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REVIEW ARTICLE

Mixed-methods research revealed the need for dementia services and Human Resource Master Plan in an aging Philippines

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Abstract

Objective: To determine the status of dementia care services and workforce in selected public and private hospitals and geriatric care facilities in the Philippines.

Study Design and Setting: Framework analysis of 54 key informant interviews, 4 focus group discussions, and survey of 167 workers in 26 purposively selected facilities.

Results: Three dementia care models emerged: (1) separate unit, seen in 2 facilities, (2) partial dementia services, 9 facilities, and (3) integrated with the general services, 15 facilities. Only 1 of 26 facilities had specific outpatient services; only 1 provided care exclusively to dementia patients. Community day care services were rare. Physicians, nurses, and nursing assistants were available in all institutions. Nutrition and physical therapy services were generally available. There was a scarcity of physician specialists (e.g., geriatrics) and occupational therapists. Half of the workers surveyed rated the quality of their service at 80 or higher, 27% defined dementia correctly. Attitude toward dementia was very positive, in the form of willingness to care for and willingness to learn more.

Conclusion: Mixed-methods research helped identify service and health workforce needs and elucidate understanding of health workers' attitude and perceptions toward a disease of which there is low knowledge and awareness.

Keywords: Dementia; Workforce; Philippines; Health Human Resource; Models of care; Geriatrics

1. Introduction

Worldwide, 47.5 million people have dementia, 58% live in low- and middle-income countries (LMICs). By 2030, the number of people with dementia is projected at 75.6 million and is expected to triple (135.5 million) by 2050. These accelerating numbers call for immediate action especially for LMICs where resources for health care are scarce [1].

Dementia is a chronic debilitating disease that requires costly long-term care [2]. There is no case registry of dementia and related disorders in the Philippines. Nevertheless, in an article on "Philippine Population and Dementia Projections" by Ogena, it is projected that population aging in the Philippines will involve a shift in share of dependents. Old-age dependents will increase from 17% in 2010 to 43% in 2045. In the same article, it is projected that more than a million dementia sufferers among senior citizens (age 60 years and older) in the Philippines are expected in 2040, which is nearly five times those in 2010.

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Challenges and Strategies

- Unlike high-income countries, many of the facilities for dementia and elder care were not government registered, and therefore a directory of services and facility information was not readily available. The researchers had to seek information from specialty physician groups (e.g., Philippine College of Geriatric Medicine and Philippine Neurological Association), Internet websites, advocacy groups (e.g., Alzheimer's Disease Association), and known nursing and physician practitioners.
- Unlike high-income countries, most of the facilities had no specific dementia services but had services for older persons. It was assumed that geriatric services for older persons would parallel services provided to persons with dementia.
- Many respondents in rural areas lacked general knowledge and understanding on what is dementia. Researchers had to explain the condition and discuss the general manifestations of dementia before proceeding with the interviews.
- A few survey forms were not returned, mainly because of the lack of administrative commitment to support such a study and fear of being negatively evaluated. This issue was discussed in the validation meetings with participating facilities.
- Lack of databases that provide sufficient information on dementia case prevalence and type of dementia. The authors used projections from World Health Organization (Prince) and Philippine population aging (Ogena). A national registry is currently recommended.

New cases of dementia are also expected to grow exponentially. The number of new cases of dementia in 2015 is expected to more than triple by 2045. In the next 35 years, it is expected that the proportion of dementia among senior citizens will increase from about 5% of dementia cases in 2010 to more than 20% by 2045 [3].

The World Health Organization (WHO) and the Alzheimer's Disease International (ADI) considered the disease a public health priority. They recommended a seven-stage model for dementia care [4]. Recognizing the limitations of LMICs, Prince et al. recommended a dementia care package for low-resourced settings [5]. Trained primary care teams were the main providers. Long-term care, integration with other health services, and linkages with community support programs for the elderly and disabled were emphasized.

