

Heart Failure Article Review

Name:

Course title:

University name:

Date:

PICO(T) Worksheet

Selected Article: Sahlen, K. G., Boman, K., & Brännström, M. (2016). A cost-effectiveness study of person-centered integrated heart failure and palliative home care: based on a randomized controlled trial. *Palliative Medicine*, 30(3), 296-302.

P: Population/disease (i.e. age, gender, ethnicity, with a certain disorder)

P: _____ **Patients with chronic and severe heart failure** _____

I: Intervention or Variable of Interest (exposure to a disease, risk behavior, prognostic factor) Note:

Not every question will have an intervention (as in a meaning question – see below).

I: **Palliative advanced home care and heart failure care**

intervention _____

C: Comparison: (could be a placebo or "business as usual" as in no disease, absence of risk factor).

Note: This is not used in a meaning question – see below.

C: _____ **Primary health care center or heart failure clinic at the**

hospital _____

O: Outcome: (risk of disease, accuracy of a diagnosis, rate of occurrence of adverse outcome)

O: _____ **Increased years of living and reduced costs of**

care _____

T: Time: ~January 2011 to 2013 at a center in

Sweden~~~~~

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**For PICO questions about a nursing intervention/therapy:**

In \_\_\_\_\_patients suffering from chronic heart failure \_\_ (P), what is the effect of \_\_\_\_\_palliative advanced home care \_\_ (I) on \_\_\_\_\_health outcomes and cost effectiveness\_\_\_\_ (O) compared with \_\_\_\_\_standard care in hospital settings\_\_ (C) within \_\_\_\_\_a period of 2 years\_\_\_\_ (T)?

**Introduction**

In the modern world, Chronic heart failure (CHF) is a significant public health issue with its prevalence is increasing due to the aging population and improved management of the heart disease. For instance, Ward et al. (2014) research on the number of people suffering from chronic diseases is approximately 1%-2% of the adult population in the developed countries are suffering from the chronic heart failure. The prevalence has significantly risen to more than 10% among the patients of 70 years and above of age and older. From a global perspective, the prevalence is approximately 23million people and over 5.8million people in the United States (Ziaeeian & Fonarow, 2016). Additionally, it is evident from research that the health care costs for the chronic heart failure are significantly high with more than 39 billion dollars being spent annually in the United States alone. This is mainly accrued by the increased rates of hospitalizations, readmission cases, and outpatient visits. The phenomenon is complexed by the presence of reduced approaches to caring for patients with chronic heart failure. Such strategies can contribute to an improved quality of life of the patients and substantial reduction of their health care costs. Two of the conventional approaches used for the care delivery include palliative advanced home care and heart failure care and hospital setup care. Taking this into account, the

selected article aspires to answer the question; In patients suffering from chronic heart failure, what is the effect of palliative advanced home care on health outcomes and cost-effectiveness compared with standard care in hospital settings within a period of 2 years? Through a focus on this question, it would be possible to assess the cost-effectiveness of the palliative care intervention as compared to the standard care for the patients with chronic heart failure.

### **Summary of the Research Article**

The selected article (Sahlen et al., 2016) published in the journal of palliative medicine is written by three authors with a background in nursing, public health and clinical medicine, health research and care delivery for patients with chronic heart failure. This is a quantitative study that followed a quantitative approach, in particular, a randomized controlled trial. The collection of data was inclusive of the cost estimates for the healthcare and the patient's responses to the EQ-5D quality of life instrument. To achieve its intended objectives, an intervention, and control group of 36 patients was used in the study. Taking into account of the results of the research, the first fact that was identified is that the used interventions contributed to a 25% quality-adjusted life years. Also, in regard to the cost analysis, it was demonstrated that there was a significant cost reduction with the palliative advanced home care as opposed to hospitalization practices. The second fact identified is that the staffing costs are significantly higher as opposed to the usual care. This is considerably lower as opposed to the hospital-based care. The current study is the only one available in all databases that have evaluated on the cost-effectiveness of the approaches used in the care of chronic heart failure patients. The third and last fact identified is that the cost savings which is evident from the care delivery in the designated research settings are informed by the existence of substantial reductions in

the overall hospital admissions with a significantly reduced number of days spent in the hospitals. Also, in the palliative care settings, there is a reduced need for transportations using an ambulance.

