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VRIJE UNIVERSITEIT BRUSSEL

PhD in Social Health Sciences
2018-2019

INVITATION to the Public defence of

Griet Van Belleghem

To obtain the academic degree of **'DOCTOR IN SOCIAL HEALTH SCIENCES'**

HEALTH CARE UTILIZATION AFTER A ROAD TRAFFIC ACCIDENT: Prediction modeling and identifying risk factors.

Monday 25 March 2019
Auditorium **Piet Brouwer**, 17:00
Faculty of Medicine and Pharmacy, Laarbeeklaan 103, B-1090 Brussels

How to reach the campus Jette:
http://www.vub.ac.be/english/infoabout/campuses

Summary of the dissertation

Previous research showed that, after trauma, patients indicate lack of information on the perspectives about their rehabilitation trajectory and recovery, while at the same time physicians state not to answer suchlike questions due to uncertainty. This study aims to test if secondary databases can be used to predict health care utilization after a road traffic accident. Linkage of claims data with hospital data was built at patient-level. A set of outcomes was selected for the acute- and post-acute phase (up to one year after the traffic accident). For the acute phase we could demonstrate the association between injury severity and the probability of in-hospital mortality and the length of hospital stay until discharge with medical advice. This model was built while accounting for time-dependent variations and competing endpoints. In the post-acute phase, the incremental healthcare compared to the period before the accident was mapped. With a specific focus on rehabilitation we developed a prediction model estimating the probability of receiving rehabilitation and if so, the probability to belong to a certain rehabilitation trajectory. For those who had in-hospital rehabilitation, the length of admission was analyzed.

As a synopsis of all these studies, it can be concluded that secondary data can be used to answer questions of health care utilization. However, further research on increasing the model performance is mandatory. Further attention needs to be given on how these model-algorithms could be translated in practice in support of patient communication and how to facilitate implementation in daily practice.

Curriculum Vitae

Griet Van Belleghem was born on October the 24th 1989 in Waregem, Belgium. She graduated from Sint-Vincentiusinstituut in 2007 and started the professional bachelor Nursing at the Katholieke Hogeschool Zuid-West-Vlaanderen. During the first classes in evidence based nursing, she developed an interest in scientific research. She pursued her interest with a Master's degree in Public Health Promotion at the University of Ghent. She continued her studies with an advanced Master in statistical data analysis (2014)To further increase her methodological and statistical knowledge.

In 2014 she applied for a function as scientific researcher at the VUB. At the end of that year she obtained an IWT-SB research grant and started the research on predicting health care utilization after a road traffic accident based on secondary data. During her PhD she was active in the doctoral school council, was a member of PhD United (an association for and by PhD students) and the last year she also represented the OAP-members for the faculty of Medicine and Pharmacy in the academic board.

She is currently working at the Flemish Institute for Quality in Care where she seized the opportunity to work within her areas of passion, namely health care, data and statistics.