There are no approved local guidelines on the care of patients with dementia. However, in 2015, the Alzheimer's Disease Association of the Philippines published its second book on Alzheimer's disease diagnosis, prevention, and management, but the contents are not adapted as guidelines [6].

The development of nursing homes in the Philippines is relatively new and unregulated. In 2012, the Department of Health (DOH) revised the classification of health facilities and added Level 2 Custodial Care, which includes nursing homes. Custodial care facilities are defined as providing long-term care, including the provision of ongoing health and nursing care due to chronic impairments and a reduction in the ability to perform activities of daily living [7]. Another recent development in 2013 is the inclusion of medical first case rate reimbursements for dementia and related diseases by the Philippine Health Insurance Corporation (PHIC) [8]. Under this scheme, hospitalization and professional fees are reimbursable for multi-infarct, vascular, presenile, and senile dementia. However, the PHIC has not yet issued a policy statement on quality standards for hospital-based care of dementia patients.

Research on preference on type of dementia care in the Philippines is not yet established. In 2013, the Philippine Council for Health Research and Development commissioned the State of the Art on Aging Research. This systematic review looked at published and unpublished researches on aging in the Philippines from 1980 to 2013. Of the 1,411 titles accessed, only 850 were available for abstraction, of which only 352 entries were of acceptable quality. There were only 32 abstracts on mental health, and none of these yielded studies on preference on type of dementia care [9].

Care coordination is at the cornerstone of dementia care services and support. The Alzheimer's Association guideline for dementia care facilities includes the following recommendations on staffing: Staffing patterns should ensure that residents with dementia have sufficient assistance to complete their health and personal care routines and to participate in the daily life of the residence. Consistent staff assignments help to promote the quality of the relationships between staff and residents. Direct care staff need education, support, and supervision that empower them to tailor their care to the needs of residents [10,11]. Community-based interventions, with the help of lay and nonmedical personnel, have been studied in prospective trials [12]. Although these targeted clinical depression and anxiety, demonstrable improvements were shown. These models may be adapted for care of dementia and support for their family members in resource-poor settings.

Patients with dementia, when hospitalized for acute illness, will need specialized and coordinated care. These include the need for liaison services, management guidelines for delirium (acute confusion and agitation), environmental design to limit confusion and agitation, fall prevention, pain management, medication management, and discharge planning [13,14].

There are no specific recommendations for dementia care in low-resource settings. The World Alzheimer's Report 2015 makes broad recommendations on policy and leadership, which includes workforce capacity building and support for family and caregivers. Further research in identifying barriers to dementia care was also recommended. It was also noted that there will always be a short supply of specialist care, and that "task shifting" or "task sharing" would be the likely approach. In the latter model, the task of dementia care will be mostly placed on primary care and community workforce, trained and supported by experienced specialists [15].

In the Philippines, dementia care is indirectly covered by Republic Act 9994, which stipulates the provision of an integrated health service for senior citizens and the establishment of a geriatric ward in every government hospital [16]. The Act formed the basis of a national plan for action that recognizes the importance of health workers trained for ward and long-term community-based care for the elderly [17]. However, the Act targets health care of the elderly in general. How the health and elderly facilities in the country provides dementia care is not known. It is important to assess these facilities and its workforce because like most LMICs, dementia cases are increasing in the country. In 2015, the number of people with dementia was estimated to be 301,000 and is expected to increase to 568,000 and 1,149,000 in 2030 and 2050, respectively [18].

This study aims to (1) describe dementia-specific services as to setup, administrative support, activities, and programs; (2) describe the training, attitude and self-perceived preparedness of the workforce; and (3) determine the attitudes and perceptions of facility administrators toward dementia; in selected health facilities in the Philippines.

2. Methodology

Fifty-four key informant interviews (KIIs), 4 focus group discussions (FGDs), and a survey of 167 workers using a self-administered questionnaire were done. Ethical approval was obtained from the National Ethics Committee.

