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### The Nurses' Work Environment: Key To Nurse And Patient Satisfaction

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In hospitals where nurses report better working conditions, nurses are less likely to leave the hospital and patients are more satisfied with their hospital stay and rate their hospitals more highly. These findings result from the Registered Nurse Forecasting (RN4CAST) study. This nurse workforce study was one of the largest studies of its kind and included a consortium of investigators from 15 countries led by the Katholieke Universiteit Leuven in Belgium and the University of Pennsylvania in the U.S. Also nurse staffing, measured as patient-to-nurse ratio is related to patient satisfaction with care. These findings were recently published in the prestigious British Medical Journal.

#### RN4CAST: A European Research Platform

The RN4CAST research consortium resulted from many years of effort by the research team of Professor Linda Aiken at the University of Pennsylvania to demonstrate the relationship between the organisation of nursing care and wellbeing of nurses and patients. Professor Aiken previously coordinated an international consortium (Canada, England, Germany, New Zealand and the U.S.). On the basis of data from approximately 40,000 nurses it was shown that issues in the organisation of nursing care are a threat to providing safe patient care.

Further studies showed that nurse staffing, nurse work environment, and nurse education level relate to patient mortality. This evidence for some time remained limited to the U.S. and Canada. It was only half a decade later that European researchers came to similar findings. Both in England and in Belgium a relationship was found between nurse staffing and patient mortality.

With the RN4CAST study, a research consortium of 12 European countries (Belgium, England, Finland, Germany, Greece, Ireland, Netherlands, Norway, Poland, Spain, Sweden, and Switzerland) was founded to expand on this important research. The U.S. had the necessary expertise in the development and application of measurement instruments for use by nurses and patients, and was an important addition to this European consortium. The research team from the University of Leuven, led by Professor Walter Sermeus, was responsible for the coordination and daily management of the RN4CAST study. Funding was obtained under the Seventh Framework Programme of the European Commission for the period 2009-2011. Additional funding came from the National Institute of Nursing Research of the National Institutes of Health in the U.S.

#### Developing a Unique Nurse Workforce Database

More than 60,000 nurses from over 1,000 general hospitals in 15 countries participated to the RN4CAST study. That includes 33,541 nurses from 486 hospitals in 12 European countries and 27,509 nurses working in 617 U.S. hospitals. Data are also available from 9,698 nurses in 181 Chinese hospitals and 4,657 nurses in 62 South-African hospitals. Patients who were hospitalised in these hospitals rated the quality of hospital care: 11,318 patients in 210 European hospitals, 6,494 patients in 181 hospitals, and tens of thousands of patients in 430 U.S. hospitals. In all countries, identical instruments were used to allow comparability. Therefore, a rigorous research protocol was used to guide a reliable and valid translation and cultural adaptation of the questionnaires. In each country, at least 30 general hospitals and at least two nursing units (general internal, surgery) per hospital were randomly selected. Nurses were asked to assess their work environment using the Practice Environment Scale of the Nursing Work Index. This included questions about working relationships with physicians, nursing leadership, quality, and participation in hospital affairs. Nurses also provided information on the number of patients they cared for during their last shift and rated their wellbeing. On the same wards where nurses were interviewed, patients rated the care provided by doctors and nurses. They also indicated to what extent they would recommend the hospital to friends or family, and gave a total score to hospital care. In the U.S., the results of this questionnaire, the Hospital Consumer Assessment of Health Personnel and Systems (HCAHPS), are publicly reported.

#### Nurse Dissatisfaction: Frequent, But Not Everywhere

Both in the U.S. and Europe many nurses reported high burnout and job dissatisfaction. In Europe, this was 30% of all nurses. The Netherlands (10%) and Switzerland (15%) were positive outliers in comparison with other European countries. In Greece however, nearly four in five nurses reported feelings of burnout. Figures on job dissatisfaction are similar. Not surprising in this regard is that a large number of European nurses reported the intention to leave their job in the hospital because of job dissatisfaction. In the U.S., this was limited to 14% of the nurses, which was better than in any European country.

