Editorial

RN4CAST@IT: why is it important for Italy to take part in the RN4CAST project?

The RN4CAST project started on January 2009 as a 3-year project, funded under the 7th European Framework Program, and included researchers from 12 European countries (Belgium, Finland, Germany, Greece, Ireland, Norway, Poland, Spain, Sweden, Switzerland, The Netherlands and UK), the USA and three international partners: Botswana, China and South Africa). The RN4CAST researchers realized that the current methods used for planning health workforce were unable to forecast accurately the size of the nursing workforce in the near future or adequately inform political interventions aimed at avoiding a cyclical lack of nurses. A significant step forward would be to consider the dynamics that influence the strategies aimed at ensuring safe, high quality care through an appropriate number of nurses.

The first phase of the RN4CAST study was conducted by the above 12 countries between January 2009–June 2010. In each country, at least 30 acute care hospitals were sampled and the data were collected through three surveys: a nurse survey, a patient survey and a hospital organization survey. In addition, also hospital discharge data were collected. Data were collected from 459 hospitals (in at least two wards of general medicine and surgery each), 30,769 nurse questionnaires and 11,000 patient questionnaires. The hospital organizational survey included data about the size of the hospital, other health workers (physicians, technicians, support workers, etc.), and other 'big data' related to patients discharged in the last 12 months from each hospital to calculate additional patient outcomes, such as in-hospital mortality rates and 'failure to rescue' (Aiken *et al.* 2002a). 'Failure to rescue' involves mortality of surgery patients within 30 days due to in-hospital complications, or of patients with medical disorders affected by one of the following five complications: pneumonia, shock, deep venous thrombosis and gastrointestinal bleeding. This measure underlines the importance of nursing and thanks to nurses' who monitor patients on a 24/7 basis it is possible to intervene immediately and prevent mortality and, therefore, increase the level of patient safety (Aiken *et al.* 2002b).

The second phase of the RN4CAST study was conducted between July 2010–December 2011, during which appropriate healthcare staffing, skill-mix, education levels, and the quality of the work environments were analysed to see what impact they had on in-hospital mortality, 'failure to rescue', quality of care and on patients' satisfaction for care received. These results will then be used to improve the accuracy of health workforce forecasting models and to generate new approaches that would enable a more effective management of the nursing workforce across Europe. The RN4CAST project will lead to concrete recommendations that will improve the quality of nursing and patient outcomes in hospitals, and produce evidence to inform national policy makers so that the quality and safety of health care can be improved through strategic investments in nursing.

In 2014, thanks to a retrospective study conducted under the RN4CAST project, an analysis of the mortality rates in 422,730 discharged patients found that in hospitals where the number of patients per nurse is lower, also the mortality rates are lower. They also found that, in general surgery wards, for every extra patient per nurse, the chances of dying within 30 days from discharge increased by 7% (Aiken *et al.* 2014). This result emerged from data collected in Belgium, England, Finland, Ireland, The Netherlands, Spain, Sweden and Switzerland where, according to the report published by the National Italian Nursing Council (Federazione Nazionale Collegi IPASVI), there are on average 11 nurses per 1000 inhabitants compared with 6.6 nurses per 1000 inhabitants in Italy.

Therefore, considering the significant scientific and political relevance of the RN4CAST project, in 2015, in addition to Portugal and to countries like USA and Germany where it will be replicated, this project will also be conducted in Italy.

Therefore, participation in the RN4CAST is important for Italy because:

- Nursing research applied to organization is not linked to productivity, but to patient outcomes. Budgets should not just look at nurses, but also at patient outcomes. Nursing productivity produces the best

cost-benefit ratio in terms of reduced adverse events, complications, readmissions and mortality.

- During the current economic crisis, we all need to define our added value, which is not only a question of numbers.
- Italy needs data that can be compared at a national and international level to help policy makers take more informed decisions, not only in terms of savings, but also of patient safety and satisfaction.
- Active involvement in research and planning in the profession needs to be improved.
- This project could enable us to help hospital directors to offer more efficient services.

The RN4CAST@IT project includes two phases: phase one includes the development of the Italian version of the tool and data collection (February 2015–December 2015); phase two includes data analysis and definition of the policy outlines (January 2016–June 2016).

The common RN4CAST international protocol offers standardized tools, data collection procedures and guidelines so that data can be analysed and compared with those collected in other RN4CAST partner countries. The RN4CAST protocol is flexible and can be adapted to the differences between the hospitals, health systems and nurse workforce characteristics of the various partner countries. However, any differences made to the protocols of the national studies have to be reported to the International RN4CAST coordinators and approved.

In Italy, the RN4CAST study has been called RN4CAST@IT. Consistent with the international protocol, RN4CAST@IT has a multilevel cross-sectional design and data will be collected in 40 hospitals across the whole country, in wards of general medicine and surgery (or similar wards), and includes three surveys at three different levels: hospital organization, nurses and patients. The hospital organization survey involves the collection of the organizational characteristics of the hospitals and wards included in the RN4CAST@IT project, such as the nurses' work environment. For this survey, we interviewed the 40 Nursing Directors of the hospitals included in the study. The nurse survey will include a total of approximately 5000 nurses, who will answer questions on an individual basis, about professional satisfaction, intention to leave, and burnout. In the third survey, patients will be asked questions about their level of satisfaction with the care they received and with the hospital services in general.

Training sessions for approximately 800 hospital staff members have been organized across Italy to encourage active participation. A comparative analysis of the data collected through the three surveys will be conducted at a national and international level, and feedback on the results of this analysis will be sent to all the hospitals included in the study. In this way, hospitals will be able to understand how well they have performed compared with other similar hospitals both in Italy and in other countries.

Several countries where the RN4CAST study has already been conducted, such as the USA and Germany, have decided to repeat this study with their own funds because they have understood its value and importance. Therefore, in Italy we hope that all the representatives of the nursing profession understand how important this study is, both for patient safety and nurses' satisfaction at work. In this view, we hope that also the nursing regulatory bodies will eventually support this project.

Loredana Sasso, Annamaria Bagnasco, Milko Zanini, Gianluca Catania, Giuseppe Aleo, Antonietta Santullo, Federico Spandonaro, Giancarlo Icardi, Roger Watson and Walter Sermeus

Loredana Sasso MSN RN
Associate Professor of Nursing
Department of Health Sciences, University of Genoa, Italy
E-mail: l.sasso@unige.it

Annamaria Bagnasco MSN PhD RN
Researcher in Nursing & Education Coordinator
Department of Health Sciences, University of Genoa, Italy

Milko Zanini MSN PhD RN
Nursing Research Fellow & Lecturer
Department of Health Sciences, University of Genoa, Italy

Gianluca Catania MSN PhD RN
Nursing Research Fellow & Lecturer
Department of Health Sciences, University of Genoa, Italy

Giuseppe Aleo MA PhD
Research Fellow
Department of Health Sciences, University of Genoa, Italy

Antonietta Santullo MSN RN
PhD Student/Head
Department of Education and Organizational Development,
Romagna Local Health Authority, Ravenna, Italy

Federico Spandonaro MA Econ
Professor of Economy
University of Rome Tor Vergata, Rome, Italy

Giancarlo Icardi MD
Full Professor/Director
Department of Health Sciences, University of Genoa, Italy

Roger Watson PhD FRCP Edin FRCN FAAN
Full Professor of Nursing
University of Hull, UK

Walter Sermeus PhD RN
RN4CAST Project Coordinator/Full Professor
Department of Public Health & Primary Care, KU Leuven,
Belgium

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