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A pharmaceutical needs assessment for the prison population of HMP Swansea

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Purpose and Summary of Document:

This report describes a pharmaceutical needs assessment for prisoners at HMP Swansea which took place during 2011-2012. It focused on the supply and use of medicines and other pharmaceutical services and was informed by the views of a broad range of stakeholders.

This report describes the current range of services delivered, assesses how pharmaceutical need is or could be met, and considers the implications of a re-profiled prisoner population on the demand and provision of pharmaceutical services.

Recommendations are made for building on the significant progress made in delivering pharmaceutical services to prisoners at HMP Swansea in recent years.

This was the first pharmaceutical needs assessment undertaken for a prison population in Wales and provides a starting point for inter-Wales comparative assessments.

Contents

1	Summary and recommendations	4
2	Introduction	6
3	Background	6
3.1	Underlying pharmaceutical need	7
3.2	Profile of HMP Swansea	8
3.3	Healthcare services for prisoners	8
4	Methodology	9
4.1	Epidemiological needs assessment	9
4.2	Corporate needs assessment	10
4.3	Comparative needs assessment	10
5	Epidemiological results	12
5.1	General characteristics	12
5.2	Prisoner health	13
5.3	Medicines usage	15
5.4	Substance misuse	17
5.5	Literature review	19
6	Pharmaceutical services description	20
6.1	Access to pharmaceutical services	20
6.2	Supply of medication to prisoners	21
6.3	Clinical pharmaceutical services for individual prisoners	22
6.4	Strategic medicines management services	24
7	Healthcare and prison service professionals interviews	27
8	Prisoner questionnaire survey	31
8.1	Announced inspection of HMP Swansea, 2010	32
9	Assessment of pharmaceutical need	33
9.1	Supply of medication to prisoners	33
9.2	Clinical services for individual prisoners	33
9.3	Strategic medicines management services	34
9.4	Main health needs	35
9.5	Pharmacy team workforce development	37
9.6	Limitations of the prison PNA	38
10	Conclusions and recommendations	39
	Appendix I: Healthcare services at HMP Swansea	40
	Appendix II: Prisoner questionnaire	41
	Appendix III: Medicines management committee terms of reference	43
	Appendix IV: Medication safety actions at HMP Swansea	45
11	References	46

Figures

Figure 1: The PNA process.....	11
Figure 2: Prisoner legal status, November 2010.....	13
Figure 3: Prisoner ethnic grouping, November 2010.....	13
Figure 4: Prisoner age bands, 2011.....	13
Figure 5: Prescription items: HMP Swansea, 2011.....	15
Figure 6: Prescription items : Wales (community), 2011.	16
Figure 7: Prescribing of analgesics; January 2012.	16
Figure 8: Prescribing of anitdepressants, January 2012.....	16
Figure 9: Drug and alcohol treamtent: pharmacological treatments, 2011.....	18
Figure 10: Detoxification by substance, June to December 2011.	18
Figure 11: Opioid retoxification.....	18
Figure 12: Take-home naloxone kits, 2011.....	18
Figure 13: Prisoner access to pharmaceutical services.....	25
Figure 14: Medication expenditure by month, 2011.....	25
Figure 15: Medication items issued per month, 2011.....	26
Figure 16: Proportion of IP medication, April 2011.....	26
Figure 17: Comparison of supplied/dispensed items, April 2011.....	26
Figure 18: Pharmacist independant prescriber consultations, 2011.....	26

Tables

Table 1: Prison population by capacity and turnover; HMP Swansea, 2011	12
Table 2: Long-term conditions: estimated prevalence, Janaury 2012	14
Table 3: Substance misuse treatment with pharmacological support, 2011....	17
Table 4: Detoxification with pharmacological support, Jun-Dec 2011.....	18
Table 5: Response to HMIP recommendations.....	32
Table 6: Response to HMIP housekeeping points.....	32

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1 Summary and recommendations

Summary

- A pharmaceutical needs assessment was carried out for the prisoner population of HMP Swansea during 2011-2012.
- The supply and use of medicines and other pharmaceutical services formed the focus of the pharmaceutical needs assessment.
- A variety of methods were used to inform the pharmaceutical needs assessment including
 - prisoner demographics,
 - main health needs
 - medicines usage data
 - professional perspectives
 - prisoner perspectives
 - response to the latest HM Inspectorate of Prisons report.
- Delivery of pharmaceutical services to prisoners at HMP Swansea takes place within a challenging context.
- Arrangements need to reflect a mix of both primary and secondary care and must be delivered in some ways differently to NHS community and hospital pharmacy services in Wales due to the custodial environment.
- During the time that the prison PNA was carried out, reprofiling of HMP Swansea was linked with a significantly increased workload for the pharmacy team.
- The resulting, less-settled, more mobile prisoner population with high levels of transfers between prisons and short-term sentencing appears to reflect a higher level of pharmaceutical need.
- The current model of service with an on-site pharmacy department and pharmacy team is responsive to the pharmaceutical needs of prisoners and local circumstances.
- However, the current situation, with a low staffing level for the pharmacy team, exacerbated by the reduction in locum pharmacist cover, is unlikely to sustain the current range and level of pharmaceutical services to prisoners.
- It is essential that service levels providing for met pharmaceutical needs of prisoners are not diminished.
- Actively seeking to provide for any unmet needs will need to be prioritised and resourced. Current limitations on financial resources are acknowledged.

Recommendations

- Ensure that the pharmacy staffing level, including locum staff, is sufficient and makes the best use of skill mix in delivering a safe and effective pharmaceutical service to prisoners, which is responsive to pharmaceutical need.
- Ensure that there is sufficient access to appropriate training to support pharmacists and pharmacy technicians in carrying out core and enhanced roles relating to pharmaceutical services to prisoners.
- Implement electronic procurement of medication and stock control, and develop electronic prescribing and transfer of medication information on release.
- Ensure that prisoners have an appropriate level of access to pharmacy staff for medication counselling and review, to support adherence, help resolve problems related to prescribed medication and assess the appropriateness of continuing medication prescribed in the community.
- Determine whether and, if so, how the in-possession medication scheme could be extended where possible and formalise changes in prisoner circumstances to trigger review of an individual's in-possession risk assessment.
- Explore further ways in which to deliver individualised medicines management at night-time, where necessary, such as the increased use of cell hatches.
- Review the process for verification of prescribed medicines, particularly for new reception prisoners; including the use of standard operating procedures, identifying dedicated staff, protected time for verification, and the use of prisoners' own medicines on entering custody.
- Ensure that there is protected time available for pharmacist input into producing and updating standard operating procedures and patient group directions.

2 Introduction

This report details the process and outcomes of a pharmaceutical needs assessment (PNA) for the prisoner population at HMP Swansea. It was undertaken in 2011-12 and is the first formal PNA for a prison population in Wales.

The PNA focused on need in relation to the supply and use of medicines and other pharmaceutical services by prisoners. Services to meet pharmaceutical need are largely delivered through the pharmacy team at HMP Swansea although medical and nursing staff deliver some of these services in their day-to-day work.

Pharmaceutical services have been defined as the supply of medicines and advice, support for health and well-being and better medicine-taking.¹ Pharmaceutical services are an important component of healthcare services and relevant to many health conditions and healthcare interventions. The term, medicines management, can include all aspects of supply and therapeutic use of medicines, from individual patient level to an organisational level.²

The PNA assessed the need for these types of services for the prison population of HMP Swansea, but not how they should be delivered in terms of a service model.

The **aims** of the PNA were:

- To examine the pharmaceutical needs of the prison population
- To build a picture of current pharmaceutical services, the baseline
- To assess the extent to which the pharmaceutical needs of prisoners are being addressed
- To provide information in order to identify any priorities for development and change in order to meet pharmaceutical needs

3 Background

In 2003 the responsibility for prison healthcare in public sector prisons in Wales transferred from the Home Office to the Welsh Government. In 2006 commissioning responsibility was devolved to the relevant Local Health Boards in Wales. The Welsh Government is the devolved government for Wales. Justice issues in general are not devolved and Her Majesty's (HM) Prison Service covers both England and Wales.

Prison healthcare aims to give prisoners "access to the same quality and range of healthcare services as the general public receives from the National Health Service (NHS)".³ The equivalence principle applies to all healthcare services to prisoners including pharmaceutical services. Therefore treatment guidelines and standards for the NHS in Wales apply equally in Welsh prisons.

In 2003, the Department of Health (England) and HM Prison Service jointly published a report called *A pharmacy service for prisoners*.⁴ The report was produced as part of a wider programme to bring improved healthcare delivery to prisoners. It acknowledged that the skills and expertise in pharmacy teams could be used more effectively.

Over 30 recommendations were made to address the wide variation in the provision and quality of pharmacy services across the prison estate in England. *A pharmacy service for prisoners*⁴ has been broadly accepted, although not formally adopted, in Wales.

The principal conclusions of the report were:

- Pharmacy services to prisoners should be patient focused, be based on identified patient needs, and support and promote self-care.
- Developments in medicines management in the NHS, including repeat dispensing and medication review, should be reflected in pharmacy services provided to prisoners.
- All prisoners should have appropriate access to a pharmacist or pharmacy staff.
- In-possession medication should be the normal method of supplying medication in prisons.

*A pharmacy service for prisoners*⁴ set the policy for the increasing use of medication in-possession. This means that, wherever possible, prisoners are responsible for storing and administering their own medicines together with associated monitoring and administration devices.

The benefits of medication in-possession include; prisoners maintaining responsibility for self-administration at the appropriate time, improvements in the continuity of care provided, and the skill utilisation of pharmacy, healthcare and other prison staff.

*Medication in-possession: a guide to improving practice in secure environments*⁵ was produced to support local prison health partnerships to move, in a managed way, to the default position where prisoners normally possess and use their own medication.

Nonetheless, there is a tension between the health needs of prisoners and the security or custodial need to not create opportunities for diversion of medication that can be traded.

*Prison Service Order (PSO) 3550 Clinical services for substance misusers*⁶ applies to prisons in England and Wales and requires that "administration and consumption of controlled drugs and other drugs subject to misuse within a prison setting must be directly observed".

*Prison Service Instruction (PSI) 45/2010 Integrated drug treatment system*⁷ states that all medication liable to misuse within the prison setting must be administered under supervised conditions. Although PSI 45/2010 does not apply to prisons in Wales, it sets out authoritative overarching guidance.

*A review of pharmaceutical services to public sector prisons in Wales*⁸ recommended that the pharmaceutical services for each prison should be reviewed and re-engineered to meet present and future needs of prisoners and prison healthcare staff.

3.1 Underlying pharmaceutical need

Prisoners often come from deprived backgrounds with histories of social exclusion and disadvantage and have greater physical and mental health needs compared to the wider population. Many of them have unhealthy lifestyles and will have had little or no regular contact with healthcare services before coming into prison.⁹ The main issues in prison healthcare are mental health, substance misuse and communicable diseases.¹⁰

The prison population is unlike the rest of the general population, it is transient with rapid turnover, poor general health and a high prevalence of serious and resource intensive conditions such as mental health and substance misuse problems. Young offenders may have a higher proportion with mental health problems and a history of self-harm.

The use of medication is an essential component of healthcare services and is the most common clinical intervention provided within the NHS.² Adherence to prescribed medication is an essential part of managing medical conditions but non-adherence can be high, up to 50% for those with long term conditions.¹¹ Medication that may be misused present particular problems within prisons. Appropriate use of medicines has an important role in treating ill-health, and improving the health and wellbeing of prisoners.

3.2 Profile of HMP Swansea

HMP Swansea operates as a local prison and remand centre, holding adult (18 years old and over) male prisoners up to and including security Category B drawn mainly from the surrounding court catchment areas in south-west and mid-Wales.¹²

Abertawe Bro Morgannwg University Health Board (ABMUHB) is responsible for delivering healthcare services to prisoners in HMP Swansea. Pharmaceutical services are commissioned by the ABMUHB and delivered as an in-house service only accessible to the prison population.

The prison governor is responsible for facilitating delivery of effective healthcare services within HMP Swansea. The Swansea Prison Health Partnership Board (PHPB) oversees the strategic development and monitors the delivery of prison healthcare services.

3.3 Healthcare services for prisoners

Healthcare services for prisoners are managed and partly provided by HMP Swansea healthcare department and partly outsourced through service level agreements with the ABMUHB. Dental, general medical and pharmacy services are provided at HMP Swansea as separate commissioned services which are only accessible to the prison population.

The local service model is primary healthcare-led, integrating with specialist services as required. Healthcare services for prisoners include dental, general medical, optometry, pharmacy, primary care nursing, sexual health, specialist mental health and Counselling, Assessment, Referral, Advice and Throughcare (CARAT). (See appendix I).

Healthcare services reflect a prison Type 3 facility with 24-hour primary care services to the prison population. The healthcare centre is housed in a separate building which includes the pharmacy department. Healthcare treatment rooms are also located within the prison wings.

An in-house pharmacy department is located within the healthcare centre at HMP Swansea. The pharmacy is not open to the public and pharmaceutical services are provided solely to prisoners who are resident at HMP Swansea. The pharmacy team is directly employed by the prison service with one full-time pharmacist, one full-time pharmacy technician and locum sessions for annual leave cover. (See appendix I). The ABMUHB oversees the delivery of pharmaceutical services at HMP Swansea.