#### Concerns about the Quality of Care

Nurses are concerned with the quality of patient care in their hospital. For example, one in three Dutch nurses indicated that the quality of care on their nursing unit is insufficient. In Ireland, this is only one in ten nurses. Moreover, many nurses do not feel confident that discharged patients

are able to manage their care. This ranged from 28% in Sweden to 75% in Poland. In almost all European countries, about four in five nurses do not feel confident that hospital management will act to resolve problems in patient care that are reported. In the U.S. this is limited to less than three in five nurses.

### **Opinions of Nurses and Patients Are Closely Connected**

Patients in Switzerland, Ireland and Finland seemed most satisfied (overall score and recommendation of the hospital) while Greek and Spanish patients are the least. In almost all countries at least three in four patients felt they were treated with respect by nurses. The number of patients who felt that nurses really listened to what they had to say was however consistently lower. There was a high degree of consensus among patients and nurses when they were asked if they would recommend the hospital to friends and family.

### **Explanatory Factors of Nurse and Patient Wellbeing: Work Environment and Staffing**

As in the case of patient satisfaction, wellbeing and quality of nursing care, the results on nurses' perceptions of their work environment and nurse-to-patient ratios varied greatly from country to country. In Norway, nurses on average took care of 5.4 patients during their last shift. This number doubled for Belgium (10.7). In Spain (12.6) and Germany (13.0) the numbers were even higher. With 5.3 patients per nurse, the U.S. scored lowest.

Figure 1 shows the score that nurses gave to their work environment. This score results from an aggregated measure of the four factors in the work environment of nurses. A higher score indicates a better working environment (maximum = 4, minimum = 1). As can be seen from Figure 1, not only is the variation between countries very large, the variation between hospitals in the same country is much larger. This high degree of within-country variation applies not only to the results of the work environment, but for all the above results. The dashed line represents a comparative average score of the U.S. magnet hospitals. The magnet accreditation is mainly about respect from doctors and nurse directors in giving nurses responsibilities, for example in the allocation of patients and participation in hospital affairs. Based on the results of the RN4CAST study, few European hospitals seem to provide such positive work environment for their nurses.

Regression models showed that a better work environment and increased nurse staffing exhibit a substantial positive impact on all dimensions of well-being among nurses, all scores of patient satisfaction, and nurse-perceived quality of care. Preliminary findings show that there is a similar relationship with hospital patient mortality.

### **Conclusions**

The findings show that all countries in this study are facing challenges relating to the quality of care and nursing staff retention. This appears related to the organisation of nursing care. The U.S. offers an interesting perspective for the retention of nurses and the attractiveness of the profession. In the U.S. a much lower percentage of nurses reported the intention to leave their current job. This may be a result of increased efforts to improve nurse staffing in hospitals. Many U.S. states have enacted nurse staffing legislation. In addition, 400 hospitals (7 percent) in the U.S. today have achieved "magnet-status". This is a recognition for excellence in nursing care. That is, they have demonstrated the ability to attract and retain nurses because of good work environments. Because of such success factors, many nurses who previously left the profession have reentered. Investing in nurses' work environment is thus an efficient strategy to achieve maximum benefits for the organisation.

Professor Aiken and colleagues recently showed that a good working environment is a premise for achieving good care results; investments in staffing prove fruitless in hospitals with poor environments. A qualitative follow-up study in Belgian hospitals participating in the RN4CAST study showed that the role of the nurse managers in this is very important. In hospitals where the nursing department was characterised by a participative management style, a flat organisational structure, and structural training programmes and career opportunities for nurses, work environments were better perceived and the intention to leave the hospital was significantly lower.

All hospitals that participated in the study received feedback reports in which they could position themselves in the total sample of hospitals within their country. The next step for the participating hospitals is to get to work with these results, guided by international and national committees of stakeholders who have been following the RN4CAST study since the start in 2009. As described, there is large variation between countries. This is possibly due to the strong differences in the organisation and financing of healthcare. Remarkable are also the major differences between hospitals in the same country. In most countries some hospitals do manage however to create positive work environments for nurses. Learning from each other's road to success seems an appropriate strategy to getting started with the findings.

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