The 3rd

National Dementia Plan

Living well with dementia in the community

Ministry of Health and Welfare

The 3rd National Dementia Plan

Living well with dementia in the community

Ministry of Health and Welfare

The 3rd

National Dementia Plan

Living well with dementia
in the community

Ministry of Health
and Welfare

Table of Contents

I. Background and History

1. Background

Aging Population

In Korea, the older population (aged 65 years or over) is expected to grow from 13.1% in 2015 to 24.3% in 2030, then to 37.4% in 2050. The population of seniors aged 75 years or over is expected to grow even faster; from 5.5% in 2015 to 9.7% in 2030, then to 22.1% in 2050.

Table 1. Changes in the population structure

Age group	2000	2015	2020	2025	2030	2050
Total population (1,000)	47,008	50,617	51,435	51,972	52,160	48,121
Older population (%)						
65 or over	7.2	13.1	15.7	19.9	24.3	37.4
75 - 84	2.0	4.4	5.1	5.8	7.2	14.4
85 or over	0.4	1.1	1.6	2.1	2.5	7.7

*Source: Statistics Korea, Future Population Projection

Dementia epidemic of Korea

In 2014, the number of people with dementia was approximately 612,000 (9.6% of the older population). By 2050, this number is projected to rise to 2,710,000 (15% of the older population).

Table 2. Prevalence of dementia in elderly Koreans

	2010	2013	2014	2015	2020	2024	2030	2050
Population aged 65 years or over (1,000 persons)	5,425	6,138	6,386	6,624	8,084	9,834	12,691	17,991
Population with dementia (1,000 persons)	474	576	612	648	840	1,008	1,272	2,710
Prevalence of dementia (%)	8.7	9.4	9.6	9.8	10.4	10.2	10.0	15.1

*Source: The 2012 Nationwide Survey on Dementia Epidemiology of Korea. Seoul National University Bundang Hospital (2013).

The number of people with dementia (PWD) who received medical treatment over the past 9 years (2006-2014) was estimated to be 676,000 (excluding the deceased). Among them, 631,000 (93.3%) were from the older population (9.9% of the older population).

* The number of people with early onset dementia (onset before 65 years of age) was 44,543, accounting for 6.6% of the population with dementia.

The growth rate of the dementia population will outpace the growth of the older population.

In 10 years, the older population is expected to increase by 54% (6,390,000 in 2014 to 9,830,000 in 2024), while the number of PWD in this age group is expected to increase by 65% (610,000 in 2014 to 1,010,000 in 2024).

Increased use of health care services by PWD

(Medical services) In 2014, 443,000 PWD used medical services (416,000 were over 65 years of age)[1)] and this number is expected to increase by 20% each year. Total annual medical cost (excluding services not covered by the National Health Insurance) was 1.6 trillion KRW (3.6 million KRW per person) in 2014 (National Health Insurance Services, 2015).

* Number of people receiving medical treatment for dementia: 105,253 in 2006 → 442,855 in 2014 (19.7% annual increase)
* Gross national costs of medical treatment for dementia: 189.8 billion KRW in 2006 → 1.6 trillion KRW in 2014 (30.7% annual increase)
* Medical costs per person with dementia (cost shared by PWD): 1.8 million KRW (324,000 KRW) in 2006 → 3.6 million KRW (770,000 KRW) in 2014

(Care services) Among the 435,000 National Long-term Care Insurance (NLTCI) service users, 236,000 (54.3%) were PWD in 2014[2)]. This number is expected to increase by 10% every year. Total annual LTC costs for dementia reached 2.4 trillion KRW (58% of total annual LTC cost) in 2014[3)]. Average annual LTC cost per person was 10.2 million KRW for PWD[4)].

Medical and care service use by PWD is rising as awareness for early diagnosis/consistent management improves and related infrastructures expand.

Medical and care services optimized to the causes and symptoms of dementia are needed.

1) 27,000 were under 65 years of age
2) The number of PWD: 145,611 in 2009 → 235,844 in 2014 (10.1% annual increase)
3) Total LTC costs for PWD: 1.12 trillion KRW in 2009 → 2.41 trillion KRW in 2014 (15.5% annual increase)
4) Annual LTC costs per PWD: 8.1 million KRW in 2009 → 10.2 million KRW in 2014

In 2013, National Social Costs for Dementia (NSCD) was about 11.7 trillion KRW, (approximately 1% of GDP) and is expected to increase to 43.2 trillion KRW (approximately 1.5% of GDP) in 2050.

* Obtained by multiplying annual dementia social costs per person (20.3 million KRW)[5] and total number of PWD (576,176) in 2013

Table 3. Annual National Social Costs of Dementia (NSCD) of Korea (KRW, trillion)

		2013	2020	2030	2040	2050
GDP (C)		1,134.9	1,471.3	1,938.6	2,384.7	2,787.8
NSCD	Actual NSCD (D)	11.7*	15.2	23.1	34.2	43.2
	NSCD to GDP ratio (D/C)	1.0	1.0	1.2	1.4	1.5

*Source: National Assembly Budget Office (2014), Status and Improvement of the Dementia Management.

> Strategies to reduce **social costs as well as social and economical caregiver burdens** for PWD should be developed.

Legal basis of establishing the NDP-3

Based on Article 6 of the Dementia Management Act (DeMA), outcomes and limitations of the Second National Dementia Plan (NDP-2) should be evaluated, and preparations for the Third National Dementia Plan (NDP-3) (in effect from 2016 to 2020) are needed.

2. History

Declaration of 'War against Dementia' and announcement of the First National Dementia Plan (NDP-1) in August, 2008

The National Dementia Early Detection (NDeED) service and Medical Expense Support Program was initiated to encourage early diagnosis of dementia and to delay its progression.

Dementia Counselling Centers (DCC) were installed at all Community Health Centers (CHC) to establish a community-based dementia management system.

5) Including direct medical costs (treatment, medicine cost), direct non-medical costs (nursing fee, etc.), transportation costs, supplementary goods purchasing costs, time costs (patients and caregivers), long-term care costs, and indirect costs (loss of productivity, etc.)

Legislation of the Dementia Management Act (DeMA) in August, 2012 and announcement of the Second National Dementia Plan (NDP-2) in November, 2012

DeMA legitimized the implementation of dementia policies.

Dementia management programs were expanded through establishment of the National Institute of Dementia (NID), Metropolitan/Provincial Dementia Centers (MDC/PDC) and the National Dementia Helpline, and funding of public long-term care hospitals to improve dementia care.

Dementia awareness and public opinions towards dementia were improved through yearly public awareness campaigns such as the Overcome Dementia Day (21st, September) and the National Walkathon for Overcoming Dementia.

Expansion of dementia polices to reduce burden of family caregivers (January, 2014)

The Respite Care Service was installed to provide family caregivers of PWD with a brief repose.

The 5th grade was added to the Long-term Care Approval System to allow people with mild dementia to be eligible for service benefits such as cognitive stimulation and visiting nursing services.

Announcement of 'Daily Life Actions to Cope with Dementia' (June, 2014)

The 3-3-3 rules of Preventing Dementia and Dementia Prevention Exercises were promoted to manage risk factors for dementia through adherence to healthy lifestyles.

Stricter standards such as fire safety regulations of long-term care hospitals and nursing homes improved safety.

II. Evaluation of the 2nd National Dementia Plan (NDP-2)

1. Objectives and strategies of the NDP-2

Strategies	Current Status
1. Early Detection and Prevention of Dementia	
(1) Improvement of the National Dementia Early Detection (NDeED) service	- Support for the NDeED service (screening, diagnosis and differential diagnosis)
	- Support for dementia self-checkups by providing the Check Dementia app.
(2) Improved management of dementia risk factors	- Dissemination of the 3-3-3 rules of Preventing Dementia and Dementia Prevention Exercises
	- Operation of Healthy Centenarian Excercise Classes
2. Tailored Treatment and Protection of Dementia	
(1) Medical treatment support	- Support for medical costs of dementia (i.e; costs for drugs and hospitals)
(2) Expansion of eligibility for LTCI	- Addition of Grade 5 to LTCI service grades
(3) Family caregiver support	- Addition of Respite Care Service
	- Provision of dementia care information
	- Provision of Missing prevention tags for PWD
(4) Designation and operation of Regional Base Hospitals for Dementia	- Reinforcement of dementia care in public long-term care hospitals
3. Expansion of Infrastructures	
(1) Establishment of the Dementia Management Conveyance System	- Establishment/operation of NID and MDC/PDC - Establishment/operation of DCC at CHC
(2) Dementia-related database integration	- Integrative analysis using the Pharmaceutical Health Information System (PHIS), Frail Elderly Support System, and National Health Insurance Database, leading to improved statistics on PWD
(3) Training of health professionals for PWD	- Dementia specialist education programs (doctors, nurses, program managers, care workers, etc.)
(4) Enhancement of dementia research	- Health and Medical Technology R&D on dementia - Social Service R&D on dementia
4. Enhancement of Support for Family Caregivers and Social Awareness on Dementia	
(1) Family caregiver support enhancement	- Installation of the National Dementia Helpline (1899-9988)
(2) Enhancement of awareness and provision of information	- Annual 'Dementia Awareness Day'
	- Annual 'National Walkathon for Overcoming Dementia'
	- Operation of dementia partner program

2. Outcomes and limitations of the NDP-2

Early Detection and Prevention of Dementia

① Enhancement of the National Dementia Early Detection (NDeED) program

- *(Achievements)* Expanded screening for dementia and increased funding for the NDeED program. Easier access to dementia check-ups through development and dissemination of the Check Dementia app., a mobile application for cognitive assessment.

