Developing a sleep apnoea clinic for prisoners

In this article...

- An overview of obstructive sleep apnoea
- The importance of developing a service for prisoners
- Benefits of the service

Prisoners cannot always access the health services available to the general public, so one nurse set up a clinic to help diagnose and treat obstructive sleep apnoea.

Keywords: Sleep/Apnoea/Prison/Prisoner/Service provision

This article has been double-blind peer reviewed

Keywords: Sleep/Apnoea/Prison/Prisoner/Service provision

The main barriers to accessing healthcare services in prison are cost and time.

In this article...

An overview of obstructive sleep apnoea

The importance of developing a service for prisoners

Benefits of the service

Author Sue Reynolds is an advanced nurse practitioner/clinical manager, HM Prison Service based in the East of England.


People in prison may experience barriers in accessing health services. By exploring some of these barriers and how they have been overcome, this article describes how prisoners were made aware of obstructive sleep apnoea and the associated risks, and how a clinic was set up in a prison healthcare centre. It shows how access to a community service was made available to the prisoners, and details how the service was set up, how it operates and what the outcomes achieved.

Poor continuity of healthcare information is common when people are sent to prison, move between prisons or are released. Offenders and ex-offenders experience greater health inequalities and social exclusion than the general population (Equalities in Health, 2014). Although organisations like the National Offender Management Service (NOMS) aim to help them deal with health issues – by ensuring they have access to appropriate health services while they are in custody and the community – around 40% of prisoners report having no contact with primary care before their detention (NOMS, 2014).

Developments to the Health and Justice Information Service (HJIS), commissioned by NHS England, have introduced a new system of registering prisoners with a GP before their return to the community. This will help to improve connectivity across the community and custody, and between establishments. However, prison nurses must be proactive and move away from the outdated, medically dominated service that has traditionally been the norm (Norman and Parrish, 2000).

Nurses working in prisons are urged to forge links with colleagues in local NHS services, thereby supporting the partnership arrangements put forward in The Future Organisation of Prison Health Care, which noted that “prison healthcare is often reactive rather than proactive” (Department of Health, 1999).

From April 2013, NHS England took responsibility for commissioned services across secure prison estates. A range of service specifications were developed that looked at the emerging skills across the clinical sector and enabled contracted services to move away from the historically GP-led practices.

Obstructive sleep apnoea

Obstructive sleep apnoea (OSA) is a condition that causes people to stop breathing in their sleep. Eventually the brain detects what is happening, wakes them up and their breathing restarts; this cycle may repeat hundreds of times each night. As a result, people with OSA have difficulty staying alert during the day, potentially posing a risk to themselves and those around them, particularly if they are drivers.

OSA is linked to obesity, type two diabetes and an increased risk of myocardial infarction or stroke. Risk factors are outlined in Box 1.

It is estimated that 4% of men and 2% of women have sleep apnoea, and at least 2.5 million people go undiagnosed for a long time.

The condition can result in sleep deprivation.

Daytime fatigue can put patients and those around them at risk of injury.

Prisoners should not have limited access to healthcare services.

Collaboration between prison and external healthcare services can help reduce health inequalities.

5 key points

1 Sleep apnoea can go undiagnosed for a long time
2 The condition can result in sleep deprivation
3 Daytime fatigue can put patients and those around them at risk of injury
4 Prisoners should not have limited access to healthcare services
5 Collaboration between prison and external healthcare services can help reduce health inequalities
Innovation

BOX 1. RISK FACTORS

- Obesity;
- Male gender;
- Increasing age;
- Menopause;
- Fluid retention;
- Adenotonsillar hypertrophy;
- Smoking

When a prisoner requires a hospital bed, the hospital has to provide a single room to protect the public and must accommodate not only the prisoner but the two escorting officers too. These facilities are rarely available in a busy sleep centre and usually reserved for isolation nursing or higher-dependency patients.

Health inequalities

People in places of detention often experience a higher burden of disease, and poorer access to treatment and prevention programmes than their peers in the community. Rates of homelessness, unemployment and a lack of basic-level education are high among offenders (Shaw et al, 2008). In addition, increasing numbers of people are being sentenced for historic crimes committed in their earlier years, which has led to an increasingly older prison population. With that comes a rise in health conditions associated with older age.

According to the World Health Organization (2007), healthcare services for prisoners struggle to provide sufficient access. O’Moore (2014) states that public-health challenges associated with detention settings are significant and increasing. However, detention represents an ideal opportunity to capture and educate an audience of patients with health promotion subjects, and inform them of services and treatments available so they can have access to healthcare.

