

Nursing and Health Education for NCDs and Global Health Management

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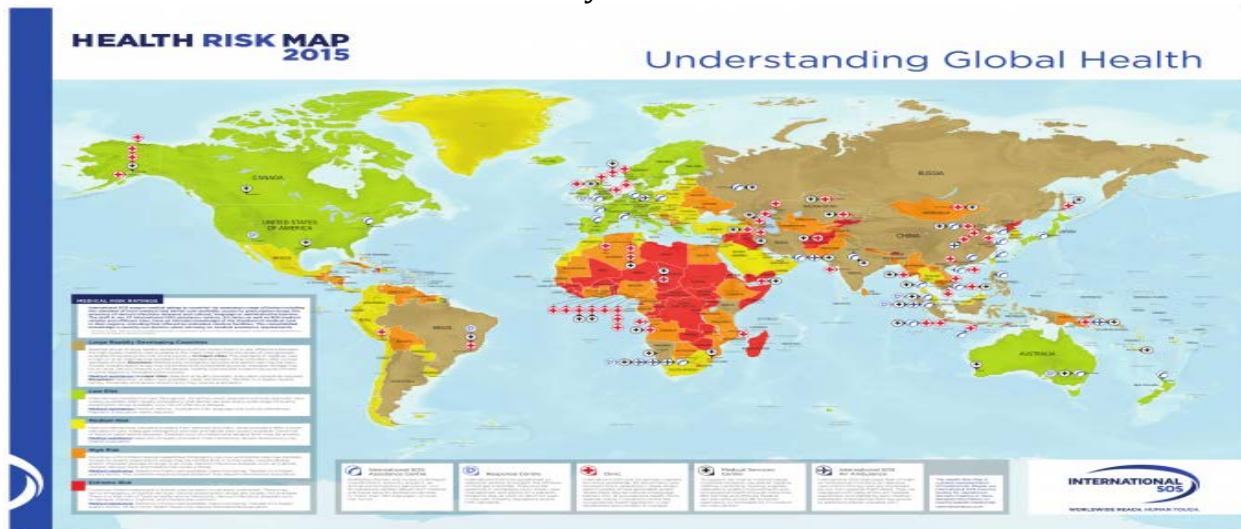
Intruduction

Indonesia is currently in a transition period of epidemiology, where development efforts in the health sector face a double burden of disease. One party still many infectious diseases/infectious diseases (malaria, dengue fever, leptospirosis, tuberculosis, diarrhea, etc.) that must be dealt with, on the other hand the increasing non-communicable diseases (NCDs), which requires immediate attention. But in the last 10 years the problem NCDs has not been a concern of many parties. It can be seen such as NCDs problem haven't mentioned in the target Millennium Development Goals(M DGs).

