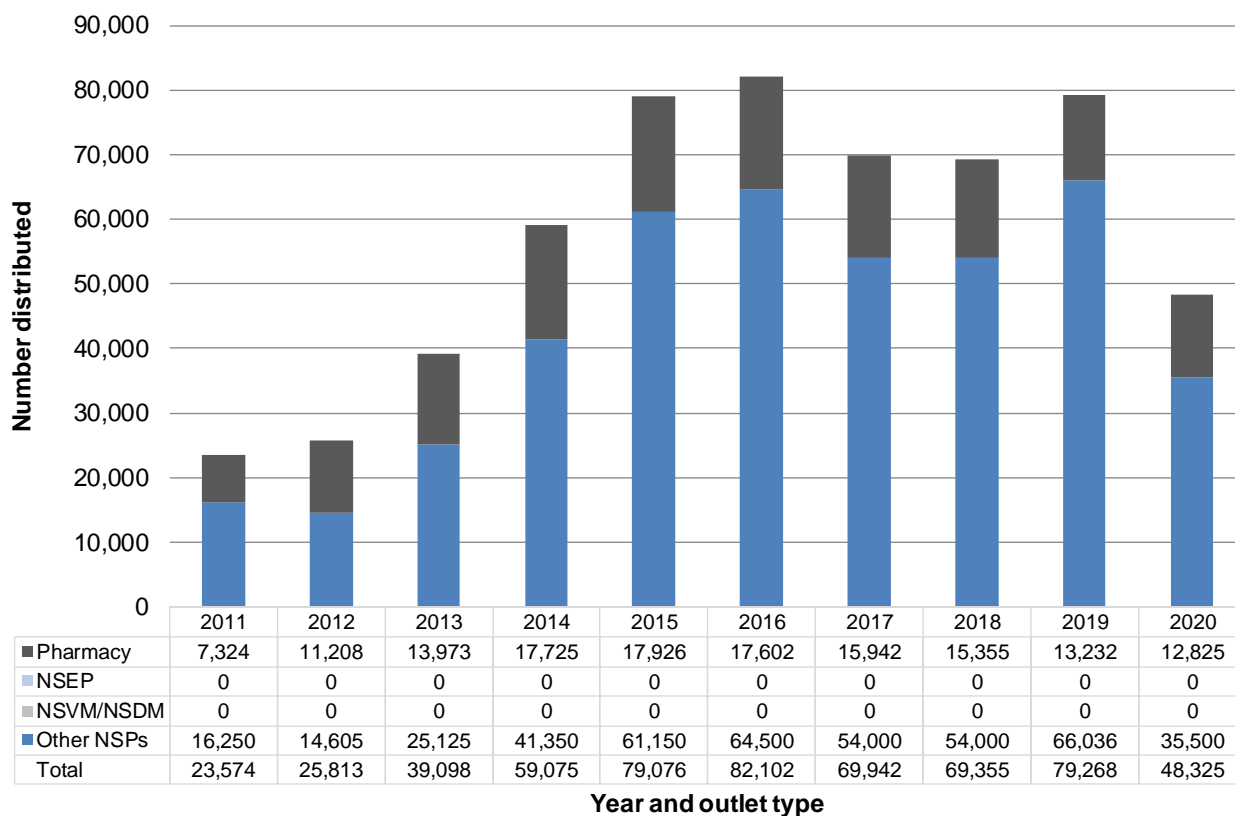


Figure 16: Number of needles and syringes in the Wheatbelt region by outlet type, 2011 to 2020



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