Action Plan Alzheimer's and Other Dementias
Action Plan Alzheimer's and Other Dementias, Mexico 2014
WORKGROUP

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Dedication

Alzheimer's disease and related diseases progress inexorably with age. From the 85-year-old woman in 4 and a man of every 5 they are affected by them; in total, it is estimated that more than 800,000 Mexicans today suffer any these conditions. Thus, the World Health Organization recognizes it as a priority in Public Health.

Facing the triple scientific, medical and social challenge this represents, the National Institutes of Health -led in this case by the National Institute of GERIATRIC-, the National Institute for Older Persons and the Mexican Federation of Alzheimer prepared this Plan action to address these diseases with specific means.

Focused on the sick person and his family, the Plan aims to promote an unprecedented effort on prevention, promoting early diagnosis and support to patients and their caregivers.

During our work in preparing the Plan, we never forget those for whose welfare we have been developing: people with Alzheimer's disease and related dementias and their families. All members of the working group devoted a significant of our daily to these patients efforts, therefore no exaggeration to say that affects us too and we therefore recommend a deeply humanistic and compassionate approach centered on the person concerned the quality of care.

Therefore, this report is dedicated first and foremost to the people affected by this scourge -a whom we respect and excellence in care under any circumstance-as well as members of their families who support them in the day with affection, courage and often at great sacrifice.

Also we dedicated to all members of health services, whose professionalism and dedication are key to the implementation of the Plan of Action; and non-governmental organizations involved in caring for these people, under the aegis of the Mexican Federation of Alzheimer whose members generously contribute their time and energy; and researchers who, driven by the vision of future therapeutic success, strive for a better understanding of the disease in all its forms.
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WORLD AGAINST DEMENTIA
The world population is aging rapidly, which is largely due to the improvement in health care during the last century, translated into longer lives and healthy. However, this achievement has also resulted in an increase in the number of people with noncommunicable diseases, including dementia.

The prevalence and incidence projections indicate that the number of people with this condition will continue to grow, particularly among the elderly and that countries in the process of demographic transition are those who experience the greatest increase in cases. It has been estimated that globally, in 2010 lived 35.6 million people with dementia, and it is expected that this figure will double every 20 years, reaching 65.7 million in 2030 and 115.4 million in 2050. Annually, the total number of new cases of dementia in the world is nearly 7.7 million, which means a new case every four seconds.
In 2010, the total estimated cost of dementia was 604 billion dollars a year. In high-income countries, informal care (45%) and formal care (40%) account for most of the cost, while the proportional contribution of direct medical costs (15%) is much lower. However, in low- and middle-income countries, direct social costs are small while predominantly informal care costs (eg unpaid care provided by relatives). Demographic changes in population cos many low- and middle-income countries could lead to that in the coming decades, decrease the immediate availability of family members to provide such care.

On the other hand, they are still incipient research to identify modifiable risk factors for dementia. Meanwhile, primary prevention should focus on those targets suggested by current data, such as counter risk factors for vascular disease, including diabetes, hypertension and obesity, as well as middle age, snuff consumption and physical inactivity.
In 2008, the World Health Organization (WHO) launched the Global Programme of Action to Overcome Mental Health Gap (mhGAP, for its acronym in English), which included dementia as a priority condition. In 2011, at the High-level Meeting of the United Nations General Assembly for the prevention and control of noncommunicable diseases, a Political Declaration admitting that "the global burden of noncommunicable diseases is one of the biggest challenges was adopted for development in the XXI "century; he also acknowledged that "mental and neurological disorders, including Alzheimer's disease, are a major cause of morbidity and contribute to the global burden of noncommunicable diseases". 1

Dementia Put on the Agenda of Public Health

High global prevalence and economic impact of dementia in families, caregivers and communities, as well as stigma and the associated social exclusion, pose a major challenge for public health. The global health community has recognized the need to take action and put dementia on the agenda of public health.
The World Health Organization and Alzheimer's Disease International (ADI), an international non-governmental organization officially connected with WHO, developed in 2013 together, the Dementia Report: A public health priority, 2 (Figure 1.1) for the purpose to raise awareness about dementia as a public health priority, articulate a public health approach and advocate for action at national and international level are taken based on the principles of evidence, fairness, inclusion and integration.

Dementia Emerges as a Global Public Health Priority

The main points of the report Dementia: A public health priority are:

- People live for many years after the onset of symptoms dementia. With proper support, many can and should be able to continue to participate and contribute to society and enjoy a good quality of life.

- Dementia is stressful for caregivers who need proper support from the financial, legal, social and health systems.

- Countries should include dementia in their public health agendas. Is required
The Time to Act is Now

coordination and sustained action between different levels and with all international, regional, national and local stakeholders.

• People with dementia and their caregivers often have a unique perspective on their condition and on life. Therefore, they must be involved in the formulation of policies, plans, laws and services related to the subject.

• Taking action. How?

  ◦ Promoting a friendly society to dementia worldwide;
  ◦ Making dementia a public health priority and social care throughout the world;
  ◦ Improving public attitudes and professionals to dementia and their understanding of it;
  ◦ Investing in social and health systems to improve care for people with dementia and their caregivers;
  ◦ Increasing the priority given to dementia research agenda in public health.
The Dementia Research Group 10/66, ADI, conducted surveys population prevalence of dementia (2003-2007) in 14 catchments ten countries of low and middle income countries (Brazil, China, Cuba, Dominican Republic, India, Mexico, Nigeria, Peru, Puerto Rico and Venezuela). Comprehensive cross-sectional surveys of a phase among all residents aged 65 and over were, in geographically defined catchment areas in each center with a sample of 1 000 and 3 000 people (usually 2000) in these countries. The studios have the same basic information, established by cross-culturally validated (diagnosis of dementia and subtypes, mental disorders, physical health, demography, anthropometry, general questionnaires about risk factors assessments noncommunicable diseases, disability / function, use of health services, planning cation of care and the provision of care, and depletion carer). The end result is a unique information resource directly comparable, from 21 000 adults over three continents.

In 2010 a phase of incidence was completed in which the following participants between 3-5 years after the study began in China, Cuba, Dominican Republic, Mexico, Peru and Venezuela was made. This phase of the project included more than 12,000 older people and more than 35,000 person-years of follow-up, making the study largest ever conducted on the incidence of dementia and associated risk factors.
A file from public access for academic and legislative community was created. Among the population research a randomized controlled intervention study on the carers of people with dementia and their family is, "Helping caregivers to care"("Helping Carers to Care"). The Working Group 10/66 Dementia Research is described in detail on the group's website: http://www.alz.co.uk/1066

During the last Summit of World Leaders G8 (UK, 2013), which brought together developed countries of greater political importance of the world: Germany, Canada, the United States, France, Italy, Japan, United Kingdom and Russia was launched a declaration of commitment by those nations to build an international effort to address the problem of dementia, based on the aforementioned report dementia: a public health priority.
Innovation Healing Therapy Quality of Life Information Research Collaboration Caregivers

Highlights of this declaration are: 3

• To promote greater innovation to improve the quality of life of People with dementia and their carers while the emotional burden is reduced and financial.

• The need to identify car a cure or therapy for dementia whose goal is the 2025, as well as increase significantly collective and funds for research aimed at that goal.