4 Methodology

Systematic approaches for assessing pharmaceutical needs are becoming increasingly well developed in the UK. *Developing pharmaceutical needs assessments: a practical guide*¹³ provides a framework to support and advice to the NHS (England) on how to proceed with a PNA.

Approaches developed for the NHS community-based pharmaceutical services were difficult to apply to the prison PNA and less useful for the small but high turnover prison population at HMP Swansea. The lack of information technology within the prison makes the collection of quantitative data difficult. Routine numerical data which could help describe underlying need for pharmaceutical interventions is scarce.

The PNA approach was developed through adapting current PNA and prison HNA guidance. This involved a literature search of relevant pharmaceutical and prison related needs assessment studies and guidance,¹⁴ site visits and expert opinion. The approach did not set out to collect new data but to work pragmatically with what was available. The process is summarised in figure 1.

Ethical approval from the National Research Ethics Service was not required to carry out the PNA as it was classed as a service evaluation.

Elements of each of the three main approaches to health needs assessment described by Stevens and Raftery were considered for the PNA as follows:¹⁵

4.1 Epidemiological needs assessment

The epidemiological needs assessment aimed to help describe underlying need for pharmaceutical services, define current service provision, and identify any research or evaluations of pharmaceutical services for prisoners. The epidemiological needs assessment included the following:

General characteristics: Information on general characteristics relating to the prison type and socio-demographic characteristics of the prisoner population of HMP Swansea were provided by the prison service.

Prisoner health: Disease registers were used to determine point prevalence estimates for long-term conditions. Some information on health determinants (lifestyles) was obtained from the most recent HNA for HMP Swansea. Analysis of Inmate Medical Records (IMRs) was not undertaken for pragmatic reasons.

Medicines usage: Data was obtained on dispensing/supply and expenditure on medicines for prisoners. The data was analysed by therapeutic categories. Data on community prescriptions for the general population of Wales was also included.

Substance misuse: Data was obtained on the dispensing of medicines used in the treatment of substance misuse problems. The data was analysed by the type of treatment intervention the medication was intended to support.

Literature search: A literature search on pharmaceutical services to prisoners was undertaken.

Description of current pharmaceutical service provision: Site visits were made to HMP Swansea which included discussions and observations in relation to access to pharmaceutical services by prisoners, dispensing/supply of medicines, clinical pharmacy services for individual prisoners, and strategic medicines management services for the prison population as a whole.

4.2 Corporate needs assessment

The corporate needs assessment aimed to explore the views of stakeholders on pharmaceutical services using a qualitative approach through:

Interviews with healthcare and prison service professionals: A semi-structured interview was developed to examine the views of professionals (healthcare and prison service staff). This included pharmacists, pharmacy technicians, registered nurses and healthcare prison officers at HMP Swansea, a GP, a prescribing advisor for ABMUHB (prison lead) and the prison health lead for Wales (National Leadership and Innovation Agency for Healthcare).

Survey of prisoners at HMP Swansea: A questionnaire survey was developed to gather the views of prisoners on pharmaceutical services at HMP Swansea in relation to continuity of prescribing/supply, information about medicines, problems with taking medicines, and other pharmaceutical services.

The questionnaire included elements of the satisfaction with information about medicines scale (SIMS): a new measurement tool for audit and research.¹⁶ Although a number of questionnaires designed for use by the public as part of formal pharmaceutical needs assessments in England were examined, they did not reflect the prison custody setting. Views were sought on the suitability of the questionnaire and it was piloted before the final version was produced. (The prisoner questionnaire survey is shown in appendix IV).

The questionnaire was self-completed by prisoners who were waiting for, or at healthcare appointments, during one morning session. One-to-one or group structured interviews with prisoners could not be facilitated, but prisoners were offered help to complete the questionnaire if required.

Response to the announced inspection by HM Inspectorate of Prisons (2010): The responses to recommendations and housekeeping points in relation to pharmaceutical services following the announced inspection of HMP Swansea by HM Inspectorate of Prisons (HMIP) in February 2010 were examined.

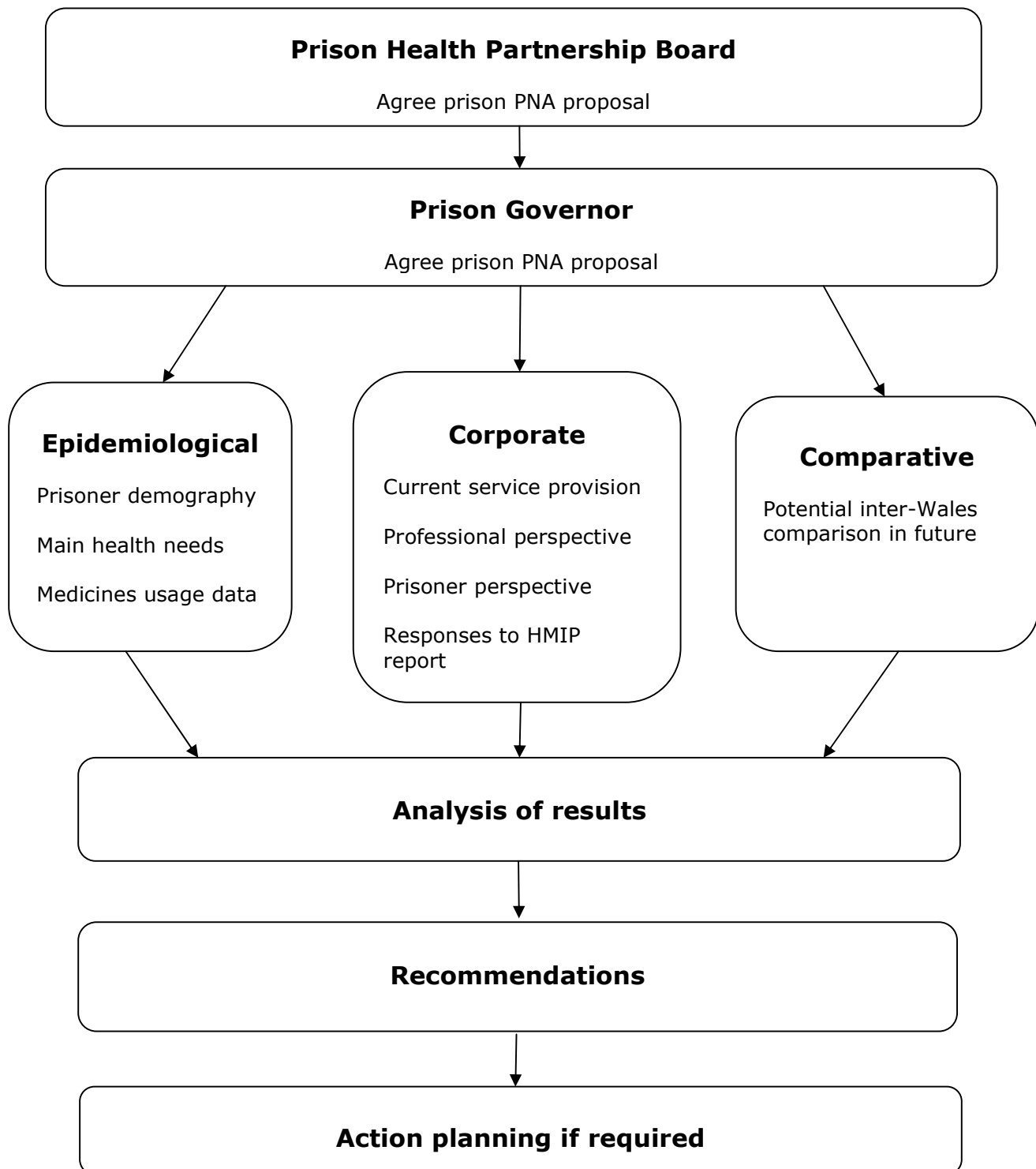
4.3 Comparative needs assessment

Consideration was given to contacting a number of comparable Category B local prisons in England in order to compare delivery of pharmaceutical services to prisoners. This method has been used for comparative HNAs for prison populations in Wales in relation to healthcare service provision.

At present there are a number of different models in place for the delivery of pharmaceutical services to prisoners in Wales. Service models in Welsh prisons include; in-house with pharmacy staff directly employed by the prison service or local health board, and contracted-out with services provided on-site but by a local community pharmacy contractor. This diversity of approach to the delivery of pharmaceutical services to prisoners is reflected in other UK countries.

Descriptions of pharmaceutical services at prisons with similar population profiles in England would be of limited value to the PNA given the divergence in the paths of the NHS in Wales and England. *A pharmacy service for prisoners*⁴ provides a framework for pharmaceutical services; it recognises that service delivery should reflect need and the individual requirements of prison establishments. The comparative approach was not pragmatic for this PNA but may be helpful should an inter-Wales comparative PNA be considered in the future.

Figure 1: The PNA process



5 Epidemiological results

5.1 General characteristics

The certified normal accommodation, or uncrowded capacity, of HMP Swansea is 240. The maximum operational capacity of the prison is 435, which is the total number of prisoners that can be held in custody taking into account control, security and the proper operation of the planned regime. (See table 1). The average daily population of the prison in 2011 was 416 prisoners. Overcrowding is an issue with the average daily population representing 172.5% of the certified normal accommodation.

HMP Swansea has a high throughput of prisoners, and received 1,881 new receptions in 2011. The average length of stay in custody was approximately 11.5 weeks. (See table 1). Around 73% of prisoners were sentenced with the remainder being held on remand. (See figure 2).

HMP Swansea has been reprofiled during the time during which the PNA was carried out to include a young offenders institute for 18-20 year old males. The operational capacity of the prison has increased, as has the annual turnover of prisoners. The average length of stay at HMP Swansea has reduced, as has the proportion of sentenced prisoners. (See table 1 and figure 2).

The prison population of HMP Swansea is male, largely white but of mixed ethnicity, predominantly young, and serving relatively short sentences. (See figures 3 and 4).

What this means for the prison PNA

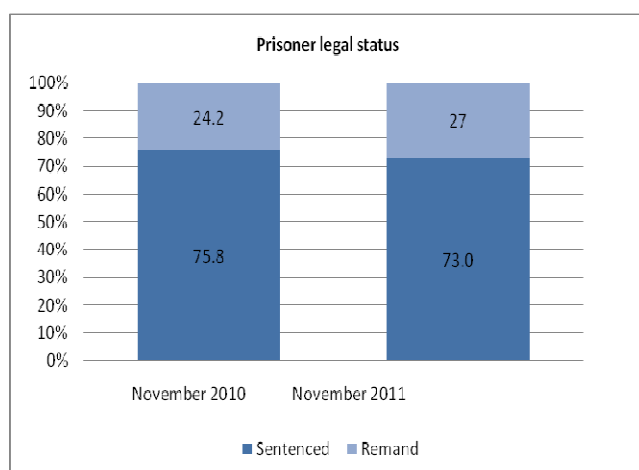
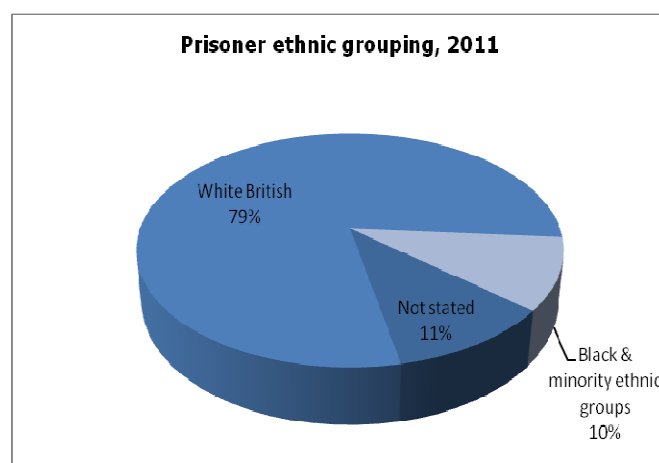
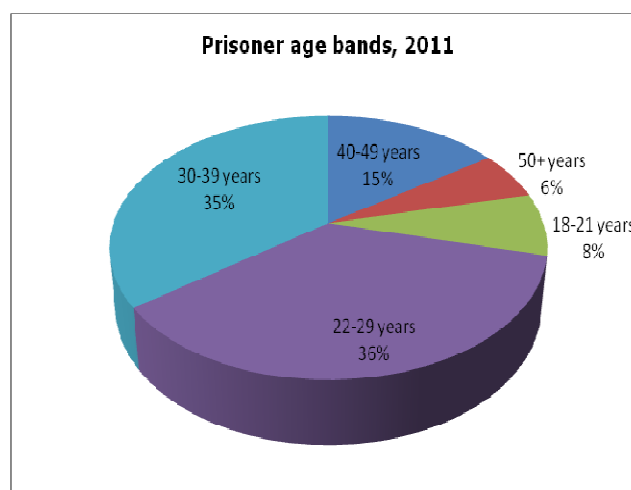
The substantial proportion (24%) of remand prisoners, high turnover, and short length of stay are likely to impact on the type of pharmaceutical interventions provided.

Just under half (46%) of the prison population were aged less than 30 years. The majority of prisoners (95%) within the establishment are aged less than 50 years of age. Initiatives which address the pharmaceutical needs of younger people are highly relevant due to the large proportion of younger prisoners. Generally, prevalence of problem substance misuse is much higher in younger prisoners. Therefore, a high level of need for substance misuse treatment interventions can be predicted.

