SYSTEMIC REVIEW/META-ANALYSIS

National Dementia Strategies: What Should Canada Learn?

Selina Chow, Ronald Chow, BMSc(C), Angela Wan, MD(C), Helen R. Lam, BSW(C),
Kate Taylor, BA(C), Katija Bonin, MD(C), Leigha Rowbottom, MD(C), Henry Lam, MLS,
Carlo DeAngelis, PharmD, Nathan Herrmann, MD

Division of Geriatric Psychiatry, Sunnybrook Health Sciences Centre, University of Toronto, Toronto, ON, Canada

DOI:https://doi.org/10.5770/cgj.21.299

ABSTRACT

Background

In order to provide appropriate care for the aging population, many countries are adopting a National Dementia Strategy (NDS). On June 22, 2017, Canada announced it will become the 30th country to launch a NDS. In light of this announcement and as Canada prepares to develop its own NDS, we conducted this review to examine and compare the NDSs of the other previous 29 countries with Canadian government's policies to date.

Methods

NDSs were compared according to their major priorities. The primary endpoints were the framework conditions and key actions outlined in the strategies. Secondary endpoints included the years active, involvement of stakeholders, funding, and implementation.

Results

We were able to review and compare 25 of the 29 published NDSs. While the NDSs of each country varied, several major priorities were common among the strategies—increasing awareness of dementia, reducing its stigma, identifying support services, improving the quality of care, as well as improving training and education and promoting research.

Conclusions

This review comprehensively lists and compares the NDSs of different countries. The results should be of great interest to policy-makers, health-care professionals and other key stakeholders involved in developing Canada's forthcoming NDS. We hope that policy-makers in Canada can review other NDSs, learn from their example, and develop an effective NDS for our country.

Key words: dementia, national dementia strategy, government, policy

INTRODUCTION

In 2015, approximately 46.8 million people worldwide had dementia, and this figure will almost double every 20 years—75 million in 2030 and 131.5 million by 2050. With the medical advances and improved health care over the last century, the expected lifespan of individuals is increasing, accompanied by a rise in the number of people living with dementia.(1)

As a result of the increasing prevalence of dementia, the significant economic impact from this illness will only continue to grow. In 2015, the total estimated global cost of dementia was 818 billion USD, which accounted for 1.09% of the world's GDP. However, these costs underestimate the true economic impact of dementia, as it is limited to caring for diagnosed patients, which is estimated to account for only one-quarter of all patients who suffer from dementia.(1) As the awareness and knowledge of dementia increases in the near-future, more cases of dementia will likely be diagnosed; along with the projected increase in dementia among the aging population, health-care costs will only trend upwards.

In order to address this changing demographic, many countries are adopting a National Dementia Strategy (NDS) as a comprehensive government plan to provide appropriate medical care for people with dementia. A government dementia plan is a policy whereby the national government holds itself accountable to carry out its stated specific objectives and policy changes, although objectives can be accomplished with non-governmental collaborators. Recommendations on the process of public policy creation have been published, and are listed in Table 1.(2) Created using input from various stakeholders (i.e., government agencies, legislators, residential and community care providers, professional and family carers, researchers, physicians, and people with dementia), the NDS is tailored specifically to the unique culture and demographics of each country to address a range of issues. Common priorities for NDSs include: raising awareness of

TABLE 1.
Principles of population health policy[a]

Recommendation	*Principle*
1	• Include directives, plans, and courses of action documented in writing
2	• Prioritize early detection, treatment, and rehabilitation following disease among at-risk and symptomatic individuals
3	• Include political, economic, epidemiological, ethical, behavioral, and legal considerations when developing population health policy
4	• Population health needs vary among groups across different demographics and jurisdictions • Population health policies need to balance standardization with customization of interventions
5	• When evaluating the effect of population health policy on outcomes, the social determinants of health must be taken into account
6	• To manage population health, align strategic planning with the management of human resources • Identify population health needs through available health needs assessments and input from affected population members

[a]Adapted from Reference #2.

the disease, combating stigma, identifying support services, quantifying the number of individuals with dementia, assessing and improving the quality of dementia care, and assessing the availability and access to diagnostic services. These strategies have been well-received and reported as the single most powerful tool to transform dementia care and support within a country.(3,4)

On June 22, 2017, Canada announced it will become the 30th country to launch a National Dementia Strategy.(4) The timing of this announcement was curious in view of the fact that, at the G8 Dementia Summit in London on December 11, 2013, the G8 Health Ministers met to discuss how to shape an effective international response to dementia. They committed to carry out 12 dementia public health policy actions, with Canada and France co-leading this initiative.(5) Subsequent to this, on September 11, 2014, at a meeting with leading researchers and dementia industry experts in Ottawa, the Federal Health Minister acknowledged that Canada was the only G7 nation without a NDS. As such, the government began planning a new National Dementia Research and Prevention Plan.(6) Canada's laggard response to NDS development can only be a matter of speculation.

In light of the recent news that Canada is now finally developing a NDS, we conducted this review with the purpose of examining and comparing the NDSs across the 29 prior countries with Canadian government policies to date. This information could provide valuable insight for clinicians, researchers, and policy-makers about pre-existing policies in other countries, to potentially aid in the development of a comprehensive and effective strategy for Canada.

METHODS

Selection Criteria

All the NDSs were retrieved from Alzheimer's Disease International.(3) For countries that have published several NDSs over time, only the current or most recent strategy was included, to allow for cross-country comparison. For strategies published in foreign languages, online translation services were employed. Strategies that were not publicly available from its corresponding country were excluded.

Data Extraction and Endpoints

The 29 countries are defined according to Alzheimer's Disease International.(3) NDSs of countries were compared according to their major priorities. The primary endpoints were the framework conditions and key actions outlined in the strategy. Secondary endpoints included the years active, involvement of stakeholders, funding, and implementation.

Data extraction from the 29 national strategies was delegated among the authors, who worked in pairs. For each national strategy, one author extracted endpoints and another author verified the extracted data to ensure accuracy and consistency in the results.

RESULTS

Of the 29 countries identified as having a NDS, 25 were published in English or in a language/medium that could be readily translated to English using online translation services.(7-36) The literature published by the countries of Argentina,(37) Costa Rica,(38) Macau, and Slovenia(39) were not publicly available online and/or could not be translated to English for inclusion in our review.

A summary of each NDS is provided in Table 2. While the NDSs of each country varied, several major priorities were common among most of the strategies: increasing awareness of dementia, reducing the stigma surrounding the illness, identifying support services, improving the quality of care, as well as improving training and education and promoting research. Several NDSs also specified the funding received to carry out the strategy, along with how the strategy will be implemented.

