

Managing the future care burden of stroke

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Valorisation

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In this chapter, the findings of this thesis on the development and implementation of an integrated care pathway for geriatric stroke patients which combines early hospital discharge with assessment and rehabilitation planning in a nursing home are addressed with regard to their societal relevance for the different stakeholders. In addition, the activities undertaken to further disseminate the study results are described.

It is estimated that in the coming years, the number of inhabitants in the Netherlands above the age of 65 will rise by 10%. Because of this and a better survival of cardiovascular patients, the prevalence of stroke will rise accordingly. By the year 2020, 250 per 100,000 inhabitants of the Netherlands will suffer from a stroke, often with subsequent permanent disabilities and handicaps as a consequence. This trend, combined with the Dutch government's policy of "ageing in place", aimed at keeping older adults living in their own home environment for as long as possible, will lead to an ever growing strain on acute care beds in hospitals and larger numbers of stroke patients in need of geriatric rehabilitation. In terms of costs, stroke is among the most expensive diseases in the Netherlands with a total of 1.5 billion Euros accounting for 2.2 % of total annual health care costs.

Cost effective integrated stroke care requires a high degree of coordination between professionals in hospitals, nursing homes and home care, a high quality integral assessment in the nursing home and a system of adequately timed patient transitions. Therefore, during recent years all sorts of initiatives were taken to optimise stroke care in order to satisfy the demands for care, to reduce hospital stay, start early rehabilitation, enhance patient satisfaction and to be cost effective. In the Maastricht region, this resulted in a stroke care model, aimed at hospital discharge within 5 days to a nursing home, followed by a systematic multidisciplinary assessment in a specialised nursing home assessment unit to determine the optimal rehabilitation track. Accordingly, the question remained whether in the new care model hospital stay was decreased without having a negative effect on other outcomes, such as the patient's functional level, quality of life or satisfaction with care. The focus of this thesis was to answer these questions and to depict the total costs of this stroke care model.

The results of this thesis showed that one of the main objectives of the innovative stroke care pathway, namely early discharge from hospital to a nursing home within five days after stroke, was not achieved. In the intervention group, as was intended, significantly more patients were admitted to the nursing home for assessment than in the control group. All nursing home patients in the intervention group were exposed to the nursing home assessment within 3 days after admission. There were no significant differences between the intervention and control group concerning effect measures, medical complications, hospital re-admissions or deaths between both groups. The economic analysis showed that overall costs were higher in the intervention group than in the control group. However, if implementation of the new stroke care model would actually

have fully succeeded, this might have been the preferred care model in terms of cost-utility and cost-effectiveness. A qualitative study of the new care model showed that in general, most patients stated that they were well cared for and that they did not experience any significant problems with the new stroke care model. Although, more attention should have been paid to adequate and timely communication with patients concerning their individual care pathway and privacy.

Taking all these outcomes together, this integrated stroke care model, if fully implemented, may be considered relevant and important in reducing strain on acute hospital beds, while maintaining a high quality of stroke care and being economically rational. Therefore, it is recommended to undertake additional actions to fully implement the model in a study setting again and to analyse the effects of the fully implemented stroke care model again before integrating it in regular care on national level.

Stakeholder benefits

The first group benefiting from a wider implementation of this stroke care model if implemented well, are older stroke patients for whom early supported hospital discharge to their home is not possible, due to the severity of stroke or the lack of informal caregivers at home. As expected, due to the changing demographic situation and the governmental policy of ageing in place there will be more need for temporary intramural geriatric stroke rehabilitation. This stroke care model at least has shown that it is able to offer more older stroke patients a timely start of rehabilitation with the same results.

As this thesis showed, no clinical imported differences in functional outcomes, quality of life or satisfaction with care were found between the two groups in the study. Therefore, patients that can be discharged directly from hospital to their home, should be discharged as soon as possible and continue rehabilitation by a multidisciplinary team at home. A thorough scientific evaluation of the long-term effects of early discharge with continued multidisciplinary rehabilitation in the home setting by a multidisciplinary team should be undertaken.

Another group benefiting of dissemination of the new stroke care model on a wider scale are healthcare professionals working in hospitals, geriatric rehabilitation facilities and primary care. A good cooperation between professional caregivers in different settings is mandatory in delivering high quality integrated care. The burden of high work load may be minimised by good coordination of different tasks and by performing them on the right place and at the right moment. As our study shows this is not always easy to achieve or maintain. Therefore additional efforts should be done, to improve interdisciplinary collaboration throughout the total care chain after exploring which relevant needs and barriers still are present and have to be solved.

The results in this thesis further show that making clear, binding working agreements between different care providers and care professionals, is not enough to ensure

success. Implementation is more than making agreements alone. It is equally important to constantly monitor and evaluate the care process. This may be done by appointing a stroke care coordinator, who can assure that agreements are adequately followed up, and who can monitor and control the logistics of the patient flow through the stroke care model. In addition, this process might be facilitated by relevant incentives[1].

The transition of the multidisciplinary assessment and rehabilitation treatment from the hospital to the nursing home should reduce delay by withdrawing double work and unnecessary waiting. However, our study showed that there is still double work being done, namely clinical assessments done in the hospital, which subsequently were repeated more extensively in the nursing home. This suggests even more time can be saved by better attuning the activities in both settings, which is necessary to fully implement the new model according to its physiological architecture.

This thesis furthermore shows that a well-trained multi-disciplinary nursing home team is able to accomplish a task formerly preserved for the acute setting, within the agreed timeframe. As all assessments and rehabilitation planning was carried out within 3 days of nursing home admission. To do so nursing homes must be willing to enlarge their geriatric rehabilitation capacity. To assure that a nursing home is able to receive new rehabilitation patients at all times, patient outflow, where a long-stay nursing home bed is needed, must be guaranteed. That is why in the studied model priority was given to finding a permanent bed for continuing long-term care for stroke patients that had finished their rehabilitation and could not return home.

Our study also showed the need for good, timely and continuous communication with the patient and their family caregivers about the care pathway. A case manager who follows the patient through the care pathway from hospital through the rehabilitation setting to their home and who provides timely information might be a solution for the lack of communication patients often experience[1].

Further research on the effects of both a stroke care coordinator and a personal case managers should be done as well.

The last group of stakeholders to benefit from a wider implementation of the stroke care model are health insurance companies. This thesis shows that if implementation of the intervention had been fully successful, this stroke care model was more cost-effective compared to care as usual. The cost savings would be mainly the result of a shorter length of stay in both hospital and nursing home. This finding might stimulate health insurance companies to provide temporary financial incentives to implement such a model, as mentioned earlier.

Dissemination

Next to the scientific value of this thesis, of which most chapters have been published internationally, the results of this thesis can be used to additionally raise awareness for the importance of adequately managing the future care burden of stroke.

Therefore, the outcomes of the studies were and will be presented on different (inter)national congresses and symposia. The acquired knowledge will also be used in the development of stroke care guidelines, specifically targeting frail older stroke patients.

In addition, efforts will be made to further optimize the integrated stroke care pathway in which we specifically will focus on implementation of elements of the integrated care pathway which were not fully implemented yet, and on improving elements of the pathway which were recommended by patients and informal caregivers during the initial study. Subsequently we will try to implement the model in a study setting again.

After finishing that study, a strategy for countrywide dissemination will be made.

References

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