

INTERNATIONAL COUNCIL OF NURSES



# Delivering Quality, Serving Communities: Nurses Leading Chronic Care

DEPRESSION

HEART DISEASE

HYPERTENSION

RESPIRATORY

CANCER

DIABETES

**12 May 2010**

International Nurses Day

**DELIVERING QUALITY, SERVING COMMUNITIES:  
NURSES LEADING CHRONIC CARE**



**INTERNATIONAL NURSES DAY 2010**

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3, place Jean-Marteau, 1201 Geneva, Switzerland

ISBN: 978-92-95094-00-0

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Dear Colleagues,

Every country in the world is affected by the rising tide of chronic disease, and the need for access to appropriate, affordable care for people with chronic conditions. The potential for nurses to contribute to improvement in the health of populations across the world through attention to chronic disease prevention and care has never been greater.

Diabetes, cardiovascular diseases, respiratory diseases and cancer are the world's biggest killers, causing an estimated 35 million deaths each year (WHO 2008a). 80% of these deaths occur in low and middle income countries. These diseases are preventable. When they do occur, effective care and management from the earliest stages can enable those affected to live fulfilling and productive lives. As well as these "conventional" chronic diseases, the changing pace and nature of other diseases such as HIV/AIDS, means that increasing numbers of people in all countries need ongoing chronic care.

There is an urgent need for nurses everywhere to take the initiative and engage with all parts of the community and all sectors to address the growing threat chronic diseases pose to global health and well being.

This document provides background information about the increasing need and demand for chronic care, using type-2 diabetes as an example. It challenges nurses and others to understand the enormity of the problem and to recognise that with knowledge, courage, vision and commitment nurses are well placed to take a lead role.

./.

**International  
Council of Nurses**

3, Place Jean-Marteau  
CH-1201 Geneva Switzerland  
Telephone 41 (22) 908 0100  
Fax 41(22) 908 0101  
E-Mail : [icn@icn.ch](mailto:icn@icn.ch)  
Website : [www.icn.ch](http://www.icn.ch)

With this IND Kit, ICN is issuing a call to action for nurses everywhere to lead the fight against chronic disease; to act as healthy role models for their families, their patients and their communities; and, through their national nurses associations, to engage with ICN and its partners to advocate for necessary social, economic and political change.

Sincerely,

Rosemary Bryant  
President

David C Benton  
Chief Executive Officer

# CHAPTER 1

## The Challenge of Chronic Disease

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The world is facing a massive increase in the levels of death and disability resulting from chronic disease. Chronic diseases have traditionally been associated with the developed world and seen as diseases of affluence affecting mainly the elderly and the wealthy, while attention and resources in the developing world have been focussed largely on communicable diseases. However, statistics now show that 60% of deaths globally are due to chronic disease and 80% of these occur in low and middle income countries (WHO 2008a). Increasing numbers of working age people are affected. In countries at all levels of income, health and illness follow a social gradient: the lower the socioeconomic position, the worse the health (WHO 2008b). “The rapidly increasing burden of these diseases is affecting poor and disadvantaged populations disproportionately, contributing to widening health gaps between and within countries.” (WHO 2008a).

There are many reasons for the increase in chronic disease and the disproportionate impacts on poorer people, most of which are beyond the scope of the health sector alone to address. However, the health sector must lead the fight against chronic disease and nurses can make an enormous contribution not only in prevention but in caring for the millions across the world who are already affected.

### Definitions

In the context of chronic care a number of related terms are used, often interchangeably, including chronic illness, chronic conditions, long term conditions, lifestyle diseases and non-communicable disease (NCD). The World Health Organization (WHO) describes chronic disease as “diseases of long duration and slow progression” and describes chronic conditions as “health problems that require continuous management over a period of years or decades” (WHO 2002). NCD has been defined as disease not typically caused by an infectious agent but from genetic susceptibility, lifestyle or environmental exposures. The

term chronic conditions is often used as an all embracing term to include non-communicable conditions (e.g. diabetes, asthma), persistent communicable conditions (e.g. HIV/AIDS, tuberculosis); long-term mental disorders (e.g. depression, schizophrenia); and ongoing physical/structural impairments (e.g. blindness, genetic disorders). (WHO 2002).

The term chronic disease will be used throughout this document but other terms will also be used particularly when quoting different authors. **Regardless of the terms used, however, the most important thing is for nurses and others to understand the size of the problem and the urgent challenge it poses and to ensure that action is taken to promote health, prevent disease and provide appropriate care and management for those who need it.**

## **The size of the problem**

The scale of the problem is huge. Diabetes, cardiovascular diseases, respiratory diseases and some cancers represent a leading threat to human health and development and are the world's biggest killers.

### **DIABETES FACTS (WHO 2009a)**

- WHO estimates that more than 180 million people worldwide have diabetes. This number is likely to more than double by 2030.
- In 2005, an estimated 1.1 million people died from diabetes.
- Almost 80% of diabetes deaths occur in low and middle-income countries.
- Almost half of diabetes deaths occur in people under the age of 70 years; 55% of diabetes deaths are in women.
- WHO projects that diabetes deaths will increase by more than 50% in the next 10 years without urgent action. Most notably, diabetes deaths are projected to increase by over 80% in upper-middle income countries between 2006 and 2015.

### **CARDIOVASCULAR FACTS (WHO 2009b)**

- CVDs are the number one cause of death globally: more people die annually from CVDs than from any other cause.
- An estimated 17.1 million people died from CVDs in 2004, representing 29% of all global deaths. Of these deaths, an estimated 7.2 million were due to coronary heart disease and 5.7 million were due to stroke.



- Low- and middle-income countries are disproportionately affected: 82% of CVD deaths take place in low- and middle-income countries and occur almost equally in men and women.
- By 2030, almost 23.6 million people will die from CVDs, mainly from heart disease and stroke. These are projected to remain the single leading causes of death. The largest percentage increase will occur in the Eastern Mediterranean Region. The largest increase in number of deaths will occur in the South-East Asia Region.

#### CANCER FACTS (WHO 2009c)

- Cancer is a leading cause of death worldwide: it accounted for 7.4 million deaths (around 13% of all deaths) in 2004.
- Lung, stomach, liver, colon and breast cancer cause the most cancer deaths each year.
- The most frequent types of cancer differ between men and women.
- More than 30% of cancer deaths can be prevented.
- Tobacco use is the single most important risk factor for cancer.
- Cancer arises from a change in one single cell. The change may be started by external agents and inherited genetic factors.
- Deaths from cancer worldwide are projected to continue rising, with an estimated 12 million deaths in 2030.

#### CHRONIC RESPIRATORY DISEASE FACTS (WHO 2009d)

- Hundreds of millions of people suffer every day from chronic respiratory diseases.
- Currently 300 million people have asthma,
- 210 million people have chronic obstructive pulmonary disease (COPD) while millions have allergic rhinitis and other often-underdiagnosed chronic respiratory diseases.

These diseases are preventable. Up to 80% of heart disease, stroke and type 2 diabetes and over a third of cancers could be prevented by eliminating shared risk factors, mainly tobacco use, unhealthy diet, physical inactivity and the harmful use of alcohol. Unless addressed, the mortality and disease burden from these health problems will continue to increase. WHO projects that globally NCD deaths will increase by 17% over the next 10 years. The greatest increase will be seen in the African region (27%) and the Eastern Mediterranean region (25%). The highest absolute number of deaths will occur in the Western Pacific and South-East Asia regions.” (WHO 2008a). A recent cited study indicates that life expectancy in the US has dropped for the first time in 100 years and that this may be attributed to chronic disease resulting from smoking and obesity (Thorpe 2009). The prevalence of diabetes will increase with improved access to anti-retroviral therapy which is

associated with a four-fold increase in the risk of diabetes. In Cameroon, baseline data suggest that diabetes prevalence has increased more than ten-fold over 10 years (Bischoff et. al. 2009).

## **What are the causes?**

The increase in chronic diseases across the world is due to a wide range of factors at global, national and local level. Many are linked to fundamental global and societal changes including urbanisation and economic globalisation; political and social policies; and issues of social injustice as well as population ageing.

Rapid urbanisation results in a lack of facilities and services for the "urban poor" that are essential to good health including housing, infrastructure (including roads, piped water, sanitation, site drainage and electricity), and basic services (including collection of household wastes, primary health care, education and emergency life-saving services) (WHO 2002).

The rural poor, including Indigenous Peoples, suffer from progressive underinvestment in infrastructure and amenities, with disproportionate levels of poverty and poor living conditions. These avoidable health inequalities arise because of the circumstances in which people grow, live, work and age, and the systems put in place to deal with illness. The final report of the Commission on Social Determinants of Health contends that social justice is indeed a matter of life and death (WHO 2008b).

Associated with these changes is an increase in the prevalence of the main modifiable risk factors: smoking, poor diet, lack of physical exercise, excessive use of alcohol, unsafe sexual practices, and unmanaged psychosocial stress. These give rise to intermediate risk factors including raised blood pressure, raised blood glucose, raised cholesterol and obesity which lead to cardiovascular disease, stroke, some cancers, chronic respiratory disease and diabetes.

## **Diabetes**

According to the International Diabetes Federation, in 1985 there were an estimated 30 million people with diabetes worldwide. Today there are more than 245 million people with diabetes, over a seven-fold increase in just over 20 years. If nothing is done to slow down the epidemic, within 20 years the number of people with diabetes will reach 380 million (IDFa). "Diabetes is the main cause of partial vision loss and blindness in adults in developed countries. Diabetes accounts for the majority of limb amputations that are not the

result of an accident. People with diabetes are much more likely to have a heart attack or a stroke. People with diabetes are at a greater risk of developing kidney disease.” (IDFa)

In Australia, the National Centre for Social and Economic Modelling predicts that the prevalence of type 2 diabetes will almost double in the next 40 years to 1.6 million people – by which time the disease will cost Aus\$14 billion per year. Complications arising from the disease are forecast to include: 270,000 coronary bypass operations, over 250,000 strokes and over 750,000 kidney complaints (C3 Collaborating for Health 2009).

## Facts and Figures

- Diabetes currently affects 246 million people worldwide and is expected to affect 380 million by 2025.
- In 2007, the five countries with the largest numbers of people with diabetes are India (40.9 million), China (39.8 million), the United States (19.2 million), Russia (9.6 million) and Germany (7.4 million).
- In 2007, the five countries with the highest diabetes prevalence in the adult population are Nauru (30.7%), United Arab Emirates (19.5%), Saudi Arabia (16.7%), Bahrain (15.2%) and Kuwait (14.4%).
- By 2025, the largest increases in diabetes prevalence will take place in developing countries.
- Each year a further 7 million people develop diabetes.
- Each year 3.8 million deaths are attributable to diabetes. An even greater number die from cardiovascular disease made worse by diabetes-related lipid disorders and hypertension.
- Every 10 seconds a person dies from diabetes-related causes.
- Every 10 seconds two people develop diabetes.
- Diabetes is the fourth leading cause of global death by disease.
- At least 50% of all people with diabetes are unaware of their condition. In some countries this figure may reach 80%.
- Up to 80% of type 2 diabetes is preventable by adopting a healthy diet and increasing physical activity.
- Diabetes is the largest cause of kidney failure in developed countries and is responsible for huge dialysis costs.
- Type 2 diabetes has become the most frequent condition in people with kidney failure in countries of the Western world. The reported incidence varies between 30% and 40% in countries such as Germany and the USA.
- 10% to 20% of people with diabetes die of renal failure.
- It is estimated that more than 2.5 million people worldwide are affected by diabetic retinopathy.
- Diabetic retinopathy is the leading cause of vision loss in adults of working age (20 to 65 years) in industrialized countries.
- On average, in developed countries, people with type 2 diabetes will die 5-10 years before people without diabetes, mostly due to cardiovascular disease.
- Cardiovascular disease is the major cause of death in diabetes, accounting for some 50% of all diabetes fatalities, and much disability.
- People with type 2 diabetes are over twice as likely to have a heart attack or stroke as people who do not have diabetes. Indeed, people with type 2 diabetes are as likely to suffer a heart attack as people without diabetes who have already had a heart attack (IDF 2001).
- Diabetes, respiratory disease (notably asthma), cardiovascular disease and immune-suppression increase the risk of severe and fatal illness from viruses such as H1NI, especially in minority groups and indigenous populations (WHO 2009e).

