

Developing a Competency-Based Curriculum in Sacral Nerve Stimulation for Urinary Incontinence

Hypothesis / aims of study

The lack of a systematic curriculum development process often results in courses that are often inefficient and duplicative, risking that target learners miss key information. One company sought to improve its training in the use of neuromodulation for urinary incontinence (sacral nerve stimulation) by addressing its lack of a systematic curriculum development process. Educational consultants recommended a competency-based curriculum, which has been identified as an effective means of developing continuing competence in clinical practice; however, the process of identifying competencies is often cumbersome. Educational planners proposed deriving competencies using existing course content and using a modified Nominal Group Technique to validate and stratify the identified competencies.

Study design, materials and methods

Because a body of existing courses was already in use for sacral nerve stimulation training, educational planners used the existing sacral nerve stimulation course content to identify competencies, and a modified Nominal Group Technique (NGT) was then tested as a means of more efficiently validating and stratifying these clinical competencies so that a competency-based curriculum could be developed based on systematically developed competencies for use in training clinicians in patient identification, surgical implantation and programming techniques, risk mitigation, and postoperative management of patients receiving sacral nerve stimulation for urinary incontinence. Educational consultants used evidence-based, competency-based methodologies to review existing course content to derive competencies for use of sacral nerve stimulation in the treatment of urinary incontinence. Competencies were identified by learning domain as cognitive, affective, or psychomotor.

NGT panelists were recruited from among existing course physician and midlevel provider faculty and given comprehensive instructions regarding how the process would work. In three rounds of NGT, physician and midlevel provider panels first reviewed the competencies to validate their accuracy, reliability, and relevance; whether they applied throughout all therapies or were specific to an individual therapy; and whether the competency was essential, desirable, useful, or not applicable. In the second round, they reviewed the first round results (with the option of further change) and identified the appropriate learner level for each competency (novice, intermediate-to-advanced, or master-level learners). In the third round, results of the first two rounds were reviewed (with the option for further change), irrelevant competencies were deleted, and the remaining competencies' sequencing within the curriculum (preoperative, operative, postoperative, and postoperative with complications) was identified. A list of all competencies was prepared for faculty review, and essential competencies for each therapeutic area became the basis for the next step in the curriculum development process.

Results

Panelists came to consensus, validating and delineating relevance, type, learner level, and sequencing for (of which 84 were deemed essential) and 93 for midlevel providers (of which 89 were deemed essential). Educational planners worked with faculty to achieve consensus in cases where panelists disagreed on any competency ranking. The process took ten weeks.

Interpretation of results

The modified NGT process and reliance on existing content for competency development reduced the time and simplified the process of identifying competencies for use in a competency-based curriculum. The competencies could then be used to begin development of a comprehensive curriculum using live meetings that further refined the competencies and linked them to course objectives, content, and format.

Concluding message

The NGT method was successful in identifying competencies, learner levels, and prerequisites for use in developing a comprehensive, competency-based curriculum in sacral nerve stimulation for physicians and midlevel providers.

Disclosures

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