

**APRIL 15, 2019 - REVISED APPENDIX A**

**Models for Long-term Residential Care: A Summary of the Consultants'  
Report to Long-Term Care Homes and Services, City of Toronto.**

**Prepared by:**

Research Team

Pat Armstrong, project lead, PhD

Albert Banerjee, PhD

Hugh Armstrong, PhD

Susan Braedley, MSW. PhD

Jacqueline Choiniere, RN. PhD

Ruth Lowndes, RN. PhD

James Struthers, PhD

**April 15, 2019**

## Contents

A review of the literature on predominant models for transforming long-term residential care .....	4
City of Toronto homes .....	5
The context .....	5
What we heard and saw .....	6
Appendix 1 .....	9
Appendix 2.....	12
Models for Transforming Long-Term Residential Care: A Review.....	14
Executive Summary .....	15
Culture change principles and approaches.....	16
History .....	16
Clarifying concepts and principles .....	16
Table 1: Principles of culture change – the ideal home should be guided by the following <sup>1</sup> .....	17
Characterizing Models and Approaches.....	18
Table 2: Descriptive narrative chart .....	19
Assessing the Evidence.....	31
Methodological challenges .....	31
Barriers to Culture Change .....	32
Table 3: Barriers to implementation.....	33
The Evidence .....	33
Table 4: Evidence Narrative Chart .....	34

The Butterfly Approach.....	44
Table 5: Most commonly reported changes .....	46
Table 6: Key lessons for implementation of Butterfly projects.....	47
Conclusions.....	49
References:.....	51

This report summarizes the findings of a seven-member academic team that has been conducting research on long-term residential care for more than a decade, doing so in six different countries (Appendix 2). Contracted to Long-Term Care Homes and Services (LTCHS) in October, we proposed:

1. To create a narrative chart of comparing predominant models of care and to review the literature that evaluates them, and
2. To consult with a wide range of those familiar with City homes, guided by three basic questions:
  1. What do the homes do well now?
  2. What needs improvement?
  3. Would the Butterfly approach help or would some other approach be more appropriate?

### **A review of the literature on predominant models for transforming long-term residential care**

For more than a quarter century, there has been a movement to transform long-term residential care. What became known as the culture change movement gave rise to a number of models and approaches for fundamentally altering the values, organization, and physical structures in care homes. Critical of institutions for being impersonal and rigid in ways that can undermine dignity and respect, these models focus on four main aspects of long-term residential care, namely,

1. approaches to care, focusing on care as a relationship and on individuals,
2. flexibility for residents and staff as well as in the division of labour, which requires structural empowerment
3. physical environments, especially small, homelike units, plants, outdoor access
4. leadership committed to the guiding principles.

Central to all the models is the importance of care relationships that take individual capacities and interests into account. Tailoring care to individuals requires a flexible approach, which in turn requires some autonomy for staff and some flexibility in the division of work. It also requires higher staffing levels than currently found in City homes, even though the staffing levels in City homes are higher than in most others. These models all seek to create homelike physical environments, albeit following somewhat different

principles. Although all address questions of leadership, they differ in the extent to which the leaders should direct the continuous adaptation required. The Butterfly model follows similar principles, with a particular emphasis on emotional intelligence.

The focus on transforming the quality of life and the quality of work, as well as the intention to create responsive organizations that continually change, make it difficult to apply conventional methods to assess the impact of the models. Indeed, there are few effective ways of assessing quality. The limited research has produced uneven and sometimes contradictory results. Moreover, while the models address individual differences and suggest grouping residents based on needs and interests, there is little discussion of the kinds of significant cultural differences among groups found in a city like Toronto. Nevertheless, all the research shows models resulting in some improvement in the quality of both care and work, although there is some suggestion that models can become more rigid over time. In addition, all the models imply significant costs.

In sum, the mixed evidence does not lead to a recommendation for a single model but rather for a strategy to learn from all the models, adapting promising practices to specific homes and their populations. Our conclusion is in line with one of the few Canadian comparisons of culture change models. According to Casper et al, facilities that implemented what they call a "facility specific social model of care," in other words taking what was best from all models and adapting them to meet their own unique needs, showed the highest levels of front-line staff empowerment that allowed for person centered care.<sup>1</sup>

## **City of Toronto homes**

For the qualitative research, we attended meetings organized at the Long-Term Care Homes and Services level and within specific homes, and we conducted key informant interviews with individuals recommended by LTCHS and with some individuals we selected ourselves. In addition, we spent two full days in two different homes where we carried out consultations and observations with the entire range of people who live and work in, volunteer and visit in these homes (Appendix 1).

### ***The context***

All homes in Ontario receive most of their funding from the province, based primarily on a formula intended to assess the care needs of the residents. There are additional funding supports for areas such as physical construction. However, City homes also receive some funding from the City, mainly for specialized staff and capital expenditures. In addition to providing funding, the province sets out detailed regulations that cover everything from snacks to physical design, although there is very limited regulation for staffing levels. The province also sets out considerable reporting requirements and provides for both regular and emergency inspections. Admission to homes comes through the five Local Health Integration Networks (LHINs) and LHINs determine the distribution of staffing support

under the Behavioural Support Ontario programme funded by the province. In addition, union contracts and scope of practice regulations structure some aspects of the division of labour and work assignments.

This context shapes the possibilities for models and contributes to the significant differences as well as the similarities among City homes. As is the case with other homes, City ones are dealing with residents who have increasingly complex care needs. However, compared to the provincial average, residents' needs are higher in City homes.<sup>2</sup> Moreover, there are more younger people living in the homes, more men and a very diverse population, all of which create new needs.

### *What we heard and saw*

Basically, there is a great deal of sympathy for the central principles in the models, especially for the need to support care as a relationship. Most recognize the importance of knowing about the person and paying attention to individual resident needs, capacities and emotions. Most are committed to the main principles articulated in the models and many staff members emphasized that a person-centered approach is an essential part of their health-related education. Moreover, there is widespread agreement that the focus should be on care processes rather than on tasks, and on the social as well as the clinical aspects of care. Indeed, different homes have taken up aspects of models that promote this kind of care. At the same time, heavy reporting requirements can serve to emphasize a task and clinical orientation, while reinforcing hierarchies of the sort critiqued in the various models and drawing attention away from the quality of resident life.

There is less agreement about the physical environment, the size of units or what homelike means. There is consensus that the City needs to proceed with the mandated redevelopment of five of the ten homes and that the knowledge of staff, residents, families and volunteers should be taken into account in the design.

There is concern that the models do not adequately address the considerable diversity in the resident and staff populations or the kinds of regulations and structural constraints faced by City homes.

However, the overwhelming majority of those we consulted stressed two things:

- 1) **One size does not fit all** when it comes to models of care.
- 2) **Staffing levels must go up** in order to maintain the current quality and must go up even higher to improve it. Although City homes have higher staffing levels than most homes, we heard repeatedly that staff members want to do the right thing but time and other policy restraints limit their capacity to do so. With more staff, they could focus less on tasks and clinical interventions. At a minimum, care as a relationship requires more staff, continuity in staff and time to care.

We also heard and saw that City homes have tried many of the approaches identified in the culture change models and have developed some innovative strategies. Indeed, we heard much that is positive about the City's care homes when it comes to their approaches to care, their flexibility, their physical structures, and their leadership.

But there are also critiques and suggestions for change. These can be organized around several central ideas.

- 1) Take greater advantage of having ten homes to learn from and with each other, as well as to share with other homes practices and approaches that are effective, especially in relation to diversity and to those who do not have dementia. This already happens to some extent but more could be done.
- 2) Promote greater flexibility and teamwork, encouraging each home and each unit to apply strategies that allow greater autonomy for and consultation with staff, residents, volunteers and families, taking scope of practice and collective agreements into account.
- 3) Provide more continuous, hands-on education not only for staff but also for managers, staff, residents, families and volunteers.
- 4) Provide more opportunities for the communities outside the home to be part of the home, starting with re-opening the cafeterias that were closed, and building on relationships with community organizations in developing culturally appropriate activities and services.
- 5) Provide residents with more access to physical spaces, especially outdoor spaces and reconsider risk assessment, especially around issues such as residents making their own coffee.
- 6) Carry out the mandated physical redevelopment of the homes, with input from staff, residents, managers, families and volunteers.
- 7) Provide a forum to bring together the union, the Colleges for the Health Professions and provincial inspectors to consider how collective agreements and regulations can promote flexibility in the division of labour, in decision-making and in reporting while protecting residents and staff.

Homelike is a common goal in culture change models. Yet, as several informants pointed out, we seldom ask what is good about communal living. When we did so at a residents' council meeting, the response was safety, company rather than the loneliness, and activities which are much better than just watching a television alone at home. Instead of focusing primarily on replicating an idea of home, perhaps we need to create models for more rewarding collective living and working in the present and into the future

---

<sup>1</sup> Caspar, S., O'Rourke, N., & Gutman, G. (2009). The differential influence of culture change models on long-term care staff empowerment and provision of individualized care. *The Canadian Journal on Aging*, 28(2), 165-175.

