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Sri Lanka College of Psychiatrists Annual Academic Sessions 2007

College Oration

Dementia in Sri Lanka

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Dementia in Sri Lanka

President, Dr. Harischandra Gambheera, and the Council, Sri Lanka College of Psychiatrists, Prof. Nalaka Mendis & Prof. Chithra Mohan, President and Vice President of South Asian Forum International, Dr. Sherva Cooray, President, Sri Lankan Psychiatrists Association UK, Dr. Afzal Javed, President, WPA Section on Developing Countries, Guest of Honour, Dr. Athula Kahandaliyanage, Secretary, Ministry of Health, Chief Guest, Honorable Sarath N. de Silva, Chief Justice of Sri Lanka, My dear Teachers, Colleagues, Friends, Ladies and Gentlemen,

I am privileged and honored today to deliver the College Oration 2007 to this distinguished audience.

Dementia in Sri Lanka

Introduction

Dementia is derived from the Latin word [de = out from+ mens= the mind], meaning loss or impairment of mental powers due to disease.

The changes caused to the mind due to old age were recognized as early as Shakespearean times.

> "Pray do not mock me:
> I am a very foolish fond old man,
> Four score and upward, not an hour more nor less;
> And, to deal plainly,
> I fear I am not in my perfect mind."
>
> Act 4, Scene 7:60-70
> "King Lear"
> William Shakespeare, 1606

Dementia is defined as generalized impairment of intellect, memory and personality without impairment of consciousness[1], with resultant impairment in functioning to the individual and causing distress to the family members and loved ones.

It is an acquired, progressive and irreversible reduction in the levels of previously attained intellectual, memory and personality/ emotional functioning. The main clinical features include,

- Clear consciousness
- Disturbed behavior (disorganized, inappropriate, distracted restless and anti social)
- Lack of insight
- Impaired thinking (slow, impoverished, incoherent and rigid)
- Poverty of speech
- Low mood
- Poor cognitive functions (forgetfulness, poor attention, disorientation in time and later in place and person)
- Impaired memory

International Classification of Diseases 10, chapter on Classification of Mental and Behavioral Disorders (WHO Geneva, 1992) recognizes Dementia as a separate entity (F00 – F03)[2]

Sub categories include,

F00 Dementia in Alzheimer's disease.

F00. 0 Dementia in Alzheimer's disease with early onset
F00.1 Dementia in Alzheimer's disease with late onset
F00.2 Dementia in Alzheimer's disease with atypical or mixed type
F00.9 Dementia in Alzheimer's disease, unspecified

F01 Vascular-infarct Dementia

F01.2 Sub cortical vascular Dementia
F01.3 Mixed cortical and sub cortical vascular Dementia
F01.8 Other vascular Dementia
F01.9 Vascular Dementia, unspecified

F02 Dementia in other diseases classified elsewhere

F02.0 Dementia in Pick's disease
F02.1 Dementia in Creutzefeldt- Jacob disease
F02.2 Dementia in Huntington's disease
F02.3 Dementia in Parkinson's disease
F02.4 Dementia in Human Immunodeficiency Virus (HIV) disease
F02.8 Dementia in other specified diseases classified elsewhere

F03 Unspecified Dementia

A fifth character may be used to specify Dementia in F00 – F03,

.x0 without additional symptoms
.x1 other symptoms, predominately delusional
.x2 other symptoms, predominately hallucinations
.x3 other symptoms, predominately depressive
.x4 other mixed symptoms

ICD 10 describes Dementia as a disorder, for diagnosis, which require evidence of a decline in both memory and thinking which is sufficient to impair personal activities of daily living. The impairment of memory typically affects registration, storage and retrieval of new information, but previously learned and familiar material may also be lost, particularly in later stages.

Although most symptoms revolve around decline in memory, Dementia is more than dysmnesia, as it impairs thinking and reasoning capacity and a reduction in the flow of ideas. The processing of information is affected, and the individual finds it increasingly difficult to attend to more than one stimulus at a time.