# CHAPTER 2

## Implications for Development and for Health Systems

This chapter considers the implications of the increasing prevalence of chronic conditions on global social and economic development with reference to the Millennium Development Goals (MDGs), poverty, gender and health systems. The costs associated with chronic conditions are explored with specific reference to diabetes.

### **Social and economic development**

Development is usually associated with ongoing sustainable improvements in the economic and social circumstances within countries. Some argue that as a result of development the opportunities are created for health, whereas others argue that a healthy population is necessary for fair and sustainable development. This is an important argument when it comes to allocation of resources and raises the question of whether a country can afford to invest in health or can afford not to. Of course, there is not necessarily a clear relationship between the economic wealth of a country and the health of all its population. There is increasing inequality within countries across the world which means that the traditional comparisons between countries do not give the full picture as poor people in high income countries may have significantly worse health opportunities than rich people in low income countries. Chronic diseases and their risk factors are closely related to poverty and contribute to poverty; they should therefore no longer be excluded from global discussions on development (WHO 2008a).

Chronic disease imposes high costs in human, social and economic terms, prevents individuals and communities achieving their potential and robs people of their future. Although it is difficult to identify appropriate methods of quantifying these costs, the costs include time lost in the home, in education and for leisure as well as time lost in the workplace resulting in reduced quality of life; increased levels of poverty for individuals and families; reduced productivity and economic output for business and national economies; costs to the individual or the health system for diagnosis, care and treatment; and the cost of often preventable complications of chronic disease.

In addressing the challenge of chronic disease within countries the overall context of social, economic and health system development must be taken into account.

## **Millennium Development Goals**

Many people have suggested that the absence of specific targets to address chronic disease in the Millennium Development Goals (MDGs) was a missed opportunity and that the focus on HIV/AIDS, tuberculosis and malaria has been at the expense of chronic disease. It is argued that by focusing on these illnesses attention and resources have been diverted away from the impending catastrophe of chronic disease (WHO 2005, p70).

However, others argue that the MDGs are tackling the root causes of ill health, e.g. poverty, inequity, lack of education, maternal mortality and that the efforts and resources invested in strengthening health systems to address communicable diseases have a positive impact on the care and management of chronic disease.

Whatever position is taken, the MDGs represent a pact between rich and poor countries. This focused partnership approach can be used to further the chronic disease prevention and control agenda, especially as chronic diseases, assume equal importance with other causes of ill health in perpetuating poverty. The issue is not whether to focus on MDGs or on chronic disease but to find synergistic ways of addressing both because they are inter linked and must be addressed as an essential prerequisite for social and economic development and the prevention of social exclusion.

## **Poverty**

The relationship between poverty and chronic health conditions goes in both directions – poverty causes ill health and ill health results in poverty. Some of the factors identified by WHO (WHO 2002) include:

- Mothers with poor nutritional standing bear children who experience chronic conditions in adulthood such as diabetes, hypertension and heart disease.
- Poverty and poor health during childhood is associated with adult chronic conditions as well, including cancer, pulmonary disease, cardiovascular disease and arthritis.
- Poor elderly in developed and developing countries often have poor health and unsatisfactory access to care.
- The work environments of the poor tend to be more physically demanding and place individuals at risk of injury and exposure to harmful substances. Hazardous chemical exposure and pollution, particularly in developing countries have been linked with local prevalence rates of cancer, cardiovascular and respiratory diseases.

- Poor people often lack access to health care or preventive measures resulting in worse health outcomes and exacerbation of chronic conditions.
- Chronic conditions have been linked to work disability, early retirement and reduced productivity resulting in job loss.
- Treatment expenses for chronic conditions can be exorbitant especially when conditions are not initially well managed or complications prevented.
- People with chronic conditions are at risk of marginalization and stigmatization in their communities that may result in further limitations in educational and employment opportunities. Moreover, stigmatization and neglect have been associated with exacerbation of chronic problems. Women with chronic conditions are at even greater risk of harm, educationally, financially and physically.

## **Gender inequality**

Social inequality, poverty and inequitable access to resources, including health care, result in a high burden of chronic diseases among women worldwide, particularly poor women.

- Women tend to live longer with chronic disease than men, though they are often in poor health.
- Costs associated with health care, including user fees, are a barrier to women's use of services as their income is lower than that of men, and they have less control over household resources.
- Women's workload in the home and their care-giving roles when other family members are ill are also significant factors in delaying decisions to seek treatment.
- In areas where women have limited mobility, they may be unable to travel to health centres (WHO 2005, p65).

## **Health systems**

The rise in chronic disease puts an increasing burden and makes new and different demands on every health system across the world. All elements of health systems are affected — service delivery, health workforce, information systems, medical products, vaccines, technologies, financing, and leadership and governance. Despite declared commitments to primary health care most health systems still need to shift focus from acute episodic care to chronic care. This is discussed in more detail in Chapter 4 with reference to different models of chronic care.

The WHO 2008-2013 Action Plan for the Global Strategy for the Prevention and Control of Non-communicable Diseases (WHO 2008a) offers guidelines for countries for the reorientation and strengthening of health systems. Nurses can use these guidelines to inform their contribution at national and local level. They include ensuring implementation of

appropriate policies; trained human resources; adequate access to essential medicines and basic technologies; standards for primary health care; well-functioning referral mechanisms; use of evidence-based guidelines and standards for common conditions like cardiovascular diseases, cancers, diabetes and chronic respiratory diseases; cost-effective approaches for the early detection of breast and cervical cancers, diabetes, hypertension and other cardiovascular risk factors; improved training of physicians, nurses and other health personnel and continuing education programmes; support to enable people with non-communicable diseases better manage their own conditions (e.g. education, incentives and tools for self-management and care); and mechanisms for sustainable health financing in order to reduce inequities in accessing health care.

## **C**osts of chronic disease

While there is strong epidemiological evidence demonstrating the increasing chronic disease burden, compelling evidence on the economic impact of chronic disease is lacking. The costs of chronic disease are not confined to the direct medical costs of operations and drug treatments. There are also significant indirect costs, including lower economic productivity as workers become sick and disabled, premature retirement, and the costs of various coping mechanisms – use of savings and investments, selling household assets or taking children out of school to care for an ill family member. These costs of chronic disease – to individuals and families, to communities, employers and economies – are rising rapidly (OXHA 2009a). In addition there are the unquantifiable human costs related to pain, suffering and bereavement.

It is difficult to get comprehensive and agreed figures because different methods and approaches are used to describe and calculate costs and the results are subject to a wide range of interpretations. The three main ways of estimating costs are:

- the accounting cost of illness method;
- economic growth models, which estimate the impact of chronic diseases on national income through variables such as labour supply and savings; and
- the full-income method, which attempts to measure the welfare losses associated with ill-health in money terms (WHO 2005, p75).

Estimates from the economic growth approach give the lowest estimates, the full-income approach gives the highest estimates, while cost of illness estimates fall between the two.

Using the cost of illness approach in the United States, the estimated total health-care costs resulting from heart disease increased from US\$ 298.2 billion in 2000, to US\$ 329.2 billion in 2001 and US\$ 351.8 billion in 2002 (WHO 2005, p75).



In Australia, stroke is estimated to be responsible for about 2% of the country's total attributable direct health-care costs (WHO 2005, p76).

A Norwegian study estimated that savings of US\$ 188 million from averted heart disease and stroke over 25 years would result from lowering the population's blood pressure level by 2 mmHg, by means of a reduction in salt intake (WHO 2005, p77).

A Canadian study estimated that a 10% reduction in the prevalence of physical inactivity could reduce direct health-care expenditures by C\$ 150 million (approximately US\$ 124 million) in a year (WHO 2005), p77).

WHO estimates that China will lose \$ 558 billion in foregone national income due to heart disease, stroke and diabetes alone between 2006-2015 (WHO 2009b).

At an OECD meeting in 2008 it was reported:

- Productivity losses associated with poor health risks are as much as 400% of the cost of treating chronic disease
- In the US, people with chronic disease account for more than 75% of the nation's US\$ 2 trillion in medical spending
- As the economic burden of chronic disease grows, it could crowd out monies needed to improve other critical issues as well as to meet basic needs such as education and infrastructure in both industrialized and emerging economies
- Only 3% of health spending goes toward prevention in OECD countries (PriceWaterhouseCoopers LLP 2008)

In the United States the direct and indirect costs of smoking are more than \$75 billion and those of diabetes over \$130 billion, each year (OXHA 2009a).

Diabetes caused around 3.8 million deaths worldwide in 2007, about 6% of total global mortality, about the same as HIV/AIDS. Using WHO figures on years of life lost per person dying of diabetes, this translates into more than 25 million years of life lost each year. The International Diabetes Federation (IDF) estimates that the equivalent of an additional 23 million years of life are lost to the disability and to reduced quality of life caused by the preventable complications of diabetes. People with diabetes face a high risk of premature death especially in countries where individuals and families have to cover the costs of their own care and treatment.

## **Disparities between the developed and developing world**

More than 80% of expenditures for medical care for diabetes are made in the world's richest countries. Less than 20% of expenditures are made in the middle- and low-income countries, where 80% of people with diabetes will soon live. The USA is home to about 8% of the world's population living with diabetes and spends more than 50% of all global expenditure for diabetes care while Europe accounts for another quarter of spending on diabetes care. The remaining industrialized countries, such as Australia and Japan, account for most of the rest. In the world's poorest countries, not enough is spent to provide even the least expensive life-saving diabetes drugs.

## **Dramatic rise in medical care costs for diabetes**

Diabetes is costly even before it is diagnosed both in developed and developing countries. Costs are much higher than they need to be because insufficient money is invested to prevent expensive complications such as heart disease, stroke, kidney disease and amputations. The cost of treating a person with diabetes who has end-stage kidney disease is 3 to 4 times higher than the costs for a person with no complications. In 2007, the world was estimated to spend at least US\$ 232 billion to treat and prevent diabetes and its complications. By 2025, this is likely to exceed US\$ 302.5 billion (IDFb).

# CHAPTER 3

## Strategies for Reducing Risks to Chronic Diseases

This chapter focuses on the prevention of chronic disease. It addresses some of the behavioural and biological risk factors which increase the likelihood of developing the most common chronic diseases, i.e. diabetes, cardiovascular diseases, respiratory diseases and some cancers, and highlights a range of interventions to reduce or manage these risks.

