Rethinking Dementia Care

Citation for published version (APA):

de Bruin, S., de Boer, B., Beerens, H., Buist, Y., & Verbeek, H. (2017). Rethinking Dementia Care: The Value of Green Care Farming. *Journal of the American Medical Directors Association*, 18(3), 200-203. <https://doi.org/10.1016/j.jamda.2016.11.018>

Document status and date:

Published: 01/03/2017

DOI:

[10.1016/j.jamda.2016.11.018](https://doi.org/10.1016/j.jamda.2016.11.018)

Document Version:

Publisher's PDF, also known as Version of record

Document license:

Taverne

Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
- The final published version features the final layout of the paper including the volume, issue and page numbers.

[Link to publication](#)

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license above, please follow below link for the End User Agreement:

www.umlib.nl/taverne-license

Take down policy

If you believe that this document breaches copyright please contact us at:

repository@maastrichtuniversity.nl

providing details and we will investigate your claim.

JAMDA

journal homepage: www.jamda.com

Editorial

Rethinking Dementia Care: The Value of Green Care Farming

Simone de Bruin PhD^{a,*}, Bram de Boer MSc^b, Hanneke Beerens PhD^b,
Yvette Buist MSc^a, Hilde Verbeek PhD^b

^a National Institute for Public Health and the Environment (RIVM), Center for Nutrition, Prevention, and Health Services, Bilthoven, The Netherlands

^b Department of Health Services Research, Care and Public Health Research Institute (CAPHRI) School for Public Health and Primary Care, Faculty of Health, Medicine, and Life Sciences, Maastricht University, Maastricht, The Netherlands

Worldwide, there are an estimated 46.8 million people living with dementia. This number will almost double every 20 years, reaching 74.7 million in 2030 and 131.5 million in 2050.¹ Long-term care services have been put in place to support people with dementia and their family caregivers, which are provided in settings that range from adult day services centers, assisted living facilities, nursing homes, hospitals, and other health facilities.² Traditionally, long-term care services for people with dementia were based on a medical-somatic model of care. The illness was emphasized, and care was provided in protected settings focusing on basic nursing and medical care services aimed at keeping residents safe.

The quality of long-term dementia care is, however, being criticized widely. Part of the debate is insufficient alignment between care environments and services offered with the preferences and needs of people with dementia. There is, therefore, growing recognition of the need for culture change in long-term dementia care, acknowledging that high-quality care for people with dementia goes beyond the provision of physical tasks and procedures. Dementia care should include the creation of a positive, safe, and person-centered environment in which the individual's needs are met, where they are respected and where they have a sense of meaningfulness, dignity, and well-being, despite the limitations imposed by the dementia disease.^{3,4} Adopting a person-centered care approach implies that care environments should be considered as an active component of dementia care. This has, however, proven difficult in existing traditional dementia care services because these are insufficiently equipped to address person-centered therapeutic goals. This is perceived as an important barrier as a growing body of evidence suggests that the care environment affects outcomes in people with dementia, especially on physical and psychosocial functioning.^{5,6}

Consequently, innovations in long-term dementia care are taking place both in the community as well as in residential care.^{7–10} Examples of innovative residential care models are for instance the

Green House model and the Eden Alternative initiated in the United States and other homelike residential care models.^{11,12} These initiatives focus on providing care in small-scale, homelike environments aiming to integrate health and social care services in everyday life.¹³ Also, innovations for people with dementia living at home are taking place, such as so-called “meeting centers” and community-based psychogeriatric adult day services centers.^{10,14}

Innovations in dementia care do not solely stem from the health-care sector. In some countries, we also see initiatives that originate from the agricultural sector, one of which is Green Care Farming. This editorial sets out lessons for long-term care that can be learned from green care farms (GCFs). GCFs combine agricultural activities with care services for a variety of client groups from the health and social care sector, such as people with a learning disability, people with mental health problems, and people with dementia.^{7,15} First, the concept of GCF is explained and evidence from first studies conducted in the field, including a study that is featured in this issue of JAMDA,¹⁶ is presented. Second, building upon the findings of first studies in the area of green care farming, 3 key aspects of GCFs are discussed that may provide inspiration to (further) improve dementia care.

