

## Current Healthcare System for Community Residents with Dementia: A Questionnaire Survey for Dispensing Pharmacies, Home Care Support Offices, and Visiting Care Support Offices

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### Abstract

**Background:** Since the number of dementia specialists is limited, dispensing pharmacies provide early detection of dementia patients in the community and drug management instructions, and care managers, who contribute to the collaboration between medical treatment and nursing care, play an important role. This investigation was performed with the aim of clarifying the awareness of dementia medication and actual psychosocial intervention to prepare materials for discussions on a system to provide effective care.

**Methods:** The subjects were 80 dispensing pharmacies, 114 home care support offices, and 117 visiting care support offices in Osaki City and Kurihara City in Miyagi Prefecture. The questionnaires were distributed on November 8, 2012, and responses were received until November 27, 2012.

**Results:** For antidementia drugs, the answers from the dispensing pharmacies and home care support offices were generally favorable, but many visiting care support offices answered that the drugs were for "general dementia, not for Alzheimer disease (AD). For psychosocial intervention, all of "physical activities," "activities using reality orientation and reminiscence approach," and "work and recreation" were performed during past 1 month, but "physical activities" were most reported as regular activity. Regarding reasons for the intervention, the most often reported response was "Reported that the activity would be good for physical and brain conditions", followed by "users seem to be having fun."

**Conclusion:** Knowledge about antidementia drugs was generally favorable, but further clarification will be required for visiting care support offices. For this, smooth communication will be necessary between physicians and care providers. Among the interventions performed in visiting care support offices, "exercise" was most common. This might be confused with the evidence of exercise intervention for mild cognitive impairment (MCI). Therefore, feedback to magazines etc. used in the visiting care support offices will be essential.

**Keywords:** Healthcare system; Dementia; Dispensing pharmacies; Home care support offices; Visiting care support offices

### Introduction

Treatment of dementia, especially Alzheimer's disease (AD), includes anti-dementia drugs such as donepezil [1], and non-pharmacological treatment such as reminiscence approach or exercise. According to the Guidelines for Dementia by the Japan Society for Dementia Research (2010), the recommendation level for drug and non-drug therapies is A and C1, respectively, but many reports have suggested that the effects of reality orientation (RO), the reminiscence approach, and cognitive stimulation, could be expected among the psychosocial interventions [2-5]. Psychosocial intervention is important for improvement of the QOL and maximum induction of drug effects. Thus, it is desirable that the intervention should be performed in combination with drug therapy [6,7]. Therefore, collaboration between medical treatment and nursing care is essential for dementia treatment.

Since the number of dementia specialists is limited, dispensing pharmacies provide early detection of dementia patients in the community and drug management instructions, and care managers, who contribute to the collaboration between medical treatment and nursing care play an important role. However, there have been few investigations of how much dispensing pharmacies and nursing care providers actually understand about dementia medication, how to promote collaboration between medical treatment and nursing care, and what kind of psychosocial interventions have been promoted. It is important to investigate dispensing pharmacies, which are directly related to dementia medication, home care support offices, which provide the base for care managers, and visiting care support offices, which provide psychosocial interventions, so that many dementia patients can receive effective treatment.

This investigation was performed with the aim of clarifying the awareness of dementia medication and actual psychosocial intervention to prepare materials for discussions on a system to provide effective care.

## Materials and Methods

### Subjects and Region

The subjects were 80 dispensing pharmacies, 114 home care support offices, and 117 visiting care support offices in Osaki City [8] and Kurihara City [9] in Miyagi Prefecture.

### Investigation method

**Questionnaire survey by mail:** The questionnaires were distributed on November 8, 2012, and responses were received until November 27, 2012. For the 3 subject categories (dispensing pharmacies, home care support offices, and visiting care support offices), “respondent, office,

and knowledge of antidementia drug” were commonly examined, and for home care and visiting care support offices, “user (level of care needed, number of dementia patients, etc.)” and “drug administration (situations of drug management, etc.)” were commonly enquired. For individual categories, original investigation items were prepared.

For dispensing pharmacies, we asked about “explanation/instruction for drug administration upon receipt of the prescription” and “instruction for home care management,” and for home care support offices, we asked about “use of day service (DS) and daily activities,” “collaboration with the primary physician (frequency of hospital visits with a patient, etc.) (e.g.: introducing to a specialist as needed, providing information about the system, service, etc.), and “relationship with the patient or family (level of achievement)”

Dispensing pharmacy	Home care support office	Visiting care support office
-Respondent (age, sex, job type, job level, years of experience, etc.) -Office (number of users, number of staffs, office hours, etc.) -Antidementia drugs (knowledge, dispensing (pharmacy), etc.)		
-Explanation/instruction for drug administration upon receipt of the prescription (details of instruction upon first/continuous use, etc.)	-User (level of care needed, number of dementia patients, etc.) -Drug administration (management of drug administration, etc.)	
-Instruction for home care management (frequency/details of instruction, etc.)	-Use of day service (DS)/daily activities (number of DS users, details of daily DS activities, etc.) -Collaboration with the primary physician (frequency of hospital visits with a patient, etc.) -Relationship with the patient/family	Nursing care (Details of activities, etc.)