<sup>2</sup> Toronto.ca/budget2019, p. 3. <https://www.toronto.ca/legdocs/mmis/2019/bu/bgrd/backgroundfile-123813.pdf>



## Appendix 1

### **Consultations at Committee Meetings:**

#### **At City Level**

Behavioural Support Committee, City of Toronto

Interhome Advisory Committee, City of Toronto

LTCHS Advisory Committee on Long-Term Care Homes & Services, City of Toronto

Long-Term Care Management Committee, City of Toronto

Nursing Services Committee

Resident Services Committee

Toronto Seniors' Strategy Accountability Table members

#### **At Home Level**

Family Council (two homes)

Resident's Council (two homes)

### **Formal Interviews were conducted with individuals from the following organizations:**

AdvantAge

Advocacy Centre for the Elderly

Alzheimer Society of Canada

Compliance branch inspector (Toronto long-term residential care homes)

Concerned Friends of Ontario Citizens in Care Facilities

CUPE representatives (two)

DementiAbility/Montessori

Dementia Care Matters Canada

Family Councils of Ontario

Ontario Association of Residents' Councils

Peel Region Butterfly Model representatives

Registered Nurses' Association of Ontario, Long-term Care Best Practices Program

Schlegel-UW Research Institute for Aging

**Consultations/conversations:**

Toronto City Councillor Josh Matlow

**From site visits:**

Management teams at two homes

Coordinator, Spiritual & Religious Care

Director of Nursing

Unit physician and a medical director

Manager, Resident Services (two)

Nurse manager

Nutrition manager

Behavioural Support Staff

Housekeepers (two)

Dietary/food services workers (three)

Music therapist

Social workers (five)

PSWs (10)

Recreation services assistants (two)

RNs (five)

RPNs (eight)

Residents (ten)

Volunteers (four)

Family members (five)

## Appendix 2

**Dr. Hugh Armstrong** is a Distinguished Research Professor and Professor Emeritus of Social Work and Political Economy at Carleton University in Ottawa. His research interests include long-term care, the political economy of healthcare, and paid and unpaid work in healthcare. He has published numerous journal articles and book chapters and, with Pat Armstrong, several books, including *Critical to Care: The Invisible Women in Health Services* (University of Toronto Press), *About Canada: Health Care* (Fernwood Publishing), and *Wasting Away: The Undermining of Canadian Health Care* (Oxford University Press). He has served on the Boards of Directors for the Ottawa-Carleton CCAC, and for the Council on Aging of Ottawa.

**Dr. Pat Armstrong** is a Distinguished Research Professor of Sociology at York University in Toronto and a Fellow of the Royal Society of Canada. She held a CHSRF/CIHR Chair in Health Services and Nursing Research, and Chair of Women and Health Care Reform, a group funded for over a decade by Health Canada. She has published on a wide variety of issues related to long-term care, health care policy, and women's health. Principal investigator (PI) of a SSHRC-funded project on "Reimagining Long-term Residential Care: An International Study of Promising Practices" now in its tenth year, and Coordinator of a smaller one embedded within it on "Healthy Aging in Residential Places", she is also PI on "Changing Place: Unpaid Work in Public Places" and co-investigator on the "Invisible Women: Gender and the Shifting Division of Labour in Long-term Residential Care" and "Seniors-Adding Life to Years: Late Life Issues".

**Dr. Albert Banerjee** is an instructor at Carleton University. For nearly a decade he has been a researcher and postdoctoral fellow with the Re-Imagining Long-Term Residential Care project. He has published extensively on scandals, violence and the impact of audit cultures in nursing homes. With an interest in identifying promising practices, he is currently studying processes that empower workers to improve the quality of nursing home care. He also holds a position as a research associate with the Trent Centre for Aging and Society.

**Dr. Susan Braedley** (MSW, Ph.D.) is an Associate Professor in the School of Social Work and the Department of Health Sciences at Carleton University in Ottawa, Ontario. Dr. Braedley's research program focuses on aging, care work, health and equity. She is a co-investigator on many funded research projects, including "Imagining Age-Friendly 'Communities within Communities:' International Promising Practices".

**Dr. Jacqueline A. Choiniere** is an Associate Professor with the School of Nursing, Faculty of Health, at York University in Toronto. Dr. Choiniere's primary areas of research include women's work and health, and health care quality and reform – most recently focusing on the long-term care sector. For the last ten years she was a Co-Investigator on the SSHRC-funded project, “Re-imagining Long-term Residential Care: An International Study of Promising Practices,” is currently a Co-Investigator on “Imagining Age-Friendly ‘Communities within Communities’: International Promising Practices”, and on “Changing Places: Unpaid Work in Public Places”.

**Dr. Ruth Lowndes** is a Research Associate at York University, currently engaging full time in research-related work in long-term care within the “Re-imagining Long-Term Residential Care: An International Study of Promising Practices” and “Changing Places: Unpaid Work in Public Places” interdisciplinary studies. She is also registered with the College of Nurses of Ontario and is a Certified Diabetes Educator.

**Dr. James Struthers** is a Professor Emeritus in Canadian Studies at Trent University in Peterborough, Ontario. Dr. Struthers is also a member of the Trent Centre for Aging and Society. His research interests include aging and long term care policy, growth and regulation of private and public nursing homes, evolution of home care policies, modern Canadian social welfare history and veterans and Canadian social policy. For the past decade, he has been a Co-investigator on the “Re-imagining Long-term Residential Care: an International Study of Promising Practices” project.

For further information on their shared research, see <http://reltc.apps01.yorku.ca/>

# Models for Transforming Long-Term Residential Care: A Review

## **Prepared by:**

Research Team

Pat Armstrong, project lead, PhD

Albert Banerjee, lead author, PhD

Hugh Armstrong, PhD

Susan Braedley, MSW. PhD

Jacqueline Choiniere, RN. PhD

Ruth Lowndes, RN. PhD

James Struthers, PhD

## **Prepared for:**

City of Toronto Long-Term Care Homes & Services

**February 13, 2018**

## Executive Summary

For more than a quarter century, there has been a movement in North America to transform long-term residential care. What has become known as the culture change movement gave rise to a number of models and approaches for fundamentally altering the values, organization, and physical structures in care homes. Critical of institutions for being impersonal and rigid in ways that can undermine dignity and respect, these models focus on four main aspects of long-term residential care, namely, approaches to care, flexibility, physical environments and leadership. Central to all of them is the importance of care relationships that take individual capacities and interests into account. Tailoring care to individuals requires a flexible approach, which in turn requires some autonomy for staff and some flexibility in the division of work. These models all seek to create homelike physical environments, albeit following somewhat different principles. Although all of them address questions of leadership, they differ in the extent to which the leaders should direct the continuous adaptation required.

The focus on transforming the quality of life and the quality of work, as well as the intention to create responsive organizations that continually change, makes it difficult to apply conventional methods to assess the impact of the models. The research that has been done has produced uneven and sometimes contradictory results, although all show models resulting in some improvement.

## Culture change principles and approaches

Despite longstanding critiques of nursing home quality and widespread efforts to improve care, the quality of life in nursing homes remains less than optimal for many residents (1). One influential movement to rethink and improve the provision of care in nursing homes is the culture change movement.

Culture change refers to a broad movement aimed at transforming nursing homes from institutions oriented to clinical considerations, a task focus, and risk management towards ‘person-centered’ homes oriented to both the quality of care and the quality of life for the resident. To put it simply, culture change involves a shift in how organizations view and deliver care, emphasizing the holistic aspects of the resident’s quality of life and attention to individuals’ interests.

### *History*

The culture change movement originated in the United States in the mid-1980s with the efforts of the National Citizens’ Coalition for Nursing Home Reform (2). In 1985, the coalition issued an influential report, *A Consumer Perspective on Quality Care: The Residents’ Point of View* (3) It stipulated that - *for residents* - quality of life considerations related to dignity and respect were inseparable from and as important as clinical considerations and assistance with the activities of daily living. This report in turn influenced the work of the US Institute of Medicine (IOM). In 1986 the IOM published *Improving the Quality of Care in Nursing Homes*, which further reinforced the conclusions that quality of care and quality of life are inseparable (4). These reports and the subsequent *Nursing Home Reform Act* passed by the US Congress in 1987 spurred the rethinking of nursing home care. Grassroots organizations were formed, most notably among them the Pioneer Network, which brought providers, researchers, consumers, and regulators together to promote what the Network called “culture change.”

### *Clarifying concepts and principles*

While the term “culture change” would seem to emphasize the *cultural* dimensions of change, this reading is misleading. The concept of culture change recognizes the interlinkages among structures, values and organization. Culture change therefore ought to be understood as a claim that the move towards ‘person-centered care’ will require 1) a reorientation of values, beliefs and norms and that this reorientation will 2) necessitate a reorganization of care work and the redistribution of power and control as well as changes in the resourcing of facilities, their design, and the regulatory environment. In other words, culture change is an approach to transformation that not only involves culture but also practices and overall organization. However, for the most part approaches to culture change tend not to look beyond the institution, leading to silences around ownership, policy and funding reform - with calls for the transformation of regulations being a notable exception.



In general, what became known as the culture change movement does not stipulate any specific set of practices or models of care. “The culture-change movement,” Koren (2) writes, “espouses a set of principles instead of offering a prescriptive set of practices or dictating conformance to a model” (p. 2). However, a number of prominent models grew out of this movement.

The principles guiding culture change (and characterizing the development of nearly all subsequent models associated with the movement) were clarified in 2006 by a gathering of US consumer groups, government representatives and trade associations and are summarized in Table 1.

**Table 1: Principles of culture change – the ideal home should be guided by the following<sup>1</sup>**

<b>Principle</b>	<b>Application</b>
Resident Direction	To the degree possible, residents should direct the care they receive.
Homelike atmosphere	Units should be small (10–15 residents) and feel like a home rather than an institution. Meals should be prepared on units, with residents having access to fridges, cooking facilities and gardens.
Close relationships	The homes and work routines should be organized to foster close relationships between staff, residents and family. This requires reducing turnover and having consistent staff assignment.
Staff empowerment	Staff should be supported and empowered so they can respond appropriately to residents’ needs.
Collaborative decision-making	Hierarchies should be flattened, participatory management systems encouraged, and aides given decision-making authority.
Quality improvement processes	Culture change is ongoing and requires processes for continuous quality improvement and assessment.

<sup>1</sup>adapted from Koren 2010, p. 2. Note Koren uses both culture-change and culture change, although the latter is the most common.

### *Characterizing Models and Approaches*

Despite the caution against the strict application of practices, several culture change models that specify practices have emerged. The models do, however, recognize that implementation requires tailoring to suit local conditions. These models include the Eden Alternative (one of the first and best known), the Butterfly Approach (developed more recently in the UK), the Wellspring collective, and Green House, which to date is the most rigorously researched of the culture change approaches (5).

The models represented in the culture change literature share many commonalities. They typically promote smaller, community-like homes. They advocate more autonomy for residents and for staff in order to meet residents' needs. These models are also oriented by clearly articulated and transformative principles of care, generally advocating holistic, 'person-centered' approaches that emphasize quality of life for residents and the inclusion of families in care. Leadership transformation is also an important consideration, with non-hierarchical, distributed approaches typically encouraged.