Green Care Farming for People With Dementia

As opposed to traditional dementia care settings, GCFs have a small-scale character breathing out a home-like and familiar atmosphere. All GCFs have some degree of farming (ie, crops, livestock, woodland) and of care (health, educational, and/or social services), but the ratio between farming and care, the type of farm (eg, dairy farm, industrial livestock farm, mixed farm), and the client groups may differ.^{17–19} GCFs offer access to several indoor (eg, kitchen, living-room, shed) and outdoor environments (eg, garden, farm yard, stable, green house, work shed). People are exposed to normal daily life stimuli, such as familiar odors (eg, hay, silage, food that is being prepared), sounds (eg, animals, tractors), touch (eg, animals, soil, precipitation), and tastes (eg, fresh fruits and vegetables).⁷ Currently, GCFs are mainly present in Europe, especially in The Netherlands and Norway. In addition, outside Europe (eg, Japan and the United States), the number of GCFs is gradually increasing.^{20,21} The vast majority of GCFs provide community-based services. In The Netherlands, for instance approximately 200 GCFs are specialized in adult day services for people with dementia. New are GCFs providing 24-hour nursing care, as alternative for nursing homes.²²

This work was supported by the Dutch Alzheimer Society (Grant: WE.13-2014-04).

The authors declare no conflicts of interest.

* Address correspondence to Simone de Bruin, PhD, National Institute for Public Health and the Environment (RIVM), Center for Nutrition, Prevention, and Health Services, PO Box 1, Bilthoven 3720BA, The Netherlands.

E-mail address: simone.de.bruin@rivm.nl (S. de Bruin).

<http://dx.doi.org/10.1016/j.jamda.2016.11.018>

1525-8610/© 2016 AMDA – The Society for Post-Acute and Long-Term Care Medicine.

There is a widely held belief that GCFs may positively affect outcomes in people with dementia, although scientific research is scarce. First studies that investigated effects of GCFs providing adult day services for people with dementia suggest that GCFs increase activity engagement, fluid and nutritional intakes, physical activity, social participation, and time spent outdoors.^{15,23–25} The first study into GCFs providing 24-hour nursing care underlines these findings and additionally suggests that residents of GCFs were more engaged in activities and had more social interaction compared with residents of regular small-scale living facilities.¹⁶

Recent studies in this area further suggest that GCFs offering adult day services attract a distinct client group. People with dementia attending adult day services centers are generally younger, more often male, and more often still married (as opposed to widowhood) than client groups of regular care environments, such as adult day services centers affiliated to residential homes or nursing homes.^{15,23,24} Traditional care environments are often not appealing to people with dementia and their families who have chosen for a GCF because of the institutional environment and the types of activities offered. If services at GCFs had not been available, other services would have been postponed or not initiated at all as regular day care services insufficiently meet their needs and capacities.²⁴

Based on first studies in the area of green care farming in dementia, we suggest that the innovative care concept delivered by GCFs can be seen as a valuable addition to more traditional care concepts in dementia care.^{15,16,22–24} Particularly, because GCFs embed a unique combination of characteristics (eg, natural elements, outdoor spaces, animals, familiar and small-scale environment, meaningful activities) that have been associated with improved outcomes in people with dementia (eg, in terms of activity involvement, autonomy, behavioral symptoms, cognition, physical functioning, quality of life, sense of purpose, social interaction, and well-being).^{5,26–32}

What Lessons Can Be Learned From GCFs?

The lessons that can be learned from GCFs are underpinned by Figure 1 in which we display the characteristics of GCFs on the micro, meso, and macro level of the healthcare system. The micro level refers to the psychosocial environment including the interactions between staff and the person with dementia and his informal caregiver where personal characteristics (eg, biological, psychosocial, and sociodemographic factors) and preferences play an important role in decision making with regard to care delivery. It also refers to mutual social interactions between people with dementia. The meso level refers to the organizational context including the organization's vision on dementia care delivery, change culture, and staff competencies, but also to the direct care environment such as the physical environment and care delivery and activities. The macro level refers to the health system in which the GCF operates, including factors such as legislation in long-term care, funding of dementia care, and quality assurance systems. In The Netherlands, GCFs and traditional dementia care environments fall under the same funding system of long-term care services, legislation framework, and quality insurance system. As such, the macro level is similar for GCFs and traditional dementia care environments.