• To work together, sharing information on research this n-financed car and identify strategic priority areas for collaboration and cooperation among nations.

• Develop an action plan coordinated international research identify the current state of knowledge in this field to identify gaps and car opportunities that will generate a joint work plan.

• Encourage access to information about research in dementia, respecting and protecting the privacy of individuals and legal and policy guidelines of the countries which carried out this research.
• Work with the Organization for Economic Cooperation and Development (OECD) to consider the changes necessary to promote and accelerate the discovery and research and its transformation to more efficient care and services.

• Holding a series of high-level forums during 2014 focused on: 1) social impact investment; 2) new care and prevention models; 3) industrial relation academy; 4) design models and programs; 5) create day care centers with specialized care services 24 hours 365 days a year.

• Identify car dementias as a growing threat to global health and support countries to strengthen systems of social care and health to improve services and care of people with dementia.

• Work with the United Nations human rights for older people affected by dementia.

• To call on all sectors to treat people affected by dementias with respect and dignity, and increase its contribution to the prevention, care and treatment of dementia.

• Promote culture on the subject based on human rights at all ages.

• Make a call to civil society to continue global efforts to reduce stigma, exclusion and fear associated with this condition.

• meet again in the United States, in February 2015, with other world experts, including WHO and the OECD to review what progress has been made in the proposed agenda.
References


II

WHAT IS ALZHEIMER'S DISEASE
Dementia is a syndrome, usually chronic or progressive nature, characterized by the acquired deterioration of cognitive functions including memory, thinking, orientation, comprehension, calculation, learning capacity, language and / or trial) - sufficiently grave as to cause interference with activities of daily living.

Classification of dementias can be made from various aspects; The most common way is by its etiology:

a) Degenerative: it includes Alzheimer's disease (AD), frontotemporal lobar degeneration (FTLD), dementia with Lewy bodies (DCLw) and dementia associated with Parkinson's disease (DEP), among others.

b) Vascular: it may be due to diffuse vascular disease (multiple infarcts of large vessels or small, hypoxic-ischemic, by a venous infarction, hemorrhagic) or focal vascular disease (strategic infarcts in mesial temporal region, thalamus and caudate, among others).

c) Mixed: re mainly refers to the coexistence of AD and vascular dementia (VD).

d) Other: is secondary to tumors, trauma, infections, demyelinating diseases, metabolic disorders (such as hypo- and hyperthyroidism, science of vitamins B1, B12 and folic acid, anoxia, etc.), storage diseases, status epilepticus, disease Creutzfeldt-Jakob disease, normal pressure hydrocephalus, among otros.1,2
It is a neurodegenerative, progressive and irreversible disorder whose main clinical manifestation is memory impairment, and is accompanied by alterations of behavior, communication and reasoning problems that impede the performance of activities of daily living.

Pathophysiology

They have been identified and molecular alterations, as the accumulation of proteins poorly shaped (in the form of amyloid plaques and neurofibrillary tangles) which together cause oxidative damage and an inflammatory reaction, with consequent dysfunction and impaired synaptic neuronal metabolism. These alterations cause the final outcome of neurodegeneration and neuronal death.

Peptides amyloid beta (Aβ) are natural products of metabolism fragments consisting of 36 to 42 amino acids. Amyloid precursor protein (APP) is fragmented through sequential and taken to an amyloidogenic pathway (amyloid formation) and a non amiloidogégica via enzymatic action. The amyloidogenic pathway requires the activity of BACE1 (beta-site amyloid precursor protein-cleaving enzyme 1), plus gamma secretase, which favors the accumulation of insoluble peptides. The non-amyloidogenic pathway requires the activity of alpha-secretase. Aβ-peptides tend to aggregate 42 and neuronal damage. The imbalance between production and disposal cause accumulation
of Aβ, which is added in the form of oligomers, bind and form shine, then slices and finally amyloid plaque deposits. This causes alteration in neuronal integrity, alteration in activity of neural networks and decreased activity sináptica.3,4

Under normal conditions, the tau protein and promotes the assembly of microtubules and stability promotes axonal transport. The activity of some kinases and phosphatase decreased, causing hyperphosphorylation of the tau protein. Hyperphosphorylated Tau form the insoluble, it has little affinity for microtubules and added in the form of helical filaments, neurofibrillary tangles forming; causing cytotoxicity and having as outcome the progressive cognitive impairment. The number of neurofibrillary tangles is a pathological marker severity EA.5

Have identified other mechanisms of neurodegeneration in AD among which synaptic dysfunction, mitochondrial dysfunction, impaired insulin, vascular disorders and inflamación.6-9

The characteristic histopathologic findings of AD include amyloid plaques and neurofibrillary tangles, located in the medial temporal lobe structures.

Risk Factor's

Currently, identified several risk factors have been and protection, related to the development of dementia, specifically EA and vascular dementia (Tables 1 and 2).
### TABLA 1. FACTORES DE RIESGO PARA DEMENCIA, ENFERMEDAD DE ALZHEIMER Y DEMENCIA VASCULAR.

<table>
<thead>
<tr>
<th>Factores de riesgo</th>
<th>Demencia</th>
<th>EA</th>
<th>DV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edad</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Sexo femenino</td>
<td>–</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>Historia familiar</td>
<td>–</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>Baja escolaridad</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>APOE4</td>
<td>–</td>
<td>–</td>
<td>+</td>
</tr>
<tr>
<td>Hipercolesterolemia (mediana edad)</td>
<td>+</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>DM</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>HTA</td>
<td>–</td>
<td>–</td>
<td>+</td>
</tr>
<tr>
<td>Tabaquismo</td>
<td>+/-</td>
<td>+</td>
<td>+/-</td>
</tr>
<tr>
<td>IMC bajo (mediana edad)</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Obesidad</td>
<td>+</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>FA</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Ateroesclerosis carotídea</td>
<td>+</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>Insuficiencia cardiaca</td>
<td>+</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>TCE</td>
<td>+/-</td>
<td>+/-</td>
<td>–</td>
</tr>
<tr>
<td>IRC</td>
<td>+</td>
<td>–</td>
<td>+</td>
</tr>
<tr>
<td>Homocisteína en sangre</td>
<td>+</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>Vitamina D</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Depresión</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>PCR</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>IL-1 y FNTα</td>
<td>–</td>
<td>+</td>
<td>–</td>
</tr>
</tbody>
</table>


### TABLA 2. FACTORES DE PROTECCIÓN PARA DEMENCIA, ENFERMEDAD DE ALZHEIMER Y DEMENCIA VASCULAR.

<table>
<thead>
<tr>
<th>Factor protector</th>
<th>Demencia</th>
<th>EA</th>
<th>DV</th>
</tr>
</thead>
<tbody>
<tr>
<td>APOEε2</td>
<td>–</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>Dieta mediterránea</td>
<td>–</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>Actividad física</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Alta escolaridad</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Actividades de estimulación cognoscitiva</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Control de factores de riesgo vascular (adulto joven)</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Consumo moderado alcohol</td>
<td>+</td>
<td>+</td>
<td>+/-</td>
</tr>
<tr>
<td>Antioxidantes</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Uso de antihipertensivos</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Terapia hormonal</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>AINE</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Estatinas</td>
<td>+</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>Ginkgo biloba</td>
<td>–</td>
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</table>

After 65 years, the incidence of dementia and AD doubles every 5 years.10 The EA is increased more than three times in those subjects having at least one first-degree relative with dementia.11 The EA has two ways of performance:

- The early-onset AD: starts before age 60; It occurs in less than 1% of cases. autosomal dominant, is associated with mutations in genes that affect the production, aggregation or removing Aβ: gene amyloid precursor protein, presenilin gene 1 and presenilin 2 gene.