  * During 2014, the proportion of the older population that received screening increased by 15.9%, and funding for the NDeED program increased by 41.6%.

- *(Limitations)* Dementia detection rates in the NDeED program were lower than predicted.[6] Inadequate management of high-risk groups for dementia, including seniors over 75 years of age that are living alone.

Strategies for the NDP-3

DCC centered management of the three major high-risk groups[7] (I-3-(1))

Continue support for early detection of dementia (I-3-(2))

② Enhanced management of risk factors for dementia

- *(Achievements)* Development and dissemination of the 3-3-3 rules of Preventing Dementia and Dementia Prevention Exercises through senior community centers and senior welfare centers (about 3,000 centers and 60,000 seniors participated in 2015). Support for social family development by dispatching lifestyle managers to older adults living alone and pairing them with private enterprises (about 220,000 older adults living alone were included in 2015).

- *(Limitations)* Shortage of services tailored for high-risk groups (hypertension and diabetes) and contents focused on prevention for healthy older adults.

Strategies for the NDP-3

Support management of dementia risk factors (dementia prevention) (I-1-(1))

Develop and disseminate cognitive training and dementia prevention contents for healthy older adults (e.g. 'Dugeun Dugeun brain exercise') (I-1-(3))

Develop the Dementia-Free Index (Defri) and support continued dementia prevention practices in daily life (I-1-(2))

---

6) Among people screened for dementia in 2014, 2.1% were diagnosed with dementia, which was only 1/5 of the national prevalence of 9.6%.

7) The three major high-risk groups of dementia: 1) people with mild cognitive impairment, 2) people who stopped receiving treatment, 3) older adults over 75 years of age or living alone

Enhanced Tailored Treatment and Protection for Dementia

① Support for medical treatments delaying disease progression

- *(Achievements)* Expanded support of medical costs for medication and treatment for low-income groups[8], and implementation of studies for PWD (e.g. cognitive training program model, etc.)[9].
- *(Limitations)* Limited evidence regarding the effectiveness of non-pharmacological therapies and insufficient standardization of these methods.

Strategies for the NDP-3

Support the development and practicalization of non-pharmacological therapies tailored to disease phase and related symptoms (II-1-(5))

② Expansion of eligibility for LTCI

- *(Achievements)* Expansion of eligibility for LTC services to include older adults with mild dementia and difficulties in activities of daily living (ADL) (the number of eligible grades increased from 3 to 5). Addition of cognitive stimulation programs covered by LTCI for people with mild dementia (grade 5).
- *(Limitations)* Shortage of contents for programs (such as cognitive stimulation programs) focused on other grades (Grades 1 to 4) and people not included in grades.

Strategies for the NDP-3

Add cognitive stimulation programs for healthy older adults and people with mild cognitive impairment (I-1-(3))

Implement dementia-specialized services in long-term care facilities to provide dedicated services to PWD (II-2-(2))

③ Expansion of at-home support for family caregivers

- *(Achievements)* Growth in quantity of services by increasing the number of day- and night- care centers.[10]
- *(Limitations)* Difficulties in increasing day- and night- care centers in rural areas underlined necessity of support for at-home dementia care services.

Strategies for the NDP-3

Add diverse at-home LTC services* to support family caregivers (II-2-(4))
* 24-hour short-term Visiting Care Services, integrated care services, etc.

Establish guidelines for safety and protection of PWD to prevent falls and improve residential environments (II-2-(5))

Promote the usage of missing prevention tags for older adults with dementia (II-2-(6))

---

8) 86,714 persons, 8.16 billion KRW in 2012 → 100,016 persons, 11.65 billion KRW in 2014
9) Development of community-based non-admitted mild dementia patient rehabilitation support program model (social service R&D) and public long-term care hospital cognitive stimulation program models, etc.
10) The total number of day- and night- care centers: 1,331 in 2012 → 1,687 in 2014 → 1,829 in June, 2015

④ Designation and operation of regional base hospitals for dementia

- *(Achievements)* Increased support for public long-term care hospitals (77 hospitals, 12,549 beds in January 2015) to delay disease progression and reduce the burden of family caregivers[11].
- *(Limitations)* Absence of additional regional base hospitals for dementia, after the original 7 were designated in 2012. Ineffective management and implementation of community health care programs in public long-term care hospitals, and inadequate community-based treatment and management systems for dementia.

> **Strategies for the NDP-3**
>
> Designate additional regional base hospitals for dementia and install dementia-specialized wards (II-1-(3))
>
> Establish community-based management systems for dementia treatment (Addition of National Health Insurance fee for counselling of family caregivers of dementia patients) (II-1-(2))

Expansion of Infrastructures

① Establishment of the Dementia Management Conveyance System (DMCS)

- *(Achievements)* Establishment of the Dementia Management Conveyance System (DMCS) by linking the MHW, NID, MDC/PDCs (13 centers built in 2015, and additional 2 centers in 2016), CHCs, and DCCs together.
- *(Limitations)* Ineffective implementation of various policies due to insufficient number of dedicated staff and workspace.

> **Strategies for the NDP-3**
>
> Enhance dementia management capability through assignment of dedicated staff and independent workspaces for the DCCs, and re-evaluation of associated duties.

② Integration of dementia-related databases

- *(Achievements)* Utilization of diverse databases for implementation of various policies, such as registration of PWD from the CHC through the PHIS, registration of older adults at high-risk of wandering through the Frail Elderly Support System, and statistical analysis of medical services used by PWD through the National Health Insurance Services (NHIS) database.
- *(Limitations)* Fragmented and sporadic establishment and operation of associated databases. Integration of data is recommended to obtain more meaningful results.

> **Strategies for the NDP-3**
>
> Publish the Dementia Research and Statistics Annual Report biennially by integrating the NHIS, the community-centered health & welfare information system, the Frail Elderly Support System, and associated results from private agencies (IV-1-(1)).

11) Number of associated public long-term care hospitals: 7 hospitals in 2012, 31 in 2013, and 45 in 2014

③ Training of health professionals for PWD

- *(Achievements)* Establishment of the Dementia Education Program Graduate Database to manage professional graduates of the education program[12].
- *(Limitations)* Inadequate management of educational programs and course applicants.

Strategies for the NDP-3

Improve profession-specific dementia-specialized education courses and enhance the Dementia Education Program Graduate Database (II-1-(6))

④ Strengthening research for PWD

- *(Achievements)* Support for various research projects (60 billion KRW annually between 2014 and 2018)*.

  * Ongoing projects: The Dementia Prevention Brain Map Project (Ministry of Science, ICT and Future Planning) and K-ADNI[13] (MHW), studies for the prevention/diagnosis/treatment of dementia, and standardization studies for the integration and analysis of various data (brain images, biomarkers, etc.), etc.

- *(Limitations)* Insufficient progress due to the absence of a coordination center.
- More effective collection and use of data will be essential for advancing our knowledge of dementia care and treatment.

Strategies for the NDP-3

Continue support for dementia research by publishing the Dementia Research and Statistics Annual Report (IV-1-(1),(2),(3))

Expansion of Support for Family Caregivers and Increased Social Awareness on Dementia

① Strengthening support for family caregivers

- *(Achievements)* Improved accessibility to dementia-related information, and management and aid for family self-help groups through installation of the National Dementia Helpline (1899-9988) in 2013[14][15].
- *(Limitations)* Substantive relief of socioeconomic burdens of family caregivers is required to reduce care burden to a realistic level.

Strategies for the NDP-3

Diversify in-home care services (introduction of 24-hour Visiting Care Service) (II-2-(4))

Provide tailored counselling services by the National Dementia Helpline, and enhance its counselling capacity (III-1-(3))

Expand socioeconomic support programs to relieve family caregiver burden

12) Addition of educational courses for care workers (9,552) and program managers (4,480) following implementation of Grade 5 of LTCI in 2014
13) K-ADNI: Korea Alzheimer's Disease Neuroimaging Initiative
14) The number of calls in 2014 = 17,148 (information-related: 15,251, dementia care-related: 1,897)
15) The number of participants in family education programs and self-help groups: 1,200 family caregivers

② Enhancement of public awareness through provision of information and improved public relations

- *(Achievements)* Improved awareness through national campaigns and special events, such as the Dementia Awareness Day (21st, September), the National Walkathon for Overcoming Dementia, the Dementia Prevention Silver Chorus Contest, and recruitment of Dementia Partners (110,000 recruited from January to September 2015).
- *(Limitations)* The use of irregular events to improve awareness.

Strategies for the NDP-3

Improve awareness by providing dementia education to colleges and the general public (I-2-(1))

Recruit Dementia Partners and implement Dementia-friendly Communities (I-2-(2),(3))

Support activities and campaigns to improve awareness (I-2-(4))

Revise erroneous and negative legislation and social expressions of dementia (I-2-(5))

3. General review of the NDP-2

Accomplishments of the NDP-2 (2012-2015)

- Legitimization of various dementia management policies through enactment of the Dementia Management Act (DeMA), and establishment of the Dementia Management Conveyance System (DMCS).
- Expansion of care services such as dementia prevention, early diagnosis and patient care, and provision of family support infrastructures[16].