For diagnosis, symptoms and functional impairment in clear consciousness, for at least six months is needed. However often a double diagnosis of Delirium superimposed upon Dementia is common.

I would not go into details of sub types of Dementia, pathology, and clinical picture of each sub type, as I intend to focus on Dementia diagnosis and management in Sri- Lankan context.

Elderly Population in Sri Lanka

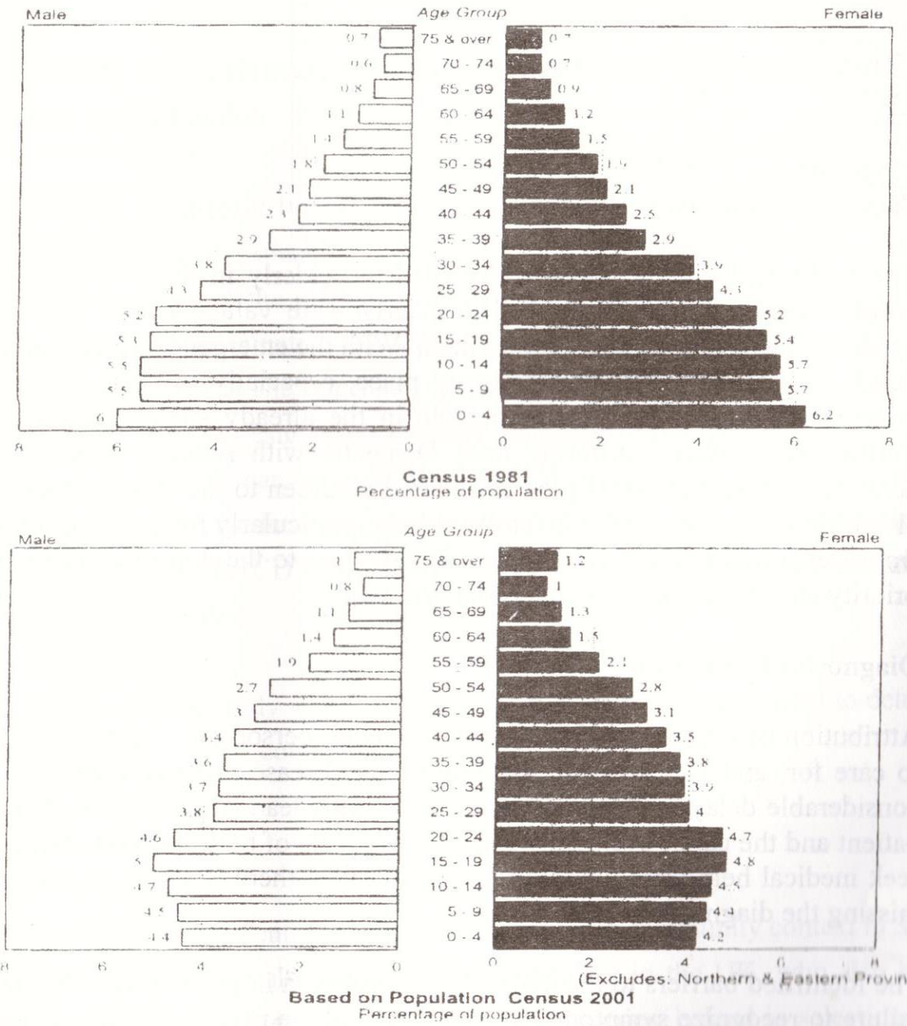
It had been estimated that approximately 70% of world's population aged 60 and above, will be found in developing countries in the year 2020[3]

The percentage of the population aged over 60 years in Sri Lanka is expected to increase from 8% in 2003, to 13% in 2010 and 21% in 2025[4], accordingly the number dementia sufferers in the country is bound to increase.

According to Annual Health Bulletin 2002, based on population census 1981 to 2001, population aged 65 and over has increased from 4.4% to 6.4 %[5]

Fig 1: Population characteristics 1981 and 2001

Fig 1.2 - Population of Sri Lanka by Age & Sex, 1981 & 2001



Source: Department of Census and Statistics

Life expectancy at birth too has increased in Sri Lanka. Accordingly, a substantial increase of problems related to old age is expected.