- The late onset AD: starts from 60 years; It occurs in 99% of cases. It is related to the presence of the apolipoprotein E-epsilon 4 [APOE ε4] 12.13

The strongest association between cardiovascular risk factors (such as hypertension, diabetes mellitus, hypercholesterolemia, smoking and obesity, among others) and the development of cognitive impairment has been found in studies that identified risk factors in middle age more than in old age. Apparently also the risk is accumulative.14 Similarly, it has been shown that adequate control of cardiovascular risk factors from the adult stage has a greater protective effect than when this control is limited to the stage of the elderly. 15

Maintain levels adequate physical activity (more than 3 times per week, or 150 minutes per week) and consumption of the so-called "Mediterranean diet" (fresh fruits and vegetables, whole grains, seafood and olive oil) have shown reduce the risk of developing dementia. 16
Diagnosis

The objectives of the evaluation are to determine whether dementia is present, characterize the areas of cognition affected, establish the severity and functional consequences, in addition to determining the probable etiology.

It is recommended to evaluation at least two visits. During the first must you obtained a detailed history, physical and cognitive examination, an interview with relatives and request basic laboratory tests and structural neuroimaging. The second visit is usually a briefing with the patient and family, to present and discuss the diagnosis and etiological factors, review medical treatment options and develop a overall management plan; at that time issues are addressed such as financial matters, drugs, legal matters, information on social and community resources available, the forecast medium and long term, between otros.17,18

Clinical Evaluation

Many patients with dementia do not perceive their ITQ and tend to deny the existence of a problem. At the beginning of the evolution of AD, can preserve social and interpersonal skills, and are even able to lead a working surface conversation without obvious signs of deterioration show, except the content of his speech working surface; often they tend to steer the conversation toward experiences that they can remember detalle.17
The key to getting an accurate history is a close informant interview. It is better if the match is done when the patient is not present with the n to avoid arguments when the caregiver describes the problems. The interview with the informant should characterize patient cognition, behavior and functionality to develop a detailed picture and assist in the diagnosis and staging. Although general cognitive story focuses on memory, some patients may have affected other domains such as language, executive functions (judgment, planning, reasoning, etc.) or visuospatial abilities (Table 3).

<table>
<thead>
<tr>
<th>Tipo de demencia</th>
<th>Manifestaciones clínicas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enfermedad de Alzheimer</td>
<td>Alteración en memoria, lenguaje y habilidades visuoespaciales, indiferencia, ideas delirantes, agitación.</td>
</tr>
<tr>
<td>Demencia vascular</td>
<td>Inicio abrupto, deterioro escalonado, disfunción ejecutiva, trastorno de la marcha.</td>
</tr>
<tr>
<td>Degeneración Lobar Frontotemporal</td>
<td>Relativa preservación de la memoria y habilidades visuoespaciales, cambios de personalidad y conducta, disfunción ejecutiva, excesos en algunas actividades como comer y beber.</td>
</tr>
<tr>
<td>Demencia con cuerpos de Lewy</td>
<td>Alucinaciones visuales, ideas delirantes, síntomas extrapiramidales, fluctuación del estado mental, sensibilidad a antipsicóticos.</td>
</tr>
</tbody>
</table>

Symptoms that indicate a memory problem include repetitive comments, difficulty remembering important dates, events and oversights on vivid details of the talks. Language problems initially include difficulty finding words, remembering names of people or objects. As the dementia progresses, patients use short sentences, circumlocutions, paraphasias or have errors in pronunciation of words. Alterations in executive functions include difficulty initiating activities to plan, perform complicated tasks or properly follow processes involving several steps. Patients with visuospatial problems have difficulty using their hands in fine coordination activities (typing on a keyboard or knitting), or miscalculate where objects are in space.
The course of AD and other neurodegenerative dementias is gradual and relatively slow over years. In early stages, patients may have occasional errors; however, over time they will be more frequent. The DV can show a stepwise deterioration, the history of a cerebral vascular event or transient ischemic attacks increases the likelihood of this diagnosis, but not essential. Rapid cognitive decline with a course subacute over weeks or months raises the possibility of other entities diagnósticas.17

It is necessary to assess whether the problem is a consistent change from the previous level of function. It should question the family about performance in activities of daily living and changes in behavior. In an early dementia, functional impairment affects mostly instrumented functions of daily life such as finance, transportation, hobbies and regular attention to the ability to learn things nuevas.18
It is important to ask about the background of the patient, identify risk factors and car protection, and treatable comorbidities. The social history should focus on the presence of a primary caregiver and the existence of a support network. You need to take into account changes in vision and hearing, a history of psychiatric disorders, use of drugs (especially those with anticholinergic activity or sedative effect) that may play a role in the deterioration cognitivo.17,18

Neurocognitive test documents the performance of memory and other cognitive domains and helps stage the severity of dementia. General cognitive tests provide a brief and structured approach, and are widely used for screening in general medical practice.

Minimum Mental State Examination (Mini-Mental State Examination, MMSE) assesses memory (learn and remember three words), orientation, working memory, language and visuospatial skills; it is a short test, easy to apply, with moderate sensitivity for the diagnosis of dementia, it is useful in staging and monitoring of progression; however, it lacks sensitivity to detect deterioration mild cognitive or mild dementia also that advanced age and low education may confound the results and give false positives. There are other useful tests such as clock and Cognitive Assessment.
Montreal (MoCA), among others. Formal neuropsychological tests provide detailed information on specific cognitive domains, giving a clearer picture of the strengths and weaknesses of the patient.17

In a person with AD is expected that the rest of the neurological examination is normal. Such examination may reveal findings consistent with focal cerebral vascular event or signs of parkinsonism that may point to dementia with Lewy bodies (DCLw).17

Laboratory, Neuroimaging and Biomarkers

Every patient with suspected dementia will be performed initial laboratory tests to rule out reversible causes of memory loss (which occurs in less than 1% of cases).19 It is recommended routinely measure levels of vitamin B12 and thyroid stimulating hormone (TSH), perform a complete blood count, serum folate levels, liver function tests, kidney function tests, glucose and serum electrolytes complete. If the patient has risk factors should be added serologic tests for syphilis and human immunodeficiency virus (HIV). Genetic testing for EA, including APOE gene, are not recommended.17,20,21

It is recommended that a study of structural brain imaging routine, preferably Magnetic Resonance Imaging (MRI) to have greater resolution.20,21 The most common abnormality in neurodegenerative diseases is the loss of brain volume; in AD seen in the medial temporal lobes (especially hippocampus and entorhinal cortex), frontal and occipital; in FTD it is evident in the frontal cortex.
ventromedial in subsequent fronto-orbital regions, the insula and the anterior cingulate cortex; while in atrio DCLw it is observed to diffuse. In DV, the IRM in sequence T2 / FLAIR is very sensitive to ischemia both small and large vasos.22

Functional neuroimaging such as computed tomography single photon emission (SPECT) or positron emission tomography (PET) - to measure brain activity associated with cognitive processing; although its usefulness in research has been demonstrated in clinical practice is unclear because it depends on factors such as availability and cost and lack of treatment and caz.19

Biomarkers for AD can be classified car in 2 categories:

1) Bookmarks Аβ accumulation: Aβ1-42 measured in cerebrospinal fluid (CSF) and evidence Аβ deposits PET with component B of Pittsburgh.

