

Workplace health needs assessment proposal: case study

Occupational health adviser **Nic Lee** describes a health needs assessment (HNA) proposal that he has developed to manage employees with diabetes who are working in a safety-critical environment.

This article will outline the proposed health needs assessment (HNA) for railway and logistics workers who manage their diabetes with medication and who are at risk of dismissal if they develop diabetes-related complications, such as hypoglycaemia or retinopathy.

The first step of an occupational HNA is to identify a health improvement need in a specific population.

Once the population has been identified – safety-critical workers registered at an undisclosed site, to ensure the sample size is manageable – the second stage of the HNA cycle can begin: identifying the problems and challenges to be overcome (National Institute for Health and Care Excellence (NICE), 2005). The method could be an online questionnaire, improving compliance and completion rates in a timely and cost-effective manner. The relevance of the questions should be explained, for example improving the process used for an annual diabetes at work programme, and promoting the self-management of diabetes at work.

The questionnaire should be presented in clear language that can be understood by the layman, and submission of the completed questionnaire only allowed after the

respondent has consented to the confidential use of their personal or sensitive information for the purposes outlined, on the understanding that their identity will not be disclosed in compliance with the Data Protection Act 1998 (Information Commissioner's Office, 2014).

The proposed questionnaire has four sections: job role; diabetes health and wellbeing; impact of work on diabetes health and wellbeing; and impact of workplace interventions on diabetes health and wellbeing. An explanation is provided below the relevant question, where necessary.

Systematic review

The CBI (2014) recommends using an HNA to identify whether or not changes are needed to improve the health and wellbeing of employees in a systematic way.

If wellbeing is determined by the physical, social and psychological environment that an employee works in, then it follows that when this balance is disturbed it can impact on the health and wellbeing of that workforce too (Dodge et al, 2012).

Health interventions should involve both employer and employee (Wright, Williams and Wilkinson, 1998).

Phillips (2013) argues that the clinicians involved need to collaborate with every member of the client company throughout each stage of the process, in compliance with ethical guidelines (Nursing and Midwifery Council (NMC), 2015). This includes the reason for the survey, how the results will be used, and how the proposed product will be delivered to its chosen population (East Midlands Public Health Observatory, 2012).

This can be achieved by using the Problem, Amenability to change, Benefits, Costs, Acceptance and Recommendation model (Maycock, Howat and Slevin, 2001).

This involves working with the key stakeholders to ensure that the HNA cycle is planned, delivered and evaluated successfully (NICE, 2005).

Since the survey outlined in this article has not been implemented, the interventions proposed are based on the public health needs of the wider population. World Diabetes Day provides a global promotion of a public health issue (International Diabetes Federation, 2014), with the current campaign focused on healthy eating as a means to prevent and manage type 2 diabetes and its complications.

Health surveillance

Given the increasing prevalence of diabetes mellitus (DM) within an ageing workforce (Tobias, 2011), meaning anyone above the age of 50 (Acas, 2011), the need for health interventions targeting DM is growing.

The Government recognises the need to encourage employers to implement reasonable adjustments in the workplace and to enable an ageing workforce to remain economically active (Department for Work and Pensions, 2014).

Clinicians can incorporate policies on presenteeism (NICE, 2012) at no extra cost into regular health surveillance activities mandated under the Health and Safety at Work Act 1974, and not only identify where exposure control is failing to protect employee health, but reduce the likelihood of it happening in the first place (Everton, 2014).

Although achieving behavioural change in type 2 diabetics is more difficult than in type 1 diabetics (Vincze, Barner and Lopez, 2004), Clarke et al (2005) argue that there is an economic case for making such interventions to reduce the costly complications associated with poor glycaemic control.

This could be achieved in a cost-effective way by developing a protocol to include a card requesting relevant clinical information, eg HbA1c, lipids and retinopathy results.

This information could then be used by the clinical stakeholders, when educating and encouraging employees to man-

RAIL WORKER HEALTH NEEDS ASSESSMENT QUESTIONNAIRE

JOB ROLE

Over the last 12 months, have you been authorised to work trackside and/or on safety critical duties:

Yes
No

This question is intended to identify employees by duties undertaken, to ensure that the chosen population is selected. If the employee answers "No", then the questionnaire ends.

DIABETES HEALTH AND WELLBEING

Have you been diagnosed with, or do you have, either type 1 or type 2 diabetes mellitus, which requires you to take prescribed medication to control your blood sugar levels?

Yes
No

This question is intended to identify respondents by condition to ensure that the topic – diabetes in the workplace – is applicable to the population selected. Once again, if the employee answers "No", then the questionnaire ends.

Are you required to take insulin on a daily basis?

Yes
No

This question identifies whether the employee – whether a type 1 or type 2 diabetic – is at a higher risk of hypoglycaemia than a diabetic using oral medication only. This information identifies the potential risk that the respondent is exposed to when working trackside.

Do you monitor your own blood sugar levels at least once a day?

