



# Evaluation of a case management program for women with breast cancer: Conducting a quasi-experimental study within mental health care research

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## Introduction

**Breast cancer** is one of the most common cancers in the world. In Germany, more than 55,000 women are affected by it every year. Patients are not only confronted with a life threatening disease but are also forced to deal with often very invasive medical treatment and cancer-related physical, mental and social burden. In this context, many patients express substantial **need for more information and support** (Kaufmann and Ernst, 2000). As the treatment of breast cancer is a system-wide, complex, multi-professional and interdisciplinary process, the original Anglo-American concept of **Case Management (CM)** may represent a suitable method to support the integration of medical treatment processes and resulting increase in effectiveness and efficiency.

**Case Management** is defined as a comprehensive, patient-oriented and integrated (trans-sectoral) organisation and coordination of treatment and medical care processes through one central contact person, the **Case Manager**.

In order to improve breast cancer treatment, a pilot model of the CM concept has been implemented at the "mammaNetz" service centre in Augsburg (Bavaria) as a first institution of this kind in Germany.

## Methods and Work Steps II

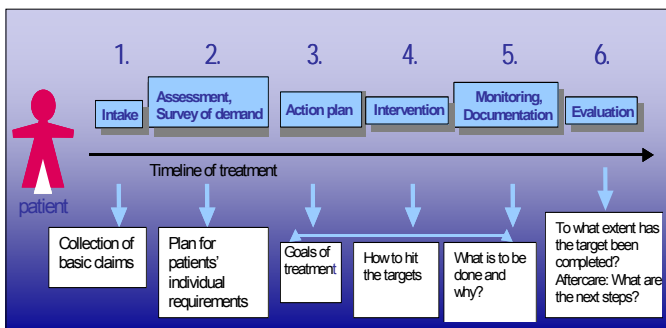
| Primary outcome                       | Instrument/data source  |
|---------------------------------------|---|
| quality of life (functional health)   | SF-8 (Ware et al. 1998), EORTC-11 (Dirmaier et al. 2004)        |
| mental state (depression and anxiety) | HADS-D (Zigmond and Snaith, 1983, Hermann et al. 1995)          |
| Secondary Outcome                     |   |
| coping behaviour                      | DWID-D (Zaun, 2002)   |
| social support                        | SSUK (Ramm & Hasenbring, 2003)                                  |
| self-efficacy                         | SWE (Jerusalem & Schwarzer, 1981)                               |
| Additional questions implementation   |   |
| feasibility                           | own questionnaire, administrative data, survey of case managers |
| acceptance of Case Management         | survey of case managers and network partners                    |

Table 1: Outcome and instruments used for investigation

## Subject Matter and Aim of the Research Project

The aim of the study (founded by the Federal Ministry of Education and Research, BMBF) is to investigate the effectiveness and efficiency of a Case Management Concept for patients with breast cancer.

## Individual Steps of the Case Management Support Process



## (Indirect) Evidence for Case Management

| Case Management can contribute to...   | Case Management can contribute to...   |
|--|--|
| <ul style="list-style-type: none"> <li>improve the patients' status of health</li> <li>improve the patients' functional status</li> <li>improve the patients' satisfaction with the treatment process</li> </ul> | <ul style="list-style-type: none"> <li>decrease the patients' hospital length of stay</li> <li>strengthen the patients' ability of empowerment (i.e. help the patients to help themselves)</li> <li>arbitrate between patients and professional health care providers</li> </ul> |

(References: f.E. Mueser, Bond, Drake et al 1998, Ziguras, Stuart 2000, for review compare Gensichen, Beyer et al. 2003)

## Methods and Work Steps I

Based on methods of Mental Health Care Research, a **prospective quasi-experimental multicentre study** started in November 2006 and will be completed in October 2009 to evaluate the pilot project based on **Case Management**. Treatment process and outcome of the **intervention group** (Case Management patients from mammaNetz, Augsburg) and the **control group** (patients from eastern Bavaria with standard care, i.e. without CM) are compared at baseline (t0) (N=700), after six (t1) and after twelve months (t2).