Table 1:Expectancy of life at birth 1946-2001

Year	Male	Female
1946	**43.9**	**41.6**
1953	58.8	57.5
1963	61.9	61.4
1967	64.8	66.9
1971	64.2	67.1
1981	67.8	71.7
1991-1996	69.5	74.2
1996-2001	**70.7**	**75.4**

Source: Annual Health Bulletin, 2002

The traditional cultural system identified the elderly in the family as the cornerstone of the family unit. The elderly were valued by the younger generation who sought advice from them. With the emergence of the nuclear families elders lost this well deserved place, especially in urban and sub urban settings making them vulnerable in the already stretched families. Further more, elders suffering from Dementia with reduced capacity to contribute, would eventually be considered a burden to the family. There is also lack of services available for the elderly, particularly for those suffering from Dementia. In this context, planning services to the demented is a high priority and diagnosing patients is the first step.

Diagnosis of dementia

Attribution of symptoms of Dementia to ageing, personality, being difficult to care for, and lack of understanding of the disease process, constitute a considerable delay in seeking medical help. This leads to suffering of both patient and the carer, eventually traumatizing lives of both Even if relatives seek medical help from a primary care physician, there is a 50% chance of missing the diagnosis.[6]

The identified barriers to the diagnosis of Dementia in primary care include failure to recognize symptoms, limited time and the perceived lack of need to determine a specific diagnosis.

Further, symptoms of Dementia often misunderstood as influenced by external forces for e.g. super natural forces. Seeking help for these ailments has a wide spectrum due to availability of different medical systems in the country, for e.g. Ayurvedic Medicine. In this context, detection of dementia in the community setting and planning a care model, which is suitable to Sri Lanka, is a significant challenge.

From here, I would like to describe the process of selection of a suitable tool to detect Dementia patients in Sri Lanka, in the community setting.

Community research on selection of a suitable tool to screen Dementia patients in Sri Lanka

In developed countries different assessment tools have been used with a wide range of sensitivities and specificities. The most suitable instrument for each country will vary according to the different cultural and educational back ground. The Mini Mental State Examination (MMSE) is a widely used instrument especially in screening of Dementia. The Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE) is designed to measure cognitive impairment depending on informant's reports. It can be used in all patients irrespective of their physical condition or level of education, provided an informant is available. Clinical Dementia Rating Scale (CDR) is a rating scale and can be used for serial measures of cognitive impairment.

The objective of the study was to select a suitable screening instrument to detect dementia patients in the community setting.

Research Method

Three screening instruments were selected to test in the community context in Sri Lanka. A consultant in old age psychiatry practicing in the UK, who also has research experience on dementia in developing countries, helped in selection of instruments. MMSE, IQCODE, and CDR were selected as screening instruments.

IQCODE is a questionnaire administered to an informant about changes in the cognitive function of an elderly person in day-to-day activities. It comprises 26 questions aiming to assess general cognitive decline independent of previous ability. Standard cut off score of > 4 is used to screen patients with dementia[6].

MMSE consists of 11 questions with a maximum score of 30 points, with different domains assessed: orientation in time and place (10 points), registration of three words (3 points), attention and calculation (5 points), recall of three words (3 points), language (8 points), and visual construction (1 point). The score of less than 23 was taken as the standard cut off point for dementia.

CDR is a global measure of dementia where 6 domains are assessed: memory, orientation, judgment and problem solving, community affairs, home and hobbies and personal care. CDR ratings are, 0 for healthy people, 0.5 for questionable dementia and 1, 2 and 3 for mild, moderate and severe dementia respectively.

The MMSE, IQCODE and CDR were translated into Sinhalese and re-translated in to English by an independent person and matched for consistency. Minor changes in the questionnaires were made in order to make the questions more culturally acceptable. A team comprising of 2 psychiatrists, a community physician, a psychologist and a lecturer in social work did this. The questions were validated

using nominal group technique[7]. The instruments were administered to 10 patients of the Colombo South Teaching Hospital to refine the questions.

