

# Diabetes behind bars: Considerations for managing diabetes within the prison setting and after release

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## Article points

1. Delivering diabetes care in the prison setting presents a range of challenges, including those related to co-occurring health issues and security-related aspects of access to medication.
2. It also presents an opportunity to access a population that might contain many hard-to-reach individuals.
3. Primary care practitioners have an important role in ensuring continuity of care once prisoners are released.

## Key words

- Access
- Continuity of care
- Equality
- Inmates
- Prisons

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**There are nearly 100 000 people in prison in the UK at any time. It is important to ensure that this population has access to the same standard of care that those outside of prison have access to, because access to services should be based on need. This article explores the challenges presented, and opportunities offered, by diabetes care in the prison setting. This will be of particular interest to practitioners whose role extends into this setting. It also describes factors to consider for people returning to the community after release, and this will be important for all to read.**

There are currently around 90 000 men and 5000 women in prison in the UK (HM Prison Service, 2015; Northern Ireland Department of Justice, 2015; Scottish Government, 2015). As the prison population is transient in nature, it is difficult to derive an accurate estimate of how diabetes prevalence compares with that in the general population (although in our local prison, which holds 1100 males, we know that the current diabetes prevalence is 4.8% [with 37% of these having type 1 diabetes and 63% having type 2 diabetes]). It has been shown, however, that the number of people in prisons in their seventies and eighties is on the rise (Berman and Dar, 2013), and we would expect that to have an effect on the prevalence of diabetes in this setting. Also well established is that offenders are more likely to smoke, misuse drugs and alcohol, suffer mental health problems, report having a disability, self-harm, attempt suicide and die prematurely, compared with the general population (National Offender Management Service et al, 2013).

## The shape of prison care

In March 2012, the Health and Social Care Act received royal assent. The Act introduced significant restructuring of healthcare services

in England from April 2013, including the abolition of strategic health authorities and primary care trusts. It created an independent NHS Commissioning Board – NHS England – with responsibility for commissioning “services and facilities for people in prison and other places of detention” and also resulted in the formation of Public Health England. The responsibilities for the new NHS England cover both public and contracted prisons and therefore effectively complete the transfer of responsibility for prison healthcare to the NHS. A similar process has taken place in Northern Ireland, with responsibility for healthcare in prisons having being transferred from the Northern Ireland Office to the Health and Social Care Trusts. In Scotland, the Government, back in 2008, announced that healthcare would best be delivered via the portfolio of the Cabinet Secretary for Health, rather than the Cabinet Secretary for Justice, thus aligning Scotland with the prison service in England and Wales.

From April 2013, NHS England became responsible for commissioning almost all health services for people in prisons in England through “Health and Justice” commissioning teams. This expands the range of healthcare

### Page points

1. Prisons can present barriers to accessing medication, including security-related aspects of holding medications and equipment.
2. It is thought that approximately 90% of inmates in the UK have a mental health problem, a substance misuse problem or both and that up to 80% smoke.
3. The large demand for healthcare in prisons, which is the result of a number of complex factors, provides an opportunity to access what could be considered a hard-to-reach group when not in prison.

services which are directly commissioned for prisons; of particular note is the new responsibility for commissioning secondary care, community services and public health services. Key expectations of the Department of Health (DH) were set out, specifically: “Developing better healthcare services for offenders and people in the criminal justice system which are integrated between custody and the community, including through development of liaison and diversion services” (DH, 2012).

The National Partnership Agreement (National Offender Management Service et al, 2013) has further clarified equality-related aspects of service provision:

- Prisoners should receive an equivalent health and wellbeing service to that available to the general population with access to services based on need.
- Health and wellbeing services in prison should seek to improve health and wellbeing, tackle health inequalities and wider determinants of health and contribute to protecting the public and reducing re-offending.
- Prisoners should expect to experience a measurable improvement in their health and wellbeing, particularly in respect of recovery from substance misuse addictions, mental health problems, management of long-term conditions and access to public health interventions to prevent disease and illness.
- Prisoners should expect continuity of care between custodial settings and between custody and community.

It is important to understand this political landscape that is guiding healthcare in prisons setting, but perhaps more important still is recognising aspects of care that are specific to delivery in this setting. These are covered in the next section.

### Diabetes within a prison: An overview

Ideally, prisoners should be allowed to self-manage their diabetes; however, in some situations that is not possible. Good diabetes

management is very much dependent on access to clinical staff, with their skills and knowledge, and the necessary medical equipment. But prisons can present barriers to access, including security-related aspects of holding medications and equipment. Moreover, in my experience, even when these barriers can be overcome it is often the case that people in prison who have diabetes may not have considered the condition to be the top priority in their lives.

Another thing to consider, and as already mentioned, is that people in prison may have a high burden of health issues, with associated complex needs. Back in 2002, Gulland documented that 90% of inmates in the UK had a mental health problem, a substance misuse problem or both and that a very high number – up to 80% – smoked. Adding a diagnosis of diabetes onto this background of factors clearly creates a significant care challenge in this group. Furthermore, being in a prison setting can be detrimental not only to mental health but also to physical health.

