Improved Cost-effectiveness of secondary prevention of kidney disease by targeting higher risk populations

World Kidney Day 2020: Prevention is better than cure, for everyone, everywhere.

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One in three people in the general population (an estimated 850 million people) is at increased risk of chronic kidney disease (CKD). And although an estimated 10% of people worldwide have CKD, estimates suggest 9 in 10 of those are unaware of their condition.

On this year’s World Kidney Day (Thursday 12 March), advocates led by the International Society of Nephrology (ISN) and the International Federation of Kidney Foundations (IFKF) are raising awareness of the importance of the preventive measures and the pressing urgency pertaining to the need for increased education of populations, patients, practitioners and policy makers in effective kidney disease prevention.

This year’s campaign theme “Kidney Health for Everyone Everywhere — from Prevention to Detection and Equitable Access to Care” is about highlighting the importance of preventive interventions – be it primary, i.e., to prevent CKD onset, or secondary or tertiary, i.e., prevention of worsening early CKD or progression of more advanced CKD to end-stage kidney disease, respectively.

The costs of dialysis and transplantation consume 2%–3% of the annual health care budget in high-income countries, spent on less than 0.03% of the total population of these countries. Costs that are preventable by preventing kidney failure. Moreover, cost-effectiveness can be increased by adopting secondary prevention measures for higher risk populations such as those with diabetes mellitus and hypertension and those with rapid CKD progression. Whilst non-targeted secondary prevention produces cost-effectiveness ratios consistently above $50,000 per life year saved; estimates suggests that this cost can be halved when management of known patients with uncontrolled diabetes and hypertension is improved.

“Primary prevention should focus on the modification of CKD risk factors and addressing structural abnormalities of the kidney and urinary tracts, and exposure to environmental risk factors and nephrotoxins” explains Professor Philip Kam Tao Li, Co-chairman of WKD Joint Steering Committee for ISN, based at Prince of Wales Hospital, Chinese University of Hong Kong. “In contrast, in persons

with preexisting kidney disease, secondary prevention, including blood pressure optimization,
glycemic control and avoiding high-protein high-sodium diet should be the main goal of education
and clinical interventions” adds Professor Guillermo Garcia, Co-chairman of WKD Joint Steering
Committee for IFKF, based at University of Guadalajara Health Sciences Center, Mexico.
He continues: “In patients with moderate to advanced CKD, management of comorbidities such as
uremia and cardiovascular disease along with low-protein diet are among the recommended
preventative interventions to avoid or delay dialysis or kidney transplantation.”

Prof Li, who is also the Immediate Past President of the Asian Pacific Society of Nephrology, says:
“educational and political efforts are needed to proliferate the “prevention” approach”. Concretely,
this means making populations aware of the risks through global communication campaigns and
empowering patients through, for example, online learning platforms. Practitioners would benefit
from cross-specialty training to recognize at risk patients and politicians need to prioritize integrated
NCD programs and support “best buys”. “Best buys” are cost effective interventions such as
screening of at-risk populations for CKD, universal access to essential diagnostics of early CKD,
availability of affordable basic technologies, and essential medicines and task shifting from doctors
to front-line health care workers to more effectively target progression of CKD and other secondary
preventative approaches.

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About the organizers of World Kidney Day:

World Kidney Day is a joint initiative of the International Society of Nephrology (ISN) and the
International Federation of Kidney Foundations (IFKF).

Founded in 1960, the International Society of Nephrology (ISN) is a global not-for-profit society
dedicated to improving kidney care and reducing the incidence and impact of kidney disease
worldwide. Through its global network and programs, ISN brings together the developing and
developed world in a collaborative effort in fighting and treating kidney disease on a global scale.

The International Federation of Kidney Foundations (IFKF), a not-for-profit Federation founded in
1999, currently has a membership of 63 kidney foundations and patient groups in 41 countries. IFKF
advocates worldwide to improve the health, well-being and quality of life of individuals with kidney
disease; disseminates standards of best practice of treatment and care; assists with the establishment of kidney foundations in countries where they do not yet exist; facilitates educational programs for its members; and promotes kidney disease research. More information on www.ifkf.org.

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References:

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For estimates of deaths attributed to chronic kidney disease from the Global Burden of Disease Study for selected countries, click here

1 for various prevalence studies on CKD in high-income countries, click here and http://ihmeuw.org/4pme