The study was conducted at Boralesgamuwa and Raththanapitiya, a sub-urban area in Colombo district. This area was selected as it is already mapped, has similar characteristics to other sub-urban areas of the country and was easily accessible to the researches. A serially numbered database that included all the households in this area, maintained at the department of community medicine of the University of Sri Jayewardenepura served as the sample frame. All households with individuals of 65 years or over were selected from this database and a stratified, computer-generated random sample of 400 house holds were selected as the study population. The survey identified 400 people > 65 years of age, of which 363 (90.8%) were available for detailed evaluation.

Ethical clearance was obtained from the Ethics Review Committee of the Faculty of Medical Sciences, University of Sri Jayewardenepura and informed consent obtained from all the participants.

The study was conducted in two phases. During Phase 1, 400 subjects c" 65 years of age in the study sample were traced by a door-to-door survey. A medical doctor trained by a consultant psychiatrist administered the study specific questionnaire, along with the three study instruments to identify subjects with cognitive impairment. Those who were severely ill, unable to communicate or had visual/ hearing disabilities were excluded.

In phase 2, a sample of 40 individuals was selected for evaluation by 2 psychiatrists. This was a concentrated sample of individuals, who had scores ranging from normal to severe dementia on the rating scales. Two consultant psychiatrists evaluated these patient blindly and independently to identify the most suitable instrument to be used in the Sri Lankan setting.

The data were tabulated and analyzed using the SPSS version 10.0 computer package.

Results

From the 400 households randomly selected 363 individuals over the age of 65years were available for detailed evaluation. The rest included those with hearing and visual impairment, those unable to communicate and who could not be traced despite effects made on repeated visits.

Of the 40 patients selected for evaluation by psychiatrists 3 were not available for assessment due to death and change of place of stay.

From the 37 patients evaluated 14 were diagnosed clinically as definitely having dementia. Independent evaluation by the 2 psychiatrists correlated perfectly with no discrepancy in their diagnosis.

The sensitivity, specificity, and positive and negative predictive values were calculated using clinical assessment by the psychiatrists as the gold standard. Table 2 depicts these results.

Table2. Comparison of the three instruments using clinical assessment as the gold standard

Instrument	Cut-off point	Sensitivity%	Specificity%	Positive predictive value	Negative predictive value	Likelihood ratio
IQCODE	>3	100.0	0	37.8	0	1.0
	>3.5	**71.4**	**82.6**	**71.4**	**82.6**	**4.1**
	>4	42.8	95.6	85.7	73.3	9.8
CDR	>0.5	85.7	17.4	38.7	66.6	1.0
	>1	57.1	86.9	71.7	76.9	4.3
	>2	28.6	95.6	80.0	68.7	6.6
	>3	21.4	95.6	75.0	66.6	4.9
MMSE	<17	35.7	91.3	71.4	70.0	4.1
	<20	50.0	82.6	63.6	73.0	2.8
	<23	64.3	65.2	52.9	75.9	1.8

Table 3 depicts comparison of 3 instruments as observed by the researchers.

Table 3. Comparison of selected factors of the study instruments

	MMSE	IQCODE	CDR
Time for administration	About 10 minutes	10-15 minutes	>40minutes if previous clinical details are not available
Administration of the instruments	By interviewer (some training desirable)	By interviewer	By clinician/Trained personnel
Need for informants	Not necessary	Essential	Essential
Limitations of use	Impossible to use in those with hearing/visual disability and illiterate persons	Can be used for all patients provided informants are present	Difficult to use in those with hearing/visual disability.
Observation by the researchers	Not wholly culturally acceptable	Culturally acceptable	Not wholly culturally acceptable
Observation by the researchers	Easy to use	Easy to use	Difficult to use

Out of the 363 individuals assessed, 22 scored above the cut-off 3.5 on the IQCODE giving a 7.12% prevalence rate of Dementia, in the population studied.

The analysis of the age and sex-specific prevalence rates was done only on 308 individuals, as the actual age of 57 individuals could not be verified.

The age and sex specific prevalence rates of dementia suing the cut-off point of 3.5 in the IQCODE are given in Table 4.

