

AWARENESS OF KIDNEY DISEASE LOW DESPITE AFFECTING 500 MILLION PEOPLE WORLDWIDE AND GLOBAL COSTS SURPASSING \$1 TRILLION THIS DECADE

Cancer, heart disease, diabetes...if you asked 100 people to name the diseases they fear most, these three would almost certainly make their list.

Chronic kidney disease (or CKD) might not even rate a passing mention. And yet it meets all criteria for a major public health problem. In their global campaign against non-communicable diseases, the World Health Organization targets four diseases: diabetes, cardiovascular disease, cancer and lung disease, but CKD is not mentioned. That's shocking when you consider that 5-7 percent of people in the world live with some level of the disease, and the cost of dialysis alone is estimated to be over \$1 trillion this decade.

The problem is most people with CKD aren't even aware they have the disease, as there are few noticeable symptoms.

The solution? Inexpensive early identification and treatment programs, which are feasible and effective in both the developed and developing world.

CKD a "Silent Killer"

Studies show that 4 out of 5 people with advanced CKD (i.e. loss of over 50% of kidney function) do not know they have the disease. Unless tested, diagnosed and dialysis or a transplant is available, many of these people only become unwell after severe kidney failure, when death is imminent. What makes this all the more tragic is that with an early diagnosis, much can be done to delay and even prevent progression of the disease.

Links to Diabetes, Hypertension and Heart Disease

Ironically, several of the most well known chronic diseases are directly linked to kidney disease. People with diabetes and hypertension are at the highest risk for CKD. In turn these two conditions are major cardiovascular risk factors, which means those with CKD are also at significant risk to have heart disease.

The risk of complications from heart disease increases continuously as kidney function decreases. In fact, people who have both CKD and heart disease are 10 times more likely to die prematurely. Even moderate CKD can greatly increase the risk of fatal heart disease.

Other Risk Factors: Family History, Race, Age and Socio-Economic Status

Additional risk factors for kidney disease include:

- A family history of kidney disease
- Being of Asian, African, Hispanic American or Aboriginal descent
- Increased age (CKD is more common among older people)
- Being born with low birth weight
- Being economically disadvantaged

The Massive Cost of CKD

The healthcare costs for one person needing dialysis are between \$150,000 – \$200,000 per year, with annual global dialysis costs exceeding \$1 trillion this decade. In countries like the UK, USA and Australia, only 1% of the population needs dialysis or a transplant yet they consume up to 5% of health care budgets. This does not even take into account the healthcare costs for people who still have kidney function but require treatment for heart disease and other health problems made worse by their kidney disease. In the US alone, expenditure on these patients exceeded \$60 billion in 2007.

As kidney disease continues to increase world-wide, along with the demand for related life saving therapies, the financial burden of CKD care will place an increasing drain on health care systems. And it's equally important to consider the unmeasured domestic and societal cost of lost earnings and productivity, and all the psycho-social challenges of living with a long term health problem.

The best way to reduce these enormous costs is to prevent kidney failure in the first place, through earlier diagnosis and better care for people with CKD.

The Impact of CKD in the Developing World

Life-saving dialysis and transplants are not available in most of the developing world. In fact 600 million people with CKD live in 112 countries that have no resources for treating kidney failure, resulting in the death of over one million people a year.

In developing countries, CKD often starts at a younger age, causing greater negative impact on families, income and society at large. Babies with low birth weight from inadequate nutrition - are more likely to develop diabetes, hypertension and CKD as adults. Ironically, success in reducing infant mortality means the survival of more low-birth-weight babies. This sets the stage for an even greater burden of CKD in the future.

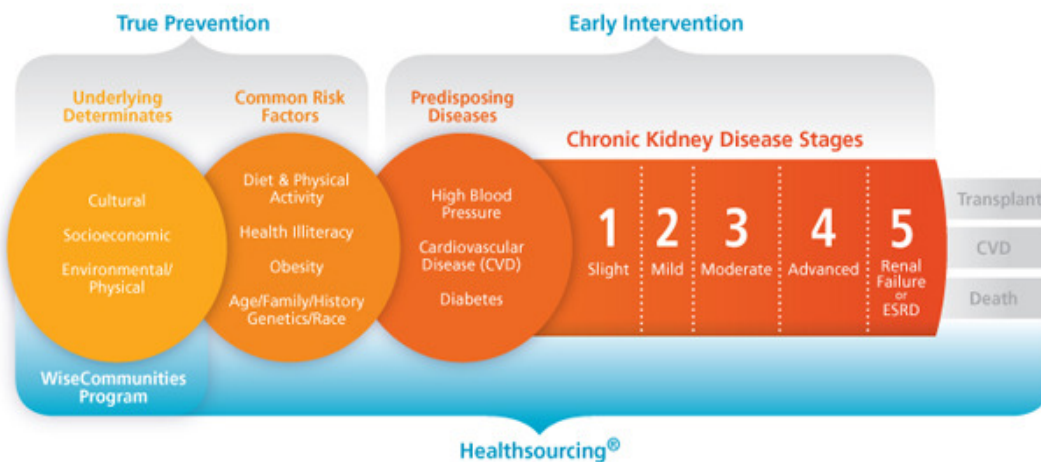
Early Diagnosis Key to Reducing Enormous Health Burden From Chronic Disease – as Targeted by WHO

