

Albanian Health Policy in Prevention of Chronic Kidney Disease

Dr. Marsida Duli

HEAD OF NURSERY AND PHYSIOTHERAPI DEPARTMENT -
EUROPIAN UNIVERSITY OF TIRANA

Dr. Qamil Dika

PUBLIC HEALTH EXPERT –HEAD OF SPORTS MEDICINE DEPARTMENT,
UNIVERSITY OF SPORTS TIRANA

Abstract

Nowadays Chronic Kidney Disease (CKD) has increasingly come and constitutes a public health problem of paramount importance. International institutions such as the “Center for Disease Control and Prevention” identify Chronic Kidney Disease as one of the main priorities in the era of the epidemiological transition. In Great Britain were articulated operational plans for identifying subjects with renal dysfunction or low-grade of renal failure. Refer to the data is estimated that in the adult population, about 1 adult individual in every 10 individuals has a moderate degree of renal failure, which means a renal function (expressed as glomerular filtrate) half or less than half of the normal rate. In Albania the problem is virtually unknown by the population, yet little-known and widely underestimated by doctors and by the policy makers, regional and / or national government public health authorities. What is proposed is intended to create the basis of data, knowledge and determine the functional organizational structure for the prevention of kidney disease (primary prevention), to slow down their development (Secondary prevention), and to prevent dangerous cardiovascular complications caused by renal insufficiency (tertiary prevention). The end result is intended to reduce morbidity and mortality from renal diseases, and improve the quality of health care provided to patients with kidney disease.

Key words: Renal Chronic Disease, Prevention, Public policy

Introduction

Chronic kidney disease(CKD) is becoming recognized more and more as a global public health problem.

A health condition to be considered a public health issue, should complete four criteria: 1.) the issue / health condition should be expanded and constitute a heavy burden on society, a burden that is increasing despite existing control efforts; CKD burden of disease is high (ie, it is widespread in many people, has grown recently, and is likely to grow even more in the future). This burden of disease is translated in terms of mortality and morbidity, quality of life, cost, and perceived as a threat by the public, that it can get out of control.

2) The burden of disease should be distributed at random (ie, certain parts of the population are disproportionately affected); 3) there must be evidences that prevention strategies can significantly reduce the burden of issue / situation; and 4) such preventive strategies aren't yet well developed and implemented.

Now there is compelling evidence that CKD can be detected through a simple laborator test, and that treatment can prevent or delay complications of the decreased function of the kidney, to slow the progression of kidney disease, and reduce the risk of cardiovascular disease complications (CVD).

Since 2006 in the Conference of KDIGO on CKD were analyzed and were taken into consideration six main themes: (1) Classification of CKD, (2) screening and surveillance of CKD, (3) health policy for CKD, (4) Cardio-vascular diseases and their risk factors as risk factors for the development and progression of the CKD, (5) accompaniment of CKD with chronic infections, and (6) relation of cancer with CKD. In conclusion a report with recommendations was drafted, the implementation of which is going to be realized through cooperation with international organizations and national public health.

Screening and Surveillance

Screening is an activity where people of a given population who are not aware of suffering from a CKD, are tested to detect the presence of disease, and if present are treated to reduce the risk of progress of CKD and of its complications.

Surveillance refers to an activity to provide relevant information on CKD, such as time, location, size, and severity, in order to implement the guidelines for medical and public health measures to control the progress of CKD and its complications.

On the other side there is no evidence that the screening of the general population is going to be cost-effective.

Screening should be applied in those subgroups of the population that may have benefits from the detection of CKD. In developed countries and developing

countries, the risk for developing of CKD is increased in people with risk factors for CVD or CVD already installed, in which CKD multiplies the risk for negative outcomes of CVD. So , the CKD subgroup' of patients with CVD and risk factors for CVD is a high-risk group that require special attention.

As well as patients with contagious chronic diseases and cancer may have increased risk.

In these groups, screening for CKD can be implemented using the existing infrastructure for the detection of other chronic conditions.

Many countries such as Albania have registers for patients treated with hemodialysis and transplantation. However, these programs marginalize people with CKD of severe stages who die before starting treatment for renal failure with dialysis or renal transplantation.

In principle, the surveillance programs for CKD in stages 4 and 5 will help the monitoring of the size and care for that population with high risk and high cost, and to reduce the progression of renal failure and the cost of renal dialysis and transplant .