2) markers of neuronal damage or neurodegeneration: phosphorylated Tau protein, total protein Tau, PET image with uorodeoxiglucosa synaptic dysfunction.

The combination of elevated phosphorylated Tau with low CSF Aβ1-42 per l is the characteristic of the EA; 23 however, currently are available mainly tions investigación.17,24
Diagnostic Criteria

In 2011, the National Institute on Aging and the Alzheimer's Association issued new diagnostic criteria EA, 24 which replace those published in 1984 by the National Institute of Neurologic, Communicative Disorders and Alzheimer's Stroke- Disease and Related Disorders Association (NINCDS- ADRDA).24 These new criteria keep the previous categories, as the central features of dementia from any cause, possible and probable AD, and incorporate the use of biomarkers in clinical practice generating new categorías.25

Treatment

Most dementia patients will be treated by the primary care physician; complex approach because it is a progressive entity that evolves over 5 to 10 years.26 The decision to initiate and maintain treatment should be taken individually, taking into account the preferences and expectations of patients and their relatives, as well the expected benefits against the potential adverse effects and cost of drug therapy.
It has some approved by the Food and Drug Administration (FDA) for the treatment of AD drugs, as they have shown some effectiveness and control of cognitive and behavioral symptoms:

1. cholinesterase inhibitors (ChEIs); donepezil, rivastigmine and galantamine; all approved for mild to moderate AD, and donepezil addition to severe.

2. Memantine, a noncompetitive antagonist of N-methyl-D-aspartate (NMDA), approved for moderate to severe AD.

The ginkgo biloba, Cerebrolysin, statins, nonsteroidal anti-inflammatory, vitamins and antioxidants have been used for the treatment and prevention of cognitive impairment; however, they are not approved because they have not proven their effectiveness and. Currently they are studied multidrug aimed at combating Aβ deposition and protein Tau.27,28

Neuropsychiatric symptoms (agitation, aggression, psychosis, sleep disorders, vagrancy, sexual misconduct, depressive symptoms) are common in this condition, 29 the mainstay of management are non-pharmacological measures such as family counseling, identifying associated factors, take Sleep hygiene measures implementing security mechanisms for the patient, among others. The ChEIs and memantine have a modest benefit; antipsychotics such as risperidone or quetiapine are effective for agitation and psychosis, with serious adverse effects, so that should be used with caution. 27
References


III

EPIDEMIOLOGY OF DEMENTIA IN MEXICO
In Mexico already has epidemiological information on the prevalence of dementia and cognitive impairment not 1-4 demented (DCND) in older adults. The ENSANUT 2012 for the first time included a section for people aged 60 and over, which evaluated the frequency of DCND and dementias.

The prevalence for dementia found by ENSANUT 2012 (7.9%) are comparable to other studies (Figure 3.1). When comparing the available epidemiological data is evident the similarity of the prevalences in the field of dementia.

![Figure 3.1. Prevalencias ajustadas para la demencia en México.](image)

The differences between the prevalence was 7.3% DCND and dementias 7.9%, according to the latest data reported in ENSANUT 2012. When adjusting for sex, age and education, area of residence and socioeconomic status was found, in general, an increase in the prevalence of dementia over time by comparing the current prevalence reported by ENSANUT 2012 with other population studies previously evaluated (Figure 3.2).
According to the data presented on the prevalence of dementia in Mexico, it is estimated that there are 860,000 people in 2014 with the condition in the country. The projection of the number of Mexicans affected by dementia by 2050 will reach the alarming figure of more than 3.5 million, so the impact of this disease in the economic, social and health systems will be severe (Figure 3.3).
References


IV

THE NEED TO CREATE AND ACTION PLAN ALZHEIMER’S AND OTHER DEMENTIAS IN MEXICO
The aging of the population as a widespread phenomenon is a cause for celebration and is the reflection of the improvement in conditions of life of the population and action and effective health systems and social protection. This has favored significant increase in life expectancy at birth which places Mexico, with 76 years in average- in 47th among 195 nations.

Figura 4.1. Esperanza de vida al nacer en el mundo.
It is in this context of population aging rapidly, predominantly female and more than half of older adults with 70 years or more, it is necessary to act, with the priority of ensuring respect for human rights and protection today to Health. Against this background, the National Academy of Medicine, National Autonomous University of Mexico and the then Institute of Geriatrics published in 2012 A position paper entitled Ageing and health: a proposal for a plan of action.

Continuing these efforts and under which has among its powers support the Ministry of Health in the development and implementation of sectoral programs, the National Institute of Geriatrics along with the Academy convened the consultation forum Ageing and health: research for a plan of action, held on April 10, 2013. Hence the date on aging information was submitted, aging and health in Mexico, obtained from different sources of information, highlighting the National Health and Nutrition Examination Survey - ENSANUT- 2012 and state surveys Health and Welfare in Aging - SABE-, in order to contribute to the formulation of the new National Development Plan and the National Health Program 2012-2018.
There are now more than 10 million adults aged 60 and over in Mexico. In addition, the country has more people over 60 than children under 5 and projections indicate that the phenomenon of demographic aging is irreversible (Figure 4.1). In this context, a threat to the health and autonomy of elderly disability is: recently documented an increase in the number of older adults suffers. In fact, the aging of the population has a very important role in national and global trends of disability.

Globally, 31.7% of all years lived with disability are attributed to conditions neuropsiquiátricas. Among older adults, depression and dementia are the main factors contributing to this phenomenon. Dementia contributes 11.9% of years lived with disability from chronic diseases, being higher proportion than the corresponding cerebral vascular events (10.1%), cardiovascular disease (5.3%) and cancer (2.5%).
The proposal to create the Plan of Action and Other Dementias Alzheimer -driven by the National Institute of Geriatrics and organized civil society interested in improving the comprehensive care of Mexicans suffering from some form of dementia-is the culmination of a series of initiatives originating in 1986 and are in effect because of the increasing incidence of this disease.

The most significant events in the construction of the proposal for the Action Plan are:

1986: The first support group for relatives of patients with Alzheimer's disease in Mexico City is formed.

1988: The Mexican Association of Alzheimer's and Related Diseases, A.C. is created (AMAES), that same year he joined the Alzheimer's Disease International (ADI).

2002: First National Meeting of Associations is held and the Mexican Federation of Alzheimer (FEDMA) is formed.

2002: Is founded FEDMA

2003: Alzheimer's Association Latin America, including Latin American and Caribbean countries and Spain is constituted. Mexico is a founding member.

