

ORIGINAL ARTICLE

An evaluation of the quality of Emergency Nurse Practitioner services for patients presenting with minor injuries to one rural urgent care centre in the UK: a descriptive study

Joe McDevitt and Vidar Melby

Aims and objectives. To evaluate the quality of the emergency nurse practitioner service provided to people presenting to a rural urgent care centre with minor injuries. The three objectives that were focused were an evaluation of the safety and effectiveness of the emergency nurse practitioner service, an assessment of patients' satisfaction with the emergency nurse practitioner service and a determination of factors that may enhance the quality of the emergency nurse practitioner service.

Background. Urgent care centres have become increasingly prevalent across the UK. Emergency nurse practitioner services at these rural urgent care centres remain largely unevaluated. This study attempts to redress this deficit by evaluating the quality of an emergency nurse practitioner service in relation to the care of patients presenting with minor injuries to a rural urgent care centre.

Design. This descriptive study used a case-note review and a survey design with one open-ended exploratory question.

Methods. Patient views were collected using a self-completed questionnaire and a data extraction tool to survey patients' case notes retrospectively.

Results. Despite comparatively low total length-of-stay times, most patients felt they had enough time to discuss things fully with the emergency nurse practitioner. Although emergency nurse practitioners routinely impart injury advice, feedback from some patients suggests a need for the provision of more in-depth information regarding their injury. The vast majority (97.3%) of patients felt that the quality of the emergency nurse practitioner service was of a high standard. Contrary to some other studies, the findings in this study indicate that patient satisfaction is not influenced by waiting times.

Conclusions. Emergency nurse practitioners in rural urgent care centres have the potential to deliver a safe and effective quality service that is reflected in high levels of patient satisfaction.

What does this paper contribute to the wider global clinical community?

- Nurse practitioners in rural settings can deliver a safe and effective service.
- Waiting times at urgent care facilities do not influence patient satisfaction.
- Some patients require the provision of more in-depth information regarding their injuries.

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The term 'minor injury' will encompass both 'minor injuries' and 'minor illnesses' throughout.

Relevance to clinical practice. This study provides some evidence to support the continued expansion of the emergency nurse practitioner service in rural settings in the UK.

Key words: emergency nurse practitioner, minor injuries, quality of care, urgent care centre

Accepted for publication: 22 April 2014

Introduction

Emergence of urgent care centres

The increasing demand for unscheduled care poses a challenge for healthcare providers. Policy-driven changes in the UK have initiated a reconfiguration of traditional models of healthcare delivery with the subsequent growth of different models such as minor injury units (MIUs) and walk-in centres (Department of Health 2006, Audit Commission 2010, Bickerton *et al.* 2012). One such model of healthcare delivery is the urgent care centre (UCC) service that attempts to manage need locally and absorb some of the workload from typically overstretched emergency departments (EDs).

Since their emergence, UCCs have become increasingly prevalent in a variety of health trusts across the UK (Martin 2008). The model of care is currently seen in two main forms: one where the service is co-located within an ED as an optional 'stream' for patients attending with minor injuries and the other type of UCC model is a satellite service, such as a MIU based within the community setting (Department of Health 2007). Some MIUs have been integrated with, or developed into, UCCs, depending on local need (National Health Service 2007, Parker 2010). These UCCs attempt to provide a more accessible and timely response to the needs of people currently attending EDs with minor injuries (National Health Service 2010).

Operational definition of quality

A definition of quality of care has been established (Department of Health, Social Services & Public Safety 2011) under three main headings, and this definition was adopted for this study;

- *Effectiveness* – the degree to which each patient receives the right care, at the right time, in the right place, with the best outcome.

- *Safety* – avoiding and preventing harm to patients from the care, treatment and support that is intended to help them.
- *Patient experience* – all patients are entitled to be treated with dignity and respect and should be fully involved.

This definition of quality of care is reflective of health-care strategies across the UK (National Health Service Wales 2005, Department of Health 2008, National Health Service Scotland 2010).

Rationale for research

It is important to evaluate emergency nurse practitioner (ENP) services at UCCs as there are plans to develop this type of integrated urgent care model throughout the UK (Department of Health & Social Care 2011). It is envisaged that UCCs should be developed in accordance with local need and therefore should be tailored to meet the specific needs of that population. ENPs must maintain an understanding of the local care needs if they are to deliver a quality service to that population. Healthcare delivery, including ENP services, must be seen to deliver a cost-effective service in the current economic climate (Matthews 2010). The Department of Health (2012, online, no page) envisages that patients should receive 'the best care from the best person, in the best place and at the best time'. As such, ENPs in rural UCCs must be able to demonstrate their ability to deliver a quality service through evaluation.

