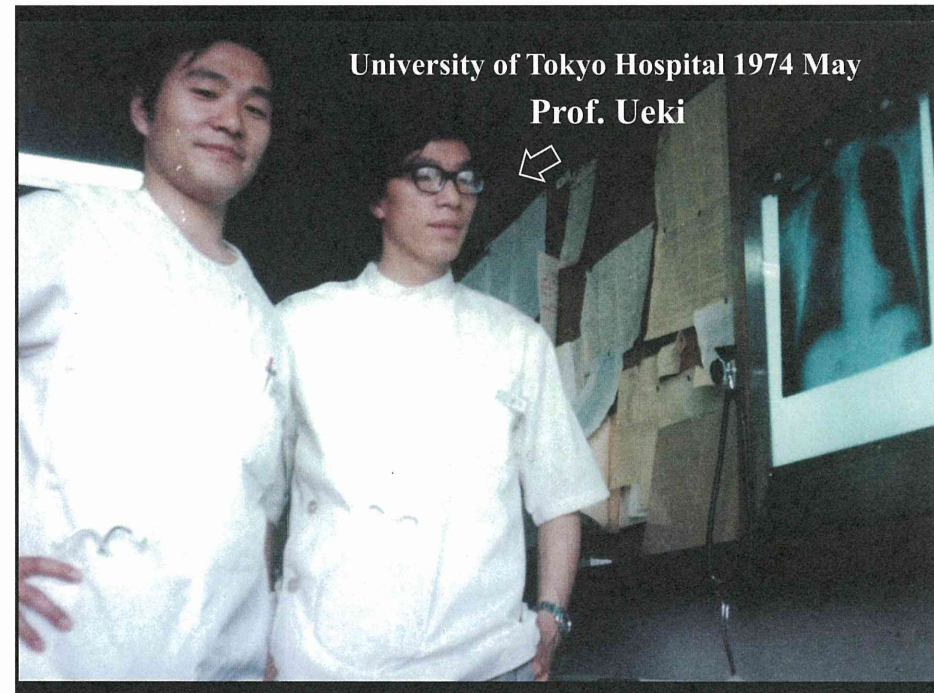


## The content of daily foods in AD (Case-control study)

Food	AD n=64	Control n=80	P value
Rice	261.9 ± 105.8	231.9 ± 94.1	NS
Potato	16.7 ± 12.2	22.6 ± 16.7	NS
Sugar	6.1 ± 15.1	5.4 ± 3.8	NS
Snack	16.1 ± 16.0	16.5 ± 13.4	NS
Beans	119.5 ± 86.9	127.8 ± 69.2	NS
Fish	40.5 ± 24.4	58.3 ± 28.2	0.0001
Meat	25.1 ± 15.4	21.0 ± 16.3	0.13
Egg	16.0 ± 15.4	13.5 ± 11.0	NS
Milk	77.2 ± 77.8	117.5 ± 99.9	0.01
Green vegetable	45.7 ± 31.7	68.9 ± 59.8	0.01
Vegetable	55.9 ± 32.2	70.6 ± 46.4	0.03
Fruits	78.9 ± 60.1	89.4 ± 54.2	NS
Fungi	4.4 ± 4.4	7.6 ± 7.7	0.004
See weeds	6.3 ± 7.3	10.7 ± 8.3	0.001
Alcohol	65.1 ± 164.4	75.5 ± 177.2	NS
Soft drink	399.7 ± 320.0	559.8 ± 381.5	NS
Spice	18.9 ± 23.1	39.4 ± 47.3	NS