### Prevention of chronic disease

Because the underlying causes often lie outside the health sector, strategies aimed at preventing chronic disease need the involvement of other sectors such as agriculture, finance, trade, transport, urban planning, education and sport. The policies of all sectors need to be analysed and aligned to ensure the best possible health outcomes.

### Reducing risk factors

Up to 80% of heart disease, stroke and type 2 diabetes and over a third of cancers could be prevented by eliminating or managing risk factors. The main shared behavioural risk factors are tobacco use, unhealthy diet, physical inactivity and the harmful use of alcohol. The associated biological risk factors include raised blood pressure, raised cholesterol, raised blood glucose and overweight/obesity.

Data from the Oxford Health Alliance (OXHA 2006) suggests that in developed countries the risk factors are mainly concentrated among the poor, whereas in developing countries the socio-economic group varies with the different risk factors. For example, in the majority of low-income countries smoking is concentrated among the poor. With regard to obesity unhealthy habits tend to start with the rich and spread to the poor within countries. While the data for diabetes suggests a predominance among the rich within both developed and developing countries this may reflect the fact that poorer people may not seek a diagnosis. The picture is more mixed for other indicators, such as physical activity and angina.

Strategies for reducing risk factors should foster a collaborative approach, aim at increasing awareness, providing and encouraging realistic and affordable healthy choices and making healthy choices easy choices.

## **Interventions**

Interventions to address risk factors include primary and secondary prevention. Primary prevention interventions are made before any diagnosis of disease and may be individual, community or population wide. Secondary prevention includes clinical screening such as blood pressure monitoring and cholesterol testing and the use of drugs such as aspirin, statins, beta-blockers and ACE inhibitors for those who are at high risk or have already developed chronic diseases.

## **Individual level**

People decide to participate in various health promoting activities at different times in their lives and for many reasons, including to look better, to feel better or to maintain health. Their intention is not always to prevent chronic disease but the following activities reduce the risk of developing common chronic diseases:

- stopping smoking, using nicotine replacement therapy if necessary;
- responsible drinking of alcohol, not exceeding maximum recommended levels;
- regular exercise at least the equivalent to a vigorous 30 minute walk three times a week;
- maintenance of appropriate weight and a healthy body mass index (BMI) and eating at least five helpings of fresh fruit and vegetables daily, reducing salt intake and switching to unsaturated fat.

Even for people who have the opportunity, resources and motivation to reduce their risk of developing chronic disease sustaining these activities until they become fully incorporated into day to day life can be challenging. Nurses can lead by example and encourage family and friends to join with them in adopting healthy lifestyles.

## **Community level**

For community-based interventions to be successful a number of factors are important including community participation, supportive local policy decisions, intersectoral action, and collaboration with nongovernmental organisations, industry and the private sector. Healthy schools and workplaces for example can have a major impact on the health of children, families and employees and can result in increased enthusiasm and participation and

improved productivity. Nurses can play a significant role in supporting such initiatives by leading education and information campaigns; ensuring that health messages are clear and consistent; influencing policies related to access to healthy foods in school and work premises; providing access to health services such as nutrition advice or blood pressure screening; encouraging the creation of healthy environments and provision of facilities for physical activity; and creating an environment in which the healthy choices are the easy choices.

Community Interventions for Health (OXHA 2009b) is a global research programme aimed at creating environments and policies that reduce exposure to tobacco use, poor diet and lack of physical activity. The interventions include community coalition building, health education, structural interventions, and social marketing strategies. The programme is being introduced in high risk communities in developed and developing countries including China, India, Mexico, Tunisia, Israel, UK and USA. Interventions are focused on communities, schools, workplaces and health centres. It is expected that the programme will provide:

- A best-practice 'roadmap' of guidance to address chronic disease risk factors
- A comprehensive international database of intervention processes and outcomes
- Research articles to advance the field of risk-factor reduction and chronic disease prevention.

Native North Americans have been disproportionately affected by the epidemic of type 2 diabetes, with some of the highest rates in the world. The Pima Indians of Arizona were reported to have an adult prevalence of 50%, the highest ever documented. Native diet and lack of exercise are significant risk factors. An intervention programme involving the majority of community members from two communities and multiple institutions was shown to be culturally acceptable and relevant and further work is underway (Rosecrans et al. 2008).

## **Societal level**

Changes at societal level include among other things, policy changes related to taxes for example on tobacco and alcohol; legislation regarding smoking and drinking: policy changes related to food labelling, marketing and product manufacturing. Changes in industrial processes to reduce unhealthy food components – such as the amount of trans fat or salt in manufactured food – can have a substantial impact on people's diets.

India accounts for nearly a third of an estimated three million tobacco-related deaths in the world (per year) and there has been a rise in pre-cancerous lesions in the mouth – which doctors are convinced are caused by chewing tobacco. Chewing tobacco has been socially

acceptable and is increasingly popular across India particularly among the young. Some types of chewable or smokeless tobacco have been particularly marketed at and used by children as young as six or seven in the past decade (Joshi 2006). Mouth cancer has a ten-year incubation period, so there is fear that a huge bout of oral cancer will hit India in a few years time. The State of Goa passed some of the toughest anti-tobacco laws in the world. The Goa Prohibition of Smoking and Spitting Act prohibits smoking and spitting chewed tobacco in public places of work or use, including bus stands, beaches, and public transportation. It bans all tobacco advertising in the state and the sale of tobacco products within 100 metres of a school or place of worship (BBC Worldservice).

## **Issues**

Addressing the risk factors for chronic disease raises many issues including cost effectiveness, cultural differences, access to information and informed decision making.

The costs and impact of many risk reducing interventions are easier to measure at the individual level than at the community and society levels. There is ongoing research for example to determine the relative cost effectiveness of general primary prevention as opposed to the targeting of high risk populations.

There are cultural variations related to health seeking behaviours and individual choice and responsibility for health promotion, maintenance and management. There are also significant differences in the relationships between the public and health professionals particularly in terms of sharing information and decision making.

Access to and use of accurate, relevant, unbiased information is important at all levels from the individual to the health professional and the policy makers. In developing countries, where the awareness about the health consequences of smoking, alcohol, poor diet and physical inactivity is low, there is an obvious case for more information. The Health Information For All by 2015) initiative, of which ICN is a part, aims at ensuring that every person has access to an informed health provider (HIFA). An example of the benefits of information is the sudden and sustained reduction in smoking that occurred in the United States after the publication of the Surgeon General's Report on the health risks of tobacco consumption in 1964.

However, the issue of information is not as straightforward as it sounds. It took centuries, before the health effects of smoking were generally understood, so all the information necessary may not be available. Some groups, including children, may not have the skills or capacity to interpret or understand the information, which is why marketing of food and drink

to children is a contentious issue. Among adults, there may be scepticism and lack of trust in the information provided by industry, governments and other stakeholders.

Also, knowing the healthy option is one thing, taking the healthy option is quite another. People do not always behave rationally and risk taking is part of normal human behaviour. Even well informed people eat unhealthy foods, smoke and drink too much alcohol. So, while providing information and raising awareness is an essential step, it may not be enough on its own to change behaviour or practice. Consistent health related messages need to be transmitted and reinforced regularly and in a variety of ways to inform and educate whole populations.

Psychosocial, motivational and behavioural support, e.g. goal setting and problem solving, play a significant role in achieving sustainable lifestyle changes and preventing chronic disease (Fekete et al. 2007; Whittemore et al. 2009; Lindstrom et al. 2008). As it is estimated that up to 80% of chronic disease could be prevented nurses are well positioned to make a significant contribution globally in preventing chronic disease.

## **Prevention of type 2 diabetes**

Primary prevention identifies and protects individuals at risk from developing type 2 diabetes reducing both the need for diabetes care and the need to treat diabetes-related complications. Lifestyle changes aimed at weight control and increased physical activity are important objectives in the prevention of type 2 diabetes.

Secondary prevention involves the early detection and prevention of complications, therefore reducing the need for treatment. Action taken early in the course of diabetes is more beneficial in terms of quality of life and is more cost-effective, especially if this action can prevent hospitalization. There is now conclusive evidence that good control of blood glucose levels can substantially reduce the risk of developing complications and slow their progression in all types of diabetes. The management of high blood pressure and raised blood lipids (fats) is equally important (IDF<sup>c</sup>). A recent study in the USA suggests that regression from pre-diabetes to normal glucose regulation can be attained through weight loss and intensive lifestyle modification (Perreault et al. 2009).





# CHAPTER 4

## Chronic Care Management, Nursing Contributions and Competencies

This section considers the care and management of chronic conditions, with reference to different chronic care models. The nursing contribution to chronic care management is highlighted and reference is made to the competencies required by nurses across the chronic care continuum.

### **Models of chronic care management**

Individual chronic diseases are no longer viewed in isolation as increasing numbers of people are affected by more than one disease, e.g. diabetes and cardiovascular disease. The demands that the common chronic diseases make on patients, families and the health care system are similar and, in fact, comparable management strategies are effective across all chronic diseases, making them seem much more alike than different.

Patients with chronic conditions need a broad level of support within their communities in order to maintain their best possible health status and level of functioning for as long as possible. They need self-care skills for managing problems at home, coupled with proactive, integrated, planned care and management which anticipates their needs so that any changes or deterioration in their condition can be quickly addressed before it develops into an acute situation.

Chronic care models are used and adapted in different countries. Nurses are in a prime position to lead and support appropriate models of chronic care. Two models, the chronic care model (CCM) and the WHO Innovative Care for Chronic Conditions (ICCC) Framework are highlighted as examples in Figures 1 and 2.

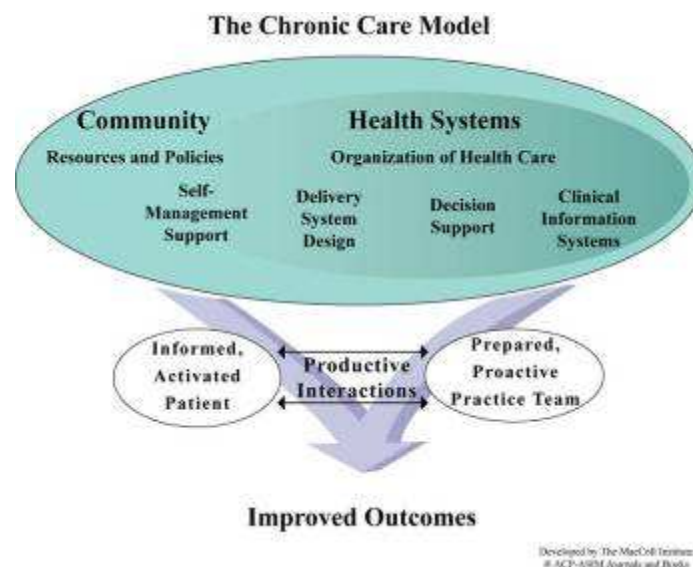
## The chronic care model (CCM)

The essence of the CCM approach is the interaction between “an informed, activated patient and a prepared, proactive practice team”. This means “a motivated patient with the information, skills and confidence to make effective decisions about their health and to manage it and a practice team with the necessary patient information, decision support and resources for high quality care.” (Improving Chronic Illness Care 2004). The model is based on six inter related elements and associated activities identified below. Nurses across the world play a major role in all of these elements and activities.