### **Reliability for the Article**

Reliability entails the extent to which results in a given study are consistent over time and also constitute an accurate representation of the phenomena under interest (Heale & Twycross, 2015). In the present study, data from the respondents were considered to be reliable only when all the respondents and reviewed literature sources report similar findings. Significant differences in reports about the improved quality of life and reduced costs of care were considered as indicators of potentially low reliability of the data. The type of reliability in the selected article is the inter-rater or Inter-Observer Reliability. In the article, the authors referenced to a study that had evaluated on the cost-effectiveness study for a palliative care integrated-care pathway intervention for patients suffering from the hip fracture. The study noted that the intervention was less expensive and more effective than the standard hospitalization care. Additionally, studies from Cochrane study regarding the cost-effectiveness of home palliative care services for adults suffering from advanced illness and their caregivers had reported similar evidence. All the respondents pointed out that palliative care contributed to a pattern of cost savings of approximately \$50,000. This shows that there is a common characteristic for all the respondents hence reliable.

### **Validity**

Validity in research is critical as it captures the extent to which the study measures the aspects it was intended to investigate (Mutz et al., 2015). This was achieved by ensuring that the data collected and used was directly related to the research questions. For the questionnaire reliability was obtained by using questionnaires that are widely known and available online provided by other researchers. This

was necessary in order to achieve content validity. For instance, the costs of the two groups were done with a non-parametric approach of Mann-Whitney U-test. The other questionnaire used for testing the quality of life of the patients was the QALYs with five questions offered numerical number previously delivered from the EQ-5D instrument. Therefore, the type of validity in the article is concurrent validity as it relates to the other available measures.

### **Strengths and Weaknesses of the Article**

One of the strength of the article can be attributed to the sample and sampling approach used. The sample included 36 individuals suffering from Chronic Heart Failure. The sampling approach was based on the European Society of Cardiology measurements which were used to determine the best choice of respondents participating in the study. Secondly, another strength could be attributed to the authors use of intervention and control group. Through this approach, it was possible to gather data from both sides rather than using a single group in the study. One of the weakness is that the patients used in the study were sourced from a single county council hospital. Secondly, as part of establishing the costs of the care, this study failed to include informal care and other indirect costs. This is a significant weakness to validate the home-based, staff-intensive working mode.

### **Clinical Practice Guideline**

The clinical practice guideline in the article was sourced from the national consensus project clinical practice guidelines for quality palliative care 3<sup>rd</sup> edition (2013) (Bickel et al., 2016). First, it was identified that palliative care concept tends to improve the health-related quality of life and reduction of morbidity. Secondly, with the new strategies of patient management introduction, they usually are accompanying with increased costs. In any event, the health-related quality of life, morbidity, or mortality are improved, the strategies are perceived as cost-effective is QALYs or life

years gained per cost unit are existing within particular units. Third, the palliative care intervention is often scoping beyond improvement of health-related quality of life and morbidity and also cost savings.

#### **Fourth Resource Summary**

The relevance of the current article could be attributed to its demonstration of the fact that palliative advanced home care and heart failure care intervention has a fundamental influencing in saving of costs as opposed to the standard care. In this case, it is incumbent upon the policymakers to consider these results in their allocation of resources. Secondly, the previous economic studies of individuals suffering from chronic heart failure had been carried out among the patients who have cancer hence a significant failure of focusing on heart failure patients. Thirdly, as opposed to the hospitalization of a patient in hospital set-up, palliative care has more influence on the health of a heart failure patient.

#### **Conclusion**

In summary, the selected article intended to answer the question; In patients suffering from chronic heart failure, what is the effect of palliative advanced home care on health outcomes and cost-effectiveness compared with standard care in hospital settings within a period of 2 years? This question had been answered conclusively, and it noted that the palliative advanced home care and heart failure care significantly save financial resources and should always be regarded as being cost-effective. In this case, a government can spend the extra costs in other medications which require hospital-based care.

### References

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