Developing an OSA service for prisoners

To address the problem of OSA among prisoners, I decided to provide a community OSA service inside a prison using my previous skills, knowledge and experience. This would enable diagnoses to be made and treatment provided while reducing the costs of escorts by removing the need for a hospital visit. The service model is similar to how the local hospital operates its clinics, which are run as outpatient services. In addition, Tomlinson and Gibson (2006) reported on the successful transfer from inpatient diagnosis and initiation of treatment for OSA to a nurse-led domiciliary model. Proven to be feasible and cost-effective, outcomes were comparable to conventional inpatient services, indicating that successful services can be conducted outside of traditional healthcare settings.

Barriers to healthcare

The main barriers to accessing healthcare services in prison are cost and time. For example, taking a prisoner to accident and emergency costs around £1,100 and involves taking account of the staffing provision of escorting officers, transport costs (including a driver) and the time taken from the working day to attend the hospital (Turner and Jefferies, 2014).

Another obstacle in my experience is embarrassment. Often prisoners do not wish to go out and be seen by the public in handcuffs, so will refuse to attend their appointment. In addition, seeing prisoners in public places chained to officers can make members of the public nervous.

Having worked at a sleep centre before working in prison health, I had relevant experience and so set up links with the local hospital and communicated with the consultant and nurse practitioners from the sleep centre. We discussed:

- How referrals would be made;
- How access to the service would work;
- Coordination of equipment collection;
- Methods of communication between the hospital and prison;
- Time frames for results of patient investigations.

The head of healthcare at the prison had no objections as the service is provided in the facility. The only cost incurred is petrol to collect and return equipment, and the hospital is happy to support the service as it reaches a community to which it would otherwise have limited access.

Referrals and assessment

Posters advertising the OSA service have been displayed to raise awareness. Referrals can be made by prisoners themselves, their fellow prisoners or staff. Initial assessment involves taking:

- The patient’s history;
- Some physical observations such as body mass index, blood pressure, pulse, neck circumference and an Epworth sleepiness score;
- Notes of medications and symptoms.

Patients are referred by letter to the sleep centre at the local hospital, a date is then coordinated and an appointment arranged to collect the diagnostic monitoring equipment. This includes a pulse oximeter, which monitors the heart rate, oxygen saturation and desaturation, the minimum oxygen level reached, and the length in time of the desaturation.

Prisoners are given the equipment during a clinic to use overnight in the privacy of their cell. The number of incidences over the course of a night is calculated to produce a desaturation index figure, on which a diagnosis is based. The equipment is returned to the hospital the following day with a completed questionnaire, which asks about the patient’s quality of sleep using the equipment compared to without, alongside sleep history and a completed Epworth sleepiness score. The oximeter information memory of the night’s sleep activity is downloaded. Results of the monitoring are then interpreted, and specialist sleep consultants analyse the test results and provide a written diagnosis. Once diagnoses are received by the prison nurse, patients are informed during a clinic session which are run weekly; their results and possible...
treatments are explained, enabling them to make an informed choice whether they wish to commence treatment.

**Treatment**

Treatment for OSA involves continuous positive airway pressure (CPAP), which features a pump that delivers air under pressure via a hose and face mask. The air pressure acts as a stent to prevent obstruction and maintain the airway. Patients initially use an auto CPAP, which fluctuates positive pressure according to how much is required – this depends on airway resistance.

The auto CPAP is exchanged after 1-2 weeks for a set-pressure machine. The pressure is set at a sleep centre by a CPAP practitioner, according to the readings shown on the auto CPAP trial machine. Patients continue the treatment while in prison, as they would in their own home. I then deal with any follow-ups or reviews.

**Results**

During 2015, 49 patients were referred to the service and 24 started treatment and are using CPAP. In total, 17 referrals showed no diagnosis of OSA having undergone a sleep study and eight are awaiting sleep study results and/or diagnosis. The numbers awaiting appointments for assessments are always changing as prisoners become aware of the service.

**Conclusion**

There are many reasons why people with OSA remain undiagnosed, but providing a prison-based service has allowed another group of patients to be reached and given the opportunity to be treated, greatly improving their quality of life. The service has eliminated the need for hospital escorts as patients do not need to attend hospital at all, and has made a community service accessible to prisoners, thereby narrowing a gap in service provision.

It is not known how many other prisons, if any, provide an OSA service but due to the size of the specialty, it is likely that there are few, if any. There are few sleep centres around the UK and having the availability of a trained nurse with a speciality in this field with this expertise and who is able to provide this service makes it unique.

The development of the OSA service demonstrates how innovation and change can be practised in the confines of a prison establishment. This can enable a move towards equality in healthcare provision from within and beyond prison walls, strengthening links between prison and other healthcare services, breaking down some of the barriers prisoners experience when trying to access healthcare, and improving the quality of life of prisoners with OSA. NT

**References**

- British Sleep and Snoring Association (2015) Obstructive Sleep Apnoea. www.britishsleepsnoring.co.uk