2006: Begins the annual meetings of the Expert Group on Dementia; specialists in Neurology, Psychiatry and Geriatrics discuss scientific and medical advances in the diagnosis and treatment of dementia.
2011: On the occasion of the celebration of World Alzheimer's Day, the head of the Ministry of Health, MSc. Solomon Chertorivski Woldenberg, commissioned the then director general Institute of Geriatrics, Dr. Luis Miguel Gutiérrez Robledo, so that, together with civil associations, to develop Alzheimer's Action Plan to the evidence of the growing and accelerated number of Mexicans affected by some form of dementia.

2012: The World Health Organization (WHO) declares dementia as a public health priority.

2012: Senator Lisbeth Hernandez Lecuona (PRI) presented in the Senate a point of agreement that is recommended and calls upon the Chief Executive to give instructions to the Ministry of Health for the measures and instruments needed for the care taken Alzheimer's in the Mexican population and quality programs and policies on prevention and treatment are implemented.

2012: A letter of intent is firm to promote collaboration between the National Institute of Geriatrics and Alzheimer Mexican Federation, and continue with the proposed creation of the Action Plan.
2013: a letter of intent for the creation of a specific action plan from the holders of the National Institutes of Geriatrics, Neurology and Neurosurgery, Psychiatry and the Elderly is signed, as well as by the Federation Mexican Alzheimer's. Declare their intention to fight jointly and in an organized against the negative and devastating effects of Alzheimer's disease in our country.

**Importance of civil associations for patients with Alzheimer's disease or other dementias and their families** *

When a family receives the news that one of its members suffers from dementia, they appear doubts, feelings and uncertainty. To this are added the difficulties to manage symptoms of the disease: cognitive, behavioral abnormalities and animal micas, gradually increasing dependency. Unfortunately, the doctor does not always have time suffices to resolve these situations. That's when the Alzheimer civil associations play a very important role.

In Mexico, as throughout the world, civil partnerships for patients with Alzheimer's disease and other dementias have emerged to respond to the void of information and the limited possibilities of care for these conditions. That was how in 1988 a group of family and health professionals integrated in Mexico City the first organization in the country of Alzheimer without for-profit, supported by many others that today make up the Mexican Federation of Alzheimer, A. C.

Caregivers often lack basic information and appropriate training to address and recently a patient. Faced with cognitive, psychiatric and Behavioural Skills of this alteration, the primary caregiver mint experienced negative emotions such as anger, guilt, frustration, shame and sadness, among others. When this adds to wear and care involving relatives or economic problems in the caregiver causes the appearance of new diseases or the worsening of existing ones, anxiety, depression and symptoms
more of overload syndrome. The integrity of the patient may also be at risk if the person who treats you do not know the appropriate management of their alterations or demerits quality of care due to overload suffering.

Fortunately, the way the family faces dementia of one of its members changed radically by joining an association of Alzheimer, because there is access to information, training and support free or at very low cost. One of the main activities promoted by Alzheimer associations are support groups (also called self-help or mutual aid), where family members share not only problems and concerns, but also emotions and feelings. In this sense, these groups have two basic purposes: to provide information about the disease and its management and provide mutual emotional support.

Other important functions of associations are:
- Dissemination of information and awareness onto dementias.
- Establishment of support networks with institutions, professionals and services for patient care.
- Training of human resources through workshops, courses and conferences.
- Services direct patient care in day centers or permanent stay.
- Collaboration and participation in investigations related to the search for alternatives to non-pharmacological care for the patient and caregiver support.

Thus, organizations of Alzheimer are the response of civil society to the serious problem posed dementias and also are key players in generating solutions.

**History of associations of relatives of Alzheimer patients in Mexico**

Alzheimer associations often have as background to a support group. Lic. Lilia Mendoza, one of the founders of the Alzheimer movement in Mexico, noted that this first group emerged in 1986 in the corridors of a hospital ISSSTE, when relatives of people diagnosed with dementia, naturally began to talk to each other about the problems faced every day. These meetings went systematizing to consolidate the first support group in Mexico, coordinated by herself and Dr. Rosalia Rodriguez and Lic. Marcela Fair. At the time Alzheimer's disease was virtually unknown and information in Spanish was nil.

On 13 November the same year the first executive board and then the Mexican Association of Alzheimer Disease and Related, AC (AMAES), formalized before a notary public in 1988. In the cities of Guadalajara and Monterrey created support groups emerged settled, but not they managed to establish itself as partnerships. In 1988, during the 4th International Congress of Alzheimer's Disease International (ADI) conducted in Australia, Mexico joined this important organization; two years later Mexico City hosted the 6th Congress, where 110 papers from 24 countries were presented.

As a pioneer, the AMAES encouraged the creation of support groups, state associations and institutions of Alzheimer. So in 1991 he supported the creation of the Alzheimer "Fran- Espinoza" Foundation, ushering in Jurica, Querétaro, the first day center for these patients in the country. The second center was created by them themselves in Mexico City.

* Text prepared by Adela Hernandez Galvan, vice president of FEDMA and representative of the Alzheimer Association Morelense; Sara Torres Castro, National Institute of Geriatrics; Rosa Maria Farres Gonzalez Saravia, FEDMA secretary and representative of the Mexican Association of Alzheimer's and Related Diseases, A.C.; and Alfonso González León, president of FEDMA and representative of the Alzheimer Association Michoacana and Similar, I. A. P.
In this decade, support groups in cities like Hermosillo, Reynosa, Puebla, Ciudad Valles and San Luis Potosi were formed; He emerged in 1992 in Hermosillo, Sonora, the first State Association of Alzheimer, followed by many others.

Then as the ISSSTE hospitals and some National Institutes of Health (the Neurology and Neurosurgery, the Medical Sciences and Nutrition and Psychiatry) also harbored a support group to date remain.

**Alzheimer Mexican Federation (FEDMA)**

In the following years state associations and support groups in Sonora, Tamaulipas, Nuevo Leon, Michoacan, San Luis Potosi, Puebla, Morelos, Oaxaca, Queretaro and Hidalgo were formed. While they all assumed as leader AMAES, it became necessary to have an organization that legally represented. So was the Mexican Federation of Alzheimer A. C. (FEDMA), which currently has registered 21 to 46 state associations and support groups, most formally integrated into it was created in 2002.

**Headquarters of the National Congress in Mexico Alzheimer**

National meetings of associations and support groups have been instrumental in the consolidation of the Alzheimer movement in our country. From 1996 to 2014 they have made 19 of them, now under the name of National Congress.

**Mission FEDMA**

It is a non-profit association of private welfare. Its main purpose is to promote the organized work of civil society (through its affiliated state associations) for the benefit of people suffering any type of dementia, as well as provide guidance, training and support for their families and caregivers in all states of Mexico. The ultimate goal of the FEDMA is to defend the rights of people with dementia to improve, where possible, their quality of life and their environment.
Vision FEDMA

Will, in the medium term (5 years), the leading national organization of charitable work on behalf of people with dementia. In the long term (10 years) will have contributed to the generation of socio-medical research on dementia and will have developed models for creating associations and support groups as well as for specialized care of people with dementia. These models will be viable and replicable in each of the states of our nation. In this period we have gained the confidence of every social sector by ethical, transparent and committed work in achieving our goals.