**Figure 1: The chronic care model (CCM)**

Element	Activity/Contribution
Patient–provider relationship	<ul style="list-style-type: none"> <li>• Engage patients as active partners in the management of their condition(s)</li> <li>• Provide information and education for patients, carers, families and the wider public</li> <li>• Facilitate patient self care and management</li> <li>• Develop relationships with patients and carers over a longer period, acknowledging that patients, carers and families may be more expert than the generalist practitioner about new developments and treatment options and may often bring new information to the nurse or health practitioner</li> </ul>
Delivery system design	<ul style="list-style-type: none"> <li>• Lead in prevention, screening, assessment, diagnosis</li> <li>• Shift from reactive to planned care and sustained proactive follow-up</li> <li>• Use a team approach and collaborative practice</li> <li>• Screen high-risk groups</li> <li>• Coordinate care of patients with complex needs</li> <li>• Plan and deliver care that patients understand and that fits with their culture</li> </ul>
Decision support	<ul style="list-style-type: none"> <li>• Systematic use of assessment and diagnostic tools</li> <li>• Use evidence-based protocols and clinical practice guidelines to guide interventions, and share with patients</li> <li>• Co-ordinate referral to specialists integrated into the team</li> </ul>
Information systems	<ul style="list-style-type: none"> <li>• Communicate effectively and manage information appropriately</li> <li>• Use new technologies</li> <li>• Provide reminders on practice guidelines and feedback including use of patient registries</li> <li>• Monitor and evaluate care and treatment</li> <li>• Focus on quality improvement</li> </ul>

Community resources	<ul style="list-style-type: none"> <li>• Create strong links with community agencies that promote social integration and healthy living to promote or develop programmes</li> <li>• Know what works in particular cultures or communities</li> <li>• Encourage patients to participate in effective programmes</li> <li>• Increase role with the public, non health personnel and other sectors</li> </ul>
Health care organisation	<ul style="list-style-type: none"> <li>• Commit to and support the strategic development of planned care infrastructure</li> <li>• Adopt appropriate leadership roles within and across organisations</li> <li>• Develop agreements for care coordination</li> <li>• Use and manage resources cost effectively</li> <li>• Contribute to policy making, service planning and management</li> <li>• Promote effective improvement strategies</li> <li>• Ensure that incentives are based on quality of care</li> </ul>



## The WHO Innovative Care for Chronic Conditions (ICCC) Framework

The WHO Innovative Care for Chronic Conditions (ICCC) Framework is based on the belief that positive outcomes for chronic conditions are achieved only when prepared, informed, and motivated patients and families; health care teams; and community supporters work together (WHO 2002).

The framework is underpinned by the following key principles:

- Evidence-based decision making
- Population focus

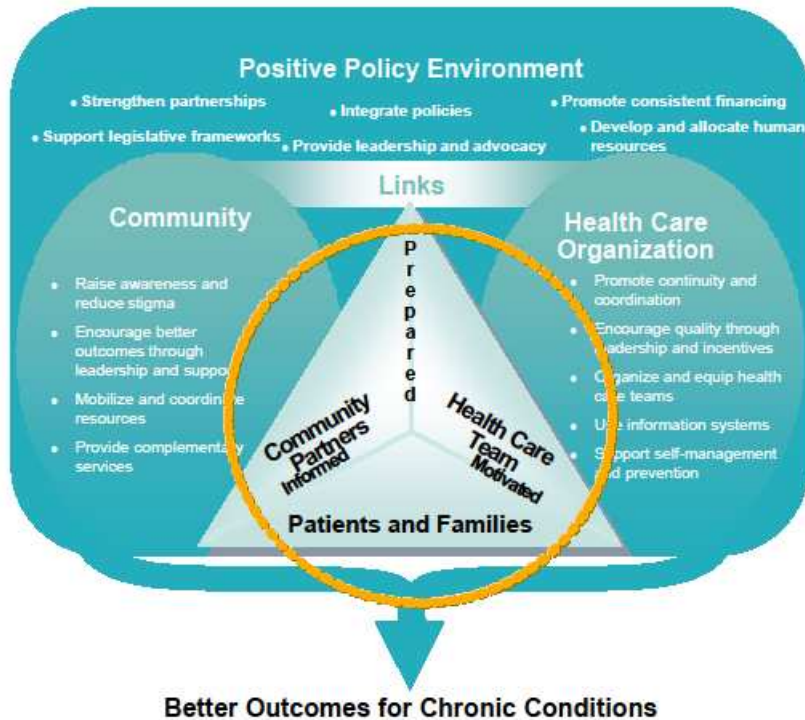
- Prevention focus
- Quality focus.
- Integration.
- Flexibility/adaptability

The framework is comprised of fundamental components or “building blocks“ that can be used to create or re-design a health care system that can more effectively manage long-term health problems. Nurses are well placed to make a full and effective contribution in each and every one of the components to ensure appropriate and effective care and management of chronic conditions according to the local situation and available resources.

**Figure 2: The WHO ICCC Framework**

<b>Building blocks</b>	
<b>Health care organisation</b>	Support self-management and prevention Organize and equip health care teams. Use information systems Promote continuity and coordination Encourage quality care through leadership and incentives
<b>Community</b>	Mobilize and coordinate resources. Provide complementary services Encourage better outcomes through leadership and support Raise awareness and reduce stigma
<b>Policy environment</b>	Strengthen partnerships Develop and allocate human resources Provide leadership and advocacy Integrate policies Promote consistent financing Support legislative frameworks

## Innovative Care for Chronic Conditions Framework



### Nursing contribution

Central to both of these models is a focus on informed, motivated patients, families and communities supported by an informed and motivated collaborative practice team. Nurses have been at the forefront of practice in terms of providing information and patient education; building relationships with patients, carers and communities; providing continuity of care; using technology to advance care provision (ICN 2007); supporting adherence to long term therapies; and promoting collaborative practice (ICN 2004).

While the chronic care model was developed in the USA and put into practice mainly by doctors, Bodenheimer, a physician, states that ‘the health care literature and the experience of many efforts to improve chronic care indicate that nurses, not doctors, are the key to implementing the chronic care model in a patient centred care team.’ (Bischoff et al. 2009)

“Many of the positive outcomes seen in planned care visits with nurses may be due to better communication with patients. Nurses appear to be particularly apt as team players and are able to establish a—perhaps more—beneficial interaction with patients (than doctors). Therefore, nurses should be well prepared to assume the epidemiologic challenge of addressing the worldwide chronic conditions epidemic (Bischoff et al. 2009)”.

## Competencies

Whatever model of chronic care is used, nurses are key and must have the knowledge, skills and attributes required to enable them to contribute to their full potential. Education and training programmes are needed which equip the nursing and health workforce to address the changing burden of disease. The type of education and training required lends itself to multidisciplinary and interdisciplinary learning. A cost effective and pragmatic approach must be used which ensures that appropriate, affordable comprehensive care is available to all those with chronic conditions together with access to specialist care and management when necessary (ICN 2008).

The ICN Nursing Care Continuum Framework and Competencies builds on the ICN Framework of Competencies for the Generalist Nurse and provides a sound framework for ensuring that appropriate knowledge, skills and attributes, or competencies, are developed across the nursing care continuum (ICN 2008). The challenge as always is to determine the common elements in the care and management of chronic conditions and diseases which need to be applied across the care continuum and the specific specialist knowledge required for co-morbidity and complex situations. Where the boundaries are drawn in terms of specialist practice will be determined at local and national level in order to make the best use of available resources to meet the health care needs of local populations. ICN provides a framework of competencies for nurses working in specialist clinical roles (ICN 2009).

Competencies required by nurses to prevent and manage chronic disease include the following (ICN 2008):

- Participates in activities related to improving the access to the range of services required for effective health services. (Registered Nurse)
- Respects the client's right to information, choice and self-determination in nursing and health care.(Registered and Specialist Nurse)
- Demonstrates professional integrity, probity and ethical conduct in response to industry marketing strategies when prescribing drugs and other products. (Specialist and Advanced Practice Nurse)
- Acts as an information and education resource and for clients seeking to improve life styles, adopt illness/injury prevention activities and cope with changes in health, disability and death.(Registered Nurse)
- Recognizes opportunities and provides guidance/education to individuals, families and communities to encourage adoption of illness prevention activities and maintenance healthy lifestyles.(Registered and Specialist Nurse)
- Selects teaching/learning strategies appropriate to the needs and characteristics of the individual or group. (Registered and Specialist Nurse)

- Cooperates with other professionals and community and speciality interest groups in activities to reduce illness and promote healthy life styles and environments in areas important to speciality practice.(Specialist Nurse)
- Incorporates into practice a perspective that takes account of the multiple determinants of health. .(Registered and Specialist Nurse)
- Works collaboratively with other professionals in health care to enhance nursing and other health services being accessed by clients. .(Registered Nurse)

## **Managing chronic disease**

Increasingly nurses take a lead role in the management of chronic disease. In some settings this is happening by default as a result of the growing numbers of people requiring care. In other settings the introduction of specialist and advanced clinical nurses is a strategic response to an identified need. In the UK Diabetic Nurse Specialists were among the earliest groups of nurses taking on additional and more wide ranging responsibilities in care management.

## **Management of type 2 diabetes**

National guidelines for the management of type 2 diabetes in primary and secondary care in the UK were reviewed and updated in 2008 based on the best systematic reviews available (NCC-CC 2008; Bannister 2008). Similar guidelines are available in other countries and it is clear from such guidelines that nurses in many countries are well placed to assume responsibility for the care and management of people with diabetes.

**Patient-centred care:** All care should consider individual patient needs and preferences. Good communication is vital to enable patients to make informed decisions, supported by access to evidence-based information and education.

**Education:** The guidelines recommend that structured education should be offered to all patients at or around the time of diagnosis. Although evidence suggests group education is preferable, an alternative should be offered for patients unable or unwilling to attend. Education should be evidence-based and meet the needs of the individual. It should have a structured curriculum, be delivered by trained educators, be quality assured and regularly audited. An educational review should form part of all patients' annual reviews, and access to annual updates is an important component of ongoing care. The education delivered through structured education programmes should be incorporated into each patient's ongoing care. It is vital, therefore, that all health care professionals involved in diabetes care

delivery are familiar with content, key messages and self-management tools used in the local programme.

**Dietary advice:** Dietary advice recommendations concentrate on the principles of healthy eating, essentially those for optimal cardiovascular risk protection. The following foods should be encouraged: fruit, vegetables, wholegrains and pulses, low-fat dairy products and oily fish. The intake of foods containing saturated or trans fatty acids should be controlled and foods marketed specifically for people with diabetes should be discouraged.

**Blood pressure:** The recommended blood pressure target for the general type 2 population is <140/80mmHg, although a tighter target of <130/80mmHg is recommended for those with kidney, eye or cerebrovascular damage. Lifestyle advice is recommended as the initial intervention but, if this is unsuccessful in achieving the agreed target level, ACE inhibitor therapy titrated to the maximum tolerated dose is recommended. However, care needs to be taken with women who may become pregnant – for this group the introduction of a calcium channel blocker is recommended. The impact of treatment must be reviewed regularly to ensure optimum management and appropriate dose titration.

**Assessment of glucose control:** A general target HbA1c of 6.5 per cent is recommended especially in relation to reduction of microvascular risk. However, this varies in individuals depending on the quality of life that might have to be sacrificed in reaching the target, the extent of side effects and resources available for management. For patients who struggle to achieve a target HbA1c close to 6.5 per cent, it is important to emphasise that any reduction in HbA1c towards the agreed target is beneficial. When treatments that carry a hypoglycaemic risk are introduced, a slightly higher target level may be required to minimise hypoglycaemia. Aggressive management of HbA1c below 6.5 per cent is not recommended.