2.1. Study settings and purposively chosen facilities

Four settings were studied: (1) government tertiary care facility, (2) private tertiary care facility, (3) government-operated institutions for the elderly, and (4) privately operated institutions for the elderly. In the Philippines, there are three levels of general hospitals. Level 1 hospitals have very limited capacity similar to infirmaries. Level 2 hospitals include level 1 services plus departmentalized clinical services, specialized units such as respiratory units, ICU, tertiary clinical laboratory, and second level x-ray. Level 3 hospitals, also known as tertiary care facilities, include level 2 services plus teaching/training, physical medicine and rehabilitation, ambulatory surgery, dialysis, blood bank, and third level x-ray (Health Service Delivery Profile, Philippines, DOH and WHO 2012). We only studied level 2 and 3 facilities because we expected these are the facilities with the capacity to provide specialty care to patients with dementia. In LMICs, privately operated facilities, in general, have better facilities than their government counterparts. Therefore, we included both types of facilities.

Although the norm in the Philippines is still caring for older persons at home by family members, there is an increasing practice of institutionalized care especially for patients with dementia because of the challenges of caring for them at home. Thus, we also studied institutions for the elderly, both government- and private-operated facilities. The DOH has issued an administrative order on the health and wellness program for senior citizens. This aims to deliver primary care screening and methods of referrals for potential dementia cases. However, the implementing rules and regulations have not yet been approved.

In the Philippines, there are 362 tertiary public hospitals, 417 tertiary private hospitals, and 55 elderly facilities. Of the latter, the government runs 6 facilities, and 49 are privately owned. A total of 26 facilities, 12 private and 14 government facilities, were included in the study.

For the three major island groups in the country, three public and two private tertiary facilities were purposively chosen from the lists of the DOH and Philippine Hospital Association (Table 1). A government hospital north of the Philippines was added. Facilities for the elderly were represented by five government-operated homes for the aged and five private facilities. These were chosen purposively to include the range of services for the elderly (such as long- and short-term care) from a list of facilities generated by consulting the Philippine College of Geriatric Medicine, Alzheimer's Disease Association, Dementia Society of the Philippines, Department of Social Welfare, and DOH. Internet databases were also searched using the terms Philippines, nursing homes, home for the aged, and geriatrics.

2.2. Data collection and analysis

We conducted KIIs of facility administrators and FGDs among workers. Administrators were not present during the FGDs of the workers. To obtain information from workers who may be shy to share their thoughts in a group setting, we also conducted a survey using a self-administered questionnaire.

2.2.1. Key informant interviews

The Director (or his representative) of 16 tertiary facilities and the person-in-charge of operations of the 10 elderly institutions were interviewed. All interviews were conducted by trained research staff using an interview guide with questions on (1) setup of dementia care in their facility including administrative support, (2) dementia

Table 1. Characteristics and reason for selection of the 26 facilities

Setting	Number in the list	Number in the study	Reason for selection
Tertiary public	362		
Luzon		4	1 national hospital (urban); 2 DOH (Department of Health) hospitals (1 urban and 1 rural); and 1 local government (LG)-managed teaching hospital (urban)
Visayas		3	1 regional teaching hospital; 1 DOH-retained; and 1 LGU-managed
Mindanao		3	1 DOH-retained and 2 LGU-managed
Tertiary private	417		
Luzon		2	1 with and 1 without existing geriatric centers/services
Visayas		2	1 without existing geriatrics services and 1 teaching hospital
Mindanao		2	1 teaching hospital and 1 nonteaching hospital
Elderly facilities	55		
Government	6	5	2 supervised by the Social Welfare Department and 3 local government models
Private	49	5	Long-term care facilities

Health Systems in Transition: Philippines Living HiT Update (WHO, 2013) http://www.wpro.who.int/asia_pacific_observatory/hits/series/phl_living_hits_4_2_1_infra.pdf

services and activities for people with dementia, (3) workforce complement, and (4) their perceived workforce readiness to care for people with dementia. Interviews were audio-recorded and transcribed. Responses were coded under aforementioned themes.

