# WHAT ARE CAREGIVING BURDENS AND HEALTH RISKS FOR CAREGIVING TO PATIENTS WITH DEMENTIA?

DEPARTMENT OF HEALTHCARE ADMINISTRATION, NAGOYA UNIVERSITY GRADUATE SCHOOL OF MEDICINE YASUYUKI GOTO

### **SELF-INTRODUCTION**

- Doctor of Medicine (M.D.): 1990/4-1996/3
  - ✓ Showa University School of Medicine, Tokyo, Japan
- Doctor of Philosophy (Ph.D.): 2003/4-2006/3
  - ✓ Department of Preventive Medicine, Nagoya University Graduate School of Medicine, Nagoya, Japan
- Master of public health (M.P.H.): 2007/8-2009/1
  - ✓ Division of Epidemiology and Biostatistics of Public Health at University of Illinois at Chicago
- Lecturer (part-time) :2024/4-Present
  - ✓ Department of Healthcare Administration, Nagoya University Graduate School of Medicine

### PROFESSIONAL SUMMARY

- Gastroenterologist with more than 20 years of experience.
- At the medical affairs at Takeda pharmaceutical company, did epidemiological studies using electrical database like JMDC, MDV.
- Joined the project of Ministry of Health, Labour and Welfare regarding the regional medical care vision with Deloitte

I am not a specialist of dementia!!

### TODAY'S TOPICS

- What is Dementia? (3 slides)
- Epidemiology of Dementia
- Integrated care systems and long-term care insurance
- Caregiving burden
- Health problem
- Coping with the burden
- Intervention
- Our research

### CAUSES OF DEMENTIA

• Alzheimer's disease: 68%

• Cerebrovascular disease: 15%

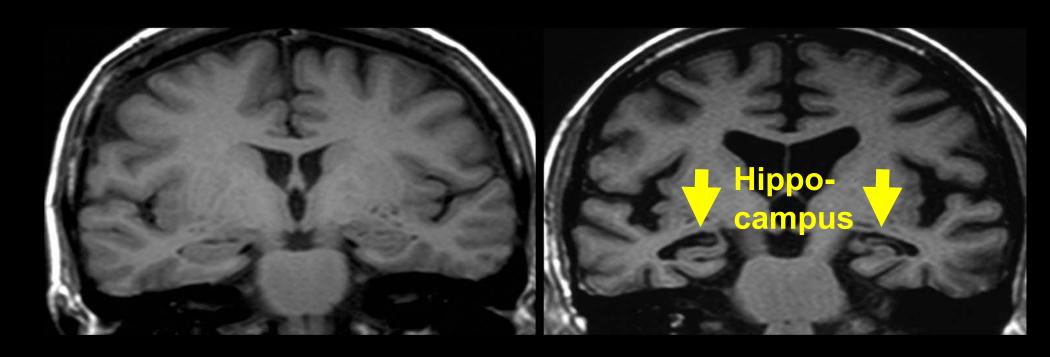
Lewy body disease: 9%

• Frontotemporal lobar degeneration: 8%

### Hippocampal atrophy Due to Alzheimer's disease



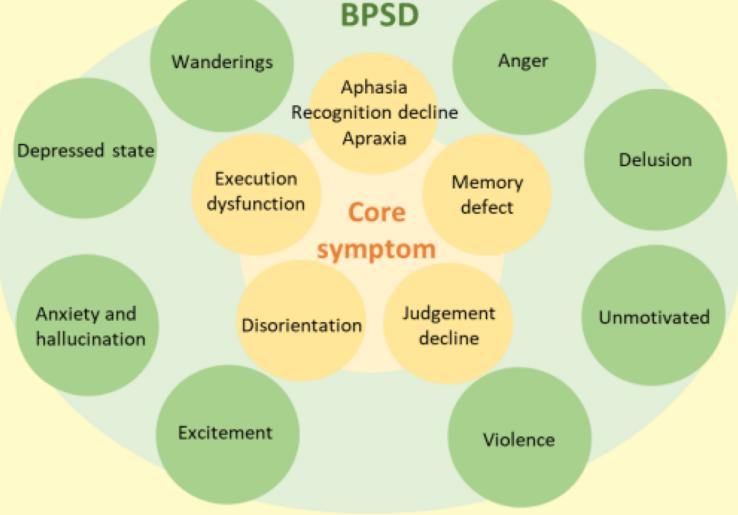
**Normal** Alzheimer's disease



〈原図〉 東京医科大学病院 老年病科 羽生 春夫

CORE SYMPTOMS AND BEHAVIORAL AND PSYCHOLOGICAL SYMPTOM OF DEMENTIA

(BPSD)