Research aim and objectives

Aim

The aim of this study was to evaluate the quality of the ENP service provided to patients presenting to a rural UCC with minor injuries.

Objectives

- To evaluate the safety and effectiveness of the ENP service.

- To assess patients' satisfaction with the ENP service.
- To determine factors that may enhance the quality of the ENP service.

Background

The literature review revealed a substantial body of evidence which strongly signifies that ENPs can provide a safe and effective quality service. It is a service with which patients are typically highly satisfied with, especially in terms of information giving, a patient-centred approach and an open communication style indicative of ENPs. Other aspects of practice synonymous with the ENP role include a perceived 'thoroughness' and the allocation of an adequate amount of consultation time for the patient. The literature review also indicates that ENPs typically demonstrate a high standard of documentation and appropriateness of referral. Although there is a commonly held perception that an ENP service can reduce waiting times, this has not been definitively shown to be the case. The environment in which the patient is seen may have more influence on waiting times than the type of professional who sees the patient.

Background to the emergency nurse practitioner service

In the UK, the nurse practitioner (NP) role originated in primary care in the early 1980s through the introduction of nurse-led clinics for chronic disease management and minor illness (McLaren 2005). The Scope of Professional Practice (United Kingdom Central Council 1992) provided guidance from the regulatory body on the extended role of the nurse. This professional guidance document subsequently enabled emergency nurses to formalise the concept of the ENP role in an attempt to address the needs of an increasing number of patients attending with minor injuries. The Audit Commission (2001) recognised the effectiveness of the ENP and strongly recommended the expansion of this service. The subsequent meteoric proliferation of ENPs in the UK is an endorsement of the success of the role (Daewood 2005, Fotheringham *et al.* 2011). Since then, the role of the ENP has expanded and matured, and the ENP is now considered a key healthcare provider in the UK (Fisher 2006).

Emergency nurse practitioners remain one of the most widely recognised and accepted subgroups of NPs. ENPs are at the forefront of many nurse-led services and are responsible for assessing, diagnosing and treating patients autonomously (Department of Health 2010a). Although the clinical aspect of the ENP role remains significant, it is by no means defined solely by this component. The ENP role

is dynamic and evolving, especially within the context of professional developments (Hoskins 2011) and current efforts to regulate the role (Royal College of Nursing 2010).

Clinically safe and effective practice

Central to the principles of clinical governance (Department of Health 1999), National Health Service (NHS) organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care. Patients are considered consumers of health services and expected to receive clinically effective, high-quality care (Leufer & Cleary-Holdforth 2009). A large randomised controlled trial (RCT) ($n = 1453$) conducted by Sakr *et al.* (1999) revealed that properly trained ENPs can provide care for patients who present with minor injuries that is equal to or in some ways better than that provided by doctors. Other studies have also acknowledged that appropriately trained and educated ENPs are able to provide safe and effective practice (Cooper *et al.* 2002, Sakr *et al.* 2003, Megahy & Lloyd 2004).

High satisfaction levels

An overarching theme that remained consistent throughout the reviewed literature was high levels of patient satisfaction. Some authors contest that large numbers of respondents are required to detect real statistical differences in patient satisfaction surveys (Collins 1999), yet even when this has been achieved, patient satisfaction remains consistently high (Touché Ross 1994, Sakr *et al.* 1999). In the UK-based RCT undertaken by Cooper *et al.* (2002), a convenience sample of adult patients ($n = 199$) exhibited high levels of patient satisfaction with the care provided by ENPs. Such overall high levels of patient satisfaction with ENP services are encouraging, yet to extract any real meaning from these surveys, it is necessary to examine the components of patient satisfaction. The concept of patient satisfaction is subjective, intricate and composed of multiple facets (Ryan & Rahman 2012). It could be argued that the components with which patients are least satisfied could provide specific evidence of issues for improvement of the service.

Factors influencing patient satisfaction

Patient satisfaction may be affected by expectations, patient characteristics as well as the patient's perception of the service (Knudtson 2000). As to whether or not demographic

factors influence patients' satisfaction, inconsistencies remain in the literature to date. Some research failed to discern any correlation between age or gender and patient satisfaction with the ENP (Thrasher & Purc-Stephenson 2008, Ryan & Rahman 2012). However, Green and Davis (2005) determined that age was the only significant predictor of patient satisfaction, as their study reported less satisfaction of 18- to 25-year-olds with a NP service when compared to other age groups.