2.2.2. *Focus group discussion*

Facility administrators were asked to nominate workers who are involved in caring for dementia patients to join a FGD at the facility. The investigators conducted the FGDs while the research associate took notes. A total of four FGDs of four to seven workers were done.

Four FGDs were conducted using an FGD guide:

1. Among the multidisciplinary staff in a dementia unit or department of a tertiary hospital. We intentionally included two nurses from the dementia unit, one nurse from the geriatric unit, a speech pathologist, a psychologist, a research division staff assigned under aging and dementia, and one support services staff.
2. Among five workers involved in the care of the elderly in a tertiary institution where there is no unit or department offering dementia-specific services. Recommendations as to whom to invite for this FGD were obtained from the facility director.
3. Among the workers of a government center that provides services to older persons and persons with dementia.
4. Among workers of a privately operated institution for the elderly.

FGDs were composed of four to seven people and were facilitated by one of the investigators. Discussions were documented through note taking and audio recording.

Discussions were audio-recorded, transcribed, and coded under the same themes as the KIIs. All FGDs were conducted without the facility administrators to facilitate openness among the workers. Despite this, some workers may still hesitate to express their views in this group setting. Thus, we also conducted a self-administered survey.

2.2.3. *Survey*

All workers who are involved in caring for people with dementia in the 26 facilities were invited to participate in a survey. A pretested self-administered questionnaire with questions on the same topics covered in the KIIs and FGDs was done. This time focus is on the workers' perceived preparedness to care for people with dementia. Responses were summarized according to the themes of the KIIs and FGDs.

3. Results

From a total of 311 government hospitals, 26 facilities were included in the study. We purposively included 10 hospitals from the three major island groups: four in Luzon, three in Visayas, and three in Mindanao (see online Appendix for details of the 26 facilities). All selected government hospitals in the Luzon and Visayas regions were tertiary hospitals. Of the private hospitals, one tertiary and one secondary hospital were selected per region. As per protocol, we planned to have 61 KIIs and 200 survey respondents. Our response rates were 88.5% for the KIIs (54/61) and 83.5% for the survey (167/200).

A total of 54 administrators from 26 facilities were interviewed—23 are physicians, and 18 are nurses. There were eight social workers, a physical therapist, a psychologist, another with a graduate degree in medical physics, another with a bachelor's degree in biology, and an accountant.

A total of 167 workers (4–12 workers per facility) participated in the survey. More than a third of the workers are nurses, 30% are caregivers or nursing assistants, and 22 (13%) are physicians. There were six physical therapists and an occupational therapist. There were nutritionists, social workers, psychologists, and midwives. Sixty-one of these workers (36.5%) may be considered informal carers, care workers, or caregivers without formal or professionally accredited training in the care of patients. The work assigned to these informal carers included direct caregiving, assistance to nurses, administrative assistance, and houseparent duties.

Majority were females, 118 (71%). The mean age of 164 respondents (3 did not indicate age) was 34.2 years, and standard deviation (SD) is 11.4 years. The youngest was 19 years old, whereas the oldest, 65 years old. The mean length of service was 7.4 years (8.3 SD). The shortest was a little more than a month, whereas the longest, 39 years. Fourteen did not indicate length of service.

3.1. Models of care

Based on the description of dementia care setup by facility administrators, three models emerged: Separate dementia unit/center (S); partial dementia services offered (P); and no specific dementia services, care is integrated to general services (I). Only two facilities had a separate dementia care unit, both of which were private facilities. Nine facilities had partial dementia services.

More than half of the facilities do not have dementia care ($n = 15$, 57%). In these facilities, patients with dementia are admitted based on their medical diagnosis (e.g., Pneumonia) and are integrated to the general services. Only one tertiary facility had a separate unit for dementia. Two public hospitals provide partial dementia services by assigning designate beds for the elderly. Same models of care were identified from the results of the FGDs.