While surveillance for patients in stage 3 of CKD will involve more people and can be an effective way to reduce the value of CVD and death, especially among older people with risk factors for CVD or CVD installed.

Health Policy

In some countries, the incidence of renal heart failure due to certain types of CKD is stabilizing or declining, reflecting the early detection and treatment.

Although the prevalence of renal failure varies substantially across the world, the number of patients and the cost of providing dialysis and transplantation continue to be increased.

Few countries have policies for the prevention of CKD, although most of them are aware of the high prevalence of CKD, its impact on other diseases, and its large economic burden .

Prevention, early diagnosis and intervention are the most cost effective strategies for CKD.

At the same time, costs for other chronic diseases are increasing. In developed countries, the care for patients with hypertension, diabetes and cardiovascular disease consumes a large part of the income of health care.

Developing countries are now experiencing the burden of non-communicable diseases, although infectious diseases are still not under control. CKD are especially common in people with other chronic diseases and multiplies the risk for negative outcomes and higher costs. Thus, public health policy should be coordinated with CKD existing policies for other chronic diseases.

Methodology

The study is a quantitative one. It is realized through the research of literature, reports and periodicals reports of the Albanian Ministry of Health on health policy related to renal diseases.

Data from international health organizations are analyzed and compared with national ones. A detailed description is made on the other side and the 10-year screening program conducted through Albanian health policy . The data obtained help us in drafting clear conclusions, which highlight the necessary recommendations for the progress of the process.

Findings / Results

CKD prevalence in the United States in 2012 (excluding IRK) was estimated at 13.6%, and has been relatively stable over the last decade, but awareness and screening for the condition remains low in the general population. Claims data for patients with diabetes in the population indicate that testing for albuminuria is done in less than half of patients. Among all patients with diabetes, testing for albuminuria rate in 2008 was only 32%, and was increased to 40% in 2013.

In 2013 there were 117.162 new cases reported with End Stage Renal disease. However, adjusted incidence rate of End Stage Renal disease , which includes both patients on dialysis and those transplanted, remained unchanged from 2012 to 2013, to 352 million per year. A total of 671.851 people were treated for End Stage Renal disease, as the first quarter of 2014, a number that continues to grow due to the decline of mortality rates among those with the End Stage Renal disease.

CKD health related costs remain high. CKD costs for patients of age 65 and older exceeds \$ 50 billion in 2013, representing 20% of all the expenditure in this age group. In 2013, costs for patients with End Stage Renal disease increased \$ 31 billion, accounting for more than 7% of total spending.

The number of people on the waiting list for a kidney transplant was about 5 times greater than in 2013. Although 17,600 kidney transplants were performed in 2013, the list of pending kidney transplant increased by 3% compared with 2012, rising to 86.965 candidates.

By 2030, it is estimated that the annual number of people in the later stages of the CKD- End Stage Renal disease will exceed 450,000, and those receiving dialysis or who have performed kidney transplant will exceed 2 million.

Albania

Since 2007 patients with CKD in the last stages of the End Stage Renal disease are treated with hemodialysis in the public and private sector . In this period, the number of patients was 60.

TABLE 1. Number of patients who are treated with hemodialysis in years

| No. | Year | Number of patients who are treated with hemodialysis |
|-----|------|--|
| 1. | 2007 | 60 |
| 2. | 2015 | 880 |

Source: Ministry of Health

During 2015 were implemented throughout the year, health packs, which are financed by the health insurance scheme. These packages are implemented by public hospitals as well as non-public health institutions, which are contracted due to the limited capacity of public hospitals, aiming to fulfill the needs of the population. Thus, during 2015 it has been provided hemodialysis for about 880 patients, 34 percent of them in public hospitals (Universitary hospital center-Mother Teresa, regional hospitals like Elbasan, Gjirokastra, Shkodra), and 66 per cent in 4 nonpublic(private) institutions.

TABLE 2. Presentation of the percentage by sector where patients are treated with hemodialysis

| No | Private/Public sector | Percentage of the patients distributed by the sector |
|----|-----------------------|--|
| 1. | Public | 34% |
| 2. | Private | 66% |

Source: Ministry of Health

Package of Basic Health Control

Albanian health policies have embraced an important initiative, the screening program “Check-up” application, a based control wide enough to ages 40-65 years old, with the help of public-private partnership for one period of 10 years. The package includes basic medical control:

Assessment, counseling, treatment and follow up on lifestyle factors:

- Nutrition;
- Smoking;
- Consume of Alcohol;
- The level of stress and depression.