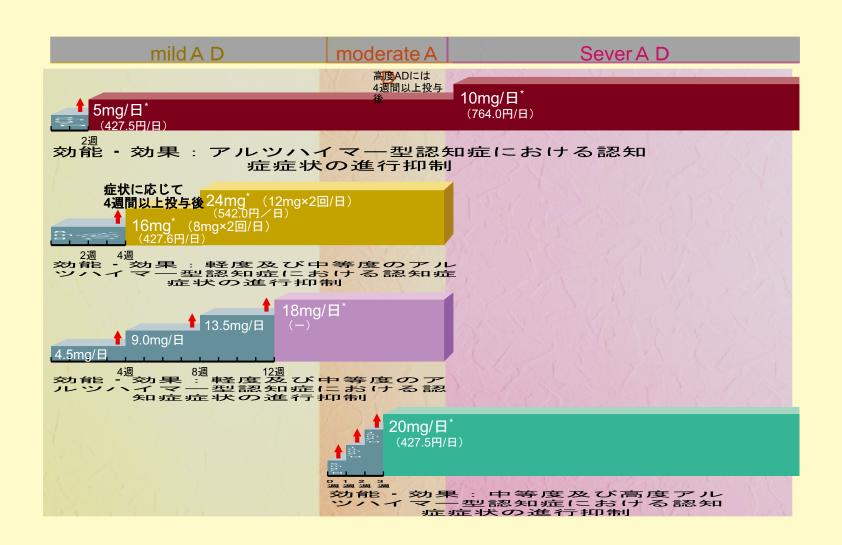


### FOUR DRUGS FOR DEMENTIA

Donepezil

- Rivastigmine
- Galantamine

Memantine



- 1) アリセプトインタビューフォーム 2011年1月改訂(改訂第22版) より作図
- 3) 平成23年3月25日付 薬事・食品衛生審議会分科会 報道発表用資料より作図 2) 平成22年12月24日付 薬事・食品衛生審議会分科会 報道発表用資料より作図 4) 平成23年3月11日付 官報より作図

### SUMMARY 1

Dementia is caused by mainly four diseases

• The number of the drugs effective against core symptoms is just 4.