Focus of the study is the investigation of **effectiveness and efficiency**. This is operationalised by analysing both **patient's perspective** using standardised questionnaires and – with regard to efficiency – **administrative data**.

## Study Design

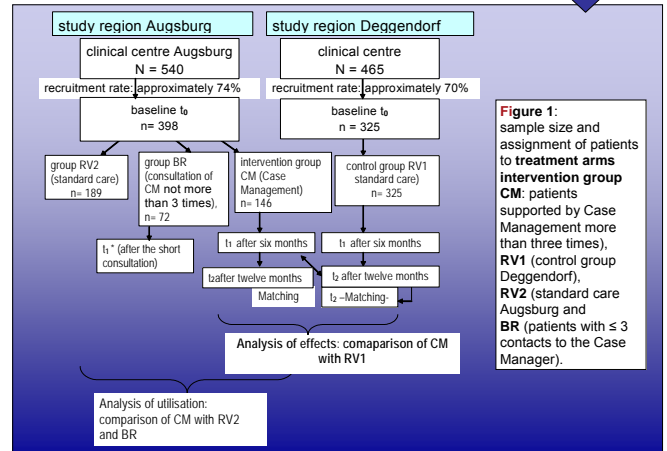


Figure 1: sample size and assignment of patients to treatment arms **intervention group CM**: patients supported by Case Management more than three times), **RV1** (control group Deggendorf), **RV2** (standard care Augsburg and BR (patients with ≤ 3 contacts to the Case Manager).

## First Baseline Results (n=106)

| Variable                                   | N   | N (%) | M (S.D., range)                               |
|--|-----|-------|---|
| Mean age in years                          |     |       | M = 56.25 m<br>(S.D = 13.276, range 28-83)    |
| <b>Marital status</b>                      |     |       |   |
| Married/common-law                         | 77  | 74    |   |
| Divorced/separated                         | 11  | 10.6  |   |
| Single                                     | 5   | 4.8   |   |
| Widowed                                    | 11  | 10.6  |   |
| <b>Educational level</b>                   |     |       |   |
| Elementary school                          | 54  | 51.4  |   |
| Junior High school                         | 34  | 32.4  |   |
| High school certificate/ university degree | 17  | 16.2  |   |
| <b>Employment status</b>                   |     |       |   |
| Currently employed                         | 35  | 33    |   |
| Retired                                    | 28  | 26.4  |   |
| Housewife/unemployed                       | 33  | 31.1  |   |
| low-paid work                              | 9   | 8.5   |   |
| <b>Diagnosis</b>                           |     |       |   |
| newly diagnosed                            | 92* | 86.8  |   |
| recurrence                                 | 8   | 7.5   |   |
| <b>Initial level of mental status</b>      |     |       | 6.46 <sup>b</sup>                             |
| (HADS sum score depression)                |     |       | S.D = 4.54, range 0-21)                       |
| (HADS sum score anxiety)                   |     |       | 8.31 <sup>c</sup><br>(S.D = 5.07, range 0-21) |

table 2: Sociodemographic and clinical characteristics of the participants at baseline (t0), (n=106)

## References:

Gensichen, J., M. Beyer, et al. (2003). "Case Management für depressive Patienten in der hausärztlichen Praxis." *psychoneuro* 29 (5): 227-233.

Kaufmann, M. and B. Ernst (2000). "Was Frauen mit Krebs erfahren, empfinden, wissen und vermissen." *Deutsches Ärzteblatt* 97(47): A3191-3196.

Mueser K.T., Bond G.R., Drake R.E. et al. Models of care for severe mental illness – A review of research on case management. *Schizophren Bull* 1998; 24: 37-74

Wendt, W. R. (2001). Case-Management im Sozial- und Gesundheitswesen. Eine Einführung. Freiburg im Breisgau. Lambertus.

Ziguras SJ, Stuart GW. A meta-analysis of the effectiveness of mental health case management over 20 years. *Psychiatr Serv* 2000; 51(11): 1410-1421