There are also some notable differences. For instance, the Wellspring approach focuses less on the design of the home and more on the integration of clinical considerations with quality of life. It also provides much more administrative guidance, supporting an alliance of eleven homes under a single governing body. By contrast, the Green House model emphasizes the built environment and requires ground up construction. Although it is not overseen by a governing body, on-going guidance is provided by the Green House Project. The Green House approach has been characterized as the most prescriptive of the culture change models, a factor which has made it appealing for comparative studies.

Butterfly, Green House, Wellspring and Eden Alternative provide a blueprint or at least an overall outline that includes approaches to care that can be described as models. There are also some prominent approaches to care that have not been developed into full models. We consider DementiaAbility Methods: the Montessori Way and the Gentle Care System. We also consider the Adards approach, developed in Australia and emphasizing the connections between resident flexibility and staff autonomy. In Table 2, we provide a description of the main features of the most prominent models and approaches in the literature. We offer the caveat that these are *key principles*, and there is considerable variability between principle and implementation.

**Table 2: Descriptive narrative chart**

Approaches to Care	Flexibility	Physical Environments	Leadership
<b>Butterfly Approach (6-10)</b>			
<ul style="list-style-type: none"> <li>● Feelings matter most.</li> <li>● Residents and staff are human BEINGS not human doings.</li> <li>● Emotional intelligence is the most important capacity in dementia care.</li> <li>● Care is guided by 5 principles: Being Enabling Inspiring Nurturing Growing</li> <li>● Care consists of five key elements: 1) person first: the person trumps the diagnosis, 2) uniqueness: each person is unique, 3) empathy: seeks to understand from the perspective of the person being served, 4) interactions: focus is on the quality of the social interaction, 5) Inclusion: recognizes person-centeredness applies to those</li> </ul>	<ul style="list-style-type: none"> <li>● Staff connect meaningfully with residents and with a flexible division of tasks.</li> <li>● Staff are trained to interpret behaviours as feelings.</li> <li>● Staff receive the same person-centered care that they provide.</li> <li>● Staff express their individuality in their appearance without uniforms.</li> <li>● If staff don't "get it" they should be employed elsewhere.</li> <li>● The "us" and "them" barrier is broken down.</li> </ul>	<ul style="list-style-type: none"> <li>● Homelike environment (e.g., bedrooms turned into mini living rooms and doors are personalized, complemented with memory boxes, special colours, and notice boards "like stories in a journal." The model does not specify that all rooms should be single.</li> <li>● Units are small 10-12 with a plan to move towards units of 8.</li> <li>● Residents are grouped into separate households according to the acuity of their 'responsive behaviours' so as to "reduce stress" by not "mix(ing) up people fearful of one another."</li> <li>● Stimulating environment with bright colors and lots of "stuff" arranged throughout the home for staff to use to engage residents.</li> <li>● Staff do not wear uniforms, but regular clothes contributing to the homelike environment.</li> </ul>	<ul style="list-style-type: none"> <li>● Leadership plays a key role through modelling and coaching and by pushing back against regulations where necessary. Person-centred leaders never allow the "system to run them." Leaders must be congruent, meaning they must embody the principles, leading "from the heart, not just by the hand."</li> </ul>

Approaches to Care	Flexibility	Physical Environments	Leadership
--------------------	-------------	-----------------------	------------

Butterfly Approach (cont'd)			
<p>working and caring for people with dementia.</p>		<ul style="list-style-type: none"> <li>● The home is adapted to make sense to someone experiencing dementia (e.g. wayfinding through colours on walls).</li> <li>● The home places importance on the person's past life (e.g. by providing adapted workshop tools and cars for people to tinker and with memory boxes, detailed life stories books, journals, etc.).</li> <li>● Enclosed, easily accessible outdoor space is provided.</li> </ul>	

Approaches to Care	Flexibility	Physical Environments	Leadership
--------------------	-------------	-----------------------	------------

Eden Alternative (11-13)			
<ul style="list-style-type: none"> <li>● The approach to care is grounded in the assumption that the “three plagues” of loneliness, helplessness, and boredom account for the bulk of suffering.</li> <li>● Medical care is to be subsumed by “genuine human caring.”</li> <li>● Meaningless activity is seen to “corrode” the human spirit. Opportunities for residents to engage in meaningful activities are essential.</li> </ul>	<ul style="list-style-type: none"> <li>● Relations with staff are a central “antidote” to loneliness.</li> <li>● Opportunities should be created for residents to give as well as receive care. This is seen as an antidote to helplessness.</li> <li>● Daily life is to be imbued with variety and spontaneity, with room for the unexpected, as well as for unpredictable interactions and happenings. This is an antidote to boredom.</li> <li>● There is a flexible division of tasks and special training.</li> </ul>	<ul style="list-style-type: none"> <li>● Nursing homes are transformed into “Human Habitats” where life revolves around close and continuing contact with people of all ages and abilities, as well as with plants and animals. These relationships provide meaning and combat loneliness.</li> </ul>	<ul style="list-style-type: none"> <li>● “Wise leadership” is essential and this involves “de-emphasizing top-down, bureaucratic authority,” seeking instead to place the maximum possible decision-making authority into the hands of the Elders (the term that refers to residents) - or into the hands of those closest to them.</li> <li>● In 1998, the Eden Regional Coordinator position was created to assist in disseminating the model.</li> </ul>

Approaches to Care	Flexibility	Physical Environments	Leadership
--------------------	-------------	-----------------------	------------

Green House (14-17)			
<ul style="list-style-type: none"> <li>● Green homes evolved from the Eden Alternative in recognition that the nursing home design sets limits on culture change.</li> <li>● Green homes are typically built from the ground up rather than involving the transformation of existing homes.</li> <li>● The use of information technologies to provide medical expertise, additional staffing and clerical support.</li> <li>● The philosophy of care is guided by the principles of warmth, smallness, flatness, and rootedness:               <ol style="list-style-type: none"> <li>1) Warmth – recognizes the importance of relationships and loving environments.</li> <li>2) Smallness: While small size does not guarantee warmth, it is an important contributor.</li> <li>3) Flatness refers to a non-hierarchical staff organization, recognizing the importance of challenging conventional hierarchies and creating relationships.</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>● Care is provided through relationships. Thus consistent allocation and minimum staffing levels of 6 hours per resident day.</li> <li>● Care is provided by “universal workers” called Shabazim (in the plural). The Shabaz (singular) are certified as nursing assistants and given special training. Shabazim work collaboratively with a clinical support team and provide a wide range of assistance, including personal care; activities; meal planning and preparation, along with laundry care; supply ordering and scheduling.</li> <li>● “Elders” – the greenhouse name for residents - may help with housekeeping, cooking, and laundry. There are no predetermined routines.</li> </ul>	<ul style="list-style-type: none"> <li>● Homes are small in size (with from 6 to 12 residents), blend in with surrounding neighbourhood architecture, and are homelike in floor plan, furnishings and décor.</li> <li>● Each resident has a private bedroom and full bathroom, opening to a central living area organized around a fireplace, full kitchen, and dining room.</li> <li>● Meals are eaten at a common table and family and friends as well as staff can join at mealtimes and in other activities.</li> <li>● Technology must blend in rather than be obtrusive.</li> <li>● As the name (Green) suggests, plants are an important part of the environment. Pets are encouraged and accommodated.</li> </ul>	<ul style="list-style-type: none"> <li>● Green homes challenge conventional hierarchies, with flat organization as a principle.</li> <li>● Homes are overseen by a council of “Elders”, “caregivers” (Staff) and family members.</li> <li>● Nurses are present with one nurse overseeing two homes during the day, and three at night.</li> <li>● Technology is used to seamlessly support care and reduce time taken up with paperwork.</li> <li>● Ongoing guidance is provided by the Green House Project.</li> </ul>

<b>Approaches to Care</b>	<b>Flexibility</b>	<b>Physical Environments</b>	<b>Leadership</b>
---------------------------	--------------------	------------------------------	-------------------

<b>Green House (cont'd)</b>			
4) Rootedness recognizes that meeting regulations is not the equivalent of providing quality care and that compliance can displace deeply held personal commitment to elders. Mastering the art of balancing formal and informal codes of conduct is a key principle to sustaining human warmth in Green houses.			

Approaches to Care	Flexibility	Physical Environments	Leadership
--------------------	-------------	-----------------------	------------

Wellspring (18)			
<ul style="list-style-type: none"> <li>• The goal of the Wellspring approach is to improve clinical care for residents and to create a better working environment for staff by giving staff skills, a voice in shaping their work, and by supporting interdisciplinary teamwork. It recognizes that clinical culture and organizational culture are linked.</li> </ul>	<ul style="list-style-type: none"> <li>• Clinical training models serve as a key mechanism for improving care and enacting culture change. Clinical training is provided to multi-disciplinary care resource teams (CRTs) to fracture hierarchies, foster collaboration and enhance teamwork among staff. CRT members are expected to return to their facility and train others.</li> <li>• CRTs are intended to be the main engine of transformation. They are interdisciplinary, anti-hierarchical, voluntary, and self-directing. They “are the glue that holds the models together as the models are implemented in the facilities and mature into routine care protocols.”</li> </ul>		<ul style="list-style-type: none"> <li>• Wellspring is a confederation of 11 freestanding not-for-profit homes in Wisconsin.</li> <li>• Leadership is key to the approach. Wellspring is implemented through an overarching organizational super-structure – the Wellspring Alliance – as well as through the provision of a geriatric nurse practitioner and a wellspring coordinator.</li> <li>• The Wellspring Alliance is an organizational superstructure composed of members from each of the 11 participating homes. These linkages operate across many levels from CEOs, to administrators, and frontline staff, providing all staff opportunities to interact through quarterly meetings and through training modules.</li> <li>• The geriatric nurse practitioner (GNP) is an external support that works across all facilities and ensures the adoption of training while identifying barriers at each facility. The GNP makes</li> </ul>



<b>Approaches to Care</b>	<b>Flexibility</b>	<b>Physical Environments</b>	<b>Leadership</b>
---------------------------	--------------------	------------------------------	-------------------

