
POSTER ABSTRACT

Financing an integrated care "network-physician" by preventing ambulatory care sensitive hospitalizations. Results of a health-economic modelling approach based on data from an integrated care system

19th International Conference on Integrated Care, San Sebastian, 01-03 April 2019

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Introduction: Spendings for healthcare services rise fast in developed countries all over the world. One main reason are rising numbers of hospitalizations due to aging populations who increasingly suffer from chronic conditions. A concept that seeks to make better use of the resources in healthcare systems is the concept of ambulatory care sensitive hospitalizations (ACSH) which was developed to identify such hospital cases which to a certain amount could be prevented by providing better quality of ambulatory care. When asked for ways to implement quality improvements in ambulatory care to reduce ACSH the majority of physicians answers that networking activities have the highest chance to reach that goal. The research question was, if an additionally employed "network physician" in an integrated care system can enable such networking and if this physician can refinance his efforts by the potential savings in hospital costs.

Theory & Methods: After a reflection on different concepts of ACSH based on a systematic literature review the mean numbers of ASCH and corresponding hospital costs were calculated in the setting of the German integrated care system "Gesundheit für Billstedt/Horn" with a total insurant population of ~33,000 people. Based on these calculations a health economic cost minimization study was performed to simulate the expected numbers of prevented ACSH based on different efficacy assumptions for the network physician.

Results: Setting the efficiency goal that the network physician shall prevent 1% of the populations' ACSH the intervention budget would be 171.990€ per year meaning that 45 cases with mean costs of 3.822€ per case must be prevented by the efforts of the network physician per year. The simulation predicts that this intervention has a chance of 75% to achieve positive value for money. Setting the assumption that costlier ASCH shall be prevented preferentially less cases would be needed but it is likely that also higher intervention costs would occur.

Discussion: There is no internationally accepted catalogue of ACSH. Apart from methodological issues it is questionable whether a network physician is universally accepted by the providers in a region which does influence the assumptions about the interventions' "warm-up" period.

Lessons Learned: Of course this basic approach is a simplification but decision makers are able to change the assumptions of the model to assume individual efficacy goals or intervention budgets. Based on the assumptions used for this calculation the simulation suggests that the

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chance of a network physician to create positive value for money is higher than not reaching that goal.

Limitations: The model strongly depends on the assumptions and on the data used for the calculations. As the sample data set was rather small e.g. time trends were not taken into account as different years had to be aggregated.

Suggestions for future research: The network physician is by far not the only kind of intervention which might have an impact on ACSH. Future research should compare these results against e.g. case managers, specially trained physician assistants or specific care programs and work out which intervention has the best prospect of success.

Keywords: hospitalization; network physician; simulation; intervention efficacy; billstedt-horn