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### PREVALENCE OF DEMENTIA

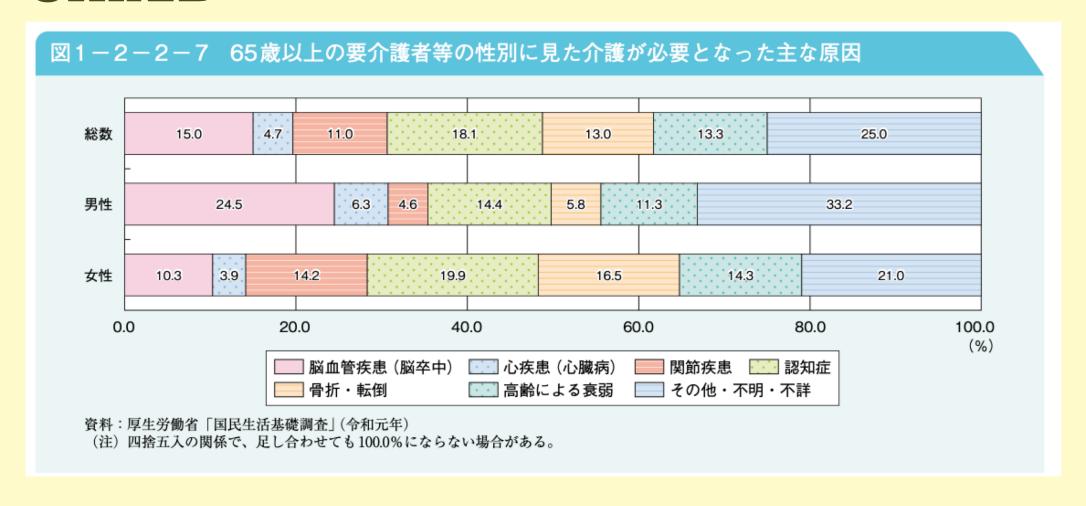
図1-2-11

65歳以上の認知症患者の推定者と推定有病率

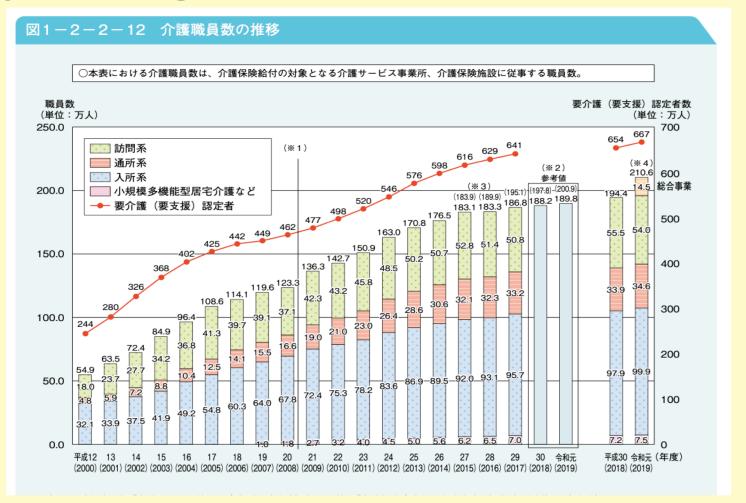


From https://www8.cao.go.jp/kourei/whitepaper/w-2017/html/gaiyou/s1\_2\_3.html

## DEMENTIA IS MOST FREQUENTLY CARED



## THE NUMBER OF FORMAL CAREGIVERS



### SUMMARY2

• The number of patients with dementia is increasing with population aging

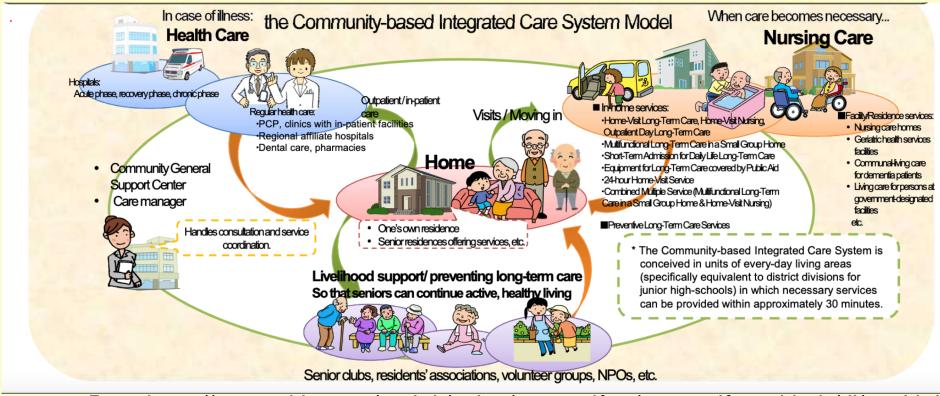
• The number of formal caregivers is increasing after the long term care insurance was implemented but is not enough for the demand.

### TODAY'S TOPICS

- What is Dementia?
- Epidemiology of Dementia
- Integrated care systems and long-term care insurance (6 slides)
- Caregiving burden
- Health problem
- Coping with the burden
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- Our research

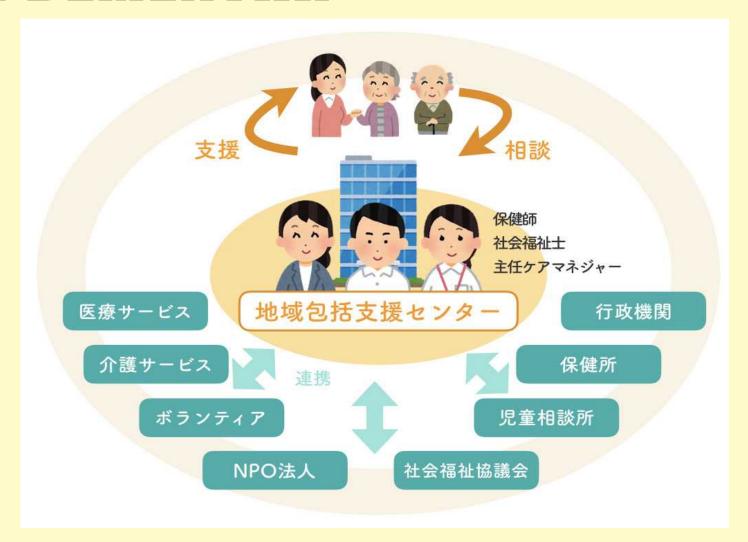
### CAREGIVING SUPPORT

 Community based integrated care systems, where a care package of housing, health care, long-term care, preventive care and support for living can be provided.



From https://www.mhlw.go.jp/english/policy/care-welfare/care-welfare-elderly/dl/establish\_e.pdf

## WHAT IF YOUR PARENTS SUFFER FROM DEMENTIA?



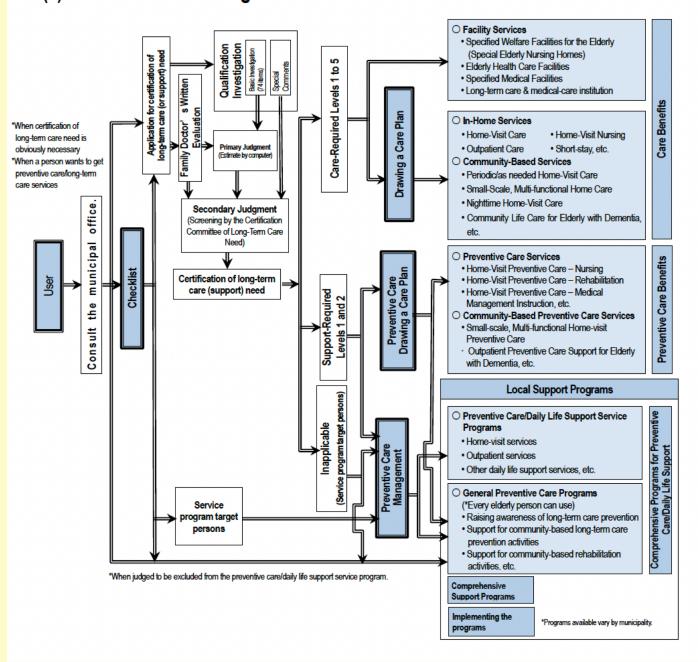
### LONG-TERM INSURANCE SYSTEM (LTIS)