TABLE 2.
Summary of national dementia strategies

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Australia(7)	2015 – 2019	i. Increase awareness and reduce risk	i. • Develop dementia-friendly communities • Launch awareness campaigns • Adopt collaborative evidence-based approach for awareness and risk reduction activities • Promote healthy and physically active lifestyles	• Australian Health Ministers Advisory Council • Individuals with dementia • Caregivers • Families • Doctors • Service providers	• National Health Medical and Research Council funds research • $200 M over 5 years committed by Australian Government for dementia research ◦ Includes $50 M to establish a National Institute for Dementia Research	Did not mention
		ii. Address need for timely diagnosis	ii. • Provide education and ongoing training for healthcare professionals • Use multi-disciplinary approach for diagnosis			
		iii. Access to care and support post diagnosis	iii. • Develop dementia-specific healthcare teams • Provide education, training, and support for caregivers and families			
		iv. Access to ongoing care and support	iv. • Provide support services and education programs for caregivers • Provide access to advice, support, and respite services for patients and families • Provide specialist medical and non-medical services in residential aged care facilities • Provide mental health services for people with behavioral and psychological symptoms of dementia			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Australia(7) Continued		v. Access to care and support during and after hospital care	v. • Improve assessment of cognitive impairment and dementia on admission in the acute healthcare setting • Develop evidence-based clinical care pathway for patients • Develop standards to ensure consistency among care and admissions/discharges from the acute care setting			
		vi. Access to end-of-life and palliative care	vi. • Promote advance care planning after diagnosis of dementia • Provide training and education for advance care planning options and palliative approaches • Develop care and referral pathways to enable seamless transition to palliative care			
		vii. Promote research	vii. • Conduct dementia research into areas such as: causes, diagnosis, care, treatment, cure • Explore opportunities for collaborative research with other National Health Priority Areas • Improve hospital data collection of dementia			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Cuba(8) (Unofficial English translation)	2013	i. Increase awareness and reduce risk	i. • Provide more education and information	• Cuban Section of Alzheimer • National Directorate of Elderly	Did not mention	• Annual meetings will be held to discuss progress and implementation of national strategy • National Directorate of Primary Health Care, the Department of the Elderly, Mental Health and Social Welfare will monitor and coordinate the Key Actions • Cuban Section of Alzheimer, Scientific Societies, Universities, Research Centers and Relief will conduct dementia research • Universities of Medical Sciences, along with the Departments of Geriatrics, Neurology, and Psychiatry in teaching hospitals, will train healthcare professionals involved with dementia care • Cuban Institute of Radio and Television will develop and disseminate educational messages to the public
		ii. Develop dementia-friendly communities	ii. • Establish residential facilities specialized for caring for people with dementia • Create support networks for caregivers • Increase staff training for providers of dementia care			
		iii. Promote prevention and early diagnosis	iii. • Did not mention			
		iv. Implement “Guidelines for Good Clinical Practice” for dementia care	iv. • Use the guidelines in daily clinical practice			
		v. Increase the availability of specialists in dementia care	v. • Provide geriatrics training for related specialties: general medicine, internal medicine, neurology, psychiatry, nurses, psychologists, social workers • Offer graduate courses for students and refresher courses for healthcare professionals about dementia			
		vi. Increase availability of treatments	vi. • Promote alternative treatment options: cognitive stimulating activities, physical exercise, etc.			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Cuba(8) (Unofficial English translation) Continued		vii. Reduce stigma	vii. • Launch dementia campaigns, television and radio programs, and health promotion activities • Develop and disseminate educational messages • Establish annual dementia programs for "World Alzheimer's Day" on September 21			
		viii. Promote patients' rights	viii. • Provide training to healthcare professionals about laws and rights of people with dementia • Require healthcare professionals to maintain complete medical history of patients, including neuropsychological tests • Require healthcare professionals to be responsible for assessing mental competency of patients			
		ix. Promote research	ix. • Conduct dementia research into areas such as: risk factors, incidence rates, diagnostic tools (e.g. genetic counseling, neuroimaging, biomarkers)			
Czech Republic(9) (Online translation service used)	2016-2019	i. Improve early diagnosis	i. • Adapt internationally accepted best practices for diagnosis of dementia • Ensure public health insurance covers the costs for dementia care • Include cognitive assessments in general medical examinations of seniors	• Ministry of Health • Ministry of Labor and Social Affairs • Czech Alzheimer's Society • Czech Neurological Society • Czech Gerontological and Geriatric Society • Psychiatric Society • Czech Association of Nurses	• Ministry of Health • Health insurance • European Social fund • European Structural and Investment funds • National budget	• Strategy will be updated annually and progress on the implementation will be presented to the government • The National Institute will implement dementia training programs for teachers