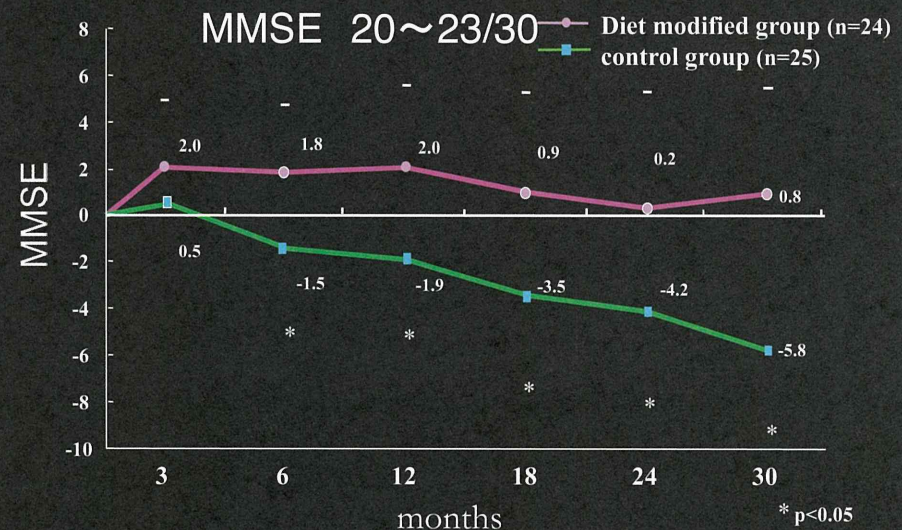


## Dietary intervention to AD

Adequate calorie intake  
Sufficient vitamin & mineral intake  
Fatty acids :  $n-6/n-3 = 3.0$

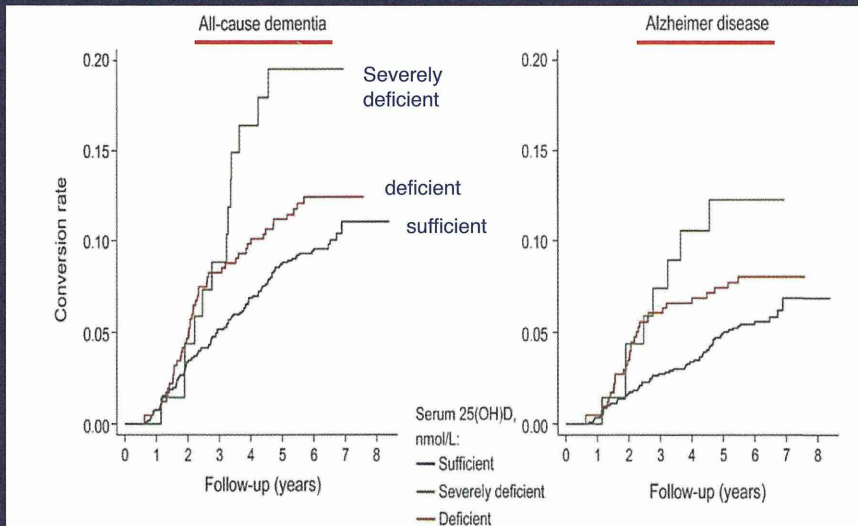
Fish	60~90g/day
Vegetable	100g/day
Fruits	at least once a day

## The effect of dietary modification on MMSE in mild to moderate AD



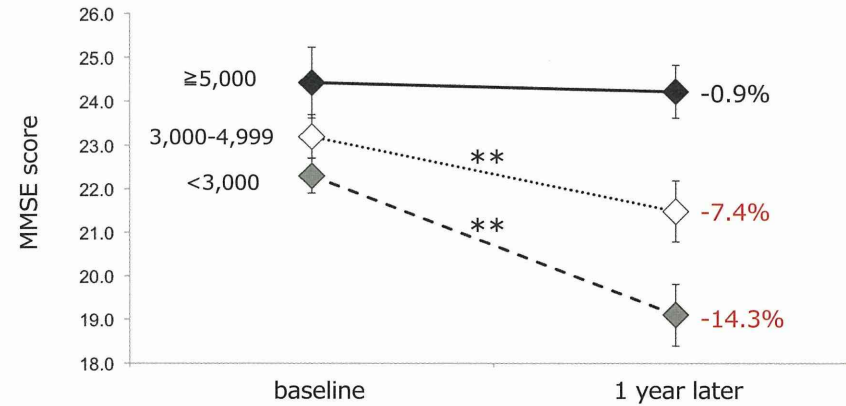
Ueki A et al. J Nut, Health & Aging (2005)

**Cumulative occurrence of all-cause dementia and Alzheimer's disease when subjects were classified by serum 25(OH)D concentration**



(Littlejohns TJ, et al. Neurology 2014)

**The daily steps and cognitive function decline in mild to moderate AD patients**



Cognitive function was preserved in AD patients who walk ≥5,000 steps/day.