- Support levels I and 2
- Care need levels I (least disabled) to 5 (most disabled).



From https://kaigo.homes.co.jp/manual/insurance/youshienyoukaigo/

#### (3) Procedure to use Long-term Care Services



## THE FAMILY CARE SUPPORT PROJECTS IN JAPAN

#### **Local Support Programs**

- O Preventive Care/Daily Life Support Service Programs
  - Home-visit services
  - Outpatient services
  - Other daily life support services, etc.
- General Preventive Care Programs

(\*Every elderly person can use)

- Raising awareness of long-term care prevention
- Support for community-based long-term care prevention activities
- Support for community-based rehabilitation activities, etc.

Comprehensive Support Programs

Implementing the programs

\*Programs available vary by municipality.

# Comprehensive Programs for Preventive Care/Daily Life Support

From 社会保障審議会介護保険部会「地域支援事業の推進」(参考資料) 倉田あゆ子 日本家政学会誌 2022

- ①介護教室の開催
- ②認知症高齢者見守り事業

認知症に関する広報・啓発活動

徘徊高齢者を早期に発見できる仕組みの構築運用

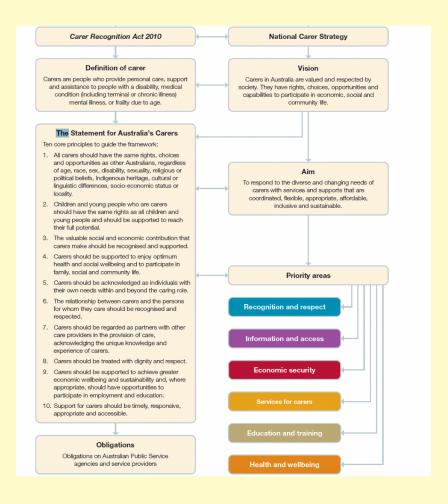
認知症高齢者に関する知識のあるボランティア等による見守りのための訪問

- ③家族介護継続支援事業
  - ア. 健康相談・疾病予防事業
  - イ. 介護者交流会の開催
  - ウ. 介護自立支援事業 慰労金等の贈呈
  - エ. 介護自立支援事業 介護用品の支給



### THE NATIONAL STRATEGY IN AUSTRALIA

The Carer Recognition Act 2010 has been enacted to support caregivers.



### **SUMMARY 3**

• The purpose of the community integrated care system under long term care insurance is to shift the patients from institution to home.

• Family caregiver support program in Japan seems to be for the stable operation of long-term care business, not for caregiver.

### TODAY'S TOPICS

- What is Dementia?
- Epidemiology of Dementia
- Integrated care systems and long-term care insurance
- Caregiving burden (7 slides)
- Health problem
- Coping with the burden
- Intervention
- Our research

## CAREGIVER BURDEN BECOMES CONCERNED

Before and after the start of the long-term care insurance system in Japan, caregiver burden felt by informal caregivers has widely surfaced since the system promoted an overall trend of shifting patients with dementia from institutional care to domiciliary care.

### WHAT IS CAREGIVING BURDEN ?

 Caregiving often includes assistance with one or more activities of daily living (ADLs), including bathing and dressing, as well as multiple instrumental activities of daily living

• The term caregiver burden is most often used to describe the situation, where much of the caregiving responsibility fall on caregivers.







## THREE OF THE MAIN REASONS

• Three of the main reasons caregivers provide assistance to a person with Alzheimer's or another dementia

- (I) The desire to keep a family member or friend at home (65%)
- (2) Proximity to the person with dementia (48%)

(3) The caregiver's perceived obligation to the person with dementia (38%).