<b>Wellspring (cont'd)</b>			
			<p>quarterly visits to all facilities, facilitates meetings of the director of nursing and is available for consultation.</p> <ul style="list-style-type: none"> <li>• The Wellspring coordinator acts as a “hub” who “links all the components of the Wellspring program” serving as educator and facilitator across all 11 facilities.</li> </ul>

Approaches to Care	Flexibility	Physical Environments	Leadership
--------------------	-------------	-----------------------	------------

Montessori Methods for Dementia (MMD)/DementiAbility (19-21)			
<ul style="list-style-type: none"> <li>● MMD emphasises the use of research on brain development and behaviour to design tools to stimulate activities for individuals. This includes the use and production of guiding materials and prompts to support responses to everything, from what time is breakfast to what's in my closet.</li> <li>● The aim is to focus on independence, high self-esteem, and a more promising future.</li> <li>● Emphasis is placed on “preparing” the environment for residents with dementia</li> <li>● It is a “strength-based” approach geared to uncover and develop “abilities” (e.g., sense of smell, touch, range of motion, ability to read, perceive, affect, and tell time).</li> <li>● Care is personalized using the W.O.W. model (<u>W</u>ho is this person? <u>O</u>bservations on what is happening, why and when. <u>W</u>hat are you going to do about it?). A model based on the premise that</li> </ul>	<ul style="list-style-type: none"> <li>● The model emphasizes interdisciplinary teams.</li> <li>● Residents engaged in all aspects of daily life.</li> <li>● Given roles that suit their ability (meal time greeter; eyeglass cleaner, buddy, mail delivery person, handrail cleaner, hand massager, towel folder, etc.).</li> <li>● Teamwork between staff and residents integral.</li> </ul>	<ul style="list-style-type: none"> <li>● Environments are prepared; their look, feel and smell are taken into account.</li> <li>● Rooms are to be familiar and homelike.</li> <li>● Personal routines supported and posted in easy to read fonts.</li> <li>● Clutter and noise removed.</li> <li>● Memory supports are put in place and easily recognizable.</li> </ul>	<ul style="list-style-type: none"> <li>● The organization must embrace the model.</li> <li>● Leadership must fact find, develop, implement, and evaluate the plan to create a prepared, ability supporting environment.</li> <li>● Must encourage teamwork among staff, residents, family, and volunteers.</li> </ul>

<b>Approaches to Care</b>	<b>Flexibility</b>	<b>Physical Environments</b>	<b>Leadership</b>
---------------------------	--------------------	------------------------------	-------------------

<b>Montessori Methods for Dementia (MMD)/DementiAbility (cont'd)</b>			
all behavior has meaning, this search for meaning guides observations, which then guides care planning			

Approaches to Care	Flexibility	Physical Environments	Leadership
--------------------	-------------	-----------------------	------------

The Gentle Care system (22-24)			
<ul style="list-style-type: none"> <li>● The approach stresses focusing away from individual behavior to the environment.</li> <li>● Accepting and supporting current levels of functionality.</li> <li>● Emphasizes closeness, recognition and liberty.</li> <li>● Emphasizes a balance between clinical and psychosocial considerations.</li> <li>● Based on belief that “activity is most effective when it is an integral part of the daily living process, rather than an ‘add-on’ or ‘take-out’ that is ‘parachuted’ into a person’s life”.</li> </ul>	<ul style="list-style-type: none"> <li>● Care workers adopt a less rushed more flexible approach.</li> <li>● No restraints policy.</li> <li>● 24 hour nutrition available (flexible breakfasts, snacks).</li> </ul>	<ul style="list-style-type: none"> <li>● Soft touch pillows.</li> <li>● Warm, mid-range colors.</li> <li>● Abandon notions of neatness and order.</li> <li>● Avoid large open spaces.</li> <li>● Arrange life around clusters of four to six people. Offer meals in small, family-sized groups.</li> <li>● Freedom of movement and “wayfinding” guides are “critical to quality dementia care.” But secure building perimeters are also essential to free staff time for “comfort and support (of) people with dementia” rather than on “enforcement of building exit rules”.</li> <li>● Stress reduction strategies (TV and music volume managed to reduce noise).</li> <li>● Meaningful activities encouraged (e.g., folding clothes, gardening).</li> <li>● Opportunities for rest.</li> </ul>	<ul style="list-style-type: none"> <li>● Therapeutic partnerships encouraged between family, staff and residents.</li> </ul>

Approaches to Care	Flexibility	Physical Environments	Leadership
--------------------	-------------	-----------------------	------------

ADARDS (25)			
<ul style="list-style-type: none"> <li>• The Adards Nursing Home was opened in Warrane Australia in 1991, as an alternative to the psychiatric housing of people with dementia.</li> <li>• Aims to provide an atmosphere that is unrushed and social. The approach recognises the necessity of sufficient staffing levels to provide unrushed, social care. Similarly, it recognises that staff members need to be treated with respect and care in order for them to be able to provide respect and kindness to their residents.</li> <li>• “The main criterion for hiring is a caring personality that enjoys older adults and can communicate with them” (p. 543).</li> </ul>	<ul style="list-style-type: none"> <li>• Flexibility with regards to residents is manifested in their ability to control the time they get up, eat, go outdoors, and sleep.</li> <li>• Family members are encouraged to have lunch or tea with the residents and staff.</li> <li>• Flexibility related to staff members includes encouragement of staff members to eat meals with residents, talk with residents, spend time walking with them, or engage in other activities with them.</li> <li>• “Staffing schedules also involve a high degree of flexibility, which stems from a philosophy that assumes that (a) shorter schedules allow the administration to tailor the staffing levels to residents’ needs, (b) shorter schedules are likely to limit burden and burnout among staff and allow them to enjoy the positive aspects of the job, (c) having a flexible schedule allows Adards to more</li> </ul>	<ul style="list-style-type: none"> <li>• The facility is small, with four, nine bed units organized around a centralized room.</li> <li>• Each unit has a living room, dining room, kitchen and nine private bedrooms with toilet and shower.</li> <li>• The units are surrounded by a garden that residents have free access to. The garden has walking paths that lead back to the units.</li> <li>• There are also windows from which residents can view activities on the adjacent street.</li> <li>• The units can be closed to operate as four distinct ‘homes’ during the day and one unit at night to allow for lower staffing.</li> <li>• Staff members are welcome to bring children or spouses when it is convenient, such as when a child finishes school earlier than usual or has a day off.</li> <li>• The presence of multiple staff members, their children, as well as pets provide stimuli to residents and exposure to</li> </ul>	<ul style="list-style-type: none"> <li>• Leadership actively supports social relations. The director of nursing interviewed by Cohen-Mansfield and Bester observed: “if, when I come into the unit in the morning I see all the beds made, and the residents all dressed, I am concerned. But, if I see that not everything has been done, and that staff members are eating breakfast and joking with the residents, I know everything is fine” (p. 541).</li> <li>• The autonomy for scheduling is devolved to staff members who can easily switch shifts with staff members. “This is very common at Adards, so that on any given day, there may be one or two staff members who changed their work schedule in order to go to a function, watch their children because they have no babysitter, or go on a longer vacation. This results in and is enabled by staff rotation, so that every staff member is familiar with all 36 residents” (p. 542).</li> </ul>

Approaches to Care	Flexibility	Physical Environments	Leadership
	easily fit its needs with the needs		
<b>ADARDS (cont'd)</b>			
	<p>of staff members” (p. 541).</p> <ul style="list-style-type: none"> <li>● Specific activities that are common to people who live in the nearby community are available to these residents, such as feeding hens in a chicken coop, playing with a pet dog on the unit, tending a raised garden, washing a disabled car, and waiting at a bus stop.</li> <li>● Care aides also do laundry, assist in the kitchen, mop the floor, and perform other household activities.</li> </ul>	<p>quotidian experiences.</p>	

## Assessing the Evidence

### *Methodological challenges*

Before presenting the evidence evaluating the effectiveness of these models, it is important to highlight the methodological challenges to such evaluations.

Central to the problem of assessing the models is the nature of conventional scientific evidence based on a ‘gold standard’ that is founded on the double-blind, randomized clinical trial. It focuses on single variables or interventions that can be readily measured and compared.

One of the main challenges in the evaluation of models may well be precisely what is intended to make them successful - variability, a holistic approach, dynamism and adaptation. Conventional scientific evaluations require the comparison of a culture change home to a non-culture change home, with everything else held constant and usually focusing on particular, easily measured variables. Random allocation to intervention and control groups would be ideal in such an approach but rarely possible in practice. These criteria are difficult to meet. Moreover, implementation is rarely uniform and often incomplete, making comparisons difficult to assess at a particular point in time. Indeed, as Hill and colleagues observe, culture change is a process, not a static event. These methodological limitations in the conventional approach to the study of culture change are nicely articulated by Shier and colleagues (1) and worth quoting at length:

The methodological limitations of the [36 reviewed] studies highlight the many challenges of studying culture change in nursing homes. Culture change interventions are, by their nature, complex. Most culture change interventions target more than one domain of culture change, and full, consistent implementation of care processes may require long time periods. Culture change affects all organizational levels of the nursing home including the residents, direct care staff, and management, as well as the physical environment. Other methodological challenges include inability to randomize individuals or units, often small sample sizes because many culture change models are organized around small group homes to promote resident-directed care, heterogeneous interventions, and measurement of many outcomes. A lack of an analytic framework and consensus on how to define the overarching goals of culture change may also impede the field. These challenges make it difficult for researchers to determine which components of the intervention are contributing to the observed outcomes, draw conclusions, and provide guidance to nursing homes (p. S14).

Considering these limitations, Shier and colleagues (1) call for more “sophisticated design and evaluation” studies ideally using “quasi-experimental design” over extended periods of time. Similarly, Hill and colleagues (5) argue that “[l]ongitudinal studies

spanning several years with periodic outcome measures, well-matched experimental and comparison groups, sample populations including a representative mix of resident physical and cognitive abilities, and a simultaneous evaluation of the culture-change process should be the goal of research in this area” (p. 38).

However, these approaches to evaluation do not address the challenge of assessing processes and outcomes related to the quality-of-life practices that are the main focus of all the models. They are themselves notoriously difficult to measure by conventional means. When improvements are found, a focus on outcomes often does not clarify the *processes* that contributed to such change.