**Self blood-glucose monitoring:** Self blood-glucose monitoring should be offered to all newly diagnosed patients as an integral part of their self-management education. Not all patients will want to monitor their own blood glucose. The purpose of monitoring must be established, and education about interpretation of results and possible actions to address changes need to be available. Patients may choose not to monitor their own blood glucose, but those who do should be supported. Having made the decision to self-monitor, the benefit and impact of monitoring should be reviewed on at least an annual basis.

**Management of lipids:** Most patients with type 2 diabetes are considered to be high cardiovascular risk. Statin therapy is indicated in most patients aged over 40 years. Some patients aged under 40 years have a high risk based on identification of the conventional risk factors – in these patients statin therapy is also indicated. High risk factors for people aged under 40 are features of metabolic syndrome, strong family history, ethnic background and evidence of microvascular damage.



## CHAPTER 5

### Nursing Innovations In Chronic Care

Innovation in health care for chronic conditions is the introduction of new ideas, methods or programmes to change the way chronic conditions are prevented and managed (WHO 2002). Innovation is not a new concept to the nursing profession. Nurses worldwide are engaged in innovative activities on a daily basis; activities motivated by the desire to improve patient care outcomes and the need to reduce costs to the health system. Many of these initiatives have resulted in significant improvements in the health of patients, populations and health systems (ICN Innovations Database).

Nurses are well positioned to provide creative and innovative solutions to the challenge of chronic conditions and to make a real difference to the day-to-day lives of patients, families and communities. ICN is committed to promoting and disseminating innovation in nursing and launched the ICN Innovations Database, a web based resource to help spread nursing innovations globally <http://www.icn.ch/innovations/>. In addition, ICN chose the theme “Delivering Quality, Serving Communities. Nurses Leading Care Innovations” for International Nurses Day 2009.

As discussed in Chapter 4, chronic care demands a change in the relationship between nurses and patients and communities as well as a change in relationships and ways of working among the care team. Advances in technology provide the basis for most innovation in the care and management of chronic conditions in terms of information and communication technology as well as the introduction of new products and techniques. The effective use of technology changes and challenges traditional working practices and requires flexibility in the design and delivery of health and nursing services. Nurses are often at the forefront in shaping and promoting such changes.

**South Korea:** Keeping blood glucose levels as near to normal as possible is key to preventing complications in type 2 diabetes. A study in South Korea demonstrates that a cellular phone SMS intervention by a nurse can help patients achieve better control of their blood glucose levels. In a controlled trial patients submitted weekly self monitored blood

glucose levels and drug information via internet or SMS. The data were interpreted in light of the individual's personal health record and recommendations made regarding, for example, diet, exercise or drugs, e.g. "Lack of exercise may be the cause of the aggravated glucose level" or "Please check the amount that you eat". This regular contact and feedback may have motivated patients to control glucose levels. Glycosylated haemoglobin (HbA1c) decreased 1.5% points at three months and 0.5% points at six months compared with baseline in the intervention group. Patients in the intervention group had a decrease of two hours post meal glucose (2HPMG) of 85.1 mg/dl at three months and 63.1 mg/dl at six months compared with baseline (Hee-Seung et al. 2007).

**Suriname:** Inspired by the IND theme 2009 "Nurses leading care innovations" nurses of the children's ward in the Diakonessenhuis hospital in Suriname have taken the lead in improving the care of children with chronic disease. The children's ward is part of a 216 bedded private hospital in the capital city of Suriname. Although the number of patients with chronic diseases that are hospitalized is low the frequency of admission is high. Nurses acknowledge that the level of psychological care available to the patients' parents and siblings is inadequate and they have designed a programme to provide professional guidance and support to help families to cope with the effects of chronic diseases. A multidisciplinary programme was designed using the chronic care model described in Chapter 4. The expected outcomes include a reduction of 40% in the admission rate resulting in improved quality of life for the patient and their family and fewer interruptions to schooling as a result of reductions in hospital admissions and attendance at outpatient clinics. (Submitted by Suriname Nurses Association)

**Finland:** Multiprofessional facilitation and learning proved to be effective in implementing guidelines, improving multiprofessional collaboration and sharing duties and responsibilities, as well as targeting preventative activities and resources adequately. This led to improvements in the care and management of patients with diabetes, hypertension and dyslipidemia (Sipla et al. 2008).

**United States:** Among the initiatives in the ICN Innovations Database is a Life Style Management Series for Women developed by the Dayton Veterans Affairs Medical Center (DVAMC) Patient Health Education (PHE) department. They developed and implemented an innovative five-week didactic and experiential holistic lifestyle management programme for women. Topics included stress management, weight management/maintenance, nutrition, exercise and self care strategies. The programme targets healthy female veterans and those women who are at higher risk for development of military service related problems, obesity, hypertension, diabetes, osteoporosis and cancer. The primary goal of this multidisciplinary programme is to promote health maintenance strategies and prevent disease or progression

of disease. The programme led participants to identify and decrease personal risk factors associated with the development or progression of disease and heightened their awareness about the importance of preventative screening. Some participants subsequently enrolled in more intensive supporting programmes to assist them in modifying behaviours to prevent progression of disease and to focus more intently on individual self-maintenance. By the end of the series the participants leave with knowledge that will help them to maintain good health and prevent disease by making better lifestyle choices.

**South Africa:** A workplace programme to address the problems of chronic disease, including overweight and smoking among nurses was introduced in McCord Hospital. The programme was a collaborative effort involving the Democratic Nursing Organization of South Africa (DENOSA), ICN and the Oxford Health Alliance and was led locally by Honey Allee, Nurse Practitioner. The programme was built on the principles of partnership and engagement, was based on shared objectives, and acknowledged that “being healthy” means different things to different people depending on factors including age, socio economic status and culture. The local programme included improved organisational policies that incorporated the principles of caring for the carers and focused on health and wellness; provision of healthy food options at lunchtime; exercise classes and various support clubs; health screening; weight management and provision of nicotine patches to help participants stop smoking. Knowledge, skills and expertise were shared as were stories about successes and barriers. The programme was successful in informing, educating and supporting nurses to improve their own health. The results to date show that a significant number of nurses have lost weight, improved the management of their own chronic disease, availed themselves of health screening, and have stopped smoking. ICN and its partners are keen to support other NNAs wishing to introduce similar schemes to improve the health of nurses, their families, workplaces, schools and local communities.

#### **Taiwan:**

Faced with the problem of cancer patients’ lack of adherence to the analgesics regimen at home and in order to understand perceptions related to analgesics, nurses in Taiwan conducted a study using a “Barrier Questionnaire-Taiwan form (BQT)”. They wanted to obtain data related to actual patient perceptions of analgesics. A Morisky self-reported analgesics adherence was employed to measure actual patient analgesics adherence.

The study showed that patients held misconceptions regarding analgesics. To address the misconceptions, patients and their families were provided a pain education handbook for practical guidance. The handbook contents included clarification fatalism, concern about taking much physician time during consultation, desire to be a good patient, side effects of medicines, addiction, disease progression and others.

Nurses also explained to patients their analgesics prescription, including the effective pharmaceuticals used, medicine shape, effectiveness, possible side effects and method of administration. They emphasised to patients the importance of taking analgesics medicine on time and as prescribed in order to effectively control pain.

At each return office visit, nurses collected information on patient perceptions of analgesics and actual perceived effect and side effects as a reference for doctors and as a basis for adjusting the prescription. Nurses and others invited the family to participate in pain relief education intervention, facilitated positive communication between patients and doctors and expressed professional concern over patient problems with pain. Patients were encouraged to share information on their pain as well as on their reaction to medicines.

After one month of pain education and consultation, barriers to using analgesics in patients and their families decreased significantly. Patient prescription adherence also increased notably. Patients reported significantly lower levels of pain intensity and pain interference in the daily life. (Submitted by Taiwan Nurses Association)

**United Kingdom:** Practice Nurse, Anita Plummer, won an award for her work in developing a nurse-led weight management programme for patients with chronic disease. She recognised an area of unmet need in 2006 when a practice audit of BMI revealed that the prevalence of obesity was higher than the national average. One in four patients was categorised as obese and two out of three were either overweight or obese. Overall, 605 out of 1,061 patients aged 18-75 with long-term illnesses (coronary heart disease, diabetes and hypertension) had a BMI above 28. As practice resources were finite, Plummer decided to prioritise helping overweight and obese patients with long-term illnesses to control their weight. She devised an educational programme, weight management meetings and healthy walks, all of which are proving popular and effective (Robinson 2007).

**United Arab Emirates:** The Emirates Nursing Association (ENA) is committed to playing an active role in improving the health standards by engaging in public education and enhancing knowledge about chronic diseases namely diabetes and hypertension. The ENA, with the support from the MOH, has launched a health awareness campaign to educate people about healthy fasting practices during the holy month of Ramadan. The awareness campaign was set to cover all the Emirates starting from Abu Dhabi to Fujairah. The approach was multidisciplinary whereby nurses functioned in partnership with the patient, family, physicians, and other health care providers involved. Campaign services provided to the public included checking blood pressure and blood sugar; distributing health awareness flyers and brochures; and educating the patients and those close to them about how to

develop healthy habits and prevent long term complications. Other services included one-on-one counselling and education for young people and their families about general topics of healthy living such as diet, exercise, psycho-social support and social activities. The campaign has targeted around 10,000 people at the time of this report. Success of this project was attributed to the support provided by the MOH, the involvement of volunteer nurses and large scale public participation. (Submitted by Emirates Nursing Association)



## CHAPTER 6

### Role of NNAs in Reducing Risk and Improving Chronic Care

Taking up the challenge for chronic disease prevention and management, requires courage and ambition by NNAs. This is particularly so because of the numerous competing and urgent priorities, many of which have a more obvious and immediate impact than the longer term prevention of disease and promotion of health. It is vital however, not just for existing patients but for families, communities and future generations, that NNAs provide leadership now to the nursing profession.

NNAs are in a strong position to inform, engage and empower nurses at every level to work with a wide range of stakeholders including communities, employers, partners, policy makers, schools, patients and families to halt the tide of chronic disease and to ensure that all those with chronic conditions receive the care, treatment and management necessary to promote well being and ensure the best possible health outcomes.

Each NNA must consider a range of factors in deciding which interventions are appropriate to their circumstances including the capacity for implementation, acceptability and community and political support. Selecting a small number of activities and doing them well is likely to have more impact than tackling a large number and doing them haphazardly.

#### **Disseminating information and advocacy**

NNAs are well placed to disseminate information and key messages about chronic disease to individuals, communities and policy-makers. Wide distribution of comprehensive and evidence-based information on chronic disease is needed to raise awareness and influence behaviour change. Sharing information about chronic disease policies is also needed to promote public debate, encourage advocacy and ensure that chronic disease is a priority on the public health agenda. NNAs can:

- Publicise key information, facts and figures about chronic conditions in speeches and press releases.
- Disseminate information on chronic disease to schools, workplaces, health centres and community centres.
- Organize national campaigns and events to raise awareness of chronic disease prevention and management.