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Czech Republic(9) (Online translation service used) Continued		ii. Standardize treatment methods	ii. • Establish standardized treatment methods for neurology, psychiatry, and geriatrics • Prevent over-use of antipsychotic agents			
		iii. Improve access to care	iii. • Promote the development of highly specialized interdisciplinary centers to care for atypical dementia patients • Establish structured network of dementia centers			
		iv. Increase support for caregivers	iv. • Establish a financial support system for caregivers • Provide support for employed people who are informal caregivers • Provide psychological support for caregivers • Promote the development of peer support groups			
		v. Educate informal caregivers	v. • Offer accredited educational courses			
		vi. Train professionals	vi. • Provide accredited courses about dementia to professionals who work with these patients • Provide training for healthcare professionals in neurology, psychiatry, geriatrics, long-term care, and palliative medicine			
		vii. Increase awareness	vii. • Organize public information campaigns through the media • Reduce stigma			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Czech Republic[(9)] (Online translation service used) Continued		viii. Promote intergenerational solidarity in society	viii. • Did not mention			
		ix. Educate public sector workers	ix. • Educate each profession in public sector about dementia • Organize training programs for teachers • Publish training materials online: www.rvp.cz			
		x. Implement epidemiological surveillance and monitoring	x. • Collect data for statistical monitoring of prevalence of dementia • Use this data to plan health and social services			
		xi. Cooperate with other countries	xi. • Exchange experience, data, information, and best practices with other countries • Participate in European and global dementia initiatives			
		xii. Assess ability of patients to drive safely	xii. • Establish standardized rules for assessing the ability of elderly to drive safely			
		xiii. Promote research	xiii. • Continue supporting basic and applied biomedical research • Promote international cooperation in research			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
England[10]	2009	i. Increase awareness	i. • Launch public information campaigns • Promote prevention methods and timely diagnosis and care • Provide educational material to schools	• Department of Health Programme Board • Department of Health Working Group • External Reference Group • Individuals with dementia • Specific target groups of patients: ◦ Younger people ◦ People with learning disabilities ◦ People from minority ethnic groups ◦ People from rural and island communities ◦ Prisoners ◦ Caregivers	• Decisions on funding were made after results from the initial demonstrator sites and evaluation work are analyzed	• Led by the Department of Health • Established regional support teams support local implementation • Established a national baseline measurement of services • Conducted annual reviews of current services • Monitored progress of implementation over time
		ii. Establish memory services	ii. • Commission local memory services			
		iii. Increase information available for patients and caregivers	iii. • Provide information and support services at diagnosis and throughout course of care for patients and caregivers			
		iv. Provide continuity of support	iv. • Provide easy access to care, support, and advice following diagnosis • Establish new role of a "dementia adviser" to serve as point of contact for patients and caregivers			
		v. Promote peer support	v. • Develop structured peer support and learning networks			
		vi. Improve community personal support services	vi. • Implement "Putting People First" personalization changes for people with dementia • Establish effective specialist services to support patients living at home			
		vii. Implement "Caregivers' Strategy"	vii. • Ensure that needs of caregivers are met • Promote development of breaks that benefit both patients and caregivers			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
England[10] Continued		viii. Improve care in hospitals	viii. • Identify senior doctor to take the lead for quality improvement of dementia care • Develop explicit care pathway for management and care of patients • Commission specialist liaison older people's mental health teams			
		ix. Improve intermediate care	ix. • Include and address needs of people with dementia in the revision of the Department of Health's 2001 guidance on intermediate care			
		x. Improve housing for patients	x. • Develop housing support, housing-related services, assistive technology, and telecare for individuals with dementia			
		xi. Improve care in dementia care homes	xi. • Identify senior staff member to take lead for quality improvement of dementia care • Develop local strategy for management and care of patients • Commission specialist in-reach services from older people's community mental health teams • Commission other in-reach services: primary care, pharmacy, dentistry			
		xii. Improve end-of-life care	xii. • Initiate projects and evaluations to fill in current gap of definitive data in this area • Improve pain relief and nursing support			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
England(10) Continued		xiii. Promote workforce competencies, development, and training	xiii. • Establish effective basic training and continuous professional development in dementia			
		xiv. Monitor performance and evaluate dementia services	xiv. • Conduct routine inspections for care homes and other service providers			
		xv. Promote research	xv. • The Medical Research Council and Department of Health will convene a summit of parties interested in dementia research			
Finland(11)	2012-2020	i. Promote brain health	i. • Develop indicators and produce more information about brain health and prevention of memory disorders • Educate professionals in different sectors (e.g. sports) • Educate students in all stages of schooling	• Finnish Ministry of Social Affairs and Health	• Finland's National Development Programme for Social Welfare and Health Care and Finland's Slot Machine Association will fund brain health promotion • Development of dementia services will be funded by Finland's Slot Machine Association, the Finnish Funding Agency for Technology and Innovation, and other parties that grant funds for research and development	• Finnish Ministry of Social Affairs and Health will coordinate brain health promotion • National Institute for Health and Welfare, universities, and other research organizations will develop indicators and produce more information about brain health • National Institute for Health and Welfare, the Finnish Institute of Occupational Health, and the Association of Finnish Local and Regional Authorities will support local authorities during implementation
		ii. Increase dementia awareness	ii. • Launch public awareness campaign • Develop online memory portal with information about memory loss			
		iii. Ensure a good quality of life for patients and families	iii. • Establish regional outpatient clinics offering primary healthcare services • Establish outpatient clinics offering specialist medical care in hospital districts and catchment areas • Develop clinical pathways for dementia care • Provide 24-hour care for patients			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Finland(11) Continued		iv. Improve dementia care	iv. • Investigate potential to establish national network of centres of expertise • Develop national criteria and indicators for quality control and supervision of dementia services • Develop national targets for prerequisite skills of professionals working with people with dementia		• Research funding agencies will fund dementia research conducted at universities	• Joint municipal authorities in charge of hospital districts will update their healthcare provision plans to cover brain health • National Institute for Health and Welfare will develop the online memory portal: www.muisti.fi
France(12)	2008-2012	i. Improve diagnosis	i. • Develop care pathway for the diagnosis and counselling of dementia • Improve assessment and diagnosis services	• National Social and Medico-Social Evaluation Agency • National Health Authority • Directorate General for Social Action • Directorate General for Health • Assembly of French Departments • National Employees' Pension Fund • France Alzheimer • Medical specialists • Representatives of social and healthcare services • Representatives of local authorities • Representatives of the research community and partner organizations	• Health insurance system • National Fund for the Autonomy of Elderly and Disabled People • Over 1.2 B Euros of funding in total ◦ Includes 200 M Euros for improving healthcare ◦ Includes 200 M Euros for research	• Led by Professors Michel Clanet, Joël Ankri and Etienne Hirsch • Evaluated and reported progress to the President every 6 months
		ii. Improve treatment and support services	ii. • Appoint coordinators to facilitate connections between different healthcare professionals caring for patients • Provide support to patients living at home • Establish specific units for patients with behavioral problems • Provide accommodations for younger patients • Establish national reference centre for younger adults with dementia • Develop and diversify respite structures • Establish phone helpline and website providing information and advice			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
France(12) Continued		iii. Promote research	iii. • Establish the "Foundation for Scientific Cooperation" to coordinate research • Publicize and promote research across Europe			
Greece(13)	2015-2020	i. Record and classify patients with dementia into different categories based on type of disease and specific needs	i. • Provide financial support for patients according to algorithm of disease and of families' financial burdens	• Ministry of Health • Local Administration Organizations • Ministry of Education – Universities • National School of Public Health • Healthcare professionals • Alzheimer's Association • Centers of Excellence for Dementia • Charities • Research institutions	• Ministry of Health • National Organization for Rendering Health Services • European Union Structural Funds • Corporate Social Responsibility • Charities • Private groups	• Coordinators in hospitals will ensure that examination and hospitalization protocols are implemented
		ii. Increase awareness	ii. • Promote prevention methods			
		iii. Support caregivers	iii. • Provide support services for caregivers			
		iv. Improve dementia care	iv. • Integrate dementia services in primary care • Coordinate services for dementia patients with co-morbidities and attend to Emergency Care Units • Establish Memory and Cognitive Disorders Clinic in all regional hospitals • Establish day care centers, long-term care facilities and end-of-life institutions for people with dementia • Develop home care and telemedicine services for patients with limited access to health services			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Greece[13] Continued		v. Enhance patients' and caregivers' rights	v. • Change current legislations to include needs of patients and caregivers • Adopt legislation aimed specifically at dementia			
		vi. Enhance education	vi. • Offer clinical and research scholarships • Establish "Centres of Excellence for Dementia" to provide education for specialized doctors			
		vii. Promote research	vii. • Participate in international research			
Indonesia[14]	2016	i. Improve dementia care	i. • Provide education and training programs for staff involved in dementia care	• Ministry of Home Affairs • Ministry of Social Affairs • Ministry of Health • National Family Planning Coordinating Board • Coordinating Ministry for People's Welfare • Ministry of Education and Culture • Ministry of Finance • Social insurance • Institute of Sciences • Academy of Sciences • Directorate General of Higher Education	• State budget • Local budget • International agencies • Non-governmental organizations • Private sector • Businesses	• Progress will be monitored by central and district governments, the Commission for the Elderly, universities, and non-governmental organizations
		ii. Promote good brain health for productive older adults	ii. • Promote dementia services • Establish cognitive health program • Launch public campaign to promote brain-healthy lifestyles			
		iii. Manage cognitive disorders early to prevent dementia	iii. • Implement early detection, diagnosis and holistic management of cognitive disorders and dementia			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Ireland(15)	2011-2016	i. Increase awareness	i. • Educate public about healthy lifestyles and cardiovascular risk factors of dementia • Implement "The National Physical Activity Plan" to promote regular physical activity • Reduce stigma	• Caregivers • Individuals with dementia • Local authorities • State agencies • Service providers • Working Group ◦ Healthcare professionals ◦ Researchers ◦ Representatives of the Department of Health and the Health Service Executive	• 105,000 Euros pledged by government to support the plan during the first year	• The Health Service Executive delegated responsibilities of implementation within its own facilities • Senior doctor within each hospital led implementation
		ii. Provide timely diagnosis and intervention	ii. • Review existing dementia services • Provide general practitioners with dementia-specific resources • Develop guidance material about medication management for nursing homes			
		iii. Provide integrated services, support and care	iii. • Review and identify gaps in existing social services for patients • Optimize resources invested in home care and respite care • Evaluate potential of assistive technology • Provide information on advocacy and voluntary organizations to patients and families			
		iv. Provide training and education	iv. • Provide dementia-specific training for healthcare professionals			
		v. Establish leadership roles in dementia care	v. • Appoint healthcare professional in primary care services to coordinate each patient's care • Designate senior management of the Health Service Executive to respond to any concerns regarding dementia • Establish a "Work Stream on Dementia Care" by The Clinical Strategy and Programmes Division			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Israel(16)	2013	i. Increase awareness and reduce stigma	i. • Launch public education campaigns • Disseminate culturally adapted information • Increase awareness of patients' and patient families' rights	• Ministry of Health • Ministry of Social Affairs and Social Services • National Insurance Institute of Israel • Ministry for Senior Citizens • Alzheimer's Society of Israel • Melabev (a non-profit organization for Alzheimer's) • Academia and Health System • Myers-Joint Distribution Committee-Brookdale Institute of Gerontology • Joint Distribution Committee-Eshel (The Association for the Planning and Development of Services for the Aged in Israel)	Did not mention	• National health insurance law will be responsible for creating the care package for patients • Resources will be allocated, and legislative changes will be promoted as needed • Priorities and goals will be set in every ministry, and a multi-year plan will be formulated
		ii. Improve community health services	ii. • Establish program to promote prevention of dementia • Develop care package for patients • Expand use of drug therapy • Increase referrals to non-medical treatments • Create new role of "nurse coordinator" to ensure continuity of care • Improve treatment of advanced dementia at end-of-life			
		iii. Improve community social services	iii. • Provide more intensive care for patients requiring supervision • Prioritize cognitive deterioration when assessing patients' independence • Establish additional daycare centres and expand its operating hours			
		iv. Improve support for caregivers	iv. • Increase wages for caregivers • Establish information and consultation centres accessible by phone • Establish respite care within daycare facilities • Increase awareness of families' legal rights • Develop auxiliary technologies			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Israel(16) Continued		v. Adapt long-term care services to the changing needs of patients	v. • Increase availability of beds to meet the needs in different regions • Project future needs and monitor increases in supply • Develop models for institutional care			
		vi. Expand training resources	vi. • Expand clinical professionals' scope of study • Provide training for general practitioners on the diagnosis and management of dementia care			
		vii. Promote research	vii. • Define outcome measures • Develop agenda for research • Consider establishing national register on incidence and prevalence of dementia • Fund research			
Italy(17-19)	2014	i. Promote public actions and policies to address dementia	i. • Map dementia services at national and regional level • Update guidelines and consensus documents to include dementia care	• Ministry of Health • Health and social sectors • National Institute of Health • 3 major national patients/caregivers associations • Alzheimer Uniti Onlus Italy • Regional health authorities • Local city councils • Families	• Ministry of Health	Did not mention
		ii. Promote integrated approach to dementia care	ii. • Involve caregivers in every phase of diagnosis and treatment • Create national dementia information system			
		iii. Promote appropriateness and quality of care	iii. • Train specialists • Provide evidence-based care through continuous monitoring			
		iv. Improve quality of life for patients and families	iv. • Promote social inclusion • Reduce stigma			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Japan(20-22)	2015	i. Coordinate medical care and long-term care	i. • Establish support team for patients with early-stage dementia • Provide training programs for healthcare professionals • Create role of "dementia coordinator" to coordinate dementia care	• Ministry of Health, Labour and Welfare • Local citizens • Long-term care service providers • Doctors	• Ministry of Health, Labour and Welfare funds community support projects • Long-term Care Insurance funds home, community and institutional care	Did not mention
		ii. Promote research around prevention and cure	ii. • Promote prevention strategies • Promote research towards finding a cure through the "Project for Psychiatric and Neurological Disorders"			
		iii. Develop dementia-friendly communities	iii. • Increase number of "dementia supporters" (individuals who have completed an accredited program to learn how to support patients and families) from 5.8 M to 8 M • Establish neighbourhood "watch networks" to help patients who wander			
Republic of Korea(23-24)	2010	i. Improve early diagnosis and treatment	i. • Establish public health center to provide dementia care to entire population • Establish specialized hospital providing national dementia care • Establish dementia clinics in 4 regional hospitals	• Individuals with dementia • Families • Caregivers • Dementia specialists • Korean government • Alzheimer's Association of Korea • Neurologist/psychiatrist associations • Ministry of Health and Welfare • Nurse's Associations	Did not mention	Did not mention
		ii. Increase the number of trained dementia specialists	ii. • Increase number of dementia specialists to 6000 by 2012			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Republic of Korea(23-24)		iii. Alleviate caregiver burden	iii. • Increase eligibility for long-term care insurance by raising recipient income limit by $20,000 per year			
Luxembourg(25) (Unofficial English translation)	2013	i. Improve the quality of life of patients and informal caregivers	i. • Promote prevention and early diagnosis • Support families • Establish system to help patients and families with decision-making • Review training for healthcare professionals	• Ministry of Family and Integration • Ministry of Health • Senior Club • Ministry of Social Security • Families • Healthcare professionals • Government officials • Representatives of various associations, politicians, and civil society	Did not mention	Did not mention
		ii. Increase awareness	ii. • Increase awareness of the elderly's rights • Promote social inclusion of patients			
Malta(26)	2015-2023	i. Increase awareness	i. • Reduce stigma • Provide information on risk factors for dementia • Provide guidance for patients and caregivers	• Malta Dementia Society	Did not mention	• Will assess priorities and determine a plan of action, timeframes and key players • Will monitor progress and achievements
		ii. Improve timely diagnosis and intervention	ii. • Promote early diagnosis and timely care			
		iii. Provide workforce development	iii. • Ensure healthcare professionals have required qualifications to work with dementia patients • Recruit trained staff to work in various areas of dementia management and care			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Malta[26] Continued		iv. Improve dementia care	iv. • Provide pharmacological and non-pharmacological treatments • Develop individualized care pathways • Provide easy access to community services • Provide long-term and palliative care			
		v. Ensure ethical approach for dementia care	v. • Provide resources to help patients and families with decision-making			
		vi. Promote research	vi. • Did not mention			
Mexico[27] (Unofficial English translation)	2014	i. Promote mental health and prevention of dementia	i. • Increase awareness of dementia • Strengthen prevention campaigns • Engage civil society, private institutions, and industries in the fight against dementia	• National Institute of Geriatrics • National Institute of Public Health • National Institute of Neurology and Neurosurgery • Mexican Alzheimer Federation • National Institute of Older Adults	Did not mention	• Created an advisory group to monitor progress
		ii. Provide easy access to services	ii. • Provide comprehensive medical care • Establish daycare centers for patients			
		iii. Improve diagnosis and treatment	iii. • Provide catalogue of resources to patients and caregivers • Reduce burden on patients and families			
		iv. Increase geriatric training	iv. • Increase number of dementia-specialists • Include geriatrics training in undergraduate and graduate curricula for healthcare professionals			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Mexico(27) (Unofficial English translation) Continued		v. Promote patients' and caregivers' rights	v. • Ensure patients are aware of their own rights and the services available for them • Provide support to caregivers			
		vi. Improve end-of life-care	vi. • Establish training programs in palliative care for patients' families and healthcare professionals • Provide information on end-of-life documents and legal, social and financial assistance			
		vii. Promote research	vii. • Promote applied research studies • Collaborate with scientific groups and Public Health			
The Netherlands(28)	2013-2020	i. Improve healthcare to ensure good quality of life	i. • Support patients to live at home as long as possible	• Deltaplan Dementia • Organizations from healthcare, education, science, public, and professional services	• 85 M Euros has already been spent on dementia plan	Did not mention
		ii. Create dementia-friendly communities	ii. • Increase awareness			
		iii. Promote research	iii. • Pursue scientific and social research			
Norway(29)	2016 – 2020	i. Encourage patient and caregiver involvement in decision-making	i. • Establish educational programs for patients • Develop quality indicators to improve consistency of care • Conduct patient surveys to assess quality of services	• Norwegian government • Directorate of Health • County governors • State Housing Bank	• Government grants provided to municipalities • State Housing Bank will fund assisted living facilities	• Directorate of Health will provide leadership • County governors will guide municipalities to make appropriate changes to dementia care services • National survey of dementia services will be circulated every 4 years