Prisoners over the age of 40 represent a significant proportion (17%) of the prison population. This age group are likely to need regular access to pharmaceutical services, especially older prisoners due to high prevalence of long-term conditions among the older population. Some long-term conditions are more prevalent in certain ethnic groups. Initiatives focusing on medicines support preventing hospital admissions are also relevant for this age group.

Table 1 Prison population by capacity and turnover; HMP Swansea, 2010 and 2011

Measure	2010	2011	Measure	2010	2011
Operational capacity (n)	428	435	New reception prisoners (n)	1,756	1,881
Certified normal accommodation (n)	240	240	Average daily population (n)	414	416
Annual turnover (whole population)	4.2	4.5	Average length of stay (weeks)	12.3	11.5

Figure 2: Prisoner legal status**Figure 3: Prisoner ethnic grouping****Figure 4: Prisoner age bands**

5.2 Prisoner health

Following the roll-out during 2011, of the prison clinical IT system for all prisoners at HMP Swansea, electronic searching for some indicators of disease prevalence was possible. A search of disease registers was carried out to determine the number of prisoners with long-term conditions.

Disease registers must be kept by prison healthcare departments in Wales for specified long-term conditions. These are determined by Welsh Government and are based on the clinical areas in the Quality and Outcomes Framework for the General Medical Services contract where relevant.¹⁷

Estimates of point prevalence, calculated as percentages of the total prisoner population, are shown in table 2.

Table 2: Estimated point prevalence of prisoners with long-term conditions, January 2012

Long-term condition	Percent	Long-term condition	Percent
Coronary heart disease	12.8%	Asthma	8.8%
Cardiovascular disease	1.4%	Chronic obstructive pulmonary disease	0.2%
Heart failure	0.0%	Chronic Renal Disease	0.2%
Stroke & transient ischaemic attack	1.4%	Diabetes mellitus	1.7%
Hypertension	1.4%	Obesity	0.0%
Atrial fibrillation	0.7%	Cancer	0.0%
Epilepsy	1.7%	Palliative Care	0.0%
Arthritis	1.7%	Mental Health	13.3%
Skin conditions	0.5%	Learning Disability	0.5%

A cross-sectional survey of prisoner medical records at HMP Swansea during 2008 identified a number of significant health problems and unhealthy lifestyles including:¹⁸

- Nearly two-thirds of prisoners (64.8%) reported using drugs in the month prior to imprisonment
- One in four prisoners (29.3%) had self-harmed during their lifetime
- Around three out of four prisoner reported smoking (79.5%)
- Nearly 1 in 2 (42.3%) of prisoners reported that they were taking prescribed medicines at the time of entry into the prison.

What this means for the prison PNA

Most long-term conditions are treated or managed using medication. Pharmacists and pharmacy technicians have an important role in the management of long-term conditions, ensuring that medicines are used safely and effectively to improve outcomes and reduce the risk of hospital admission.

Non-adherence is a significant challenge, particularly in managing long-term conditions. It is important that effective services are provided to support adherence to medication. Pharmacists and pharmacy technicians can contribute significantly to ensuring that prisoners obtain the maximum benefit from medicines while reducing risks associated with treatment.

Targeted pharmaceutical services include: disease specific medicines management, medicines assessment and compliance services, and supervised self-administration of medication.

Significant contributions can be made by pharmacy teams to support public health e.g. providing access to nicotine replacement therapy (via pharmacist independent prescribing or a direct supply protocol), and motivational support for prisoners to stop smoking. In the community pharmacy setting, support for healthy lifestyles includes taking part in national and local public health campaigns.

5.3 Medicines usage

Data was obtained from the pharmacy IT system and from routine record keeping by the pharmacy team. Due to differences in NHS primary care systems used to record data on prescribing in GP practices and prescriptions dispensed in community pharmacies in Wales, it was not possible to retrieve and analyse comparable data. The prescribing element of the clinical information technology system had not been implemented at HMP Swansea at the time that the prison PNA was carried out.

The pharmacy IT system has limited reporting capability and for pragmatic reasons data was retrieved over two consecutive days only. The data was sorted manually into therapeutic classes according to British National Formulary (BNF) categories. (See figure 5). Welsh Government data¹⁹ was used to present primary care prescriptions dispensed in community pharmacies in Wales during 2011 by BNF category for comparison. (See figure 6). Wales (community) data relates to the general population whereas the HMP Swansea data is for a much smaller population of males only, aged 18 years and over.

Prevalence of mild/moderate depression, and pain in general, were perceived as being relatively high but are not reflected in the definitions used for the disease registers. Figures 7 & 8 show the number of prisoners that were prescribed analgesics and antidepressants respectively during January 2012. Although some individuals may have been prescribed more than one analgesic and some may have been prescribed antidepressants primarily for the treatment of anxiety, the data indicates high levels of need for pain management and treatment of mild/ moderate depression.

What this means for the prison PNA

Although data collection on medicines usage at HMP Swansea was limited, the results reflect the high levels of substance misuse and mental health problems likely to be present in a local remand prison. The results also indicate that levels of morbidity due to pain are high. The data is also likely to reflect the mix of acute and long-term physical health conditions of prisoners at HMP Swansea. The hepatitis B vaccination programme, introduced into prisons in Wales in 2003 provides a good opportunity to vaccinate hard-to-reach population groups.

Figure 5: Prescription items: HMP Swansea, 2011

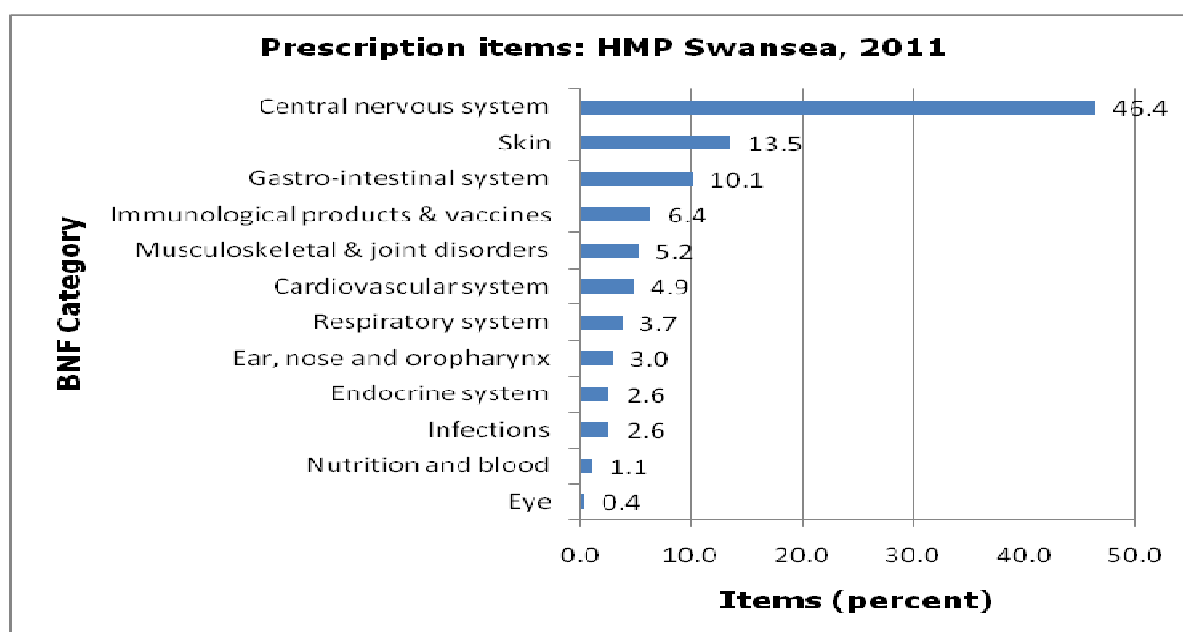
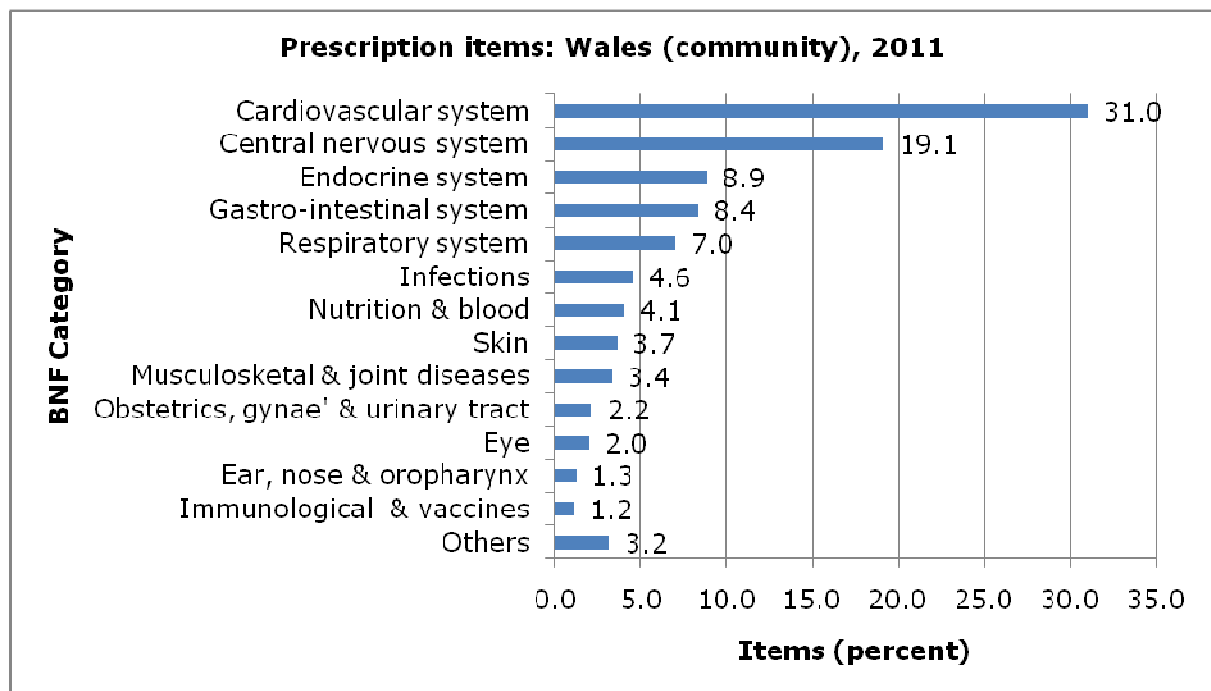
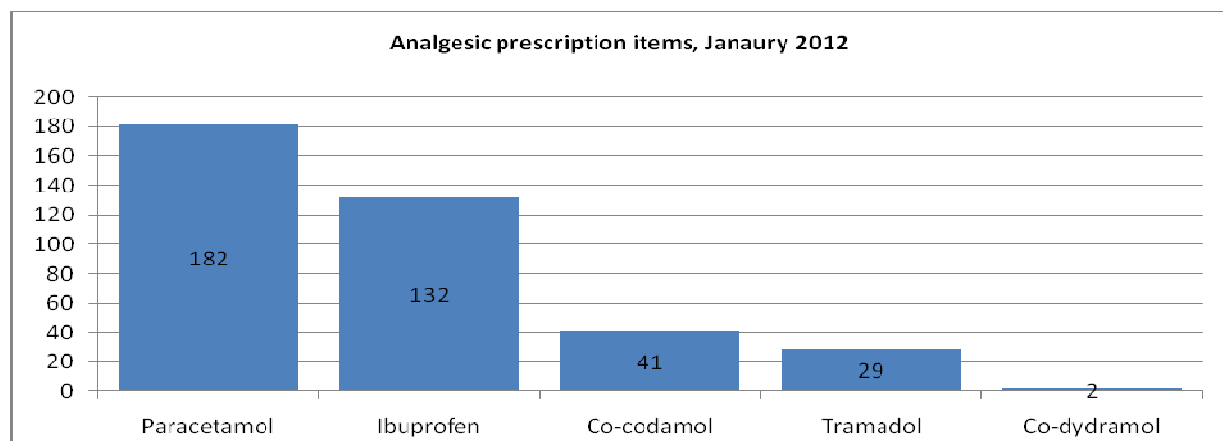
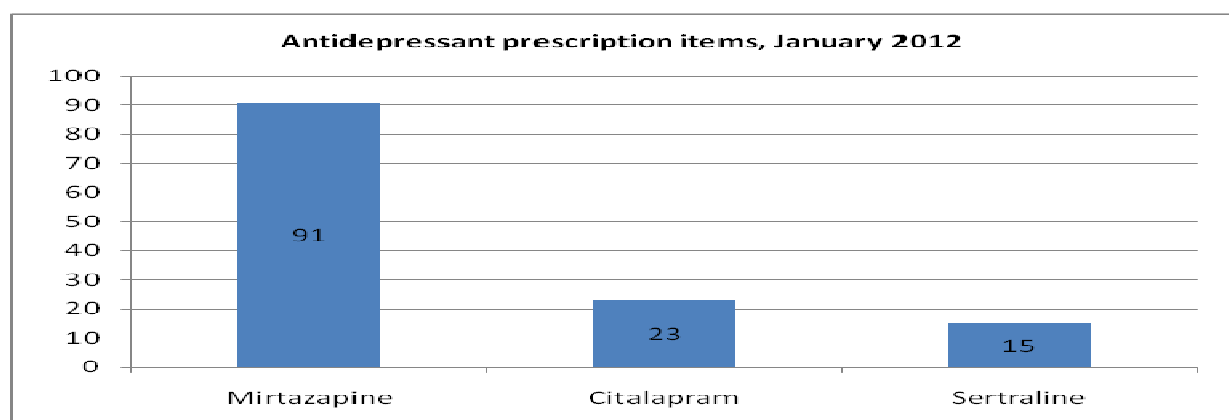


Figure 6: Prescription items: Wales (community), 2011**Figure 7: Prescribing of analgesics, January 2012****Figure 8: Prescribing of antidepressants, January 2012**

5.4 Substance misuse

Pharmacy records were used to retrieve data on medication to assist with substance misuse treatment interventions during 2011. The treatments were used to assist with detoxification, maintenance, retoxification, relapse prevention and overdose prevention.