- Raise the priority given to the prevention and control of chronic conditions on the agendas of relevant forums and meetings.
- Celebrate nurses' innovative achievements in the field of chronic care and profile nurses work in publications, websites, conferences etc.
- Facilitate collaboration with other health professional associations, health ministries, and other relevant sectors and stakeholders.
- Work with ministries of health and others to influence national health and other relevant public policy.
- Lobby for legislation and regulation that enhances and facilitates nurses' contributions to chronic care.
- Lobby for a balanced approach towards preventive, promotive, curative and rehabilitative services.
- Provide a forum for dialogue and proper understanding of the challenges and issues.
- Advocate for the health of vulnerable populations.
- Disseminate evidence on best practice.
- Lobby employers to provide healthy work environments.

## **Leading grass roots mobilization**

NNAs can work with advocacy groups and other community leaders to:

- Organize grassroots campaigns and events that inspire public health action such as annual health days which can be used to increase awareness of chronic disease risk, prevention, and management.
- Encourage chronic disease-related events and activities at local level.
- Support innovative practices in ensuring healthy schools and workplaces, collaborating with other key players.
- Encourage local NNA representatives to get involved in their local communities, talk with the local media, neighbours, friends, etc. about the benefits of healthy lifestyles and preventing chronic disease.
- Encourage patients and communities to lobby for local, affordable, healthy options.
- Ensure that national strategies are tailored to local circumstances.

## **Building Partnerships**

Successful prevention and management of chronic conditions requires coordinated action within and beyond the health sector, among civil society organizations, government ministries, community leaders, health-care workers, and the private sector and business communities. Effective partnerships encourage collaboration, minimize overlap and reduce competition for resources, allowing organisations to strengthen and expand chronic disease programmes.

- Establish partnerships amongst community leaders, health professionals, business leaders and policy makers to share information, develop strategies and mobilize resources.



- Encourage policy makers to increase investment in chronic disease prevention and management and to implement programmes and policies that promote healthy diets, physical activity and tobacco abstinence.
- Provide input to health care organisations, researchers and policy makers on the implications for nurses of new approaches to prevention, care and management, for both short term implementation and long term costs and benefits, and contribute to discussions about how these implications can be effectively managed.
- Work with educational facilities to strengthen the input on chronic conditions in curricula.
- Collaborate with nursing education and research centres to focus research into chronic care.
- Work with regulators and legislators to eliminate any inconsistencies in legislation and regulatory practices that restrict nurses in fulfilling their full potential in managing chronic conditions.

## **Capacity building**

NNAs play an important role in building capacity across the nursing profession and in building the capacity of individuals, families and communities in promoting health, preventing disease, and managing ill-health and chronic conditions.

- Provide technical assistance in designing and implementing chronic disease programmes.
- Provide a space/forum for exchange and discussion of practices and innovations in prevention and management of chronic disease.
- Disseminate nursing innovations to nurses and others.
- Lobby ministries to provide scholarships or other funding assistance to facilitate further education.
- Stimulate interest in nursing and research through the provision of fellowships and training opportunities for nurses and the development of career opportunities.
- Encourage/facilitate uptake of new information technologies, through adequate training and feedback mechanisms.
- Facilitate change management.



# CHAPTER 7



## Conclusion

There is an urgent need for nurses everywhere to take the initiative and engage with all parts of the community and all sectors to address this growing threat to global health and well being. The steep downturn in the global economic climate in 2008-2009 increased the pressure on resources available to the health sector across countries worldwide. At the same time individuals, families and communities in the developed and the under developed world face increasingly difficult choices and challenges in their everyday lives.

It is now more important than ever that nurses work to ensure that healthy choices are easy choices. This may involve lobbying and advocating at national and international level for legislation and regulation that facilitates healthy choices for example with regard to food manufacturing, labelling and pricing; lobbying for evidence based allocation of national resources to support effective, healthy interventions; working with schools and workplaces to promote healthy environments and practices; and using opportunities to inform and educate patients and families.

Unlike some themes and activities advocated to celebrate International Nurses Day, this call to action demands the attention and response of every individual nurse everywhere in the world regardless of specialty, place or type of practice. If each of the world's 13 million nurses made a personal commitment to eat healthily, exercise appropriately, drink sensibly and avoid the use of tobacco, this would improve their health and well being and reduce the likelihood of them developing chronic disease. If each of these nurses acted as role models, educators and change agents among their families, friends, workplaces and local communities to promote healthier lifestyles, together we could help stem the tide of chronic disease. Educated and empowered nurses and communities can contribute more effectively to the wider changes needed in health and social policy as well as structural changes locally, nationally and internationally.

ICN and its partners are committed to preventing and better managing chronic disease and will work to promote a healthier world.



# **ANNEXES**





## **ICN Issues a Call to Nurses Everywhere: Lead the Fight against Chronic Disease**

**12 May 2010, Geneva, Switzerland** – As the world faces a massive increase in the levels of death and disability resulting from chronic disease, there is an urgent need for nurses everywhere to proactively engage with all parts of the community and all sectors to address this growing threat to global health and development. Statistics now show that 60% of deaths globally are due to chronic disease and 80% of these occur in low and middle income countries. On the occasion of International Nurses Day, the International Council of Nurses (ICN) is calling on nurses everywhere to move to action, in their personal lives and professional roles, to stem the pandemic of chronic disease.

“It is now more important than ever that nurses work to ensure that healthy choices are easy choices,” declared ICN President Rosemary Bryant. “If each of the world’s 13 million nurses made a personal commitment to eat healthily, exercise appropriately, and avoid the use of tobacco, this would improve their health and well being and reduce the likelihood of their developing chronic disease. If each of these nurses acted as role models, educators and change agents among their families, friends, workplaces and local communities to promote healthier lifestyles, together we could help to halt the tide of chronic disease.”

### **The magnitude of the problem**

The scale of the problem is huge. Diabetes, cardiovascular diseases, respiratory diseases and some cancers represent a leading threat to human health and development and are the world's biggest killers.

- WHO estimates that more than 180 million people worldwide have diabetes. This number is likely to more than double by 2030.
- An estimated 17.1 million people died from cardiovascular diseases (CVDs) in 2004, representing 29% of all global deaths. Of these deaths, an estimated 7.2 million were due to coronary heart disease and 5.7 million were due to stroke.
- Deaths from cancer worldwide are projected to continue rising, with an estimated 12 million deaths in 2030.

These diseases are preventable. Up to 80% of heart disease, stroke and type 2 diabetes and over a third of cancers could be prevented by eliminating shared risk factors, mainly tobacco use, unhealthy diet, physical inactivity and the harmful use of alcohol. Unless addressed, the mortality and disease burden from these health problems will continue to increase.

Along with adopting a healthy lifestyle, nurses can advocate for legislation and regulation that facilitates healthy choices for example with regard to food manufacturing, labelling and pricing; lobby for evidence based allocation of national resources to support effective, healthy interventions; work with schools and workplaces to promote healthy environments and practices; and use all opportunities to inform and educate patients and families.

This call to action demands the attention and response of individual nurses everywhere in the world, regardless of specialty, place or type of practice. Educated and empowered nurses and communities can contribute more effectively to the wider changes needed in health and social policy as well as structural changes locally, nationally and internationally.

The **International Council of Nurses (ICN)** is a federation of more than 130 national nurses associations representing the millions of nurses worldwide. Operated by nurses and leading nursing internationally since 1899 ICN works to ensure quality nursing care for all and sound health policies globally.

**For further information contact Linda Carrier-Walker**  
Tel: +41 22 908 0100 - Fax: +41 22 908 0101  
Email: [carrwalk@icn.ch](mailto:carrwalk@icn.ch) - ICN Website: [www.icn.ch](http://www.icn.ch)





## Nurses' role in prevention of cancer

### ICN Position:

While helping prevent cancer is an important role of many health care professionals and consumer groups, nurses are in a key position to directly affect people's health. Consequently, the International Council of Nurses (ICN) strongly advocates that nurses:

- Contribute to the primary prevention of cancer through helping individuals adopt healthy living habits.
- Carry out secondary prevention and early detection activities by providing information about the importance of screening programs and facilities; encouraging high risk individuals or families to undertake screening; and participating in screening activities, particularly at the primary health care level.

National nurses associations (NNAs) have an important role to play. ICN urges NNAs to:

- Lobby for nursing research that addresses the potential improvement in the approaches and strategies of cancer prevention and early detection, as well as nurses' roles in this.
- Advocate for inclusion of new knowledge and new technology about cancer prevention and early detection in basic, post-basic and continuing education programmes of nursing.
- Support and become involved in public awareness raising, government and other initiatives aimed at prevention and early detection.
- Promote the participation of the national cancer nursing organisation in international exchange activities on cancer prevention and early detection.
- Lobby for inclusion of human papillomavirus vaccine (HPV) in national immunisation programmes.
- Collaborate with other health professionals and government bodies for total ban of tobacco use and smoking in public places.
- Encourage nurses' involvement in cancer prevention activities and strategies, including participation in national and international activities.
- Lobby for changes in environmental health policy such as smoke-free public places and healthy public policy that addresses the broader social determinants of health.

## **Background**

Cancer is the leading cause of death in many countries. About 85 percent of cancer is now thought to be potentially avoidable. Although knowledge about the actual causes of cancer is still limited, research has pointed out two most important risks-- cigarette smoking and diet.

More than 30 percent of cancer deaths are due to tobacco use and approximately 35 percent of cancer deaths may be related to unhealthy diet, harmful use of alcohol and physical inactivity.

As such, cancer prevention means suggesting changes in lifestyle and behaviour, i.e. cessation of tobacco use, decreasing alcohol intake, altering dietary habits, increasing physical activity, and avoiding hazards in the environment, such as environmental tobacco smoke, the sun and asbestos. Further, the potential for reducing cancer incidence and mortality through early detection strategies appears to be promising.

About 99% of cervical cancer is associated with HPV infections<sup>1</sup> and there is strong consensus on the safety of HPV vaccine in prevention and control of cervical cancer<sup>2</sup>.

Recent studies also confirm that the use of the pap test and liquid based cytology to screen for cervical cancer greatly reduces the risk of mortality from invasive cervical cancer. Other procedures for the early detection of cancer, such as breast self examination, fecal occult blood testing, sigmoidoscopy, and oral, skin and digital rectal examination may also have potential for reducing cancer morbidity and mortality.

Tobacco use and other risk factors for cancer are related to broader social determinants of health that impact on the lifestyle of individuals and families.

Providing information and education on risk factors of cancer should go beyond lifestyle and address social determinants of health and healthy public policy, including a total ban on smoking in public places.

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<sup>1</sup> World Health Organization (2005). New WHO initiative to speed development and introduction of vaccines to protect against cervical cancer.  
[www.who.int/mediacentre/news/releases/2005/pr26/en/print.html](http://www.who.int/mediacentre/news/releases/2005/pr26/en/print.html)

<sup>2</sup> Global Advisory Committee on Vaccine Safety (2007). In Weekly Epidemiological Record, No.28/29, 20 July 2007. page 139-140.

**Adopted in 1989**  
**Reviewed and revised in 2008**

**Related ICN Positions:**

- [Reducing environmental and lifestyle-related health hazards](#)
- [Nurses and the natural environment](#)
- [Tobacco use and health](#)

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# Position Statement

## Tobacco use and health

### ICN Position:

The epidemic of tobacco use poses a serious public health threat, yet measures to control its use are tragically inadequate.