Thoroughness

Another factor that may influence patient satisfaction was the perceived thoroughness of the ENP (Touché Ross 1994, Perry *et al.* 2005, Jennings *et al.* 2009). It may be that this thoroughness is one of the reasons why ENPs appear to excel in providing clinically safe and effective practice. Certainly, ENP thoroughness could contribute to other areas of their practice, including patient examination and high standards of documentation.

Reduced waiting times

Waiting times, both real and perceived, affect patient satisfaction (Rahmqvist & Bara 2010). As waiting time increases, patients become increasingly dissatisfied (Ritchie *et al.* 2004, Collis 2010), whereas when the waiting time is less than expected, patients exhibit higher levels of satisfaction (Thompson & Yarnold 1995). Cole *et al.* (2001) found that expectation about the length of waiting time was the only variable that was consistently related to patient satisfaction. Waiting times tend to be longer in large urban EDs and shorter in smaller rural EDs (Audit Commission 2001), although the reasons for this are unclear.

Although evidence has established the safety and effectiveness of ENPs, it has not been definitively shown that they reduce waiting times (Cooke *et al.* 2004). There is certainly a perception that an ENP service can reduce waiting times (Locker *et al.* 2005, Fotheringham *et al.* 2011), and the literature suggests that lower waiting times are an inherent by-product of an ENP-delivered service (Jarvis 2007, Wilson & Shifaza 2008). However, there is limited evidence that demonstrates that ENPs can directly affect waiting times.

In the Sakr *et al.*'s. (2003) cohort study, waiting times were much shorter in the ENP-led MIU group compared with doctor-led ED care. However, whether or not ENPs were independently responsible for the marked differences in waiting time remains unproven. Other factors, including high volumes of patients and subsequent 'bed-blocking' in

the ED, may equally have influenced waiting times (Cameron *et al.* 2009). Although it was minor injury services that were compared in this study, it is not made clear whether the doctors in the ED were also treating other ill patients concurrently.

In Thompson and Meskell's (2012) retrospective case-note study, the length-of-stay of patients seen by advanced nurse practitioners were compared with patients seen by doctors in one ED in the Republic of Ireland. A typically much shorter total length-of-stay for patients seen by an advanced nurse practitioner (ANP) compared with doctors was revealed. Significantly, this study acknowledged an inability to control other concurrent role responsibilities that may have influenced waiting times.

The fragmented and often protracted nature of the traditional ED system has long been associated with excessive waiting times (Swann *et al.* 2003, Wilson & Shifaza 2008). The apparent shorter waiting times achieved by ENPs could be attributed, at least in part, to having a dedicated environment. Evidence acknowledges that streaming of minor injury patients in EDs and dedicated MIUs expedites their journeys (Department of Health 2001, Cooke *et al.* 2002).

High standard of documentation

Emergency nurse practitioners have demonstrated the ability to maintain high standards of documentation (Tachakra & Deboo 2001, Megahy & Lloyd 2004, Organ *et al.* 2005). In the Cooper *et al.*'s. (2002) RCT, a documentation audit tool was used to measure the quality of each set of case notes written by either an ENP or a senior house officer (SHO). The documentation of the ENPs was found to be of marginally higher quality (28.0/30) compared with SHOs (26.6/30), which was statistically significant ($p < 0.001$).

Unplanned Re-attendances

Unplanned re-attendance is an acknowledged quality care indicator that is closely linked to dissatisfaction of the returned patient (Nunez *et al.* 2006). Despite evidence which suggests that ENPs promote more discretionary unplanned re-attendances (Dierick-van Daele *et al.* 2009), patients seen by an ENP are less likely to seek unplanned follow-up (Sakr *et al.* 1999, 2003). Conversely, other studies found that unplanned re-attenders were comparable between ENP and doctor groups examined (Tachakra & Deboo 2001, Cooper *et al.* 2002). The provision of adequate discharge advice is an effective strategy for reducing the occurrence of unplanned re-attendance (Taylor &

Cameron 2000, Kuan & Mahadevan 2009). Unplanned re-attendances are often averted when patients' concerns are addressed thoroughly by NPs (Nunez *et al.* 2006, Williams & Jones 2006).

NHS Information Centre (2012) indicated that 7.2% of patients re-attended urgent care facilities within seven days of initial attendance. Although it is advantageous to minimise the number of unplanned re-attendances by patients, their presentation should be seen as an opportunity to assess the patient for the possibility of missed injuries. Unplanned re-attendances have been shown to account for the detection of a significant amount of both missed injuries and inappropriately managed injuries (van der Linden *et al.* 2010).