By contrast, Zimmerman and colleagues (26) suggest that research on culture change may be doing the field a disservice. They point to the challenge of differentiating culture change from improved standards of care. Likewise, Shier and colleagues (1) suggest that attention ought to be directed more narrowly to care processes and structures that promote quality. Rahman and Schnelle (27) offer a concise summation of a major reason for the lack of conventional evaluation.

One reason is that some culture-change leaders were not measurement oriented, or were even opposed to measurement because the very act of measuring quality of life could seem to be a dehumanizing activity. Related to this, some culture changes possessed so much face validity that evaluating them seemed unnecessary (if the cost is reasonable, for instance, can there be any objection to replacing institutional white towels with richly colored ones?). In addition, some culture change projects had a comprehensive scope and a long gestational process that rendered the attribution of effects difficult. Similarly, a lack of definition for culture change clouded the prospect of measuring cause and effect (p. 143).

In short, models are difficult to assess using conventional means not only because they are implemented over time and are about the whole home, rather than about single interventions, but also because their main objective is to change the quality of care processes that are very difficult to capture using quantitative techniques. In addition, the population in care homes is changing even as new models are introduced and this factor too adds to the complexity of assessing the models' impact.

### ***Barriers to Culture Change***

Alongside the methodological challenges of evaluating culture change models, there are also serious barriers to implementing them successfully. According to Zimmerman and colleagues (26), these include the increasingly complex medical needs of residents, as well as the low staffing levels, insufficient resources and hierarchical organizational structures that prevent staff from providing resident-focused care. These authors also note that providing high quality care is further impeded by staff turnover and inadequate staff training as well as by a general lack of readiness on the part of organizations for such deep change. Stone (28) has identified similar barriers (see Table 3 below). Regulations set by governments, collective agreements and scope of practice rules also have to be considered.



**Table 3: Barriers to implementation**

<b>First try failure</b>	People give up too soon. Many attempts do not succeed the first time around nor do they produce quick results, leading to disillusionment and the abandonment of the change process.
<b>The model is not worthwhile</b>	There are many fads and not all models have the evidence, sustainability, or codified processes to enable successful replication.
<b>Resistance to change</b>	Staff's resistance to change is a significant barrier. Those with seniority or long tenure may be particularly recalcitrant and sabotage the process.
<b>Persistence</b>	Most homes already face serious challenges and do not have the time or resources to fully implement culture change and allow it to take hold.

adapted from Stone, 2003, pp. 414-5

Recognizing that providers and policy makers have turned to culture change models in the hope that they will provide a manageable answer to complex problems, Stone (28) cautions that changing the culture of nursing homes is a long-term, systematic, and challenging endeavour. Using the analogy of weight loss, Stone argues that fundamental behaviors must be changed; this change needs to become habitually engrained; and it is ongoing and must be sustained. However, Stone's caution does not address the problem of identifying through research the full range of conditions required to apply the principles in practices.

## **The Evidence**

All this means that there are few studies of the impact and effectiveness of culture change models (5, 29). Moreover, the evidence is often inconclusive, mixed and at times contradictory depending on the criteria evaluated. Nevertheless, overall, the body of evidence provides some support for the ability of comprehensive culture change models to positively influence the quality of life and care within residential care facilities. In Table 4, we provide a summary of the main findings examining the predominant models, namely, the Butterfly Approach, the Eden Alternative, the Green House, and Wellspring. These are followed by descriptions of two prominent approaches to care that do not offer full models; namely Gentle Care system and Montessori/DementiAbility. Because this review is prompted by the Butterfly Approach we follow this summary with a more detailed narrative review of the limited evidence on that approach.

**Table 4: Evidence Narrative Chart**

Approaches to Care	Flexibility	Physical Environments	Leadership
<b>Butterfly Approach (30)</b>			
<ul style="list-style-type: none"> <li>• Increased staff interactions with residents.</li> <li>• Enhanced staff relationships with residents.</li> <li>• Decreased medication use, exit attempts.</li> </ul>	<ul style="list-style-type: none"> <li>• Less rigid, task-oriented roles for some staff.</li> <li>• Increased staff sense of freedom, self, inclusion, and job satisfaction.</li> </ul>	<ul style="list-style-type: none"> <li>• Relaxed, less-structured environment with fewer restrictions and enhanced autonomy for residents: Modified pain and décor to create homelike atmosphere and wayfinding.</li> </ul>	<ul style="list-style-type: none"> <li>• Improved sense of teamwork and connection to colleagues.</li> <li>• Continued need for additional staff, especially Health Care Aids and Recreation Staff (all 3 sites).</li> </ul>

Approaches to Care	Flexibility	Physical environments	Leadership
--------------------	-------------	-----------------------	------------

Eden Alternative			
<ul style="list-style-type: none"> <li>• Lower levels of boredom and helplessness; no significant difference in loneliness.(31)</li> <li>• Decreases in infection rates, in the average number of prescriptions per resident, and in the use of mind and mood altering medication (12).</li> <li>• Higher rates of falls and nutritional problems. (32)</li> <li>• Significant decreases in urinary tract infections, stage 1 and 2 pressure ulcers, and behavioral incidents (33); significant decreases in depression for both cognitively intact and impaired residents (34).</li> </ul>	<ul style="list-style-type: none"> <li>• Staff reported increased physical and social function of residents (35).</li> <li>• No significant difference in life satisfaction (36) nor in survival, cognition, ADLs, or infection rates (32).</li> </ul>	<ul style="list-style-type: none"> <li>• Study of a home inspired by The Eden Alternative found that residents with higher cognitive status and those with greater affinity for pets became more positively engaged with their environment (37).</li> </ul>	<ul style="list-style-type: none"> <li>• "The Eden organization felt that conformity to the specific demands of the Eden model could actually constrain creativity, especially when only some of the concepts were developed or the facility could not afford adequate training" (38).</li> </ul>

Approaches to Care	Flexibility	Physical environments	Leadership
--------------------	-------------	-----------------------	------------

Green House (GH)			
<ul style="list-style-type: none"> <li>• The organization of care in GH homes was not found to negatively affect safety culture or lead to increased stress (39).</li> <li>• The model creates opportunities for staff to identify, communicate, and respond to early changes in an elder’s condition and reduce hospital transfer rates; however, not all staff maximized these opportunities. (40)</li> <li>• In addition to reducing 30-day hospital readmissions (overall and avoidable), adoption of the GH model led to reductions of catheterized residents, bedfast residents, and pressure ulcers among low-risk residents. (41)</li> <li>• Residents reported significantly higher satisfaction with their facility as a place to live, better scores on many dimensions of self-reported quality of life (on 9 of 11 domains assessed), lower rates of depression, bed rest, and reduced activity.</li> </ul>	<ul style="list-style-type: none"> <li>• More choice was found around waking times and bath times but there was considerable variability between facilities in the choices needed to be made within a predefined time period. Findings indicate that the most permitted choices were related to skipping breakfast, sleeping in, and having alcohol with meals (17).</li> <li>• Shabazim (see description chart for definition) were responsible for a wider variety of tasks than similarly qualified personnel in comparator homes. However, this staff did not enjoy scheduling work. And despite the generalized duties approach, some homes hired specialized cooking staff because of complaints around food quality. “It has actually worked out beautifully, it ensures food preferences were spot on” (17).(p. 369).</li> <li>• Staff had twice the usual hours per week budgeted per resident</li> </ul>	<ul style="list-style-type: none"> <li>• Homes were smaller than comparators (between 10 and 12 beds; staff said this small size enabled residents to get to know one another. All rooms were private, residents were encouraged to bring their own décor. All homes had open kitchens, though one quarter did not permit residents or their families’ access. Three quarters of the homes studied had outdoor spaces, though they varied in their design, access, use, protection from the elements, and whether staff could observe residents using the space, which limited their use (17).</li> </ul>	<ul style="list-style-type: none"> <li>• Elder councils, which is the name for resident councils applied by this model, were present in most homes but their decisions affected only one quarter of the policy areas studied. These included issues such as whether the home would allow pets and visiting hours. (17).</li> <li>• In the U.S. context studied, the adoption of GH lowered overall Medicare spending per resident by 30 percent (44). Several mechanisms for this decrease are suggested, including lower hospital use, which was also associated with the adoption of the GH model in this context (41).</li> <li>• Organizations varied in their ability to sustain GH principles (45). The organization’s approach to problems was key to sustainability. Sustainable organizations evidenced a “coached collaborative” approach, as opposed to</li> </ul>

Approaches to Care	Flexibility	Physical environments	Leadership
--------------------	-------------	-----------------------	------------

Green House (cont'd)			
<ul style="list-style-type: none"> <li>• Residents experienced reduced rates of decline in functional abilities, and higher rates of incontinence than residents in comparator homes. (42)</li> </ul>	<p>than aides in comparator homes; they also had lower staff turnover. While not statistically significant, GH Shabazim made \$0.60USD more per hour than aides in comparator homes (37).</p> <ul style="list-style-type: none"> <li>• Staff had twice the usual hours per week budgeted per resident than aides in comparator homes; they also had lower staff turnover. While not statistically significant, GH Shabazim made \$0.60USD more per hour than aides in comparator homes. (39)</li> <li>• Staff were able to assume expanded responsibilities without compromising time spent on resident care, with 24 minutes more spent on direct care per resident per day than comparator homes (12), though Licensed Practical Nurses (LPNs) preferred working in comparator setting. (43)</li> <li>• GH homes were more likely to have fewer prescheduled activities than comparator homes, relying more on</li> </ul>		<p>hierarchical or management-led ones.</p> <ul style="list-style-type: none"> <li>• Reinforcing the self-management principle of GH tended to support sustainability. This approach to problem solving was assisted by “the nature of the problem (being amenable to the slower, collaborative process), by Shahbazim opportunities and capacities to problem solve (through regular house meetings. This approach was also supported by the Guide [from the Green House Project] taking the time to coach Shahbazim in problem solving), and leadership support of the model (the Guide understanding the importance of empowering Shahbazim)” (45: pp. 410-11).</li> </ul>

Approaches to Care	Flexibility	Physical environments	Leadership
--------------------	-------------	-----------------------	------------