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Norway[29] Continued		ii. Improve dementia prevention	ii. • Conduct home visits for older adults to promote dementia prevention • Reduce number of hip fractures in older adults and people with dementia			
		iii. Provide timely diagnosis and follow-up	iii. • Assign "service coordinators" to patients • Create individual plans for patients			
		iv. Enable people with dementia to live active lives and provide support to caregivers	iv. • Propose amendment to Social Services Act: municipalities need to offer day programs to people living at home with dementia by January 2020 • Establish flexible respite services • Strengthen cooperation with voluntary sector			
		v. Ensure people with dementia have good quality of life and access to assisted living facilities	v. • Develop and evaluate models for home care services • Establish modern nursing homes and assisted living facilities with continuous care for patients • Improve end-of-life care			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Norway(29) Continued		vi. Strengthen research, knowledge and competence	vi. • Launch information campaigns • Develop training programs for relevant sectors • Develop practice methods of working in milieu therapy (psychotherapy involving therapeutic environmental changes) • Promote research • Provide dementia training for people with minority backgrounds or languages • Encourage municipalities to develop local dementia plans			
Northern Ireland(30)	2011	i. Reduce risk or delay onset of dementia ii. Increase awareness iii. Promote early assessment and diagnosis	i. • Promote prevention and healthy lifestyles • Encourage primary care professionals to offer lifestyle advice and early diagnosis • Develop protocols for referral to specialists ii. • Develop educational resources for general population iii. • Ensure memory clinics offer a minimum range of services • Assess effectiveness of memory services	• Department of Health, Social Services, and Public Safety • Health and Social Care Board • Public Health Agency • Health and Social Care Trusts • Dementia Services Development Centre • Regulation and Quality Improvement Authority • Local commissioning groups	Did not mention	Did not mention