A total of 1837 prisoners received pharmacological treatment to assist with interventions for substance misuse problems during 2011. (See table 3). Over two-thirds of the interventions were to assist detoxification and almost a quarter for maintenance treatment. (See figure 9).

Detoxification from benzodiazepines alone (31%), and combined detoxification from alcohol and benzodiazepines (17%), accounted for the largest proportion of detoxification interventions during June to December 2011. Substantial proportions of the detoxifications were from opioids (30%) and alcohol (22%). (See figure 10).

Interventions for opioid retoxification (1.5%) using buprenorphine or methadone, and relapse prevention (1.5%) using naltrexone, were also provided to prisoners in difficult social circumstances who were shortly to be released and had a high risk of relapse. (See figure 11).

Interventions to help reduce drug-related deaths amongst newly released prisoners included opioid overdose prevention on release through a naloxone take-home scheme (5.7%). Relevant prisoners are trained prior to release to recognise signs of opioid overdose and provide effective action including the administration of naloxone. (See figure 12).

What this means for the prison PNA

High levels of substance misuse problems are likely to have a significant effect on the workload of the pharmacy department. Pharmacists and pharmacy technicians perform a critical role in supporting substance misusers in dispensing/supply of pharmacological treatments including controlled drugs, providing support to prisoners for adherence to treatment, and managing the safe handling of controlled drugs in the prison setting.

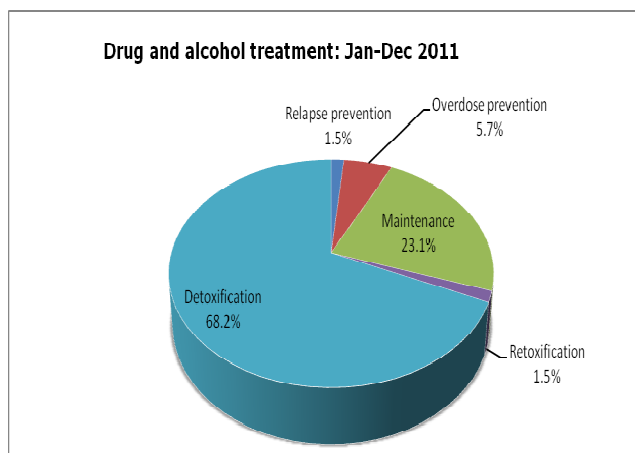
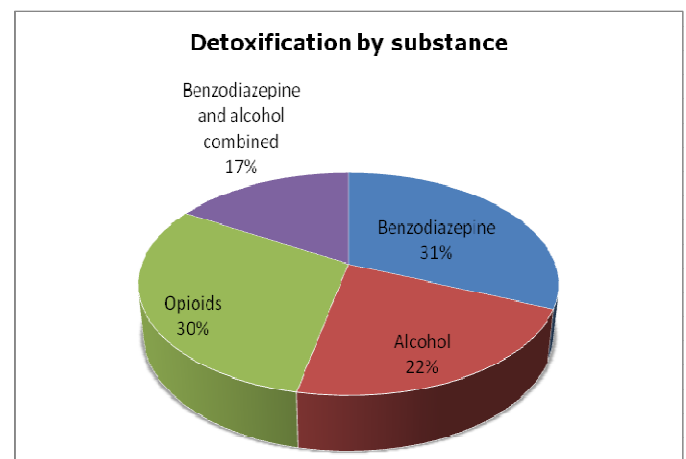
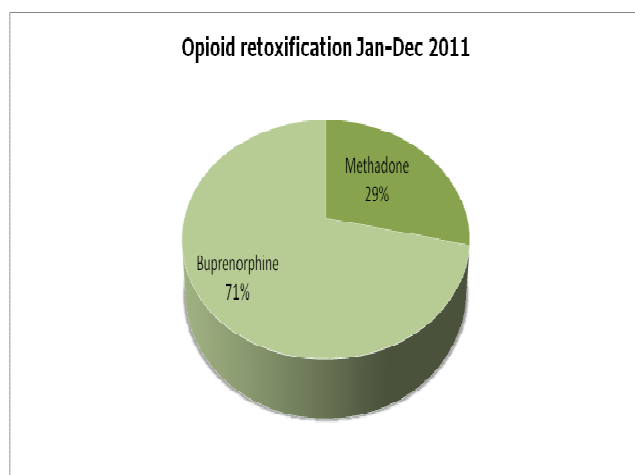
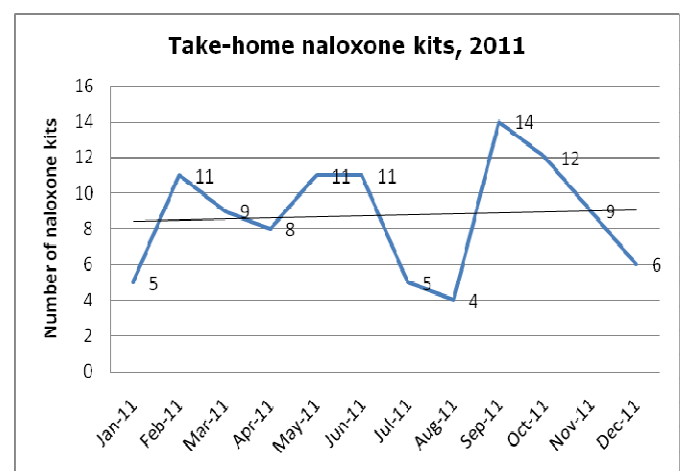
Pharmacists have an important role in developing a range of patient group directives (PGDs) to allow reception nurses to respond to the symptoms being experienced by prisoners in opiate, benzodiazepine or alcohol withdrawal.

Table 3: Substance misuse treatment with pharmacological support, 2011

Intervention type	Number
Detoxification	1252
Maintenance	424
Retoxification	28
Relapse prevention	28
Overdose prevention	105
Total	1837

Table 4: Detoxification with pharmacological support, Jun-Dec 2011

Substance type	Number
Opioids	215
Benzodiazepines	223
Alcohol	156
Benzodiazepines and alcohol combined	117
Total	711

Figure 9: Drug and alcohol pharmacological treatments, 2011**Figure 10: Detoxification by substance, Jun-Dec 2011****Figure 11: Opioid retoxification, 2011****Figure 12: Take-home naloxone kits, 2011**

5.5 Literature review

A literature review was carried out to identify formal guidance and published studies on pharmaceutical services for prisoners.²⁰ The full report on the literature search can be accessed at: <http://www2.nphs.wales.nhs.uk:8080/pharmaceuticalphtdocs.nsf>

Two formal guidance documents were identified; *A pharmacy service for prisoners*⁴, and *Medication in-possession: a guide to improving practice in secure environments*⁵. The purposes of the guidance have been described in section 3.

Few research studies have been published on pharmaceutical services in prison settings. The studies identified had all focused on specific aspects of pharmaceutical services to prisoners. Overall, they found that pharmacist-led and joint pharmacist-physician collaborative services were feasible and effective. However, lack of clinical information technology within prisons can impact on the effectiveness of the medicines management process.

Nine published observational studies of pharmaceutical services to prisoners were identified,²¹⁻²⁹ of which six took place in non-UK prison settings. Four of the eight studies were conducted in the USA,^{21,25,28,29} and two in France.^{23,24}

Four studies examined prescribing quality.²¹⁻²⁴ Two studies involved treatment guideline development, education and feedback on prescribing practices, resulting in positive impacts on prescribing quality in 16 prisons in the USA²¹ and 1 in France.²³ One study examined differences in prescribing quality between 3 UK prisons with different types of pharmacy provider.²² One study assessed interventions made by pharmacists and their acceptance by physicians on prescribing medication for prisoners in 1 prison in France.²⁴

Two studies related to pharmacist-led clinics for prisoners^{25,26} A pharmacist-led point-of-care service for warfarin management showed that non-therapeutic anticoagulation levels were identified and addressed quickly, and prevented common adverse events associated with warfarin use.²⁵ A pharmacist-led dermatology clinic improved access to treatments, prisoners' understanding of their condition, and how to use their treatments.²⁶

One study examined the views of prison healthcare staff on pharmaceutical services provided to prisoners in 23 prisons in England.²⁷ It concluded that there would need to be a significant culture shift before gaining wider acceptance of new/extended roles for pharmacists in prisons. Also, understanding the culture and expectations of prisons is essential to maximise the benefits from pharmaceutical services provided to prisoners.

One study indicated that, selection of suitable quality indicators with appropriate methods to measure compliance, can provide an effective means of monitoring the quality of pharmaceutical services to prisoners and for identifying need for change and/or service development.²⁸

One study showed that implementation of an automated check-and-sort device in a centralised pharmacy department servicing over 140 prisons appeared to reduce dispensing errors and gave pharmacists more time to review patient profiles and recommend clinical interventions.²⁹

6 Pharmaceutical services description

6.1 Access to pharmaceutical services

Reception: The immediate healthcare needs of all newly received prisoners are assessed within 24 hours of arrival at HMP Swansea by members of the healthcare team. Medication may be administered to prisoners during reception process/first night in prison through the use of PGDs, or following prescribing by a GP or non-medical prescriber as appropriate. Where consultation with a GP is necessary, newly received prisoners are seen by a GP within 24 hours of arrival.

Prison custody: All newly received prisoners are offered a secondary health screen during the first week of custody to gather in-depth information for ongoing healthcare needs and referral to the primary care team or specialist secondary care services.

Prisoners at HMP Swansea may be responsible for storing and using their own medicines, together with associated monitoring and administration devices, known as in-possession (IP) medication. A risk assessment is carried out to determine on an individual basis when medicines and related devices may not be held IP. A locally agreed list of medication has been developed for which risk assessments are not routinely carried out. Initial risk assessments are usually carried out in the first week of custody and have 7 days supply of IP medication where appropriate. This may be repeated or extended for up to 28 days supply following further risk assessment. Prisoners who have completed the prison service *Assessment, Care in custody, and Teamwork* care-planning system for prisoners at risk of suicide or self-harm process may receive 3 days', followed by 4 days', then 7 days' supply of IP medication subject to individual review and further risk assessment.

When a decision to hold medication IP is made, steps are taken to ensure that all parties involved understand their roles and responsibilities. Prisoners are required to engage with a compact outlining their understanding and agreement with their responsibilities and the consequences of non-compliance. Prescribed medication not held IP is administered by healthcare professionals during treatment times held up to 3 times a day at treatment rooms on the prison wings. Further arrangements are in place for night-time doses. Prisoners can collect prescribed medicines and/or present for treatment of minor ailments at treatment times. Where appropriate, prisoners may request repeat dispensing of IP medication for long-term conditions.

Transfer and release: Individually dispensed medication is sent with a prisoner on transfer to another prison or admission to hospital to ensure continuity of treatment. Prisoners who normally have IP medication may be allowed it on their person whilst away from the prison such as attending a court appearance or on transfer to another prison.

Prior to a planned release, a prisoner's GP and other prescribers are advised of discharge medication and, if appropriate, the need to quickly take over prescribing. A copy of the discharge medication information is given to the prisoner for his community pharmacist. Where appropriate, a prisoner's dispensed medicines are given to him on release, to support continuity of treatment. If release is unanticipated e.g. following an order from court, contingency arrangements may involve providing the prisoner with a community prescription. (See figure 13).

6.2 Supply of medication to prisoners

Supply of medication to prisoners involves the procurement, stock management, supply and dispensing of a wide range of medicines and medicines related devices.

Procurement: All medicines and medicines related devices are purchased under the supervision of a pharmacist to meet prescription and stock requirements. A medicines and product recall procedure is in place to respond to UK defective medicines/medical devices alert systems and product recalls. Expenditure on medicines for prisoners at HMP Swansea was approximately £11,428 per month during 2011. (See figure 14).

Medical and dental equipment and optical glasses are also purchased under the supervision of a pharmacist. As this service is not intended to meet pharmaceutical needs, it does not form part of the prison PNA.

Distribution and stock management: Medicines routinely stocked in treatment rooms in the healthcare centre and prison wings are provided by a pharmacy technician top-up service. The service aims to provide appropriate stock control to minimise stockholding, whilst ensuring continuous supply and avoiding wastage. Stockholding is reviewed every week on Thursdays to ensure sufficient supply, particularly during the weekends. All stock of controlled drugs is checked once a week by a pharmacist supported by a pharmacy technician. Medicines are stored in lockable facilities appropriate to the nature and stability of individual products. The temperatures of medicines refrigerators are monitored daily. A limited stock of medication is stored securely in one of the prison wing treatment rooms for use outside the pharmacy department opening hours if necessary. Access is by registered nurses following authorisation by the on-call GP on a case-by-case basis.

Dispensing of medicines and associated devices: Medication prescribed to prisoners is dispensed in the pharmacy department at HMP Swansea. The pharmacy department opening hours are 8.30am to 4.30pm, Monday to Friday with 30 minutes lunch break. Around 2,850 items a month were dispensed by the pharmacy team at HMP Swansea during 2011. (See figure 15).

