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**POSTER ABSTRACT****Lean in Healthcare: reduce wastes to increase efficiency for stroke patients**18<sup>th</sup> International Conference on Integrated Care, Utrecht, 23-25 May 2018

Bianca Buijck, Maud Heijndermans

Rotterdam Stroke Service, The Netherlands

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**Background:** Many health care organizations are looking for methods to reduce their costs and increase the productivity of their professionals. In 2015, the annual costs of healthcare in the Netherlands were 95 billion euro's. Healthcare organizations are looking into the Lean methodology to reduce costs and work more efficient. The Lean method looks at every step in every process to assess if this step adds value for the customer or not. If not, the step should be removed. The aim of this study was to explore the value adding and non-value adding process steps in stroke patient admission in an integrated care stroke service in the Netherlands.

**Methods:** This study was executed in the Rotterdam Stroke Service RSS, a collaboration of 19 health care organizations, and focused on discharge of stroke patients from hospital acute treatment, and were admitted for rehabilitation. We used interpretative knowledge from professionals normative approach, explorative research, naturalistic inquiry. Professionals were interviewed to explore which problems they experience in their daily work. This results in more insight of potential wastes. In order to collect all the important data, we used interviewing, value stream mapping and a large part of the data consisted of the research journals that captured all the information gathered during the naturalistic inquiry process. Also documents received from the experts current protocols, application forms, available beds were added to the research. For the interviews we used coding according to the grounded theory approach. Furthermore, we used a configuration analysis to distinguish aggregates and configurations in order to diagnose the different problems.

**Results:** Eleven interviews were held with professionals. In a customer journey, each step was researched from the moment the patient arrived in the hospital till the moment the patient was discharged to a rehabilitation center or rehabilitation unit in a skilled nursing facility. In expert-meetings, professionals discussed the findings and created an improvement plan. The results of the configuration analysis most common problems and possible solutions were discussed. According to the RSS protocol, the majority of the patients were discharged within 5 days. More than 100 wastes were discovered during this research. The most reported issues concerned 1 slow internal logistics in the hospital, 2 lack of medical readiness of the patient, 3 missing or delayed medical patient information transfer, 4 multiple discharge interviews, 5 lack of safely transfer of delicate information, 6 waiting lists and queuing up in rehabilitation facility.

Buijck; Lean in Healthcare: reduce wastes to increase efficiency  
for stroke patients

**Discussion:** A critical note is that no research was found about failed attempts to implement Lean. Several studies show that only 10% of the Lean implementations can be considered as a success in the long term. Therefore, we should be careful with marking Lean as the definite success for the entire healthcare industry.

**Conclusions:** After this study, the organizations within the RSS started with reducing the wastes which were discovered during this study. This is an ongoing process in 2017, and the assumption is that there will be a significant improvement

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**Keywords:** stroke; lean-methodology; efficiency; hospitals

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