

A grayscale microscopic image of a neuron, showing a central cell body with multiple branching processes. Some of these processes are highlighted with bright, glowing light effects, resembling lightning or electrical impulses. The background is dark, making the neuron stand out.

# NATIONAL STRATEGY

MANAGEMENT OF ALZHEIMER AND OTHER DEMENTIA  
DISEASES:

TOWARDS HEALTHY AND PRODUCTIVE OLDER PERSON

Ministry of Health  
Republic of Indonesia  
2015



## PREFACE



The National Strategy for the Management of Alzheimer and Other Dementia Diseases: Towards Healthy and Productive Older Persons has successfully been developed as planned. The most delightful experience in the development process of this strategy is the involvement of various programs and sectors since the beginning of the process. This involvement is very valuable due to the fact that, in addition to giving a strategic dimension to this National Strategy, the discussion on the issues has become a discussion on “*cross-cutting issues*”.

We should also be grateful that in the middle term planning, which is in the National Middle Term Development Plan (RPJMN) 2015 – 2019, the issue on older persons has been included as one of the priority issues. The success in health development will lead to increased Life Expectance (LE) along with all its consequences that should really be understood as a form of the logical consequences, which needs to get attention in framework of Health Development through Life course approach.

Substantively, this National Strategy document is developed by referring to the “Yogyakarta Declaration for Older Persons”, in which the explanation on the concrete efforts consists of 7 (seven) strategies that are further elaborated in the main activities related to the distribution of roles for each related sector. It is our hope that this document becomes more operational and will touch various system elements that are rolled out in synergy to deal with the existing problems.

This National Strategy for the Management of Alzheimer and other Dementia Diseases: Towards Healthy and Productive Older Persons consists of eight chapters that include, in addition to the general strategies and component strategies, the roles of the related sectors, coordination between components, international partnership, indicators to monitor the progress of the program, monitoring and evaluation, and funding.

Our highest appreciation and gratitude are extended to all parties that have contributed in the development of this National Strategy for the Management of Alzheimer and other Dementia Diseases: Towards Healthy and Productive Older Persons, including various sectors, Academic Institutions, Research Institutions, Community Social Organizations who work on older persons issues, especially dementia, as well as related private sectors. Recommendations and inputs for improving this document are very much expected to refine this document.

Jakarta, August 2015  
Secretary General



  
dr. Untung Suseno Sutarjo, M.Kes



**MINISTER OF HEALTH  
REPUBLIC OF INDONESIA**

**FOREWORD FROM THE MINISTER OF HEALTH OF THE REPUBLIC OF  
INDONESIA**



The elaboration of sustainable Health Development has been made through various efforts, including improving health through life course approach which encompasses efforts to achieve healthy and productive older persons. Currently, the Indonesian People have entered the gate of a longer Life Expectancy. This should be seen gratefully as a long journey of the Health Development that we have work on together.

As a country that is designated as the 4<sup>th</sup> country with the largest population and the 10<sup>th</sup> country with the highest number of older persons in the world, it is already expected that strategic efforts to prepare, prevent, and manage potential problems related to this situation are implemented.

In a period of 10 years, the Life Expectancy has increased from 68.1 in 2005 to 72.7 in 2014 (RPJMN, 2009). The logical consequences faced, in addition to non-communicable disease and degenerative diseases, include cognitive disorders such as dementia and intelligence disability. These conditions need to get careful attention from all parties in the framework of achieving healthy, smart, and

productive Indonesians until they enter their elderly period.

The careful attention towards older persons to make them healthy, smart, and productive can be achieved through various synergic efforts of various sectors where each stakeholder can play the most feasible role. To establish a strong common steps, a framework in the form of a “National Strategy for the Management of Alzheimer and other Dementia Diseases: Towards Healthy and Productive Older Persons” is needed to be able to describe integrated and effective steps to reduce the incidence of dementia and other cognitive disorders.

It is expected that with the availability of this National Strategy, the implementation of the management of Alzheimer and other dementia diseases: towards healthy and productive older persons will be better and stronger which will lead to improved health status of the people of Indonesia.