Green House (cont'd)			
	<p>unstructured activities. The study found that some elders preferred having a consistent schedule. Staff identified activities as the first thing to be sacrificed when they were busy. Half the homes used staffing strategies to assist with activities, such as having a Shabazim scheduled exclusively for activities 3 days per week. (17).</p>		

Approaches to Care	Flexibility	Physical environments	Leadership
--------------------	-------------	-----------------------	------------

Wellspring (18)			
<ul style="list-style-type: none"> <li>● Wellspring homes had fewer deficiencies than comparator homes and reduced their risk of serious deficiencies, posting a perfect record in the post-implementation phase.</li> <li>● Staff were more vigilant and proactive in assessing and responding to resident care.</li> <li>● No significant differences in residents' clinical status were found, with the possible exception of improved incontinence rates.</li> </ul>	<ul style="list-style-type: none"> <li>● Wellspring facilities improved their retention of nursing staff and had lower staffing turnover than comparator homes.</li> <li>● The Care Resource Teams(CRTs),described as “the main instrument for quality improvement”, were important in the translation of the training content into the facility, however there was considerable variability in how and how well CRTs functioned across facilities.</li> <li>● The clinical training modules were “one of the most stable dimensions” (p. 6) of Wellspring, and important parts of building camaraderie and conveying content.” Nevertheless, use “of the training modules is not sufficient to change a nursing home’s culture” (p. x).</li> </ul>		<ul style="list-style-type: none"> <li>● The implementation of Wellspring resulted in additional costs, however, these were absorbed or compensations were found, resulting in no change in the <i>per diem</i> expenditures or direct care costs.</li> <li>● The governing Alliance made up of the 11 homes played a key role in affecting planning, implementation, problem solving, and accountability and evaluation.</li> <li>● The Wellspring coordinators, who are responsible for education and communication across the home were “arguably the single most important contributor to the successful implementation and ongoing operation of the model, playing a pivotal role in the relationship between the facility and other Wellspring facilities, both as a formal linkage to the Alliance and an informal conduit of information among facilities” (p. 8).</li> </ul>

Approaches to Care	Flexibility	Physical environments	Leadership
--------------------	-------------	-----------------------	------------

Wellspring (cont'd)			
			<ul style="list-style-type: none"> <li>● The Geriatric Nurse Practitioner (GNP) “portrayed as the primary source of knowledge and advice about best practices and adherence to regulatory requirements” (p. 5) was important in implementing, troubleshooting and sustaining the model, however, use varied by facilities.</li> <li>● The most underappreciated element of Wellspring was the administration, and when a home was not aligned with Wellspring this became a significant barrier, undermining implementation and frustrating staff.</li> </ul>



Approaches to Care	Flexibility	Physical environments	Leadership
--------------------	-------------	-----------------------	------------

Montessori Methods for Dementia (MMD)/DementiAbility			
<ul style="list-style-type: none"> <li>● Intergenerational play between older adults in LTRC and preschool children elicited higher levels of constructive engagement and lower levels of merely passive or non-activity focused engagement in residents with dementia than standard activities programming (19).</li> <li>● A number of studies indicate positive outcomes with specific activities structured according to Montessori methods and equipment. For example, residents with dementia trained to lead memory bingo enjoyed their role and expressed increased positive engagement when compared to standard activities programming (21). Authors suggest Montessori-based activities can accommodate a wide range of cognitive abilities. A study that followed a group of residents for nine months found that specially designed cognitive activities led to higher levels of constructive</li> </ul>	<ul style="list-style-type: none"> <li>● A recent one-year study found that the “implementation of specific leadership, staff, and environmental features leads to changes in the quality of life and affect of individuals with dementia and in the job satisfaction of the staff employed to care for them” (46: p. 70).</li> <li>● An extended qualitative study by Roberts et al. (47) found that family members appreciated Montessori methods while staff felt that they were better equipped to respond to the individual choices of residents.</li> </ul>		<ul style="list-style-type: none"> <li>● Ducak and Denton (48) claim that the model does provide “many positive outcomes” for residents with dementia when there is “support from management” and effective “in-house staff education” (p. 27).</li> </ul>

<b>Approaches to Care</b>	<b>Flexibility</b>	<b>Physical environments</b>	<b>Leadership</b>
---------------------------	--------------------	------------------------------	-------------------

<b>Montessori Methods for Dementia (MMD)/DementiAbility (cont'd)</b>			
<p>engagement (19).</p> <ul style="list-style-type: none"> <li>• A review (48) of the research found “consistent evidence for the benefits of Montessori-based interventions for people with dementia” (p. 3).</li> </ul>			

Approaches to Care	Flexibility	Physical environments	Leadership
--------------------	-------------	-----------------------	------------

The Gentle Care system			
<ul style="list-style-type: none"> <li>• Medication use dropped (22).</li> <li>• Family unanimously positive.</li> <li>• Fewer aggressive behaviors.</li> <li>• No or too limited evidence that gentle care has positive effects on either apathetic, depressed or aggressive behaviors of people with dementia (24).</li> </ul>	<ul style="list-style-type: none"> <li>• One additional multi-skilled worker hired (22).</li> <li>• No restraints (falls initially increased then decreased below original levels).</li> </ul>	<ul style="list-style-type: none"> <li>• 30 out of 34 residents experienced weight gain (22).</li> <li>• If poorly applied, Davies (23) suggests that this promising model of care “could turn the everyday activities of [residents] into a series of therapeutic interventions, becoming an avenue to a new kind of medicalization” (p. 460).</li> </ul>	

### *The Butterfly Approach*

The Butterfly Approach is being rolled out across a number of homes in Canada. It should be noted that this model specifically applies to residents with dementia and, while a majority of residents have a dementia diagnosis, there are a significant number that do not.

We were unable to find any peer reviewed studies of the effectiveness of the Butterfly Approach.<sup>iii</sup>

Reporting on a pilot in Malton Village Long-Term Care Centre in Mississauga for the *Canadian Medical Association Journal*, news journalist Vogel observes that the project delivers dementia care that feels like home (51). The approach, as she describes it, emphasizes relationships over routine. It is not fully explained how this was achieved in Malton Village, but she notes the model involves a higher staffing ratio for care aides and eight days of training over four months to enable the transition from “doing for” residents to “being with” them.

Vogel notes that efforts were also made to break down barriers between staff and residents. For instance, staff wore regular clothes as opposed to uniforms; they could have lunch with residents, and they engaged with residents throughout the day, not just during structured activities. A more homelike environment was produced by incorporating “the stuff of life” (e.g. magazines and puzzles) and rich colours. Residents at Malton Village were also separated into households of 10-12 people, based on their stage of dementia. As a result, those in earlier stages became more social and those in a later stage appeared calmer. No information is provided as to how this was assessed.

Since adopting the model, Malton Village has seen a reduction in unintended weight loss, falls, responsive behaviors and in the use of anti-psychotics. At the same time, there have been improvements in pain levels, in social engagement, and in both staff and family satisfaction. It is not clear how significant these improvements are or how thorough the assessment was and the website suggests not all the results were positive (<https://www.peelregion.ca/planning-maps/butterfly/>). However, the model will be rolled out to all five of Peel Region’s long-term care facilities over the next three years.

Dementia Care Matters Canada, the organization responsible for the Butterfly Approach in this country, has supplied us with an unpublished, independent assessment conducted by Zadunayski and Goble of NorQuest College (30) of three assisted living facilities in Alberta that had transitioned to the Butterfly care approach. The study was conducted in late 2017 and drew on 49 interviews with self-selected families, frontline staff and management as well as with external health professionals who visited the facilities as part of their work (e.g., physicians).

Responses to the transition to the Butterfly Approach were mostly positive with families, staff, and external professionals finding that the sites felt more homelike and with residents appearing happier and more alert. “Family members routinely described their sites...as happy, caring, engaged, calm and having a homey feeling to it” (p. 11). Staff members reported improved teamwork and collaboration. One Licensed Practical Nurse (LPN) said:

[Staff] are more aware of how they’re conducting, behaving themselves around the residents. They are doing more, for or with the residents – picking up on the residents’ personalities and their perks, and what works for them and what doesn’t. Sitting down with them. Just being with them. That has changed. ... some of them still have challenges in understanding the Butterfly, and exactly what to do. ...For the most part, it’s been good ... (p. 19).

By far the most significant change reported, perhaps because it is also the most visible, was the transformation of the environment. All those interviewed said the sites appeared more homelike. One case manager observed:

... the biggest change that you can see is really the environmental change. And that’s what the clients and the families have noticed the most, is the painting of the walls ... different objects out that people can be manipulating or interacting with. ... The thing that I have noticed is that ... caregivers are out interacting with the clients at times other than meal times (p. 12).

However, some families cautioned that it was possible to go too far; they want it cozy, not “cluttered” (p. 23).

Staff described the implementation of the Butterfly Approach (BCM) to be an “evolution” or a “process.” Staff and management noted that training was a key part of this transition, however, it was observed that the training was not uniformly undertaken by all staff. Some staff felt this uneven participation in training was a problem and meant some workers did not “get it.” Workers with longstanding careers, who operated in task-oriented ways or were not used to interacting with residents, experienced the greatest difficulties with the transition. One site had high turnover during the transition. Initial responses to the transition from staff included concerns about the new workload and about the new ways of communicating with residents. The authors noted that an additional staff member was funded for the pilot at one site but was lost once the pilot was complete. Staff noticed the difference with this loss. In line with most research on residential care, when asked for areas of improvement, workers said that more staff were needed. Some of the workload issues appear to be addressed by privileging relationships and at times leaving tasks undone. Leadership support was important in legitimating this trade-off, as the authors summarize:

One of the most frequently articulated difficulties lay in wanting to engage with residents but being required or feeling compelled to complete tasks. With management’s support, this struggle seemed to ease-off over time for some staff participants, who described working on giving themselves permission to just be with the residents and shedding the fear of

being accused of not working hard. For those employees who could overcome the guilt of not completing every task, the BCM transition was much easier, with some staff reporting less stress and more professional fulfillment. This suggests that leadership’s support of the BCM philosophy and how it changes what staff do daily is key to its successful implementation (p. 20).