Lesson 1: Take Preferences and Remaining Capacities of People With Dementia as a Starting Point

GCFs take remaining capacities of people with dementia as a starting point rather than their limitations. GCFs provide a broader spectrum of activities than traditional dementia care environments,¹⁵ matching biological, psychosocial, and sociodemographic factors. As such, they are well able to align with differences in preferences, needs, and capacities people with dementia have (ie, the micro level). GCFs

Fig. 1. Characterization of GCFs, distinguishing the micro, meso, and macro levels of the health system in which they operate.

further allow them to choose the activities that fit their preferences, needs, and capacities most. The aforementioned factors may explain why for instance higher activity levels and engagement of people with dementia at GCFs than in traditional dementia care environments have been observed.^{15,16}

Lesson 2: Ensure that the Care Environment Includes Stimulating Elements in Daily Care

A pronounced difference between GCFs and traditional care institutions are the physical and organizational environments in which dementia care is being provided (ie, the meso level). At GCFs, stimulating home and farm elements are actively used. Activities are naturally incorporated in the environment and care provision, and are continuously present.⁷ This means that the activities are usually not especially organized, but are tasks that need to be done anyway and fit within normal life. As such, people with dementia are encouraged to participate in a diverse range of meaningful and stimulating activities (eg, picking eggs, preparing meals, gardening, sweeping the yard, feeding and viewing the animals) centered around their normal daily life and integrated in a daily routine of the farm. This might contribute to their activity engagement, higher food and fluid intakes, feelings that they still matter, and a sense of autonomy and reciprocity.^{16,23,24,33} Because the activities can be done at different places and often require some physical effort, at the GCFs people with dementia are physically active. This is in contrast to traditional dementia care environments where daily life is primarily organized around routines of the institution and where activities have an institutional character (eg, memory training, reading the newspaper, crafts work, bingo) and are mostly done while seated.^{15,16,34}

Lesson 3: Have Courage and Vision to Implement a Radically Different Care Philosophy

The radical redesign of GCFs stems often from dissatisfaction with traditional dementia-care environments. Farmers, and farmers' wives in particular, usually have a professional health or social care background (eg, nurse, carer, occupational therapist) in a traditional dementia care setting.³⁵ They were displeased with the traditional working routines, regulations, and care program. At the GCF, they implemented a care philosophy (ie, meso level) that reflects their values in relation to dementia care to better meet the needs of people with dementia and their families. As such, they realized a culture change in dementia care provision (De Bruin et al, unpublished work, 2013). Key elements of their vision are in line with lessons 1 and 2.

Addressing preferences and remaining capacities of people with dementia and including stimulating elements in the care environment alone will not be sufficient to radically change dementia care. Farmers additionally show leadership by being personally involved and highly motivated to transfer their vision to their staff. They act as a role model, often showing clinical leadership. Nursing staff working at the farm is selected based on competencies that support the individual GCF vision and are continuously guided in providing the care according to this philosophy. To ensure high-quality care, collaboration with other healthcare organizations is sometimes set up, especially if GCFs are nursing homes providing 24-hour care. Where regular long-term care services may perceive rules and regulations as a barrier to change their care practice, GCFs show that it is possible under similar conditions to radically redesign care. This may reflect a more clear vision on person-centeredness, creativity and clinical leadership.

Future Directions

Although the GCF concept is expanding, not only in Europe but also in the United States,^{36,37} adoption of the concept is as yet still not

widespread. A farm may not be the preferred place of care to all people with dementia. Nevertheless, the lessons described in this editorial may encourage other long-term care environments to change services for people with dementia. As such, they may be supported in transforming themselves, and in giving follow-up to actions that have been proposed to address current shortfalls in long-term care.^{4,38,39} We, therefore, propose to investigate which elements and principles of the GCF philosophy could also be adopted by traditional dementia care environments, and which facilitators and barriers are to be expected.

Furthermore, when normalization of care for older people with dementia is the main focus of interest, there is a risk that professionalism may be lost. This aspect of care should not be neglected in the development of GCFs and related approaches. Adequate quality staffing will remain essential. As described, GCF staff aims to encourage people with dementia in social participation and their autonomy instead of to focus on disabilities and to take over tasks. This may require other skills and competencies that will need to be addressed in education and training.