### WHO ARE THE CAREGIVERS?

- Approximately two-thirds of Alzheimer's and dementia caregivers are women
- About 30% of caregivers are age 65 or older
- Approximately 10% of caregivers provide help to a spouse with Alzheimer's disease or another dementia
- Over one-third of dementia caregivers are daughters caring for a parent

## THE FREQUENCY OF WOMEN CAREGIVER IN THE WORLD

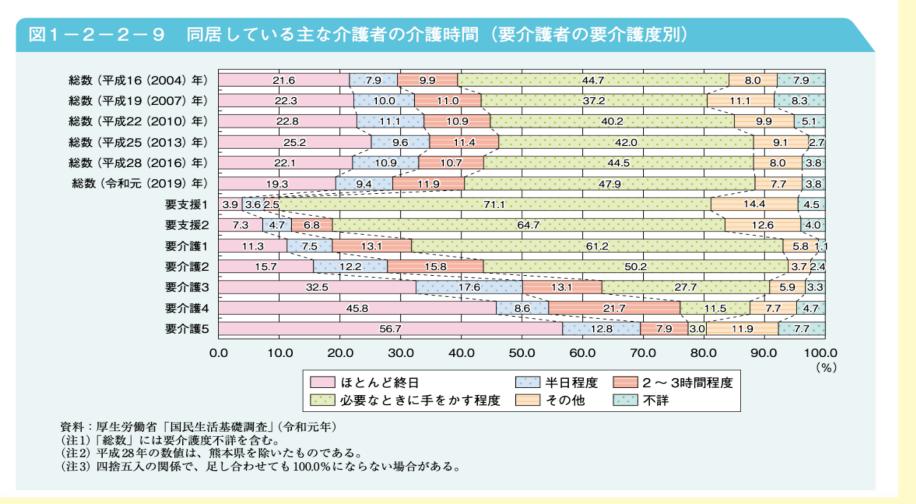
• The United States: 61.5%

• Japan: 51.9%

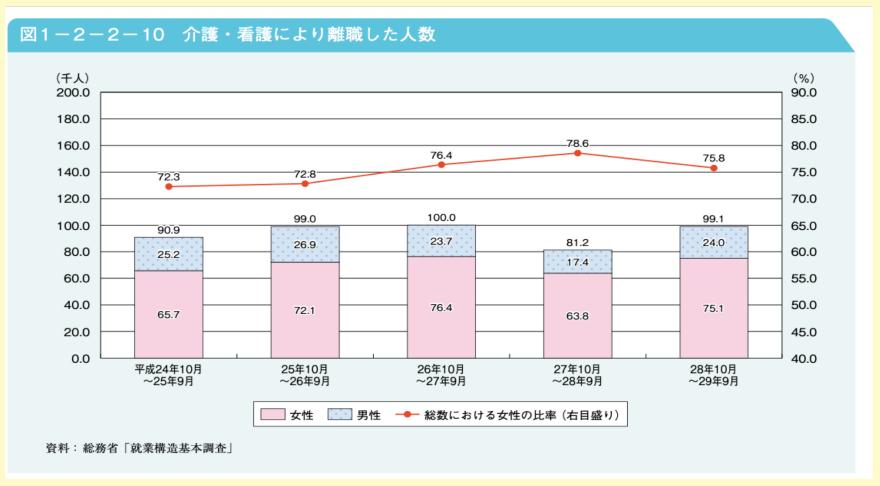
• France, Germany, the United Kingdom, Italy and Spain: 56.3%

from the 2018National Health and Wellness survey

## TIME NEEDED TO CARE BY THE SEVEN LEVELS



# THE NUMBER OF THOSE WHO HAVE TO STOP WORK DUE TO CAREGIVING



### **SUMMARY 4**

• Caregiver responsibility fall on women like daughter, who love dementia parents.

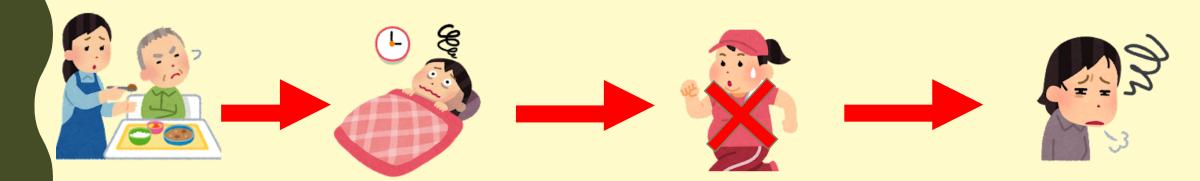
• They have to quit job to continue to give a dementia person their care.

• The system that supports caregivers is necessary so that they can keep job.

### TODAY'S TOPICS

- What is Dementia?
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### WHY HEALTH PROBLEM?



Dementia symptoms worsen

Increased emotional stress and depression.
Insufficient sleep.