Table 4: Age and Sex prevalence rates of dementia using IQCODE cut off of > 3.5.

Age (Years)	Male	Female	Total	Dementia cases			Prevalence / 1000		
				Male	Female	Total	Male	Female	Total
60-64	20	31	51	4	3	7	200.0	93.7	134.6
65-69	39	42	81	3	2	5	76.9	47.6	61.7
70-74	38	43	81	0	3	3	0	69.7	37.0
75-79	13	30	43	0	0	0	0	0	0
>80	25	27	52	5	2	7	200.0	74.0	134.6
Total	135	173	308	12	10	22	88.8	57.4	**71.2**

The demographic data including marital status, with whom the patients live, previous occupation, monthly income, smoking, level of education, alcohol consumption, mothers age at birth and social activities showed no statistically significant correlation with the risk of dementia.

No association was found with the family history of dementia.

Association of dementia with other selected medical conditions such as stroke, diabetes mellitus, hypertension, history of treatment for psychiatric disorders, history of thyroid disease, history of Parkinson's could not be obtained due to the incidence of these in the study population being too small for accurate analysis.

Discussion

IQCODE was found out to be the most effective and culturally acceptable instrument, which can be recommended for screening of Dementia in the Sri Lankan setting. IQCODE with a sensitivity of 71.4% and a specificity of 82.6% at a cut off point of 3.5 correlated best with the psychiatrist's assessment of dementia taken as the gold standard. It also had the advantage of being simple, easy to administer and to interpret. IQCODE had a higher sensitivity than CDR. This is comparable to similar studies, where IQCODE was shown to be as good as the MMSE in the diagnosis of dementia [8,9].

In Sri-Lanka, although the extended family system is on the wane, reliable informants are still available. This facilitated the use of IQCODE, which is based on informant reports and is culturally more acceptable and reliable. Nevertheless, informant bias will still be there[10]. Studies have showed that the informant's personal characteristics contribute to contrasting results between the informant's report and direct assessment of activities of daily living in patients affected by mild and very mild dementia. IQCODE is a screening test and those who are found to be positive, should be subjected to a clinical assessment to confirm the diagnosis.

MMSE has the advantage of being quick, easy to use and acceptable to both patient and the assessor, without the need for informants to be present. It is impossible to use, on patients with hearing impairment or blindness or those who are illiterate. MMSE has been used to screen for dementia in the primary care setting worldwide. However in this study, when the cut-off score of 23 was used, the specificity was 65.2% and sensitivity 64.3%. De Silva used a cut - off 17 yielding a specificity of 84.6% and sensitivity off 93.5%[11]. The differences could be due to methodological discrepancies.

Correlation of CDR with the psychiatric assessment showed a specificity of 86.7% and low sensitivity (57.1%) when the standard cut-off of > 1 was used. The use of CDR is already a gold standard for the clinical rating of dementia with the advantage of being applicable in a wide range of mild to more severe stages of dementia[10]. It is time consuming with the need for detailed knowledge of the individual patient and requires administration by trained personnel. It is mainly used as a clinical rating scale and distinguishes healthy individuals from those with dementia.

IQCODE was found to be the most culturally acceptable instrument, which can be recommended for screening of dementia in the Sri-Lankan setting.

CDR and MMSE could also be used to screen for dementia in Sri-Lanka with due consideration of the advantages and disadvantages of each.

Prevalence of Dementia

The population studied depicted a prevalence of 7.12% when screened for dementia using a cut-off point of >3.5 in IQCODE. It is comparable with the global estimated values though there is a male preponderance in this sample. In general, estimated rates from Asian nations have been somewhat lower than from west[12]. De Silva reported 3.98% prevalence of Dementia in a semi-urban population in Sri Lanka and explains the actual prevalence could be higher in that study[13]. The variations in reported prevalence of dementia in various countries might be explained by the methodological differences in case detection and classifications used in these studies.

The increase in prevalence of dementia with increasing age and the female preponderance was not evident in this sample.