(Yamada A, Arai H, Kyoto University, unpublished data)

**Smoking and Smoking cessation vs. the risk of dementia**

Smoking Status	Non-smoker	Ex-smoker	Current Smoker	< 20 /day	> 20 /day
<b>&lt;Total dementia&gt;</b>					
Age-,sex-, survey year-matched OR	1.0	1.4 (0.6-2.8)	2.2 (1.1-4.4)	2.1 (1.1-4.3)	2.6 (0.9-7.3)
Multivariable OR	1.0	1.5 (0.7-3.3)	2.3 (1.1-4.7)	2.2 (1.1-4.7)	2.7 (0.9-8.2)
<b>&lt;Dementia with history of stroke&gt;</b>					
Age-,sex-, survey year-matched OR	1.0	1.4 (0.4-4.5)	2.4 (0.8-7.1)	2.4 (0.8-7.2)	2.5 (0.5-11.9)
Multivariable OR	1.0	1.7 (0.5-5.9)	2.4 (0.8-7.7)	2.4 (0.7-7.9)	2.5 (0.4-14.4)
<b>&lt;Dementia without history of stroke&gt;</b>					
Age-,sex-, survey year-matched OR	1.0	1.3 (0.5-3.5)	2.0 (0.8-5.0)	2.0 (0.8-4.9)	2.6 (0.6-11.1)
Multivariable OR	1.0	1.5 (0.6-4.3)	2.3 (0.9-6.0)	2.2 (0.8-5.9)	3.0 (0.7-13.8)

(Adjusted for body mass index, alcohol use, serum total cholesterol, systolic blood pressure, use of antihypertensive medication, diabetes mellitus, atrial fibrillation and ST-T abnormality)

(Ikeda A, et al.: Cerebrovascular Diseases 2008)

**AD and life style-related diseases**

Well-known risk factors for atherosclerosis . . .

**Hypertension** have been reported to be risk factors also for AD

**Diabetes**

**Dyslipidemia**

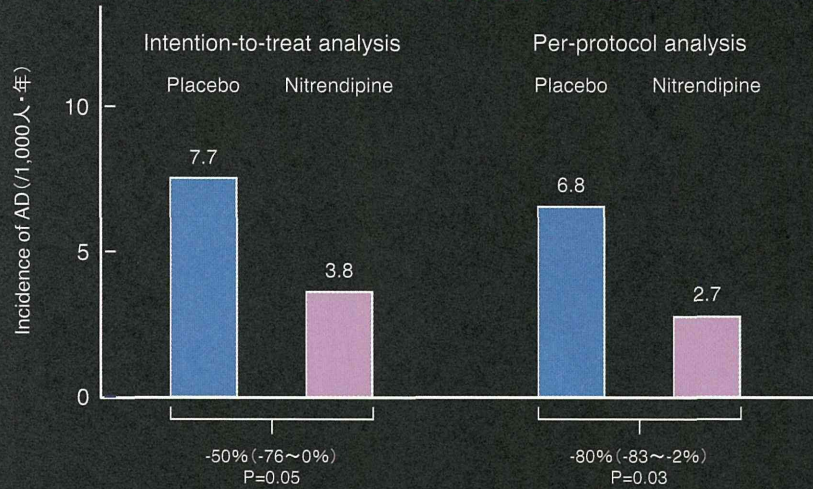
**Obesity**

**Smoking**

Also, treatment of life style-related diseases has been reported to decrease the incidence of AD.

## The incidence of AD in Syst-Eur Trial

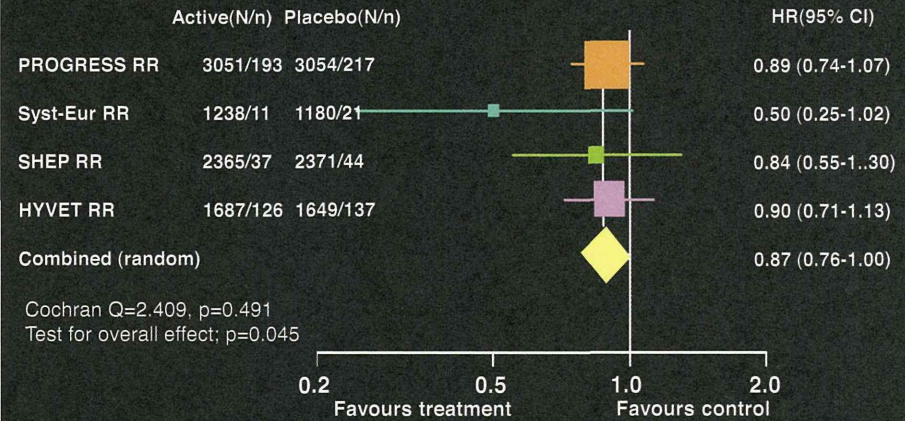
Possibility : Treatment of life style-related disease reduces the risk of AD Diabetes, HT.....