Conversely, there are also potential positives. All UK prisons have some healthcare facilities and healthcare staff on site – varying from pharmacies, nurses and GPs to a full hospital ward area (Cook, 2011) – and for some individuals, prison can provide an opportunity to access healthcare that had not been taken up in the community (Marshall et al, 2001; Condon et al, 2007). Marshall et al (2001) found that prisoners characteristically make little use of health service outside prison, but make extensive use of services during imprisonment. In their study, they demonstrated that prisoners consulted prison healthcare workers approximately 23 times per year (77 times more frequently than men in the community consult a nurse).

This large demand for healthcare in prisons, which is the result of a number of complex factors, provides an opportunity to access what could be considered a hard-to-reach group when not in prison. It is important that this opportunity is seized. In order to provide access to the health service needs of an inmate, some prisons will arrange for a healthcare professional to visit the prison and provide

a clinic within the prison site (Mills, 2013), while others will transfer prisoners to off-site medical care. This can be time-consuming and often requires security arrangements involving two prison guards, which can, in turn, lead to cancellations, failure to attend or appointments not being set up at all.

### Management and care

The aspects of diabetes management and care introduced in the previous section are explored in more detail below, beginning with lifestyle and diet.

### Lifestyle and diet

Research by Herbert et al (2012), in which the data from a number of studies were compared, showed that both men and women in prison were less likely to achieve adequate physical activity (defined as more than 150 minutes per week) than those not in prison. Diet is another important determinant of health, and in a survey of male prisoners, by Lester et al (2003), 62% of the respondents stated that they ate fewer than three portions of fruit and vegetables a day, even though the prison diet was judged to allow for the daily consumption of at least five portions. This highlights that the dietary choices that prisoners are making need to be taken into consideration. Moreover, it emphasises that nutritional advice should be reinforced in the setting, ideally on an ongoing basis. Similarly, while opportunities for exercise in prisons exist, 68% of the respondents in the survey of Lester et al (2003) reported that they never took vigorous exercise.

Such failings in achievement of health indicators are not due to a lack of guidance. Diabetes UK, for instance, published a position statement in 2005 on diabetes care in the prison setting. This provides a description of the minimum dietary standards that all people with pre-existing diabetes, or who develop the condition while in prison, should expect (see *Box 1*).

Clearly, there is a crucial role for dietitians in the prison setting – including involvement with the staff and catering team – to help

#### **Box 1. Minimum dietary standards that all people with pre-existing diabetes, or who develop the condition while in prison, should expect (Diabetes UK, 2005).**

The quote below is presented as an illustration. It should be noted that while the advice was appropriate at the time the guidance was issued, it would not necessarily be similarly appropriate now, with significant changes in some dietary recommendations having occurred.

“ To receive a balanced, healthy diet which is low in animal or saturated fat (providing alternative low fat dairy products e.g. semi-skimmed milk) and which includes regular meals based on starchy carbohydrate foods (bread, potatoes, chapatis, pasta, rice) and also plenty of fruit and vegetables. Provision of snacks in-between meals (fruit, plain biscuits, sugar free yoghurts) is essential to maintain good blood glucose control. Flexibility with meals and access to food at times other than meal times may be necessary for people with diabetes on insulin therapy, in order to minimise the risk of hypoglycaemia or coma due to low blood glucose levels. For example, at bedtime a snack of toast, cereal and milk or a milky drink would be appropriate. The needs of people with diabetes in relation to snacks and food varies from person to person and on changing activity levels. It is therefore important that all dietary regimens are individualised.”

inmates follow a healthy eating protocol. This would, in addition, have a positive impact on other long-term conditions (Booles, 2013).

A final point to consider pertaining to diet in the prison setting is that fruit (which can be made into alcohol, or “hooch” as it may be known) is often traded by prisoners for other items.

### Prescribing considerations

Pharmacotherapy can be an important part of the process in treating ill health and improving the wellbeing of people in prison. However, medications are often misused within this setting, and this presents an important issue to consider when deciding on medications to be prescribed. Inmates, for instance, seek prescription medicines for a psychotropic effect rather than the intended therapeutic or licenced use. Furthermore, medicines can acquire a commodity value and are often traded within prisons (Bicknell et al, 2008). As an example of

### Page points

1. Good glucose control is fundamental to the management of diabetes, and while many prisoners have poor control when they arrive in prison, the access to regular medications and meals, along with exercise, offers potential for improvement.
2. Conversely, a rigid routine and the lack of snacks to reduce the risk of hypos can cause problems.
3. Hyperglycaemia is a potential issue too, especially as some prisoners will not have access to blood glucose or blood ketone monitoring equipment.
4. People in prison with diabetes will need access to healthcare professionals with knowledge and skills to handle the complex issues associated with the setting.

how this can impact on pharmacotherapy, some drugs used in general practice for neuropathy might be highly sought after, and thus of high trade value, in prison, on account of their use in enhancing the effects of opiates and their own inherent abuse potential; they are thus not necessarily available for prescribing within this setting.