It should further be noted that green care farming is not the only approach radically redesigning dementia care. In The Netherlands, for instance, other care concepts are also being developed (eg, green urban initiatives for adult day services, adult day services for former professors). These developments provide opportunities for people with dementia and their family caregivers to choose a care facility that suits their wishes and beliefs best. It will be worthwhile to monitor these developments and share lessons that can be learned from these approaches. Such insights will help us to answer the key question in long-term care, which is how to reach optimal well-being for people with dementia, their family caregivers, and nursing staff.

References

1. Prince M, Wimo A, Guerchet M, et al. World Alzheimer Report 2015, the global impact of dementia. An analysis of prevalence, incidence, cost and trends. London: Alzheimer's Disease International; 2015.
2. World Health Organization. World report on ageing and health. Luxembourg: World Health Organization; 2015.
3. Winblad B, Amouyel P, Andrieu S, et al. Defeating Alzheimer's disease and other dementias: A priority for European science and society. *Lancet Neurol* 2016;15: 455–532.
4. Tolson D, Rolland Y, Andrieu S, et al. International Association of Gerontology and Geriatrics: A global agenda for clinical research and quality of care in nursing homes. *J Am Med Dir Assoc* 2011;12:184–189.
5. Day K, Carreon D, Stump C. The therapeutic design of environments for people with dementia: A review of the empirical research. *Gerontologist* 2000;40: 397–416.
6. Fleming R, Purandare N. Long-term care for people with dementia: Environmental design guidelines. *Int Psychogeriatr* 2010;22:1084–1096.
7. De Bruin SR, Oosting SJ, van der Zijpp AJ, et al. The concept of green care farms for older people with dementia: An integrative framework. *Dementia* 2010;9: 79–128.
8. Kane RA, Lum TY, Cutler LJ, et al. Resident outcomes in small-house nursing homes: A longitudinal evaluation of the Initial Green House Program. *J Am Geriatr Soc* 2007;55:832–839.
9. Verbeek H, Zwakhalen SMG, Van Rossum E, et al. Effects of small-scale, home-like facilities in dementia care on residents' behavior, and use of physical restraints and psychotropic drugs: A quasi-experimental study. *Int Psychogeriatr* 2014;26:657–668.
10. Dries RM, Meiland F, Schmitz M, et al. Effect of combined support for people with dementia and carers versus regular day care on behaviour and mood of persons with dementia: Results from a multi-centre implementation study. *Int J Geriatr Psychiatry* 2004;19:673–684.
11. Sharkey SS, Hudak S, Horn SD, et al. Frontline caregiver daily practices: A comparison study of traditional nursing homes and the Green House project sites. *J Am Geriatr Soc* 2011;59:126–131.
12. Coleman MT, Looney S, O'Brien J, et al. The Eden Alternative: Findings after 1 year of implementation. *J Gerontol A Biol Sci Med Sci* 2002;57:M422–M427.
13. Ausserhofer D, Deschodt M, De Geest S, et al. "There's no place like home": A scoping review on the impact of homelike residential care models on resident-, family-, and staff-related outcomes. *J Am Med Dir Assoc* 2016;17:685–693.
14. van Haften-van Dijk AM, Meiland FJ, van Mierlo LD, et al. Transforming nursing home-based day care for people with dementia into socially integrated community day care: Process analysis of the transition of six day care centres. *Int J Nurs Stud* 2015;52:1310–1322.