Staessen JA, et al., 1997

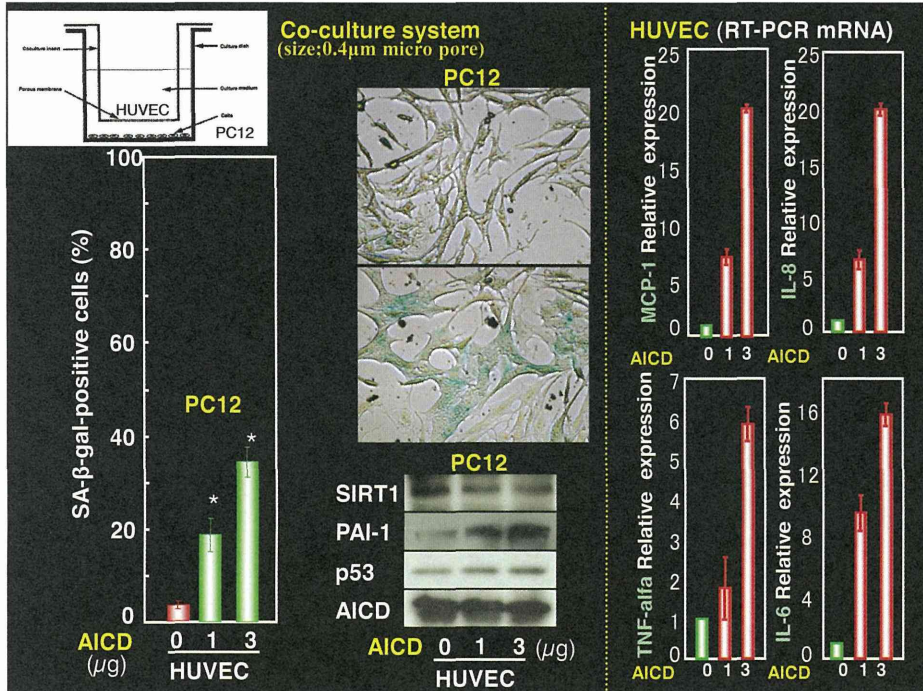
## The effect of anti-hypertensive treatment on the occurrence of dementia

-Meta-analysis-

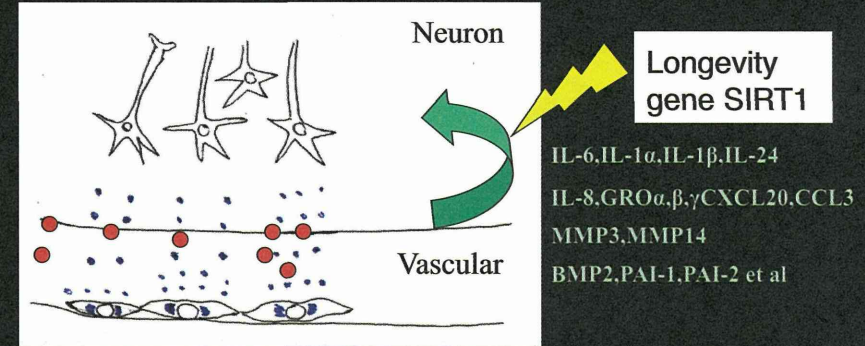


N=total participants, n=number with dementia

(Peters R., et al., 2008)



## Hypothesis: Vascular senescence/damage promotes neuronal senescence/damage by secretion of inflammatory cytokines



## SASP (Senescence-associated secretory phenotype)

1. Progression or inhibition of tumor
2. Induction of inflammation
3. Progression of Cellular Senescence

## Messages from JGS

- Life style modification is important for the prevention of both vascular and Alzheimer's types of dementia.
- Although evidence is not concrete, life style-related diseases, especially diabetes and hypertension, should be well treated for the prevention of both types of dementia.
- The basic research on the mechanism underlying the effect of life style modification or treatment of life style-related diseases may provide a new preventive and therapeutic approach for AD.

