CRITERION-RELATED VALIDITY OF THE REVISED BELGIAN NURSING MINIMUM DATASET (B-NMDS) THROUGH THE ACTUAL B-NMDS

Oral presentation

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Summary

A pilot-test, based on a federal project for updating B-NMDS, ran in 158 nursing wards in 66 Belgian hospitals, generated data for some 100.000 inpatient days. This study aims to validate, with a criterion-related approach, the revised B-NMDS in comparison with the actual B-NMDS.

Keywords: Nursing minimum dataset, nursing care management, criterion-related validity
Conference theme: From nursing data collection to information / policy, examples of nursing data sets, and of integration of nursing data into (inter)national health data sets.

Background

The Ministry of Public Health commissioned a research project to revise the Belgian Nursing Minimum Dataset (B-NMDS) for six care programs (Cardiology, oncology, geriatrics, chronic care, paediatrics and intensive care)[1]. In a previous study phase (2000-2003), committees of clinical experts (N=75) indicated hospital financing, nurse staffing allocation and assessment of the appropriateness of hospitalization as priorities of an updated B-NMDS. A draft instrument with 84 variables, using the Nursing Intervention Classification as a framework, was developed during this period. This new NMDS was tested on 158 nursing wards in 66 Belgian hospitals from December 2003 until March 2004. This test generated data for some 100 000 inpatient days.

Study objective

Before examination of the discriminative power of the pilot-tested tool, it was important and significant to analyse its validity. This study, using a criterion-related validation approach, aims to objectively validate the revised B-NMDS in comparison with the actual B-NMDS. The rationale for this approach is that the similar elements of the revised tool should give at least the same results as the previously validated actual B-NMDS.

Methodology and procedure

First, the data collected with the revised tool during two of the three pilot-periods (December 2003 and March 2004, N=+/- 80 000 records) were coupled with the data of the available data of the B-NMDS. After a coupling based on common identifiers (patient number, date …), a database of 20 000 records was available for the comparison.

In the second step, these coupled-data were recoded, item by item (N=23), by the research team, so that the data definitions in both datasets were as similar as possible[2].

Ridits were used to standardize these variables so that the distributions of all variables could be easily compared. More-over the ridit transformation is traditionally used to analyse the B-NMDS so that the impact of the revised B-NMDS could be assessed more accurately. Ridit

analysis is an appealing technique for treating ordinal data because the reference distribution can be chosen[3].

Finally, correlation of Spearman rho and Kendall's tau b correlation coefficients were used to analyse criterion-validity of the next B-NMDS. The analysis was performed on three levels: items, hospitals and care programs.

These statistical results will be discussed in the six panels of clinical experts who are guiding the revising process (October – November 2004).

Study outcome
The study shows high positive correlations between the two instruments and validates the new pilot-tested tool in comparison with the actual B-NMDS. Although the results are significant, they must be further analysed to assess the impact of the refined and new variables on the nursing profile.

References

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