Dispensing is supervised by a pharmacist according to standard operating procedures (SOPs) to ensure that legal and professional standards are met. All prescriptions are clinically assessed and validated by a pharmacist before dispensing on an individual patient basis. A repeat dispensing service is provided where appropriate for prisoners taking medication to treat long-term conditions.

An audit of dispensed prescription items carried out in April 2011 found that around 31% of prescription items for prisoners were dispensed for in-possession and 69% for not-in-possession.³⁰ (See figure 16). Of the total number of prescription items supplied/dispensed, a significant proportion (18%) was supplied as stock medication for the reception and prison wing treatment rooms. (See figure 17).

Waste management: An SOP is in place for the pharmacy team to accept unwanted or unused medication from prisoners and ensure collection by the ABMUHB waste contractor for safe disposal.

6.3 Clinical pharmaceutical services for individual prisoners

Clinical pharmaceutical services are delivered individually to prisoners and reflect particular and specific individual pharmaceutical needs. These services often require direct contact with prisoners and/or the healthcare team. The main clinical pharmaceutical services provided to individual prisoners are:

Prescription monitoring and review: The review and monitoring of prescribed medication by pharmacists includes treatment initiation or discontinuation, or dosage adjustment (actual or recommended), and follow-up of test results needed to monitor side-effects and dosage. Medication-related problems identified are discussed with the prescriber, including problems relating to medicines reconciliation (managing medication on entry to prison).

When the prison clinical IT system (SystemOne Prison) goes live in the healthcare centre at HMP Swansea, pharmacists will be able to view prisoners' electronic medical records. This will have an impact on pharmacists' workload and skill requirements when engaging locum pharmacists. Access to clinical information will improve significantly and will need to be considered routinely for prescription monitoring, review and other clinical pharmaceutical services.

Medication counselling: A pharmacy technician-led medication counselling clinic providing information and advice to prisoners including support for adherence to their prescribed medication was provided. In early 2011, the clinic ceased due to staffing shortages in early 2011.

Medication review: Medicines usage reviews (MURs) are undertaken by pharmacists to help prisoners understand their medication and identify any problems they are experiencing along with possible solutions. Prisoners can self-refer or be referred by other healthcare staff to a pharmacist for an MUR to help them manage their medicines more effectively, especially those on multiple medications or those receiving medication for long-term conditions. Five MURs were carried out by a pharmacist in 2011.

Clinical medication reviews (CMRs) undertaken by the pharmacist independent prescriber provide an in-depth clinical review of all medication that a prisoner is taking and includes an adherence review. CMRs are also undertaken by GPs at HMP Swansea. The pharmacist CMR service focused on more complex medication related issues, particularly for those prisoners undergoing detoxification from drugs and/or alcohol and included prescribing medication to assist with detoxification.

Around 200 CMRs were carried out by the pharmacist independent prescriber between January and October 2011. These were mainly in the context of the pharmacist independent prescriber substance misuse clinic. This clinic stopped at the end of October 2011 due to loss of locum pharmacist cover following funding cuts.

Support for prisoners with disabilities: Assessments are carried out by a pharmacist of prisoners with disabilities that result in difficulties using medication. Adjustments such as the use of reminder charts, large print labels, monitored dosage systems (MDS) or other compliance aids are arranged by a pharmacist as appropriate. Around 70 medication disability assessments were carried out in 2011.

Substance misuse review clinic: A substance misuse review clinic was provided by the pharmacist independent prescriber until the service ceased at the end of October 2011. Referrals to the clinic were made for prisoners who had been assessed as suitable for detoxification from drugs or alcohol. The pharmacist independent prescriber carried out CMRs (see section 5.3) and prescribed medication to support detoxification from alcohol and/or benzodiazepines, and for symptomatic management of opioid withdrawal to supplement methadone or buprenorphine assisted detoxification. Around 19 prisoners attended the clinic per month. (See figure 18).

Changes to controlled drugs legislation came into force on 23 April 2012 allowing pharmacist independent prescribers to prescribe any schedule 2 to 5 controlled drugs within their clinical competence, with some exceptions. This provides a legal framework for the development of the pharmacist independent prescriber role to include prescribing controlled drugs (methadone or buprenorphine) to assist with opioid detoxification, stabilisation, maintenance and retoxification. An SOP has been produced for the prescribing of controlled drugs which takes account of the changes to the legislation. None of the non-medical independent prescribers at HMP Swansea were prescribing controlled drugs at present, pending a health board-wide review of the situation by the ABMUHB.

Supervised self-administration of medicines: A service for the supervised self-administration of medicines is provided by the pharmacy team. On Tuesdays to Fridays inclusive, new reception prisoners self-administer their morning dose of prescribed medication at the pharmacy treatment area, supervised by a pharmacist. The service aims to provide safe and timely access to medicines for these individuals early on in prison custody to address high levels of need. The focus is around controlled drugs for the treatment of substance misuse problems but can include other medication as appropriate. Prisoners also have some medication counselling by a pharmacist at this time.

Supervised consumption of controlled drugs for the treatment of opioid dependence is usually continued throughout the period of remand custody or prison sentence. This may apply to other medicines such as benzodiazepines to enhance control of diversion. Day-to-day supervised administration is carried out on the prison wings by healthcare staff.

Minor ailments clinic: A pharmacist clinic is available to prisoners on a very limited *ad hoc* basis for the treatment of common self-limiting conditions following nurse triage. Registered nurses provide a minor ailments service at treatment times on the prison wings. A policy is in place for the treatment of minor ailments supported by SOPs.

Promotion of healthy lifestyles: The promotion of healthy lifestyles is supported through pharmaceutical services though one or more of the following: verbal advice, provision of written information such as leaflets or referral to another source of advice or assistance.

One-to-one motivational support and prescribing services were provided by the pharmacist independent prescriber to around 50 prisoners at HMP Swansea in 2011. A pharmacy technician has received training to provide intensive behavioural support to groups for smoking cessation. Back-fill would be needed if the pharmacy technician is to provide smoking cessation clinics.

6.4 Strategic medicines management services

Strategic medicines management services relate to the prisoner population rather than individual prisoners. These services include tools for managing, monitoring and improving the cost-effective and safe use of medicines in the prison population such as formularies, guidance and protocols. The main strategic medicines management services provided are:

Medicines management committee: The medicines management committee develops policies and procedures around prescribing and medicines management. Membership is multi-disciplinary providing expertise in medicine, nursing, pharmacy and security. Additional specialists are included where specific expertise is needed. (See appendix III for terms of reference). The principal pharmacist is the chair and secretary of the medicines management committee. The pharmacy team provides extensive support for the development and management of the policies and procedures.

Formulary management: The medicines formulary is developed and maintained by the medicines management committee. The formulary forms the basis of the stock list for the pharmacy at HMP Swansea. The principal pharmacist leads the multi-disciplinary process for ongoing review of the formulary to enhance medicines safety, improve quality of care, and help control costs.

In-possession medication policy: The medicines management committee is responsible for the development of a policy and risk assessment criteria for determining, on an individual basis, when medication may not be held in the possession of a prisoner. The principal pharmacist leads the multi-disciplinary development and review of the formal IP policy.

Standard operating procedures and patient group directions: The principal pharmacist leads the production of SOPs and patient group directions (PGDs). Over 100 SOPs are in place covering the prescribing, dispensing, supply, storage, administration and disposal of medication, including controlled drugs for prisoners at HMP Swansea. A comprehensive set of PGDs are in place for the administration of named medicines to prisoners by registered nurses in a variety of identified clinical situations. The use of PGDs assists with timely access to medicines at reception screening and first night in custody in particular. Between April and June 2012 inclusive, the principal pharmacist updated 24 PGDs, produced 12 new SOPs and updated 18 existing SOPs.

Medicines governance: The principal pharmacist is responsible for ensuring that all aspects of medicines management processes are safe and are of high quality. Medication-related incidents are recorded and reviewed to facilitate learning. Safe medication practice at HMP Swansea focuses on the implementation of relevant medication safety warnings, alerts, recalls and guidance together with reviews of patient medication safety incidents. (See appendix IV).

Education and training: A range of initiatives have been developed and delivered by the principal pharmacist to healthcare staff e.g. the use of PGDs and the take-home naloxone service, and awareness training to prison staff.