## The perspective of dementia practice from the geriatric point of view

1. Seamless coordination :
  - Prevention→diagnosis & treatment at early stage→care
2. Insight from whole body to brain
  - Control of vascular risk factors
3. Insight from brain to whole body
  - Treatment and care for geriatric syndrome including aspiration pneumonia, osteoporosis and frailty
  - Treatment and care of complicated diseases in demented patients
4. Coordination : Geriatricians – Neurologists - Psychiatrists
5. Coordination : Medical - Care & Social welfare

Thank you very much for your attention



### トピック3: 認知症にやさしいコミュニティとICTの活用

前日のセッション3でまとめられた、認知症の人と、地域社会の在り方について概観し、認知症にやさしいコミュニティに関して話をしてもらおう。そのような社会実現のために、IT等の新たなテクノロジーは何ができるか、についても、関連省庁や企業代表などから話をしてもらおう。

栗田 圭一(東京都健康長寿医療センター研究所)

神崎 恒一(杏林大学)

片山 禎夫(認知症の人と家族の会)

奥 公一 (NPO 町田市つながりの開)

Marc Wortmann (国際アルツハイマー病協会)

五島 清国 (テクノエイド協会)

井上 剛伸 (国立障害者リハビリテーションセンター研究所)

新美 芳樹(厚生労働省)

Peter Whitehouse (ケースウェスタンリザーブ大学, 米)



Global Dementia Legacy Event Japan  
New care and prevention models

Topic3 : Information and Communication Technology

## Expectations of ICT to support the TSUDOI

06/Nov/2014 14:15~

Roppongi Academyhills, Roppongi Hills Mori Tower 49F

Director board Member,  
Association of Persons living with dementia and their Families  
(Alzheimer's Association Japan (AAJ))

Sadao Katayama MD, PhD

Organizer: Ministry of Health, Labour and Welfare



## Cognitive Impairment and Hardships in Life

- Depending on the core cause of Cognitive impairment, the disease can move from phase (1) through phase (3)
- Depending of the level of necessary medication, the physical condition, level of understanding of the surrounding, the level of hardships that one faces in life change.

(1) During the initial phase of the disease, the level of hardships that one will face will vary from case to case.

Some may see an immediate impact on life, some may not see an impact at first

Some may not be able to perform if they feel that the expectation on them is high. If they do not feel the expectation to perform, it can often be easier to do so. Often people confuse the disease with "a fact of life due to old age".

(2) The phase in where all affected feel the full impact of the disease.

Not able to remember who one is, not being able to understand, feeling frustration due to not being able to do what one once could. Not being able to ask for help.

Condition will worsen without risk management, especially for large changes in life such as being hospitalized, going on a trip, moving home, being swindled, a change of medication, etc.



## Dementia: The need for peace of mind

(3) The phase in where one cannot see beyond ones self.

When one loses their role in life/when one starts being "monitored"

Without family and friends in where one can depend upon and smile with, one will start to get bottled up, and won't be able to see beyond ones self.

One begins to stop thanking, or caring about others.

To "own" ones life, it means that one has a role in society and in family, is trusted, is confident, lives ones life in peace, and has time that one considers fun.

The complete requirement is to "know", the acceptable requirement is to have the peace of mind. Knowledge (information), is a requirement for gaining the peace of mind.

Basic information for when signs start showing.

Loss of confidence, uncertainty

If misunderstood, can lead to a loss of trust in others

If unable to control this feeling, this leads to a decline in function

When one does not know how to react to a situation, or cannot react in a way that is thoughtful of others....: The stress level of those with cognitive impairment will heighten, along with the feeling of uncertainty and lack of trust.

In turn, this raises the stress level and uncertainty of those around the patient.



## TSUDOI(meeting)

TSUDOI is a place for when you feel lost and don't know what to do  
To feel and understand how one with dementia feels.

To feel and understand how one who is assisting feels.

One starts to understand how it feels to not remember, and how to live with someone who is losing their memory.

What is expected: To be able to go back to the family one was

Family consultation: Peer counseling

Conversation between patients: Ability to talk about dreams and hopes.

A place where the patient and the family of the patient can be at ease, a place with knowledge (medical, welfare, and life information) and experience.

A place where the patient and family of the patient can remember what it is to be a family, and build/re-build the trust and family ties.