Shortcomings and future recommendations

- User-centered policies are needed to reduce burdens of PWD and their families on a realistic scale.
- Further modifications to incorporate community-based treatment, management needs and tailored care services for PWD, and protection of PWD's rights.

16) Establishment of the DMCS, which links the MHW, NID (2012), MDCs/PDCs (2013), and DCCs. Development of the 3-3-3 rules of Preventing Dementia and Dementia Prevention Exercises (2014). Support programs to support early screening and medical costs (2010). Addition of Grade 5 to the LTCI (2014).

III. Overview on the 3rd National Dementia Plan (NDP-3)

1. Development of the NDP-3

Preparations through the pilot project (October-December, 2014) and main research project (May-November, 2015) to **establish the Third National Dementia Plan (NDP-3)**

- Thirty-eight professionals[17] and stakeholders were organized into four subcommittees (i.e. ① Prevention and awareness enhancement, ② Patient care, ③ Family support, ④ Research and statistics) and participated in designing the NDP-3.

Meetings with national experts (June, 2015) and local government officials (July, 2015).

Inter-departmental discussions within the Government (September, 2015) and Dementia-related NGOs and Professionals Hearing (October, 2015)

Announcement of the NDP-3 (16 December, 2015)

2. Principles of the NDP-3

Establishment of a user-based dementia management system with wider coverage.

- Consideration of the 'Care Pathway'[18] of PWD

Consideration of past projects that were focused mainly on care (long-term care) and welfare services for PWD

- A tailored treatment and management system and policies balanced between welfare and health care are needed.

Evidence-based planning and target population selection, along with increased quantification of outcomes to promote maximal effectiveness.

17) Including Professor Kim Kiwoong, Department of Psychiatry, Seoul National University College of Medicine and Director of the National Institute of Dementia

18) Patient support following the Care Pathway (e.g. the general public → older adults → high-risk groups [older adults living alone or people with cognitive impairment] → mild/moderate dementia → severe dementia)

3. Framework of the NDP-3

The basic framework was centered around the 'Care Pathway', with considerations for the OECD "Key Objectives of Dementia Policy" announced in November 2014.

The Key Objectives of Dementia Policy, OECD

The OECD Directorate for Employment, Labor, and Social Affairs presented a report titled 'Addressing Dementia: The OECD Response' (March, 2015).

The OECD suggested 'The Key Objectives of Dementia Policy', that are based on a user-centered approach, and are focused on improving the lives of PWD and their families[19].

Includes four main aims: ① Community-based prevention and management ② Convenient and safe diagnosis, treatment, and care ③ Reduction of care burden for family caregivers ④ Support through research, statistics and technology.

- 4 main aims, 10 objectives and 38 projects

Figure 1. Framework of the NDP-3

OECD Objectives / Target Users	KEY01 The risk of developing dementia is minimized	KEY02 Dementia is diagnosed quickly once someone becomes concerned about symptoms	KEY03 Communities are safer for and more accepting of people with dementia	KEY04 Those who care for friends and relatives with dementia are supported	KEY05 People with dementia live in safe and appropriate environments	KEY06 People with dementia have access to safe and high quality long-term care services	KEY07 Health services recognize and effectively manage people with dementia	KEY08 People with dementia die with dignity in the place of their choosing	KEY09 Care is co-ordinated, proactive and delivered closer to home	KEY10 The potential of technology to support dementia care is realized
Non-demented	①	①	①						③	④
Mild to moderate		①	①	②	②	②	②		③	④
Severe			①	②	②	②	②		③	④
End-of-life			①	②	②	②	②	②	③	④

Main Aims
① Community-based prevention and management
② Convenient and safe diagnosis, treatment, and care
③ Reduction of care burden for family caregivers
④ Support through research, statistics & technology

19) Organization for Economic Cooperation and Development. Addressing Dementia: The OECD Response. 2015.

4. Vision, missions and objectives of the NDP-3

Vision	Building a society where people with dementia (PWD) and their families can live comfortably and safely		
Missions	· Community-based and severity-based dementia treatment and care · Establishment of a support system that protects patients and their rights, and reduces family caregiver burden		
Objectives and Projects	**Community-based prevention and management** (general public → older adults → high–risk groups)	▪ Dementia prevention support for all citizens (early management of risk factors, development and dissemination of Defri, development and expansion of cognitive training programs) ▪ Improvement of dementia awareness and creation of a dementia-friendly environment (via the Dementia Partners Program, the Dementia-Friendly Communities Initiative, the Dementia Awareness Day, etc.) ▪ Management of the three major dementia high-risk groups (mild cognitive impairment, patients who have stopped treatment and seniors over 75 years of age that are living alone) and support for early diagnosis of dementia	3 Objectives 11 Projects
	Convenient and safe diagnosis, treatment, and care (mild → moderate → severe → EOL)	▪ Treatment support (Expansion of NHI benefits to cover diagnostic tests used to diagnose dementia, introduction of the Dementia Family Counselling Fee to the NHI, installation of dementia-specialized wards at regional base hospitals for dementia) ▪ Care for mild dementia (Improvement of the benefits of Grade 5 of NLTCI, development and dissemination of the Home Safety Guidelines for PWD, support for missing prevention of PWD) ▪ Care for severe dementia (Introduction of the 24-hour short-term Visiting Care Service, provision of specialized dementia care in nursing homes, etc) ▪ EOL care (Consideration of introducing a Public Guardianship support for low-income and/or living alone PWD)	3 Objectives 15 Projects
	Reduction of care burden for family caregivers	▪ Support for family members of PWD through counselling/education/self-help groups ▪ Support for psychological evaluation and counselling of family members of PWD and increased benefits for leisure activities of family caregivers ▪ Increased tax benefits and improved promotion of employment policies to support family caregivers	3 Objectives 8 Projects
	Support through research, statistics, and technology	▪ Enhance management through research and statistics (by publication of the Dementia Research and Statistics Annual Report, etc.) ▪ Development of evidence-based policies on dementia ▪ Development and commercialization of management and care technologies for dementia	1 Objectives 4 Projects

IV. Key Tasks of the 3rd National Dementia Plan (NDP-3)

1. Community-based prevention and management

Main Objectives

■ **Development and dissemination of Defri (Dementia-Free Index) (2016-)**

An index (application) quantitatively measuring adherence to the 3-3-3 rules of Preventing Dementia, based on a formula that incorporates parameters of basic health (gender, age, education level, lifestyle, diseases), cognition levels and quantitative measurements of adherence to behaviors known to prevent dementia (smoking and drinking, exercise, diet, constant social interactions and participation in cognitive training programs).

Firmer adherence results in increased scores, reflecting real-time current risk.

■ **Expansion of the Dementia Partners Program and support for their activities (2015-)**

Increased social support for PWD and their families through education and public awareness campaigns and participation in various volunteering activities by members of the Dementia Partners program (Partners).

Recruitment goals: 100,000 (2015) → 300,000 (2018)
→ 500,000 partners (2020)

■ **The Dementia-friendly Communities Initiative (2017-)**

An initiative to support social activities of PWD by educating service providers at local facilities and institutions (police stations, banks, social welfare facilities, public transportation, religious facilities, clinics, etc.) about proper techniques to assist PWD, and to urge them to take part in the Dementia Partners Program.

Goal : 3 communities (2017, pilot project) → 17 communities (2018, 1 per metropolitan area) → 51 communities (2020, 3 per metropolitan area)

■ **Intensive management of the three major dementia high-risk groups (2016-)**

Continuous management through the DCC by regular correspondence providing information on the 3-3-3 rules of Preventing Dementia, Dementia Prevention Exercises, cognitive training programs, and newsletters.

People with mild cognitive impairment (106,000), people who stopped treatment (70,000), and older adults over 75 or living alone (350,000).

Support for dementia prevention in daily life (target: all citizens)

A glimpse of expected changes

Mr. A registered at a community health center (CHC) for hypertension and diabetes. Afterwards, he was advised at the CHC that hypertension and diabetes can increase the risk of dementia, and that he should try to prevent it. He also received helpful information concerning the 3-3-3 rules of Preventing Dementia and Dementia Prevention Exercises, the NDeED service, and local dementia prevention programs.

He tried his best to follow the guidelines, and to check his progress, he installed the Check Dementia app. on his smart phone. Now Mr. A can review his diet, exercise/smoking/drinking habits, and manage his lifestyle by checking his Dementia-Free Index (Defri) score every week.

Everyday, Mr. A does the Dementia Prevention Exercises that he learned at the Healthy Centenarian Excercise Class at the senior center, and participates in cognitive training programs at the senior welfare center. His Defri scores are increasing, and so is his confidence.

① Support for dementia prevention (management of risk factors[20])

- Expand publicity to improve awareness and practice of the 3-3-3 rules of Preventing Dementia and Practice Codes by Life Cycle (2015-).
- Improve the Dementia Prevention Exercises to encourage its practice among healthy older adults (2016-)*.
  - * Development of the 'Energetic version' of the Dementia Prevention Exercises (2015): Addition of livelier music and faster motions to increase interest in healthy older adults
  - * Dissemination of the preventive exercises through the Healthy Centenarian Excercise Class[21], CHCs, senior welfare centers, parks, etc. (2016-)
- Development (2015) and promotion (2016) of healthy brain exercises for long-term care facilities to support brain health and residual functions.
- Support self-management of high-risk patients (obesity, hypertension and diabetes) by utilizing the Management business of hypertension and diabetes registration system and Healthcare management business of patients with chronic disease, etc.