Jakarta, August 2015

Minister of Health



Prof. Dr. dr. Nila Farid Moeloek, Sp.M(K)

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## EXECUTIVE SUMMARY

### Introduction

The National Strategy for the Management of Alzheimer and Other Dementia Diseases: Towards Healthy and Productive Older Persons has been formulated to respond to the increased awareness of policy makers on older persons health at the national, regional and global levels. In 2012, the theme of the World Health Day was on Ageing and Health and the Yogyakarta Declaration on Ageing and Health by the Health Ministers of countries in South- East Asia Region in the same year has emphasized that older persons are social assets who have active and constructive contributions in the national development of their respective countries.

However, increasing Life Expectancy and the magnitude of health problems in each age group of the life course (Risksedas, 2013) will have consequences on increased dementia and other cognitive disorders in the future, If this situation is not handle properly, it will lead to impacts on the economic, social, and political life of the nation. To deal with this issue, accelerated efforts through a national strategy and cross-sector and cross-program action steps involving active community participation are needed.

### Objective

The objective of this guide is to achieve efforts for managing Alzheimer and other dementia diseases towards healthy and productive older persons.

To achieve this objective, the strategies applied are:

1. Mainstreaming the efforts to achieve healthy brains towards productive older persons through the life course approach in all levels of the national development
2. Improve quality of the services for cognitive disorders and dementia
3. Strengthening the managerial capacity in achieving optimum brain



health

### **Seven Action Steps**

1. Campaign on Public Awareness and Promotion of Healthy Lifestyle
2. Advocacy on human rights for people with dementia and their caregivers
3. Ensuring access and information of quality services
4. Implementation of early detection, diagnosis and holistic management of cognitive disorders and dementia
5. Establishment of a professional and sustainable system for strengthening human resource
6. Establishment of a cognitive health program as the main factor in achieving a smart life in the nation based on the life course approach
7. Implementation and application of research on cognition and dementia

### **Conclusion**

The National Strategy for the Management of Alzheimer and other Dementia Disorders: Towards Healthy and Productive Older Persons is expected to position older person issues as a priority in the National Development to achieve a higher quality of Indonesian human resource.

# 1

## INTRODUCTION

### A. BACKGROUND

Indonesia as a developing country with the fourth largest population size in the world has put efforts to align its existence with other countries in the world. The development efforts performed by Indonesia aim to realize the 1945 Constitution mandates, which is to achieve excellent Indonesian human resource in its entirety. To achieve this, health development is the main pillar in providing human resource by implementing Law Number 36 of 2009 article 1 subarticle 1 on Health that stated: “Everyone has the right for health”.

Human resource development that is based on health is a basic need that should be included in each National Development Plan to build a healthy and smart community. The development of this health-based human resource is performed according to the life course and each stage in life carries its own specific health issues.


Ageing and increased prevalence of non-communicable diseases are the main factor that causes reduced cognitive functions that will eventually increase the number of Alzheimer and other dementia diseases in elderly group. Reduced cognitive functions lead to reduced daily social activities among older persons that will create problems in public health and increased in family, community, and government spending.

In Indonesia, the number of People with Dementia (PwD) is expected to be increasing from 960,000 in 2013 to 1,890,000 in 2030 and is estimated to reach 3,980,000 in 2050 (World Report Alzheimer, 2012). Hence, a careful attention is needed to prevent and manage the PwD, including efforts to maintain the healthy state of the brain. Optimum brain health can be achieved if efforts have been performed since pregnancy and during infancy, toddler, adult, and elderly periods.

Unhealthy and non-productive brain in older persons will not only create health and social problems but also will become an economic burden. The financial burden that has to be carried by people with dementia in countries with middle up income is estimated to be US\$ 32.5 Billions or 325 Trillion rupiahs per year (*World Report Alzheimer*, 2012).

Prevention of dementia can be performed by controlling degenerative diseases such as Diabetes mellitus, due to the fact that 54.6% people with DM Type 2 has experienced decreased cognitive functions in the form of Non-Dementia Cognitive Disorders (ND CD). The prevalence of Dementia in DM group is 6.8% while in groups without DM the same prevalence is only 1.2%. Overall, the prevalence of Dementia in Jabotabek is 3.5% (MWS Nasrun, dissertation of UI 2007). Meanwhile, a study in 3 areas including Borobudur, Sumedang, and Jakarta has revealed 38.9% of decreased cognitive functions in elderly above 60 years old with healthy lifestyle and brain stimulus as protective factors (Hogervorst, et al. 2009).