To be able to share and smile with ones partner



## ICT, support TSUDOI

- 1) To supplement the loss of recognition  
The type of cognitive function: What functions remain? What functions are being used?
- 2) The goal is to get the peace of mind: Supplement the loss of cognitive function in order to attain the peace of mind.
- 3) It is important give the family comfort and ease of mind

The use of IT in case distance is a barrier to connect.

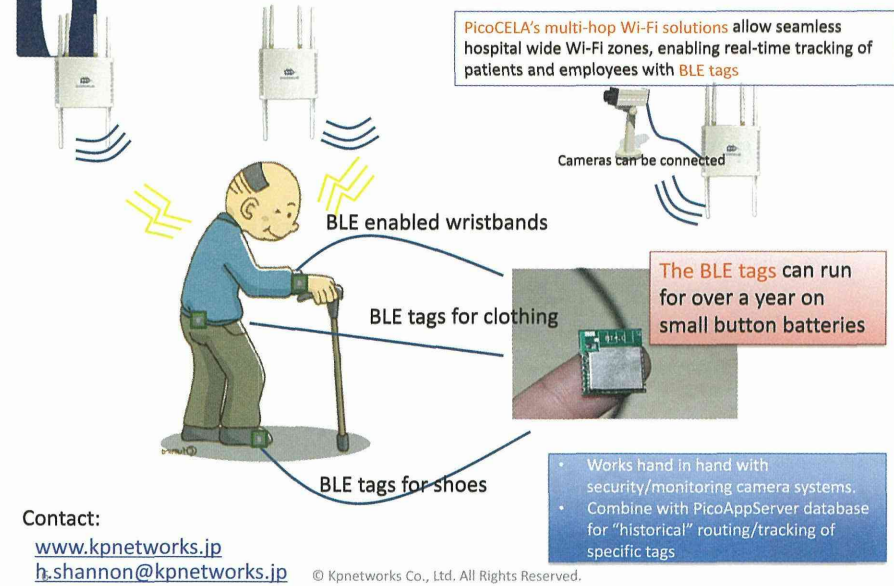
### Forgetfulness

- Forgetting the meeting days **Can a reminder be posted on the TV?**
- Reminders for medication and/or hospital days by writing or visits/calls
- Not being confident that the clothes are coordinated correctly.  
To have someone give feedback **To have family members give positive feedback while looking in the mirror.**
- Not knowing where to go **Navigation to the site by family from afar (via technology?)**

- Not remembering how to get home once one leaves the meeting  
One may forget why one is there the moment he/she leaves the building  
**Have a sensor devise notify once one leaves a building.**



## BLE tracking solutions for Tsudoi(meeting)

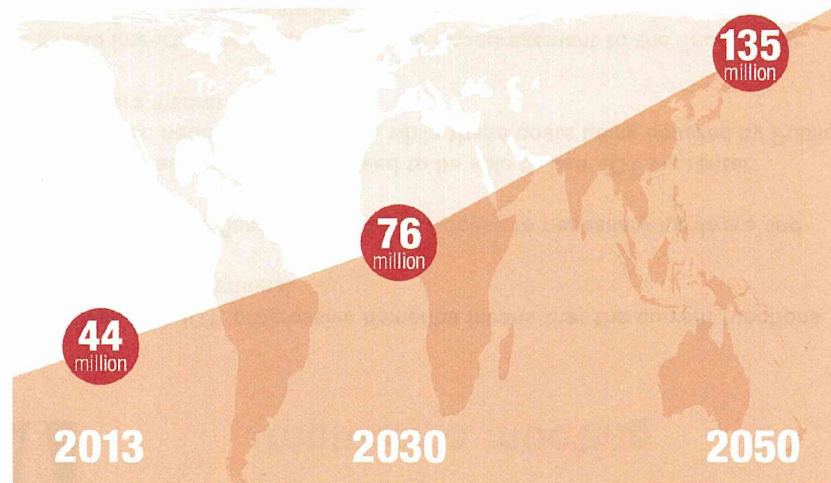


## To participate, not only monitor a meeting

- #1. Even with ICT, progressive dementia means that the current functions may not remain functional.
- #2. The need for financial aid to gain access to necessary hardware and software
- #3. In the case of Japan, the need to be able to use ICT via rental depending on necessary functions, while these costs being covered by Public nursing care insurance