- The best way to reduce the personal and economic costs of CKD is to improve early detection to prevent kidney failure and reduce associated CKD problems like premature heart disease.
- Detecting CKD requires only simple blood or urine tests. Treating the disease generally involves diet and lifestyle changes, in combination with simple, cheap and widely available medications.
- Treatment of CKD can delay or even **prevent** kidney failure for many.
- Detecting CKD in people with diabetes, hypertension and/or heart disease can also improve health outcomes because people with CKD require specialized treatment.
- **In fact, current estimates suggest that more attention paid to CKD could alone meet the WHO challenge to reduce death rates from all chronic diseases by 2% per year!**

Backgrounder: Chronic Kidney Disease (CKD)

Understanding the Reasons CKD Numbers Increasing

A sequence of events known as the **CKD Chain** predisposes countless individuals worldwide to having CKD. Underlying cultural, socio-economic, environmental and physical determinants combine with common risk factors such as poor diet, physical inactivity, obesity, health illiteracy, and low birth weight to either cause or exacerbate hypertension, heart disease and diabetes. This leads down a slippery slope of entry to the five stages of CKD. However, on a positive note, such events also provide “entry points” for possible intervention.



Why Should We Care about Non-Communicable Diseases?

In the early 21st century, chronic non-communicable diseases (NCDs) have replaced infectious diseases as the most common causes of global suffering and premature death, both in the developed and most of the developing world. The impact of NCDs on the global economic health care burden is astronomical and growing rapidly.

In 2005 the World Health Organization (WHO) challenged the global health community to “reduce death rates from all chronic diseases by 2% per year over and above existing trends during the next 10 years.”

WHO’s campaign against NCDs identified four main targets: diabetes, heart disease (including hypertension), cancer and lung disease. However, there is compelling evidence to add CKD as another major target for WHO’s campaign. CKD is common, harmful and treatable, and it is a major contributing factor to both the incidence and negative outcomes for people with diabetes, hypertension and heart disease.

What Happens to People with CKD?

People with CKD are at higher risk for hospitalizations, infections, heart disease, strokes and bone disease. In addition to being more likely to need dialysis or kidney transplants to survive, people with CKD often die earlier and suffer more than those of corresponding age and gender in the general population.

A Call to Action for Governments

Enormous cost of treating kidney failure can be avoided through early detection

Early identification and proper treatment can significantly reduce the need for dialysis or transplants. Governments that reimburse the enormous costs of dialysis and kidney transplantation should also support inexpensive early detection and prevention programs. In some countries, CKD screening and management are now recognized in the incentive payment scheme for primary care physicians.

Identification and intervention for those at highest risk for heart disease is cost saving

Diagnosing CKD simultaneously identifies those at highest risk for diabetes and heart disease. The greatest benefits, both in terms of health outcomes and health system costs, will come from detecting and treating those individuals before catastrophic health events occur. In the US alone, estimates are that early detection of CKD could save as much as \$60 billion in health care costs over the next decade.

Screening and intervention for CKD can work in low resource countries

There is even more to gain in developing countries where CKD occurs in younger people, and dialysis and kidney transplants are most often unavailable. Detecting CKD with simple blood and urine tests is affordable and cost effective worldwide.

***Therefore, governments should request that kidney disease be included
in the WHO's global strategy for Non-Communicable Diseases.***

Two Case Studies Underscore the Power of Simple Strategies to Improve Outcomes

Case Study 1: Taiwan

In 2005, Taiwan had the highest incidence of end stage kidney disease in the world. Over a 3-year period that incidence was slashed by 10% through a multifaceted plan that included a nationwide CKD detection and prevention program, a policy for prohibiting the popular use of Chinese herbs known to contribute to kidney damage, and the introduction of multidisciplinary care for people with CKD.

Case Study 2: Chennai, India

In a rural area near Chennai, India, young women were trained to measure blood pressure and carry out simple urine tests. In addition, the cheapest drugs to control blood pressure and treat diabetes were utilized. The results were nothing short of astounding, with control of blood pressure in 96% of those identified with hypertension, and control of diabetes in 52%. These encouraging findings indicate that simple and inexpensive strategies for early intervention are feasible and effective even in very resource-poor settings.