The efforts to prevent and manage people with non-dementia and dementia disorders need collaborations between the government, private sector, and development partners as well as other stakeholders. To coordinate these collaborations towards an integrated and harmonious collaboration, a National Strategy for Management of Alzheimer and other Dementia Disorders: Towards Healthy and Productive Older Persons is needed. This national



strategy is a reference for implementing comprehensive, integrated, and efficient health efforts that aim to reduce the incidence of Alzheimer and other dementia diseases using the life course approach.

**B. VISION, MISSION, OBJECTIVES, AND STRATEGY**  
**VISION**

To achieve healthy and productive older persons


**MISSIONS**

- To coordinate cognitive issue and dementia control
- To promote healthy brain towards productive older persons
- To manage cognitive disorders in order to prevent dementia in older age

**GENERAL OBJECTIVE**

To achieve the management of Alzheimer and other dementia disorders: towards health and productive older persons

**SPECIFIC OBJECTIVES**

- a. To implement coordination on management of cognitive and dementia issues
  - b. To implement healthy brain towards productive older persons promotion
  - c. To implement management of cognitive disorders to prevent dementia
- 

## **STRATEGIES**

1. Mainstreaming of efforts to achieve the healthy brain towards productive older persons using life course approach in every level of the national development.
2. Quality improvement of services for intelligence and dementia disorders.
3. Strengthening managerial capability to achieve optimum healthy brain.

## **C. SCOPE**

In this national strategy document, the followings are described:

1. Overview of intelligence health situation (especially for Alzheimer and cognitive disorders due to other brain diseases).
2. Health situation analysis in each stage of life as a factor that affects healthy brain in older persons.
3. Concepts and efforts to achieve healthy and productive brain in older persons.
4. Strategies for managing Alzheimer and other dementia diseases as well as steps to attain older persons with healthy and productive brain.
5. Vertical and horizontal coordination among programs and sectors as well as community empowerment.

## **D. LEGAL FRAMEWORK AND SUPPORTING LEGISLATIONS:**

1. 1945 Constitution;
2. Law No. 13 of 1998 on Elderly Welfare;
3. Law No. 32 of 2004 on Local Government;
4. Law No. 36 of 2009 on Health;

5. Law No. 52 of 2009 on Population and Family Development;
6. Regulation of the Minister of Health Number 1144/Menkes/Per/VIII/2010 on Organization and Work Procedures of the Ministry of Health
7. Regulation of the Minister of Home Affairs Number 6 of 2007 on Technical Instruction on Formulation and Determination of Minimum Service Standards
8. Regulation of the Minister of Home Affairs number 60 of 2008 on Guideline for Establishing Local Commission for Elderly and Community Empowerment in Elderly Management at Local Level
9. Decree of the Minister of Health Number 922/Menkes/SK/X/2008 on Distribution of Government Health Affairs between the Provincial and District or City Government
10. Decree of the Minister of Health Number 263/Menkes/SK/II/2010 on Cognitive Rehabilitation Guideline
11. Decree of the Minister of Health Number 264/Menkes/SK/II/2010 on Guideline on Management of Intelligence Issues due to Degenerative Disorders

## 2

### **SITUATION ANALYSIS: OVERVIEW ON ELDERLY INTELLIGENCE HEALTH IN INDONESIA**

Indonesia will experience elderly explosion. In a period of 10 years, it is estimated that there will be an increase of life expectancy from 68.6 years old to 72.7 years old in 2014. The increase in LE will be followed by increasing number of elderly, starting from 23.9 millions (9.77%) in 2010 and is estimated to achieve 28.8 millions (11.34%) in 2020. Based on the projection for 2010-2035, the number of people in the age group of 0-14 years and 15-49 years will decrease while the number of people in elderly group (50-64 years old and 65+) will continue to increase.

In 2020-2025, Indonesia will experience demographic bonus where 100 working people will provide 44 dependents. This demographic bonus will create impacts on income, both per capita and national income. The role of healthy and productive older people will greatly contribute to the condition. This is supported by the data from the period of 2005 – 2012 where most older persons (around 90%) still play important roles in the household vicinity and have a status of the Head of Household. Based on the results of the National Manpower Survey (*Sakernas*) 2011, almost half of the older people (45.41%) still do their work as their main activity.

However, with the increase in LE and the number of elderly, there is also an increase in various brain degenerative diseases that reduce the cognitive functions and productivity of elderly. Reduced cognitive functions will also lead to a decrease in daily activities if not controlled and will create additional social burden that has to be carried by the family, community, and government.