Goals

• Disseminate information on dementia and Alzheimer's Disease and increase public awareness of mental health problem representing dementias.
• Contribute to the creation of public policies and health for people with dementia.
• Strengthen the various state associations and support groups affiliated.
• Strengthen the relationship with national and international organizations related to the areas of geriatrics, gerontology and dementia.
• Participate in national and international conferences and forums related to the areas of geriatrics, gerontology and dementia.
• Participate and / or support the conduct of scientific research in the field of dementias.
• Support the organization of the Annual Congress.

Services provided by Alzheimer associations

• When Sick: Day care centers with workshops cognitive stimulation, motor skills and physical therapy workshops, music workshops, workshops for manual activities.
• A Family: Information on Alzheimer's disease, legal, medical, psychological, and social. Training workshops on dementias, providing psychological support to caregivers through self-help groups. Procedures for institutions and others.
• To the community: information via web pages, phone calls, awareness and awareness in the media of communication. Involvement of different sectors of society. political awareness.

References


V

OBJECTIVES OF THE ACTION PLAN
Nearly 860,000 Mexicans are currently affected with some form of dementia, most of them with insufficient access to adequate comprehensive health, attended by caregivers without guidance or training, which has adverse effects on health and the economy not only of patients but also their families and primary caregivers. To provide viable answers to this situation, the Plan Alzheimer's and other dementias action the following objectives.

Central Objective of the Action Plan Alzheimer's and Other Dementias:

- Promote the welfare of people with Alzheimer's and related diseases and their families, by strengthening the response of the Mexican Health System, in synergy with all responsible institutions.
Particular objectives

Stigmatize
a) Promote greater awareness of Alzheimer's disease and other dementias to reduce or, better yet, eliminate stigma and negative stereotypes associated with them, which will result in greater acceptance of people affected by this problem.

Report
b) Increase access to reliable and updated information on disease for both health professionals, and family members, caregivers and the general public with the ultimate aim that patients can live well with dementia.

Comprehensive Care
c) Develop a comprehensive care model according to the needs and characteristics of the country.

Research
d) Encourage the development of quality research in all disciplines to better understand the process of Alzheimer's disease and its various implications.

Train
e) Improve the training of health professionals and caregivers to achieve a more efficient management of the disease.
f) Strengthen prevention and promotion programs for the control of chronic diseases and other risk factors for the disease, reducing the appearance of new cases.

Wellness

g) To improve the welfare of people with Alzheimer's disease and their families, through health services with lower cost of care and greater responsibility in health.
Agency Collaboration

The Plan Alzheimer's and other dementias Action requires permanent interagency working, so that public health agencies, civil society and the industry itself strengthen and enrich to deal with and effectiveness negative effects of this disease, positive impact both individual quality of life as collective and social vision of this condition. This proposal was developed by a working group composed of the following institutions.
VI

STRATEGIES AND SPECIFIC ACTIONS PROPOSED PLAN OF ACTION FOR ALZHEIMER AND OTHER DEMENTIAS
Strategy 1. Prevention and promotion of mental health

The number of people affected by Alzheimer's disease and the serious impact of this disease necessitate a public policy of promoting mental health across the life course and considering the known risk factors, to encourage active and healthy aging. This will help to prevent or at least delay the onset of this and other specific conditions of this age group. (PROSESA: Strategy 1.1; 1.1.8 Action Line Strategy 1.7, action lines 1.7.1 to 1.7.7.)

**Lines of action:**

1.1. Consider dementia as a public health problem relevant.

1.2. Raise public awareness to encourage mobilization around dementia.

1.3. Strengthen prevention campaigns diabetes, obesity, hypertension and physical inactivity to reduce risk factors associated with dementia.

1.4. Integrate civil society, private institutions and industry in the fight against dementia.

1.5. Promoting mental health care at all stages of human development.
Strategy 2. Ensuring access to quality services

It is necessary to improve access to quality services in the areas of primary health care, as well as the second and third level of care. (PROSESA: Strategy 2.4, lines of action: 2.4.1, 2.4.3, 2.4.5, and 2.4.6.)

**Lines of action:**

2.1. Available human, material and financial commensurate with the number of patients with dementia at the three levels of health care.

2.2. Improve the quality of geriatric, neurological and psychiatric care to achieve a comprehensive medical management in advanced stages of the disease.

2.3. Strengthen community and family care with a level, non-hospital care for long-term patients with dementia through specific programs comprehensive outpatient rehabilitation vision.

2.4. Establishment, growth, maintenance and regulation of day care centers as an alternative to the comprehensive management of patients with dementia in the early stages of the disease.

2.5. Allocate the third level of attention to the study and management of difficult cases for appropriate differential and final diagnosis.
Strategy 3. Diagnosis and Treatment of those Affected by the Disease

The delay in diagnosis seriously affects the course of the disease and impacts the quality of life of those affected and their families. It is necessary to apply science and resources available today for a comprehensive, multidisciplinary evaluation to identify cases timely through the proper use of screening instruments in force. (PROSESA: Strategy 1.7, Action Line 1.7.4; Strategy 2.4, action lines 2.4.2 and 2.4.4)

**Lines of action:**

3.1. Develop a comprehensive care model that responds to the activities of each level within the national health system in our country.

3.2. Strengthen the training of health professionals, especially in primary care, to detect people affected in the early stages of the disease.

3.3. Reduce the impact of disability and dependence on individual, family and economic level.

3.4. Develop a training model, assessment and care for primary caregivers and family.

3.5. Create a network of inter-online communication between health professionals to update and feedback from staff dedicated to the care of this condition.

3.6. Identify, through an updated catalog all human, material and financial resources of each public institution that treats patients with dementia to make more efficient use of available resources.
4. Training specific strategy and human resources

The characteristics of these conditions generate very particular care needs that, at certain levels, require qualified personnel and specialized, organized in multidisciplinary teams with participation of specialists, rehabilitation, caregivers and family. To this end training programs and training required at all levels of care (with emphasis on the former) that They will be developed by participants working groups under the coordination of the National Institute of Geriatrics. (PROSESA: 5.1 strategy, action lines 5.1.1 to 5.1.10.)
Lines of action:

4.1. Steadily increasing the number of specialists to provide care to patients with dementia, according to the country’s needs.
4.2. Implement ongoing training programs for updating health professionals and non-professionals.
4.3. Promote the inclusion of content on aging for the undergraduate and graduate training of all health professionals, with emphasis on issues of dementia.
4.4. Promote advanced strategies in human resource training, taking advantage of new information technologies and interagency collaboration.
4.5. Creating scholarships for the training of health professionals specializing in non-medical care of the elderly with dementia.
4.6. Foster family counseling for better care and management of their families affected by dementia.

Figura 6.2. Materiales de apoyo para cuidadores elaborados por profesionales de la salud.
Strategy 5. Promoting respect for human rights of people affected with dementia and their carers

Raise awareness and inform the society that dementia is a public health problem that can affect anyone, without distinction, and generates profound changes in the lives of sufferers. Recognition and support for professionals and family caregivers is vital to maintaining quality care for patients. (PROSESA: Strategy 1.7, Action Line 1.7.2)

**Lines of action:**

5.1. Promote the fight against discrimination in all areas.

5.2. Inform older people at a disadvantage on their rights and teach them the ways of accessing services right places and if necessary, particularly when victims of abuse or discrimination.

