Indicia

LETTER TO THE EDITOR

Diagnosis-Related Groups and Electronic Nursing Documentation: Risks and Chances

Implementing a new model of diagnosis-related groups (DRGs) called "SwissDRG" is in process in Switzerland. Diagnosis-related groups are used as payment models and offer possibilities such as establishing nationwide databases incorporating medical data for cost and quality analyses. However, evaluation studies have shown that DRG implementation can affect quality, staffing, and organization of nursing care. By reducing hospital lengths of stay (LOSs), nursing care supporting patients' needs in the healing process is substantially reduced. Effects result in minimized nursing care, loss of care continuity, and prolonged stays in rehabilitation and nursing homes. Frequent relocations from one institution to the other deprive stable therapeutic relationships between patients and primary care nurses.[1] The conference entitled, "DRG and Electronic Nursing Documentation: Risks and Chances," held in Basel on January 25, 2010, was organized by M.M.S., Pflege PBS. The focus of the conference was to discuss the question: "How can the implementation of DRGs be of benefit for nursing?" Implementing nursing diagnoses along with DRGs provides chances, as nursing data are not redundant to DRGs.[2,3]

Nursing classifications allow visibility of the range of nursing practice, including nurses' contribution to health promotion and prevention of illness.[4] Classifications such as the NANDA-I Diagnoses, NIC, and NOC help nurses to plan and consistently document care.[4–6] The combination of nursing diagnoses along with DRGs allows a full description of patients' overall treatment needs. Matthias Odenbreit[7] (Solothurner Hospitals [SoH]) presented nursing diagnoses and related DRGs based on 2 years of experience with an electronic nursing documentation system named WiCareDoc. Implementation of NANDA-I diagnoses, related interventions, and nursing outcomes has demonstrated efficiency in exchanging patient information on an interinstitutional level, and connections between DRGs and nursing diagnoses were presented along with data for measuring quality of care across hospitals.[7] These results are in line with a study by Welton and Halloran.[8] By adding nursing diagnoses to DRGs, the explanatory power (R^2) and model discrimination (c statistic) improved by 30%. Nursing diagnoses provided significant explanations for the outcome variables LOS, ICU LOS, total costs, probability of death, and discharge to a nursing home ($P \leq .0001$).[8] The most prevalent nursing diagnoses, the performed nursing interventions, and achieved patient outcomes were evaluated in the SoH documentation system.[7] Nevertheless, what goes into the system must be relevant and precise, since electronic nursing documentations need to be reliable. Individual nurses—not the electronic system— are accountable for deriving and documenting accurate nursing diagnoses, related interventions, and nursing-sensitive patient outcomes. Electronic nursing documentation facilitates nurses in critically evaluating the care plans based on a structured and legibly documented nursing assessment linked with nursing diagnoses.[7] Resources to reduce the lack of precision of diagnostic reports, as for instance, computer-generated standardized nursing care plans, may support nurses in their administrative work.[9] The development and implementation of electronic documentation resources and preformulated templates have demonstrated positive influences on the frequency of diagnoses documentation.[9–11] Studies have shown that the time needed to obtain nursing diagnoses was, using a computer aid, significantly shorter. Classification structures, for example, the NANDA-I classification, are helpful in combination with applicable electronic resources leading to more accurate diagnoses documentation.[9,12]

W.P. presented findings of a recent experimental study performed at the Hanze University Groningen (the Netherlands) with 241 hospital nurses. The results will be published in the future.[13] This experiment pointed out that nurses' diagnostic reasoning skills such as inferential and analytical skills as well as the use of resources, such as a prestructured form in the PES structure (*p*roblem label, *e*tiology/related factors, *s*igns/symptoms/defining characteristics), had a significant positive effect on accuracy in nursing diagnosis documentation. Prestructured PES formats, implemented in computer systems for daily use, are

CIN: Computers, Informatics, Nursing • February 2011   73

Copyright © 2011 Lippincott Williams & Wilkins. Unauthorized reproduction of this article is prohibited.