The main cause of reduced cognitive functions among older persons is Alzheimer disease and other dementia diseases. Data from the *World*



*Alzheimer's Report 2013* predict that the number of dependent elderly will increase from 101 millions to 277 millions in 2050, an almost three-fold increase. Almost half of them will live with Alzheimer disease or other dementia diseases that will rapidly become global health crisis. In Indonesia, specifically, it is estimated that there are around 1 million people suffering from Alzheimer while the proportion of elderly with reduced cognitive functions in three areas of Indonesia (DKI Jakarta, West Java, and Central Java) is 38.9% and around 4% experience dementia [Hogervorst et al., 2009]. In addition another study on prevention of dementia stated that one of the ways to prevent dementia is by controlling degenerative diseases such as Diabetes mellitus since 54.6% of DM type 2 patients have experienced reduced cognitive functions of Non-Dementia Cognitive Disorders. The prevalence of Dementia in DM group is 6.8% while the same prevalence in non-DM group is only 1.2%. Overall, the prevalence of Dementia in Jabotabek area is 3.5% (MWS Nasrun, dissertation of the University of Indonesia, 2007).

Data from Riskesdas (Basic Health Survey, BHS) 2010 also present **Burden of Diseases** (BOD) presentation as the risk factor for diseases/disorders that, directly and indirectly, cause reduced cognitive functions such as: *maternal disorder, neonatal disorder, nutritional deficiencies, transports injuries, mental & behavioral, infections* (HIV AIDS, diarrhea), with hypertension, stroke, and diabetes mellitus as the most frequent diseases (Riskesdas, 2013). Under-nutrition during the 1,000 days of life will affect the very rapid development of the brain and will very much affect the appearance of cognitive disorders in the future. Data from Riskerdas 2010 describe the prevalence of poor and malnutrition of 17.9%, stunting and severe stunting of 35.6%, thin and extremely thin of 13.3%. The prevalence of stunting and severe stunting in teenagers is 31.2% and the prevalence of thin and extremely teen is 8.9%. In the age group of 19 to 64 years old, the tendency of poor nutrition ranges from 30% to 50%.

The data above show that the number of elderly keeps increasing and this group can become the national asset if they are healthy and productive. However, older persons who are not healthy and not independent will create a tremendous impact towards the socioeconomic condition of the nation. Hence, it is important to have a national strategy to control Alzheimer



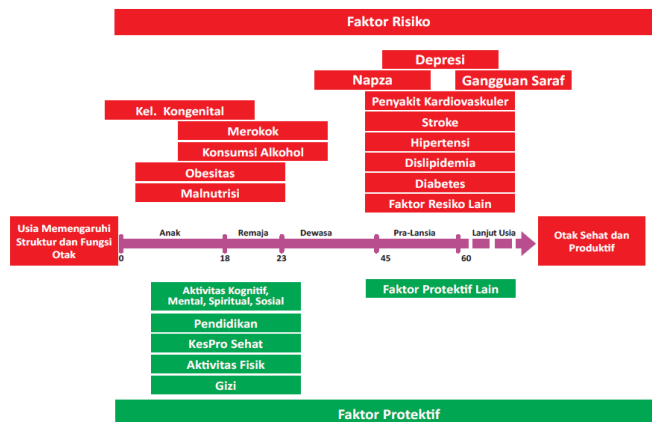
and other dementia diseases that are one of the causes that lead to unhealthy and non-productive elderly. This national strategy to control Alzheimer and other dementia diseases should pay attention to various conditions and risk factors in each stage along the life course, where all individuals are expected to be able to maintain their health starting from the reproductive process, avoiding potential environmental pollution, increasing balanced nutrition intake, and stimulation in the form of education to improve the intelligence health. To achieve this, a mutual commitment between families, community, government, and business world is needed.

### 3

## TOWARDS HEALTHY BRAIN IN OLDER PERSONS

### A. LIFE COURSE CONCEPT TOWARDS HEALTHY AND PRODUCTIVE BRAIN

Healthy and productive brain will be achieved through optimum health since pregnancy, infancy, childhood, adolescent, adulthood, pre-elderly, and elderly. This condition will be influenced by the presence of congenital disorders, genetic factors, smoking behavior and alcohol consumption, poor nutrition, and various diseases such as non-communicable diseases, communicable diseases, metabolic diseases, vascular diseases, and neuro disorders. These can be prevented through balanced nutrition as well as cognitive, sociocultural, education, and physical activities plus good reproductive health. Furthermore, other stimulus is needed to increase the function of the brain (see figure 2.1).