5.3. Treat informal caregivers as partners who need support.

5.4. Incorporate civil organizations continually in the activities of public and private institutions in order to broaden the dissemination.
Strategy 6. Increase dementia research

Encourage (basic, clinical, epidemiological and social) national research on this disease is essential to generate new knowledge that foster better disease management to optimize the quality of life for families and people with dementia. (PROSESA: 5.4 strategy, action lines 5.4.1 to 5.4.9.)

Lines of action:

6.1. Include aging research with emphasis in applied research studies to improve treatment and cure of disease as a priority in sectoral demands of research funds.

6.2. Promote inter-linkages with national and international disease around scientific groups.

6.3. Increase and strengthen research on the subject, through collaborations between different scientific groups that make up the Thematic Network Conacyt: Aging, Health and Social Development, throughout the country.

6.4. Promote public health research on the subject of aging, with particular emphasis on the issue of dementia, by academic and scientific institutions.

6.5. Develop new sources of information for the construction of a permanent epidemiological surveillance system for monitoring cases of dementia in Mexico.

6.6. Networking interagency collaboration for molecular, clinical and imaging of disease diagnosis is national in scope.
Strategy 7. Periodically evaluate the effectiveness of the proposed actions

The establishment of a specific action plan Alzheimer's and other dementias continuous assessment of the impact of each of the proposed actions through indicators that have been established will require.

Lines of action:

7.1. Creation of an advisory group to assess the relevance and feasibility of the proposed actions, and the mechanisms to implement them.

7.2. Generation assessment tools to measure the impact of the actions implemented.
8. Strategy Long-term care in the late stages of the disease

Older people affected with some dementia, require long-term care and a family atmosphere, surrounded by his memories. This attention is a severe human and economic cost, especially in the advanced or final stage. For this reason, we need new programs or services for comprehensive palliative care home.

Lines of action

8.1. Creating programs and training for family and health personnel in palliative care.

8.2. Educational programs on the rights of people at the end of life, including issues such as wills and advance directives.

8.3. Adapting the home to a safe environment.

8.4. Facilities at the family's primary caregiver, for time and forms watch out.

8.5. Legal, social and financial assistance to avoid abuse, violence or negligence in the care of the person with dementia.

8.6. Programs of psychological and spiritual support.

8.7. Subsidy programs or inexpensive to purchase and funeral essential drugs in home palliative care (Eg for pain control).

8.8. Establish multidisciplinary teams of health care palliative, to avoid unnecessary hospital admissions.

8.9. Financial support, especially for people affected by limited economic resources.

8.10. Creating units respite or rest for carers primary.
VII

ALZHEIMER'S ACTION PLAN AND OTHER DEMENTIAS WITHIN PLANS AND PROGRAMS
THE PND AS A PLATFORM FOR BUILDING THE ALZHEIMER ACTION PLAN

The National Development Plan (NDP) 2013-2018 is a working document that governs the programming and budgeting of all Federal Public Administration. Thus, according to the Planning Act, all sectoral, special, institutional and regional programs that define government actions, should be developed consistent with the NDP, whose main objective is to lead Mexico to its fullest potential, for which It proposes five national goals: I. Mexico in Peace; II. Inclusive Mexico; III. Mexico with Quality Education; IV. Mexico Prospero; and V. Mexico with Global Responsibility

In this regard, the proposed here Plan of Action dementia and Alzheimer's would be inserted in two national goals: Inclusive Mexico and Mexico with Quality Education.

II. A Incluyente Mexico to ensure effective social rights of all Mexicans, to ensure access to the right to health for all Mexicans exercise.

III. A Mexico with Quality Education to ensure comprehensive development of all Mexican. It will seek to encourage greater and more effective investment in science and technology that nurtures the development of national human capital.
Alzheimer alignment Action Plan with the Health Sector Program

The Health Sector Program 2013-2018 (Prosesa), in accordance with the National Development Plan establishes the following objectives:

1. Consolidate protection actions, health promotion and disease prevention;
2. Ensure effective access to quality health services;
3. Reduce the risks affecting the health of the population in any life activity;
4. Close the gaps in health between different social groups and regions;
5. Ensure the generation and effective use of health resources;
6. Advance the construction of the National Universal Health System under the guidance of the Ministry of Health.

Action Plan Alzheimer's and other dementias proposed here aligns and enriches from the objectives first, second and fifth Prosesa, which are detailed below, along with their respective strategies and lines of action.

Prosesa. Objective 1. To consolidate protection actions, health promotion and disease prevention.

The NDP 2013-2018 sets as a priority for improving health promotion axle, disease prevention and health protection, always with a gender perspective, attached to ethical criteria and responding to the multicultural mosaic that characterizes country. The country must travel to see health as a cure for diseases to a comprehensive concept associated with healthy lifestyles.
Strategy 1.1. And promote healthy attitudes and jointly responsible for the personal, family and community level behaviors.

Action Line:

1.1.8. Promote prevention strategies and promoting mental health.

Strategy 1.7. Promote active, healthy, with dignity and improving the quality of life of older people aging.

Lines of action:

1.7.1. Implement actions to care and timely care of older persons in coordination with other social programs.

1.7.2. Close gender gaps in communities that ensure healthy aging.

1.7.3. Strengthen prevention, detection and early diagnosis of cardiovascular risk factors and diseases with emphasis on fragility, geriatric syndromes, osteoporosis, falls and dental care.

1.7.4. Expand the prevention, detection, diagnosis and treatment in mental health.

1.7.5. Increase actions of health promotion to achieve self-care and self care in older persons.

1.7.6. Strengthen the institutional and social action organized for community care of the elderly.

1.7.7. Implement mechanisms to ensure that seniors who receive the Universal Pension collaborate with health responsibility.
Prosesa. Objective 2. Ensure effective access to quality health services.

The financial protection now granted by the National Health System should result in better health outcomes. The State shall implement all the tools at its disposal to the population access to comprehensive care with technical and interpersonal quality, regardless of gender, age, place of residence or employment status. In this regard, the actions taken in previous years will be reviewed and those that have been consolidated results, but should be deeply adapt and have not been effective.

Strategy 2.4. Strengthen comprehensive care and social rehabilitation of patients with mental and behavioral disorders.

Lines of action:

2.4.1. Prioritize the implementation of EU relatives of comprehensive care of patients with mental disorders and behavioral models.

2.4.2. Strengthen the diagnosis and comprehensive care for mental and behavioral disorders at all levels of care.

2.4.3. Strengthen care coverage to mental disorders with family approach, community and respect for human rights.

2.4.4. Promote the comprehensive care of patients with mental disorders to achieve their social and productive reintegration.
2.4.5. gradually incorporate mental health and psychiatric care network of health services.

2.4.6. Promote non-institutional models of care for patients with mental and behavioral disorders.

Prosesa. Objective 5. Ensure generation and effective use of health resources.

The challenges currently facing the public sector in terms of financial, material and human resources for health should be addressed and science and raising the quality of health spending. Therefore, this objective aims to promote a health and patient sector mechanisms to improve their performance and quality of services; sectoral planning schemes and performance evaluation; that encourages innovation and scientific research ca; to simplify the procedures and regulations and government accountable for clear and timely manner to citizens.