② Development and dissemination of Defri (Dementia-Free Index) (2016-)

- Disseminate the Defri online to promote self-management of healthy and dementia preventive lifestyles (2017-).
  - * The Dementia-Free Index: An index (application) quantitatively measuring adherence to dementia prevention guidelines, based on a formula that incorporates parameters of basic health (gender, age, education level, lifestyle, diseases), cognition level and quantitative measurements of adherence to dementia preventive behaviors (smoking and drinking, exercise, diet, constant social communication and participation in cognitive training programs)
  - * Firmer adherence results in increased scores, reflecting real-time current risk.

---

20) Dementia risk factors: Drinking, smoking, lack of exercise, traumatic brain injury, inadequate social communication, etc.

21) Goals of the Healthy Centenarian Excercise Class: 230,088 classes/3,748 locations (2015) → 255,744 classes/3,990 locations (2016) → 281,376 classes/4,300 locations (2020)

③ Dissemination of cognitive training programs and dementia prevention contents focused on healthy older adults

- Development and dissemination of additional contents of the cognitive training program, the 'Dugeun-dugeun Brain Fitness' (2018-).

  * Goals: 1 volume per year up to a total of 4 volumes until 2018

- Promotion of the program through daily newspapers, the MHW, NID, Dementia Information 365 website, CHC newsletters, etc. (2016-).

Improvement of dementia awareness and creation of a dementia-friendly environment (target: all citizens)

A glimpse of expected changes

B, a middle school student, realized that her grandmother was showing signs of dementia, after learning about it in health class.

By watching a free online lecture on dementia with her parents, she was able to understand the symptoms more fully. Afterwards, her parents took her grandmother to a hospital for a dementia work-up. The doctor complimented her parents on bringing her to the hospital so early, as she was still in the very early stages of the disease, and recommended active management to delay disease progress.

Friends of B's grandmother took the Dementia Partners' course to learn about dementia. Currently, they encourage B's grandmother to participate in various activities, and take her out frequently.

① Public education on dementia and improvement of dementia awareness

- Widespread dementia education for students, parents, and teachers by including courses in elementary and middle school curriculums[22], and holding related field trips, and volunteer programs.

  * The number of 'Leading Schools for Overcoming Dementia'[23], which offer dementia-related courses, is growing (2015-).

- Expand advanced courses on dementia in colleges, that combine theoretical earning and actual practice.

  * The number of 'Leading Colleges for Overcoming Dementia[24]', which offer dementia-related courses, is growing (2015-).

22) The following courses will include dementia-related topics by 2018: (Health) Health promotion and disease prevention, (Technology and Home Economics) Difficulties of families and older adults in an aging society, (Social Studies) Current issues of the Korean society, such as ageing, (Ethics) Problems of an aging society and respect for older adults

23) Current list of Leading Schools for Overcoming Dementia: the National High School of Traditional Korean Arts, Ilsung Girls Middle and High School, Bukil Girls Academy, HanSaem High School, etc. in 2015

24) Current list of Leading universities for overcoming dementia: the Seoul National University College of Medicine, Chonnam National University Medical School, Kangnam University, Kyungpook Naitonal University, Dong-A University College of Natural Resources and Life Science, Gachon University, etc. in 2015

- Provide advanced online dementia lectures, to educate the public about dementia, and satisfy the public's needs for higher level information (2017-).
  * Provision of online public lectures by the NID website[25] or SNS and integration with other public dementia-related lectures at various institutions (online open lectures at the Seoul National University, dementia lectures at the Kangnam University, online lectures in each cyber
  * Goal of online lectures: 10,000 viewers in 2018 → 50,000 viewers in 2019 → 100,000 viewers in 2020
- Enhance understanding of dementia by utilizing workplace education, in-company broadcasting, etc. (2016-).

② Recruitment of 500,000 Dementia Partners

- Support for PWD and their families through education and increasing public awareness, and participation in volunteering programs (2015-).
  * Recruitment goals: 100,000 in 2015 → 300,000 in 2018 → 500,000 partners in 2020
- Recruitment, education, support and continued management of partners through the Dementia Partners website[26] (2015-).

③ The Dementia-Friendly Communities Initiative

- An initiative to support social activities of PWD by educating service providers at local facilities and institutions (police stations, banks, social welfare facilities, public transportation, religious facilities, clinics, etc.) about proper techniques to assist PWD, and to urge them to take part in the Dementia Partners Program.
  * Certified communities will receive awards and certificates from the Minister of Health and Welfare and provincial governors.
  * Goal: 3 communities (2017, pilot project) → 17 communities (2018, 1 per metropolitan area) → 51 communities (2020, 3 per metropolitan area)

④ Continued support for community-based dementia awareness campaigns

- Strengthen relationships with community-based organizations, such as schools, hospitals, senior welfare centers, and etc. through the 'Dementia Awareness Day (21st of September)' (2016).
- Continue diverse annual dementia campaigns such as the National Walkathon for Overcoming Dementia (in May) and the Dementia Management Workshop (in November) to enhance dementia awareness.

25) The web-site of NID: www.nid.or.kr
26) The web-site of the Dementia Partners: http://partner.nid.or.kr/main/main.aspx

⑤ Revision of legislative and social terminology with negative connotations to dementia

- Amend inaccurate or inappropriate legislative and social terminology associated with dementia (2016).
  * *(Example)* The expression "Dementia Paralytica" in 1) Article 116.1.2. of the Enforcement Decree of the Occupational Safety and Health Act (prohibition of and restriction on work of sick persons) and 2) Article 24 of the Laboratory Safety Management Rules of National Research Institute of Cultural Heritage (prohibition of research activities).
- Development of reasonable regulations for restricting driving and working of PWD, that are based on disease severity and physical and cognitive function (2018).
  * *(Example)* Development (2016) and standardization (2017) of cognitive function tests for older drivers (R&D cost of the Road Traffic Authority, 300 million KRW).

Management of the three major dementia high-risk groups and expansion of support for the early diagnosis of dementia (target: older adults and dementia high-risk groups)

A glimpse of expected changes

Mrs. C's husband was diagnosed with mild cognitive impairment 3 years ago. He was afraid that it might progress to dementia, but did not receive any further management and spent his days at home.

One day, Mrs. C received a letter about DCC support programs delaying progression of mild cognitive impairment to dementia. Her husband went to the DCC, and was advised of lifestyle habits, exercises, and cognitive stimulation programs that are protective against dementia. He is currently receiving dementia screening tests every 6 months.

① Dementia Counselling Center (DCC) based management of the three major dementia high-risk groups

- Periodically distribute information pertaining to dementia prevention, such as the 3-3-3 rules of Preventing Dementia, Dementia Prevention Exercises, cognitive training programs, and newsletters, etc. to people with mild cognitive impairment (MCI)[27], and manage them continuously through the DCC.
  * The DCC is implementing outreaching services for people with MCI (180,000 in 2014).
- Contact patients who stopped treatment (69,848 people[28]) by mail or medicaid case managers, and connect them to the DCC to receive support for continued treatment.
- For older adults over 75 years of age and living alone, provide outreaching services (the NDeED of DCC The DCC[29]) and community care services (the Support Center for the Elderly Living Alone[30]).

---

27) People with MCI in 2014: 105,598

28) The number of people who had stopped receiving dementia treatment: 56,717 (NHI) and 13,131 (Medicaid)

29) The DCC provided outreach NDeED service to 14,346 seniors 75 year of age and older and living alone in 2014, and connected them to visiting nursing services for continued management.

30) 8,000 life managers were dispatched by the Support Center for the Elderly Living Alone to check-up on 220,000 older adults living alone once a week.

② Consistent support for the early diagnosis of dementia

- *(National Health Checkup)* Revise and improve eligibility requirements[31] and instruments used for cognitive screening (change the currently used Korean Dementia Screening Questionnaire [KDSQ] to the Subjective Memory Complaints Questionnaire [SMCQ]) (2016).
  * As the KDSQ is caregiver based, its validity is not high in screening situations, and thus plans to change it to the SMCQ, which is a brief, reliable and valid self-questionnaire for evaluating cognition of older adults, were confirmed at the 'The Committee for Test Standardization'. Implementation will take place after further discussion at 'the Committee of National Health Checkup' (2016).
  * Promote the NDeED service through health screening test results.
- *(Community Health Center)* Support costs for medical work-ups[32] to high-risk groups following dementia screening.

③ Strengthen the capability of the Dementia Counselling Centers

- Stepwise increase in dedicated staff, proportional to the number of local older adults, the number of local PWD, and workload.