**Table 1:** Presents the outline of detailed investigation.

For visiting care support offices, we enquired about the details of the psychosocial intervention as “nursing care” (e.g.: physical activities, activities using reality orientation and the reminiscence approach, work and recreation) and their reasons.

### Questionnaires

#### Antidementia drugs

1) Which target disease is the drug effective against? (for the 3 subject categories)

The question was “Which target disease do you think the antidementia drug is effective against?” and the correct answer was “AD.” (When the survey was performed, dementia with Lewy bodies had not yet been approved, and thus only AD was considered to be the correct answer.)

2) What type of effect does the drug have? (for the 3 subject categories)

The question was “What type of effect do you think the antidementia drugs have?” and the correct answer was “to inhibit progress.”

3) How is the drug administered? (for the 3 subject categories)

The question was “How do you think the antidementia drug should be administered?” and the correct answer was “The drug should be taken continuously.”

4) Are antidementia drugs always available? In such cases, respond with which types of drugs you can provide, in descending order of the number of prescriptions. (only for dispensing pharmacies)

#### Psychosocial intervention (only for visiting care support offices)

- 1) Activities performed within the past month or regularly
- 2) Reasons for the intervention

#### Awareness of care managers (only for home care support offices)

- 1) Awareness of changes among users
- 2) Experience in suspending administration of antidementia drugs, person who decided upon the suspension, and the reasons
- 3) Level of achievement of “introduction to specialist as needed”

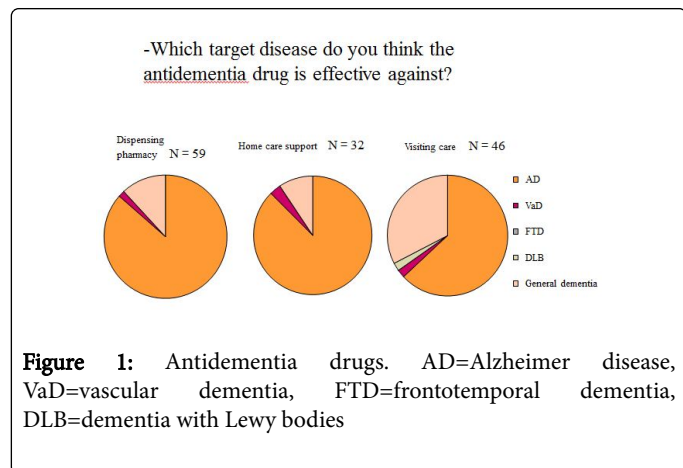
### Results

We received answers from 150/311 sites (48%), including 62/117 dispensing pharmacies (53%), 36/80 home care support offices (45%), and 52/114 visiting care support offices (46%).

#### Antidementia drugs

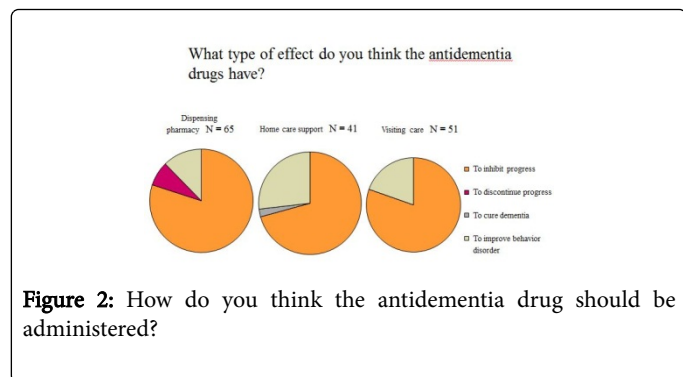
1) Which target disease is the drug effective against? (for the 3 subject categories). Figure 1 presents the results. The answers from the

dispensing pharmacies and home care support offices were generally favorable, but many visiting care support offices answered, “general dementia.”



