



## Telenursing: Proper Communication Avoids Malpractice Claims



Telephone advice nursing, or 'telenursing' including telephone triage, is defined as the practice of providing 'a component of telephone nursing practice that focuses on assessment, prioritisation, and referral to the appropriate levels of care' and 'identifying the nature and urgency' of a caller's or patient's needs'.

In Sweden, the service is called Swedish Healthcare Direct (SHD) and is provided by 33 call centres staffed by registered nurses (RNs), here referred to as telenurses. The RNs independently triage callers' care needs, give self-care advice and/or refer the caller to an appropriate level of care, with the assistance of a computerised decision support system (CDSS). The CDSS could be entered either by symptom or by diagnosis, covering various symptoms and conditions amongst children, adolescents, adults and older people. The recommendation levels within the CDSS vary from ambulance dispatch to self-care advice. No matter how accurate the CDSS is, errors may happen if the users do not use the system as intended.

### Previous Studies on Telenursing

Several studies have described how telenurses in both Sweden and the UK stated that they did not always use the CDSS as intended. As their knowledge about the CDSS increases, they are able to select the 'proper' main symptom to enter, enabling them to choose a route through the software that matches their own understanding of the symptoms and its causes, hence using the CDSS to confirm their decisions rather than excluding severe symptoms.

When a patient in Sweden is exposed to or subjected to a medical error, a malpractice claim is filed with the National Board of Health and Welfare (NBHW) by the healthcare provider or the patient. A medical error can be defined as 'the failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim'.

In a previous study of malpractice claim calls (Ernesäter et al., 2012), the root-cause analysis performed by NBHW showed that the most common reasons for the malpractice claims were communication failures (n=35). These communicative failures consisted of: failure to listen to the caller (n=12), communication failures (n=11) and telenurses asking the caller too few questions (n=10). The investigation also showed how telenurses in seven cases failed to follow the guidelines of the CDSS, or did not use the CDSS at all. The NBHW's investigations also showed how deficiency in the CDSS (n=5) contributed to the cases.

### Communication Problems Linked to Medical Errors

Fernald et al. have shown that as much as 70 percent of all medical errors within primary healthcare are related

to communication problems. Communication failures have also been shown to be the most common reason for patient safety risks, as well as the most common cause of adverse events. This likely also holds true for telephone advice nursing services, in which the assessment of healthcare needs is based solely on verbal communication. Safety risks in telenursing might be related to gathering partial information from callers, communicating with callers with language problems, or callers behaving in a way that hinders communication (such as being very angry); but the greatest risk seemed to be uncertainty due to the inability to see the caller in person.

When searching the literature, there are no descriptions found of how communication in telenursing should be conducted to achieve safe communication, and what communicative patterns characterise safe and unsafe calls. The authors believe that the potential differences found when calls subjected to a malpractice claim are compared to matched controls might shed light on both safe and unsafe communication practices via telephone. The aim of the present study was to compare communication patterns in calls subjected to a malpractice claim with matched controls.

## Study Materials and Participants

A total sample of all reported medical errors ( $n=33$ ) during the period 2003–2010 within SHD was retrieved as text documents from the NBHW, responsible for such investigations. In Sweden, all calls to SHD are recorded and stored as a sound file in a call database, connected to the patient record for a minimum of 10 years.

Corresponding calls were thereafter identified and collected as sound files from the manager in charge at the respective call centres. For technical reasons, calls from four of the cases were not possible to retrieve. For this study, matched control calls ( $n=26$ ) based on the patient's age, gender, and main symptom presented by the caller were collected. The three cases which the managers were unable to find controls to were excluded from the study. Hence, the study covered 26 cases and 26 matched controls, or a total of 52 calls.

The cases and controls were spread over a period of time from the introduction of SHD in 2003 until 2010 and fielded by different telenurses. The 26 cases and 26 matched controls each contained 16 male and 10 female patients. Patient age varied from 2 to 85 years; mean age 44 years, SD 23.7. The most common reasons for calling were abdominal pain ( $n=10$ ), chest pain ( $n=5$ ), dizziness ( $n=3$ ) and breathing problems ( $n=2$ ).

All authentic calls were analysed using the Roter Interaction Analysis System (RIAS), a commonly used instrument for describing provider–patient communication in various medical contexts. During analysis, the authentic communication between telenurses and callers was coded as frequency of utterances and of statements, and as a proportion of statements in a given category relative to all nurse/caller statements during the call. To control/adjust for differences in call length between the cases and matched controls, utterances in a category are presented as percentage of total utterances (i.e., utterances in the category divided by all utterances made by the caller or telenurses).

## Results

There were statistically significant differences between the communication in the cases and controls:

- Telenurses used fewer open-ended medical questions ( $p<0.001$ ) in the cases (mean 2.6, SD 3.0) compared to the control calls (mean 9.6, SD 4.5).
- The use of back-channel response – an indicator of sustained interest, attentive listening or encouragement emitted by the telenurses when not holding the speaking floor (Mmmm-huh; yeah; go on) by telenurses – was also significantly more common in the controls (mean 28.8, SD 11.3) than in the cases (mean 15.9, SD 10.1;  $p=0.001$ ).
- Callers provided telenurses with more medical information in the control calls (mean 54.9, SD 13.2) compared to the cases (mean 38.9, SD 13.4;  $p=0.001$ ); while callers in the cases gave more lifestyle information (mean 5.6, SD 5.4) than those in the controls (1.4, SD 3.6;  $p=0.001$ ).

## Conclusions

The findings show that telenurses in malpractice claim calls used more closed-ended questioning compared to those in control calls, who used more open-ended questioning and back-channel response enabling them to obtain richer medical descriptions and more information from the caller. Hence, the use of open-ended

questions and encouraging callers to freely describe their problems and reasons for calling should be taught and used in clinical practice. These communicative techniques are important in addition to solid medical and nursing competence and sound decision aid systems.

Further studies which include telenurses subjected to malpractice claims, using qualitative methods, might deepen the understanding of why telenurses were prone to use close-ended questions.

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