Appropriateness of referrals

Referrals made by ENPs are consistently appropriate (Cooper *et al.* 2002, Sakr *et al.* 2003, Megahy & Lloyd 2004). A prospective case-control evaluation of ophthalmic referrals by Ezra *et al.* (2005) found that ENPs were consistently more accurate than SHOs in history-taking, examination and diagnosis. Consequently, the authors concluded that ENPs were competent in making accurate and appropriate referrals to ophthalmologists. In fact, they suggested that a significant reduction in ophthalmic workload may be achieved by patients being assessed by ENPs only. Such appropriateness of referrals could be viewed as validation of the clinical accuracy and high standards of documentation demonstrated by ENPs.

Distinctive communication style and holistic approach

Patients feel at ease talking to ENPs. A relaxed consultation style is apparently common among ENPs and may contribute to a more holistic approach of care (Touché Ross 1994, Cooper *et al.* 2002, Williams & Jones 2006). ENPs speak a language that patients can understand (Fisher 2006), which is associated with enhanced patient outcomes, including increased patient satisfaction and increased adherence to treatment plans (Charlton *et al.* 2008). In Jarvis' (2007) evaluation survey of an ENP service, a convincing 97% ($n = 416$) of patients felt that their treatment was explained *completely* by the ENP 'in a way they could understand'. Such findings were replicated in Wilson and Shifaza's (2008) retrospective case-note survey and questionnaire which revealed that 91.2% ($n = 57$) of patients felt that ENPs were competent in explaining matters to them.

Time for adequate consultation

Many of the studies reviewed (Williams & Jones 2006, Thrasher & Purc-Stephenson 2008, Jennings *et al.* 2009) concluded that patients felt they had enough time to discuss concerns fully with the ENP. Byrne *et al.* (2000a,b) revealed that ENPs spent longer than doctors at the initial consultation, and this resulted in greater patient satisfaction overall. Only one study reviewed found no significant difference in total consultation time (Cooper *et al.* 2002). Sakr *et al.* (2003) suggested that comparatively less pressured MIU environments allow ENPs more time with patients. However, increasing attendances may mean that ENPs will have less time with patients and this may lead to decreased patient satisfaction (Burley 2011).

Injury advice and health promotion

Health promotion is one of the fundamental tenets of ENP practice, and an effective patient-centred approach to this aspect of care may contribute to increased patient satisfaction (Daewood 2005). Although effective health promotion and injury advice can be time-consuming, the expertise of ENPs makes them ideally equipped to fulfil this essential aspect of healthcare provision (Dunlop 1999). Adequate health promotion and injury advice may mean a longer total length-of-stay for the patient. However, educating patients on their injury combined with a recovery strategy enables patients to assist themselves in their own pathway back to health. Sidani (2008) suggests that patients recognise quality care when it is individualised and when they are encouraged to be proactive in their own health-related decisions.

Paxton and Heaney (1997) conducted questionnaire surveys designed to measure patient satisfaction of the care received in one nurse-led MIU. This revealed that many of the respondents *expected* to be given advice and reassurance on their injury by the ENP. A follow-up questionnaire subsequently revealed that the vast majority (87%, $n = 456$) of patients felt that the ENP service had met these expectations.

Emergency nurse practitioners are significantly more likely to impart high-quality healthcare information to patients (Barr *et al.* 2000, Cooper *et al.* 2002, Wallis *et al.* 2009). When compared to patients seen by doctors, Byrne *et al.* (2000a) revealed that those patients seen by ENPs were significantly more likely to be given written instruction on discharge, given health advice and information and told who to contact should they need further advice.

Conclusion

The themes that have been explored in the literature should be interpreted within the context of their findings and limitations. Although ENP-delivered services typically result in high patient satisfaction levels, many of these studies were site-specific evaluations. Many of the studies were also newly developed ENP services, and this may have under-represented the overall evaluation of established services. While acknowledging the limitations of some of the literature, there is strong evidence which suggests that ENP services are safe, effective and held in high regard by patients.

Methods

Design

Using a descriptive design combining a case-note review and a survey, an evaluation of the quality of an ENP service was undertaken. While the study is primarily descriptive, the survey includes one open-ended question that should increase the depth of understanding of the phenomenon explored, without necessarily compromising the breadth of the study. It was also anticipated that the complementary findings of the qualitative data could be used to verify the data findings of the quantitative dimension of the study, thereby enhancing validity. The use of such a pragmatic paradigm allows researchers to move between inductive and deductive processes during the research process (Morgan 2007).