additional properties to acquire correct nursing information. The collection of accurate nationwide nursing data can present a macroeconomic focus on health expenses. A base rate mean price for specific DRG-related nursing care or nursing-related groups can be used to explain nursing care demands and costs.[2,14] Under the new SwissDRG payment system, nursing-related costs gain importance for hospital managers as these costs are not compensated by the revenues.[15] By adding nursing diagnoses to DRGs, hospitals can profit from higher explanatory power to explain treatment costs. If the hospital management is willing to reinvest capital gains into nursing care quality, positive effects on patient outcomes should be expected. Further studies evaluating nursing diagnoses in relation with DRGs are planned.

Maria Müller-Staub, PhD, RN
Pflege PBS,
Selzach, Switzerland
muellerstaub@me.com

Wolter Paans, MSc, RN
Hanze University Groningen
The Netherlands
Catholic University
Leuven, Belgium

REFERENCES

1. Buhr P, Klinke S. *Qualitative Folgen der DRG-Einführung für Arbeitsbedingungen und Versorgung im Krankenhaus unter Bedingungen fortgesetzter Budgetierung.* Berlin, Germany: Wissenschaftszentrum für Sozialforschung; 2006.
2. Fischer W. *Diagnosis Related Groups (DRGs) und Pflege: Grundlagen, Codierungssysteme, Integrationsmöglichkeiten.* Bern, Switzerland: Huber; 2002.
3. Welton JM, Halloran EJ. A comparison of nursing and medical diagnoses in predicting hospital outcomes. *Proc AMIA Annu Symp.* 1999:171–175.
4. Keenan G, Tschannen D, Wesley ML. Standardized nursing terminologies can transform practice. *JONA.* 2008;38(3):103–106.
5. Bulechek G, Butcher H, Dochterman J. *Nursing Interventions Classification (NIC).* 5th ed. St Louis, MO: Mosby/Elsevier; 2008.
6. Moorhead S, Johnson M, Maas M, Swanson E. *Nursing Outcomes Classification (NOC).* 4 ed. St Louis, MO: Mosby; 2008.
7. Odenbreit M. Pflegeleistung und DRG: Sichtbar durch Pflegediagnosen? *DRG und elektronische Pflegedokumentation: Risiken und Chancen.* Basel, Switzerland: Pflege PBS; 2010.
8. Welton JM, Halloran EJ. Nursing diagnoses, diagnosis-related group, and hospital outcomes. *J Nurs Adm.* 2005;35(12):541–549.
9. Smith-Higuchi KA, Dulberg C, Duff V. Factors associated with nursing diagnosis utilization in Canada. *Nurs Diagn.* 1999; 10(4):137–147.
10. Gunningberg L, Fogelberg-Dahm M, Ehrenberg A. Improved quality and comprehensiveness in nursing documentation of pressure ulcers after implementing an electronic health record in hospital care. *J Clin Nurs.* 2009;18:11.
11. Kurashima S, Kobayashi K, Toyabe S, Akazawa K. Accuracy and efficiency of computer-aided nursing diagnosis. *Int J Nurs Terminol Classif.* 2008;19(3):95–101.
12. Thoroddsen A, Ehnfors M. Putting policy into practice: pre- and posttests of implementing standardized languages for nursing documentation. *J Clin Nurs.* 2007;16(10):1820–1836.
13. Paans W, Müller-Staub M. DRG und Elektronische Pflegedokumentation: Risiken und Chancen. *Pflegewissenschaft.* 2010; 12(6):379–380.
14. Welton JM, Zone-Smith L, Fischer MH. Adjustment of inpatient care reimbursement for nursing intensity. *Policy Polit Nurs Pract.* 2006;7(4):270–280.
15. Wernitz M, Keck S, Swidsinski S, Schulz S, Veit S. Cost analysis of a hospital-wide selective screening programme for methicillin-resistant *Staphylococcus aureus* (MRSA) carriers in the context of diagnosis related groups (DRG) payment. *Clin Microbiol Infect.* 2005;11(6):466–471.