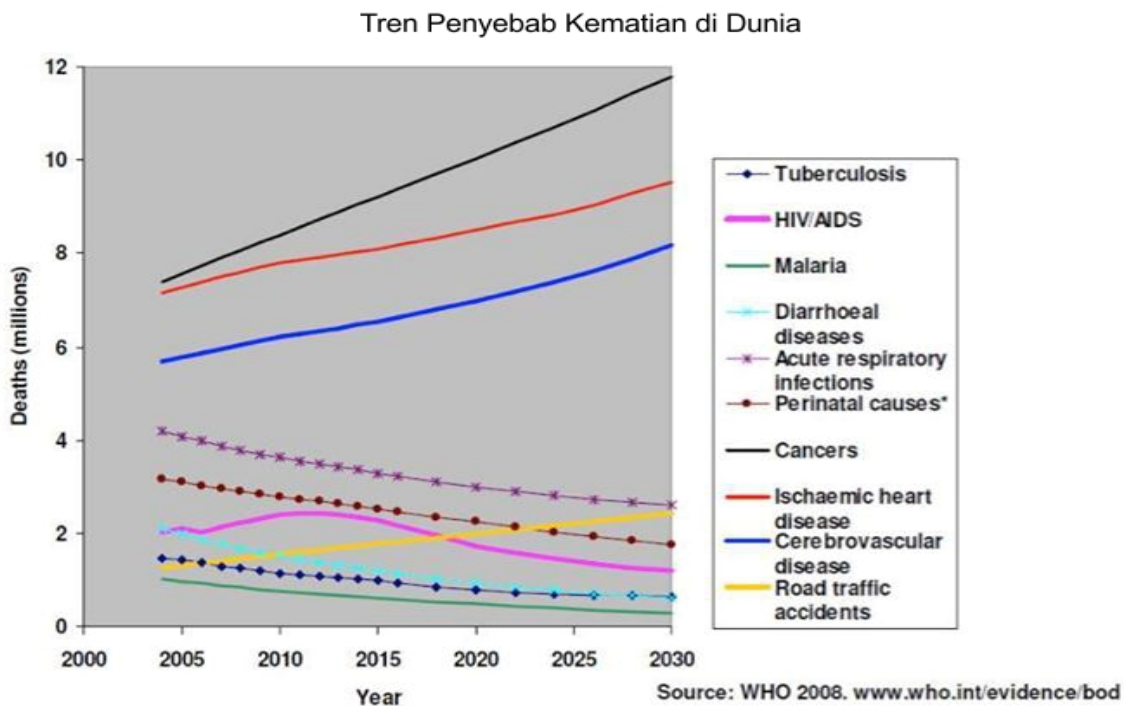
Based on a review of existing data, the World Health Organization (WHO) has set the type of non-communicable diseases that need immediate attention and treatment. Likewise, the Ministry of Health through the Directorate of Non Communicable Disease Control has also set a priority non-communicable diseases namely cardiovascular diseases, diabetes mellitus (DM), chronic pulmonary disease, cancer (especially cervical and breast cancer)

Global situation

NCD are the leading cause of death globally (NCD caused 66.6% of deaths, WHO 2008). In countries with low and medium levels of the economy, the deaths of those with age <60 years 29% were caused by non-communicable disease, whereas in developed countries, NCDs cause 13% of deaths. In overview the proportion of causes of death of non-communicable diseases in people aged less than 70 years were explained that cardiovascular disease are the biggest cause (39%), followed by cancer (27%), whereas chronic respiratory diseases, gastrointestinal diseases and other NCDs were causes about 30% of deaths and 4% of deaths caused by diabetes.



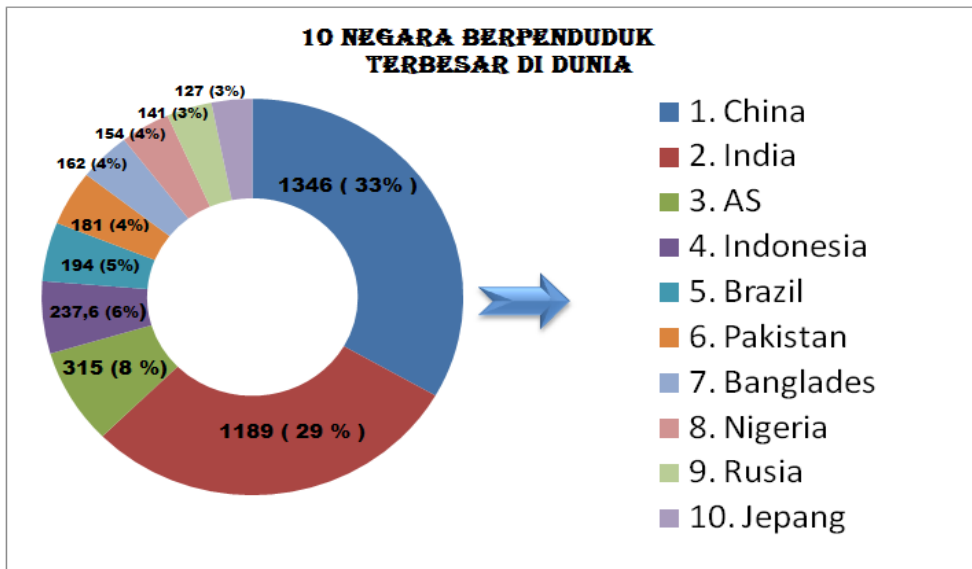
According to the World Health Organization, deaths from of Non Communicable Diseases (NCDs) are expected to continue to increase worldwide, the largest increases will occur in countries with middle income and poor. More than two-thirds (70%) of the global population will die from non-communicable diseases such as cancer, heart disease, stroke and diabetes. in total, in 2030 is predicted there will be 52 million deaths per year due to non-communicable diseases, increased 9 million from 38 million at present. On the other hand, deaths from infectious diseases such as malaria, tuberculosis or other infectious diseases will decline, from 18 million today to 16.5 million in 2030. In countries with middle economic class and poor, NCDs will be responsible for three times, from the years of life lost and disability (disability adjusted life years = DALYs) and nearly five times of deaths due to infectious diseases, maternal, perinatal and nutritional problems.