Demographic factors showed no association with dementia in the population studied. The other parameters including the health status indicators and family history of dementia could not be analyzed due to the low incidence of such factors in the population studied.

All patients with dementia detected in this study were looked after by their own family members, some facing many inconveniences. Though assessing caregivers burden was beyond the scope of the present study, emerged observations showed that this component needed to be addressed sooner than later. The burden of care was compounded by their lack of awareness about the disease and care giving strategies. These observations initiated the publication of booklets on dementia giving essential information to help improve quality of life for both patients and the caregivers [14,15]. The booklet on dementia describes clinical features, causes of the disease, effects of dementia, recognition of the disease, diagnosis, advise on improving day today activities and preparation for the future.

The handbook for caregivers gives a description on dementia, indicators to diagnosis, doctors' responsibility, caregivers' responsibility, importance of paying attention to caregiver's health, limitations of caregivers and answers to commonly asked questions. HelpAge Sri Lanka did Printing and distribution of the booklets. Copies were posted to the households with Dementia patients detected by the study.

Management of Dementia patients in Sri Lankan Setting

Detection of dementia as a disease entity is an important and urgent task in the management of these needy individuals. Nurses, Family health workers, General practitioners need to be trained in detection of dementia using screening instruments developed.

This could be achieved by adopting a systematic approach. Now I will describe the screening, diagnosis, management of patients and training needs.

Screening for Dementia

From the Ministry of Health, all the Medical Officer of Health (MOH) and Medical Officers of Mental Health (MOMH) are trained to use IQCODE and MMSE. They in-turn could train Public Health Sisters, Nurses, Inspectors and Family Health Workers in their respective area. Their views could be obtained to develop a protocol to screen suspected dementia patients in the locality. In protocol development, it is very important to include views of Dementia patients those who have the capacity to contribute and carers of mild, moderate and severe dementia patients.

The same method could be used with physicians and general practitioners to train to use instruments as well as to develop protocols for screening, which is suitable for their profession and psychiatrists could assist them.

Diagnosis of Dementia

The second step would be to establish a diagnosis of dementia, investigate for reversible causes and to detect the subtype of dementia. This is a specific task and needs expertise and resources.

To achieve this end, there should be properly planned referral centers at least one in each province.

One way of achieving this is to develop one psychiatric unit of the province as a center, which could manage dementia referrals from various practitioners.

This requires a psychiatrist in each province, with the capacity to diagnose and manage dementia patients and also with adequate staff and resources to carry out his/her function effectively. Along with this a good referral system need to be developed, which has to be initiated by the psychiatrist, who is knowledgeable about local links, strengths as well as possible obstacles in achieving the goal.

Designing a clinic for the senior citizen in the psychiatric unit is the next step. The clinic should have adequate space to accommodate senior citizens. Rails, ramps, toilets and waiting areas have to be designed properly to cater to this need. Provision of psychiatric care across the life cycle is not a novel feature to Sri Lanka and could be achieved, if properly planned[16]. Thus, considerable time and effort should go in to planning process with adequate stakeholder participation.

These units should have easy access to investigative procedures, as effort should be made to diagnose reversible causes of Dementia. Space should be available for a thorough physical examination and easy access to laboratory facilities to do investigations including UFR, FBC, VDRL, Thyroid, Liver and Renal profiles. ECG and X-Ray facilities and investigating for HIV/AIDS are also requirements. Usually these investigative procedures are available in all provincial hospitals. Vit B12 and Folate levels need to be done and if facilities are not

available blood picture would be helpful. Facilities to carry out CT and MRI scans are a necessity that needs to be addressed.

The doctors and the nursing staff of the unit need to be trained to obtain collateral histories from relatives. This component should be an integral part in the development plan. With the availability of more human resources, occupational therapists, psychiatric social workers and psychologists, these members of the multi disciplinary team could be given specific tasks in the assessment of activities of daily living, assessing home situation including safety and detailed cognitive assessment. Further research in this aspect is essential, as most of the work in these specific areas come from developed countries, where social setup and needs are much more different. Each patient should be assessed in medical, psychological, social and spiritual dimensions. Expertise to train MDT could be drawn from the developed as well as developing countries, and this task could be greatly facilitated by the Ministry f Health.