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Northern Ireland(30) Continued		iv. Increase support for patients	iv. • Create individual care plans for patients • Audit all dementia services and facilities • Establish framework for palliative and end-of-life care • Develop care pathways for younger people with dementia and patients with learning disabilities			
		v. Support caregivers	v. • Encourage caregiver involvement in patient discharge and home care planning			
		vi. Initiate legislation changes	vi. • Develop legislation protecting patients' rights			
		vii. Promote research	vii. • Continue to support dementia research			
Puerto Rico(31) (English Executive Summary used)	2015-2025	i. Initiate public policy	i. • Create public policy to guarantee access to services for patients and caregivers • Assess current laws to ensure the needs of patients and caregivers are met • Develop protocol about elder abuse, specifically for those with dementia	• Task Force appointed by Secretary of Health • Puerto Rico Department of Health • Secretariat for Health Promotion • Chronic Disease Prevention and Control Division	Did not mention	Did not mention
		ii. Initiate public health efforts and epidemiological surveillance	ii. • Promote research and surveillance of patients • Increase reporting of dementia by doctors and hospitals by 50% • Increase surveillance of elder abuse and mistreatment			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Puerto Rico[31] (English Executive Summary used) Continued		iii. Improve home and community caregiving services	iii. • Improve access to home and community services • Create service directory • Conduct needs-based assessment to identify barriers to access			
		iv. Improve education and training	iv. • Increase awareness via health promotion, education and communication • Host annual educational events • Collaborate with academia to integrate dementia awareness into associated curricula			
		v. Improve diagnosis and treatment	v. • Increase access to early diagnosis • Train healthcare professionals on importance of timely diagnosis, detection and treatment • Conduct needs-based assessment to identify barriers to diagnosis and treatment			
		vi. Improve long-term care services	vi. • Increase awareness of patients' needs • Promote inclusion of patients when creating public policy for long-term care • Encourage more long-term care facilities to use intervention protocols for patients			
		vii. Improve long-term care financing	vii. • Increase access to long-term care • Improve availability of insurance coverage • Reduce financial burden on caregivers via tax incentives			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Scotland[32]	2017-2020	i. Support patient autonomy	i. • Improve delivery of post-diagnostic services • Evaluate relocation of post-diagnostic dementia services to primary care locations	• Scottish Government • Minister for Mental Health • Alzheimer's Scotland • Convention of Local Scottish Authorities • Scottish Dementia Working Group • National Dementia Carers Action Network	Did not mention	• Will establish a national governing structure to oversee implementation
		ii. Improve access to quality, individualized care	iii. • Offer all newly diagnosed patients minimum of 1-year post-diagnostic support			
		iii. Enable individuals to live at home safely	iii. • Establish more therapeutic home care services • Implement assistive technologies for home living			
		iv. Improve access to palliative and end-of-life care	iv. • Evaluate "Alzheimer Scotland's Advanced Care Dementia Palliative and End-of-Life Care Model" • Identify improvements in delivery and access to care			
		v. Support caregivers	v. • Continue to build partnerships with caregivers and community organizations			
		vi. Ensure right to quality care for all patients	vi. • Support clinical and non-clinical research • Implement "Promoting Excellence" framework in both health and social sector workforces • Ensure all patients and caregivers have access to assistive technology for independent living			
		vii. Promote dementia-friendly communities	vii. Encourage and support individuals with dementia to participate in community			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Switzerland(33)	2014-2017	i. Increase awareness	i. • Host public educational activities • Create information materials for those who interact with individuals with dementia • Provide personalized information and counselling for patients	• Federal Office of Public Health • Swiss Conference of Guidelines • Cantonal Directors of Health	Did not mention	• Led by a coordination committee
		ii. Provide needs-appropriate services	ii. • Establish accessible network of diagnostic services • Promote use of interdisciplinary care teams to provide individualized care • Establish and expand respite services for both day and overnight care • Ensure care in both acute hospitals and long-term care facilities is catered to meet patients' needs			
		iii. Promote quality and professional skills	iii. • Provide quality and ethical care to patients • Expand education of healthcare professionals, volunteers, and caregivers to include necessary skills to care for dementia patients			
		iv. Promote data and knowledge transfer	iv. • Determine feasibility of a care monitoring system to be included in health statistics • Continue scientific evaluation of new treatment and care • Establish online network to allow for knowledge translation and dissemination			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Taiwan[34] (English summary used)	2013	i. Increase awareness	i. • Promote public knowledge to lower the risk of dementia and facilitate early referral and assessment • Launch educational initiatives to reduce stigma and promote dementia-friendly communities	• Ministry of Health and Welfare	Did not mention	Did not mention
		ii. Establish comprehensive community care network	ii. • Provide multi-disciplinary care • Establish community network to support patients and caregivers • Develop early intervention programs and social interaction to delay functional deterioration			
		iii. Improve prevention and healthcare services	iii. • Increase healthcare professionals' competency in dementia evaluation • Increase access to diagnosis and treatment services			
		iv. Provide training for healthcare professionals and volunteers	iv. • Provide education regarding dementia prevention, treatment and care			
		v. Promote cooperation between healthcare professionals and resource integration	v. • Improve prevention, treatment and early diagnosis			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
Taiwan(34) (English summary used) Continued		vi. Promote patients' and caregivers' rights	vi. • Review and update policy regarding individuals with dementia • Build policy in conjunction with patients and families • Develop quality benchmarks to ensure good provision of service • Involve non-government stakeholders in decision-making			
		vii. Promote research	vii. • Monitor population at national and community levels for policy and advocating initiatives • Support national and international research			
United States of America(35)	2012-2025	i. Prevent and effectively treat dementia by 2025	i. • Identify research opportunities for prevention and treatment • Host research summits with national and international scientists • Disseminate research to promote uptake into practice, to inform research initiatives, and to educate public	• Department of Health and Human Services • Advisory Council on Alzheimer's Research, Care, and Services	• 156 M USD from the Obama administration ◦ 130 M USD for research • 26 M USD for supporting patients and their families, as well as to develop education for public and healthcare professionals	• Will be led by the Secretary of the Department of Health and Human Services and the Advisory Council on Alzheimer's Research, Care, and Services • Strategy to be updated annually
		ii. Improve quality and efficiency of dementia care	ii. • Educate healthcare professionals with knowledge and necessary skills • Encourage healthcare professionals to pursue geriatric specialities • Promote diagnostic services to the public • Disseminate diagnostic assessment tools among healthcare professionals			

TABLE 2.
Continued

Country	*Years Active*	*Framework Conditions*	*Key Actions*	*Involvement of Stakeholders*	*Funding*	*Implementation*
United States of America(35) Continued		iii. Increase support for patients and families	iii. • Educate healthcare professionals about long-term services and supports • Improve support for caregivers			
		iv. Increase awareness	iv. • Develop national initiatives			
		v. Track progress of strategy to drive improvements	v. • Identify areas for improvement in major policies and public health data collection			
Wales(36)	2011	i. Improve service provision	i. • Employ dementia clinical coordinators to support patients • Improve care for patients in hospital wards • Establish a new service for younger patients	• Welsh Assembly Government • Alzheimer's Society • Local government • Volunteer sector • National Health Service Wales	• 1.5 M Pounds per year in additional funding	• Led by the Mental Health Programme Board
		ii. Increase information available for patients and caregivers	ii. • Ensure bilingual provision of services • Establish dementia care helpline • Include dementia care in the Welsh Government Prescription Scheme			
		iii. Increase awareness	iii. • Launch health campaigns			
		iv. Improve training for service providers of dementia care	iv. • Provide dementia training for healthcare professionals and social care workers • Create resources to help caregivers			
		v. Promote research	v. • Offer funding to support dementia research			

Increase Awareness

The NDS of 18 countries (Australia, Czech Republic, England, Finland, Greece, Indonesia, Ireland, Israel, Luxembourg, Malta, Mexico, The Netherlands, Northern Ireland, Puerto Rico, Switzerland, Taiwan, USA, Wales) aimed to increase awareness of dementia by providing more education and information to families and the community. Some countries also planned to launch awareness campaigns and create dementia-friendly communities, thereby promoting prevention and allowing for facilitation of early referral and assessment. In particular, Finland and Ireland had unique actions by which they hoped to raise awareness of dementia. Finland developed an online portal with information about memory loss (www.muisti.fi), while Ireland implemented “The National Physical Activity Plan” to promote healthy lifestyles involving regular physical activity.

Reduce Stigma

Six countries (Cuba, Czech Republic, Ireland, Israel, Italy, Malta) aimed to reduce the stigma surrounding dementia through awareness campaigns. For example, Cuba planned to launch dementia campaigns, television and radio programs, and health-promotion activities, along with establishing annual events for “World Alzheimer’s Day” on September 21.

Identify Support Services

Identifying and establishing support services for patients and caregivers was a common priority among 14 countries (Australia, Cuba, Czech Republic, England, France, Greece, Israel, Japan, Luxembourg, Northern Ireland, Norway, Scotland, USA, Wales). These countries planned to provide psychological support to caregivers by creating support networks and promoting peer support. In addition, France, Israel, and Wales established telephone helplines for caregivers, while France also created a website containing information and advice. The Czech Republic is the only country that also included in its NDS the need to provide financial support to caregivers, by establishing a financial support system for all caregivers, as well as providing support for employed people who are informal caregivers.

In terms of providing support services for patients, countries had varying means of achieving this goal. Several countries appointed a professional to support patients throughout the disease trajectory—England established the new role of a “dementia adviser” to serve as a point of contact for patients and caregivers; France appointed coordinators to facilitate connections between health-care professionals (HCPs) caring for patients; Wales employed “dementia clinical coordinators” to support patients. Japan approached this priority from a different angle by encouraging the public to become involved in supporting individuals with dementia. 5.8 million Japanese volunteers, known as “dementia supporters”, had already completed an accredited program to learn how to support patients and families, and the Japanese NDS aimed to increase the number of “dementia supporters” to 8 million people. Japan also established neighbourhood “watch networks” to help patients who wander. Meanwhile, France, Northern Ireland, and Wales all prioritized increasing support for younger adults with dementia, while France and Northern Ireland also focused on patients with behavioural problems and learning disabilities, respectively. Scotland planned to improve support for all newly diagnosed patients by offering a minimum of one-year, post-diagnostic support. Norway hoped to better support people with dementia living at home, and thus proposed an amendment to the Social Services Act to mandate all municipalities to offer day programs to these patients by 2020. Norway is also the only country that aimed to establish educational programs specifically for patients.