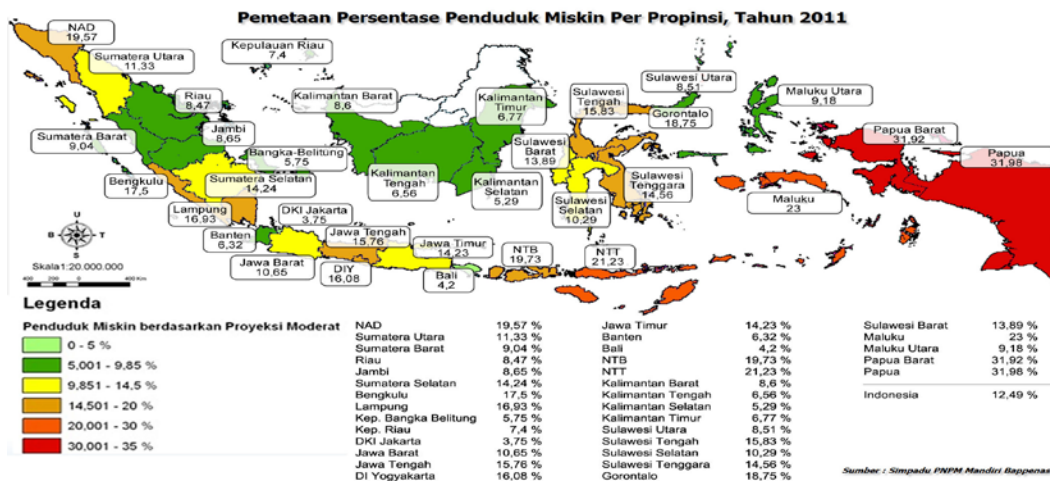
Globally, regionally and nationally in 2030 an epidemiological transition from infectious diseases to non-communicable diseases become more obvious. It is projected amount of morbidity due to non-communicable diseases and accidents will increase and infectious diseases will decline. NCDs such as cancer, heart disease, diabetes and chronic obstructive pulmonary, and other chronic diseases will experience a significant increase in 2030. While infectious diseases such as tuberculosis, HIV / AIDS, Malaria, diarrhea and other infectious diseases are expected to decline in 2030. Increased incidence of NCDs is associated with increased risk factors due to lifestyle changes along with the development of increasingly modern world, population growth and the increase in life expectancy.

Based on global data mentioned 10 countries with the largest population are; China, India, USA, Indonesia, Brazil, Pakistan, Bangladesh, Nigeria, Russia and Japan. Indonesia, which

ranks the 4th largest population of the world at risk and the potential for greater disease problems. Environmental problems, housing, congestion and the potential social problems are also an issue that is equally important for Indonesia.



Situation in Indonesia



1. It is projected that the amount of morbidity due to non-communicable diseases and accidents will increase and infectious diseases will decline. NCDs such as cancer, heart disease, diabetes and chronic obstructive pulmonary, and other chronic diseases will increase significantly in 2030.
2. Meanwhile, infectious diseases such as tuberculosis, HIV / AIDS, Malaria, diarrhea and other infectious diseases are expected to decline in 2030. The increase in incidence of NCDs is associated with increased risk factors due to lifestyle changes along with the development of increasingly modern world, population growth and the increase in life expectancy.