The International Council of Nurses (ICN) is committed to:

- A total ban on tobacco use.
- Preventing and eliminating tobacco use by nurses and nursing students.
- Implementing a smoke-free policy within ICN, including encouraging national nurses associations (NNAs) to adopt a smoke free policy for their premises, meetings and other events.
- Working with other international governmental and non-governmental organisations, and health professions' organisations to combat the tobacco epidemic.
- Working with NNAs to support implementation of the WHO Frame Work Convention on Tobacco Control (FCTC).

ICN encourages member associations to co-ordinate their efforts with other national groups to bring government and public attention to the negative health effects of tobacco and to encourage governments to reduce, discourage and eradicate tobacco use. More specifically, ICN advocates the following national actions:

- Lobbying for policies that ban tobacco advertising, sponsorship, and that support prominent warnings on all tobacco products.
- Working with governments to introduce legislative and fiscal measures, such as higher taxes on tobacco products.
- Supporting a smoking ban in public places, and creating smoke free schools, sports, workplaces, air travel, restaurants, and other public spaces.
- Participating in public education/information campaigns, particularly targeting vulnerable groups such as youth.
- Supporting incentives to tobacco farmers to switch to other crops.
- Encouraging nurses to become smoke free role models by offering cessation programmes to nurses who use tobacco.
- Encouraging nurses to integrate tobacco use prevention and cessation as part of their regular nursing practice.
- Working to integrate tobacco and smoking information into all levels of nursing curricula.
- Identifying actions to support hospitalised patients who normally use tobacco and are confined in a non-smoking environment.

## Background

Global tobacco use has increased steadily, and the cost in preventable deaths approaches 5 million people a year and is expected to rise to 10 million by the year 2020. The nurses who continue to smoke and the increasing tobacco use by young women are growing concerns.

The ICN Code of Ethics for Nurses<sup>1</sup> states that health promotion and illness prevention are among the fundamental responsibilities of the nurse. Additionally the nurse shares with other citizens the responsibility for initiating and supporting action to meet the health and social needs of the public.

Health problems caused by tobacco use are highly preventable. Health promotion and disease prevention related to the WHO Framework Convention on Tobacco Control must be strengthened and nurses are well suited for its implementation. As well, nurses and NNAs should be involved in tobacco-related research and in its dissemination.

**Adopted in 1999**  
**Reviewed and revised in 2006**

Previously: *Smoking and Health*

### Related ICN Positions:

- [Reducing environmental and lifestyle-related health hazards](#)
- [Occupational Health and Safety for Nurses](#)
- [Nurses Role in the Prevention and Early Detection of Cancer](#)

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<sup>1</sup> International Council of Nurses (ICN), Code of Ethics for Nurses, revised 2005.

## Reducing environmental and lifestyle related health hazards

### ICN Position:

Nurses and national nurses associations should play a strategic role in helping reduce environmental and lifestyle related health hazards.

National nurses associations (NNAs) can contribute to reducing health hazards for individuals and communities by:

- Promoting a positive life style, including exercise, stress management, accident prevention, weight maintenance and nutrition education that is sensitive to socio-economic status, gender and cultural beliefs.
- Developing and widely disseminating a NNA position concerning major national environmental and lifestyle-related health hazards.
- Working with governments and communities to introduce measures to create and preserve healthy living and working environments, including water fluoridation, control of food additives, measures to reduce substance abuse, and services to combat health hazards.
- Supporting government efforts to prevent and control specific health hazards including international co-operation to address shared problems (e.g. inadequate nutrition, drug trafficking, pollution control, sexually transmitted infections, counterfeit medicines, etc.).
- Initiating and participating in:
  - bodies that develop, co-ordinate and supervise hazard prevention and control programmes;
  - national/local disaster planning, and international programmes in case of disasters in other countries;
  - research into: the magnitude, consequences and required interventions of critical environmental and occupational health hazards; wellness and the practices and techniques which enable people to reduce health hazards and maintain their health; early warning of health hazards; improving living and working conditions; monitoring the environmental levels of pollutants; and, measuring the impact of nursing intervention on environmental hazards.
- Ensuring that nurses have sufficient information and education, empowerment and resources to effectively carry out their role in hazard related health promotion and counselling.
- Collaborating with health facility managers to ensure safe disposal of medical waste and avoid harm to the environment.



### International Council of Nurses

3, place Jean-Marteau  
 CH -1201 Geneva • Switzerland  
 Telephone +41 (22) 908 0100  
 Fax +41 (22) 908 0101  
 e-Mail : [icn@icn.ch](mailto:icn@icn.ch)  
 Website : [www.icn.ch](http://www.icn.ch)

The International Council of Nurses (ICN) affirms the World Declaration on the Survival, Protection and Development of Children and the Plan of Action<sup>1</sup>, which address the need to create and preserve healthy environments for children.

## **Background**

Lifestyle and environmentally related health problems are a growing cause of morbidity, mortality, increased health care costs and decline in productivity and quality of life. Of particular concern are:

- Lifestyle related hazards such as tobacco, alcohol and drug abuse, add to personal and societal costs in the form of cancer, violence, road accidents, etc. As well, cardiovascular diseases and mental health problems are global concerns, as is the dramatic increase in sexually transmitted diseases.
- Food additives and chemicals used in food production are growing nutritional concerns.
- In many industrialised countries, people suffer from obesity and eating disorders such as anorexia and bulimia and, throughout the world, many people are consistently undernourished.

Environmental factors, such as stress, are major causes of ill health. Pollution (water, air and soil) is increasing the prevalence of acute and chronic diseases.

Whether arising from personal choice or from the environment, these hazards require attention. Nurses are increasingly advocating policies and programmes aimed at creating healthy homes, schools, workplaces, communities, etc. Work environments which lessen stress and allow people to make their full contribution need to be supported, created and studied.

Nurses are important advocates for accident and disease prevention both at home and in the workplace. Most accidents are preventable, but much more education is required.

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<sup>1</sup> United Nations, *World Declaration on the Survival, Protection and Development of Children and Plan of Action for Implementations of the World Declaration on the Survival, Protection and Development of Children in the 1990's*, United Nations, New York, 1991.

**Adopted in 1999**  
**Reviewed and revised in 2007**

Previously: *Health Hazards*

**Related ICN Positions:**

- Nurses and the natural environment
- Occupational safety and health for nurses
- Nurses' role in the prevention and early detection of cancer
- Reducing Travel-Related Communicable Disease Transmission
- Acquired immunodeficiency syndrome (AIDS)

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## Elimination of substance abuse in young people

### ICN Position:

The International Council of Nurses (ICN) is concerned about the growing number of youths who abuse dependence producing substances and the resulting impact on their health. Nurses, as key providers of health care for young people, have a crucial role in addressing substance abuse in this age group. Prevention and reduction of substance abuse through policy and advocacy, promotion of healthy lifestyles, and equipping youth with life skills to deal with stress, peer pressure, and other risk factors is an important role for ICN and nursing.

ICN is committed to prevention of substance abuse and calls on nurses and national nurses associations (NNAs) to mobilise their efforts towards the prevention of substance abuse, particularly among young people, and to:

- Urge their government, communities, youth associations, parents associations and school authorities to disseminate information on the hazards of substance abuse and on life skills.
- Work with other organisations, including nursing schools, youth and parents associations, school personnel, governments and communities to implement strategies to eliminate substance abuse.
- Work with their national agencies to develop comprehensive policies on tobacco, alcohol, drugs and other substances, in order to reduce the demand for psychoactive substances, and to minimize harm through access to prevention and treatment.
- Mobilize efforts in tobacco prevention and cessation.
- Support integration of preventive and cessation programmes related to tobacco, alcohol, drugs and other substances of abuse into nursing education at basic, post basic and continuing education.
- Get involved in research on the rates, trends and disease burden associated with adolescent substance abuse and dependence; on patient-centred treatment approaches and pharmacological interventions; studies of interventions targeted to high-risk groups and individuals; and identifying barriers to implementation of effective preventive interventions.
- Provide a range of harm reduction measures such as information and counselling, vaccinations, needle/syringe exchange and comprehensive prevention and treatment in a non-discriminatory way.
- Combat the prejudice, stigma and discrimination associated with substance abuse.
- Support policies and interventions within the framework of human rights.

NNAs and nurses must be engaged in national discussions and policy issues related to substance abuse.

## Background

Tobacco, alcohol and illicit drug use pose a significant threat to the health, social and economic fabric of families, communities and nations.

A growing number of social and economic problems are associated with the use of tobacco, alcohol, drugs and other substances. Often, the effects are not limited to the individual but also to their families, friends, colleagues and society at large.

Young people may often abuse substances due to family factors, life pressures and peer influence. Biological changes in adolescence cause uncertainties and anxieties, and drugs are often used to cope with the situation.

There is increasing prevalence of HIV and sexually transmitted infections, hepatitis B and C and other infections among people who use alcohol and drugs and those who share needles for injection of substances. It is estimated that tobacco causes about 5 million deaths annually<sup>1</sup>, followed by alcohol which causes 2.3 million premature deaths or 3.2% of all deaths worldwide; and illicit drugs cause 0.2% of all deaths<sup>2</sup>. It is important to differentiate between use of tobacco and abuse of other substances. In the case of tobacco, any "use" is of great risk for youth. Evidence suggests nicotine dependence begins almost immediately upon starting to smoke in susceptible children.

ICN supports global initiatives to reduce or eliminate tobacco use such as the WHO Framework on Tobacco Control (FCTC). Nurses deal with the harmful effects of substance abuse and the associated physical, psychological and social consequences. As key health care providers nurses have a crucial role to play in the elimination of substance abuse. Prejudice, stigma and discrimination associated with substance abuse will discourage youth from seeking support and health services. Harm reduction measures are vital for the success of programmes aiming to control and prevent substance abuse.

**Adopted in 1995**

**Reviewed and revised in 2002 and 2008**

### Related ICN Positions:

- [Tobacco use and health](#)
- [Reducing environmental and lifestyle-related health hazards](#)
- [Acquired Immunodeficiency Syndrome \(AIDS\)](#)

### ICN Publications:

- Tobacco Free Living, ICN Fact Sheet, 2000.
- Tobacco Control and Smoking Cessation, ICN Monograph, 2004

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<sup>1</sup> WHO Report on the Global Tobacco Epidemic, 2008, The MPOWER package. Geneva :

<sup>2</sup> WHO web site. [www.who.int](http://www.who.int)



## NURSING MATTERS

*Nursing Matters* fact sheets provide quick reference information and international perspectives from the nursing profession on current health and social issues.

### Adherence to Long Term Therapy

Adherence is generally defined, as “the extent to which a person’s behaviour – taking medication, following a diet, and/or executing lifestyle changes, corresponds with agreed recommendations from a health care provider.”<sup>1</sup> Most studies investigating adherence focus on the extent to which patients follow medical instructions for prescribed medications, however it encompasses broader health-related behaviours that go beyond taking prescribed medications. Some examples of behaviours related to adherence include:<sup>2</sup>

- Seeking medical attention;
- Filling prescriptions;
- Taking medication appropriately;
- Obtaining immunizations;
- Attending follow-up appointments; and
- Adopting behavioural modifications that address weight control, self-management of asthma or diabetes, smoking, contraception, risky sexual behaviours, unhealthy diet and insufficient levels of physical activity.

