**E-APPENDIX A – The CareWell in Hospital program – before-after study**

**Program**

The CareWell in Hospital program (CWH) is a project of the National Care for the Elderly Program, which is coordinated by ZonMw, the Netherlands, Organization of Health Research and Development. The aim of CWH is to improve the quality, safety, and efficiency of hospital care for elderly patients by creating a tailored care plan (the CareWell plan) for all inpatients aged 70 years and older who are identified as being frail, in order to ensure optimum prevention strategies for hospital-associated and peri-operative complications. The CWH program consists of:

* Initial screening of every patient age 70 years and older by the nurses for a risk of functional decline at or before admission. If a patient is at risk for functional decline or adverse events (delirium, malnutrition, falls or physical disabilities):
* Secondary screening by a geriatrics nurse. The Geriatrics nurse determines whether the patient is frail or not and would benefit from the CWH program, primarily based on her clinical judgment after reviewing the nursing and medical file (including medication) and a brief interview with the patient. If the patient is judged to be frail:
  + Creation of a CareWell plan by the CareWell team, including:
    - A medication review by the geriatrician;
    - If necessary, a medical history by proxy;
    - If necessary, a comprehensive geriatric assessment by the geriatrician;
    - If necessary, discuss the patient in a multidisciplinary meeting;
    - If necessary, involvement of a CWH volunteers coordinator who instructs trained volunteers to visit patients and perform cognitive and physical stimulating activities;
    - Follow-up of the patient during hospital admission;
    - An updated CareWell plan upon discharge by the geriatrician.

The CareWell plan contains recommendations about care and well-being provided by the geriatric consultation team, to which nurses and physicians should adhere. These recommendations are categorized in domains of somatic problems, physical functioning, social environment, psychosocial functioning, and communication.

* Education of the nurses and physicians by the geriatric consultation team.

**Study**

CWH was evaluated in a before-after study which was performed in 2 surgical departments and 1 internal medicine department at Radboud University Medical Center, Nijmegen, The Netherlands (1 January 2011–1 May 2011 and 1 March 2012–1 July 2012). The 3 departments represent the medical specialties: vascular surgery, trauma surgery, abdominal oncology and surgical oncology (50 beds); cardiothoracic surgery (16 beds) and lung diseases (16 beds); rheumatic diseases (7 beds), infectious diseases and general internal medicine (27 beds). Patients were eligible for the study if they were 70 years or older and when their expected length of stay was longer than 48 hours. Patients who did not understand Dutch, were admitted less than 48 hours, had a contagious disease, were terminally ill, and/or were treated by a medical specialist from another department were excluded from the trial, but could receive the intervention. During the after-measurement period, all patients who were judged to be frail could receive parts of or the complete CWH interventions.