Methods of data collection

Retrospective case-note survey

A data extraction tool was created specifically for this part of the study to collect a range of objective data. The retrospective case-note survey collected data in relation to demographic details of age and gender, and clinical variables of waiting times, investigations, time to definitive treatment by ENP, type of injury and total length-of-stay in the department, and whether the patient subsequently returned as an unplanned re-attender. Research that uses data from patient records can be used in an effective way to monitor local health care (Department of Health 2010b, Department of Health, Social Services & Public Safety 2011).

To measure quality, standards must exist, against which practice can be measured. The retrospective case-note survey was structured to reveal quantitative details based on relevant clinical quality indicators (CQIs) (Department of

Health 2010b). These CQIs were introduced by the Department of Health to assist trusts in presenting a broader picture of the quality of urgent care services. NHS trusts are to be held to account against clinically credible and evidence-based outcome measures and not simply process targets used in the past (Department of Health 2011). The CQIs examined in this study were 'waiting time' (from time of arrival to when patient is initially seen by an ENP), 'total time spent in UCC' (from time of arrival to time of discharge) and any 'unplanned re-attendance' within seven days of original attendance. These first three CQIs are to be examined in the retrospective case-note survey, and a 'service experience' indicator was completed using a patient satisfaction questionnaire.

Patient satisfaction questionnaire

Patient satisfaction is a recognised method of evaluating nursing practice and is perceived as an indicator of quality of care (Walsh 2001, Megahy & Lloyd 2004), reflective of patients expectations and experience (Foot & Fitzsimons 2011). Touché Ross (1994) developed a questionnaire to measure patient satisfaction with NPs. The Touché Ross (1994) *patient satisfaction questionnaire* was adopted for this study as it was deemed very relevant, as it has been used successfully in previous studies (Byrne *et al.* 2000a, Jennings *et al.* 2009) and exhibits validity and feasibility. Using Cronbach's α coefficient, the internal consistency of items contained in the questionnaire demonstrated good reliability ($\alpha = 0.829$). This questionnaire was slightly adapted and shortened for use in the UCC setting.

The satisfaction questionnaire uses brief, self-completion questions that concentrate on evaluating the main aspects of quality markers. The patient satisfaction questionnaire used consists mainly of questions or statements with a fixed set of possible answers and one open-ended question. Some of the questions use a Likert-type scale; others are closed questions seeking only 'yes' or 'no' answers. Although the questionnaire used was primarily constructed to secure quantitative data, it has one open-ended question and therefore attempts to secure a small amount of additional qualitative data also.

Background to site-specific study hospital

The study-site UCC provides services for an expansive rural catchment area of approximately 88, 000 people. This particular UCC is a 24/7 nurse-led service. This study focused specifically on the minor injuries service provided by the ENPs. Of the current 17, 000 annual attendances, the vast majority would be classified as 'minor injury' patients.

Sample and sampling procedure

This study used a prospective nonrandom convenience sample. Potential participants were identified from a population of all patients ($n = 888$) who attended the UCC during a continuous 21-day recruitment period. The sampling process took place during July and August of 2012. At the time of their attendance, the ENPs asked all eligible patients ($n = 347$) whether they were willing to participate in the study and receive a posted questionnaire. Prenotification of a forthcoming postal questionnaire is a recognised method of enhancing response rates (Edwards *et al.* 2009). The ENPs gave brief information to the patient of the study at the time of their attendance and any concerns were discussed.

Questionnaires were posted within three days of patient attendance, thus reducing the likelihood of recall bias. It was explicitly clarified that consent to participation in the entire study was to be implied on return of their questionnaire. Participants can imply their informed consent by returning a completed questionnaire (Royal College of Nursing 2011). On return of these coded questionnaires, they were matched to a correspondingly coded data extraction tool. Case-note surveys were only commenced once the patient satisfaction questionnaire had been returned and therefore consent obtained.

Inclusion/exclusion criteria

Some individuals belong to especially vulnerable groups, such as those with learning disabilities, people with mental health problems and children. This study did not include these people as research should not be carried out on vulnerable individuals if it could as easily be carried out on competent adults (Burns & Grove 1999). The inclusion criteria for the sample population were patients having attended the UCC with a minor injury within the recruitment phase and patients who were assessed and treated by an ENP, able to read/understand English and 18 years old and over. Exclusion criteria were patients in police custody, affected by alcohol and drugs, suspected or reported self-harm and those with learning disabilities or mental health problems.