There is strong evidence that suggests that most chronic patients with asthma, diabetes, hypertension, HIV and AIDS have difficulty adhering to a prescribed regimen of care. For example, in China only 43% of patients with hypertension adhere to their antihypertensive treatment; while in Gambia just 27% adhere to antihypertensive medication. In Australia, only 43% of patients with asthma take their medications regularly as prescribed by their health provider. In Europe, just 28% patients with diabetes are able to achieve optimal glycaemic control for diabetes. Adherence to antiretroviral therapy (ART) varies from 37% to 83%, depending on the medication used and frequency of medication taking. In developed countries adherence to treatment regime is approximately 50% while this figure is much lower in developing countries.<sup>3</sup>

### Problem of poor adherence

Poor adherence to treatment compromises the efforts of the health care system, policy makers and health care professionals in improving the health of populations. Failure to adhere to treatment causes medical and psychological complications of the disease, reduces patients’ quality of life, increases the likelihood of development of drug resistance, wastes health care resources and erodes public confidence in health systems.<sup>4,5</sup>

## Measurement of adherence

Accurate measurement of adherence is very important but there is no single “gold standard” to ascertain the extent of the problem. There are several measures discussed in the literature but they are proxy measures of patient’s actual behaviour. Some of the strategies that are used to measure adherence include:

- Asking providers and patients;
- Standardised patient-administered questionnaires;
- Counting of remaining dose;
- Electronic monitoring device, which records time and date when the medication container was opened; and
- Checking when prescriptions are initially filled and refilled.

Each of these methods has its drawbacks and must be used with caution. For example both providers and patients tend to overestimate the extent of adherence. Similarly, use of an electronic monitoring device or counting of remaining tablets does not indicate that the patient has actually taken the medicines.

## Factors influencing adherence<sup>6, 7</sup>

Adherence is influenced by several factors. These include:

- Poor socioeconomic status;
- Illiteracy and limited education;
- Unemployment;
- Long distance from treatment centres;
- High cost for transport or medication;
- The characteristics of the disease;
- Therapy-related factors: complexity and duration of treatment, side effects;
- Cultural beliefs about disease and treatment.

Some of these factors are patient related; some are medication related and others are health care provider related. For example poor socioeconomic status is patient related factor inhibiting adherence, while side effects of a drug regimen are therapy related. Given this complex interactions of factors affecting adherence, patients need to be supported, not blamed.

## Improving adherence

Better adherence is linked to patient safety, leads to better health outcomes and decreases health care costs. Good adherence improves the effectiveness of interventions, promotes health, and improves patients’ quality of life and life expectancy.<sup>8</sup> Good adherence also has economic benefits for the health care system and the patient.<sup>9</sup> There is no single way to promote adherence to treatment regimens. To improve adherence several educational and behavioural strategies need to be combined.<sup>10</sup> Behavioural strategies include reminders and reinforcement of patient behaviour. Also, health care providers can investigate patients’ preferences, simplifying dosing regimens, etc. Educational strategies that improve adherence among chronically ill patients include reducing the number of medications

and frequency of doses, providing information about expected side effects, and motivating patients to adhere to the lifestyle changes caused by therapy.

It is very important to educate patients about their chronic diseases, benefits of the treatment, and complications associated with nonadherence.<sup>11</sup> Education is needed for self-management since most of the care provided for chronic conditions requires the patients be involved in their own self care.

Education is an important strategy to improve adherence but patients not only need to be informed they also need to be motivated and encouraged to adhere to treatment and lifestyle-related goals.

A multidisciplinary approach is needed to manage chronic conditions and improve adherence. Family, community and patients' organisations are key partners in the promotion of adherence. They need to be actively involved in the care plan and expected outcomes of care. Improving adherence will require continuous cooperation between health professionals, researchers, policy makers, families, and most importantly the patient.

TG/2006

**For further information, please contact: [icn@icn.ch](mailto:icn@icn.ch)**

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<sup>1</sup> World Health Organization (2003). *Adherence to long-term therapies: evidence for action*. Retrieved July 8, 2005, from [www.who.int/chronic\\_conditions/adherencereport/en/](http://www.who.int/chronic_conditions/adherencereport/en/)

<sup>2</sup> WHO (2003). *Ibid.*

<sup>3</sup> Organizacion Panamerican de la Salud (Sept 2003). Poor adherence to long-term treatment of chronic diseases is a worldwide problem. Washington.

<sup>4</sup> WHO (2003). *Op. cit.*

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<sup>8</sup> Williams AB (2001). Adherence to regimens: 10 vital lessons. *American Journal of Nursing*, 101(6), 37-43.

<sup>9</sup> Organizacion Panamerican de la Salud (Sept. 2003). *Op. cit.*

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# NURSING MATTERS

*Nursing Matters* fact sheets provide quick reference information and international perspectives from the nursing profession on current health and social issues.

## Harmful Use of Alcohol

# Fact Sheet

### Introduction

Harmful use of alcohol is an avoidable risk factor for many diseases and social problems. Harmful use of alcohol encompasses many aspects of drinking. First is the amount of alcohol consumed. Other aspects include the pattern of drinking which can range from regular or occasional drinking to intoxication, and the quality of alcoholic beverage or toxic substance, for instance methanol, contained in it.

<sup>1</sup>

Alcohol consumption has adverse health and social consequences including:

- intoxication (drunkenness), dependence (habitual, compulsive and long-term drinking),
- a major cause of premature death,
- intentional and unintentional injuries,
- several infectious and non-communicable diseases such as cardiovascular disease, liver cirrhosis, cancers, mental diseases, and
- sexually transmitted infections including HIV infection.

Alcohol is estimated to cause about 3.7% of all deaths; with 2.3 million premature deaths, and 4.4% of the global burden of disease. In addition, harmful use of alcohol is associated with several adverse social consequences, such as crimes, violence, unemployment, and absenteeism. Recently, the negative impact of alcohol use in young people and women across the world is of increasing concern.<sup>2</sup> The ICN, for example, in its policy on Elimination of Substance Abuse in Young People, expressed concern about the growing number of youths who abuse dependence producing substances and the resulting impact on their health.

### What influences alcohol consumption?

In order to design effective interventions against harmful use of alcohol, it is important to understand the factors that impact on the problem. Alcohol use in many cultures is often rooted in social and cultural environment, and linked with personal characteristics, which include:<sup>3</sup>

- Age, gender, physiological and psychological status, personal awareness of adverse effects of alcohol use;
- Social, economic and cultural values, and norms of the family including acceptance and approval of individual's pattern of drinking alcohol;
- Accessibility, affordability and acceptability of alcohol use by society;



- Socio-cultural attributes of peer group influence, personal status and attitudes of society towards alcohol use;
- Advertisement and media portrayal of alcohol use as “masculine” and “attractive” shape people’s values and thinking process; and
- Legal status of alcohol and legal actions against those who cause damage while under the influence of alcohol.

In many societies alcohol use is associated with celebrations including weddings, birth, and academic achievement and job promotions. The advice to use “alcohol in moderation” has often led to mixed and contradictory messages about alcohol and its consumption perhaps undermining health policies and strategies to reduce alcohol-related harm.

### **What are the consequences of harmful use of alcohol?**

Alcohol has a toxic effect that can harm almost every organ of the body. The harmful use of alcohol has both acute and long-term adverse effects on health, social and economic factors. The acute effects of alcohol are associated with risk behaviours including unsafe sex, which can lead to sexually transmitted infections such as HIV infection, accidents and injuries due to drunken driving or operating machinery, and violence. Long-term effects of alcohol include more than 60 disorders and can exacerbate chronic health conditions such as cardiovascular diseases, breast cancer, hepatitis C, and liver cirrhosis. Chronic harmful use of alcohol can compromise the immune system and increase risk to infectious diseases including bacterial pneumonia.<sup>4</sup> Alcohol is a “psychoactive substance” that can affect the central nervous system, resulting in disturbances in motor function, cognitive process, mood, perception, and behaviour changes. These effects can cause major social problems.<sup>5</sup>

“Social harms” related to harmful use of alcohol includes disruptions in the family, community and workplace, violence and crimes. Other consequences of harmful use of alcohol include job loss, involvement in crime and arrest. These consequences affect the person using alcohol as well as the family, community and society.<sup>6</sup>

Adverse effects of harmful use of alcohol on individual health, family and community have led to economic burden in terms of health care and societal costs. Worldwide alcohol causes 1.8 million deaths (3.2% of total) with unintentional injuries alone accounting for about one third of the 1.8 million deaths.<sup>7</sup> The health care costs include cost of treating injuries and alcohol-related diseases as well as rehabilitation costs.<sup>8</sup> Societal costs include cost related to property loss, unemployment, road traffic injuries, and pain and suffering to family.<sup>9</sup>

## **W**hat are the strategies to reduce harmful use of alcohol?

Strategies for reducing harmful use must be designed to achieve several aims including delaying initial alcohol use, reducing the number of people who misuse alcohol, minimising harmful patterns of alcohol use and changing behaviour of alcohol consumption.<sup>10</sup> The literature identifies a number of strategies to reduce harmful alcohol use.<sup>11, 12, 13</sup>

- *Strengthen health promotion, prevention and education* to increase public awareness and enhance the capability of individuals and communities to participate in reducing harmful consequences of alcohol misuse. To be effective, using knowledge-based understanding of the cultural and social contexts of alcohol drinking and a combination of measures that target the population at large, vulnerable groups (i.e. young people and pregnant women) have to be considered.
- *Increase community-based action*, with involvement of different stakeholders, such as community leaders, religious organisations, health promotion organisations, consumer associations and trade unions, is an effective strategy to minimise harms related to alcohol drinking. The actions can increase community perception related to the harms, reduce the acceptability to excessive alcohol use and mobilise the community against the unregulated selling and using alcohol.
- *Regulate availability of alcohol* in order to control alcohol consumption and accessibility. This strategy includes regulating production and distribution of alcoholic beverages such as minimum legal purchasing age, restricted hours and days of sale, restricting retail sales and density of outlet, and controlling price, advertising and promotion.
- *Support and enact drink-driving policy* to reduce alcohol drink-driving and the adverse consequences and severity of traffic crashes. The policy has to address a low limit for blood alcohol concentration of drivers and suspension of driving licences.
- *Strengthen health sector response* through involvement and training of health care professionals in early detection of problems related to alcohol consumption and prevention of more serious conditions. Treatment and community services for people with alcohol use disorders are effective when supported by adequate policies and systems and integrated in a broader preventive strategy.

## **W**hat actions can nurses and National Nurses Associations (NNAs) take?

Nurses and NNAs have an important role in reducing or eliminating harmful use of alcohol. NNAs can take the following actions:

- Collaborate with government, community and other organisations to disseminate information on the harmful consequences of alcohol and to implement strategies to reduce alcohol misuse;
- Support integration of preventive programmes related to harmful use of alcohol into nursing education and continuing education;
- Urge the government to develop policies on alcohol in order to minimize harm through access to prevention and treatment;
- Be involved in research related to alcohol issues such as rates, trends and disease burden; nursing interventions targeted to high risk group; barriers to

- implement prevention interventions; and patient-centred treatment approaches; and
- Support policies and interventions that are based on human rights

Nurses and NNAs can be key stakeholders in strengthening health sector response against harmful use of alcohol including prevention, treatment, care and rehabilitation services.

For further information, please contact: [icn@icn.ch](mailto:icn@icn.ch)

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TG/October/2009

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