Table 4. Average number of dedicated staff for dementia counselling per the CHC by region, 2015

Seoul	Incheon	Ulsan	Daegu	Daejeon	Gyeonggi	Chungnam	Jeonbuk	Gyeongbuk	Busan	Gangwon	Gyeongnam	Gwangju	Chungbuk	Jeonnam	Jeju	Sejong	Total	Total (excluding Seoul and Incheon)
11	6.4	3.2	3.1	2.2	1.8	1.8	1.6	1.4	1.4	1.2	1.2	1	0.7	0.4	0.2	0	2.56	1.43

- Coordinate and connect community-based services (such as medical treatment, welfare, and long-term care, etc.) through the Regional Dementia Council.
  * Manage high-risk groups, people with cognitive impairment, and people with mild dementia through the DCC, and gradually connect them to LTC services depending on disease progression.

31) Change eligibility requirements to: all older adults (aged 66/70/74) → seniors over 70 years of age may apply for screening every 2 years

32) (Eligibility) Persons with household income lower than 100% of the national average (75,648 persons in 2014) (Contents) 80,000 KRW for evaluations at clinics, up to 130,000 KRW for evaluations at general hospitals.

2. Convenient and safe diagnosis, treatment, and care

Main Objectives

- **Expansion of National Health Insurance (NHI) benefits to cover diagnostic tests used to diagnose dementia (2016-)**

  Expand NHI benefits to cover non-insured tests for dementia (such as the following Neurocognitive function tests: Consortium to Establish the Registry for Alzheimer's Disease (CERAD-K), Seoul Neuropsychological Screening Battery (SNSB)).

  Annual budget: approximately 11.8 billion KRW

- **Introduction of the Family Caregiver Counselling Fee to NHI (2017-)**

  Support constant treatment and management of PWD through introduction of the Family Caregiver Counselling Fee to the National Health Insurance.

- **Installation of specialized dementia wards at regional base hospitals for dementia**

  Model development (2016) and pilot project implementation (2017) for operating regional base hospitals for dementia (dementia-specialized wards) to effectively treat and manage behavioral and psychological symptoms of dementia (BPSD), and other comorbidities and complications.

  Revision of the National Health Insurance fee and establishment of a monitoring system (2018-).

- **Introduction of a 24-hour short-term Visiting Care Service**

  Provision of a 24-hour short-term Visiting Care Service (up to 6 days/year) for severe PWD (Grade 1 and 2) to enable family caregivers a period of respite.

  Model development (first half of 2016), pilot program (second half of 2016), implementation (2017-).

  Eligibility: LTC grade 1 & 2 beneficiaries (Grade 1: 13,000 / Grade 2: 25,000)

- **Provide dementia-specialized institutional care (second half of 2016)**

  Provision of a tailored environment and professional care workers for PWD.

- **Consideration of introducing a Public Guardianship support program for low-income and/or living alone people with dementia (PWD)**

  Establishment of a legal basis under the Dementia Management Act (DeMA) (2016).

  Development & pilot project (second half of 2016), implementation (2017).

Establishment of a community-based treatment and management system for dementia (target: mild/moderate dementia)

A glimpse of expected changes

Mr. D's father had been diagnosed with dementia, and Mr. D had been looking after him, at home, using visiting care services. Recently, his father started showing violent behavior and wandering symptoms, so it was no longer possible to keep him at home. Through the National Dementia Helpline (1899-9988), he learned about regional base hospitals for PWD, with tailored ward environments, and specially educated doctors, nurses, and care workers. His father was admitted to one such facility, and through constant pharmacological treatment, the problematic symptoms improved, and he was able to return home. Afterwards, the hospital recommended participating in cognitive stimulation programs designed to slow disease progression. Through constant participation, he continued to improve.

① Expansion of National Health Insurance (NHI) benefits to cover diagnostic tests used to diagnose dementia (2016-)

- Expand NHI benefits to cover non-insured tests for dementia (such as the following Neurocognitive function tests: Consortium to Establish the Registry for Alzheimer's Disease (CERAD-K), Seoul Neuropsychological Screening Battery (SNSB)).

② Introduction of the Family Caregiver Counselling Fee to NHI (2017-) for psychiatrists and neurologists to support continued management, and provide programs to support medical costs of PWD

* Unlike other diseases, PWD need to be accompanied by family members, and lengthy education about coping skills, medication and care skills, is needed.

* Psychiatrists and neurologists receive professional training regarding dementia (neurocognitive dysfunction, cerebrovascular diseases, neuropsychological assessment, occupational therapy, etc.) during their residency.

- Support for pharmacological costs after diagnosis and registration at CHCs.

* Eligibility: persons with lower household incomes (below 100% of the national average), 102,000 potential beneficiaries in 2014.

* Provided support: 30,000 KRW per month for medications and hospital fees.

③ Designation of regional base hospitals for dementia and installation of dementia-specialized wards

- For effective treatment and management of BPSD[33], comorbidities, and complications.
- Model development (2016) and pilot project implementation (2017).

33) Behavior and psychological symptoms of dementia (BPSD) include symptoms other than cognitive impairment, such as depression, anxiety, wandering, violence, delusions, hallucination, etc.

- Provision of a dementia-specialized ward insurance fee and establishment of a monitoring system (2018-).

  * Addition of a compensation system for BPSD treatment and cognitive training programs

④ Standardization and dissemination of dementia diagnosis and treatment guidelines, categorized by dementia type, to enhance diagnosis and treatment

- Development based on meta-analysis and systematic reviews of relevant national and international studies, and validation by relevant academic societies.

⑤ Development and dissemination of non-pharmacological interventions for people with dementia (PWD)

- Development of non-pharmacological interventions designed to 1) prevent dementia in cognitively normal older adults and those with mild cognitive impairment, 2) delay progression in people with mild to moderate dementia, and 3) improve symptoms in people with severe dementia (2016-).

Enhancement of expertise of dementia-related health professionals

① Improvement of educational courses for dementia-related personnel

- Develop and provide dementia-specialized courses for dementia-related health and social care personnel (doctors, nurses, occupational therapists, social workers, care workers, etc).
- Manage personal education histories through enhancement of the Dementia Education Program Graduate Database (2015-) to improve capability of related personnel.

  * Dementia-related personnel (150 doctors, 350 nurses, 150 dementia counselling experts at health centers, 4,855 program managers for the patients with Grade 5 dementia, and 11,250 care workers) completed dementia-specialized educational courses in 2015.

Support for at-home and institutional care for people with dementia (targets: mild/moderate/severe dementia)

A glimpse of expected changes

Mrs. E was living with her mother who was suffering from severe dementia. One day, Mrs. E had to receive an emergency operation, so a 24-hour visiting care worker came home and took care of her mother for six days.

As Mrs. E's condition got worse, she had to send her mother to a nursing home. As her wandering and violent behavior got worse, the staff tied her hands together to control her behavior. Mrs. E was upset and called the National Dementia Helpline (1899-9988) for advice, and they introduced her to a care facility providing tailored services for PWD. There, care plans and programs were planned according to her mother's condition, and the care workers were well informed and familiar with symptoms of dementia and how to manage them. Mrs. E felt relieved seeing her mother being comfortable at the care facility.

① Improved benefits of the 5th grade of the National Long-term Care Insurance (NLTCI)

- Improved eligibility assessments for the National Long-term Care Insurance (NLTCI) system through the use of hospital records of dementia treatment and medication, evaluation of the effectiveness of cognitive stimulation programs, and consideration of programs to support housework.

② Provision of dementia-specialized institutional care at care facilities

- Provision of dementia-friendly environments to provide dementia-specialized institutional care in long-term care facilities and day- and night- care centers.
- Creation of a comfortable environment for PWD, and provide tailored physical and cognitive stimulation programs.

  * Assignment of professional care workers: (long-term care facilities) 1 care worker per 2 PWD, (day-and night-care centers) 1 care worker per 4 PWD

③ Development and dissemination of a LTC service manual optimized for people with dementia

- Develop education manuals and increase education to enhance the service of dementia-related workers and facilities (2018-).

④ Diversification of at-home care services for people with dementia

- Provision of a 24-hour short-term Visiting Care Service (up to 6 days/year) for severe PWD (Grade 1 and 2) to enable family caregivers a period of respite.
- Model development (first half of 2016), pilot program (second half of 2016), implementation (2017-).

  * Eligibility: LTC grade 1 & 2 beneficiaries (Grade 1: 13,000 / Grade 2: 25,000)

  * Development of insurance fees, adjustment of patient cost-sharing, and budget estimation needed.

- Provide medication management and family education through expansion of integrated at-home care and nursing services in the LTC, for more effective long-term care.

⑤ Development of 'Home Safety Guidelines' to reduce the risk of falls and improve living environments of PWD[34] (2017-)

⑥ Publicize services for missing prevention, such as missing prevention tags for PWD, Locator Devices with GPS, and improve cooperation among related agencies, such as the police and senior welfare centers

- ID tag issuance goal: 10,000 (2015) → 15,000 (2017) → 20,000 cases (2019)

---

34) Removal of obstacles at home, installation of handles in bathrooms and on walls, more convenient and safe electric heating appliances, etc.

Establishment of a support system for protecting the rights and preventing abuse towards people with severe dementia (targets: severe dementia)

A glimpse of expected changes

In Mr. F's village, a man with dementia, who was also a recipient of the National Basic Livelihood Security Act, was living alone. Mr. F helped the older adult with many things, but was barred from aiding him in economical matters or medical decisions by law. One day, the man's son came, beat and threatened him, and took his bankbook and password.

Mr. F called the National Dementia Helpline (1899-9988), and was advised that if he were legally designated as his guardian, he could handle his assets and make medical decisions on his behalf. In addition, Mr. F was informed of an institution that could support expenses and procedures related to Public Guardianship.