Improve Care

Improving dementia care is also a notable framework condition listed by all of the countries, although details varied slightly by country. In general, improving the quality of care included promoting multi-disciplinary care for patients, and assessing and increasing the ease of access to services via dementia-friendly communities and guidance resources. The NDSs of Australia, Cuba, Czech Republic, England, Finland, and France wanted to standardize care by implementing clinical guidelines and/or developing explicit care pathways for the management and care of patients. Additionally, Finland planned to provide 24-hour care to patients. Australia and England aimed to improve care in hospitals by establishing dementia-specific health-care teams. Likewise, several countries (England, Ireland, Israel, Japan, Norway) appointed a specialized HCP to lead quality improvement of services and coordinate dementia care for patients. Finally, Australia, Czech Republic, and Norway had unique processes to improve dementia care. Australia aims to improve access to end-of-life and palliative care by promoting advance care planning after diagnosis of dementia. Interestingly, Czech Republic is the only NDS to establish standardized rules for assessing the ability of dementia patients to drive safely. Finally, Norway’s priority is to conduct home visits for older adults to promote dementia prevention.

Improve Training and Education for HCPs

Improving training and education for HCPs was a priority in 16 countries’ NDSs (Australia, Cuba, Czech Republic, England, Greece, Indonesia, Ireland, Israel, Italy, Korea, Malta, Mexico, Puerto Rico, Switzerland, USA, Wales). Cuba, Czech Republic, Mexico, Korea, and USA specified an aim to increase the number of dementia specialists by including geriatrics training in undergraduate and graduate curricula for related specialties. In particular, Korea set a goal of increasing the number of HCPs specialized in caring for dementia patients to 6,000 by 2012. While the aforementioned NDSs focused on offering courses for those training to be HCPs, Cuba also aimed to offer refresher courses about dementia for HCPs, while Greece offered clinical and research scholarships. In contrast, Ireland and Israel focused on training general practitioners on the diagnosis and management of dementia care.

Promote Research

The NDSs of 17 countries (Australia, Cuba, Czech Republic, England, France, Greece, Israel, Japan, Malta, Mexico, The Netherlands, Northern Ireland, Norway, Scotland, Taiwan, USA, Wales) also aimed to promote dementia research, to better identify risk factors and develop diagnostic tools. In addition, Australia and Cuba specified the following topics as areas of interest for dementia research: causes, incidence rates, diagnosis, treatment, and a cure. The United States also included the goal of effectively treating dementia by 2025. Finally, England and the USA planned to host research summits with national and international scientists involved in dementia research.

Funding for NDS

Funding for the NDS was specified by 13 of the 25 countries (52%) (Australia, Czech Republic, Finland, France, Greece, Indonesia, Ireland, Italy, Japan, The Netherlands, Norway, USA, Wales); however, only six (Australia, France, Ireland, The Netherlands, USA, Wales) of these countries disclosed the amount of funding received. The United States received 156 million USD from the Obama administration (prior to 2017) for their NDS, of which 130 million USD is devoted to research and the remaining 26 million USD for supporting patients, families, and HCPs. Australia has specified that they have a 200 million AUD budget provided by the national government for their NDS, which includes 50 million AUD to establish a National Institute for Dementia Research. France has received a total of 1.2 billion Euros of funding from the health insurance system and the National Fund for the Autonomy of Elderly and Disabled People, including 200 million Euros for improving health care and another 200 million Euros for research. Other European countries have supported the NDS to the magnitude of 105,000 Euros for Ireland in the first year of the strategy, 85 million Euros for The Netherlands, and additional funding of 1.5 million Pounds annually for Wales.

Implementation of NDS

The following 16 countries specified in the NDS how their strategy will be implemented: Cuba, Czech Republic, England, Finland, France, Greece, Indonesia, Ireland, Israel, Malta, Mexico, Norway, Scotland, Switzerland, USA, Wales. Most of the plans for implementation were vague, with the exceptions of Cuba and Finland, which both included very well-structured and detailed plans. In Cuba, the National Directorate of Primary Health Care and the Department of the Elderly, Mental Health, and Social Welfare were responsible for the overall coordination of the key actions outlined in the NDS. Specific key actions of research, training HCPs, and developing public educational messages were further delegated to related organizations listed in Table 2. Likewise, a number of governmental agencies and non-governmental organizations in Finland were assigned relevant responsibilities for implementing the NDS. In addition, France committed to monitor and report the progress of its NDS every six months, while Cuba, Czech Republic, England, and the USA tracked their progress on an annual basis.

DISCUSSION

This review comprehensively lists the components of 25 of the 29 countries with a NDS, and reports the overarching themes that present across all strategies. To our knowledge, this is the first review to summarize and synthesize all of these NDSs in a single report. The results within, especially the similarities between the strategies, may be of great interest to policy-makers, HCPs, and other key stakeholders involved with Canada's forthcoming NDS.

Most NDSs had five major framework conditions: increasing awareness of dementia, identifying support services, improving the quality of dementia care, as well as improving training and education and promoting research. While not a component of the majority of NDSs, another common theme was reducing stigma. Some countries explicitly described the actions they will take to accomplish these objectives (i.e., England), while others list vague actions (i.e., Indonesia). Unfortunately, only a few countries have had follow-up studies evaluating the effectiveness of their NDS, while discussing ways to improve the strategy.(40-42) When establishing Canada's NDS, we would recommend investigating the efficacy of the NDSs of other countries further, and looking into which of, and under what circumstances, the aforementioned major framework conditions are effective. However, successes in other countries may or may not apply in Canada, given differences in health-care systems. In particular, because health care in Canada is primarily a provincial and territorial responsibility, Canada's NDS will require extraordinary cooperation across governments.

Notably, all G7 countries have disclosed that they have dedicated tremendous financial resources towards their NDSs, ranging from 156 million USD by the United States of America to 1.2 billion Euros by France. It would be interesting to study the effectiveness of these NDSs to determine if there is a positive correlation between financial resources and efficacy. It is, however, important to note that France offers a universal health-care system, while the United States does not. Hence, the French government likely needs to take on a greater financial burden. Nevertheless, Canada should be prepared to dedicate significant resources towards an NDS, as a country that also has a universal health-care system.

Some might argue that since health care is a provincial responsibility, each Canadian province should have their own local strategies, and indeed all ten provinces have already developed, or are currently developing, their own dementia strategies—British Columbia,(43) Newfoundland and Labrador,(44) Nova Scotia,(45) Manitoba,(46) Prince Edward Island,(47) New Brunswick,(48) Quebec,(49) Alberta,(50) Saskatchewan,(51) and most recently Ontario.(52) Unfortunately, the delivery of health-care services to dementia patients and their caregivers is only one component of a comprehensive dementia strategy, and many other components including education, awareness, and de-stigmatization would clearly benefit from a national approach in contrast to a local patchwork of strategies. Canada, in particular, must also pay special attention to dementia in Indigenous communities, a problem which crosses provincial boundaries, and which has been a remarkably understudied area of research.(53)

Another key lesson to be learned from a review of these NDSs is the process of NDS development and, in particular, the identification of key stakeholders. These include all appropriate federal government ministries (e.g., Health; Employment, Workforce Development, and Labour; Finance; Canadian Heritage; Indigenous Services), provincial representatives, Canadian Institute of Health Research, Alzheimer's Society of Canada, Canadian Medical Association, specialist physician groups (Neurology, Psychiatry, Geriatric Psychiatry, Geriatric Medicine, Palliative Care), Canadian Nurses Association, and individual patients and caregivers, where appropriate. This list is far from complete and consideration should also be given to the inclusion of other potentially valuable contributors, including, for example, pharmacists, home care service providers, occupational therapists, physiotherapists, insurance agency representatives, and pension plan mangers. We strongly support the inclusion of specific milestones and a pre-determined evaluation process. A Canadian NDS can take advantage of established organizations to provide research into the strategy's effectiveness, including the Canadian Institute for Health Information, the Institute for Clinical Evaluative Sciences, and the Canadian Consortium on Neurodegeneration in Aging.

