THE HIDDEN EPIDEMIC: WORLDWIDE, OVER 850 MILLION PEOPLE SUFFER FROM KIDNEY DISEASES

June 27, 2018 — The global burden of kidney diseases has so far been underestimated; most people are not aware of their impaired kidney function. In general, kidney diseases are “silent diseases”, most often there are no apparent early symptoms. Many patients with kidney diseases are not aware that they have been living with high risks not only of kidney failure which may require dialysis or transplantation but also cardiovascular diseases, infections, and hospitalizations.

Kidney diseases to date have not had a major role in most health promotion and public awareness campaigns. This, however, is completely unjustified. We estimate that over 850 million people worldwide have some form of kidney disease, which is roughly double the number of people who live with diabetes (422 million, [1]) and 20 times more than the prevalence of cancer worldwide (42 million [2]) or people living with AIDS/HIV (36.7 million [3]). Thus, kidney diseases are one of the most common diseases worldwide. “It is high time to put the global spread of kidney diseases into focus”, explain Professors David Harris and Adeera Levin, President and Past-President of the International Society of Nephrology (ISN).

Chronic kidney diseases (defined as abnormalities of kidney structure or function, persistent for greater than 3 months) are the most common form of kidney diseases, with an estimated prevalence around the world of about 10.4% among men and 11.8% among women [4]. Between 5.3 and 10.5 million people require dialysis or transplantation, though there are many who die because they do not receive these treatments due to lack of resources or financial barriers [5,6]. Acute kidney injury (AKI), is experienced by 13.3 million patients each year; it may resolve or lead to chronic kidney disease in the future. “Using all these sources of data, and existing estimates of acute and chronic kidney diseases, there are approximately 850 million kidney patients, a number which surely signifies an 'epidemic' worldwide”, says Levin.

However, it is not only the number, which is dramatic, but also the outcome: “Even if many patients with impaired kidney function do not feel ill over a long period of time, they are at a particularly high risk of many other health outcomes due to this condition”, explains Professor Carmine Zoccali, President of the European Renal Association – European Dialysis and Transplant Association (ERA-EDTA). As he points out, the average age standardized mortality rate due to low kidney function (GFR) is 21 deaths per 100,000 [4,6]. In particular, the cardiovascular death toll from CKD is huge: In 2013, there were 1.2 million cardiovascular deaths attributed to CKD [6]. “The death rate in CKD is incredibly high! AIDS, for example, accounts for “only” 1.9 deaths per 100,000 [7] – but with all the effective campaigning about HIV it is recognized as a priority health issue. There is little active campaigning for kidney diseases, even though the number of people who die from kidney disease is eleven times higher.”

“It is time for constructive change in kidney care policy”, confirms Professor Mark D. Okusa, President of the American Society of Nephrology (ASN). “The number of kidney patients is alarmingly high, but the public is not aware of this fact. The patients have rather poor outcomes and, last but not least, kidney diseases impose a heavy financial burden on

healthcare budgets, as the annual cost per patient for hemodialysis (HD) ranges from Int$ 3,424 to Int$ 42,785 according to one study focusing on low and middle income countries [9] whereas in the United States the per-patient per year cost for HD is $88,195 the US Renal Data Service [11] – see also Table 1 below.

Country	Annual cost of dialysis (USD)
USA	88,195
The Netherlands	83,736
Belgium	83,616
France	70,928
Germany	32,812 – 58,812
United Kingdom	38,688

ASN (https://www.asn-online.org), ERA-EDTA (http://web.era-edta.org) and ISN (https://www.theisn.org/) are collaborating to raise awareness of kidney diseases and to improve prevention efforts. “Our joint aim is to reduce the burden of kidney disease worldwide and improve awareness. Communicating openly the current burden of the kidney diseases worldwide is a first step”, concludes Okusa.

The current presidents of the ASN, ERA-EDTA and ISN, Professor Dr Mark D. Okusa, Professor Dr Carmine Zoccali and Professor Dr David Harris, thank the former presidents of the societies for having initiated this project: Professor Dr Raymond C. Harris (past president ASN), Professor Dr Andrzej Więcek (past president ERA-EDTA) and Professor Dr Adeera Levin (past president ISN).

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