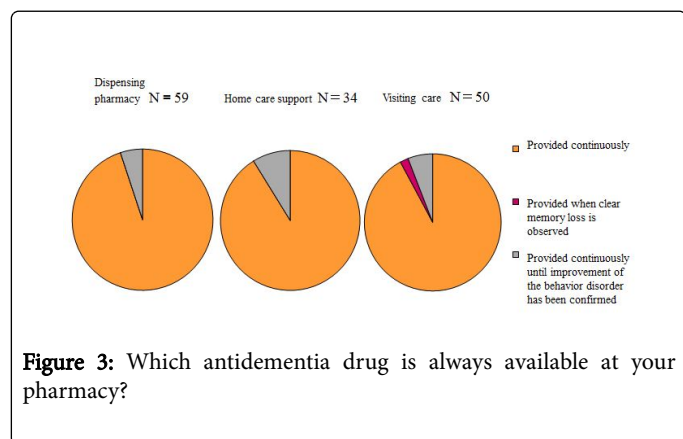
**Figure 1:** Antedementia drugs. AD=Alzheimer disease, VaD=vascular dementia, FTD=frontotemporal dementia, DLB=dementia with Lewy bodies

2) What type of effect does the drug have? (for the 3 subject categories). Figure 2 presents the results. Generally favorable responses were obtained for all 3 categories.



**Figure 2:** How do you think the antedementia drug should be administered?

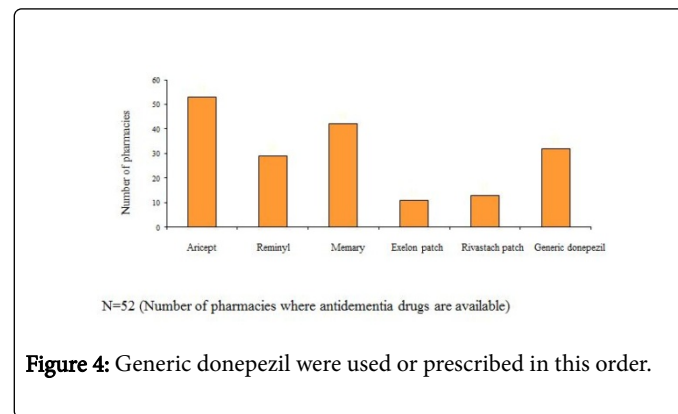
How is the drug administered? (for the 3 subject categories). Figure 3 presents the results. Generally favorable responses were obtained for all 3 categories.



**Figure 3:** Which antedementia drug is always available at your pharmacy?

The subjects who provided correct responses to all of the 3 questions mentioned above were considered as “knowledgeable,” which was confirmed in 23/36 home care support care managers (64%), and 31/52 visiting care support office staff (60%).

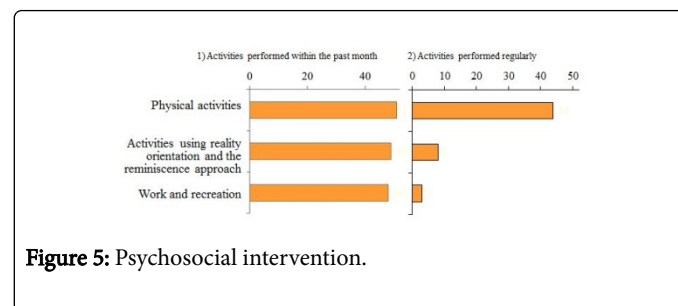
Are antedementia drugs always available? In such cases, respond with which types of drugs you can provide, in descending order of the number of prescriptions (only for dispensing pharmacies). Among 61 pharmacies, 52 pharmacies (85%) responded that antedementia drugs would always be available. The types of the drugs are shown in Figure 4. Donepezil, memantine, and generic donepezil were used or prescribed in this order.



**Figure 4:** Generic donepezil were used or prescribed in this order.

### Psychosocial intervention (only for visiting care support offices)

Activities performed within the past month or regularly. Figure 5 presents the results. All of “physical activities,” “activities using reality orientation and reminiscence approach,” and “work and recreation” were performed during past 1 month, but “physical activities” were most reported as regular activity.



**Figure 5:** Psychosocial intervention.

### Reasons for the intervention

Figure 6 presents the results. The most often reported response was “Reported that the activity would be good for physical and brain conditions”, followed by “users seem to be having fun.”

### Awareness of care managers (only for home care support offices)

Figure 7 presents the results. With respect to changes as a consequence of the dementia drugs, stable feelings, decreased wandering, improved motivation, elimination of delusion, decreased anxiety, etc. were reported. Changes by use of visiting care support offices included increased expressive appearance, normal circadian rhythm, stable feelings, improved motivation, etc. All of the care managers who responded “changed” by dementia drugs also suggested “changed” by use of the visiting care support office. Significantly more “knowledgeable” care managers for dementia drugs responded “no

drug effects,” compared with the “non-knowledgeable” care managers (square test,  $\chi^2=8.4$ ,  $\alpha<0.008$ ).