Measurement, assessment, counseling, referral and monitoring of physiological parameters:

- Blood pressure;
- Body mass index;
- Heart activity (ECG).

Measurement, assessment, counseling, treatment, referral and monitoring of biochemical parameters:

- Blood formula;
- Hb, HCT, MCV, MCH, MCHC;
- Cholesterol Total, HDL cholesterol, LDL cholesterol, triglycerides;
- Glicemia;
- Faeces analyze for occult blood;
- Albuminuria, presence of cells, cylinders, crystals in the urine, uremia and creatinemia;

Total and direct Bilirubine, transaminase (SGPT, SGOT)

Basic Health Control Program , are free (40-65year), Renal diseases, cardiovascular and diabetes have special attention, implemented these in 415 health centers in overall Albania.

This control, at the same time, has three main goals:

- (I) to assess health risks;
- (II) to communicate with citizens the health risk; and then,
- (III) to build the bridge to manage this health risk, certainly for people in the age group 40-65.

The program attempts to address systematically the major causes of premature mortality (I) arterial hypertension; (II) obesity; (III) smoking; (IV) cholesterol; (V) poor diet; (VI) physical inactivity; and (VII) the use of alcohol.

During the control 6 basic component are assessed for basic health control: (I) cardiovascular diseases; (II) diabetes type 2; (III) mental health; (IV) lifestyle, including nutrition, smoking, alcohol, physical activity; (V) arterial hypertension; and (VI) laboratory tests to assess blood, urine, faeces for Ca colon / rectum, evaluation of heart and liver.

From data results with hypertension 37% of people who participated in control. About 18% do not know they are hypertensive, which means that we have a very high rate of disease in the population, initially, people did not know, and then, we did not have proper care for the disease. About 35% of the people know they are hypertensive, but on the day of control have the same results again of the state of the disease, which means, they are not treated properly.

Diabetes: 4% of people have resulting in diabetes control and do not know this fact. And if this 4% has come from the age group 40-65 years, means that the proportion is greater of people who have diabetes and do not know they have diabetes. Meanwhile, 12.5% of persons who have control, as assessed paradiabetic.

Minimally, results of controls that we have a high degree of obesity; which means that we have high degree of risk. Meanwhile, the patients we have today wich are diagnosed with diabetes, we note that 30% of patients with eye diseases are diabetic; 30% of those who have kidney disease and are treated with hemodialysis are diabetics; 30% of those who suffer from hypertension, have diabetes; that means we have in these cases of these diseases, some chronic diseases together.

All patients that have resulted with disorders of the urinary system indicators, including a complete analysis of urine or even creatinemia -azotemia through referral scheme have taken the necessary services through consultations by specialists of the field-Nephrology. On the other hand patients aware of the presence of nephropathy were evaluated and advised regarding risk factors and renal disease progression.

The burden of chronic kidney disease in the health system is great. The analysis in the statistical database service in Mother Teresa –University Hospital, in the nephrology service(not including hemodialysis services) results 4082 cases of hospitalization for the period 2012-2015, of which 3374 belong to chronic kidney disease. It is clear that about 82% of all cases of renal pathologies are chronic kidney disease of different stages and different origins.

The table below shows the distribution of these cases according to the basic pathology causes. Others involved in the field of diagnosis cause of CKD 's not above cited example skleroderima, Alport syndrome, unspecified nefroskleroza, transplant rejection, uric acid nephropathy and cases where the card was not recorded underlying disease that comprise approximately 1190 patients with CKD.

TABLE. 3 Distribution of cases by diagnosis based on chronic kidney disease

| Glomerulonephritis | Pyelonephritis | Hipertension | Diabet | Renal Policitosis | Lupic Nephropatia | Other |
|--------------------|----------------|--------------|--------|-------------------|-------------------|-------|
| 186 | 1283 | 123 | 409 | 162 | 21 | 1190 |

Source: Database of statistics at the University Hospital Mother Teresa-Tirana

Referring to the results the highest number of cases of the disease causal basis of CKD 's hold pyelonephritis with 1283 cases. In second place with 409 cases diabetes ranks as the most rare cases occur in patients with Lupus nephropathy because the LES prevalence in the population which is low too.

