Diabetic foot care used to be managed by podiatrists but, in recent years, practice nurses have started undertaking diabetic foot assessments (DFAs) as part of diabetes care plans. To reduce the risk of diabetes-related foot complications, the National Institute for Health and Care Excellence (2015) recommends that DFAs are conducted by skilled and trained health professionals. However, do practice nurses receive adequate training on diabetes and its foot-related complications, both as undergraduates and in employment? This article reports on a recent survey of practice nurses exploring how well equipped they were to fulfill their role in diabetic foot care.

**Key points**

- Diabetic foot care used to be the preserve of podiatrists, but today it is often undertaken by practice nurses.
- Diabetic foot assessments should be undertaken by skilled and trained professionals to reduce the risk of complications.
- A small-scale survey found that practice nurses lacked adequate education and training in these assessments.
- Better pre-registration and post-registration training is needed.

**Authors** Trupti Lakha is specialist diabetes podiatrist, Department of Foot Health; Brian C Lee is consultant in diabetes and endocrinology, Department of Diabetes and Endocrinology; both at Sandwell and West Birmingham Hospitals Trust.

**Abstract** Practice nurses play a key role in diabetes management. Working in a shared care model with podiatrists, they often undertake diabetic foot assessments. However, there is evidence that they do not receive adequate education and training in diabetes care and foot assessment, before or after registration. This has recently been confirmed by a survey of practice nurses in the Sandwell and West Birmingham Hospitals Trust area. This article describes the survey’s background and outcomes, which have led the authors to suggest including diabetic foot assessments in the undergraduate nursing curriculum and creating a mandatory training module as part of continuing professional development.

**Citation** Lakha T, Lee BC (2018) Are practice nurses equipped to do diabetic foot assessments? *Nursing Times* [online]; 114: 8, 36-38.

**In this article…**

- Role of practice nurses in diabetic foot assessments
- Outcomes of a survey on practice nurses’ competence to undertake these assessments
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**Diabetic foot care**

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Clinical Practice

Discussion

Table 1. Survey questions and nurses’ responses

<table>
<thead>
<tr>
<th>Question</th>
<th>Response, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How much knowledge were you given about diabetes and its foot-related complications at undergraduate level?</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>8.7</td>
</tr>
<tr>
<td>A little</td>
<td>91.3</td>
</tr>
<tr>
<td>Detailed</td>
<td>0</td>
</tr>
<tr>
<td>2. Were you given training to perform the DFA at undergraduate level?</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>100</td>
</tr>
<tr>
<td>Yes</td>
<td>0</td>
</tr>
<tr>
<td>3. Do you perform the DFA in employment?</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>76.0</td>
</tr>
<tr>
<td>No</td>
<td>24.0</td>
</tr>
<tr>
<td>4. Do you feel confident in how, and why, you are performing the tests involved in DFAs?</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>14.3</td>
</tr>
<tr>
<td>No</td>
<td>80.0</td>
</tr>
<tr>
<td>n/a (respondents refused to comment)</td>
<td>5.7</td>
</tr>
<tr>
<td>5. Have you had any post-graduate DFA training in your employment?</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>82.6</td>
</tr>
<tr>
<td>No</td>
<td>17.4</td>
</tr>
<tr>
<td>6. What tests are you performing on diabetic patients?</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>131</td>
</tr>
<tr>
<td>Neurological and vascular tests</td>
<td>71.7</td>
</tr>
<tr>
<td>Investigations and lifestyle advice</td>
<td>15.2</td>
</tr>
</tbody>
</table>

DFAs = diabetic foot assessment.

*Q4 answered by respondents who answered ‘yes’ to Q3.  *Including 10g monofilament, 120kHz vibration, pedal pulses, capillary refill time and temperature gradient.  *Including fasting HbA1c, urine, liver and kidney blood tests, cardiovascular exercise, smoking cessation and dietary advice.

Foot ulcers, educate patients and refer them when needed (Franklin, 2013). Educational institutions have been encouraged to incorporate this into the nursing undergraduate curriculum (Franklin, 2013). However, the consensus is that student nurses do not receive enough education on DFAs (Moore and Clarke, 2011).

Cardwell et al (2016) observed that, among 86 third-year student nurses, 55% had substantial knowledge gaps in aspects of diabetes management. This may have been due to a lack of basic diabetes education at university, or of ward-based training during placements – or both. Although NICE guidance has evolved to take account of the fact that nurses are taking a greater role in managing the diabetic foot, it seems that undergraduate training has not kept pace with this change.

