Literature Review

Substance misuse services

Needle and syringe exchange & Supervised administration of opiate substitutes

In 2008/09, 10.1% of adults in England had used one or more illicit drug within the last year. Individuals taking illicit drugs are at risk of health problems, drug poisoning and lethal overdosing. Drugs can also become addictive and lead to long term damage to the body (NHS IC, 2009). Overall in 2008-09 there were an estimated 321,229 problem drug (opiates and/or crack cocaine) users in England; this corresponds to 9.41 per thousand of the population age 15-64 (Hay *et al*., 2010).

In 2003/2004, the economic and social costs of drugs were estimated to be around £15.4 billion in the UK (Gordon *et al*., 2006). Most of this, about 90%, accounts for drug-related crime, and the health costs account for 3% (£488m) (Gordon *et al*., 2006). The cost of providing health services to someone who injects drugs is estimated to be about £35,000 over their lifetime. The related costs of crime are estimated to be an additional £445,000 over a lifetime (NICE, 2009). It is also estimated that around 6.6 % of all working age benefit claimants (ca. 267 000) in England are dependent on drugs (Hay & Bauld 2008) generating, together with benefit claimants dependent on alcohol, benefit expenditure costs of approximately £1.6 billion per year (HM Government, 2010).

In addition to the poor nutrition, mental, physical and dental health common to many problem drug users, injecting drug users (IDUs) are at risk of several viral and bacterial infections (Gordon & Franklin, 2005; Health Protection Agency Centre for Infections, Health Protection Scotland & UCL Institute of Child Health, 2007), and some of blood-borne viral (BBV) infections, such as HIV, can also be passed on to the wider public through risky sexual behaviour (NHS NTA, 2010). Acute bacterial infections due to poor injecting hygiene, non-sterile equipment or contaminated drugs cause health problems costing the NHS around £47m a year. After years of vein damage caused by their injecting, long-term IDUs are likely to suffer from circulatory problems. Deep vein thromboses are also a common risk (NHS NTA, 2010).

Where primary or secondary diagnosis of drug-related mental health and behavioural disorders was recorded there were 42,170 admissions in 2008/09 compared with 40,421 in 2007/08 showing an increase of 4.3%. During 2008/09, there were 11,090 admissions with drug poisoning as primary diagnosis, showing an increase of 47.2% from 1998/99 (7,533) (NHS Information Centre, 2009). In recent years, the number of drug-related deaths in England has been rising (NHS NTA, 2010). In 2008, the total number of deaths in England and Wales related to drug misuse was 1,738 with the main underlying cause of death being accidental poisoning (NHS IC, 2009).

In 2008/09, £800m was spent on national drug treatment services including methadone treatment and specialist counselling (NHS IC,

2009). The investment has more than tripled in the last decade. However, opiate dependence treatment can generate substantial savings in both health care and crime costs (Godfrey *et al*., 2004; Gossop *et al*., 2001; Healey *et al*., 2003). Opiates only (which includes heroin) was the main type of drug for which people received treatment (48% of all treatments), with a further 31% of treatments for those who have taken both opiates and crack in 2008/09. During the same period, there were more than 207,000 adults in structured drug treatment (NHS IC, 2009). By the end of 2008/09, there were 60,386 discharged episodes of treatment and 24,656 (41%) of clients exiting treatment who were no longer dependent on the substances. An additional 9,002 (15%) were referred on for further interventions outside of community-structured treatment (NHS IC, 2009).

Drug strategy 2010 states that in order to deliver successful recovery, commissioning of all services should focus on outcomes, such as prevention of BBVs, and improvement in mental and physical health and wellbeing (HM Government, 2010). Needle and syringe exchange programmes (NSPs) were originally introduced to prevent transmission of blood-borne viruses among drug-users. Through NSPs, usually based in pharmacies or stand-alone specialist services, provision of needles and syringes is free and return of used equipment is encouraged (NHS NTA, 2010). The NICE guidance (2009) requires a wide coverage of needle and syringe exchange facilities and encourages the utilisation of the long opening hours of pharmacies.