Management

Once assessed by the multi-disciplinary team (MDT), considering all aspects, a proper management plans needs to be developed to help each and every patient and their family. Use of medication, symptom management, and treatment of co-morbid conditions, educating family, and support for caregivers are important facets in the management.

In this scenario, multidisciplinary team involvement is mandatory as they could carry much of the educational activities out. Carer support groups could be developed locally with the help of existing organizations. Two booklets on dementia that have been developed could be used in this respect.

In this country, family is the main resource in looking after the demented, and has to be acknowledged and supported properly. Practical help for the family is virtually non-existent in Sri Lanka, and has to be born in mind by every practitioner and policy maker.
I would not propose a plan in this delicate area at the present time and context, since it needs a thorough evaluation of carers needs.

So far, I have discussed management of dementia patients who have families to look after them. In other words these people have a carer who could

follow instructions, able to bring them to the service delivery point, and are in some financial standing to arrange transport to the elderly.

What is the plight of people who do not have this strength?
Now I focus on this group of patients who needs a shelter and a designated carer by the state or otherwise.

Shelter and care for the demented without a family

Residential homes are reluctant to admit difficult patients, hence demented are eliminated at entry point. Therefore properly set up centers to cater to this group of patients is of vital importance. In this regard, insights could be drawn from countries where established services are available.

In the developed countries following local resources are used in the care of the elderly demented patients.

Respite Care

Publicly or privately paid temporary care to relieve primary care givers.

Day Care

Private or state run programs that provide a safe, structured setting that helps maintain functioning in the affected relative which provides respite for the care giver.

Foster Care

Private individuals or non-profit organizations maintain houses and provide care for one or more impaired persons.

Meals on Wheels

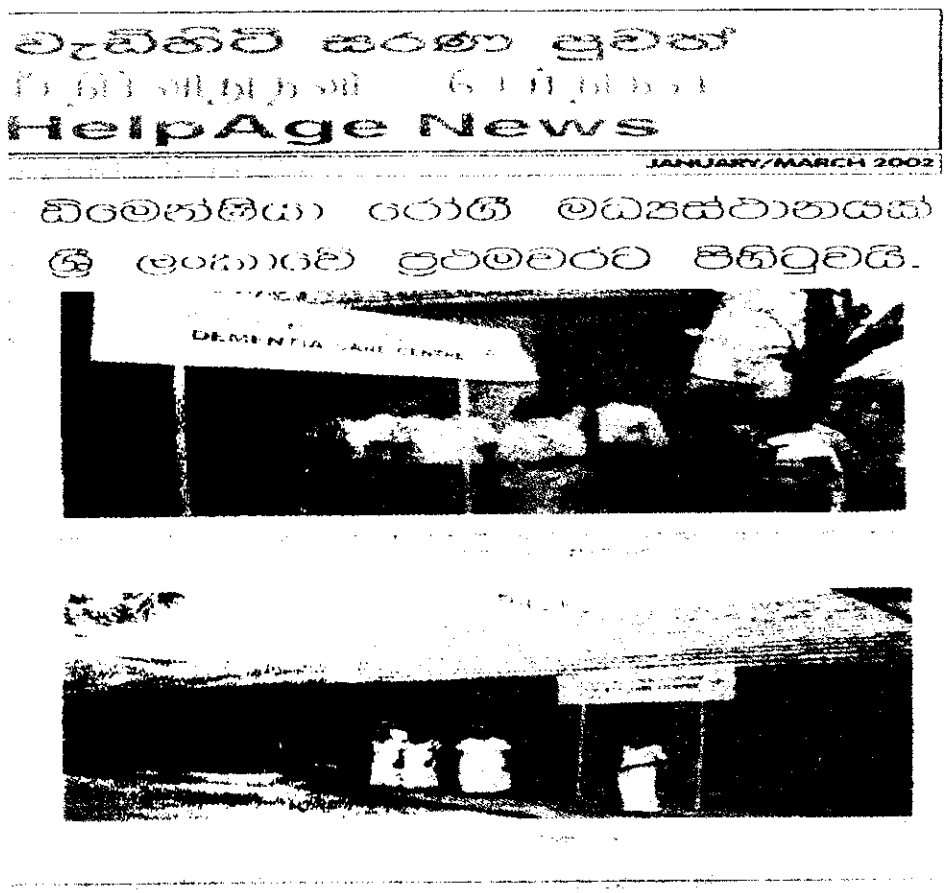
Provides an opportunity live in his/her accommodation for a longer period of time, even without capacity to prepare a meal for self.