TABLE. 5 Distribution by stage of disease

| Stage of disease | Percentage |
|------------------|------------|
| I | 2.7 |
| II | 6.8 |
| III | 40.5 |
| IV | 14.9 |
| V | 35.1 |
| Total | 100.0 |

Source: Database of statistics at the University Hospital Center Mother Tereza- Tirana

Based on the distribution by stage of disease, patients with stage II-CKD represent the highest percentage of about 40.54%, accompanied by the fifth stage with 35.14%, the first stage is only 2,703%.

TABLE. 6 Diseases associating CKD

| Diseases associating CKD | Percentage |
|--------------------------|------------|
| Diabet Mellitus | 24.5 |
| Hipertension | 63.4 |
| KMP | 37.2 |
| Anemia | 8.9 |

Source: Database of statistics at the University Hospital Center Mother Teresa-Tirana

The most common disease associated with CKD is Hipertension 63.4%, followed by 37.2% and KMP with less Anemia 8.9%.

Conclusions

CKD burden disease, in terms of human suffering and economic cost is steadily growing towards the 21st century, making it a major public health issue.

Approaches of different countries are different to those associated with incidence, prevalence or different forms of CKD to address effectively this serious health problem. The Albanian government has adopted a health policy regarding the CKD and further, supporting a program of screening and surveillance was associated with them, thanks to a public-private partnership. Albania has applied a broad screening program associated with chronic diseases associated with CKD in 40-65 age group, cardiovascular diseases, diabetes, etc. On the other hand the target group of patients of this age groups is addressed to these with the highest risk for this diseases. The tests include a complete urine analysis, proteinuria, and creatinemia, necessary for the calculation of glomerular filtration and evaluation of the renal function, detection of new cases, preventing chronization in time, slowing down the progress toward the terminal stage, and reducing complications and mortality. Tests above are applied once a year.

Recommendations

- A. The expansion of the screening program in other age groups, in those younger than 40 years and especially over 65 years old, where risk factors are more present.
- B. Organizational proposals to the Association of the Albanian Nephrologist

Prevention of chronic kidney diseases and their complications should be performed at three levels:

1. Primary Prevention

Primary prevention consists on informing and awareness on the population regarding the disease and risk factors, which in fact constitute a fundamental problem. This is achieved through information campaigns in the period who marks events, such as the International Day of the kidney, which are media campaign with educational character. These initiatives remain insufficient unless we put action plans and screening programs to better calibrated.

2. Secondary prevention

Secondary prevention consists in the identification and treatment of nephropathy and early, thus it is essential that integration between General Medicine / Family and Nephrology, enabling communication and the creation of diagnostic therapeutic pathways.

3. Tertiary prevention

Tertiary prevention and control consist essentially in search and control of factors of renal pathology progression and prevention of chronic renal complications of renal failure. Nephrologists play a key role in cooperation with other specialists to connect with them as such; diabetologists, cardiologists, but also imunologists, urologists, vascular surgeons etc.

Improve the quality of service delivery to patients with chronic nephropathy.

Improve quality of service for patients with cronic nephropathy includes:

- a) Communication
- b) the formation and ongoing education of nephrologists, consists in three main aspects:
 - Adequate number of nephrologists
 - Continuous formation of Nephrologist
 - Ongoing Formation of family doctors
- c) improvement of diagnostic-therapeutic protocols, seen especially in the direction of stabilization of one capillary proliferation program plan training for doctors in general medicine.
- d) cooperation with other specialties, to encourage the exchange of ideas and dissemination of program tasks that final aims at preventing major causes of renal failure.
- e) improving the functioning of the network of nephrologists etc.