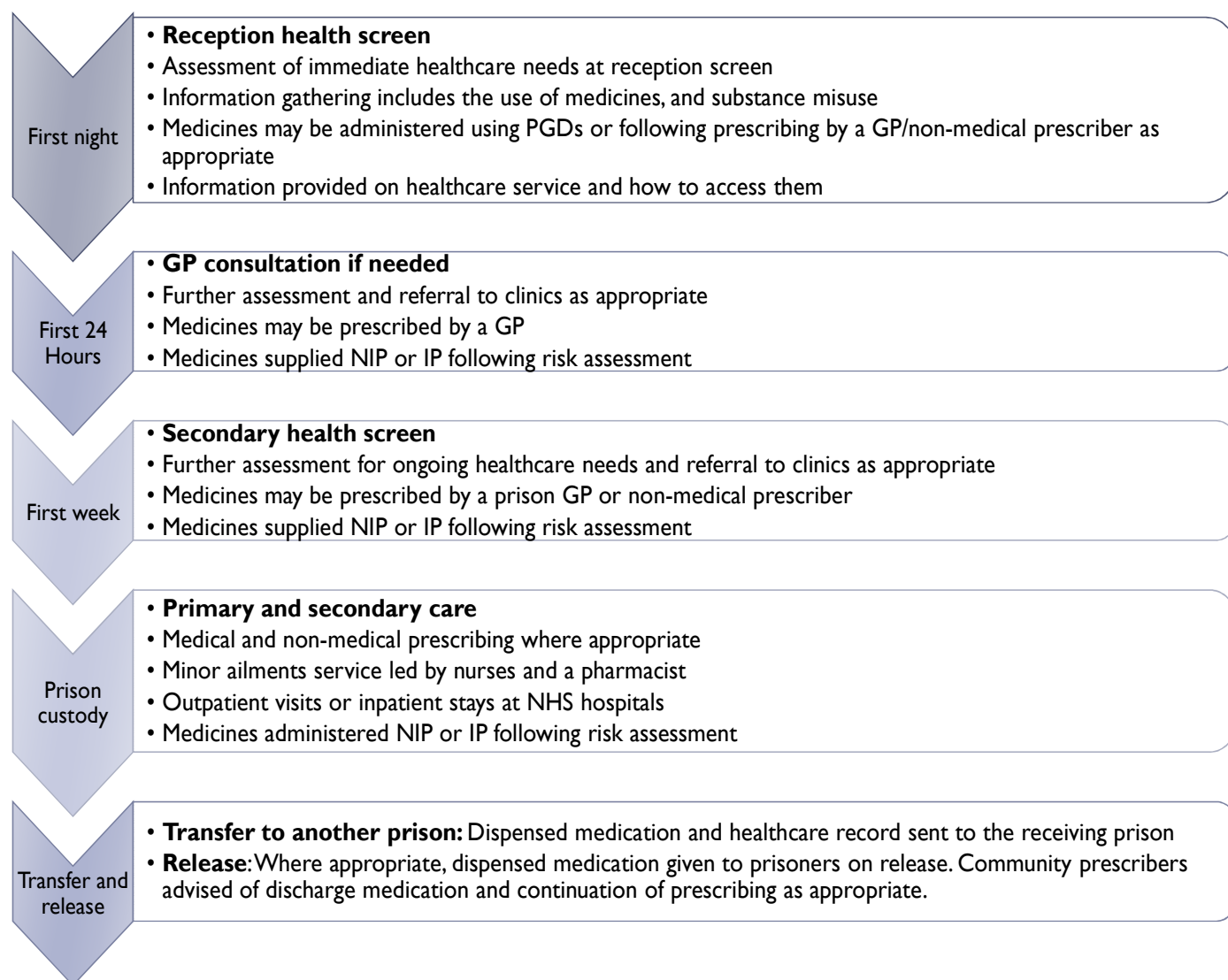
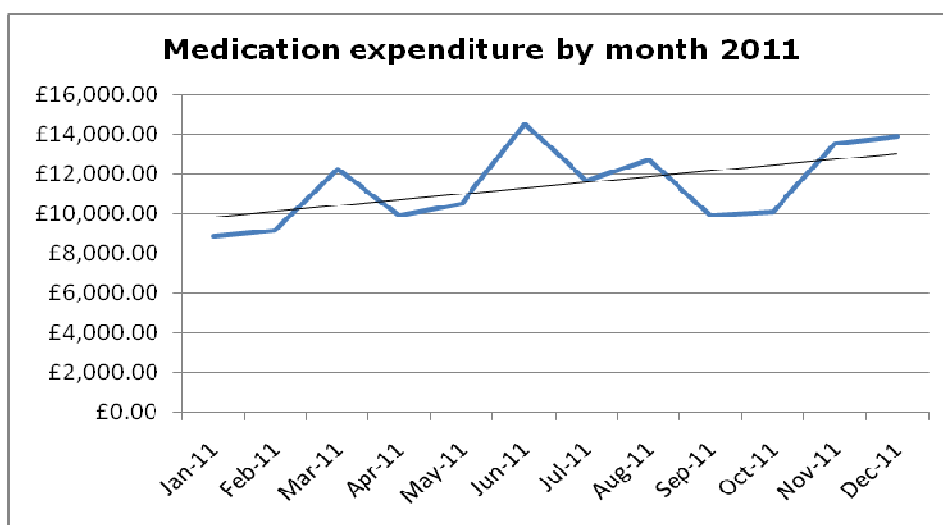
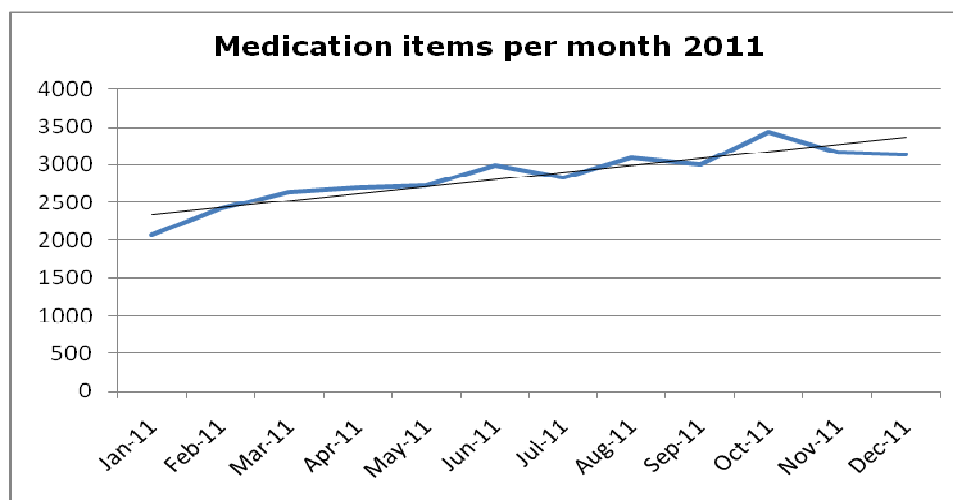
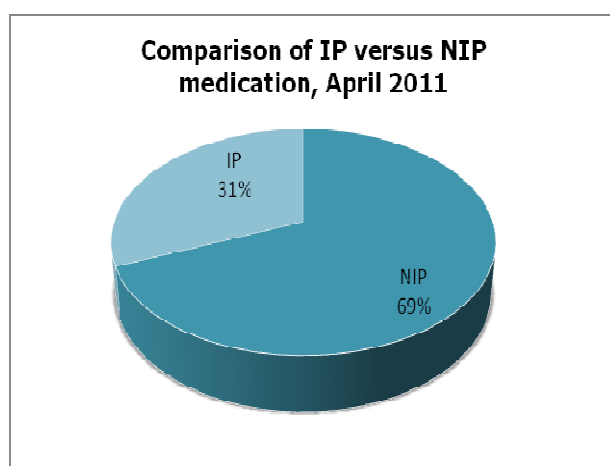
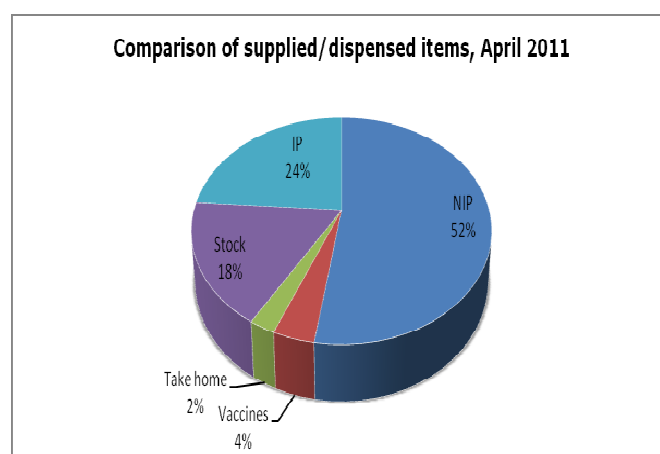
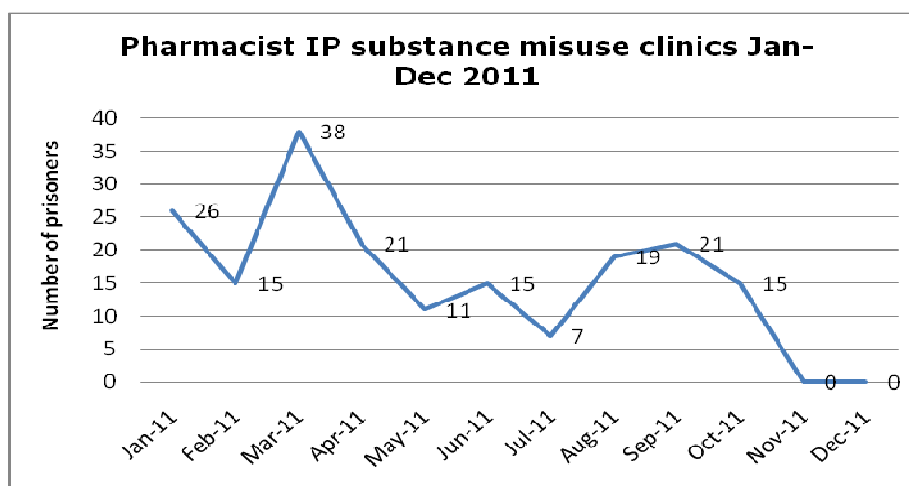
Figure 13: Prisoner access to pharmaceutical services**Figure 14: Medication expenditure by month, 2011**

Figure 15: Medication items by month, 2011**Figure 16: Proportion of IP medication, April 2011****Figure 17: Comparison of supplied/dispensed items, April 2011****Figure 18: Pharmacist independent prescriber consultations, 2011**

7 Healthcare and prison service professionals interviews

Eleven semi-structured interviews were carried out by the author. Ten were face-to-face interviews and one by telephone. The main themes emerging from the interviews are presented as follows:

Pharmacy department and information technology: The location of the pharmacy department is convenient for multi-disciplinary working and provision of a first dose supervised self-administration of medicines service to prisoners when needed. Pharmacy staff may access consulting rooms within the healthcare centre for some services e.g. medication reviews.

The pharmacy appears cramped and lacks sufficient lockable medicines storage space. Two former prison cells were adapted to house the pharmacy several years ago. However, the pharmacy was not designed to accommodate the volume of medication and range of work that is required in more recent times. Lack of sufficient suitable lockable storage and space for medicines has become more of a problem with increased prisoner turnover and the consequent need for a broader range and volume of medicines. Proposed plans to relocate the healthcare centre within HMP Swansea would result in the pharmacy being moved and presents an opportunity to address current problems with space and design.

The pharmacy has a dedicated pharmacy information technology (IT) system which fulfils the requirements for mechanically produced dispensing labels containing the required information. The system also includes some other essential functions e.g. patient medication records but is a stand-alone system that does not interface with other healthcare or prison IT systems. As only one work station is available work flow issues result. It has limited capability for producing reports to help with the monitoring of prescribing and medication budgets, and the work of the Medicines Management Committee.

The prison service does not currently allow access to the internet through the pharmacy IT system and therefore the electronic procurement and stock control functions cannot be used. This means that hand-written lists and verbal telephone ordering must be used in order to procure stock of medication. The manual process is labour intensive and lacks the timely feedback on out-of-stock and delayed supply situations that are routinely available using electronic processes. This can have serious consequences when stock needed by the next delivery is not received and contingency plans have to be implemented at short notice with significant effects on pharmacy staff time and expenditure on transport.

The pharmacy team access SystemOne Prison, the clinical IT system implemented in HMP Swansea during 2012, from the pharmacy. The pharmacy team can access the internet within the pharmacy department in relation to pharmacy practice, prescribing and medicines management, NHS Wales's intranet websites and their NHS e-mail accounts. Access to the prison service IT system including e-mail accounts is also available to the pharmacy team at the healthcare centre but not within the pharmacy department.

Some developments in practice are being sought through implementation of additional aspects of the SystemOne Prison clinical IT system. For example, approval is being sought to introduce electronic transfer of prescriptions within HMP Swansea for dispensing in the pharmacy. Some modern developments in pharmacy practice such as electronic controlled drugs registers would need to be supported by the use of electronic procurement and stock control functions of the pharmacy IT system. However, electronic controlled drugs registers are used as a function of the methadone dispensing systems located in treatment rooms on prison wings.

Human resources: The pharmacy team is part of a broad mix of healthcare staff. (See appendix I). It is a small team, but provides a wide range of services to support the healthcare for prisoners. Since HMP Swansea became a remand centre the pharmacy team's workload has increased substantially.

Locum pharmacist cover used to be engaged on a one day per week basis in order to support extended pharmacist roles such as independent prescribing. Since funding for the locum pharmacist is no longer available, pharmacist independent prescriber substance misuse clinic has ceased and there is less use of extended roles for pharmacists. Locum pharmacist and pharmacy technicians continue to be engaged to cover annual leave.

More use could be made of pharmacy technicians' skills by developing roles similar to those in community and/or hospital pharmacy. This would require some investment of resources. Although a pharmacy technician has initial training for the Accredited Checking Technician and Medicines Management Technician roles, training cannot be completed and roles implemented without additional resource for skill mix.

Recruitment of individuals with sufficient knowledge and experience of providing pharmaceutical services in the prison setting can be a problem. A national education resource on prison healthcare and pharmaceutical services may help to meet a gap in training provision and recruitment. Security vetting of individuals before employment or sessional working in a prison can take several months or more to complete.

Medicines reconciliation: Receptions to prison often take place in the evenings when community substance misuse services, general practitioners and community pharmacies are closed. There is often little background information on prisoners' medication to support the first reception assessment.

Contact with new reception prisoners' community healthcare services are usually made on the next working day and therefore relevant information may not be available for several days. Sometimes new reception prisoners bring their current medication and/or repeat prescription request slip with them and this can help reception nurses to confirm pharmaceutical needs.

Access to Individual Health Records in future, providing summary medical records for patients registered with a GP in Wales, could help with health screening and continuity of care for new reception screening including medicines reconciliation.

First night in custody: PGDs cover most of the immediate medicines-related needs for new reception prisoners. Those PGDs in relation to substance misuse treatment are particularly helpful as this a key issue for new reception prisoners.

Medicines can be prescribed by a GP (via Swansea GP out-of-hours service) or, where appropriate, by the nurse independent prescriber specialist in mental health. A scheme for the use of new reception prisoners' own medication where appropriate should be considered. This would reflect current practice for patients admitted to NHS hospitals. SOPs would need to be developed to support best practice.

In-possession medication: The shift to greater use of in-possession medication in recent years has resulted in more opportunity for prisoners to manage their medication in prison as they would at home. Introduction of a scheme for requesting repeat medication where appropriate also provides an opportunity for prisoners to manage their medication and helps with preparation for release from prison.

Registered nurses routinely undertake the risk assessments and there is input from prison healthcare officers. The in-possession medication risk assessment tool appears to work well. As the level of risk can change for individual prisoners over time, the risk assessment needs to be repeated as part of an ongoing process of risk management. Obtaining informed compliance with the in-possession medication scheme from prisoners with serious mental illness or learning disabilities needs special consideration.

Whilst administration of medication not held IP at treatment times provides useful opportunities for monitoring prisoners' health, this approach was recognised as doing little to develop personal responsibility and as failing to meet many prisoners' needs with respect to the timing that medication should be taken.

Although insulin dependent diabetic prisoners do not usually have insulin in-possession during the first week of custody some individuals may benefit from earlier access to IP insulin. At the request of the former National Patient Safety Agency, the SOP on the safe handling of insulin at HMP Swansea was included in Patient Safety First website resources on insulin safety as an example of good practice in the prison setting (available at: <http://www.patientsafetyfirst.nhs.uk/>).

Lockable cabinets were installed in each cell at HMP Swansea in 2006 for secure storage of prisoners IP medication although the cabinets need some attention due to damage and wear and tear over the last six years.

Promotion of healthy lifestyles: Plans to provide support to prisoners to stop smoking through group sessions need to ensure that the service model is logistically sound within the prison environment and keeps resources in mind. Further support in the prison more broadly could help with smoking cessation, such as activities and more smokefree cells for non-smokers.

Currently the pharmacy department is not included in the Wales national community pharmacy public health campaigns and other campaigns determined locally by the ABMUHB for community pharmacies. The pharmacy team could support these campaigns as part of their role in promoting healthy lifestyles.

Pain management: Where analgesics are not given IP, night-time doses may be administered earlier in the evening compared to the timing of night-time doses at home. Some analgesics are unsuitable for in-possession use and whilst long-acting formulations can help, and may be prescribed at HMP Swansea, they are not always suitable for individual pain management. Difficulties experienced in prison custody for individuals prescribed fentanyl patches for long-lasting pain relief can limit their suitability. (See section 9.4 – pain management).

Substance misuse: Prisoners who are already on established opioid substitution treatment (OST) started in the community are offered maintenance treatment with methadone or buprenorphine as appropriate.

Reduction in locum pharmacist cover has resulted in cessation of the pharmacist independent prescriber substance misuse clinic. Changes to controlled drugs legislation which came into force recently allowing pharmacist independent prescribers to prescribe certain controlled drugs for the treatment of substance misuse cannot be put into practice. (This also applies to controlled drugs for palliative care should a pharmacist independent prescriber role be considered for this clinical area in future).

The pharmacist independent prescriber has experience and competency in prescribing for the treatment of substance misuse and is well-placed to prescribe OST via WP10 MDA prescriptions in future for prisoners whose release is unexpected but need to continue OST in the community.