Case Manager and Service Coordinator

In recent years a number of people, often social workers, assist the families of cognitively and/or physically impaired persons with identifying and coordinating needed services.

In Sri Lanka, all these are not applicable since some of the facilities are not available or not suitable to the local setting.

In Sri Lanka, 1st residential care center for dementia sufferers was established at Mallika Home, Colombo 4, for female patients in 2002. 10 were enrolled and 8 are still living, enjoying relatively good health. 2nd center was established at Bambalapitiya. Both these had inputs from HelpAge, Sri Lanka. The Department of Psychiatry, University of Sri Jayewardenepura. provided technical support in development of the centre and the psychiatric unit of Colombo South Teaching Hospital, provides medical care to patients. In this regard, a medical officer visits Mallika Home once a month. At present the center provides training opportunities to both undergraduates and postgraduates in psychiatry.


HelpAge News
JANUARY/MARCH 2002
DEMENTIA CARE CENTRE

Development of such centers at least one for each province that caters to both genders is an important task, which needs proper planning. Psychiatrists and physicians could provide valuable expertise to responsible organizations in this regard. This partnership is vital to care for these patients

Training

Training at different levels again needs planning. Arranging in service training for psychiatrists is the first step.

Postgraduate training should de strengthened to include old age psychiatry. It is not very difficult to find overseas placements in old age psychiatry for those who are successful at MD Part 2 examination. At present, among other requirements, it is a requirement of the Postgraduate Institute of Medicine for trainees to receive one year overseas training, after MD Part 2. Upon return to the country, trainees could bring knowledge and experience to develop local services. Some of the services in the west are inappropriate to local setting, taking into consideration the local scenario. Adapting some aspects in care delivery is possible, however, this needs wisdom to evaluate which is beneficial for Sri Lanka.

Nurses, occupational therapists, psychologists and psychiatric social workers need to focus on their training needs. I do not believe that training of such professional groups in assessing and managing dementia patients is a task of medical profession. Initiative should come from the professional group. However, medical profession could help in such programmes, with their expertise, without taking over the sole responsibility. Thus, the task of training would be manageable to the medical profession, who is already stretched with numerous other obligations.

The same principle applies to training of caregivers and staff of organizations too.

I have described need of detection of Dementia, community screening, screening instruments available, diagnostic procedure at local level, service development, need for care to the demented without families, support to care givers, Management of Dementia patients by multi-disciplinary team and training needs of all sectors. Now I would like to summarize and conclude my oration.

Summary and conclusions

Elderly population is on the increase and Dementia in Sri Lanka is an important segment in the health care delivery system, in the new millennium.

Careful assessment of strengths and weaknesses of the existing system and views of stakeholders is important in planning services.

Much of the work could be initiated and sustained at local level, provided adequate support is given from the Ministry of Health, and other responsible organizations. Thus, I propose a bottom-up approach, in place of a top-down approach, which is not so familiar to Sri Lanka.

Research in to local needs, collaboration with the stakeholders and adapting from already developed suitable work in the country and other countries are important points to remember.

Caring for the demented in Sri Lanka in a systematic manner is a dream at present. To make this dream a reality, considerable effort is needed. Knowledge, wisdom, true partnership and collective effort are needed to achieve this goal.

If this dream becomes a reality, Sri Lanka could be a model to many nations in providing care to demented.

My vision is to achieve 20% of the task in 2020, by which time some of us would be in the age group in which dementia is prevalent.

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