Yes
No

This question is intended to gauge whether or not the respondent manages their risk of hypoglycaemia by monitoring their blood glucose levels. The information obtained will inform the health interventions to be considered in the health improvement proposal to follow.

IMPACT OF WORK ON DIABETES HEALTH AND WELLBEING

Do your work duties impact your ability to balance your blood sugar level through exercise, diet and medication?

Yes
No

The title of this section is intended to be self-explanatory and convey the purpose of the questions posed.

Do your shifts, including night duties, impact your ability to balance your blood sugar level?

Yes
No

The responses will again inform the health interventions to be proposed.

Have you recorded or experienced any low blood sugar levels (hypos) while at work?

Yes
No

The response to the above question will once again inform the interventions to be considered in relation to the management of the risks from working with diabetes.

If yes, could these have been prevented if your working conditions or duties were adjusted?

Yes
No

The choice of only a yes or no answer to this question allows the data to be analysed in a way that allows qualitative adjustments to be assessed at the next stage of the health needs assessment cycle, using the Health and Safety Executive's (HSE) five steps to risk assessment model (HSE, 1998).

IMPACT OF WORKPLACE INTERVENTIONS ON DIABETES HEALTH AND WELLBEING

Have you attended a diabetes review or a diabetes education programme outside of work?

Yes
No

This section of the questionnaire is intended to address the perceived needs and health aspirations of the chosen population.

Are you required by your employer to attend an annual diabetes at work review?

Yes
No

If yes, is this review at least 30 minutes long?

Yes
No

If yes, is 30 minutes long enough to cover your needs as a diabetic at work?

Yes
No

Are you normally reviewed by a doctor or a nurse?

Doctor (OHP)
Nurse (OHNA)

Do any of the health checks, such as weight (body mass index), blood pressure, or eyesight, make you more likely to make changes in your diet, alcohol intake, physical activity, or smoking?

Yes
No

If yes, are you given information on how to make such changes, either online or in paper format, such as how to enrol on a smoking cessation programme or join a cycle-to-work scheme?

Yes
No

If no, what is stopping you from making such changes:

[FREE TEXT]

This final question is intended to overcome the limitations of using only closed questions thus far.



HEALTH NEEDS... assessment must identify any requirements of diabetic workers employed in safety-critical environments.

age their own condition, which has been shown to reduce absence levels (NHS Employers, 2014).

This is where the OH practitioner, and especially the nurse, has an opportunity to promote wellness in the workplace and to reduce health inequalities in a given population by reducing unemployment related to ill health (NICE, 2005).

Further interventions

Following the questionnaire, a second health intervention could be implemented, simplifying the bookings, time allocations and roles of clinicians involved in a diabetes at work review.

To achieve this, a referral algorithm (set sequence of activities for triage) could be used by clinicians and management. This algorithm would be designed by the stakeholders, and enable line managers to triage type 1 and 2 diabetics through the proposed referral algorithm.

The lean methodology used in manufacturing could be used to evaluate the health improvement activity at each stage of the health promotion cycle in a way that is specific, measurable, achievable, relevant and time-bound (SMART) (Gijo and Rao, 2005). This enables the intervention to be modified as it is developed, if results suggest this is necessary. Thus, using the SMART evaluation tool would make triaging diabetics to the correct clinician less problematic.

A third health intervention could be to use health surveillance to promote wellbeing in the workplace, preventing rather than just measuring ill health in the process (Black, 2008). This can be achieved by relating exercise, diet and other lifestyle advice to the clinical readings discussed at a diabetes review.

To further promote diabetes health and wellness that is an evidence-based toolkit could be developed to aid self-management in a way relevant to the life of a safety-critical worker.

This initiative and others, such as organising diabetes support groups at work, may only be possible with the involvement of key stakeholders.

The OH nurse is key to achieving this in the workplace and improving public health in the process.

DM is a global pandemic which can be prevented, or at least better managed, through the promotion of a healthier diet, smoking and alcohol cessation, and increased physical exercise (International Diabetes Federation, 2014).

The OH adviser can use problem-based learning to identify: what is known about each individual employee; what needs to be known; and what further information is needed to address the unmet health needs identified by the health needs assessment (Hmelo-Silver and Eberbach, 2012).

A final health intervention is for management to make attendance at an annual diabetes review mandatory for the selected population, on the grounds that it is a periodic fitness for work review.

Evidence from the Diabetes Control and Complications Trial (1993) and the UK Pro-

spective Diabetes Study Group (1998) support the interventions proposed in this article to promote diabetes self-management, as a means to improving glycaemic control in type 1 and type 2 DM respectively.

Self-management

In conclusion, the Government's emphasis on promoting health improvement and wellbeing strategies in the workplace (The Knowledge Network, 2014) builds on the Bangkok Declaration (World Health Organisation, 2005), which advocated promotion of public health through empowering individuals to manage their own health through the workplace.