Now Mr. F legally represents the man, and is monitored regularly by the court and institution.

① Consideration of introducing a Public Guardianship support program for low-income and/or people living alone with dementia

- Establish a legal basis for introducing a Public Guardianship support program based on the Dementia Management Act (DeMA) for low-income and/or people living alone with dementia (2016).
- Consider support programs for guardian appointment, activity and monitoring (2016-).
- Increase promotion and education of the public guardianship program by the NID, MDC/PDC, the National Dementia Helpline (1899-9988), and the Elder Protection Agency, etc. (2016-).

② Reduction of inappropriate care activities (restraints, seclusion, etc) due to difficulties in patient care

- Reinforce human rights education and develop and disseminate related manuals for care workers (2015-).
- Establish the Elder Abuse and Neglect Committee within care facilities, with the authority to monitor and investigate elder abuse cases (2015-).

  * The Elder Abuse and Neglect Committee will include policemen, judicial officers, civil servants and professionals at MDC/PDC, and local senior protection facilities, etc.

③ Enhance public support for establishing the 'Comprehensive End-of-life Care System for people with dementia'

- Develop (2018) and expand (2019) educational courses related to end-of-life care.

  * Organize a task force for establishing the 5-year Comprehensive End-of-life Care Plan to support family caregivers with the terminal patients including severe dementia and noncancerous patients (Launch the plan as soon as the 'Hospice Palliative Care Legislation' proposal is approved at the National Assembly).

3. Reduction of care burden for family caregivers

Main Objectives

- **Support online psychological self-screening and counselling for family caregivers (2017-)**

  Addition of an online psychological self-screening instrument to the NID's website.

  Offer counselling and case management through community mental health centers according to the screening results.

- **24-hour counselling and outbound case management for family caregivers through the National Dementia Helpline (1899-9988) (2017-)**

  Goal: 30,000 calls in 2015 → 86,000 calls in 2018 → 120,000 calls in 2020

- **Provision of travel vouchers and leisure services for family caregivers**

  As a part of the Korean Community Social Investment Services (KCSIS), develop (2016) and expand (2017) a project providing travel vouchers for PWD and their families.

Support for counselling/education/self-help groups of family caregivers

A glimpse of expected changes

Mrs. G called the National Dementia Helpline (1899-9988) for advice, as she was unsure of how to care for her father who had been diagnosed with dementia. She was advised to take the Family Dementia Education Course. After checking the course schedule, she decided to attend offline classes after work, and make up for the classes she missed through online classes. She could also call the National Dementia Helpline whenever she had questions.

After completing the course, she joined a self-help group with others from the same course. When her father was asleep, she shared her experiences with others by reading and writing posts on a self-help website.

Once she knew how to look after her father, caring for him was less difficult. Furthermore, as she got better, her father seemed to be less worried.

① Implementation of on-offline education programs for family caregivers

- Based on verified programs, develop educational curriculums[35] to reduce the burden of family caregivers and improve caring skills for PWD (NID), and train instructors how to use the curriculums and courses (MDC/PDC) (2016).

35) The NID will develop curriculums tailored to caregiver characteristics and type and severity of dementia based on qualified programs, such as REACH II, Savvy Caregiver program, and ESP in U.S.A.

- For family caregivers of PWD, establish a system on the NID's website for sharing on-offline curriculums, posting course schedules, course registration, and satisfaction surveys (2016-).
- Implement (2015) and gradually expand (2016) a pilot project[36] for family counselling service by the Mental Health Centers (MHC) and LTC centers of the NHIS.
- Provide family education and counselling by dementia-related institutions and organizations.

  * Currently, the Family Caregiver Association (2007-2011) and the Korean Dementia Association (2013-2015) provide family education.

② Promotion of on-offline self-help groups for family caregivers

- Support self-help groups of families that completed dementia education courses through websites (NID, MDC/PDC), mobile applications (called the Companion*), and phone calls (the National Dementia Helpline (1899-9988)).

  * Companion: This application was developed in 2013 to support dementia care by families and care workers of PWD. It provides resources related to treatment, care, counselling, and self-help groups.

- Support pairing self-help groups with Dementia Partners and counselors (1 self-help group – 5 Dementia Partners – 1 counselor at the National Dementia Helpline)

③ 24-hour counselling and support of family caregivers through the National Dementia Helpline (1899-9988)

- The "Hanaro" project: a pilot project (2015-) that switches out of hour calls at dementia-related institutions (at night, holidays) to the National Dementia Helpline, enabling 24-hour coverage.

  * 7 institutions were using the Hanaro service as of September 2015.

- Expand the Hanaro service (2016-) from 10% of MDCs/PDCs/DCCs in 2015 → 30% in 2018 → 50% in 2020.
- Provide a professional counselor to each self-help group, and aid them through periodic outbound calls[37] (2016-).

  * Case management, support and burden relief for families in crisis states by the National Dementia Helpline.

- Collect opinions of PWD, their families, and related workers, and conduct a satisfaction survey to investigate and monitor dementia-related policies (2016-).

---

36) Develop support programs to enhance care skills of families of long-term care beneficiaries (50% of PWD) and relieve distress (target: 1,080 people).

37) Goal of outbound calls: 30,000 in 2015 → 86,000 in 2018 → 120,000 in 2020

Expansion of social services for relieving the burdens of family caregivers

A glimpse of expected changes

Mrs. H had been looking after her mother-in-law, who had dementia, for quite a while. She was very stressed and was starting to feel depressed. She visited the NID website and took an online psychological test. It told her that she might have depression, and recommended a visit to a nearby mental health center, where she could receive psychological counselling whenever she felt depressed.

Mrs. H felt she had to do something, so she started attending a singing class at the welfare center where her mother-in-law was also going to, to relieve stress. She also went on a trip with her mother-in-law using a travel voucher.

Sending her mother-in-law to a day- and night- care center freed Mrs. H during the day, and so she decided to start working again. The Job Support Center of the Ministry of Economic Affairs, Industry, and Employment helped her get an interview with a company with a flexible work schedule.

① Addition of online self-screening instruments to evaluate psychological distress of family caregivers and provision of counselling and/or case management

- Addition of an online psychological self-screening instrument to the NID's website[38] (2017-).
- Case management and/or counselling for families through community mental health centers (MHC) (2017-).

② Provision of travel vouchers and leisure services for family caregivers

- As a part of the Korean Community Social Investment Services (KCSIS), develop (2016) and disseminate (2017) a project for providing travel vouchers for PWD and their families.
- Optimize community welfare centers and senior welfare centers with day- and night- care centers into leisure and cultural facilities for PWD and their families (2017-).

  * Community welfare centers could provide services for family caregivers with PWD as a part of family programs.

  * According to the revised Enforcement Decree of Welfare of the Aged Act, senior welfare centers may set up Articles of Exceptions for attendance and service use of family caregivers with PWD (aged 60 or under) (2016-), and the exceptional article may specify the services for family caregivers with PWD as a type of family caregiver support project (2017-).

38) Online self-screening goal (cumulative): 12,000 in 2018 → 24,000 in 2020

Reinforcement of financial support for reducing family caregiver burdens

① Promote eligibility requirements for the 'tax deduction for qualifying dependents' item of end-of-year tax adjustments[39].

② Support employment for family caregivers

- To support employment for family caregivers of PWD, promote the Employment Support Project[40].
- Connect family caregivers to various employment support projects of the Ministry of Employment and Labor (MEL), Ministry of Gender Equality and Family (MGEF), and Ministry of Health and Welfare (MHW) and time selective jobs.

4. Support through research, statistics, and technology

Improved management of dementia-related research and statistics

① Improved management of dementia-related research data

- Publish the Comprehensive Dementia Data Analysis Report[41] by merging data managed by various institutions (2016-).
- Improve dementia research policies by publishing the Dementia Research and Statistics Annual Report biennially, after analysis of national and international trends, demand predictions, and planning (2017-).
- Enhance management of public and private clinical dementia research by the Clinical Research Information Service (CRIS) of the Centers for Disease Control and Prevention (2016-).

② Expand support for clinical research on neuroimaging, biomarkers and anti-dementia medications

- Establish a National Dementia Cohort to study prevention methods (2016-17).

  * Budget: 1.2 billion KRW

---

39) The family benefit-related income tax credit(only for persons who needing chronic treatment) is approximately 2,000,000 KRW.

40) The Ministry of Employment and labor (MEL): Youth employment support (Youth employment academy, Youth internship program), re-employment and outplacement support for middle-grade manpower (older cohort employment internship program), employment support for older adults (bank of the aged talents, double-cropping support center), the Ministry of Gender Equality and Family (MGEF): Employment support (new employment center, flextime work program), employment academy for the middle aged and older adults, the Ministry of Health and Welfare (MHW): Employment support for older adults (social activity programs, community rehabilitation centers, senior clubs), etc.

41) PWD register (Social Security Information Service), statistics of health insurance treatment and LTCI use (NHIS), health insurance evaluation data (Health Insurance Review & Assessment Service), etc.

  * Establish a community-based elderly cohort to survey living conditions and welfare needs of Korean older adults and investigate risk factors and high-risk groups.
  * Secure subjects for translational projects, develop National Guidelines for dementia prevention and management.