In synthesis are necessary:

- Integration -Programs Hospital-Territory
- Adequate -Number of Nephrologist
- Ongoing formation programme especially for nephrologists and medical doctors in general medicine.
- Omogenisation of structural and accreditation criteria

C. Operative Proposals

Cooperation of central decision-making levels in scientific society for:

- 1) Use of existing tools for the detection of chronic diseases to determine cases, incidence, prevalence and trends for the future of CKD
- 2) Determining the epidemiological and social health importance of CKD.
- 3) Programming of an adequate number of nephrologists to deal effectively with CKD and inform the competent authorities, that they can adjust the number of training contracts with specialty in Nephrology.
- 4) Control of the costs and benefits of long-term prevention programs of CKD.
- 5) Promote the development of communication plans so that every citizen becomes aware of the condition of his kidney and the cardiovascular risk associated with and possible therapies.
- 6) Promotion periodically campaigns to promote the donation of organs, especially the kidney in this case.

Hospitals and hospitals enterprise

1. To help health institutions and public health institutions in the programming structures and strengthening the Network of Nephrology.
2. Alternative solutions assessment local programming already present, under the direction of the needs of the territory, in optics of efficiency and make full use of the competences of nephrologists.
3. Entirely use of nephrologists competences, to avoid credulity treatment of patients with no nephrologists physicians, because it will reduce the quality of service and that of prevention.

Albanian Association of Nephrologist

Albanians Association of nephrologists, such us, represented by Nephrology experts, in their respective fields, should activate maneuvers prevention: to develop and update on a regular instructions to create website pages dedicated to patients, organizing events on World kidney day.

Also exist National register of dialysis and transplantation which are already used as a source of health information and planning for the terminal stage of CKD.

Also recommended the creation of a database for CKD in stage 4 and 5 and strengthening the existing Register of Dialysis and transplantation.

Data entry in this registers of the disease should be mandatory, as an element for accreditation and evaluation of the quality of services provided.

Literature

- Vinacor F. Is diabetes a public-health disorder? *Diabetes Care* 1994;17(Suppl 1):22-7.
- Saaddine JB, Narayan KM, Vinacor F. Vision loss: a public health problem? *Ophthalmology* 2003;110(2):253-4.
- Gilbertson D, Solid C, Xue JL, Collins AJ. Projecting the U.S. ESRD population by 2030. *US Renal Data System: Data presented at the 2003 American Society of Nephrology Annual Meeting. Available from: URL: http://www.usrds.org/2003/pres/html/5U_ASN_projections_files/frame.htm*
- Sarnak MJ, Levey AS, Schoolwerth AC, Coresh J, Culleton B, Hamm LL, et al. Kidney disease as a risk factor for development of cardiovascular disease: a statement from the American Heart Association Councils on Kidney in Cardiovascular Disease, High Blood Pressure Research, Clinical Cardiology, and Epidemiology and Prevention. *Circulation* 2003;108(17):2154-69.
- Keith DS, Nichols GA, Gullion CM, Brown JB, Smith DH. Longitudinal follow-up and outcomes among a population with chronic kidney disease in a large managed care organization. *Arch Intern Med* 2004;164(6):659-63.
- Menon V, Sarnak MJ. The epidemiology of chronic kidney disease stages 1 to 4 and cardiovascular disease: a high-risk combination. *Am J Kidney Dis* 2005;45(1):223-32.
- National Kidney Foundation. K/DOQI clinical practice guidelines for chronic kidney disease: evaluation, classification and stratification. *Am J Kidney Dis* 2002; 39(Suppl 1): S1-S266.
- Boulware LE, Jaar BG, Tarver-Carr ME et al. Screening for proteinuria in US adults: a cost-effectiveness analysis. *JAMA* 2003; 290: 3101-3114.
- Atthobari J, Asselbergs FW, Boersma C et al. Cost-effectiveness of screening for albuminuria and subsequent treatment with an ACE inhibitor to prevent cardiovascular events: a pharmacoeconomic analysis linked to the PREVEND and the PREVEND IT studies. *Clin Ther* 2006; 28: 432-444.
- Lysaght MJ. Maintenance dialysis population dynamics: current trends and long-term implications. *J Am Soc Nephrol* 2002; 13(Suppl 1): S37-S40.
- US Renal Data System. *USRDS 2005 Annual Data Report: Atlas of End-Stage Renal Disease in the United States*. National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases: Bethesda, MD, 2005 Ref Type: Report.
- <http://www.fsdksh.com.al/aktivitete/615-analiza-vjetore-e-fsdksh-s%C3%AB-p%C3%ABr-vitin-2015>
- <http://www.fsdksh.com.al/paketa-e-sherbimeve-shendetesore>