Delayed or did not do things they should to maintain their own health

### Developed

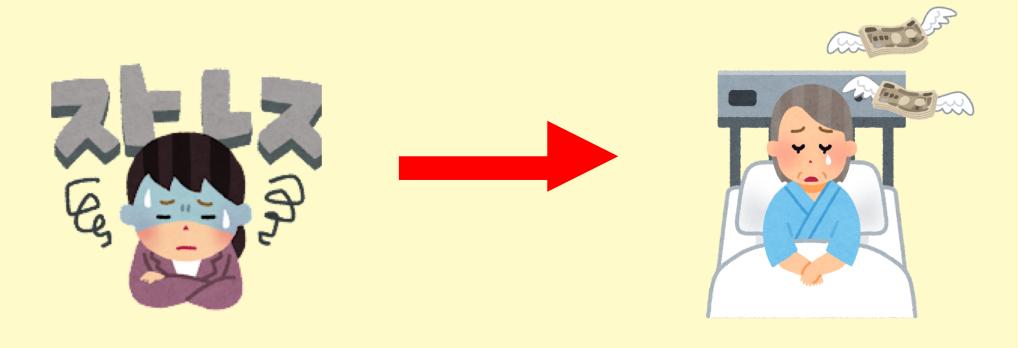
- high levels of stress hormones,
- impaired immune function,
- slow wound healing
- coronary heart disease
- depressive symptoms

**TABLE 10** Percentage of Dementia Caregivers Who Report Having a Chronic Health Condition Compared with Caregivers of People without Dementia or Non-Caregivers

Condition	Dementia Caregivers	Non-Dementia Caregivers	Non- Caregivers
Stroke	5.2	3.4	3.2
Coronary heart disease	8.3	7.2	6.6
Cardiovascular disease*	11.8	9.5	8.6
Diabetes	12.8	11.1	11.3
Cancer	14.3	13.3	11.5
Obesity	32.7	34.6	29.5

## WHAT IS PROBLEM IF CAREGIVER IS UNHEALTHY?

• Distress on family caregivers is associated with increased odds of institutionalization of the patients with dementia.



### **SUMMARY 5**

- Caregiving burden leads to insufficient sleep
- The stress of providing dementia care increases caregivers' susceptibility to disease and health complications
- These result in difficulty keeping care dementia patients at home; It is very hard to maintain the community based integrated care systems

### TODAY'S TOPICS

- What is Dementia?
- Epidemiology of Dementia
- Integrated care systems and long-term care insurance
- Caregiving burden
- Health problem
- Coping with the burden (2slides)
- Intervention
- Our research

#### COPING WITH BURDEN

Coping strategies are defined as specific behavioral and phycological efforts to mitigate stress that caregivers feel when they try to handle external and internal demand that exceeds the resources of them.

# THREE DOMAINS OF COPING STRATEGIES

1) **Emotion-focused** (i.e. to ameliorate depression symptoms, anxiety, stress and burden by using thoughts and indirect actions)

- 2) **Problem-focused** (i.e. to alter or control them in an active and constructive way)
- 3) **Dysfunctional** (i.e. to relive them by confrontation, escape and avoidance)

#### SUMMARY 6

- The emotion-focused strategies like wishful thinking might tend not to look for help from others, in which case such caregivers were more likely to suffer from depression.
- The problem-focused strategy is widely adopted and is effective when dealing with specific problems .
- The combination of emotion focused and problem focuses strategies has been reported to be better.

### TODAY'S TOPICS

- What is Dementia?
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- Intervention (2 slides)
- Our research

# NON-PHARMACOLOGICAL INTERVENTIONS FOR CAREGIVERS

(a) Those aimed at reducing the objective amount of care provided by caregivers (i.e., respite)

(b) Those aimed at improving the caregiver's well-being and coping skills (e.g. psychosocial and/or psychoeducational interventions).

### INTERVENTION TOOLS

• The tools should prevent "familism", which means less delegation of caregiving responsibilities to outsourced caregivers.

 Of them, online communication tool could facilitate the interaction regardless of geographic distance

### **SUMMARY 7**

• The intervention based on the adequate coping strategies is necessary to mitigate caregiver burden so that they continue to give cares.

• The online communication fits the intervention like psychoeducation.

#### **SUMMARY SO FAR**

- In Japan, after the implementation of long term care insurance, the dementia patients are cared at home by family caregivers
- The shift from institution to home causes caregiver burden problem.
- In the current healthy system, nobody care about informal caregivers. Especially, the systems which provide financial support with caregivers are necessary.
- The online intervention would be good to mitigate caregivers distress, resulting in maintaining the community based integrated care systems

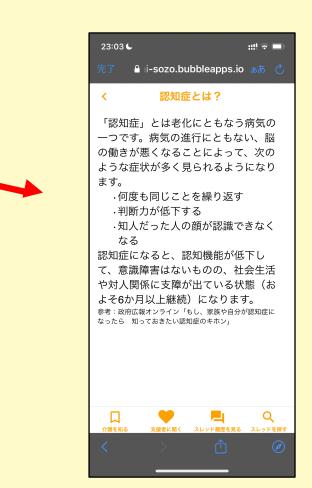
### TODAY'S TOPICS

- What is Dementia?
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- Caregiving burden
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- Intervention
- Our research (15 slides)

### COLUMN OF DEMENTIA

You can select your favorite topics and learn them





#### Two sections for their conversation

#### With care managers With other peers





## INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) FOR INTERVENTION

• Online communication is a candidate interventional tool for facilitating the interaction between healthcare professionals and/or other caregivers regardless of geographic distance.