A diabetes at work review offers OH advisers an opportunity to achieve this aim. Given that the limited research available shows that health promotion in the workplace achieves only moderate success (Hayday, 2004), it is important that OH nurses promote easy-to-understand and achievable behavioural change within the workforce (Nursing and Midwifery Council, 2015).

■ *Nic Lee BSc SCPHN (OH) is director of Ad Hoc Occupational Health. Website: www.adhocoh.com*

References

- ▶ Acas (2011). "The employment relations of an ageing workforce".
- ▶ Black C (2008). "Working for a healthier tomorrow: Dame Carol Black's review of the health of Britain's working age population". London: The Stationery Office.
- ▶ Clarke PM et al (2005). "Cost-utility analyses of intensive blood glucose and tight blood pressure control in type 2 diabetes (UKPDS 72)". *Diabetologia*; 48(5), pp.868-877.
- ▶ CBI (2014). "Getting better: workplace health as a business issue", available at www.cbi.org.uk/media/2727613/getting-better.pdf
- ▶ Data Protection Act 1998. London: The Stationery Office.
- ▶ Department for Work and Pensions (2014). "Fuller working lives: a framework for action".
- ▶ Dodge R et al (2012). "The challenge of defining wellbeing", *International Journal of Wellbeing*; 2(3), pp.222-235.
- ▶ East Midlands Public Health Observatory (2012). "Health, work and wellbeing: defining the priorities: workplace health needs assessment for employers".
- ▶ Everton S (2014). "Health surveillance" in G Thornbory (ed) in *Contemporary Occupational Health Nursing: A Guide For Practitioners*, pp.75-97. Abingdon: Routledge.
- ▶ Gijo EV, Rao TS (2005). "Six sigma implementation – hurdles and more hurdles", *Total Quality Management and Business Excellence*; 16(6), pp.721-725.
- ▶ Hayday S (2004). "Promoting a healthy workplace", available at www.employment-studies.co.uk/pdflibrary/mp34.pdf
- ▶ Health and Safety at Work, etc, Act 1974. London: The Stationery Office.
- ▶ Health and Safety Executive (1998). "Five steps to risk assessment", available at www.hse.gov.uk/pubns/indg163.pdf

- ▶ Hmelo-Silver CE, Eberbach C (2012). "Learning theories and problem-based learning", in Bridge S, McGrath C and Whitehall TL (eds) in *Problem-Based Learning in Clinical Education: The Next Generation*, pp.3-18. London: Springer.
- ▶ Information Commissioner's Office (2014). <https://ico.org.uk>
- ▶ International Diabetes Federation (2014). *World Diabetes Day 2014*, information available at www.who.int/healthpromotion/conferences/6gchp/hpr_050829_%20BCHP.pdf?ua=1
- ▶ Maycock B, Howat P and Slevin T (2001). "A decision-making model for health promotion advocacy of drunk-driving control measures", *Promotion and Education*; 8(2), pp.59-64.
- ▶ National Institute for Health and Care Excellence (2005). "Health needs assessment: a practical guide", available at http://admin.nice.org.uk/nicemedia/documents/Health_Needs_Assessment_A_Practical_Guide.pdf
- ▶ NICE (2012). "Workplace health", available at www.nice.org.uk/advice/lgb2/resources/non-guidance-workplace-health-pdf
- ▶ NHS Employers (2014). "Reducing sickness absence in the NHS using evidence-based strategies", available at www.nhsemployers.org/~media/Employers/Publications/Reducing%20sickness%20absence%20in%20the%20NHS.pdf
- ▶ Nursing and Midwifery Council (2015). "The code: professional standards of practice and behaviour for nurses and midwives". London: NMC.
- ▶ Phillips A (2013). "Management of OH services" in G Thornbory (ed) in *Contemporary Occupational Health Nursing: A Guide for Practitioners*, pp.144-164. Abingdon: Routledge.
- ▶ The DCCT Research Group (1993). "The effect of intensive treatment of diabetes on the development and progression of long-term complications in insulin-dependent diabetes mellitus". *The New England Journal of Medicine*; 329, pp.977-986.
- ▶ Tobias M (2011). "Global control of diabetes: information for action". *Lancet*; 378, pp.3-4.
- ▶ UK Prospective Diabetes Study (UKPDS) Group (1998). "Intensive blood-glucose control with sulphonylureas or insulin compared with conventional treatment and risk of complications in patients with type 2 diabetes (UKPDS 33)". *Lancet*; 352, pp.837-853.
- ▶ Vincze G, Barner JC and Lopez D (2004). "Factors associated with adherence to self-monitoring of blood glucose among persons with diabetes". *The Diabetes Educator*; 30(1), pp.112-125.
- ▶ World Health Organisation (2005). *Bangkok Declaration*, available at www.who.int/healthpromotion/conferences/6gchp/hpr_050829_%20BCHP.pdf?ua=1
- ▶ Wright J, Williams R and Wilkinson JR (1998). "Development and importance of health needs assessment". *BMJ*; 316(7140), pp.1,310-1,313.