Indonesia in recent decades face problems triple burden diseases. On the one hand, infectious diseases are still a problem characterized by still frequent outbreaks of some certain infectious diseases, re-emergence of some infectious diseases (re-emerging diseases), as well as the emergence of new infectious diseases (new-emerging diseases) such as HIV / AIDS , Avian Influenza, Swine Flu and Nipah disease. On the other hand, NCDs showed an increasing trend over time.

Global Situation

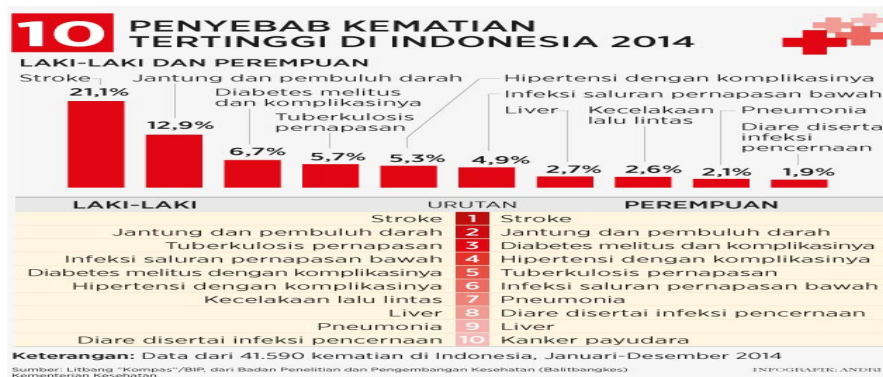
SITUATION IN INDONESIA

1. Re-emerging disease
2. New emerging disease (HIV/AIDS, Avian Influenza, Flu Babi (H1N1) and Nipah Disease)



According to Basic Health Research (Riskesdas) in 2007 and the Household Health Survey (SKRT) in 1995 and 2001, explained that for 12 years (1995-2007) there has been an epidemiological transition where deaths due to non-communicable diseases is increasing, while deaths from communicable diseases is decline. (See graphic in the picture one) This Phenomena will predict to be continuous.

During 1995 to 2007 in the Indonesia the proportion of infectious diseases has decreased by a third from 44.2% to 28.1%, but the proportion of non-communicable diseases has increased sharply from 41.7% to 59.5%, while interruption of maternal / perinatal and injury cases are relatively stable. NCDs profile according to WHO in 2011, in the Indonesia in 2008 there were 582.300 (five hundred eighty two thousand) men and 481.700 (four hundred eighty one thousand) women died because of NCDs



The picture of 10 Primary Causes of Death in Indonesia, 2014; stroke (21.1%), heart and vessels (12, 9%), DM (6, 7%), hypertension (5, 3%), lower respiratory tract infection (4, 9%), liver, trauma/ accident, pneumonia and diarrhea. If we evaluated from gender, thus stroke, heart and vessel disease equally ranked highest both in men and women, then followed with tuberculosis, hypertension and diabetes mellitus.