**Use application** 

Facilitate the conversations among other participants

Mitigate the burden and BPSD symptoms

#### **OUR RESEARCH PLAN**

- Criteria of inclusion
  - Family caregivers of the patients who diagnosed as dementia by DSM-V and visit Nagoya University Hospital.
  - ➤ Care managers and helper
- Required number of subjects
  - ➤Informal caregiver 15, demented patients 15
- Methods

Subects		
Informal caregivers	Zarit score	Measuring caregiver burden
Demented patients	Abe's BPSD score	Assessment of BPSD

#### ZARIT SCORE

- Currently use revised version contains 22 items evolved from 29-item version published in 1980.
- Each item on the interview is a statement which the caregiver is asked to endorse using a 5-point scale.
  - ✓Interpretation of Score:
  - -0 21 little or no burden
  - -21 40 mild to moderate burden
  - -41 60 moderate to severe burden
  - -61 88 severe burden
- The two-factor mesured: I) personal strain and 2) role strain.

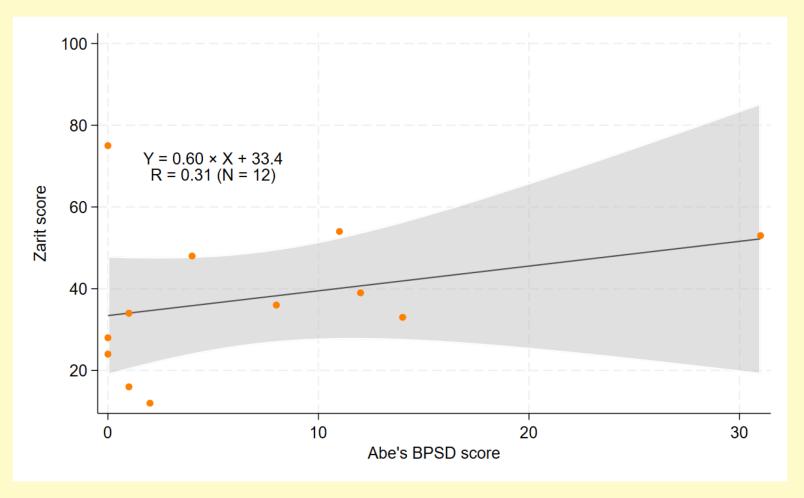
## BPSD (BEHAVIORAL AND PSYCHOLOGICAL SYMPTOMS OF DEMENTIA )SCORE

Use Abe's BPSD score with 10 BPSD items for assessment of BPSD

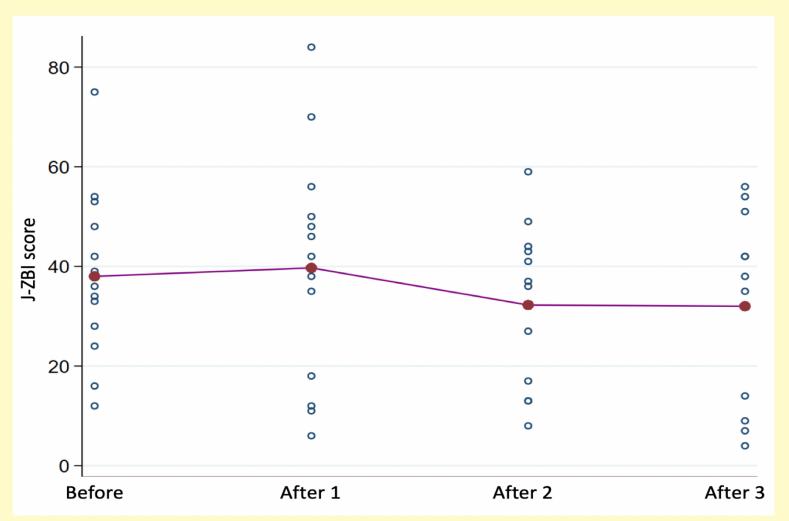
Inquiry	Seldom	Occasionally	Sometimes	Often
1) Wandering in/outside home	0	3	6	9
2) Eating or toilet problem	0	3	6	9
3) Delusion or hallucination	0	2	4	6
4) Offensive & abusive words	0	2	4	6
5) Day-night reversal	0	2	4	6
6) Excitation & agitation	0	1	2	3
7) Apathy & indifference	0	0	1	2
8) Depressive & gloomy mood	0	0	0	1
9) Violent force	0	0	0	1
10) High irritability	0	0	0	1