Transfer, release and resettlement: There is usually sufficient notice of release or transfer of prisoners to make arrangements for the ongoing prescribing of medication including controlled drugs. Where continued prescribing of controlled drugs for OST is intended in the community, prisoners are given their dose of OST in prison on the morning of the day of release.

Sometimes prisoners, particularly those on remand, may be released unexpectedly from court. Such unexpected movement can make continuity of prescribed medication difficult. Contingencies to help reduce these problems include the issuing of prisoners IP medication, take-home medication or community prescriptions to continue the prisoner's medication until they can be seen by primary and specialist healthcare services as appropriate. (See section on substance misuse).

8 Prisoner questionnaire survey

Summary of questionnaire survey results:

- Ten prisoners completed the questionnaire and were in the following age bands; 18-20years (1), 30-39 years (2), 40-49 years (3), and 50 years or more (4).
- Most respondents (7) had been sentenced and the remainder (3) were un-sentenced and on remand.
- All respondents were currently taking medication that had been prescribed for them at HMP Swansea and received their medication; in-possession only (4); not in-possession only (3); and combination of in- and not in-possession (3).
- Few respondents (3) reported ever having been without their medication at HMP Swansea. Reasons given were; forgetting to collect, having taken too many doses, and missing a night-time dose.
- Most respondents reported having enough information about their medication in terms of; what the medication is for (10), how it should be taken (10), when to take it (10), how long to take it for (8), what to do if any side-effects are experienced (8), and what to do if a dose has not been taken (6).
- Half of all respondents (5) reported not having any problems in taking their medicines. Where problems were reported, they related to; packing(1) with medicines sticking to the blister packs, reading small print on labels (1) or leaflets (1), sometimes forgetting to take a dose (2), and no patient information leaflet with not in-possession medication (1). One respondent was given a chart to help remind him to take his medication correctly.
- More than half of all respondents (6) had asked for help from a pharmacist at HMP Swansea. These respondents had sought help in relation to; sorting out problems with medication (3), a minor illness (4), or healthy lifestyles (4). One respondent commented of a pharmacist "I was put on a healthy eating and exercise course to help my health problems. Thank you."

Other comments from respondents about their medication or pharmacy services included: "Thank you very much for asking about my meds, you've been helpful regarding myself. Just to get out of this place to sort my health out properly. Thanks again", "Very good staff and services", "Good and friendly service", and "Helpful staff."

Overview: Although the number of respondents was small and representative samples of prisoners such as by age, legal status etc. were not sought, the responses helped to provide some insights into; prisoners' satisfaction with the information they have about their medication, the types of problems they may have with medicine taking, and their use of broader pharmaceutical services.

Overall, these results suggest that prisoners who take medication prescribed for them at HMP Swansea have positive perceptions of the pharmaceutical services provided.

8.1 Announced inspection of HMP Swansea, 2010

The most recent announced inspection of HMP Swansea by Her Majesty's Inspectorate of Prisons (HMIP) took place in February 2010. HMIP has a statutory duty to provide independent inspection of all prisons and young offender institutions in England and Wales.

The 2010 inspection included pharmaceutical services. This was carried out by an inspector employed by the General Pharmaceutical Council (GPhC), the independent regulator for pharmacists, pharmacy technicians and pharmacy premises in Great Britain.

The inspection report indicates that expectations of HMIP in relation to pharmaceutical services were mostly met. A number of recommendations were made for improvement and housekeeping points. (See tables 6 and 7). Advice included attendance by a prison pharmacist at the controlled drugs Local Intelligence Network meetings. This was implemented but not sustainable following budgetary restrictions for locum pharmacist cover.

Table 5: Response to HMIP recommendations

Medication administration charts should be appropriately and fully completed.
Checked weekly by a pharmacist to ensure that they are appropriately and fully completed. Action is taken regarding poor compliance with prescribed medication action e.g. referral to the appropriate clinic, and recorded on the SystemOne clinical IT system.
The timing of medication rounds should enable clinically effective intervals between doses.
Treatment times at: 8.30am, 11.30 am, 3.30pm and night-time 8.00pm or 10.00pm as appropriate.
Controlled drugs cabinets should be secured to the wall in line with current legislation.
Action taken as required.
Dosages on prescription charts should be written to reflect the dose denominations of tablets to reduce need for manual dosage calculation.
Action taken for writing dosage of buprenorphine sub-lingual tablets as requested.

Table 6: Response to HMIP housekeeping points

Table of response to NIP - housekeeping points		
The fridge temperature range should be reset after daily checks are completed.		
Training provided to registered nurses, SOP produced and attached to each medicines refrigerator.		
There should be consistent recording of cleaning and calibration of methadone measuring equipment.		
Methadone measuring machines no longer in use.		
In-possession risk assessment should be attached to medication administration charts.		
Action taken as required but completed risk assessments forms become detached resulting in a poor audit trail. Completed risk assessment forms are retained in the pharmacy and the relevant medication administration charts stamped and annotated to indicate that the individual may have IP medication.		
The use of diazepam for detoxification/withdrawal regimes should be reviewed.		
An audit of diazepam use in detoxification/withdrawal regimes ³¹ informed a review of practice in collaboration with the Community Drugs and Alcohol Team, ABMUHB.		
Date: 22 November 2010	Version: 1	Page: 32 of 48

9 Assessment of pharmaceutical need

9.1 Supply of medication to prisoners

Procurement, distribution and dispensing: The full range of services for the supply of medicines and related devices and the maintenance of appropriate records is provided by the pharmacy team at HMP Swansea. Services for the supply of medication appear to be at a level which meets the needs of prisoners at HMP Swansea.

However, restrictions placed on the use of the internet mean that modern electronic methods of medication procurement and stock control cannot be used. Use of IT systems including internet connectivity is essential if progress in areas such as electronic prescribing, and electronic transfer of medication details for community prescribers and pharmacists.

9.2 Clinical services for individual prisoners

Prescription monitoring and review: New reception prisoners often arrive in the late afternoon or early evening outside the standard opening hours of most community healthcare services. It is often not possible for healthcare staff to obtain information about a prisoner's prescribed medication until the following working day at least. Although contingencies exist to ensure prisoners' health is not endangered whilst waiting for this information, the situation is still of concern.

Verification of medication, which involves identifying the most accurate list of a prisoner's current medication including the name, dose, frequency and route of administration, can be challenging at first-reception screening. It can be an additional duty for healthcare staff already busy with carrying out health screens on new-reception prisoners. Medicines reconciliation, to ensure continuity of community prescribed medication on entering prison custody, relies on timely and accurate verification.

Consideration should be given to identifying dedicated staff to verify prescribed medication. Depending on the timing of prisoners' arrival at prison the role could be carried out by the pharmacy or nursing team. Given the current workload of the pharmacy team further pharmacist involvement in medicines reconciliation is unlikely at present. SOPs should be produced to provide further detail and help clarify the verification and medicines reconciliation processes.

Medication counselling: A technician-led medication counselling service has the potential to support effective prescribing through the adherence aspect of medicines management. Although the service was not available during 2011, some of the need for direct contact with pharmacy staff to discuss medication issues was met by pharmacist medication use reviews. However, appropriately trained pharmacy technicians help to release pharmacist time for more complex medication problems.

Medication review: In total, 5 MURs and 200 CMRs were carried out for prisoners at HMP Swansea by the pharmacist independent prescriber during 2011. Due to a cut in locum pharmacist cover in October 2011, the pharmacist independent prescriber can no longer routinely carry out CMRs. GPs continue to provide a CMR service. It is unlikely that 5 MURs per year is sufficient to meet the needs of prisoners at HMP Swansea but increasing the number of MURs carried out would require some pharmacy staffing resource.

Support for prisoners with disabilities: The level of assessments carried out by pharmacists appears to be meeting the needs of prisoners with medicines taking-related disabilities.

Substance misuse review clinic: (See section 9.4).

Supervised self-administration of medicines: (See section 9.4).

Minor ailments: Consultations for minor ailments are handled mostly by registered nurses who may refer prisoners to a GP or pharmacist as appropriate. Although this service appears to be meeting the need for minor ailment consultations, a pharmacist or pharmacy technician-led service could release nursing and GP workload in relation to minor ailments.

Smoking cessation: (See section 9.4).

9.3 Strategic medicines management services

SOPs and PGDs: These take a significant amount of time and resource to develop and implement. In clinical circumstances where PGDs are the most appropriate option, careful thought and consideration regarding the content of PGDs can save time and will contribute to safe and timely delivery of patient care.

Good practice in the production and use of SOPs and PGDs for supply and administration of medicines at HMP Swansea was recognised more widely when the principal pharmacist won a Butler Trust award in 2012 for good practice in the care of prisoners.

In-possession medication: The level of medication dispensed for IP use at 31% was considered to be lower than expected.³⁰ On entry to prison custody personal control by prisoners over taking medication may be limited, particularly in the first week. This can cause disruption to the ways in which they were used to taking and managing their medication in the community.

The IP medication scheme has a number of advantages including; prisoners maintaining responsibility for self-administration at the appropriate time, helping to provide continuity of care in medicine taking, and better use of professional and clinical skills. However, this needs to be a balanced with risks such as self-harm, illicit trading, bullying and security implications.

As HMP Swansea is a local prison with remand prisoners and a high level of transfer activity, high turnover of prisoners, some prisoners may be less well settled and less well known to healthcare staff. Whilst some prisoners may be more stable allowing IP medication, the IP scheme may be being used more cautiously on entering custody and with young offenders.

These and other factors are taken into consideration within the IP policy and criteria for IP medication so that the IP policy reflects local issues and policies related to the prison category and population status. However, the IP risk assessment tool should act as a guide to decision-making rather than a straightforward determination of outcomes.

It is not clear as to whether the IP policy fully meets the needs of prisoners at HMP Swansea in terms of balancing risk particularly in the first week of custody and pharmaceutical needs for medication at appropriate times. Administration of medication by healthcare staff at treatment times provides opportunities for repeat contact with prisoners but it does not encourage independence. The IP risk assessment process should formalise changes in prisoner

circumstances which trigger review. The approach should be multi-disciplinary as relevant information may not generally be available to all groups of staff.

9.4 Main health needs

Long-term conditions: Pharmacists have a role in the management of prisoners with long-term conditions in order to assist in improving the prisoners' understanding of, and optimising the clinical benefits from, their medication. Medication reviews can help to support prisoners with long-term conditions. Information gained can also be useful for other healthcare professionals in relation to continuity of care within the prison setting and on transfer or release from prison. Consideration should be given to piloting pharmacist-led disease specific medicines management clinics where appropriate.

Helping prisoners to take an active role in managing their own care is important as the majority of prisoners at HMP Swansea serve short sentences and there is regular movement between prisons, courts and other establishments. Support for more effective medicine-taking could be enhanced by enabling the pharmacist independent prescriber to resume targeted CMRs and reinstating a pharmacy technician-led medication counselling service. Pharmacist CMRs, MURs, medicines management clinics and pharmacy-technician medication counselling services provide opportunities for prisoners to have direct contact with the pharmacy team to discuss medication-related problems.

Pre-release promotion of the community pharmacy discharge medication review service by the pharmacy team and other healthcare staff could help prisoners continue to gain the most from their medicines after release from prison.

Mental health: High levels of mental health problems have been identified within prison populations. This is reflected in the high proportion of central nervous system medication items for prisoners at HMP Swansea. Although no specific pharmaceutical service is in place for mental health medicines management prisoners needs appear to be met through GP or psychiatrist clinical medication reviews, and the pharmacist prescription review and monitoring service.

All prisoner medication administration charts are reviewed weekly by a pharmacist and non-attendance to collect medication for mental health problems is brought to the attention of the primary care mental health nurse lead and the prescriber. Where monitoring through laboratory tests are appropriate, results are followed-up by a pharmacist and any issues discussed with the prescriber.

Pain management: The management of pain can be challenging due to the constraints that prison custody imposes and substance misuse being a common problem. The routines and practices employed in the community to effectively manage acute or persisting pain symptoms can be disrupted and curtailed on entering prison custody. Inadequate pain management can lead to increased anxiety and distress and an increased risk of self harm.³²

Pain is a complex experience and is particularly clinically challenging in the context of substance use and dependence, and especially so in a prison setting.

Opioid analgesics have well recognised potential for misuse; they may be used as currency for illicit trading and prisoners can be bullied into passing them on to others. Nonetheless some prisoners experiencing moderate or severe pain will need treatment with opioid analgesics and is not appropriate to exclude their use.³³ Acute or chronic pain may occur in prisoners who have substance misuse problems. Prisoners should however be able to achieve a similar degree of

symptom relief as in the community setting, although their treatment may need some adjustment.

*PSO 3550 Clinical services for substance misusers*⁶ and *PSI 45/2010 Integrated drug treatment system*⁷ clearly include all opioid analgesics as medication which must be administered under supervised conditions. Therefore there can be practical problems for prisoners who need to take their medication at frequent intervals, or specific times which are not in keeping with the prison medication treatment times.

The British Pain Society stated that it may be more appropriate for longer acting preparations or transdermal preparations to be prescribed, although the use of patches as route of administering analgesia is not without risk of diversion in a prison setting.³² In considering the difficulty in ensuring compliance, the British Pain Society also stated that slow-release oral formulations of opioid analgesics should be considered as a viable alternative to transdermal administration.