- Develop in vitro molecular biomarkers for prevention and early detection.
  * Budget: 6 billion KRW
  * Collect neuroimaging (MRI, PET) and biomarker (blood, cerebrospinal fluid) data predicting disease progress and prognosis, and conduct research to standardize analytic techniques.
  * Develop structural and functional imaging techniques and imaging surrogate markers.
- Develop medications tailored to Korean PWD (2016-20).
  * Budget: approximately 4.68 billion KRW
  * Conduct translational research for medications tailored to genetic and clinical characteristics of Korean PWD.
  * Conduct research on dementia treatments to solve social problems.
- Develop new neuroscience technologies.
  * Budget: approximately 30 billion KRW
  * Develop neuroimaging-based and blood-based, dementia prediction technologies and establish the Korean standard brain map of dementia (older adults of 60s, 70s, and 80s).

③ Expand research to develop evidence-based dementia policies

- Periodically conduct the Nationwide Survey on Dementia Epidemiology of Korea (NaSDEK) (every 5 years) and the Nationwide Survey on Dementia Care of Korea (NaSDeCK) (every 3 years).
- Establish evidence-based dementia policies through analysis of current dementia-related status, such as research on socioeconomic burden of family caregivers and the Nationwide Survey on Dementia Awareness (every 3 years).

④ Development of new technologies for supporting people with dementia and their family caregivers

- Promote development, commercialization and evaluation of management and care technologies for PWD and their family caregivers[42] (e.g. development of aging-friendly products and IoT-based dementia support technologies, etc.).
  * Utilize the MHW ‘Coping with the ageing’ research development project (budget of 1.5 billion KRW) to develop aging-friendly products, and to support independent living of older adults.

42) Example of technology to support care: Development of the 'Smart Dementia Management System' (Bucheon city at Gyeonggi-do), care systems for PWD using wearable devices, and U-Health Care System for PWD, etc.

Changes after the NDP-3

① Recruitment of 500,000 Dementia Partners to improve dementia awareness and to participate in community volunteer services supporting PWD and their families

Before (2015)	After (2020)
Public view of dementia: a disease that takes all memories, causes problematic symptoms such as delusions, wandering, and violence, and breaks up families.	As more people learn about dementia (500,000 Dementia Partners), public views of dementia will improve.
Lack of volunteers to improve dementia awareness and dementia prevention and to help PWD and their families.	Increased volunteering by local citizens who have received advanced dementia courses (recruitment of 50,000 Dementia Partners Plus members).

② Dementia-friendly communities where PWD and caregivers can live more comfortably

Before (2015)	After (2020)
Poor overall knowledge of dementia leads to poor management of situations or ignorance.	Knowledgable and experienced public service providers cope with and care for PWD (at least three qualified Dementia-friendly communities in each metro area).

③ Management and prevention programs for healthy older adults

Before (2015)	After (2020)
Lack of cognitive stimulation programs for healthy older adults, compared to PWD (due to approval of the Grade 5 at LTCI).	Cognitive training and dementia prevention of healthy older adults through tailored contents (e.g. Dugeun-dugeun Brain Fitness).
Lack of indices showing exactly how well an individual is practicing the 3-3-3 rules of Preventing Dementia.	Systematic assessment of lifestyle by Defri (incudes adherence to the 3-3-3 rules of Preventing Dementia, such as eating habits, exercise, lifestyle, disease management, social activities, etc.).

④ (Prevention · Early Detection) Management of dementia among high-risk groups

Before (2015)	After (2020)
Check-ups focusing on locations with mostly healthy seniors has led to inefficient early diagnosis programs.	Improved efficiency through focus on high-risk groups (older adults (75+) living alone and people with cognitive impairment).
Insufficient support for continued treatment and care.	Use the NHIS database to identify PWD who stopped treatment, and support them to continue treatment.

⑤ (Treatment) Introduction of the National Health Insurance fee for counselling family caregivers of people with dementia (PWD)

Before (2015)	After (2020)
Poor public knowledge of clinics treating dementia.	Better understanding of symptoms and better care by family caregivers with PWD through constant counselling and education from dementia specialists in the community.

⑥ (Treatment) Provision of dementia-specialized treatment and management by regional base hospitals for dementia (dementia-specialized wards)

Before (2015)	After (2020)
Lack of facilities that can care for PWD with BPSD.	Effective management of BPSD in dementia-specialized wards in regional dementia base hospitals, and improved care for comorbidities and complications lead to discharge and return to society.
PWD who have been unable to qualify for LTCI benefits had no choice but to stay in long-term care hospitals for long durations, with poor quality of life.	

⑦ (Care) Provision of a 24-hour short-term Visiting Care Service

Before (2015)	After (2020)
Use of the Respite Care Service is low as PWD need to stay in unfamiliar facilities.	24-hour short-term Visiting Care Service provided at home (up to 6 days/1yr).

⑧ (Care) Provision of dementia-specialized institutional care

Before (2015)	After (2020)
Lack of dementia tailored care due to the presence of other patients at long-term care facilities.	Installation of dedicated wards for dementia patients with stricter regulations will lead to tailored care services.

⑨ (Protection of rights) Consideration of introducing the Public Guardianship for low-income and/or living alone PWD

Before (2015)	After (2020)
Difficulties for low-income and/or living alone PWD to appoint legal guardians.	Economic and administrative support for low-income and/or living alone PWD for the appointment of legal guardians.

⑩ (Family) Expansion of support for counselling/education/self-help group for family caregivers of PWD

Before (2015)	After (2020)
Difficulties in maintaining effective and continuous support services (counselling/education/support group meetings) due to sporadic management.	Systematic and continuous counselling/education/support group meetings (Operate 20 on-offline support group meetings per metropolitan area) (total 320)).

⑪ (Family) Establishment of online self-screening for psychological distress of family caregivers

Before (2015)	After (2020)
Poor support for the distress and depression of caregivers of PWD.	Systematic management through self-screening on the NID website, and counselling at MHCs.

⑫ (Family) Expanded provision of travel vouchers and leisures services for family caregivers

Before (2015)	After (2020)
Lack of methods for family caregivers of PWD to relieve stress through travel or leisure activities.	Support for family caregivers of PWD to help them reduce care burden.

V. Implementation of the 3rd National Dementia Plan (NDP-3)

1. Management plan

Manage strategies based on the KPI

(Management) Improved effectiveness through selection of Key Performance Indices (KPI) based on priority and management by setting regular 5-year and 10-year goals.

(Implementation) Provide methods to improve implementation of annual action plans prepared by relevant ministries and local governments.

- *(Central Ministry)* Actualization of policy tasks, provision of principles to improve cooperation of related departments, and management of planning and execution of strategies.
- *(Local Government)* Flexible planning that includes main principles and reflects local differences in conjunction with MDCs/PDCs for effective implementation.

(Evaluation) Evaluation by the National Dementia Council, and promotion of accomplishments.

Preparation of a supplementary plan of the NDP-3 (late 2018)

Preparation of a supplementary plan (2019 - 2020) of the NDP-3 based on the first 3-year outcomes of the NDP-3.

2. Key Performance Indices (KPI)

	KPI	Current	Goal (2018)	Goal (2020)	Authorities	Note
Common	Increase rate of dementia prevalence (%)	(2012-15) 2.14%	(2016-18) 1.64%	(2018-20) 1.14%	MHW	Reduced increase in prevalence by early management of risk factors for dementia
	Dementia Awareness	64.7	75	80	MHW	Based on the Nationwide Survey on Dementia Awareness
Community	Numbers of leading secondary schools and universities overcoming deentia	11	80	160		5 in 2018, 10 schools per metropolitan area in 2020
	Number of Dementia Partners	100,000	300,000	500,000	MHW	-
Treatment and care for PWD	Introduction of the Family Caregiver Counselling Fee to NHI	-	I	-	MHW	Introduce in 2017
	Provide 24-hour Visiting Respite Service	-	I	-	MHW	Introduce in 2017
	Specialization of care services for PWD in nursing homes	Pilot service	I	-	MHW	Introduce in 2016
	Prevalence of physical abuse in older adults with dementia (%)	0.16	0.13	0.10	MHW	949 reports of physical abuse in 2014
Family caregivers	Average QOL of at-home caregivers	5.23	5	4.7	MHW	Based on the Nationwide Survey on Dementia Care of Korea (14-point scale, lower scores indicate better quality of life)
	Cumulative number of on-offline self-help groups	-	160	320	MHW	10 in 2018, 20 in 2020 per metropolitan area
Research and statistics	Publication of the Dementia Research and Statistics Annual Report	-	Publication	-	MHW	Publish in 2017

* The additional indices will be supplemented and applied when complementary strategies for 2018 are established.