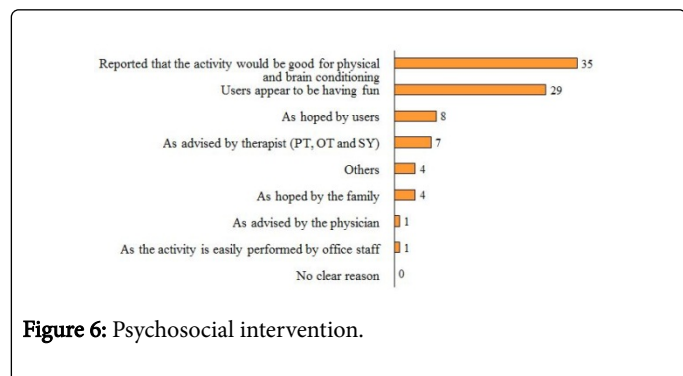


Figure 6: Psychosocial intervention.

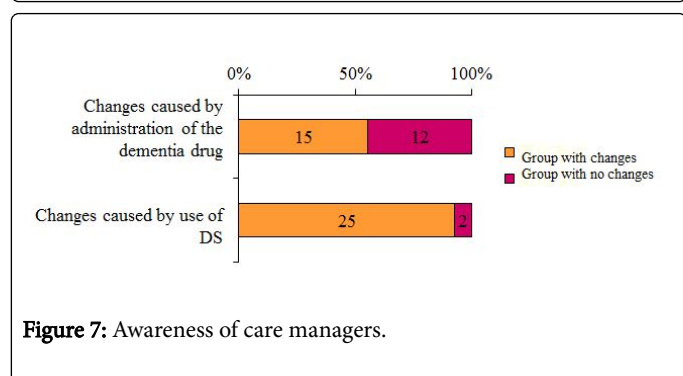


Figure 7: Awareness of care managers.

### Experience in suspending administration of antedementia drugs, person who decided upon the suspension, and the reasons

Among 34 offices, 16 offices (41%) responded that “We have experience in suspending the administration.” Nine subjects responded that the suspension was determined by “judgement of primary physician” for “side effects” and “worsened dementia,” while 6 subjects responded that the suspension was determined by “judgement of the family” for popular reasons, such as “unclear effects of the drug” and “worsened conditions after administration.”

	Physical activities	Work and recreation
Reality orientation+no reminiscence approach	Gymnastics, massage Power rehabilitation Mouth exercise Games with exercise Walking	Learning, crafting Mentally-challenging game Listening to the latest popular songs Singing of the latest popular songs Gardening
Reality orientation+emimiscence approach	Reality orientation/reminiscence +physical activity = “Festival!”	Confirmation of date, reminiscence approach Birthday party/seasonal event Conversation and activities in which the season can be felt Activities to enjoy long-forgotten music and dramatic performances Singing of long-forgotten songs

Table 2: Summary of psychosocial interventions.

### Level of achievement of “introduction to specialist as needed”

Achievement level in the group with “changed” by antedementia drug was 77.5%, which tended to be greater than the 55.5% in the group with “no change” (t test,  $t=-1.82$ ,  $p<0.1$ ).

### Discussion

#### Antedementia drugs

Knowledge about antedementia drugs was generally favorable, but further clarification will be required for visiting care support offices. For this, smooth communication will be necessary between physicians and care providers.

#### Psychosocial intervention

Among the interventions performed in visiting care support offices, “exercise” was most common. This might be confused with the evidence of exercise intervention for mild cognitive impairment (MCI) [10,11]. Therefore, feedback to magazines etc. used in the visiting care support offices will be essential.

#### Awareness of care managers

Knowledgeable care managers for antedementia drugs were not aware of changes in users as a consequence of drug administration. Since they knew that the drug might delay the progress of dementia, they might have difficulty being aware of changes in the users.

Furthermore, many care managers realized the effects of visiting a care support office, which might be reflected by the perceived effects of antedementia drugs. Care managers with less awareness of antedementia drug effects had less experience in introductions to a specialist, suggesting the potential for poor medical collaboration.

### Conclusion

Table 2 presents the details of psychosocial intervention. In the present situation, exercises are provided without reality orientation/the reminiscence approach, but “reality orientation/reminiscence approach + exercise” may provide a contact point between such circumstances and the activities that were reported to be effective for dementia.

For example, we would like to propose to arrange a local “festival” in which the experiences of the elderly would be useful, and this “exercise” could motivate the feeling of seasons and reminiscence and contribute to local development.

## Acknowledgement

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