In 2016, the Canadian government authorized the Standing Senate Committee on Social Affairs, Science and Technology to assess and report on the current issue of dementia in Canada. Within the report, the need for a National Dementia Strategy was emphasized. As noted by the Alzheimer Society of Canada, "…we are far behind other countries in our approach to [the issue of dementia], being one of only two G7 countries (along with Germany) that do not have a comprehensive national dementia strategy". The Senate Standing Committee, therefore, made 29 recommendations for a National Dementia Strategy, as summarized in Table 3.(54) Reassuringly, many of the initiatives and themes discussed above, including important process issues (e.g., appropriate stakeholder involvement, specified funding) and priorities (e.g., public awareness), were mentioned in this document, though many specific details were lacking.

As noted in the Introduction, it is not clear why it has taken Canada so long to develop a NDS. As with all public policy development, there are always competing interests and other political considerations, especially when considerable financial resources are involved. We have already discussed the provincial/territorial jurisdictional issues. Finally, it is possible that ageism and stigma have also played a role in Canada's delayed response.

A limitation of this review is that some of the listed 29 countries did not have an easily accessible document that could be translated into English for inclusion in this review. For the NDSs included in our review that were translated from a foreign language, the unofficial English translations used may not accurately represent the original NDS.

CONCLUSION

Our review was able to comprehensively list and compare 25 of the 29 countries with National Dementia Strategies. The results suggest five major priorities that are covered by most NDSs: increasing awareness, establishing support services, improving standard of care, improving training and education for HCPs, and promoting research. We hope that policy-makers in Canada will review these NDSs, learn from their examples, and develop an effective NDS for our country.

ACKNOWLEDGEMENTS

Dr. Nathan Herrmann is funded in part by the Canadian Consortium on Neurodegeneration in Aging, supported by the Canadian Institute of Health Research and its partners.

CONFLICT OF INTEREST DISCLOSURES

Unrelated to the current study, Dr. Herrmann has received research funding from Lundbeck, Roche and Axovant and consultation fees from Merck, Lilly, Astellas and Mediti. The authors declare that no conflicts of interest exist.

REFERENCES

1. Alzheimer's Disease International. Dementia statistics [Internet]. London, UK: Alzheimer's Disease International. 2017. Accessed 2017 Jul 12. Available from: https://www.alz.co.uk/research/statistics
2. Bhattacharya D, Bhatt J. Seven Foundational Principles of Population Health Policy. *Pop Health Manage*. 2017;20(5):383–88.
3. Alzheimer's Disease International. Dementia plans [Internet]. London, UK: Alzheimer's Disease International; 2017. Accessed 2017 Jul 31. Available from: https://www.alz.co.uk/dementia-plans
4. Alzheimer Society of Canada. Canada's national dementia strategy [Internet]. Toronto, ON: Alzheimer Society of Canada; 2017. Accessed 2017 Jul 31. Available from: http://www.alzheimer.ca/en/Get-involved/Advocacy/National-dementia-strategy

TABLE 3.
The Standing Senate Committee's recommendations for Canada's national dementia strategy[a]

Recommendation	*Action Item*
1	• Establish the Canadian Partnership to Address Dementia • Include a mandate to create and implement a National Dementia Strategy
2	• Model the Canadian Partnership to Address Dementia after the approach taken in the Canadian Partnership Against Cancer • Include the following stakeholders in the new dementia partnership o Federal, provincial, and territorial governments o Dementia and other health-related organizations o Individuals with dementia o Caregivers o Healthcare professionals o Housing organizations o Researchers o Indigenous community • Evaluate, report on, and update the National Dementia Strategy annually • Federal government funding of at least $30 M annually for the Canadian Partnership to Address Dementia
3	• Adjust the annual government funding provided to the Canadian Partnership to Address Dementia according to annual evaluations and strategy updates
4	• Use the following documents when creating the National Dementia Strategy: o *The Canadian Alzheimer's Disease and Dementia Partnership: Strategic Objectives* (Alzheimer Society of Canada) • *Improving Dementia Care Worldwide: Ideas and Advice on Developing and Implementing a National Dementia Plan* (Alzheimer's Disease International)
5	• Federal government funding of approximately $100 M annually for the Canadian Institutes of Health Research's Dementia Research Strategy
6	• Develop a public awareness campaign that promotes the following items o Dementia Friends Canada website o Prevention o Early diagnosis o Symptom recognition o Quality of life o Services o Supports
7	• Develop public awareness campaigns on healthy eating and active lifestyles
8	• Adequate federal government funding for the Canadian Chronic Disease Surveillance Program • Aim to provide robust, timely and accessible dementia surveillance data beginning in 2017
9	• Encourage the implementation of the Alzheimer Society of Canada's First Link® early intervention program
10	• Federal government should explore fiscal options to alleviate the financial burden on informal caregivers • Possible options: o Expand the Employment Insurance compassionate care benefit beyond palliative care • Amend the Caregiver Tax Credit and the Family Caregiver Tax Credit to make them refundable
11	• Promote workplace best practices to support employees who are caregivers
12	• Provide the following additional supports for caregivers o Education and training o Respite services o Online portal with information about dementia programs and initiatives
13	• Federal government funding of $3 B over 4 years for a comprehensive package of home care services
14	• Routinely evaluate and report on the use of government funding for home care services • Provide annual, success-based adjustments to funding
15	• Assess the need for home care funding beyond the initial 4-year period

TABLE 3.
Continued

Recommendation	*Action Item*
16	• Promote innovative technologies and the Home-Care-Plus model (integrates specialists in dementia care into home care)
17	• Assess the fiscal barriers preventing the integration of health and social services • Implement the changes needed to successfully integrate health and social services
18	• Establish targets for implementing electronic health and prescription drug systems • Promote the use of electronic databases by healthcare professionals • Report on the progress of implementing these electronic systems
19	• Promote models of dementia care that integrate healthcare delivery (e.g. Dementia-plus Care Model) • Integrate social services into dementia care • Promote advance care planning for palliative and end-of-life care
20	• Federal government funding of $450 M to develop more continuing care infrastructure
21	• Examine and update as necessary the staffing, care, and accommodation standards in seniors' residences • Improve access to seniors' housing
22	• Assess and promote models of dementia care for rural and remote communities
23	• Expedite federal government funding for rural and remote communities
24	• Support the Home and Community Care Program by Health Canada's First Nations and Inuit Health Branch
25	• Develop standards of care for acute-care hospitals
26	• Provide dementia care training and professional development for healthcare professionals
27	• Develop a Best Practices Portal for providers of dementia care
28	• Consider the programs and practices listed in the report for inclusion in the Best Practices Portal
29	• Include individuals with dementia in all aspects of the Canadian Partnership to Address Dementia

[a]Adapted from Reference #54.

5. G7 Information Centre. Health Ministerials. G8 Dementia Summit Declaration. Toronto, ON: University of Toronto; 2013. Available from: http://www.g8.utoronto.ca/healthG8/2013-dementia-declaration.html
6. Vogel, L. Canada releases national dementia plan. CMAJ. 2014;186(15):E562.
7. Australian Health Ministers Advisory Council. National framework for action on dementia 2015-2019. Canberra, Australia: Department of Health; 2015.
8. Ministry of Public Health, Cuba. Cuban strategy for Alzheimer's disease and dementia syndromes. Havana, Cuba: Ministry of Public Health; 2013.
9. Ministry of Health, Czech Republic. The national action plan for Alzheimer's disease and other similar diseases for 2016-2019. Prague, Czech Republic: Ministry of Health; 2015.
10. Department of Health, United Kingdom. Living well with dementia: a national dementia strategy. London, UK: Department of Health; 2009.
11. Finnish Ministry of Social Affairs and Health. National memory programme 2012-2020: creating a "memory-friendly" Finland. Helsinki, Finland: Ministry of Social Affairs and Health; 2013.
12. National plan for Alzheimer's and related diseases 2008-2012. France; 2008. Available from: https://www.alz.co.uk/sites/default/files/plans/Alzheimer-Plan-2008-2012-France-ENG.pdf
13. Ministry of Health, Greece. National action plan for dementia—Alzheimer's disease. Athens, Greece: Ministry of Health; 2016.
14. Ministry of Health, Indonesia. National strategy for the management of Alzheimer's and other dementia diseases: towards healthy and productive older persons. Jakarta, Indonesia: Ministry of Health; 2015.
15. Department of Health, Ireland. The Irish national dementia strategy. Dublin, Ireland: Department of Health; 2014.
16. Ministry of Health, State of Israel. The national program for addressing Alzheimer's disease and other types of dementia [Internet]. Jerusalem, State of Israel: Ministry of Health; n.d. Accessed 2017 Aug 25. Available from: https://www.health.gov.il/English/Topics/SeniorHealth/DEMENTIA/Pages/National_program.aspx
17. Di Fiandra T, Canevelli M, Di Pucchio A, *et al*. The Italian dementia national plan. *Ann Ist Super Sanità*. 2015;51(4):261–64.