The interviews and FGDs both showed that apart from one private facility, none of the community-based elderly institutions had specific dementia services. However, there were efforts to separate dementia patients from other residents.

3.2. Services offered

Based on interviews of administrators, medication management was provided to patients in all institutions, except in one public elderly institution with an integrated model (Table 2). Although nutrition support was provided in all facilities, some facilities lack dieticians and nutritionists such that administrators perceived this as lack of nutrition support (2 public and 1 private elderly institutions). Comprehensive geriatric assessment was available in less than a third of the facilities. The 12 hospitals with the integrated model do not offer these services. Only four of the elderly facilities offer this service. Rehabilitative care was usually outsourced, and integrative medicine was inconsistently available. Specialist care was not available in the five public elderly institutions.

All elderly institutions provide long-term care. Day care programs were rare. Support for caregiver was offered in most institutions but only in the form of continuing education.

3.3. Workforce complement and administrative support

Interviews of administrators showed that physicians, nurses, and nursing assistants were available in all hospitals and private community-based institutions (Table 3). Three of five government institutions had physicians. Nutritionists were generally available except in government elderly institutions. Physical therapists were available in most private hospitals and elderly facilities, but only a few were employed in government hospitals. A scarcity of occupational therapists was evident across all care settings.

Table 2. Services (activities and programs) offered to patients, in public and private hospitals according to models of dementia care

Setting	Public tertiary		Private tertiary			Public elderly institutions		Private elderly institutions	
Model of dementia care (number of facilities)	P (2)	I (8)	S (1)	P (1)	I (4)	P (2)	I (3)	S (1)	P (4)
Services (activity/program)									
Comprehensive geriatric assessment	2	0	1	1	0	0	1	0	3
Specialist care (geriatrics, neurology, psychiatry)	2	8	1	1	4	0	0	1	4
Rehabilitative (physical, cognitive, behavioral)	1	5	1	1	4	0	1	1	4
Nutrition support	2	8	1	1	4	2	1	1	3
Medication management	2	8	1	1	4	2	2	1	4
Long-term care	1	0	0	0	0	2	3	1	4
Short-term care	2	8	1	1	4	2	2	1	3
Day care	0	1	0	0	0	0	0	1	1
Caregiver support	2	7	1	1	3	2	1	1	4
Integrative/alternative care	1	2	1	0	1	0	1	1	2

S, specific care for dementia; P, partial dementia services; I, no dementia service, integrated to general care.

Table 3. Number of facilities with available workforce complement by setting according to models of dementia care

Professions	Public tertiary			Private tertiary		Public elderly institutions		Private elderly institutions	
Setup (number of facilities)	P (2)	I (8)	S (1)	P (1)	I (4)	P (2)	I (3)	S (1)	P (4)
Physicians	2	8	1	1	4	1	2	1	4
Nurses	2	8	1	1	4	2	2	1	4
Nursing assistants	2	4	1	1	3	2	3	1	4
Physical therapists	1	5	1	1	4	1	2	1	3
Occupational therapists	0	1	1	1	0	0	0	0	1
Nutritionists	2	8	1	1	4	2	0	1	3

S, specific care for dementia; P, partial dementia services; I, no dementia service, integrated to general care.

The survey respondents showed a similar workforce complement. More than a third of the respondents were nurses; 30% were caregivers and nursing aides. There were six physical therapists, an occupational therapist, and 22 physicians (9 internists and 6 psychiatrists). Only three nurses had specialty training (2 in psychiatric nursing, one in gerontology). None of the therapists had specialty training.

More than a third, 61 (36.5%), were informal carers—caregivers without professionally accredited training. Some had health care training (midwifery), but some had none at all (had management and business courses).

Facilities with specific dementia services had the best administrative support. Private institutions received more support compared with government-run facilities. Support included approval of dementia programs, budgetary and administrative oversight, and training programs.