Risk Factor of NCDs

Risk Factor of NCDs

1. Smoking Behavior,
2. Unhealthy Diet,
3. Lack of Physical Activity
4. Alcohol Consumption

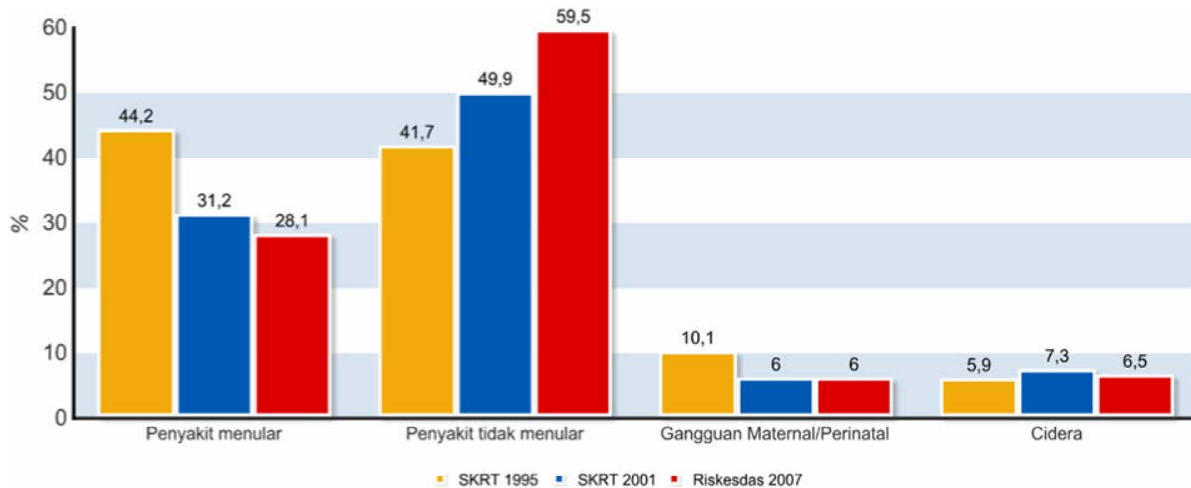


The greatest risk factor at all NCD are smoking behavior which were quite high among people, diet is such unhealthy fast food, processed materials that contain chemicals, overeating, alcohol consumption and excessive sugar consumption but less balanced with physical activity or adequate exercise regularly.

In contrast to an infectious disease caused by microorganisms such as bacteria, viruses, worms, fungi and protozoa that infect humans, non-communicable diseases are not caused by microorganisms, but due to the interactions between multiple physiological, genetic, factors behaviors and factors beyond the human beings themselves such as social, economic and environmental conditions around it. Factors that contribute to the emergence of NCDs commonly known as the Risk Factors.

The presence of risk factors, along which several factors are the cause of the emergence of some kind of disease, whether the disease is referred to as a disease among the signs and symptoms of a disease (hypertension, obesity, dyslipidemia, pre-cancerous lesions and chronic bronchitis) until the occurrence of the disease itself (coronary heart disease and vascular, stroke, Diabetes, chronic Kidney disease chronic Obstructive Pulmonary / COPD and cancer).

Distribution of Disease which Leading Cause of Death in Indonesia



- Figure 1: Distribution of cause of death by disease groups in Indonesia, Household Health Survey 1995, Household Health Survey 2001, Riskesdas 2007 Source: Basic Health Research (Riskesdas) 2007
- Figure 1 above shows that during 1995 to 2007 in Indonesia the proportion of infectious diseases has decreased by a third from 44.2% to 28.1%, but the proportion of non-communicable diseases has increased sharply from 41.7% to 59.5% , while the disruption of maternal / perinatal and injury cases are relatively stable.
- According to NCDs profile according to WHO in 2011, in Indonesia in 2008 there were 582 300 men and 481 700 women died due to non-communicable disease.

A new outpatient case

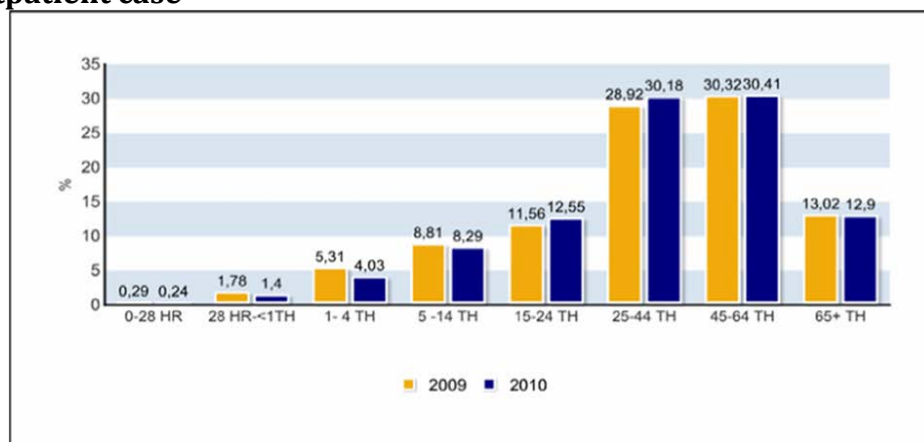


Figure 5: The percentage of new cases in the outpatient associated with non-communicable diseases by age group from 2009 and 2010 Source: Hospital Information System (SIRS) in 2010-2011

The percentage of new cases in the outpatient associated with non-communicable diseases by age group from 2009 and 2010, illustrated that the presentation of the case to have the same pattern, with the highest occurred in 2009 and 2010 were in the age group 45-64 years and then followed by the age group 25-44 years. As well as the percentage of new cases of outpatient most low both in 2009 and in 2010 was in the age group of 0-28 days as shown below.