18. Di Fiandra T. The new Italian national strategy. Rome, Italy: Ministry of Health; 2014. Available from: https://www.alz.co.uk/sites/default/files/plans/italy.pdf
19. Lanzetta MC, Naddeos A. Conference unified. Rome, Italy; 2014. Available from: https://www.alz.co.uk/sites/default/files/plans/italy-english.pdf
20. Health, Labor & Welfare Ministry, Japan. New orange plan on dementia care. Tokyo, Japan: The Ministry; 2015.
21. New dementia strategy to cope with projected rise in cases. *The Japan Times* [Internet]. 2015 Jan 27. Accessed 2017 Aug 23. Available from: https://www.japantimes.co.jp/news/2015/01/27/national/science-health/new-dementia-strategy-to-cope-with-projected-rise-in-cases/#.WZ2h71yvxSY.
22. Hayashi M. Dementia: Japan's experience. Presentation made at the Dementia Awareness Week Conference, 2015 Jun 1, Glasgow, Scotland. Available from: http://daw.dementiascotland.org/wp-content/uploads/2015/06/Mayumi-Hayashi-Japans-Policy.pdf
23. Lee S. Korea's "War on Dementia". Presented at The Changing Face of Dementia, the 26th International Conference of Alzheimer's Disease International, 2011 Mar 26-29, Toronto, Canada. Available from: https://www.alz.co.uk/sites/default/files/plans/Korea-war-on-dementia.pdf
24. Lee S. Dementia strategy Korea. *Int J Geriatr Psychiatry*. 2010;25(9):931–32.
25. Council of Government, Luxembourg. Luxembourg national dementia plan. Luxembourg City, Grand Duchy of Luxembourg; 2013.
26. Parliamentary Secretariat for Rights of Persons with Disability and Active Ageing, Malta. Empowering change: a national strategy on dementia 2015-2023. Valetta, Malta: Government of Malta; 2015.
27. National Institute of Geriatrics, Ministry of Health, Mexico. Action plan: Alzheimer's and other dementias. Mexico City, Mexico; 2014.
28. Deltaplan dementia [website]. Amersfoort, The Netherlands: Deltaplan Dementia; 2017. Available from: https://deltaplan dementie.nl/en
29. Norwegian Ministry of Health and Care Services. Dementia plan 2020. Oslo, Norway: The Ministry; 2016.
30. Department of Health, Social Services, and Public Safety, Northern Ireland. Improving dementia services in Northern Ireland. Belfast, Northern Ireland: The Department; 2011.
31. Department of Health, Puerto Rico. Alzheimer's disease action plan for Puerto Rico 2015-2025. San Juan, Puerto Rico; n.d.
32. Government of Scotland. Scotland's national dementia strategy 2017-2020. Edinborough, Scotland; 2017.
33. Federal Office of Public Health, Swiss Conference of the Cantonal Ministers of Public Health. National dementia strategy 2014-2017. Bern, Switzerland: Federal Office of Public Health; 2017.
34. Ministry of Health and Welfare, Taiwan. Taiwan dementia policy: a framework for prevention and care. Taipei, Taiwan: The Ministry; 2014.
35. Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. National plan to address Alzheimer's disease. Washington, DC: The Department; 2012.
36. Welsh Assembly Government. National dementia vision for Wales. Cardiff, Wales: Government of Wales; 2011.
37. PAMI. Plan estratégico nacional pami para un cerebro saludable, enfermedad de Alzheimer y otras demencias 2016-2019. Buenos Aires, Argentina: PAMI; 2015.
38. Conapam. Plan nacional para la enfermedad de Alzheimer y demencias relacionadas esfuerzos compartidos 2014-2024. San José, Costa Rica: Conapam; 2014.
39. Ministrstvo za Zdravje, Slovenia. Strategija obvladovanja demence v sloveniji do leta 2020. Ljubljana, Republic of Slovenia: The Ministry; 2016.
40. Department of Health, United Kingdom. Equality impact assessment for the national dementia strategy. London, UK: The Department; 2009.
41. Palethorpe AJ. Impact assessment of national dementia strategy. London, UK: Department of Health; 2009.
42. National Institute for Health and Welfare, Finland. Human impact assessment [Internet]. Helsinki, Finland: Ministry of Social Affairs and Health; 2015. Accessed cited 2017 Aug 25. Available from: https://www.thl.fi/en/web/health-promotion/human-impact-assessment
43. Ministry of Health, British Columbia. The provincial dementia action plan for British Columbia. Priorities and Actions for Health System and Service Redesign. Vancouver, BC: The Ministry; 2012.
44. Department of Health & Community Services, Newfoundland and Labrador. Provincial strategy on Alzheimer disease and other dementias. A plan of action. St. John's, Newfoundland: The Department; 2001.
45. Department of Health and Wellness, Nova Scotia. Towards understanding: a dementia strategy for Nova Scotia. Halifax, NS: The Department; 2015.
46. Manitoba Health. Manitoba's framework for Alzheimer's disease and other dementias. Winnipeg, MB; n.d.
47. Alzheimer Society of Prince Edward Island. Provincial dementia strategy [Internet]. Charlottetown, PEI: Alzheimer Society of Canada & PEI; 2016. Accessed cited 2017 Sept 3. Available from: http://www.alzheimer.ca/en/pei/Get-involved/Raise-your-voice/Provincial-Dementia-Strategy
48. Keefe J. New Brunswick government says aging strategy plans coming soon. *Global News* [Internet], 2017 May 3. Accessed 2017 Sept 3. Available from: http://globalnews.ca/news/3424615/new-brunswick-government-says-aging-strategy-plans-coming-soon/
49. Bergman H. The Quebec Alzheimer plan: the never-ending cycle from practice to research to policy and back. Seminar presented by Dept. of Family Medicine at McGill University, 2013 Jan 14, Montreal, Canada. Poster and background information available from: https://www.mcgill.ca/familymed/files/familymed/rd_seminar_bergman_2013-01-14.pdf
50. Graney E. Alberta dementia strategy coming soon, health minister promises. *Edmonton Sun* [Internet], 2017 Jun 5. Accessed 2017 Sept 3. Available from: http://www.edmontonsun.com/2017/06/05/alberta-dementia-strategy-coming-soon-health-minister-promises

51. Provincial Advisory Committee of Older Persons. A strategy for Alzheimer disease and related dementias in Saskatchewan. Regina, SK: The Committee; 2004.
52. Alzheimer Society of Ontario. Ontario achieves a fully funded dementia strategy [news release][Internet]. Toronto, ON: Alzheimer Society of Canada; 2017. Accessed cited 2017 Sept 3. Available from: http://www.alzheimer.ca/en/on/Get-involved/Advocacy/Ontario/Ontario-dementia-strategy
53. Jacklin KM, Walker JD, Shawande M. The emergence of dementia as a health concern among First Nations populations in Alberta, Canada. *Can J Public Health*. 2013;104(1):e39–e44.
54. Standing Senate Committee on Social Affairs, Science and Technology. Dementia in Canada: a national strategy for dementia-friendly communities. Ottawa, ON: The Committee; 2016. Available from: http://alzheimer.ca/sites/default/files/Files/national/Advocacy/SOCI_6thReport_DementiaInCanada-WEB_e.pdf

Correspondence to: Dr. Nathan Herrmann, MD, Division of Geriatric Psychiatry, Sunnybrook Health Sciences Centre, 2075 Bayview Ave., Rm. FG19, Toronto, ON, Canada M4N 3M5
E-mail: nathan.herrmann@sunnybrook.ca