Strategy 5.1. Strengthen the training and management of human resources in health

Lines of action:

5.1.1. Establish criteria for responsible growth and orderly human resources.

5.1.2. Promote the training of human resources aligned with, epidemiological, demographic needs of economic and cultural development.

5.1.3. Promote updating and continuous training human resources based on national health needs.
5.1.4. Promote training to improve health care processes, managerial and administrative support.

5.1.5. Participate in the development of criteria and guidelines for accreditation of educational institutions together with the institutions concerned.

5.1.6. Contribute to the integration of basic contents gender, human rights and intercultural training professionals.

5.1.7. Promote training in public health, occupational health, quality management and health services staff.

5.1.8. Strengthen inter-agency collaborative mechanisms for training human resources.

5.1.9. Evaluate the implementation of national policies for training and human resource training.

5.1.10. Promote the recruitment of human resources aligned with a model focused on primary care.

Strategy 5.4. Drive innovation and scientific research and technological development for improving the health of the population.

Lines of action:

5.4.1. Increase public investment in scientific research, innovation and technological development in health.

5.4.2. Prioritize research on topics relevant and emerging health.

5.4.3. Joint efforts in the National Health System promote new discoveries that foster care more effective.

5.4.4. Promote investment and private sector responsibility for scientific research and technological development in health.
5.4.5. Promote international cooperation and funding for scientific research and technological development in the country.

5.4.6. Strengthen the infrastructure of health research centers at the regional and local levels.

5.4.7. Manage infrastructure sharing agreements between institutions and researchers with the aim of taking advantage of the available capacity.

5.4.8. Promote the involvement of institutions and research centers with the public, social and private sectors.

5.4.9. Encourage research that attend ethical, scientific relevance and integrity and protection of human rights.
VIII
ADVANCES
1. Proposed functional map for comprehensive care of patients with dementia (Action Plan Alzheimer, PAA: Strategy 3, action line 3.1)

Since 2013, the National Institute of Geriatrics prepared, together with a group of experts from the National Institute of Neurology and Neurosurgery, National Institute of Psychiatry, National Institute of Older Persons and the Mexican Federation of Alzheimer, functional map the elderly person with dementia in order to identify the main functions to be performed by the professional who works with the elderly to improve the quality of life for him and his family.

The overall objective of this functional map is to promote the quality of life of the older person (PAM) with dementia and their caregivers and / or family, through specific actions (Figure 8.1).
This functional map—still under development and is built approvingly from an interdisciplinary approach. Thus, in terms of physical health, the candidate has to keep under control chronic noncommunicable diseases and prevent complications arising from comorbidity. In turn, the mental state assessment, which includes emotional-cognitive aspects and can recognize what stage of the disease the patient is and determine appropriate intervention programs to improve their quality of life. Social diagnosis, meanwhile, identifies social problems and makes it possible to prevent problems arising from the state of health of the person with dementia. Finally, it is also important to determine the functionality of PAM with dementia.

As an example, an outline of how one—the goals of preserving the overall health of the PAM with mild cognitive impairment and moderate-stadium was analyzed shown; for this clinical need, therapeutic care, social support system and decision-making (Figure 8.2) is contemplated. As already mentioned, this functional map has not yet been finalized, so here only some relevant aspects are presented in their manufacturing process.
2. Training strategies in the care of people with dementia and their families (PAA: Strategy 4 Action Line 4.2)

The National Institute of Geriatrics has started training strategies aimed at staff working in the primary care level in order to develop skills based on scientific evidence to allow proper care of the elderly with dementia and their families. Such strategies are initially a diploma in Alzheimer's and other dementias and interactive conferences held under the XIX National Congress of Alzheimer.

*Diploma in Alzheimer's and other dementias*

In the first stage of a long-term strategy, a virtual graduate with an interdisciplinary approach, accompanied by expert tutors in the subject, with a duration of 160 hours, divided into four modules (Table 8.1), with a manual like material designed support for. The course started in July 2014, with 180 professionals working in the primary care Health Sector in Mexico. The proposal is to advance and consolidate this national educational strategy for the first 18 months and then turn over the medium term, a regional leader in Latin America, opening the possibility of carrying other countries.
Interactive Conferences

The National Institute of Geriatrics, in collaboration with researchers from the Laboratory of Dementias the National Institute of Neurology and Neurosurgery "Manuel Velasco Suarez", designed four interactive lectures to medical and related areas of primary care staff, given under the Alzheimer XIX National Congress 2014.

The conference aimed to sensitize medical staff sought it on the issue of dementias and improve their skills in aspects of diagnosis and treatment, prevention, family, reference and counter-appropriate and prevention of iatrogenic and complications.
In turn, lectures designed for personnel related areas met the objectives of sensitizing staff on the needs of patients and their families, strengthen the competencies to identify possible cases and make timely reference and train caregivers the patients.

The purpose of the aforementioned strategies for training and human resource training is to consolidate, by the National Institute of Geriatrics, a model of care with quality and safety that contributes to the welfare of the elderly population in Mexico.


While there are scales and guides in Mexico validated care that can identify cognitive impairment, the truth is that primary care professionals need simple and quick to promptly detect cognitive impairment, particularly in elderly tools.

In this sense, the validation of a screening for early detection in adults over cognitive impairment and Alzheimer's at an early stage will allow positively impact the health of people affected, their families and their primary caregivers as well as the costs generated in health services. The purpose is to create standards of care that promote the welfare of the elderly with cognitive impairment in different degrees, and their family and / or caregivers.
Objective of the screen: Innovating in services primary care with a validated instrument that identifies priority problem timely mental health in the older population, and to promote the response to the specific requirements of the people tested.

Methodology: A cross-sectional study was conducted validation. Adults over 65 were selected with and without cognitive impairment of the community. Standardization of specialists (neurologists, psychiatrists) by an expert in dementias was performed. Clinical assessments were performed at the home of the people. The sample size was determined by the formula the program for epidemiological analysis of tabulated data (EPIDAT) version 3.1, the following estimates, based on the values of the Mini-Cog previously found: 1 sensitivity, 99%; specificity, 93%; prevalence of the disease in the Mexican population, 8%; 2 confidence level, 95%; accuracy 4%.
First stage. Description of the study population: a census was conducted in the Unit Independence Mexico City to identify adults over 65 years. 258 descriptive analysis of complete data, 72 men and 185 women was conducted. 52% were people aged between 70 and 79 years, while the remaining 48% were aged 80 or more. In general subjects greater than that reported for these age groups average schooling were identified as 60% it has completed at least one year of secondary education and no schooling was found in only 3%. The most frequent categories of marital status were married (36%) and widowed (43%). 15% of people with depressive symptoms, 13% limitations in at least one of the basic activities of daily living and 23% with at least one limitation in instrumental activities were identified. Of the 258 who were evaluated, 17% showed deterioration in cognitive function and approximately 7% dementia problems.

Second stage. Clinical evaluations by specialists: a survey in the homes of the elderly in order to identify cognitive impairment and dementia with professionals previously trained health will be performed. He later held at the Laboratory Dementias the National Institute of Neurology standardization of a group of six specialists led by an expert in dementias. Consequently, the clinical evaluations will be conducted at the home of the elderly. This study is in the implementation phase of the second stage; its final results and conclusions will be announced at the end of 2014.
References