Survey

In the West Midlands, there is a high prevalence of diabetes and significant NHS resources are spent on treating the condition and its complications. This, coupled with the concerns about nurses’ training, led us to survey practice nurses in the Sandwell and West Birmingham Hospitals Trust area in 2015-16 to find out more about their knowledge, skills and competence in this field.

We designed a questionnaire with five closed questions and a sixth allowing additional free text. We asked about knowledge and training received at undergraduate level, whether practice nurses perform DFAs as part of their work, their confidence in doing so, postgraduate DFA training in employment, and what tests and interventions they perform and use with patients.

The questionnaire was sent by post to 70 local GP surgeries that employ practice nurses. Having obtained no response to this postal contact, we contacted the nurses by phone and invited them to meet face-to-face to complete the questionnaire; 46 out of 69 (67%) agreed. Their responses are detailed in Table 1 and Fig 1; additional information reported here was gained from participants in conversation during the face-to-face meetings.

At undergraduate level, no respondent had been trained in performing DFAs and none had received "detailed" knowledge about diabetes and its foot-related complications; most (91.3%) had received “a little” training and 8.7% had not received any.

In employment, 82.6% of respondents had received post-graduate DFA training and 76.0% were performing DFAs. However, 80.0% did not feel confident in how, and why, they were performing the tests included in DFAs.

The respondents had been qualified for between two and 31 years: 28% for 10 years or fewer and 72% for more than 10 years (Fig 2). They had obtained either an old-style nursing diploma or a university nursing degree.

Discussion

We would expect the longer nurses have been qualified, the more experience and competence they have – provided they have kept up with their continuing professional development (CPD). We would also expect the respondents who had obtained a degree to have been educated to a higher

![Fig 1. Number of nurse responses to survey questions](image-url)
The number of years since qualifying – for a degree course.

level of qualification upon entry is higher standard than those with a diploma, as the number of years since qualifying – and hence irrespective of whether the respondents had obtained a diploma or a degree – the amount of knowledge on diabetic foot and its complications imparted at undergraduate level had been limited (91.3%) or non-existent (8.7%). McHugh and Lake (2010) suggested that, without background knowledge, nurses run the risk of using poor judgement and lack the tools they need to learn from their experience.

Three-quarters of respondents performed DFAs as part of their work, despite having received no training as undergraduates. Respondents stated that their knowledge and training came from either workplace training delivered by specialist podiatrists or formal post-graduate courses. Some respondents had simply been told to perform DFAs because of the demand at their surgery but had not received training.

Most respondents (82.6%) had received post-registration DFA training, but few had received subsequent refreshers due to time constraints and/or lack of funding; 17.4% had received no post-registration DFA training at all. Diabetes UK (2015) reported that, in 2014, “60% of clinical commissioning groups [did] not fund specific diabetes education for health professionals”.

There was a widespread lack of confidence among respondents about carrying out the tests required as part of DFAs. Furthermore, only 71.7% performed neurological and vascular tests on their patients, despite these being particularly relevant to diabetes foot health.

Discussion

To complete a learning unit on preventing, diagnosing and managing type 2 diabetes go to nursingtimes.net/learning

This survey is a snapshot of the situation in our local area. Beyond its limited sample size, there are, as in any survey, limitations such as subjectivity and response bias (Clint et al, 2005). To add validity to our observations, a survey covering the entire West Midlands NHS region and involving a larger sample of practice nurses would be needed.

This survey highlights inadequate DFA training provided to student nurses and registered practice nurses. We believe that DFAs should be part of both the pre-registration nursing curriculum and of CPD for practice nurses. In addition, every person responsible for diabetic foot health should receive training from a suitably qualified clinician every year and have a professional assessment of their competency.

We recommend that, in the pre-registration nursing curriculum, DFA is incorporated into the existing diabetes module or a separate DFA module is created. This would equip newly qualified nurses with the knowledge, skills and confidence to meet NICE (2015) and Skills for Health (2016) recommendations, and subsequently build on their skills through CPD; a diabetic foot module is proposed in order to address the need for more specific diabetes education in foot health at undergraduate and at employment level. We also recommend the creation of a mandatory online training module on DFAs with graded competency levels for all practice nurses as part of their CPD.

Fig 2. Number of years since respondents qualified

Recommendation

Reference


For more on this topic online

- Diabetes management 3: the pathogenesis and management of diabetic foot ulcers
  Bit.ly/NTDiabetes3