

Measuring patient satisfaction as an indicator for the quality of provided care

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Patient care requires the exercise of judgement to assess and respond to the patient's needs prior to, during and after procedures in the nuclear medicine department. In current health care systems patients are increasingly regarded as customers and therefore service aspects and quality care are gaining importance. Patient satisfaction is a very important part of patient care because a higher level of "customer" satisfaction frequently affects patient therapy positively, as shown in studies (1). That is why our department has chosen process approach of quality care by using the ISO 9001:2008 which is one of the standards in the ISO 9000 family. ISO 9000 is a family of standards for quality management systems maintained by ISO, the International Organisation for Standardization. It is administered by accreditation and certification bodies. The requirements in ISO 9001:2008 include: a set of procedures that cover all key processes in the department, monitoring processes to ensure they are effective, keeping adequate records, checking output for defects with appropriate and corrective actions where necessary, frequently reviewing individual processes and the quality system itself for effectiveness and facilitating continuous improvement. If we take a closer look to the model of a process-based quality management system, we can distinguish three main parts. The patient who has certain requirements (the input), the realization of the product and patient satisfaction (the output). Examples of inputs are patient perception (dealing with language, dementia, claustrophobia, etc.) and expectations of aftercare (next appointment, results, etc.). By realization of the product is meant, the different gamma cameras, PET camera and the regular performance of the quality checks. The output contains the protocol, PACS (picture archiving and communication systems), physician satisfaction and patient satisfaction. For optimal realization of the input, product and output, our department has made a number of fundamental objectives being: to perform the examination properly, increasing patient, physician and personnel satisfaction, an efficient use of existing appliance, working according to evidence based medicine conformable with the ruling regulations. To measure patient satisfaction we have established some important quality parameters. First, the number of times a patient has to return for the same examination. Second, the patient's knowledge concerning the examination, thirdly the correct and polite treatment of the patient, fourthly the length of the patient's waiting time in the waiting room, fifthly the contact with the departments' physician, sixthly the hygiene of the department, seventhly the explanation going with the examination and finally the "flow time" (the time between reception and injection, the time between whole body and SPECT, etc). According to these quality parameters we have developed a patient questionnaire to measure patient satisfaction. The patient receives eight statements relating these quality parameters. However that is not all considering quality improvements are non-existent unless measured. Articulation of service quality is particularly subjective because only the patient can assess it. That is why service quality measurements have to be based on perceived quality rather than objective quality (2,3). Service quality can be defined as an overall judgment similar to the "attitude towards the service" and related, but not equivalent, to consumer satisfaction (6). Two dimensions of service quality must be taken into consideration (4): technical and functional. In this study only the functional quality is taken into account because that can be equated to process quality and has a more subjective nature. The functional quality can be compared with the quality of provided care. The most common used instrument to measure service quality in services (or departments) is SERVQUAL (5,6). SERVQUAL was originally measured on 10 aspects of service quality: reliability, responsiveness, competence, access, courtesy, communication, credibility, security and understanding or knowing the customer. It measures the gap between customer expectations and experiences. By the early nineties the authors had refined the model to the useful acronym rater: reliability (ability to perform the promised service reliably and accurately), assurance (knowledge and courtesy of employees and their ability to inspire trust and confidence), tangibles (physical facilities, equipment and appearance), empathy (caring, individualized attention provided to customers) and responsiveness (willingness to help customers and prompt service) (7,8,9). Patient satisfaction can be defined as a type of attitude that reflects the experienced positive and negative feelings. Patients have experienced a service that has given them a certain satisfaction. We have made, based on SERVQUAL, two questionnaires to evaluate the functional quality (= the quality of provided care). One questionnaire includes 18 statements relating to patients' expectations of the quality of the service that the nuclear medicine department of the university hospital Leuven delivered. The second questionnaire includes the same statements but now relating to the patients' experiences. The five-point response format (ranging from strongly disagree = 1 to strongly agree = 5) was adopted for all statement. The different statements are: The department has up-to-date equipment (tangibles); physical facilities are visually appealing (tangibles); Employees are neat in appearance (tangibles); Physical facilities are in accordance with service (tangibles); made promises are fulfilled (reliability); sincere interest is

shown in solving problems (tangibles); services are provided at the time promised (reliability); information is provided regarding the time of service application (responsiveness); prompt service is provided (responsiveness); personnel shows willingness to help (responsiveness); personnel is never too busy to respond to requests (responsiveness); employees can be trusted (tangibles); patients achieve a feeling of safety in communicating with personnel (tangibles) ; each patient is provided with individual attention (empathy); operating hours are convenient (assurance); employees give personal attention (empathy); personnel has the importance of patient at heart (assurance); employees understand specific needs (empathy). The first section of the questionnaire includes demographic questions and questions about the type of examination (PET/conventional/Skeleton/etc.). Because a nuclear medicine department is more task-interactive than personal-interactive, we are very curious which dimensions scored the highest. We thank the personnel of the nuclear Medicine department of the university hospital Leuven for their assistance.

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