Despite these challenges, it can be beneficial for prisoners to have possession of their medications. This is crucial if the person is to be able to effectively self-manage their glucose. In the case of insulin, being in possession of the medication offers a less “prescriptive” approach, which may also be beneficial. Indeed, in 2003, as part of a wider programme to bring improvements in healthcare delivery to prisoners, HM Prison Service and the DH jointly published *A Pharmacy Service for Prisoners*, in which it was stated that:

“Medicines in use, together with associated monitoring and administration devices, should normally, as a matter of principle, be held in the possession of prisoners.”

Of course, there is potential for harm to result from this approach. Therefore, an individual risk assessment should be carried out before a prisoner is left “in possession” of their medications.

### **Glycaemic control: Avoiding acute complications**

Good glucose control is fundamental to the management of diabetes, and while many prisoners have poor control when they arrive in prison, the access to regular medications and meals, along with exercise, offers potential for improvement (the earlier comments about potentially poor uptake notwithstanding). Conversely, a rigid routine and the lack of snacks to reduce the risk of hypos can cause problems. Some inmates may not have been in prison before, particularly younger ones, and they may have previously relied on a parent to support them with their glucose control. Not having access to help as quickly as they are used to can be extremely stressful, and

some prisoners may intentionally allow their glucose levels to run higher to avoid the risk of hypoglycaemia, particularly if they know they have impaired awareness or have previously experienced nocturnal hypoglycaemic episodes.

Hyperglycaemia is itself a potential issue too, especially as some prisoners will not have access to blood glucose or blood ketone monitoring equipment. It is vital that prisoners who are at risk of developing diabetic ketoacidosis have access to the tests recommended in *The Management of Diabetic Ketoacidosis in Adults* (Joint British Diabetes Societies Inpatient Care Group, 2010).

Education must go hand in hand with access to testing. Booles and Clawson (2009) carried out an audit that highlighted the poor handling of hypoglycaemia and diabetic ketoacidosis events in prison in reference to prisoner understanding, as well as the level of knowledge among the prison staff and their responses to these clinical episodes. If staff do not have the necessary skills, there should be access to a specialist service local to the prison that can provide it.

### **Healthcare professional support**

People in prison with diabetes will need to have access to healthcare professionals that have the knowledge and skills to handle the complex issues associated with the setting. Without adequate support, this group of people are likely to have an increased risk of developing both acute and chronic complications.

In 2006, a prison service order was published that outlined the necessary partnership arrangements between HM Prison Service and the NHS for providing prisoners with access to the same range and quality of services as non-prisoners (HM Prison Service, 2006). As part of this, prisoners should, through local prison healthcare services, develop contacts with community health providers. They should be able to identify appropriate referral routes for individual prisoners, which are aimed at maintaining continuity of healthcare upon release. During the release of all prisoners for whom healthcare needs have been identified, adequate referral arrangements need to be

made and the individuals should, of course, be informed what these are. This requires that information to ensure continuity of care is communicated, with the prisoner's consent, to the GP practice and any other responsible community agencies on discharge. This is set out in the "Release/Discharge" of the document *Continuity of healthcare for prisoners* (HM Prison Service, 2006).

The challenges of successfully resettling into the community are exacerbated for prisoners with health problems because they may face substantial barriers in areas such as primary care. As primary care can often be a gateway to other services, the failure to connect with a GP has wide-ranging consequences.

Where a prisoner who is receiving medical care that needs to continue after discharge does not have an external GP, it is important that healthcare staff help the prisoner to register with one prior to discharge. Prison healthcare staff must also supply medication appropriate to clinical need to ensure supply until a GP prescription can be obtained (HM Prison Service, 2006).

### An opportunity for specialist clinics

A recently published study from a specialist nurse-led prison-based diabetes clinic demonstrated both improved glycaemic control and reduced acute complications by allowing the recommendations suggested by the National Partnership Agreement to be implemented (Mills, 2014). Offering a specialist diabetes clinic within the prison setting can be an excellent opportunity for joint working and training provision for prison healthcare staff (Robson, 2009).

### Concluding thoughts

With an aging population, not just across society but also within the prison setting, there is going to be an increase in pressure on prison healthcare services, which are already presented with many challenges. Ongoing development of educational and clinical services also needs to be addressed, on top of this, to help ensure the opportunities presented by the prison setting are seized. As an over-riding principle, people involved in

this area of diabetes services need to strive to ensure continuity of care. Without this, both the prisoner and the healthcare professional are at risk of failing to achieve good outcomes. ■

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**“Ongoing development of educational and clinical services also needs to be addressed to help ensure the opportunities presented by the prison setting are seized.”**