Sources : Riskesdas 2010 & 2013, Mangialasche, Kivipelto et al 2012, CAS UI 2013, processed by the Center for Intelligence Health of the Indonesian Ministry of Health

Legend: *Faktor risiko* = risk factors, *depresi* = depression, *Napza* = Narcotics and substances, *Gangguan syaraf* = neuro disorders, *penyakit kardiovaskuler* = cardiovascular disease, *hipertensi* = hypertension, *dislipidemia* = dyslipidemia, *faktor risiko lain* = other risk factors, *kel. Kongenital* = kongenital disorders, *merokok* = smoking, *alcohol consumption* = konsumsi alkohol, *obesitas* = obesity, *malnutrisi* = malnutrition, *usia memengaruhi struktur dan fungsi otak* = age affects the structure and function of the brain, *anak* = childhood, *remaja* = adolescent, *dewasa* = adulthood, *pra-lansia* = pre-elderly, *lanjut usia* = elderly, *aktivitas kognitif, mental, spiritual, sosial* = cognitive, mental, spiritual, social activities, *pendidikan* = education, *KesPro sehat* = healthy reproductive health, *aktivitas fisik* = physical activity, *gizi* = nutrition, *faktor protektif* = protektif faktor

Figure 2.1. Protective and Risk Factors of Healthy and Productive Brain

### B. LOGICAL FRAMEWORK FOR HEALTHY BRAIN

A Healthy Brain is a condition where the cognitive and non-cognitive functions are well maintained that they can make independent decisions. The efforts to achieve a healthy and productive brain include balanced nutrition intake and physical, cognitive, spiritual, and social stimulations with the support of adequate environment. To achieve healthy brain in older persons, various efforts are needed (figure 2.2)

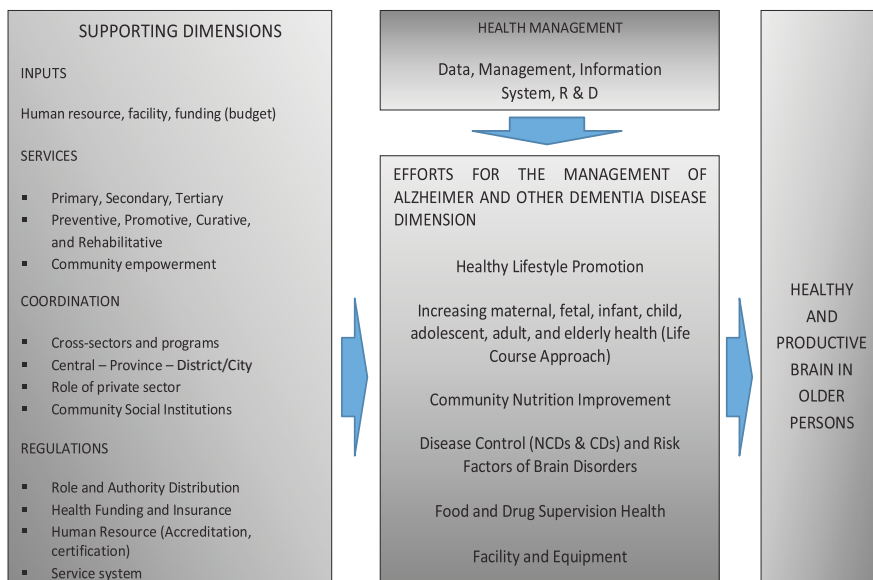



Figure 2.2. Logical Framework towards Healthy and Productive Brain in Older Persons

### C. EFFORTS TO ACHIEVE HEALTHY AND PRODUCTIVE BRAIN IN OLDER PERSONS


To achieve healthy and productive brain in older persons, continuous health efforts in each stage of the life course are needed. Various efforts to improve maternal, fetal, infant, child, adolescent, adult, pre-elderly, and elderly health will affect the brain health in older persons. Increased community nutrition really influences fetal health that will lead to healthy and productive brain in older persons (*Buku Gaya Hidup Otak Sehat (Brain Healthy Life Style)*, Center of Intelligence Health 2013). Fetus is not only influenced by nutrition but also needs brain stimulation, as stated in



the Guideline for Brain Stimulation and Brain Booster Nutrition for Fetus through Pregnant Women (*Brain Booster*, Center for Intelligence Health 2009). Food with preservatives, high salt content, high fat content, and high sugar content as well as smoking habit and diseases such as hypertension and diabetes mellitus are factors that can affect the brain health and may cause dementia (see figure 2.1).