Pilot study

Pilot work for the patient satisfaction questionnaire was carried out to check content clarity and acceptability. The questionnaire was shown to five individual patients who attended the UCC, and they were asked to provide feedback in relation to ease of understanding. It was also shown to five ENPs to check the face validity of the questionnaire. At the time, no clarity difficulties were encountered and the instrument was acceptable to patients and therefore no amendments were deemed necessary.

Ethical issues

Ethical approval was obtained from the regional research ethics committee and by the study site's hospital trust research governance committee.

Data analysis

The STATISTICAL PACKAGE FOR SOCIAL SERVICES (SPSS 2008) version 15.0 was used to analyse the quantitative data generated. A combination of descriptive and analytical statistics was used to examine data. Nonparametric tests were used in the absence of a normal distribution of scores (Pallant 2010). A confidence level of 95% with a confidence interval defined as a P -value of <0.05 was used throughout this study. Content analysis of the qualitative data was undertaken by categorising under distinguishable headings and further examined using thematic analysis. Some verbatim quotes were used in the discussion to illustrate identified themes.

Results

Response rate and demographics

Of the questionnaires posted out to the eligible participants ($n = 347$), a total of 111 were returned, giving a response rate of 32%. Males accounted for 50.5% ($n = 56$) and females accounted for 49.5% ($n = 55$) of the overall respondents. Respondents' age ranged between 18–91 years.

Unplanned re-attendance

There were four (3.6%) unplanned re-attendances to the UCC within seven days of initial attendance; none returned more than once.

Presenting types of injury

Lower limb soft-tissue injuries, including ankle sprains and crush injuries, accounted for almost one-third ($n = 36$, 32.4%) of all presentations to the UCC. The ten most common presentations to the UCC are presented in descending order of prevalence (See Table 1).

Waiting time to see the ENP

From time of arrival to start of full initial assessment by the ENP, the median waiting time was 22 minutes. The minimum waiting time was 0 minutes, and the maximum waiting time was 120 minutes. Patients were triaged by a

Table 1 Presenting type of injury

Type of injury	Number	Per cent
Lower limb soft-tissue injury	36	32.4
Eye problems	18	16.2
Upper limb soft-tissue injury	13	11.7
Wounds	12	10.8
Fractures and dislocations	12	10.8
Localised infection	7	6.3
Head and facial injury	6	5.4
Chest injury	4	3.6
Neck problems	2	1.8
Back problems	1	0.9
Total number of presentations	111	100

staff nurse after their arrival to the UCC, prior to being seen by an ENP.

Total length-of-stay

The median total length-of-stay for all participants involved in this study was 45 minutes. The shortest length-of-stay for a patient in the UCC was five minutes. The single longest time spent in the UCC by any patient was 125 minutes. In total, 73.0% ($n = 81$) of all patients were seen, assessed, diagnosed, treated and discharged by an ENP within one hour of registration in the UCC (See Table 2).

Investigations undertaken

Radiological investigations accounted for all investigations undertaken. Altogether, 46.8% ($n = 52$) of all respondents had X-rays undertaken.

Patient safety

Of the total number of patients ($n = 71$) who received medications for home, 98.6% ($n = 70$) were given advice on taking the medication by the ENP. Of the valid responses to the questionnaire, 69.8% ($n = 74$) of patients were given health education advice from the ENP. Only 41.3% ($n = 45$) of patients were given written advice about their injury, and most patients (90.1%, $n = 100$) were informed

Table 2 Total length-of-stay

Time in minutes	Number	Per cent
0–60 minutes	81	73.0
61–120 minutes	28	25.2
121–180 minutes	2	1.8
Totals	111	100

of who to contact if they needed more help or advice regarding their injury/illness.

Effectiveness of ENP service

The vast majority of patients (97.3%; $n = 108$) felt they had enough time to discuss things fully with the ENP. Of the valid responses, 83.8% ($n = 93$) of the patients indicated that they would be agreeable to seeing the ENP again about a similar health need. Some patients (14.4%, $n = 16$) indicated that they would not like to see the ENP about a similar health need. The vast majority of patients (96.4%, $n = 107$) indicated that they would recommend the ENP service to a friend. Although many patients (73.0%, $n = 81$) indicated that the ENP service could not be improved, some patients (18.9%, $n = 21$) felt that the service could be improved. Various suggestions of how the service could be improved were provided in response to the one open-ended question in this study. These patient suggestions were categorised into two main themes, namely 'a decrease in waiting time' and the provision of 'more information' regarding their injuries.