In the UK, community pharmacists have for long delivered a range of harm-reducing services to drug misusers, including dispensing of substitution therapies, providing sterile injecting equipment and offering a needle and syringe exchange service (Britton & Scott, 2006; Sheridan *et al.,* 1996, 2007). The number of community pharmacies contracted by PCTs to provide harm reduction services to drug misusers has almost doubled from 2005/2006 to 2009/2010 (NHS IC, 2010).

Prescribing opiate substitutes, methadone or buprenorphine, is an effective community-based treatment for opiate dependence (Simoens *et al*., 2005). In the UK, pharmacies have dispensed opiate substitutes to drug misusers since 1970s (Anderson *et al*., 2005). According to prescribing records, provision of opiate substitute treatment dispensed by community pharmacies had doubled from 1995 to 2005 (Strang *et al*., 2007). Supervised consumption, where consumption of the daily dose is observed by the pharmacist instead of sole dispensing of the substitute, was provided by 49% of community pharmacies in 2009/2010 with numbers increasing from 2563 in 2005/2006 to 5215 pharmacies (NHS IC, 2010).

Community Pharmacy: at the heart of public health

Glossary

BBV	Blood-Borne Virus
HCV	Hepatitis C Virus
HPA	Health Protection Agency
IDU	Injecting Drug Users
MUR	Medicines Use Review
NICE	National Institute for Health and Clinical Excellence
NSP	Needle and Syringe exchange Programme

Within the UK, supervised consumption became a standard practise first in Scotland in 1994 (Anderson *et al.*, 2005). Via supervised consumption, over-usage or diversion of the substitutes onto the illicit drugs market can be prevented (NHS Community Pharmacy Contractual Framework, 2005). Moreover, a study conducted among patients collecting substitute treatment from community pharmacies in Islington, London (Haskew *et al.,* 2008) found that not being under supervised consumption and having a less frequent pick-up is associated with a range of non-adherent behaviours, such as dose splitting, storing or selling. According to a UK survey (Stone & Fletcher 2003), service users understand the need for supervision of substitute consumption and are generally willing to accept it. Stone and Fletcher (2003) conclude that supervised consumption is an important component of safe, effective and responsible methadone prescribing.

In England, needle exchange service was provided by 19% of community pharmacies in 2009/2010, with numbers increasing from 1061 in 2005/2006 to 2048 pharmacies. Community pharmacies account for 80% of needle exchange facilities in England (Abdulrahim *et al.*, 2006) and 72% in Scotland (Audit Scotland, 2009). The NTA 2005 survey found that approximately half of all syringe distribution was through pharmacy exchanges and half through non-pharmacy exchanges, although with a notable geographical variation in the amount of syringes distributed and BBV vaccinations offered (Abdulrahim *et al.,* 2005, 2006). The pharmacy schemes on the whole tended to provide needles and syringes, sharps bins, wipes, swabs and condoms. Other paraphernalia was available, but fewer pharmacy schemes provide them. Hepatitis B immunisation, and hepatitis B, C and HIV testing were carried out on-site in less than half the services surveyed (Abdulrahim *et al.,* 2005, 2006).

In the NTA survey, overall visits to pharmacies were higher than those of other service providers and pharmacies on average were distributing more syringes per client per visit. Overall, the average number of syringes given out by a pharmacy to a client in England was 16 syringes per contact and approx. 200 syringes for the 2004/05 period (Abdulrahim *et al.*, 2005, 2006). In Scotland, pharmacy-based needle exchange services are used by large number of clients and have one of the highest return rates among four different types of needle exchange settings (Cameron *et al.*, 2004). From April 2005 to March 2006, five pharmacies in Swindon distributed 68 900 needles with return rate ranging from 72-92% per pharmacy compared to 48% in a Walk-in-centre operating under different circumstances (Swindon & Wiltshire

LPC, unpublished). In rural areas of South East, needle distribution based in pharmacy setting with wide network coverage is essential, as the optional NSP setting ('Turning point') is located solely in urban areas (South West Region LPC, 2010).