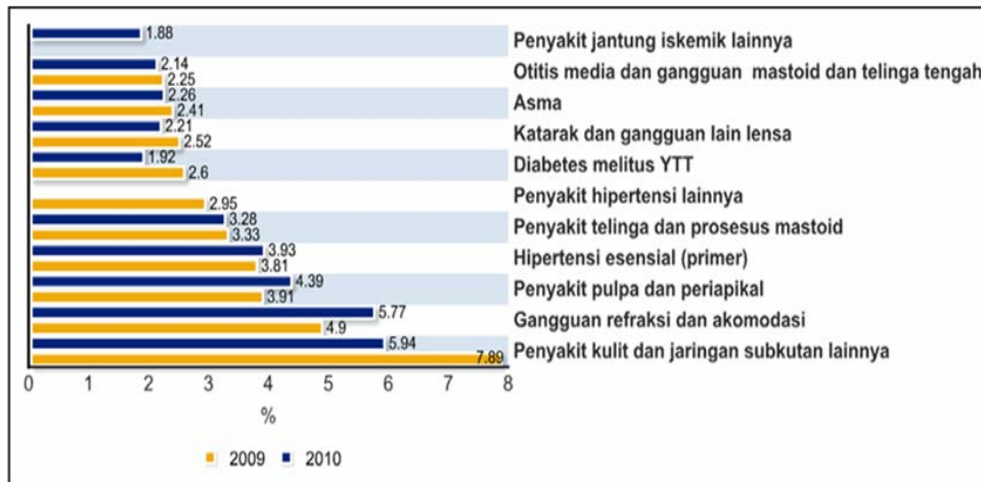


Figure 14 : Ranked the top 10 of NCDs that causes an outpatient in the hospital in 2009 and 2010
Source: Hospital Information System (SIRS) in 2010-2011

Ranked the top 10 of NCDs that causes an outpatient in the hospital in 2009 and 2010, Illustrated that the cause of the illness is almost the same except in 2009 there were another hypertension disease, whereas in 2010 there were another Ischemic Heart Disease with the percentage of all outpatient illnesses as shown in the figure below

Cases of Non-communicable Diseases in patient

1. In 2009-2010, the largest proportion of outpatient cases is non-communicable diseases followed by infectious diseases, injuries, maternal and perinatal.
2. The proportion of new cases based on sex have the same pattern i.e. there is no significant difference between groups of men and groups of women
3. The proportion of new cases by age group, the highest age group of 45-64 years followed by 25-44 years

Cases of Non-communicable Diseases in the Outpatient

1. In 2009-2010, the proportion of inpatient is equal to outpatient, in which the largest portion is non-communicable diseases followed by infectious diseases, injuries, maternal and perinatal.
2. The proportion of inpatient cases of NCDs by gender, in which men and women have a pattern that is not much different in 2009 and 2010.

Globally Target Control of NCDs in 2015-2025

1. A relative reduction of 25% of all deaths caused by cardiovascular disease, cancer, diabetes, chronic lung disease
2. 10% relative reduction in the use of alcohol, from the dangerous level to the appropriate level in the context of a national standard units
3. A relative reduction of 10% of the prevalence of physical inactivity
4. A relative reduction of 30% of the average intake of salt / sodium in the population aged 18 years and over
5. The relative decrease as much as 30% of the prevalence of smoking at age 15 years and over
6. The relative decrease as much as 25% of the prevalence of high blood pressure

7. Reducing the rate of increase in the prevalence of diabetes, obesity and overweight
8. At least 50% of patients gain access to treatment and counseling of cardiovascular risk factors including hyperglycemic control to prevent heart attacks and strokes
9. At least 80% of patients get access to essential quality treatment, and counseling of non-communicable disease risk factors including hyperglycemic control, and basic medical technology support necessary in the management of non-communicable disease to prevent heart attacks and stroke

The Scope of NCDs Prevention

1. The National Program for Prevention and Control of Major Non Communicable Diseases, include:
 2. Heart disease and blood vessels
 3. Diabetes mellitus and metabolic diseases
 4. Cancer
 5. Chronic disease and other degenerative diseases
 6. Disorders due to accidents and injuries.

