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**CONFERENCE ABSTRACT****Advantages of person-centered and integrated care service: results of Mixed Method Research on Embrace**16<sup>th</sup> International Conference on Integrated Care, Barcelona 23-25 May 2016Sophie L.W. Spoorenberg<sup>1</sup>, Ronald J. Uittenbroek<sup>1</sup>, Hubertus P.H. Kremer<sup>2</sup>, Sijmen A. Reijneveld<sup>1</sup>, Klaske Wynia<sup>1,2</sup>

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**Introduction:** Health care systems are challenged by the changing demands for care and support of older adults. Integrated care models may provide a solution for these transformations. Embrace is a recently developed population-based, person-centered, and integrated care service for community-living older adults. It was implemented in the Netherlands in 2012. Currently, 2600 older adults from 29 general practitioner (GP) practices are participating. We evaluated the effects of Embrace regarding patient outcomes and experiences, quality of care, and service use and costs using Mixed Methods Research.

**Theory/Methods:** Intervention. Embrace combines the Chronic Care Model with risk profiles based on a population health management model. A multidisciplinary Elderly Care Team – consisting of a GP, an elderly care physician, and two case managers (district nurse and social worker) – provide care and support. The intensity level, focus, and individual or group approach of the care and support depends on an older adults' risk profile.

**Design.** We used different measurement instruments, e.g. the specifically developed GeriatrICS (a geriatric core set based on the ICF) and the Patient Assessment of Integrated Elderly Care (PAIEC), to assess the effects of Embrace after twelve months using Mixed Methods. A Randomized Clinical Trial and cost-effectiveness study was conducted to assess the effectiveness of Embrace on patient outcomes for older adults, their perceived quality of care, and service use and costs. Qualitative studies were performed to determine the experiences of older adults and professionals with Embrace. One group pre-post studies were conducted to evaluate professionals' perceived quality of care, effects of Embrace on health-related problems, and goal attainment scores. Furthermore, the long term effects of Embrace will be assessed.

**Results:** (Patient outcomes and experiences) The RCT showed no clear advantages of Embrace regarding the domains health, well-being, and self-management. The qualitative study showed that older adults felt safe and secure and had the confidence to remain living at home. The preliminary findings of the pre-post study indicated that the number and severity of perceived health-related problems decreased.

Quality of care. Results of the RCT showed that older adults in the Embrace group reported greater improvement in quality of care compared to care as usual (CAU). In addition, professionals reported a significant increase in the level of integrated care. A qualitative study showed that case managers identified problems early, took preventive actions, and felt more competent to meet their clients' needs.

Service use and costs. Findings of the cost-effectiveness study will be available in May 2016.

**Discussion:** Embrace care and support has several advantages compared to CAU. Quality of care improved, older adults felt safe, secure, and in control, case managers felt that they were able to connect fragmented and discontinuous elderly care, and the number and severity of perceived health-related problems decreased. Embrace yielded greatest improvement in the "Frail" risk profile, a subgroup of older adults "at risk" of poor health outcomes with no immediate need for professional care yet. This specific group is usually not eligible for integrated care services even though these could be increasingly effective for their health outcomes in the long run.

**Lessons learned:** Complex interventions such as Embrace require a multimethod evaluation to obtain a complete overview of the effects. Focusing only on a RCT would lead to limited conclusions. Furthermore, commonly used measurement instruments for health and well-being may not have been sufficiently sensitive to change to detect advantages of Embrace in clinical practice. This may explain why we only found effects using the specifically developed measurement instruments (GeriatrICS and PAEIC).

**Limitations:** A limitation of this study is that we randomized participating older adults within the GP practices. This may have led to some contamination of CAU via the members of the Elderly Care Team. In addition, we had no control groups for the studies on professionals' perspectives on quality of care and on older adults' health-related problems.

**Future research:** Future research should focus on the long-term effects of Embrace and on evaluating the process of care provision. Furthermore, the effects of Embrace in other geographical areas and in other cultures with different healthcare systems should be explored.

**Conclusion:** Mixed Methods Research showed that receiving care and support by Embrace for twelve months resulted in several advantages compared to care as usual.

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**Keywords:** person-centered; population-based; older adults; community-living; mixed methods research

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