15. De Bruin SR, Oosting SJ, Kuin Y, et al. Green care farms promote activity among elderly people with dementia. *J Hous Elderly* 2009;23:368–389.
16. De Boer B, Hamers JP, Zwakhalen SM, et al. Green care farms as innovative nursing homes, promoting activities and social interaction for people with dementia. *J Am Med Dir Assoc* 2017;18:40–46.
17. Hassink J, Zwartbol C, Agricola HJ, et al. Current status and potential of care farms in The Netherlands. *NJAS* 2007;55:21–36.
18. Hine R, Peacock J, Pretty J. Care farming in the UK: Contexts, benefits and links with therapeutic communities. *Therapeut Commun* 2008;29: 245–260.
19. Pedersen I, Patil G, Berget B, et al. Mental health rehabilitation in a care farm context: A descriptive review of Norwegian intervention studies. *Work* 2016; 53:31–43.
20. Haubenhofer D, Elings M, Hassink J, et al. The development of green care in Western European countries. *Explore* 2010;6:106–111.
21. Gallis C. Green care for human therapy, social innovation, rural economy and education. New York: Nova Biomedical; 2013.
22. De Boer B, Hamers JP, Beerens HC, et al. Living at the farm, innovative nursing home care for people with dementia—Study protocol of an observational longitudinal study. *BMC Geriatr* 2015;15:144.
23. De Bruin SR, Oosting SJ, Tobi H, et al. Day care at green care farms: A novel way to stimulate dietary intake of community-dwelling older people with dementia? *J Nutr Health Aging* 2010;14:352–357.
24. De Bruin SR, Stoop A, Molema CCM, et al. Green care farms: An innovative type of adult day service to stimulate social participation of people with dementia. *Gerontol Geriatr Med* 2015; In press.
25. Schols J, van der Schriek-van Meel C. Day care for demented elderly in a dairy farm setting: Positive first impressions. *J Am Med Dir Assoc* 2006;7:456–459.
26. Anderiesen H, Scherder EJ, Goossens RH, et al. A systematic review—Physical activity in dementia: The influence of the nursing home environment. *Appl Ergon* 2014;45:1678–1686.
27. Fleming R, Goodenough B, Low LF, et al. The relationship between the quality of the built environment and the quality of life of people with dementia in residential care. *Dementia (London)* 2016;15:663–680.
28. Kok JS, van Heuvelen MJ, Berg IJ, et al. Small scale homelike special care units and traditional special care units: Effects on cognition in dementia; A longitudinal controlled intervention study. *BMC Geriatr* 2016;16:47.
29. Milke DL, Leask J, George C, et al. Eight years of data on residents in small dementia-care settings suggest functional performance is maintained. *J Hous Elderly* 2015;29:298–328.
30. Smit D, de Lange J, Willemse B, et al. The relationship between small-scale care and activity involvement of residents with dementia. *Int Psychogeriatr* 2012; 24:722–732.
31. Whear R, Coon JT, Bethel A, et al. What is the impact of using outdoor spaces such as gardens on the physical and mental well-being of those with dementia? A systematic review of quantitative and qualitative evidence. *J Am Med Dir Assoc* 2014;15:697–705.
32. Clark P, Mapes N, Burt J, et al. Greening dementia—A literature review of the benefits and barriers facing individuals living with dementia in accessing the natural environment and local green space. Natural England Commissioned Reports, Number 137. Worcester: Natural England and other parties; 2013.
33. Phinney A, Chaudhury H, O'Connor DL. Doing as much as I can do: The meaning of activity for people with dementia. *Aging Ment Health* 2007;11: 384–393.
34. Den Ouden M, Bleijlevens MH, Meijers JM, et al. Daily (in) activities of nursing home residents in their wards: An observation study. *J Am Med Dir Assoc* 2015;16:963–968.
35. De Bruin SR, Oosting SJ, Enders-Slegers MJ, et al. Farming for health—Exploring the benefits of green care farms for dementia patients in The Netherlands. In: Gilliard J, Marshall M, editors. *Transforming the Quality of Life for People with Dementia through Contact with the Natural World—Fresh Air on My Face*. London: Jessica Kingsley Publishers; 2012. p. 72–85.
36. Buist Y. A comparative research into the development of care farming in different countries from a transition perspective (intern report). Wageningen: Wageningen University and Research Center, Plant Research International; 2016.
37. Relf PD. Green care: Farming for health in the USA. In: Gallis C, editor. *Green Care for Human Therapy, Social Innovation, Rural Economy, and Education*. New York: Nova Biomedical; 2013. p. 305–338.
38. Tolson D, Morley JE, Rolland Y, et al. Improving nursing home practice: An international concern. *Nurs Older People* 2011;23:20–21.
39. Tolson D, Morley JE, Rolland Y, et al. Advancing nursing home practice: The International Association of Geriatrics and Gerontology Recommendations. *Geriatr Nurs* 2011;32:195–197.