

## CHRONIC KIDNEY DISEASE: A HIDDEN EPIDEMIC

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**Abstract:** Chronic kidney disease (CKD) is increasingly recognized as a global public health problem. Now, there is convincing evidence that CKD can be detected using simple laboratory tests and that treatment can prevent or delay the complications of decreased kidney function, slow the progression of kidney disease and reduce the risk of cardiovascular disease (CVD). Two simple tests can detect almost all CKD. The estimated GFR and a urine albumin-to-creatinine ratio provide adequate testing. We do not have data on the prevalence of CKD in adults in the Republic of Macedonia. There has been an increase of End Stage Renal Disease and Renal Replacement Therapy in our country. In 2002 we had 1,056 patients on RRT compared with 1,216 in 2005. The nephrologists of Macedonia held a symposium devoted to the World Kidney Day on March 13, 2008, at the Macedonian Academy of Sciences and Arts in Skopje. One of the most important messages was that there is an urgent need for a screening programme for the detection of CKD in the Republic of Macedonia. Health authorities, nephrologists and general physicians should collaborate together on the detection of CKD.

**Key words:** chronic kidney disease, laboratory tests, screening programme, education

Chronic kidney disease (CKD) is increasingly recognized as a global public health problem. The declaration of the World Kidney Day sends a clear message to the public, governments, health officials, physicians, allied health professionals, patients and families that "CKD is common, harmful and treatable" [1, 2].

Now, there is convincing evidence that the CKD can be detected using simple laboratory tests and that treatment can prevent or delay complications of decreased kidney function, slow the progression of kidney disease and reduce the risk of cardiovascular disease (CVD).

In 2005, the World Health Organization (WHO) emphasized the importance of controlling chronic non-communicable diseases as a neglected global health priority [3]. WHO estimates that chronic diseases were responsible for more than 60 % (35 million) of all deaths in 2005, with more than 80% of these deaths occurring in low income and middle income countries. More recently, in a study of 23 selected low income and middle income countries, chronic diseases are shown to be responsible for 50% of the total disease burden in 2005 [4]. The lost economic productivity in these 23 countries from heart disease, strokes and diabetes alone is estimated to be 84 billion U.S. dollars between 2006 and 2015. As a consequence, WHO has targeted a 2% annual reduction in chronic disease death rates over the next 10 years, which would avert 24 million deaths and save an estimated 8 billion dollars in these countries alone. The primary targets for intervention on a global level are the common causes of the major chronic diseases, which include an unhealthy diet, excessive energy intake, physical inactivity and tobacco use. These important modifiable risk factors are also implicated in the development and progression of CKD.

CKD is a global health problem. In the United States of America, the prevalence of CKD in adults may be as high as 13.1 % of the population [5].

We do not have data on the prevalence of CKD in adults in the Republic of Macedonia.

There has been an increase of End Stage Renal Disease (ESRD) and Renal Replacement Therapy (RRT) in our country (Table 1)

Table 1 – Табела 1

*Registry data for prevalent patients (31 December, unadjusted for age and gender) by courtesy of Dr. O. Stojscheva-Taneva*

*Податоци за превалентноста на пациенти (31 декември, нејприспособено за возраст и пол) со љубезноста на д-р О. Стојчева-Танева.*

<b>Parameter</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
RRT	1056	1093	1108	1216
HD	973	995	990	1077
PD	5	4	10	18
Tx	78	94	108	121
Males	625	653	667	730
Females	431	440	441	486
Per million population	522.1	540.4	547.7	601.4
Mean age	51.3 ± 13.7	51.7 ± 13.5	52 ± 13.7	52.4 ± 14.3

RRT – Renal Replacement Therapy; HD – Haemodialysis; PD – Peritoneal Dialysis; Tx – Renal transplantation.

*Renal replacement therapy is very expensive*

The nephrologists of Macedonia held a symposium devoted to the World Kidney Day on March 13, 2008, at the Macedonian Academy of Sciences and Arts in Skopje.

**One of the most important messages was that there is an urgent need for a screening programme for the detection of CKD in the Republic of Macedonia.** Health authorities, nephrologists and general physicians should collaborate together on the detection of CKD.

People with CKD are largely unaware that they have reduced kidney function. Among those with an estimated glomerular filtration rate (GFR) of less than 30 ml/min per 1.73 m<sup>2</sup>, less than one half knew that they had kidney disease. [5]

Two simple tests can detect almost all CKD. The estimated GFR and a urine albumin-to-creatinine ratio provide adequate testing. [6]

Nephrologists can play a major role, particularly by providing formal and informal public education to primary care colleagues (including general internists, family physicians, nurses, practitioners, physician assistants and diabetes educators). Nephrologists are best suited to help the primary care provider; they determine who should be tested and how to interpret screening tests. Persons with diabetes should be tested yearly for the presence of CKD. [6] Testing hypertensives also seems cost-effective.

Finally, because CKD is common among relatives of persons with ESRD and increases the mortality in cardiovascular disease, many call for testing in these groups as well.

Each nephrologist should consider how he/she can contribute to an increase in the local screening, identification and treatment of kidney disease. As a profession, we need to work to evolve the process of efficient care patterns. Nephrologists must also reduplicate efforts and become increasingly involved, both locally and nationally, in advocacy of the importance of kidney disease, and in the redesign of kidney disease care models across the entire spectrum of disease severity. Nephrologists should be strong advocates for enhanced support from the government for research on the causes and treatment of CKD.

## REFERENCES

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### Резиме

## ХРОНИЧНИ БУБРЕЖНИ БОЛЕСТИ: СКРИЕНА ЕПИДЕМИЈА

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Апстракт: Хроничните бубрежни болести (ХББ) сè повеќе се препознаваат како глобален здравствен проблем. Сега, постојат податоци дека ХББ може да се открие користејќи едноставни лабораториски тестови и дека третманот може да ги попречи или одложи компликациите од намалената бубрежна функција, да ја забави прогресијата на бубрежната болест и да го намали ризикот од кардиоваскуларната болест (КВБ). Два едноставни теста може да ги откријат речиси сите ХББ, одреден степен на гломерулната филтрација и во урината одреден однос на албумин кон креатининот со соодветни тестирања. Ние немаме податоци за превалентата на ХББ кај возрасните во Република Македонија. Постои зголемување на терминалната бубрежна болест и потреба од заместителна терапија за бубрежите во нашата земја. Во 2002 г. ние имавме 1.056 болни на заместителна бубрежна терапија споредено со 1.216 во 2005 г. Нефролозите од Македонија на 13 март 2008 година одржаа симпозиум посветен на Светскиот ден на бубрежите во Македонската академија на науките и уметностите во Скопје. Една од најзначајните пораки беше дека постои итна потреба за скрининг-програма за откривање

на ХББ во Република Македонија. Здравствените власти, нефролозите и општите лекари треба заедно да работат во откривањето на ХББ.

**Клучни зборови:** хронични бубрежни болести, лабораториски тестови, скрининг-програма, едукација.

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