

# An evaluation of quality control activity for near patient testing in primary care

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## SUMMARY

Near patient activity is now increasing within the United Kingdom and can be a valuable activity within primary care, but only within the confines of safe practice that incorporates quality control procedures. This study identified widespread use of near patient testing (NPT) within primary care but that there is a haphazard approach to specific test performance. Results showed a poor understanding of quality control issues and provide a clear indication of future training and educational priorities if NPT is to develop in primary care.

**Keywords:** near patient testing; quality assurance; primary care; questionnaire.

## Introduction

NEAR patient testing, defined as the performance of a diagnostic test outside the laboratory setting,<sup>1</sup> can be a productive and valuable activity in primary care. This can only occur, however, within the confines of safe practice that incorporates quality control procedures.<sup>2</sup>

To ensure the quality of NPT in primary care, a number of issues need consideration, including where and by whom the tests are performed and their technical quality.<sup>3</sup> This study was designed to investigate the level of, and implications for, increased NPT activity in primary care in terms of the quality of health care provided.

## Method

A semi-structured questionnaire was devised to question NPT systems used, quality control procedures, and liaison with the local laboratory. The questionnaire was sent to two populations of senior practice nurses within the West Midlands, with a repeat mailing after six weeks. The practice nurse (PN) populations were provided by Warwickshire and Walsall health authorities in December 1996. The Statistical Package for the Social Sciences (SPSS) was used to undertake analysis using frequency distributions and cross tabulation. Content analysis of the open-ended questions was used to draw out any common themes or valid comments.

## Results

One hundred and sixty-four eligible PNs were mailed the questionnaire. The response rate was 114/164. Eleven different NPT activities were described (Table 1).

Only 39% (44/114) of the nurses stated that they were per-

forming any internal (within the practice) quality control (IQC). Twenty of the 114 (18%) nurses took part in an external quality control scheme (EQC) where results are compared with laboratory results two to three times a year.

When outlining how the nurses used their local laboratories, 10 (9%) said they sought advice regarding which machine to buy, 17 (15%) sought advice over maintenance of equipment, 32 (28%) used the laboratory to discuss accuracy of results, 14 (12%) to discuss health and safety issues, and 28 (25%) to discuss management of results.

## Discussion

Widespread use of NPT was demonstrated. The most frequently used NPTs were multi-test urine dipsticks (99%) and glucose monitors (92%). Only 43% of nurses in this study used NPT for monitoring cholesterol. Other NPTs were used by less than 30% of the population. Restricted use of NPTs may be a result of costs or limited awareness of their availability. It may also be due to that fact that some NPT may be undertaken by other health professionals and only PNs were questioned in this study.

Tests for vaginal infections and chlamydia, used by 26% and 14% of PNs respectively in this study, were described in an earlier study as expensive and not widely available.<sup>4</sup> Pregnancy tests, used by 24% of nurses, have also been described as highly specific and sensitive but expensive.<sup>4</sup>

The study showed that more than half of the nurses who responded were not performing any IQC on the equipment, which may suggest that accuracy and reliability of the tests they performed were given little consideration. Of the nurses performing IQC, only 14% performed it before every clinic, with nearly one-quarter performing IQC fewer than once a month. The implications from the results of this study are that NPT is largely performed haphazardly with little thought given to the specific test performance. Previously, nurses involved with NPT have showed little knowledge or concern about quality control and accuracy.

This study has shown an improved general awareness of the importance of quality control, nevertheless, 83% of nurses responding stated that they had no involvement in EQC. Involvement by practices using NPT in EQC schemes is essential if quality control directly corresponds with the fact that little is made of the local laboratories for support and advice regarding issues such as quality control. Given the range of activities performed and the lack of quality assurance demonstrated, this study strongly identifies a requirement for a formal programme of training in NPT management and quality assurance to be implemented if optimum performance is to be obtained.

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**Table 1.** NPT activity (n = 114)

NPT	Total n (%)
Urine dipsticks	113 (99)
Glucometer	105 (92)
Cholesterol	49 (43)
Vaginal infection	30 (26)
Pregnancy tests	27 (24)
Chlamydia	16 (14)
Hb analysers	16 (14)
C-reactive protein	11 (10)
H. pylori	6 (5)
INR	9 (8)
Desk-top analysers	4 (4)

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