Patient satisfaction with ENP service

Patient satisfaction with the ENP service was addressed in statements one to five of the questionnaire. Overall, it would appear that patients have exhibited high levels of patient satisfaction with the ENP service. The findings of these questions have been summarised in Table 3. Using Cronbach's α coefficient, the internal consistency of items contained in the statements one to five demonstrated good reliability ($\alpha = 0.779$).

Factors influencing patient satisfaction

The total scores for the five patient satisfaction items were calculated, and the correlation between waiting times and total patient satisfaction was examined. Spearman's rank order correlation (ρ) between the two variables found no significant correlation ($\rho = -0.07$, $n = 108$, $p > 0.05$). The percentage of variance (0.49%) revealed very little overlap between the two variables.

Four age groups were collapsed into equal percentiles to enable comparison between age and total patient satisfaction scores. A Kruskal–Wallis test did not reveal any statistically significant ($p = 0.79$, $df = 3$) difference between the four age groups and patient satisfaction.

A Mann–Whitney U -test revealed a statistically significant difference ($p = 0.043$) between the total patient satisfaction

Table 3 Overall satisfaction with emergency nurse practitioner (ENP) service

Statements 1–5	Agree very much <i>n</i> (%)	Agree a little <i>n</i> (%)	Disagree a little <i>n</i> (%)	Disagree very strongly <i>n</i> (%)
The ENP understood why I had come to see them	105 (94.6)	2 (1.8)	0 (0.0)	1 (0.9)
The ENP was interested in me as a person	91 (82.0)	19 (17.1)	0 (0.0)	1 (0.9)
The ENP seemed to be very thorough	103 (92.8)	7 (6.3)	1 (0.9)	0 (0.0)
I was less worried about my injury after seeing the ENP	95 (85.6)	11 (9.9)	3 (2.7)	2 (1.8)
I will follow the advice of the ENP because I believe it is good advice	104 (93.7)	6 (5.4)	1 (0.9)	0 (0.0)

of males and females, with male respondents exhibiting higher levels of total patient satisfaction.

Patient evaluation of overall quality of ENP service

Most of the patients (81.3%) considered the overall quality of service provided by the ENP to be *excellent*. A summary of the breakdown of this global item has been demonstrated in a pie chart (See Fig. 1).

Discussion

This study adds further evidence that ENPs in rural UCC can deliver a safe and effective quality service, reflected by high levels of patient satisfaction.

Significant findings

Data from this study suggest that waiting times were much lower in this ENP-led UCC when compared to national waiting times. These patients are being seen in a timely manner, indicating the provision of an effective service. The

median waiting time for patients at this UCC (22 minutes) was compared favourably with national figures (49 minutes) (NHS Information Centre 2012). Similarly, the median total length-of-stay for all participants involved in this study (45 minutes) also was compared favourably against national figures (128 minutes) (NHS Information Centre 2012). The considerable differences in waiting times can be at least partially attributed to the dedicated environment which the UCC offers.

According to the data in this study, waiting times do *not* influence patient satisfaction. No correlation was shown to exist between increased waiting times and lower levels of patient satisfaction. Although several patients expressed some dissatisfaction with the waiting times, this was not reflected in the overall levels of patient satisfaction. One patient commented that ‘shorter waiting times would improve the service, but overall very good’ (Patient No. 40). Although total length-of-stays were typically short, most patients still felt they had enough time to discuss things fully with the ENP.

Although many of the respondents did not receive written advice leaflets about their injuries, most patients were at least given verbal advice prior to discharge. It would appear that the limited range of printed advice leaflets were being supplemented with verbal advice. Although ENPs appear to impart advice routinely, feedback from a small minority of patients suggests a need for more in-depth information. One patient recommended that ENPs should ‘provide more information on how to look after my injury’ (Patient No. 83). Nunez *et al.* (2006) previously acknowledged that patient satisfaction may be improved with better information giving. Therefore, patients’ individual information needs should be assessed and responded to accordingly.