Caregivers	4	•	•	n«	
Gender <sup>©</sup>	e	Male↔	4	2.	
e	•	Female €	•	11€	
Age♥	e	40-49€	•	1€	
e	e	50-59€	4	4∾	
P	e	60-69€	•	4∾	
e	e	70-79	•	3€	
e	•	≥80€	•	1.	
Duration of care (years)	•	less than 1	•	3€	_
e	e	1-20	•	2.	
P	e	2-3*	€	4€	
e	•	3-4	•	1€	
e e	P	4-5*	•	2.	
e e	•	more than 10	•	1€	
Patients with dementia	e	e	•	e	
Gender <sup>©</sup>	•	Male↔	42	6€	
P	e	Female «	4	7∻	
Age®	e	60-69€	*	1€	
e	e	70-79€	•	5€	
P	e	≥80€	•	7€	
Type of dementia*	•	Alzheimer's disease®	*	9€	
P	e	Cerebrovascular disease	•	1€	
e	e	Frontotemporal lobar degeneration	•	1€	
e	e	MCI€	•	2.	
Long-term care serviceb	P	Commuting rehabilitation service	•	3€	
P	•	Commuting for care	•	4•	
e	e	Home-visit nursing care	•	1∾	
Long-term care/support need	P	Independence •	•	3€	
•	•	Requiring support level 1	€	2€	
•	•	Requiring support level 2	•	1€	
•	e	Requiring long-term 1	•	3€	
•	•	Requiring long-term 2	4	2.	
•	€	Requiring long-term 3	42	10	

## THE CORRELATION BETWEEN THE ZARIT SCORES AND ABE'S BPSD SCORES



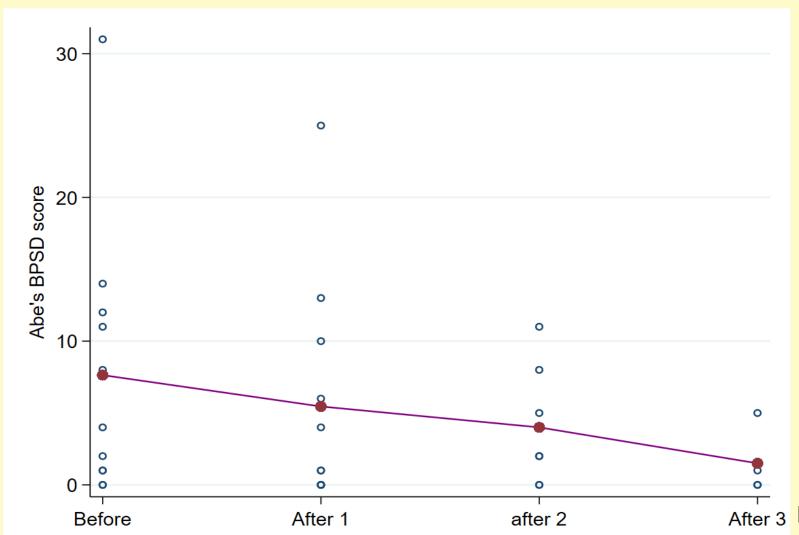
# EFFECT OF WEB APPLICATION ON CAREGIVER BURDEN



p=0.013

From Nagoya J Med Sci. 86 2024.

# EFFECT OF WEB APPLICATION ON BPSD



After 3 From Nagoya J Med Sci. 86 2024.

#### DISCUSSION

Our findings indicated that exchanging information in the virtual community could alleviate caregiver burden, although not the BPSD of their patients with dementia.

Therefore, whether or not the reduction of caregiver burden alleviates BPSD remains unclear.

#### NARATIVE META ANALYSIS



doi: 10.2169/internalmedicine.0911-22 Intern Med Advance Publication http://internmed.jp

[ REVIEW ARTICLE ]

Caregiver Burdens, Health Risks, Coping and Interventions among Caregivers of Dementia Patients: A Review of the Literature

Yasuyuki Goto<sup>1</sup>, Kohei Morita<sup>2</sup>, Mina Suematsu<sup>3</sup>, Takahiro Imaizumi<sup>4</sup> and Yusuke Suzuki<sup>5</sup>

From https://www.jstage.jst.go.jp/article/internalmedicine/advpub/0/advpub\_0911-22/\_article

### NEWS!



#### Broadcasted on NHK

#### **NHK** NEWS WEB

2022年(令和

#### 東海 NEWS WEB

#### 名古屋大が認知症介護者向けの支援アプリを 開発

06月07日 11時02分



認知症の人を介護する人たちの心 の負担を減らそうと、名古屋大学 などの研究グループが悩みなどを 匿名でやりとりできるアプリを開 発しました。

アプリを開発したのは、名古屋大 学医学部の後藤康幸客員研究員ら のグループです。

「私の介護」と名付けられたアプリは認知症の介護を行う人が登録すると、ほかの介 護者やケアマネージャーなどの支援者と匿名でメッセージをやりとりすることができ ます。

### TO BE CONTINUED NEXT WEEK!