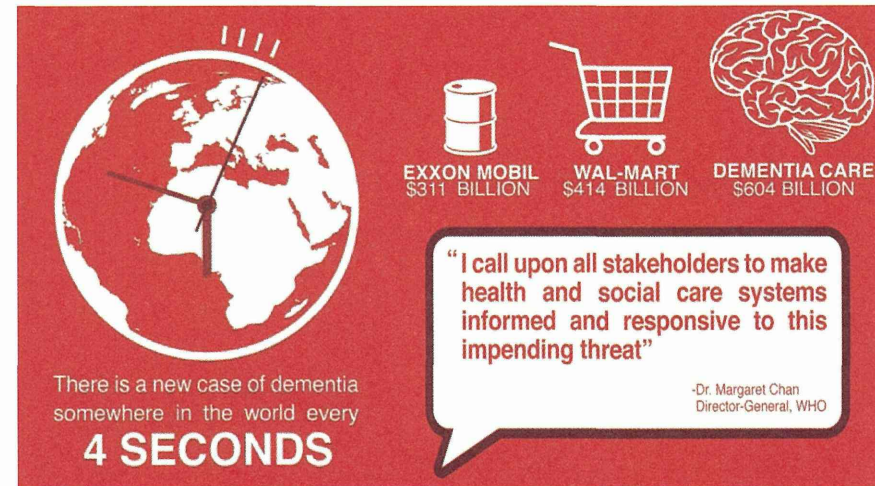
It is also important to support and give encouragement to the "non family members" who give and show support.  
 To support the functions and give mental care for the patient and his/her family is also of grave importance.

## Global prevalence of dementia



[www.alz.co.uk/statistics](http://www.alz.co.uk/statistics)

## Global prevalence of dementia



[www.alz.co.uk/statistics](http://www.alz.co.uk/statistics)

## Dementia Friendly Communities (DFC)



- Aim to create an environment with a good level of public awareness, where people with dementia can participate in society as long as possible
- Tackles social exclusion and supports caregivers
- Makes longer independent living more likely
- 6 key domains:
  - Public awareness
  - Planning processes
  - Physical environment
  - Access to business and public services
  - Community-based innovation
  - Transportation

## Dementia Friendly Communities (DFC)



- **Two-tiered approach:**
  - The "invisible" network of businesses, healthcare workers, emergency services personnel and other civic employees .
  - The grassroots, "bottom-up" network comprised by persons with dementia engaging socially in their community.

**In planning, building and developing DFCs, there is a need to recognise both tiers.**



## Examples



- Little understanding that dementia is a disease of the brain; huge impact on families
- South Korea since 2008 training of 120,000 volunteers to support families
- Japan developed 90-minute course on dementia (caravan); over 5 million attended
- Other clever solutions (factsheet)
- UK Dementia Friends programme + Canada
- Several countries created Alzheimer Cafe of Memory Cafe

## Learning points



- Involve people living with dementia, family carers and experts (in that order)
- A bottom-up process is helpful to increase understanding
- Mobilise local resources
- Lots of innovation
- Ideally part of overall dementia strategy




## Alzheimer's Disease International

*The global voice on dementia*

 Follow ADI on Twitter

[@AlzDisInt](https://twitter.com/AlzDisInt)

 Like us on Facebook

[/alzheimersdiseaseinternational](https://www.facebook.com/alzheimersdiseaseinternational)

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[www.alz.co.uk](http://www.alz.co.uk)

# 認知症サミット日本後続イベント

— 新たなケアと予防のモデル —

## 福祉用具・介護ロボットの開発及び普及に関する取り組み

平成26年11月6日(木) トピック3

公益財団法人テクノエイド協会  
企画部 五島清国

## 現状・課題

### 要介護者について

- 要介護高齢者の増加
- ニーズの多様化・複雑化
- 認知症高齢者の増加
- 高齢者世帯や高齢者独居の増加
- ADLやQOLの維持・向上 など

### 介護分野の人材について

- 介護人材の確保
- 職員の腰痛
- 働きやすい職場環境の構築 など

## 日本再興戦略

### ロボット介護機器開発5ヵ年計画

- 高齢者や障害者の自立支援の促進
- 介護者の負担軽減

実用性の高いロボット介護機器の開発を加速化させる開発5ヵ年計画を実施する

開発されたロボット介護機器を積極的に活用することで、自立支援の促進と質の高いケアの提供が期待される

## ロボット介護機器の開発・導入促進体制