It is unclear, however, what tasks remained incomplete, and their consequences for care.

Finally, when asked to describe changes to residents, most of those interviewed reported that while the approach would not change the trajectory of dementia, residents appeared happier and more alert. One physician reported decreasing and even stopping the use of antipsychotic medications. Table 5 provides a list of most commonly reported changes.

**Table 5: Most commonly reported changes**

Environmental changes, including modified paint and décor
Relaxed, less-structured environment with fewer restrictions and enhanced autonomy for residents
Less rigid, task-oriented roles for some staff
Decreased medication use
Increased staff interactions with residents
Enhanced staff relationships with individual residents
Decreased exit attempts by residents
Increased staff sense of freedom, self, inclusion, and job satisfaction
Improved sense of teamwork and connection to colleagues
Continued need for additional staff, especially Health Care Aids and Recreation Staff (all 3 sites).

adapted from Zadunayski and Goble 2018; p. 14

All culture change models involve additional costs, although costs vary significantly among models and estimates of actual costs are difficult to make. According to those we consulted, two kinds of costs are associated with implementation of the Butterfly model. The first is the cost of the 12-month Culture Change program, provided by Dementia Care Matters. The second kind are the costs associated with implementing the model, which are dependent on the individual care home situation, including ownership type affecting access to capital, potential profitability, market share and the like, whether or not the facility receives direct funding from government, regulatory requirements, compliance regime and more. Dementia Care Matters charges \$100,000. CAD plus travel, accommodation, expenses and taxes, for the 12-month Culture Change Program, per home. There is room for “dialogue” if an owner with more than one home would like to implement in multiple sites. There are also a variety of costs that may or may not be similar in other settings. There may be costs related to training, such as coverage for staff who are completing the training. In addition, there are costs for changes to the physical environment, including bringing into the home “the stuff of life”, removing and/or rebuilding nursing stations and replacing them with seating areas that could accommodate both staff and residents and adapting dining rooms and food service areas to encourage interaction. Equipment removal, new signage, paint and decorating also have costs. And there were costs associated with significant staff turnover during the year of implementation and the increase in staffing levels.

We also received an essay by Catarina Versaevel, National Director of DCM Canada, outlining some of the lessons learned implementing the Butterfly approach in Canada. These lessons are summarized in Table 6.

**Table 6: Key lessons for implementation of Butterfly projects**

<b>Lessons</b>	<b>Description</b>
<b>Strong and supportive leadership</b>	Having a leader who understands the model, its implementation challenges, and can provide direction is essential. Additionally, leaders at all levels will need to buy in and model care to others. Implementation needs to be a standing agenda item.
<b>Vision and stakeholder relationships</b>	The project will require cultivating a “collaborative and trusting relationship” with key stakeholders – including government officials, policy makers, fire marshals and compliance auditors – to ensure they understand and are committed to the implementation of the butterfly model. This will be needed in order to address the cultural barriers that will arise throughout the implementation process.
<b>Project management methodology and expertise</b>	The pace of change is fast and ongoing, requiring effective project management skills and structures to ensure deliverables are completed.

<b>Communication</b>	Before the commencement of the project, the approach to communication and engagement needs to be thought through.
<b>Dementia Care Matters consultancy</b>	Guidance from Dementia Care Matters is critical to successful implementation as is adhering to the project structure and its deliverables.
<b>Matched households</b>	The introduction of the matched household is a key concept and should happen sooner rather than later.
<b>LPN leadership and knowledge</b>	LPN modelling of care and support for staff on relational care is essential.
<b>Engaged home action team</b>	The home action team is the organization’s link to staff and plays a key role in problem solving and communication.
<b>Ongoing staff engagement</b>	It is helpful to provide staff opportunities to engage leadership, since frontline staff know the people with dementia and their families best.
<b>Strong family participation</b>	Regular meetings with families in which they are authentically engaged are key to the implementation processes.
<b>Being a butterfly workshop</b>	These workshops are a key component of the implementation process. They train staff to apply a person-centered approach. They also trains staff to consider the “truth of what life is really like” for residents in the home, which can have a transformative and motivational effect.
<b>Occupation/Activities</b>	The Dementia Care Matters tools provide creative ideas to engage residents in a person-centered way, with meaningful activities being incorporated throughout the day rather than “seen as something separated and not everyone’s job.” This also includes reconfiguring roles to achieve an overall 1:5 staff ratio.
<b>Focus on human resources</b>	Human resources will need to understand and value emotional intelligence, authenticity and being genuine and real when recruiting. Some staff may need to leave their jobs if they are not going to “get” the approach.
<b>Celebrate and mark success</b>	Finally, the celebration of accomplishments is an important component to implementation.

Adapted from Versaevel, C. (n.d.), Implementing the Butterfly Household Model of Care in Canada: Lessons Learned to Date. Dementia Care Matters.



## Conclusions

Our review of the limited evidence suggests all the predominant models can improve care, although it is not clear how long this impact will last or which staff, families and residents will benefit most. All models show a reduction in staff turnover and work absences that contribute to both care quality and cost reduction but we do not know if this reduction continues over the long term and what conditions were the most central to this change. All of them show some improvement on standard indicators such as pressure ulcers, but there

---

*...there is no recipe for organizational culture change. Despite this observation, however, policymakers, providers, workers and consumers are searching for the “magic bullet,” a cookie-cutter approach to creating an organizational culture and work environment... Stone, 2003, p. 413*

---

is a problem with what is not measured in terms of quality of work and care. All models support smaller units, access to the outdoors, and homelike environments with kitchens in each unit but differ somewhat in the size and style supported while leading to similar outcomes. However, there is not much research that explores the impact of these environmental changes. All support taking residents' individual interests and capacities into account, staff training and the development of care relationships but vary in terms of how this should be done. Here, too, there is research suggesting a positive impact. A key common factor related to improvement seems to be the involvement of staff in making change but which staff are included varies and the evidence on which staff change has the most impact is unclear. Similarly, a reduction in a focus on tasks, a flexible division of labour and some flattening of hierarchies seem to consistently contribute to improvements, although each model seeks to do this in different ways. The models differ in the extent to which they critique a clinical emphasis and in whether they support uniforms for staff, a calm, uncluttered environment, extensive involvement of families, and the allocation of residents to units according to capacities. The evidence does not lead to clear conclusions about these alternative approaches.

It is important to note that all the models focus on individuals, with little consideration for large group differences in culture, language and interpersonal relationships or for those who do not have dementia. Moreover, there is little discussion of financial costs in the presentation of the models.

In short, the evidence indicates that there is no one perfect model, and considerable variation exists not only among models but among their practical implementation in homes. Moreover, the models outlined here and the research on them do not address the wide cultural diversity in the population of the sort found in Toronto.

While Stone (28) recognizes there is no one perfect model, she identifies four key dimensions that need to be addressed in order “to develop a quality long-term care workforce” (p. 416). Her first recommendation involves improving the clinical culture throughout the organization and at all levels of staff to meet the needs of the increasing acuity levels of incoming residents. Second, given that “the nature of the interpersonal relationship between caregiver and resident is a barometer of the quality of care and quality of life provided in a facility,” she argues that staff must be properly supported. Quality care cannot be provided when staff do not have sufficient time, when their allocation to residents is discontinuous, and when they are not properly rewarded for the relational aspects of their work. Third, organizational culture must change to foster worker empowerment at all levels, promote collaboration across disciplines, and provide mechanisms to enhance communication between and across all levels of staff. And finally, Stone notes that the physical environment itself must be redesigned to be less institutional and more comfortable, with strategies ranging from intergenerational programs to incorporating plants and animals to enhance livability (pp. 416-19).

These recommendations, these reviews, and these models leave a number of significant questions either unanswered or lacking in detail. For example,

- what are the specific implications for the linked issues of funding, support for implementing models, and staffing ratios? Renovations can be expensive and this is especially the case for the kitchens and gardens recommended for each unit. Some models explicitly call for an increase in staffing ratios without indicating a cost for such increases, while others such as Butterfly suggest that the reorganization of work combined with lower turnover and absenteeism will mean no increase in direct care costs but it is not clear how this will play out in the long term or how other costs such as management and certification are factored into the overall costs.
- what are the overall policy implications for governments at various levels and for regulations as well as inspections? The Butterfly model does encourage leaders to fight back on regulations but it is not clear which regulations should be changed or resisted. Nor is it clear what form of inspection and reporting would support the models.
- how does the increasing diversity among residents and staff in terms of cultural backgrounds, age and other social locations and relationships factor into these models? While most models seek to create a ‘homelike’ environment, it is not clear whose home will be replicated or how so many quite different notions of ‘home’ can be accommodated. Similarly, emotional and social support can mean quite different things for people in different social locations and relationships. In many models, there is an emphasis on family involvement but what about those without families or estranged from their families?
- if residents are to be accommodated in smaller units based on their capacities as the Butterfly model in particular suggests, what are the implications for continuity as their capacities rapidly deteriorate?

- how is gender factored into the models? While for the most part, these homes are characterized by women providing care for women, a growing number of residents and staff are male or do not identify with binary gender distinctions.
- what roles do unions and existing collective agreements play? Much of the research on implementation has been done in the US where unionization rates are low.
- what strategies are required for those who do not have dementia?
- what strategies are required to prevent the new approaches from themselves becoming institutionalized?
- what are the full range of conditions that are required to support the model?

Based on her research on models and in homes, McLean (38) concludes that

Innovative models invested in creating communities hold tremendous promise for transforming dementia caregiving from institutional management to caring relationships, but there are no guarantees (p. 250).

In short, the mixed evidence does not lead to a recommendation for a single model but rather to a strategy to learn from all the models, adapting promising practices to specific homes and their populations. Our conclusions are in line with those from one of the few Canadian comparisons of culture change models. Caspar and colleagues (52) found that facilities that implemented what they call a "facility specific social model of care," in other words taking what was best from all models and adapting them to meet their own unique needs, showed the highest levels of front-line staff empowerment that allowed for person-centered care.

