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Effects of person-centred care on health outcomes—A randomized controlled trial in patients with acute coronary syndrome

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ABSTRACT

Objectives: To study the effects of person-centred care provided to patients with acute coronary syndrome, using four different health-related outcome measures. Also, to examine the performance of these outcomes when measuring person-centred care.
Data and method: The data used in this study consists of primary data from a multicentre randomized parallel group, controlled intervention study for patients with acute coronary syndrome at Sahlgrenska University Hospital in Gothenburg, Sweden. The intervention and control group consisted of 94 and 105 patients, respectively. The effect of the intervention on health-related outcomes was estimated, controlling for socio-economic and disease-related variables.
Results: Patients in the intervention group reported significantly higher general self-efficacy than those in the control group six months after intervention start-up. Moreover, the intervention group returned to work in a greater extent than controls; their physical activity level had increased more and they had a higher EQ-5D score, meaning higher health-related quality of life. These latter effects are not significant but are all pointing towards the beneficial effects of person-centred care. All the effects were estimated while controlling for important socio-economic and disease-related variables.
Conclusion: The effectiveness of person-centred care varies between different outcomes considered. A statistically significant beneficial effect was found for one of the four outcome measures (self-efficacy). The other measures all captured beneficial, but not significant, effects.

1. Introduction

Healthcare innovations, utilized over the last three decades, have improved the quality of healthcare significantly, but they have not been able to contain its costs despite promised greater efficiency. This rise in healthcare spending is a major threat to equal access

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to quality care. Therefore, it is important to focus on the accelerated uptake of care innovations that not only maintain or improve the quality of care, but also indicate the capacity to contain care related costs. Results from studies that have evaluated person-centred care have indicated positive effects independent of the care setting in which testing took place. Person-centred care seems to decrease care related costs, while also improving quality and responsiveness of care [1,2]. The goal of this study is to add to the stock of knowledge needed for efficient allocation of available healthcare resources. For this purpose, cost-effectiveness analyses (CEA) are frequently employed. CEA is used in studies comparing outcomes and costs attributed to an intervention by measuring outcomes directly, without incorporating the value of all other competing uses of resources [3]. In this study, we will examine the performance of different outcomes measures frequently used for evaluating the effects of person-centred care interventions and that may be considered for measuring outcomes in health economic evaluations.

1.1. Person-centred care

Person-centred care refers to a type of care where the care provider focuses on the needs and resources of the patient and can be defined as co-creation of care between the patients, their family, informal care takers, and health professionals. This definition is becoming widely used [4,5], by many international organizations. Coulter et al. [6] defined personalised care planning in their Cochrane review including the following components:

1. Patients and clinicians identify and discuss problems caused by or related to the patient's condition(s), giving due consideration to both clinical tests and treatments and the practical, social, and emotional effects of their condition(s) and treatment(s) on their daily lives.
2. They then engage in a shared decision-making process involving goal setting and action planning, focused on determining priorities, agreeing about realistic objectives, solving specific problems, and identifying relevant sources of support.
3. The agreed plan is documented and followed up.

Ekman et al. have also described and evaluated the effects of person-centred care using these three components [7].

1.2. Outcome measures

Different outcomes have been used in studies concerning person-centred care. For instance, self-efficacy, which has been found to increase as a result of person-centred care for patients with acute coronary syndrome (ACS) and diabetes [8–11]. Also, person-centred care reduced length of hospital stay in a quasi-experimental study in patients undergoing hip-replacement [12].

An observational cohort study assessing patient-centred care on primary care visits showed improved health status, measured by The Short Form Health Survey (SF-36), and increased efficiency of care [13]. A study using randomized controlled trials for patients with ulcer diseases, hypertensions and diabetes used patients' functional status and self-reported evaluations of health as outcomes to measure patient-centred care. The intervention group reported better health status at follow-up [14]. Lower social support for patients suffering from acute myocardial infarction (AMI) led to worse health status and more depressive symptoms over the first year, measured with a disease specific health measure and Short Form-12 [15]. Mead and Bower [16] discovered both significant and non-significant effects on patient satisfaction from patient-centred care in a review-article.

1.3. Quality of life

Beneficial functional and quality-of-life effects from implementation of person-centred care have been found in studies e.g. Ref. [17]. In a non-randomized prospective study for acute hip fracture patients the intervention group had significantly shorter length of hospital stay, shorter time to first ambulation, fewer pressure wounds and medical complications than the control group [18]. Quality-of-life effects, measured by The Mental Health Inventory (MHI-5), a part of SF-36 [19] was studied for patients suffering from chronic disease [20]. Patient-centred care improved health status and health behaviour, led to fewer days of hospitalization and fewer hospitalizations. In a randomized controlled trial, evaluating the effects of person-centred care, re-hospitalization decreased, quality of life increased [17] and a significant cost reduction was observed [21]. Moreover, a patient-centred care intervention for diabetes patients led to greater satisfaction with health care, fewer symptoms of depression, fewer days in bed due to illness and greater self-efficacy [22]. However, Kennedy et al. [23] and Chambers et al. [24] found no effects from patient-centred care on health-related quality of life measures on patients with chronic conditions and psoriasis respectively. Also, studies on patient-centred care for diabetes patients have not been able to find significant results on health-related quality-of-life [25–27].

1.4. Cost-effectiveness

In a study performed at hospital for patients with chronic heart failure person-centred care yielded less costs compared to conventional care [1] and the length of hospital stay was reduced by 30 percent along with better preserved index of ADL [28]. However, studies evaluating the cost-effectiveness of person-centred care is limited [1]. Patient-centred care has been shown to lead to better clinical outcomes, better health cost management and cost-effectiveness [29]. A randomized controlled study using a computer-based personal health support system concluded that it could improve quality-of-life for patients and promote more efficient health care [30]. Furthermore, patient-centred care for patients with pancreatic diseases resulted in cost-effective management, thereby decreasing the burden on healthcare systems [31]. Online patient-centred management of psoriasis was less costly but as effective as standard in-office follow-up treatment [32].