3.4. Workforce preparedness for attitudes and perception toward dementia care

Using 0–100 (best) scale, 51 interviewed administrators rated their workforce preparedness from 10 to 100, median of 50. The survey showed similar result—self-preparedness rating of 155 workers ranged from 0 to 100 with a median of 80. For administrators and workers, ratings in the tertiary hospital with a separate dementia unit scored highest ranging from 85 to 98 with a median of 85, whereas lower scores were seen in tertiary facilities with integrated services ranging from 40 to 100 with a median of 40.

A total of 123 surveyed workers (74%) had taken care of patients with dementia, and majority (90%) are willing to do it again. Their self-rated quality of care had a median of 50, lowest was 30, and highest was 100. Except for the fully trained staff in the facility with a separate unit, most (73%) never received training on dementia care, but majority (96%) were willing to train. Knowledge of dementia was very poor—only 27% of workers correctly defined dementia.

In the FGDs, the difficulties of caring for patients with dementia was a common theme. Nevertheless, the staff have learned that patience is key.

Participant 0902: *Number one is focus and patience, you have to be extremely patient [the nurse/caregiver] because sometimes they (patients with dementia) can be violent toward us.*

All participants: *Patience and more patience!* [chuckles].

Both FGDs and KIIs also showed that the role of the family and community are important in dementia care.

Participant 1101: *I think the best person to take care of a patient with dementia is a family member and they should not be institutionalized… The kind of care you give depends on their needs. For example, is there a problem in behavior or is it a memory problem? If the problem is impairment of activities of daily living, then the focus should be such. However, it is best if we also take care of family members or relatives of patients. Or they should be trained on how to care for patients with dementia.*

Key informant 0102: *The family has to be guided and supported. More than anyone else, they are the ones who deal with the patients on a daily basis. When the patient is discharge from hospital, we are no longer needed, except when they have to be readmitted.*

The interviews showed that a few administrators were hesitant to set up dementia programs. A common theme was that dementia as a secondary problem compared with other diseases, particularly, to more common, acute conditions.

Key informant 2001: *The lifespan of our patients is increasing. So these patients that we have, more (and more) will have dementia. I think it is neglected in society because we lack special services that cater to them… In our setup, [yes,] I foresee that [it will take a long time before establishing such services]. It's not the priority of the local government. The priority is more of the acute conditions.*

Key informant 0103: *We can't even afford the medicines. Unless we will transfer to the newly built hospital which has a 300 bed capacity… As of now, in my point of view, we cannot afford to apportion a certain ward or even 6 beds. For our medicine patients who are really sick, our ward is overflowing.*

Essential services are lacking, and cultural unacceptability of institutional care is common. However, most administrators noted that dementia care should be provided to

achieve quality health care for the elderly. However, several elements identified by the key informants have to be in place.

3.4.1. Maintaining an adequate number of well-trained personnel

Key informant 0201: *I don't think physical facilities and diagnostic equipment is a problem because we are slowly but surely acquiring all of these. I think it is really the expertise. The occupational therapist, maybe a geriatric specialist. Because it is not actually so easy to attract people from metro area to come to Name of Locality.*

Key informant 0403: *But our main problem is we lack manpower. There is not enough manpower to handle cases like that. The Name of Foundation has offered us a place for the elderly… The only problem is we don't have the people to assist us.*

3.4.2. Organizing services into a formal (national) program

Key informant 0401: *Actually the Department of Health has numerous programs. In our Center for Health Development, we have 42 programs—Rabies, BEmONC, newborn, diabetes, etc. We implement these even if we don't have the budget, when we receive a directive, we will provide the services for the good of the people in the community, so that is where our focus is: on the patient.*

Key informant 1602: *If you think about the situation now, I don't think they will give in because it's not a priority… There must be a mandate from the Department of Health, a circular…Because when DOH has such a project, it's usually integrated. For example, with the breastfeeding project, we're doing it with the mothers in obstetrics…So that's how I understand the concept of dementia. It's already there [and] it's just a matter of program [organization].*