Changes in lifestyle need a long term control and availability of effective and inexpensive medicines as well as adequate health facility and equipment.

Controlling various risk factors can reduce the risk for dementia in the future. Routine brain health check is important, especially for individuals with dementia risk. Brain health check can be performed in primary and secondary health care facilities in a holistic manner, such as using ABCDE screening (*A : Activity daily living, B : Balance, C : Cognitive, D : Disease and Risk Factor, E : Emotions*) (Guideline for Management of Intelligence Health Issues due to Degenerative Disorders, Center for Intelligence Health 2010). By assessing daily activities, balance, cognitive, risk factors, and mental-emotional state, the presence of intelligence disorders can be detected as early as possible to enable integrated cross-program and cross-sector efforts.



## 4

### **SEVEN ACTION STEPS TO MANAGE ALZHEIMER AND OTHER DEMENTIA DISEASES: TOWARDS HEALTHY AND PRODUCTIVE OLDER PERSONS**

To manage (promotive, preventive, and curative) Alzheimer and other dementia diseases: towards healthy and productive older persons, action steps need to be formulated by paying attention to the religious and cultural values as well as community norms.

#### **FIRST: CAMPAIGN ON PUBLIC AWARENESS AND PROMOTION OF HEALTHY LIFESTYLE**

To increase community awareness that dementia (“senile”) is not a part of normal ageing process, various efforts and brain healthy lifestyle for life are needed. These include physical, mental, and social activities as well as balanced nutrition. These efforts should be applied consistently and continuously.

#### **SECOND: ADVOCACY ON HUMAN RIGHTS FOR PEOPLE WITH DEMENTIA (“SENILE”) AND THEIR CAREGIVERS**

Increased awareness among stakeholders and community members that dementia is a problem that will create a broad impact on life is needed to increase the quality of life of the PwDs and their caregivers.

#### **THIRD: ENSURING ACCESS AND INFORMATION OF QUALITY SERVICES**

Efforts are performed to increase access and information on multi-disciplinary and comprehensive quality services that can be accessed by PwDs and their caregivers.



#### **FOURTH: EARLY DETECTION, DIAGNOSIS, AND HOLISTIC MANAGEMENT OF COGNITIVE DISORDERS AND DEMENTIA**

Efforts to increase quality of services that include early detection, diagnosis, and holistic management in primary and secondary health care facilities. In the case where long-term care is needed, homecare and community-based care will be prioritized.

#### **FIFTH: ESTABLISHMENT OF PROFESSIONAL AND SUSTAINABLE SYSTEM FOR STRENGTHENING HUMAN RESOURCE**

Efforts to increase specific knowledge and skills for all health care workers and non-health care workers through education and training programs in all care levels (with an emphasize on the primary care).

#### **SIXTH: ESTABLISHMENT OF A COGNITIVE HEALTH PROGRAM AS THE MAIN FACTOR IN ACHIEVING A SMART LIFE IN THE NATION BASED ON THE LIFE COURSE APPROACH**

Efforts to achieve healthy and productive brain as a part of an integrated strategic plan by paying attention to the conditions and risk factors of each stage of life.

#### **SEVENTH: IMPLEMENTATION AND APPLICATION OF RESEARCH ON COGNITION AND DEMENTIA**

Efforts are performed to increase the quality of cognitive and dementia management through various research at the national level (basic, clinical, epidemiological, and social research).

## 5

### STRENGTHENING COORDINATION AMONG COMPONENTS

#### A. Optimizing the Roles of Stakeholders

Government needs to encourage various potential efforts in promoting healthy and productive older persons, management of cognitive disorders in older persons, and the implementation of coordination in PwD care through Inter-generation Empowerment and Economic Empowerment approach. The efforts to achieve this goal require coordination among stakeholders that include: the National Commission for Elderly (Komnas Lansia), government (through the coordination of the coordinating ministry of people's welfare), and community involvement to produce and implement cross-sector and cross-program activities. The concept to synergize various efforts between sector institutions, between actors in various levels, and between types of activities that are adapted to the characteristics of empowerment level and dignity level related to independence of the community by developing local resource potentials is described (figure 5.1). This concept can be implemented at the local level by involving the Local Commission for Elderly and all other elements under the local government.