The issue of patient safety was also addressed. By definition, patient safety included ‘preventing harm to patients from the care, treatment and support that is intended to help them’ (Department of Health, Social Services & Public Safety 2011, online, no page). The fact

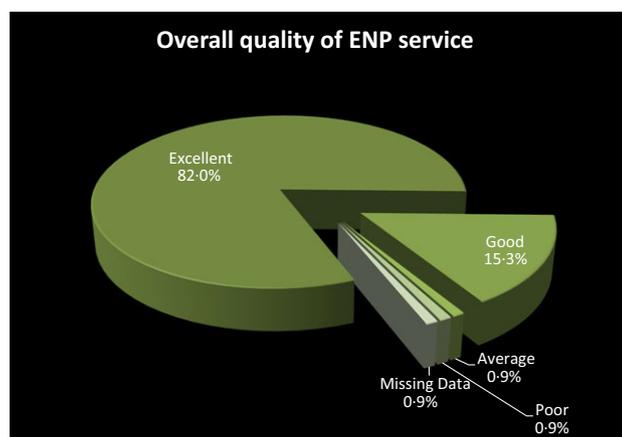


Figure 1 Overall quality of ENP service.

that patients are routinely given medication advice on discharge would strongly indicate that ENPs are 'preventing harm to patients' from this particular aspect of treatment. As the vast majority of patients were told who to contact if they needed more help or advice, it would appear that overall, matters of patient safety are being adequately addressed.

Echoing the findings of previous research (Sakr *et al.* 1999, 2003), patients seen by an ENP are less likely to seek unplanned follow-up. This may be due to NPs adequately addressing patients' concerns prior to discharge (Nunez *et al.* 2006, Williams & Jones 2006). Unplanned re-attendances in this UCC were half (3.6%) the national average of 7.2% (NHS Information Centre 2012). This indicates the provision of an effective service; however, the low response rate and the possibility of patient re-attendance at a different care facility should be factored into this assumption.

The vast majority (97.3%) of patients felt that the quality of the ENP service was either excellent or good. The patients' experience of a quality service was supported by comparable feedback, with one patient observing that 'the standard of care was excellent' (Patient No. 76).

Limitations

The 32% response rate obtained means that the views of many nonrespondents are unknown. As ENPs were aware of the patient satisfaction survey, this may have influenced their usual practice to some extent. This study was undertaken at one UCC only, and therefore, the results can only be truly representative of the study hospital. As this research was undertaken by one of the ENPs working in the UCC, bias could have been a factor influencing the presentation of the findings from this study.

There was an indication that the theoretical question, 'Would you like to see the ENP again about a similar health need?' was misinterpreted by some study participants. Although the vast majority indicated that they would recommend the ENP service to a friend, a significant proportion indicated that they would not 'like to see the ENP again' themselves. This apparent contradiction could be explained by a misinterpretation of the question by some patients. It is suggested that rather than these patients not actually wanting to see the ENP again because they were unhappy about the ENP service, some of the respondents may have thought this was an open invitation to see the ENP about another separate health need. A more extensive pilot study may have highlighted a problem with this question prior to conducting the survey. Any future studies

using this questionnaire may wish to consider amendment to the wording of this particular item.

Recommendations

A larger, multisite sample would undoubtedly yield more generalisable results. Future studies in this area may wish to further explore patient satisfaction and information needs using more in-depth qualitative interviews. Should this study be replicated, the authors might want to consider having a small focus group, in which members are asked to read the questions and explain what they think it means. This may eliminate problems encountered with possible misinterpretation of any questions, as identified in this study.

Conclusion

Emergency nurse practitioners in rural UCCs can deliver a safe and effective quality service. This is demonstrated by high levels of service user satisfaction, low waiting times, effective practice and ensuring safety by providing appropriate information about treatment factors such as medication and when to return to the department. ENPs are highly skilled professionals who work autonomously and effectively to meet patients' needs. Emergency nurse practitioners can provide a valuable, safe and effective service in rural UCCs.

Relevance to clinical practice

Emergency nurse practitioners in rural settings can deliver a safe and effective service. This small piece of research indicates that waiting times at urgent care facilities do not influence patient satisfaction. The findings of this study also suggest some patients have a need for more information on the management of their injury. ENPs should consider carefully the information needs of each patient they treat and ensure that such information needs are fully met. This could be achieved by discussing and formulating individual treatment plans with patients. However, strategies to meet information needs must consider patients' ability to absorb and retain more new information.

These findings could bear relevance in the commissioning of future services. ENP-led services may become a victim of their own success, unless commissioners reinvest in the development and expansion of such services. With increasing attendances to UCCs, fuelled by low waiting times and high levels of patient satisfaction, it may become more difficult to maintain a quality service in the future.

Disclosure

The authors have confirmed that all authors meet the ICMJE criteria for authorship credit (www.icmje.org/ethical_1author.html), as follows: (1) substantial contributions to conception and design of, or acquisition of data or analysis and interpretation of data, (2) drafting the article

or revising it critically for important intellectual content and (3) final approval of the version to be published.

Conflict of interest

None.

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