## References:

1. Shier V, Khodyakov D, Cohen LW, Zimmerman S, Saliba D. What does the evidence really say about culture change in nursing homes? *Gerontologist*. 2014;54(Supp1):S6-S16.
2. Koren MJ. Person-Centered Care for Nursing Homes Residents: The Culture-Change Movement. *Health Aff*. 2010;29(2):1-6.
3. NCCNHR. A consumer perspective on quality care: the residents' point of view. Washington, DC: National Citizen's Coalition for Nursing Home Reform, 1985.
4. IOM. Improving the Quality of Care in Nursing Homes. Washington, DC: (Institute of Medicine) National Academy Press, 1986.

5. Hill NL, Kolanowski AM, Milone-Nuzzo P, Yevchak A. Culture Change Models and Resident Health Outcomes in Long-Term Care. *The Journal of Nursing Scholarship*. 2011;43(1):30-40.
6. Sheard D. *Nurturing: Emotions at Work in Staff*. London, UK: Alzheimers Society; 2009.
7. Sheard D. *Achieving real outcomes in dementia care homes*. Brighton, UK: Dementia Care Matters; 2011.
8. Sheard D. The "Butterfly Model": Person-Centered Dementia Care. OANHSS Annual Meeting and Convention, Great Places to Live and Work; April 13-15; Toronto2015.
9. Sheard D. *Growing: Training that works in dementia care*. London: Alzheimer's Society; 2008.
10. Sheard D. *Being: An approach to life and dementia*. London: Alzheimer's Society 2007.
11. Thomas WH. The Evolution of Eden. *Journal of Social Work in Long Term Care*. 2003;2(1-2):141-57.
12. Thomas WH. *Life worth living: How someone you love can still enjoy life in a nursing home: The Eden Alternative in action*. Acton, MA: VanderWyk & Burnham; 1996.
13. Eden Alternative. About the Eden Alternative. 2018 [cited 2018 November 10]; Available from: <http://www.edenalt.org/about-the-eden-alternative/>.
14. The Green House Project. *Home for Success*. Arlington, VA: The Green House Project, n.d.
15. The Green House Project. *Evaluating THE GREEN HOUSE Model*. Arlington, VA: The Green House Project, n.d.
16. The Green House Project. *Core Values and Practices*. Arlington, VA: The Green House Project, 2012.
17. Cohen LW, Zimmerman S, Reed D, Brown P, Bowers BJ, Nolet K, et al. The GreenHouse Model of Nursing Home Care in Design and Implementation. *Health ServRes*. 2016;51 (Supp 1):352-77.
18. Stone RI, Reinhard SC, Bowers B, Zimmerman D, Phillips CD, Hawes C, et al. *Evaluation of the Wellspring model for improving nursing home quality*. New York: The Commonwealth Fund, 2002.
19. Lee MM, Camp CJ, Malone ML. Effects of intergenerational Montessori-based activities programming on engagement of nursing home residents with dementia. *Clinical Interventions in Aging*. 2007;2(3):477-83.
20. Elliot GM. *DementiAbility Methods: The Montessori Way*. Burlington, ON: DementiAbility Enterprises, 2017.
21. Camp CJ, Skrajner MJ. Resident-Assessted Montessori Programming (RAMP): Training Persons with Dementia to Serve as Group Activity Leaders. *The Gerontologist*. 2004;44(3):426-31.
22. Cowan P. Special care for dementia patients. *The Canadian Nurse*. 1999;96(6):49-50.
23. Davies MJ. A Humanist in the House of Old: Moyra Jones and Early Dementia Care in Canada. *Journal of Canadian Studies*. 2016;50(2):446-81.
24. Verkaik R, Weert JCMv, Francke AL. The effects of psychosocial methods on depressed, aggressive and apathetic behaviors of people with dementia: a systematic review. *IntJGeriatrPsychiatry*. 2005;20 (301-314).
25. Cohen-Mansfield J, Bester A. Flexibility as a Management Principle in Dementia Care: The Adards Example. *The Gerontologist*. 2006;46(4):540-4.

26. Zimmerman S, Shier V, Saliba D. Transforming nursing home culture: evidence for practice and policy. *Gerontologist*. 2014;54(Suppl 1):S1-5.
27. Rahman AN, Schnelle JF. The Nursing Home Culture-Change Movement: Recent Past, Present, and Future Directions for Research. *The Gerontologist*. 2008;48(2 ):142-48.
28. Stone RI. Selecting a Model or Choosing Your Own Culture. *Journal of Social Work In Long-term Care*. 2003;2(3/4):411-22.
29. Zimmerman S, Bowers BJ, Cohen LW, Grabowski DC, Horn SD, Kemper P. New Evidence on the GreenHouse Model of Nursing Home Care: Synthesis of Findings and Implications for Policy, Practice, and Research. *Health ServRes*. 2016;51 (Supp 1):475-96.
30. Zadunayski A, Goble E. *Life My Way - Living Well with Dementia: The Perspectives of Families, Staff, and External Health Professionals on the Impact of the Butterfly Care Model*. Alberta Canada: Norquest College, 2018.
31. Bergman-Evans B. Beyond the basics: Effects of the Eden Alternative Model on quality of life issues. *JGerontolNurs*. 2004;30(6):27-34.
32. Coleman MT, Looney S, O'Brien J, Ziegler C, Pastorino CA, Turner C. The Eden Alternative: Findings after 1 year of implementation. *Journals of Gerontology Series A: Biological Sciences & Medical Sciences*. 2002;57a(7):M422-M7.
33. Ransom S. The Eden Alternative: Nurturing the Human Spirit in Long-Term Care. In: Mackenzie ER, Rakel B, editors. *Complementary and alternative medicine for older adults: A guide to holistic approaches to healthy aging*. New York, NY, US: Springer Publishing Co; 2006. p. 299-310.
34. Robinson SB, Rosher RB. Tangling with the barriers to culture change: Creating a resident-centered nursing home environment. *JGerontolNurs*. 2006;32(10):19-27.
35. Hinman MR, Heyl DM. Influence of the Eden Alternative on the functional status of nursing home residents. *PhysOccupTherGeriatr*. 2002;20(2):1-20.
36. Wyllie R. *Impact of the Eden Alternative on Texas nursing home residents' quality of life: A psychosocial perspective*. San Marcos, TX Texas Long Term Care Institute, 2001.
37. Ruckdeschel K, Van Haitsma K. The impacts of live-in animals and plants on nursing home residents: A pilot longitudinal investigation. *Alzheimer's Care Quarterly*. 2001;2(4):17-27.
38. Mclean A. *The person in dementia: a study in nursing home care in the US*. Toronto: Broadview; 2006.
39. Brown PB, Hudak SL, Horn SD, Cohen LW, Reed DA, Zimmerman S. Workforce Characteristics, Perceptions, Stress, and Satisfaction among Staff in GreenHouse and Other Nursing Homes. *Health ServRes*. 2016;51 (Supp 1):418-32.
40. Bowers B, Roberts T, Nolet K, Ryther B. Inside the GreenHouse "Black Box": Opportunities for High-Quality Clinical Decision Making. *Health ServRes*. 2016;51(S1):378-97.
41. Afendulis CC, Caudry DJ, O'Malley AJ, Kemper P, Grabowski DC. Green House Adoption and Nursing Home Quality. *Health ServRes*. 2016;51(S1):454-74.

42. Kane RA, Lum TY, Cutler LJ, Degenholtz HB, Tzy-Chyi Y. Resident outcomes in small-house nursing homes: a longitudinal evaluation of the initial green house program. *Journal of the American Geriatric Society*. 2007;55(6):832-9.
43. Sharkey SS, Hudak S, Horn SD, James B, Howes J. Frontline Caregiver Daily Practices: A Comparison Study of Traditional Nursing Homes and The Green House Project Sites. *Journal of the American Geriatric Society*. 2010;59(1):126-31.
44. Grabowski DC, Afendulis CC, Caudry DJ, O'Malley AJ, Kemper P. The Impact of Green House Adoption on Medicare Spending and Utilization. *Health ServRes*. 2016;54(S1):433-53.
45. Bowers B, Nolet K, Jacobson N. Sustaining Culture Change: Experiences in the Green House Model. *Health ServRes*. 2016;51(S1):398-417.
46. Brush J. Montessori for Dementia and Aging: An Approach Worth Learning About. The Pioneer Network 2018:<https://www.pioneernetwork.net/montessori-for-dementia-and-aging-an-approach-worth-learning-about/>.
47. Roberts G, Morley C, Walters W, Malta S, Doyle C. Caring for people with dementia in residential aged care: Successes with a composite person-centered care model featuring Montessori-based activities. *GeriatrNurs*. 2015;36(2):106-10.
48. Ducak K, Denton M. Implementing Montessori Methods for Dementia in Ontario long-term care homes: Recreation staff and multidisciplinary consultants' perceptions of policy and practice issues. *Dementia*. 2018;17(1):5-33.
49. Hagen B, Sayers D. When caring leaves bruises: The effects of staff education on resident aggression. *JGerontolNurs*. 1995;21(11):7-9.
50. Martin LS, Gillies L, Coker E, Pizzacalla A, Montemuro M, Suva G, et al. An Education Intervention to Enhance Staff Self-Efficacy to Provide Dementia Care in an Acute Care Hospital in Canada: A Nonrandomized Controlled Study. *American Journal of Alzheimer's Disease & Other Dementias*. 2016;31(8):664-7.
51. Vogel L. Pilot project delivers dementia care that feels like home. *CMAJ Canadian Medical Association Journal*. 2018;190(June 11):E729.
52. Caspar, S., O'Rourke, N., & Gutman, G. (2009). The differential influence of culture change models on long-term care staff empowerment and provision of individualized care. *The Canadian Journal on Aging*, 28(2), 165-175.

---

<sup>iii</sup> A search of the PubMed, CINAHL, Sociological Abstracts, PsychInfo and Google scholar was conducted for the terms “butterfly” and “long-term care” or “nursing.” This search identified no peer reviewed studies of the implementation and effectiveness of the approach. Dementia Care Matters Canada was contacted to see if there were any studies that might have been missed in the search or any unpublished research available. They shared a report prepared by NorQuest College presenting the results of a qualitative study of family and staff in an Alberta facility. We also have the publications of Dementia Care Matters and many from other models In

completing the report on models, we drew on our extensive bibliography we have gathered over the years in our studies of long-term residential care.