3. Timeline

Strategies	Timeline by year				
	'16	'17	'18	'19	'20
I. Community-based prevention and management					
1. Support for dementia prevention in daily life (target: all citizen)					
(1) Support for dementia prevention (management of risk factors)	C	E			
(2) Development and dissemination of Defri	D, E	E			
(3) Dissemination of cognitive training programs and dementia prevention contents focused on healthy older adults		D, E	D, E	D, E	E
2. Improvement of dementia awareness and creation of a dementia-friendly environment (target: all citizen)					
(1) Public education on dementia and improvement of dementia awareness	C				
(2) Recruitment of 500,000 Dementia Partners	C				
(3) The Dementia-Friendly Communities Initiative		P	E		
(4) Continued support for community-based dementia awareness campaigns	C				
(5) Revision of legislative and social terminology with negative connotations to dementia	A	R	M		
3. Management of the three major dementia high-risk groups and expansion of support for early diagnosis of dementia (target: dementia high-risk groups)					
(1) Dementia Counselling Center based management of the three major dementia high-risk groups	C				
(2) Consistent support for the early diagnosis of dementia (Improvement of dementia screening tests in the free Health Checkup provided by the National Health Insurance Cooperation and Operation of the Nationwide Dementia Early Detection program)	M				
(3) Strengthen the capability of the Dementia Counselling Centers	C				
II. Convenient and safe diagnosis, treatment, and care					
1. Establishment of community-based treatment and management systems for dementia (target: mild/moderate dementia)					
(1) Expansion of NHI benefits to cover diagnostic tests used to diagnose dementia	I				
(2) Introduction of the Family Caregiver Counselling Fee to NHI for psychiatrists and neurologists to support continued management, and provide programs to support medical costs of PWD		I			
(3) Designation of regional base hospitals for dementia and installation of dementia-specialized wards	D	P	I		
(4) Standardization and dissemination of dementia diagnosis and treatment guidelines, categorized by dementia type, to enhance diagnosis and treatment		D	D	E	
(5) Development and dissemination of non-pharmacological interventions for people with dementia	D	D	D	D	D
(6) Enhance expertise of dementia-related health professionals in the treatment and care of people with dementia (Improvement of educational courses for dementia-related personnel and management of personal education histories for physicians, nurses, care workers, etc.)	C				

2. Support for at-home and institutional care for people with dementia (target: mild/moderate/severe dementia)					
(1) Improved benefits of the 5th grade of the National Long-term Care Insurance (NLTCI)	M				
(2) Provision of dementia-specialized institutional care at care facilities	D	E			
(3) Development and dissemination of long-term care service manuals optimized for people with dementia	D	E			
(4) Diversification of at-home care services for people with dementia	P	I	E		
(5) Development of 'Home Safety Guidelines' to reduce the risk of falls and improve living environments of PWD	D	E			
(6) Services for missing prevention	C				
3. Establishment of a support system for protecting the rights and preventing abuse of people with severe dementia (target: severe dementia)					
(1) Consideration of introducing a Public Guardianship support program for low-income and/or living alone people with dementia	C*	P			
(2) Reduction of inappropriate care activities (restraints, seclusion, etc) due to difficulties in patient care	C				
(3) Enhance public support for establishing the 'Comprehensive End-of-life Care System for people with dementia'			D	E	
III. Reduction of care burden for family caregivers					
1. Support for counselling/education/self-help groups of family caregivers					
(1) Implementation of on-offline education programs for family caregivers	C				
(2) Promotion of on-offline self-help groups for family caregivers	C				
(3) 24-hour counselling and support of family caregivers through the National Dementia Helpline (1899-9988)	C				
2. Expansion of social services for relieving the burden of family caregivers					
(1) Addition of online self-screening instruments to evaluate psychological distress of family caregivers and provision of counselling and/or case management	C	D			
(2) Provision of travel vouchers and leisure services for family caregivers	D, A	I, E			
3. Reinforcement of financial support for reducing family caregivers burdens					
(1) Promote eligibility requirements for the 'tax deduction for qualifying dependents' item of end-of-year tax adjustments	C				
(2) Support employment for family caregivers	C				
IV. Support through research, statistics and technology					
1. Improved management of dementia-related research and statistics					
(1) Improved management of dementia-related research data	E*	P*		P*	
(2) Expand support for clinical research on neuroimaging, biomarkers and anti-dementia medications	C				
(3) Expand research to develop evidence-based dementia policies	C				
(4) Development of new technologies for supporting people with dementia and their family caregivers	C				

* Amend(A), Continue(C), Consideration(C*), Develop(D), Establish(E*), Expand(E), Introduce(I), Modify(M), Pilot(P), Publish(P*), Research(R)

4. Budget[43)]

(Central Government Subsidy) A total of 31,495,000,000 KRW

(KRW: hundred million)

Year	2015	2016	2017	2018	2019	2020	2016~20
Total	440.3	506.3	601.6	646.2	680.1	715.1	3149.5
I. Community-based prevention and management	90.0	95.3	108.4	115.9	125.2	131.5	576.3
II. Convenient and safe diagnosis, treatment, care	176.8	221.1	243.8	252.8	257.4	271.4	1246.5
III. Reduction of care burden for family caregivers	51.0	51.7	80.8	100.0	106.5	121.5	460.5
IV. Support through research, statistics and technology	122.5	138.4	168.6	177.5	191.0	190.7	866.2

(Local Government Subsidy) A total of 156,900,000,000 KRW

(KRW: hundred million)

Year	2015	2016	2017	2018	2019	2020	2016~20
Total	232.3	275.8	295.0	315.8	328.1	354.8	1569.5
I. Community-based prevention and management	58.8	59.3	65.6	71.9	78.2	84.5	359.5
II. Convenient and safe diagnosis, treatment, care	173.5	216.5	223.0	231.0	237.0	251.0	1158.5
III. Reduction of care burden for family caregivers	0.0	0.0	6.4	12.9	12.9	19.3	51.5
IV. Support through research, statistics and technology	-	-	-	-	-	-	-

(Total Cost of the NHI and NLTCI[44)]) 30,908,700,000,000 KRW

(KRW: hundred million)

Year	2015	2016	2017	2018	2019	2020	2016~20
Total for the NHI & NLTCI	39,103	45,218	52,301	60,507	70,020	81,041	309,087
Cost of the NHI	14,962	17,625	20,762	24,458	28,816	33,945	125,606
Cost of the NLTCI	24,141	27,593	31,539	36,049	41,204	47,096	183,481

43) This can be changed with establishing strategies separately and reflecting considered tasks, etc. in a period of the NDP-3.

44) The NHIS payment of medical and the LTC cost by dementia. The costs from 2015 to 2020 were estimated by the increase rate of annual average (e.i. 17.8% of the NHI and 14.3% of the NLTCI).

References

1. Dementia Partner in Korea. http://partner.nid.or.kr/main/main.aspx.
2. Ministry of Health and Welfare. Daily Life Actions to Cope with Dementia. 2014.
3. Ministry of Health and Welfare. Survey of older adults 2014. 2014.
4. Ministry of Health and Welfare. The 2012 Nationwide Survey on Dementia Epidemiology of Korea. 2012.
5. Ministry of Health and Welfare. The First National Dementia Plan in Korea (2008-2014). 2008.
6. Ministry of Health and Welfare. The Second National Dementia Plan in Korea (2013-2015). 2012.
7. National Assembly Budget Office. Status and Improvement of the Dementia Management. 2014.
8. National Institute of Dementia. http://www.nid.or.kr.
9. Organization for Economic Cooperation and Development. Addressing Dementia: The OECD Response. 2015.
10. Seoul National University Bundang Hospital. A Pilot Project of Establishing the Third National Dementia Plan in Korea. 2014.
11. Seoul National University Bundang Hospital. A Main Project of Establishing the Third National Dementia Plan in Korea. 2015.
12. Seoul National University Bundang Hospital. Nationwide Survey of Dementia among Elderly in Korea. 2011.
13. Seoul National University Bundang Hospital. The 2012 Nationwide Survey on Dementia Epidemiology of Korea. 2013.
14. Statistics Korea. Future Population Projection. 2015.

List of Acronyms Used

ADL	Activities of Daily Living
BPSD	Behavioral Psychological Symptoms of Dementia
CDCP	Centers for Disease Control and Prevention
CERAD-K	Consortium to Establish a Registry for Alzheimer's Disease
CHC	Community Health Center
CRIS	Clinical Research Information Service
DCC	Dementia Counselling Center
Defri	Dementia-Free Index
DeMA	Dementia Management Act
DMCS	Dementia Management Conveyance System
EOL	End-of-Life
IoT	Internet of Things
K-ADNI	Korea Alzheimer's Disease Neuroimaging Initiative
KCSIS	Korean Community Social Investment Services
KDSQ	Korean Dementia Screening Questionnaire
KPI	Key Performance Indices
LTC	Long-term Care
LTCI	Long-term Care Insurance
MCI	Mild Cognitive Impairment
MDC/PDC	Metropolitan/Provincial Dementia Center
MEL	Ministry of Employment and Labor
MGEF	Ministry of Gender Equality and Family
MHC	Mental Health Center
MHW	Ministry of Health and Welfare
NaSDeCK	Nationwide Survey on Dementia Care of Korea
NaSDEK	Nationwide Survey on Dementia Epidemiology of Korea
NDeED	National Dementia Early Detection
NDP-1	The First National Dementia Plan
NDP-2	The Second National Dementia Plan
NDP-3	The Third National Dementia Plan
NHIS	National Health Insurance Services
NID	National Institute of Dementia
NLTCI	National Long-term Care Insurance
NSCD	National Social Cost of Dementia
OECD	Organization for Economic Cooperation and Development
PHIS	Pharmaceutical Health Information System
PWD	People with Dementia
SMCQ	Subjective Memory Complaints Questionnaire
SNSB	Seoul Neuropsychological Screening Battery