Although slow-release oral formulations of opioid analgesics may be prescribed for prisoners at HMP Swansea where appropriate, the timing and formulation of doses does not appear to be fully meeting pharmaceutical needs for some prisoners' night-time pain management. Pain management needs to be provided in the most appropriate way for the safety of those who it is intended for and for the wider prison community.

Whilst it is essential that prison establishments ensure the safe and secure operation of the establishment during the night state, scope to improve individualised pain management should be explored, such as the increased use of cell hatches. The specific issues relating to palliative care in prison should also be considered. Although there has historically not been any pharmaceutical need in this area, future need cannot be ruled out.

Smoking cessation: Access to a smoking cessation service through the pharmacy team is currently limited due to staffing levels. The planned introduction of intensive behavioural support for groups of prisoners will help with access. This additional service could be pharmacist/pharmacy-technician led provided adequate staffing resource is in place, and integrated with pharmacist independent prescribing and supply of NRT to prisoners.

Substance misuse: The use of PGDs appears to provide a means of meeting the immediate needs of substance misusers on reception and first night of custody at HMP Swansea. Those prisoners on OST initiated in the community are offered maintenance treatment. The timing of first doses of OST in custody has already been reviewed. A supervised self-administration service is provided by the pharmacy team to ensure that prisoners receive their first dose immediately following prescribing at morning clinics. Other areas of good practice include the take-home naloxone scheme, judicious use of retoxification and relapse-prevention medication.

The pharmacist independent prescriber has developed a specialist area of practice in the treatment of substance misuse. It is not clear how this work is being covered since the pharmacist independent prescriber clinics ceased. Since the locum pharmacist cover ceased the pharmacist independent prescriber has had to provide more cover for dispensing and prescription monitoring services and non-medical prescriber skills are not being fully utilised. In addition, the opportunity to develop and increase the range of prescribing interventions brought about by recent changes to the legislation is being missed.

9.5 Pharmacy team workforce development

Recruitment and retention of prison pharmacists has been a long-standing challenge in some areas of the UK. This has also applied to recruitment of pharmacy technicians in some locations. Pharmacy practice has extended significantly in recent years with pharmacist independent prescribers, accreditation for enhanced and advanced services provided by community pharmacists and consultant pharmacists. The market for clinical pharmacists is highly competitive.

Through the use of accredited schemes, pharmacy technicians have taken on enhanced roles such as checking dispensed prescriptions and medication counselling. The development of enhanced roles for pharmacy technicians supports pharmacists in the delivery of a wider range of pharmaceutical services reflecting modern practice.

Recent increases to the number of prisoners and the reprofiling of HMP Swansea to include remand prisoners has had a significant impact on the workload of the pharmacy team. The pharmacy team at HMP Swansea will struggle to maintain the range and quality of services provided at current staffing levels. This is likely to have a negative impact on recruitment and retention of pharmacy staff.

There is a need for appropriate recruitment and training to support the further development of pharmacy technicians at HMP Swansea to take on greater responsibility to help ensure that there is protected time to draw on the professional experience and expertise of the pharmacist independent prescriber in areas such as medicines management, prescribing and supporting healthy lifestyles. Investment in locum pharmacist time would help to ensure that adequate capacity for clinical pharmacy services is continuous.

There is a mandatory requirement for pharmacists and pharmacy technicians to undertake continuing professional development (CPD) to ensure that the pharmacy workforce is fit for purpose. Access and support for course fees for appropriate training including specialist courses is essential. Development of the permanent and locum pharmacy workforce may also be supported by:

- Easy access to appropriate training for pharmacists and pharmacy technicians new to the prison pharmaceutical services.
- Ensuring more innovative roles such as pharmacist independent prescribing are supported by protected time.
- Placements for pharmacists and pharmacy technicians at HMP Swansea as part of their training.
- Work experience placements for undergraduate pharmacy students.

9.6 Limitations of the prison PNA

The following limitations applied:

- Data collection began a few months after the reprofiling of HMP Swansea was completed. Subsequent discussions suggested that it may be more meaningful to update the original data collection. Some additional data has been made available.
- Core elements of the prison clinical IT system were implemented during the time the PNA was carried out. Population of electronic records over time enabled limited electronic searching for clinical data. At the time the PNA was carried out, the prescribing element had not been implemented and so it was not possible to report on prescribing data using this system. Therefore comparisons could not be made with prescribing data collected from GP clinical IT systems used in the community.
- Due to time constraints it was not pragmatic to review prisoners' medical records or medication administration charts in order to estimate disease prevalence or health determinants (lifestyle) for the prisoner population at HMP Swansea.
- Medication prescribed and dispensed to prisoners at HMP Swansea is not included on the Comparative Analysis System for Prescribing Audit (CASPA) database as NHS community prescriptions cannot be used within the prison setting.
- The pharmacy IT system has limited reporting capabilities and is not designed to collate information on medication usage in the ways that are available through the CASPA database.
- The PNA related to the types of services which meet or could meet pharmaceutical need but not which model(s) of service delivery to employ.
- Cost-effectiveness assessments were not part of the scope of the PNA.

10 Conclusions and recommendations

Delivery of pharmaceutical services to prisoners at HMP Swansea takes place within a challenging context. Arrangements need to reflect a mix of both primary and secondary care and must be delivered in some ways differently to NHS community and hospital pharmacy services in Wales due to the custodial environment.

During the time that the prison PNA was carried out, reprofiling of HMP Swansea was linked with a significantly increased workload for the pharmacy team. The resulting, less-settled, more mobile prisoner population with high levels of transfers between prisons and short-term sentencing reflects a higher level of pharmaceutical need.

The current model of service with an on-site pharmacy department is responsive to the pharmaceutical needs of prisoners and local circumstances. However, the current situation, with a low staffing level for the pharmacy team, exacerbated by the reduction in locum pharmacist cover, is unlikely to sustain the current range and level of pharmaceutical services to prisoners.

It is essential that service levels providing for met pharmaceutical needs of prisoners are not diminished. Actively seeking to provide for any unmet needs will need to be prioritised and resourced. Current limitations on financial resources are acknowledged.

Recommendations

- Ensure that the pharmacy staffing level, including locum staff, is sufficient and makes the best use of skill mix in delivering a safe and effective pharmaceutical service to prisoners, which is responsive to pharmaceutical need.
- Ensure that there is sufficient access to appropriate training to support pharmacists and pharmacy technicians in carrying out core and enhanced roles relating to pharmaceutical services to prisoners.
- Implement electronic procurement of medication and stock control, and develop electronic prescribing and transfer of medication information on release.
- Ensure that prisoners have an appropriate level of access to pharmacy staff for medication counselling and review, to support adherence, help resolve problems related to prescribed medication and assess the appropriateness of continuing medication prescribed in the community.
- Determine whether and, if so, how the in-possession medication scheme could be extended where possible and formalise changes in prisoner circumstances to trigger review of an individual's in-possession risk assessment.
- Explore further ways in which to deliver individualised medicines management at night-time, where necessary, such as the increased use of cell hatches.
- Review the process for verification of prescribed medicines, particularly for new reception prisoners; including the use of standard operating procedures, identifying dedicated staff, protected time for verification, and the use of prisoners' own medicines on entering custody.
- Ensure that there is protected time available for pharmacist input into producing and updating standard operating procedures and patient group directions.

Appendix I: Healthcare services at HMP Swansea

Service area	Whole time equivalent (WTE)	Service provider
Dentistry	0.2 WTE dentist 0.2 WTE dental nurse	Local general dental practitioner
General medical services	X WTE GPs (morning clinics) Out-of-hours services	Swansea Out of Hours Service GP co-operative
Optometry	<i>Ad hoc</i> sessions	Specsavers Optical Group Ltd.
Pharmacy (Mon-Fri)	1.0 WTE pharmacist (independent prescriber) 1.0 WTE pharmacy technician 0.2 WTE pharmacist	HMP Swansea HMP Swansea Sessional
Primary care nursing (24/7 on-site nursing cover)	0.2 WTE Head of healthcare X.X WTE registered nurses (includes 1.0 WTE nurse independent prescriber)	HMP Swansea
Sexual health	0.1 WTE genitourinary medicine physician	Abertawe Bro Morgannwg University Health Board
Specialist mental health	Mental health in-reach: 0.2 WTE psychiatrist 0.1 WTE clinical psychologist 1.0 WTE community psychiatric nurse 1.0 WTE occupational therapist 1.0 WTE occupational therapy assistant Forensic psychiatry: 0.1 psychiatrist	Abertawe Bro Morgannwg University Health Board
Counselling, Assessment, Referral, Advice and Throughcare (CARAT).	3.5 WTE workers Not healthcare funded	West Glamorgan Council on Alcohol and Drug Abuse Ltd. (WGCADA)

Appendix II: Prisoner questionnaire

Hello,

We want to hear what you think about pharmacy services for prisoners in *this prison*.

This includes everything to do with your prescribed medication.

Please would you let us know what you think by filling in this survey?

This survey is anonymous. We will not ask your name at any point.

Q 1. How old are you?

☐ 18-20

☐ 21-29

☐ 30-39

☐ 40-49

☐ 50+

Q 2. What is your current legal status?

☐ On remand

☐ Sentenced

Q 3. Have you taken any medication prescribed for you in this prison?

☐ Yes, please go to Q 4

☐ No, please go to Q 8

Q 4. How is your medication given to you? (Please tick as many as apply)

☐ To keep and take yourself (in-possession) ☐ A dose at a time by healthcare staff

Q 5. Have you ever been without your medication in this prison?

☐ Yes ☐ No

☐ Yes, please explain.....

Q 6. Do you have enough information about the following? (Please tick as many as apply)

☐ What your medication is for

☐ How to take your medication

☐ When to take your medication

☐ How long you will need to be on your medication

☐ What to do if you have any side-effects

☐ What to do if you forget to take a dose of your medication

☐ None of these

☐ Other, please explain.....

Q 7. Do you have any problems with the following? (Please tick as many as apply)

- ☐ Getting medication out of the packet or bottle
- ☐ Reading the label, please explain.....
- ☐ Reading the information leaflet, please explain.....
- ☐ Remembering to take your medication
- ☐ Side-effects from your medication
- ☐ Taking medication that looks alike
- ☐ Changes to the colour or shape of medication
- ☐ No problems
- ☐ Other, please explain.....

Q 8. Have you asked for help with any of the following? (Please tick as many as apply)

- ☐ Sorting out problems with your medication
- ☐ A minor illness, like an upset stomach or a cold
- ☐ Healthy lifestyles, like stopping smoking, healthy eating or exercise
- ☐ None of these
- ☐ Other, please explain

Q 9. Is there anything else you want to tell us - about your medication or pharmacy services?

Please explain.....

Thank you for filling in this survey.

Please give it to one of the healthcare staff before you leave the healthcare centre.

Appendix III: Medicines management committee terms of reference

HMP SWANSEA

MEDICINES MANAGEMENT COMMITTEE

MEMBERSHIP

Chairperson: - Head of Pharmaceutical Services

Secretary:-Head of Pharmaceutical Services

Health Care Manager

Lead General Practitioner (from SOS)

ABM University Health Board Pharmacy Representative

Clinical Team Leader

Mental Health Team Leader

Members of the Healthcare Team

Deputies should be identified and required to attend as necessary

Quorate: A minimum of four members

CO-OPTION OF MEMBERS

The committee will seek to obtain expert advice on the topics they will be discussing. Specialist consultant medical staff and others will be invited to attend certain Committee meetings for specific agenda items to help the Committee on specialist issues.

TERMS OF OFFICE

The terms of office for the appointed members of the committee is linked with their position in the prison and are permanent members of the committee.

OBJECTIVES

To ensure the consistent quality of care through uniform access to medicines therapy across the prison.

FUNCTIONS AND RESPONSIBILITIES

1. To develop and maintain an HMP Swansea formulary (when required) and approve therapeutic aspects of clinical guidelines.
2. To develop and maintain policies.
3. To review and implement PGDs.
4. To participate in the financial planning and control of medicines usage.
5. To advise the Management on medicines expenditure trends and the financial implication of anticipated developments including those resulting from NICE guidance, in order to aid planning and prioritisation.
6. To recommend and implement approaches for the clinical use of medicines including those cited in clinical guidelines to ensure they are used in the safest and most cost-effective manner.
7. To produce quarterly minutes to promote the activity of the committee, including awareness of new medicines use and best therapeutic practice.
8. To receive and consider information from the Welsh Assembly Government, and ABM University Health Board, implementing strategies and policies as appropriate.
9. To review and consider clinical risks identified by agencies relating to medicines or product choice and use in clinical practice where formulary changes are required.
10. Frequency of meetings- quarterly.

Terms of reference formulated by:	Date:
Cathryn Richards, Head of Pharmaceutical Services, HMP Swansea.	17th January 2011

Appendix IV: Medication safety actions at HMP Swansea

Origin	Action
Medicines and Healthcare products Regulatory Agency (MHRA)	<ul style="list-style-type: none"> • Drug alerts on defective medicines • Medical device alerts • Safety warnings and messages about medicines, including letters sent to health professionals
National Patient Safety Agency (NPSA)	<ul style="list-style-type: none"> • Medication safety alerts • Medication safety guidance • Medication safety signals
1000 Lives Plus Programme (Public Health Wales)	<ul style="list-style-type: none"> • High alert (high-hazard) medication
HMP Swansea	<ul style="list-style-type: none"> • Medication-related adverse incident reviews • Medicines reconciliation for new receptions, transfers to and from other establishments, and on release • In-possession risk assessment & policy

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