limitation), participation in activities, quality of life or aspects of patients’ experience in using services.

While nurses are likely to be involved in administering PROMs and PREMs, it is also possible that they may be involved in selecting the questionnaire to be used. To ensure the one chosen is valid the stages of its development should be considered and evidenced, as these can vary greatly. Some have been developed by consulting patients about which questions to include, while others have used only groups of healthcare professionals to develop the questions and therefore their validity with patients is assumed rather than known.

Questionnaires use a variety of scoring methods. Some have scores that can be added up to produce a number, some use labels such as “agree” or “disagree”, and some need computer packages for analysis because scores cannot simply be added up.

The people involved in carrying out PROMs should ensure consistent and as far as possible, follow a protocol to ensure consistency in timing. For example, for a surgical PROM, there should be agreement about whether it is done preoperatively and postoperatively and the timings such as “on the day” or at preadmission clinic. Guidance on carrying out the four surgical PROMs required is available from the DH (2009b).

Patients should be given consistent guidance about completing the questionnaire. For instance, a question may ask: “Tell us about your symptoms in the past week.” Patients may ask whether they should think of their “bad” day during the week or the other “good” days; all staff involved must take a consistent approach. Finally, methods of data entry and analysis should also be consistent. All information should be agreed in advance, and guidance should be sought from those who developed the questionnaire on how to use and analyse the information obtained from it. PROMs are developed using clear processes, so it is extremely important that they are not altered in any way unless they are then retested for the key elements of rigour. These include:

- **Validity** – are the questions meaningful to patients; that is, are they answering the question that we think they are?
- **Reliability of the measure over time** – will the questions result in the same answer if nothing has changed for the patient?
- **Translation (cultural and linguistic)** – are versions available that have gone through the appropriate process for cultural and language translation? For example, a question for patients in the UK might read: “Can you do your housework?” For those in the US, it may need cultural translation to: “Can you do your yard work or chores?”

Box 1 provides a case study on how PROMs can provide insight on the patient experience of being in hospital and the referral process from the GP to having surgery.

**BOX 1. CASE STUDY**

Amy Green*, a 72 year old woman, was struggling to climb stairs at home, walk outside, carry shopping and play with her grandchildren. She was also experiencing pain, caused by osteoarthritis in the knee, which was keeping her awake at night and making her tired and miserable during the day. Mrs Green saw her GP, who referred her to an orthopaedic consultant. The consultant asked her to complete a questionnaire about her activities (PROM – Oxford knee score, see tinyurl.com/oxford-scores). This showed she was having problems with her activities of daily living at home and showed that pain was interfering with her ability to do what she wanted and keeping her awake at night. This, combined with clinical examination, resulted in Mrs Green being referred for a knee replacement.

She was asked to complete the PROM again at her preoperative assessment, and once more by her GP six months after surgery. This gave a picture of the impact of osteoarthritis on Mrs Green’s life before and after surgery, creating a clear picture of the outcome of the procedure from her perspective. She was also asked to complete a PREM questionnaire about her experience of being in hospital and the referral process from the GP to having surgery.

*The patient’s name has been changed.

**POINTS TO CONSIDER FOR PREMS AND PROMS**

Nurses involved in choosing a measure should consider the following:

- Is a questionnaire format appropriate for the patient population and the information you need to gather?
- What outcome(s) or experiences are you trying to understand?
- What measures are already available that sound appropriate from their title?
- From the original article on the measure (describing its development), can you establish the following:
  - What is the questionnaire measuring?
  - What is the conceptual basis? For example, there are many approaches to quality of life (QoL) – is the questionnaire based on health related QoL (HRQoL) or health utilities such as quality adjusted life years (QALYs) and so on? These are complex concepts; in brief, HRQoL explores domains relating to health such as impairment and activity limitation, while QALYs require patients to rate goals in relation to risk taking and hypothetical states. More detail on these concepts and others can be found in Rapley (2003).
  - Is there clear evidence that patients have been involved in identifying the questions in the PREM/PROM, or do your patients feel the questions cover their areas of interest?
  - Is there clear evidence of rigour in the design including: validity (is it asking questions that are relevant to patients?); reliability (has it been shown to be reliable over time?); and, if it is available in other languages, is there evidence of how these translations have been verified?

**FORMATS FOR PATIENT RESPONSES**

PREM and PROM questionnaires usually ask patients to answer the questions using one of a range of possible formats. The aim is to provide a wide enough range to give patients a choice of responses but not so much choice that it becomes difficult to differentiate between each option.

Two answer formats commonly used are Likert scales and visual analogue scales.

**Likert scales**

Likert scales are a rating scale (Henerson et al, 1987; Likert, 1932) in which patients are given statements and asked to rate their

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**FIG 1. EXAMPLE OF A LIKERT SCALE**

Following surgery, I am pain free (circle which applies):

- Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree

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