4. Discussion

The mixed methods used in this research enabled us to overcome challenges in eliciting responses to questions about a disease of which there was low awareness and understanding. The conversational style of the FGDs enabled the frontline health providers to express their perceptions about and difficulties with dementia care. Ideas that were not yet concrete, such as future plans (especially the administrators), were articulated and further explored during the interviews. Quantitative methods, on the other hand, easily described the number, availability, and types of services. The self-administered questionnaires reached respondents who were more comfortable answering on their own.

The results of the research were able to point out to the lack of dementia facilities, services, and workforce. Day care and temporary inpatient care may provide support for families, but our study showed these services are rare. This is the case for other LMICs, with services concentrated in major cities [4]. The findings in this study will help support policies for the establishment of more community day care facilities for older persons, especially those with dementia.

The workforce shortages were identified in greater detail, and the roles of the informal carers were better understood. These details are important because demand for dementia care is expected to increase given the projected rise in the number of cases especially in LMICs. These informal workers play an important role in dementia care models proposed for low-resourced countries [4,5]. The total cost of dementia care in the Philippines has been estimated at 849.2 million US dollars, with 321.3 million spent in informal care, assuming that the caregiver spends 1.6 hours per day providing ADL care [18]. Primary care workers may be trained to provide these services. Community-based interventions for mental health delivered by lay health workers have been shown to be effective in LMICs such that these are being considered even for high-income countries [12] However, professional care by nurses and physical and occupational therapists are also important in providing holistic care to these patients. Results of this study will help guide the DOH, Department of Social Welfare, Commission on Higher Education, and academic institutions to include dementia care in the training of the current and future health workforce.

The WHO-ADI seven-stage model for planning dementia services includes prediagnosis, diagnosis, postdiagnostic support, coordination and care management, community support, continuing care, and end-of-life palliative care. Across these stages, effective coordination is important "for achieving improved quality of life for people with dementia and their caregivers" [3]. At the diagnostic stages, primary care case finding instead of a network of specialists is recommended in low-resourced settings [4]. Despite lack of specialists, efficient case finding may be achieved in the Philippines by training primary care workforce.

This study also showed the need for a Philippine Health Human Resource Master Plan for care of patients with dementia. This should include (1) enhanced dementia education of health professionals and caregivers, (2) training programs for nonmedical personnel, (3) use of telemedicine and distance learning, and (4) additional salaried positions with competitive employment packages. Future policies should go together with improved infrastructure, financing, formulation of local dementia guidelines and standards of care, enhancement of community support, and public awareness campaigns.

5. Limitations of the study

Purposive selection of the facilities may limit the generalizability of the results, but facilities were carefully chosen to represent different models of health care delivery in the country from private tertiary care facility with a specific dementia unit to government hospitals and elderly institutions

with scarce resources. Facilities were described as to level of care, management authority, and type of facility—these may even allow generalizability (although limited) to similar facilities in other LMICs. Quantitative methods could have been used to investigate, for example, different workforce and patient ratios in each of the care models.

Primary and secondary care facilities were not included because of budget and time limitations. Some institutions and key informants declined to participate because of concerns over privacy and confidentiality. These were replaced with institutions of similar characteristics. Validation was done only among participants in the National Capital Region due to logistical limitations.

6. Recommendations for future research

A case registry and a database of dementia cases are necessary to understand its true magnitude. There is a need to further understand the role and needs of informal carers, push-pull factors for allied professionals, and methods and models of enhancing quality care. It is also important to study the attitude of policymakers, funding agencies, business, and private organizations toward dementia care. Comparative effectiveness studies and family preferences on the venues of care, such as in-hospital vs. nursing home vs. outpatient/day care vs. home care, may help guide policymakers and service providers.

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Supplementary data

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