Although the initial purpose of NSPs was to prevent transmission of blood-borne viruses among drug-users, there is a demand for more studies of high quality before the effectiveness of NSPs at reducing the incidence of BBVs among IDUs can be concluded with sufficient credibility (Palmateer *et al.*, 2010). Currently, the evidence for prevention of HIV transmission is tentative, but insufficient for HCV (Palmeteer *et al.*, 2010). Explosive outbreaks of HIV are occurring worldwide. The present value of the lifetime treatment costs associated with infectious diseases are estimated to be £23 million for HIV, £608,475 for Hepatitis C and £580,568 for Hepatitis B (Gordon *et al.*, 2006). Thus, even if NSPs were not reducing the incidence of BBVs among IDUs, prevention of their outbreaks can yield considerable savings in terms of health care costs.

In the UK, HIV infection rates among IDUs have remained low and relatively stable in the long run (1998-2006) (Gordon *et al.*, 2006). England has one of the lowest levels of HIV among IDUs in Europe. Outside of Europe, Australia is the only major developed state with a lower level. HIV prevalence among IDUs in England now stands at 1.6%, and has fluctuated around the 1.5% mark for the past five years (NHS NTA, 2010). Hepatitis B infection levels among IDUs has also declined markedly and are currently at 18%, the lowest since the HPA began recording data in 1990. Hepatitis C infection levels are fluctuating around the 46% mark. Although the levels are slightly higher than a decade ago, they have not risen significantly in the past few years. Hepatitis C levels in England remain substantially lower than in most other developed countries, even those with similar levels of injecting drug user (NHS NTA, 2010).

The fact that HIV infection among IDUs has remained relatively uncommon in the UK, is probably a result of prompt community and public health responses (Health Protection Agency Centre for Infections, Health Protection Scotland & UCL Institute of Child Health, 2007), e.g. NSPs. Many studies have demonstrated that the implementation of NSP is cost-effective and cost-saving (Wodak & Cooney, 2004; Jones *et al.*, 2008) although international studies have limited generalisability to the UK (Jones *et al.*, 2008). During 2000-2009, there has been a decline in equipment sharing, and rises in testing for blood-borne viruses (NHS NTA, 2010). Of all users entering treatment, the proportion currently injecting has fallen by 9% in the past five years (2005-2010). NSPs have played a major role in the decline (NHS NTA, 2010). There is good evidence that NSPs reduce risky injection behaviour among IDUs (Committee on the Prevention of HIV Infection Among Injecting Drug Users in High-Risk Countries 2006; Jones *et al.*, 2008), and the setting of the NSPs or syringe dispensation policy does not impact on injecting behaviour (Jones *et al.*, 2010).

A NICE review (Cattan *et al.*, 2008) concluded that IDUs rated pharmacies more highly than drug agency based NSPs for accessibility in terms of opening hours and location, but had

reservations due to fear of exposure. Pharmacists are largely willing and committed to provide harm reduction services to drug users (Cattan *et al*., 2008; Jaffray *et al*., 2010; Matheson *et al*., 2007). Pharmacy premises have improved to the direction suggested by pharmacy customers (Lawrie *et al*., 2004) and towards lessening exposure; 72% of pharmacies responding to a survey had a private consultation area where supervised consumption can take place (Sheridan *et al*., 2007). Many of the current pharmacy services such as MURs require privacy, which might relief the threat of a drug misuse-related stigma for those using a consultation area. In addition to substitute provision services, NSPs could be delivered in private areas, too. This is already the prevailing practise in some community pharmacies.

NSPs provide a gateway to a range of other services, including drug treatment interventions such as substitute prescribing (NHS NTA, 2010). It is important that needle exchanges are further developed to deliver a range of services to clients, including the provision of sufficient sterile injecting equipment and a range of other BBV interventions such as vaccination, testing, counselling and awareness rising (Huntington *et al*., 2006). There are many areas where pharmacists can, and do, contribute to the wider field of misuse work in prevention, harm minimisation and treatment as well as helping retain people in treatment, e.g. face-to-face harm reduction advice and referral to structured treatment, treatment of overdose, providing hepatitis immunisation, tetanus booster vaccination, sexual health services, health promotion and health education, wound care and checking injection sites, and referral to other health care professionals as appropriate (Abdulrahim *et al*., 2006).

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