Strategic Plan of the Ministry of health on NCDs Prevention in 2015 – 2019

1. Community health centers that implement an integrated control program of NCDs
2. Village / Sub conducting Integrated Development Center (Posbindu) about NCDs
3. Women aged 30 to 50 years to detect cervical and breast cancer
4. District / city to implement policies No Smoking Area (KTR) at least in 50% of schools area
5. District / city conduct health examinations of drivers in the main terminal.

Policies

1. Developing and strengthening of early detection of risk factors for non-communicable diseases
2. Improve and strengthen management, equity, and quality of equipment for early detection of risk factors for non-communicable diseases
3. Improve the professionalism of human resources in the prevention and control of non-communicable disease risk factors.
4. Develop and strengthen epidemiological surveillance of non-communicable disease risk factors
5. Increase the monitoring of prevention and control toward the risk factors of non-communicable disease
6. Developing and strengthening the information system of prevention and control the risk factor of non-communicable disease.
7. Develop and strengthen the network of prevention and control of non-communicable diseases
8. Enhancing advocacy and outreach prevention and control of non-communicable disease risk factors
9. Develop and strengthen the system of financing prevention and control of non-communicable disease risk factors.

Networking of Prevention and Control of the Risk Factors of Non-Communicable Disease

Involving various sectors, community groups, government institutions to work based on the agreement, the principle and the respective roles in the prevention and control of non-communicable disease risk factors.

The purpose of these networks is:

1. Increasing the commitment of governments and a wide range of potential partners
2. Synergy and coherence in the various activities of prevention and control of risk factors
3. Increasing the self-reliance in prevention and control of risk factors

Prevention and Control of Non-Communicable Disease Risk Factors: a Community-Based approach

The development and strengthening of the prevention activities and control of non-communicable disease risk factors implemented through community-based approach in which integrated into the community group that already exist in the each region.

The activities of prevention and control of non-communicable disease risk factors based community include:

1. Epidemiological surveillance of non-communicable disease risk factors based society
2. Early detection of non-communicable diseases risk factors based on community approach
3. Countermeasures (handling) the risk factors of non-communicable diseases using community based approach.

Control of non-communicable disease

Healthy Population	At Risk Population	Population with NCDs	
Health Promotion	Integrated Control of Risk Factors	Control and Prevention of Complications	
<ul style="list-style-type: none"> • Conducive Environment • Healthy Life Styles (No smoking, Healthy diet and physical activity) 	Case management: <ul style="list-style-type: none"> - Smoking, - hypertension, - cancer, - obesity, - hyperglycemia 	Case Management: <ul style="list-style-type: none"> -Emergency Nursing -In patient -Outpatient -Referral 	Complication Prevention: <ul style="list-style-type: none"> -Rehabilitation -Home care -Foot Care -Diet -OR
:POSBINDU NCDs in Community	Basic Health Facility	Hospital	Posbindu, Community
Surveillance Risk Factor of NCDs		Hospital Information System (SIRS)	

- C: Check the condition of your health routine and regular
- E: Get rid of cigarette smoke and other air pollution
- R: Diligent to performing physical activity with sports and art

- D: a healthy diet with calorie balanced (low in sugar, low salt and fat and high in fiber)
- I: Get enough rest and prioritizing safety
- K: Control stress and violence

Conclusion

The increase in non-communicable diseases requires serious attention by all parties, both policy makers and the public. The increase in NCDs can be reduced through control of risk factors, such as the reduction of tobacco consumption, alcohol, sugar and salt, increased consumption of fruits and vegetables, increase physical activity through sport, preventing obesity, controlling stress with recreational activities and perform blood pressure checks, blood sugar levels regular. NCDs prevention efforts can be done by the community independently through Posbindu.