The new Research Agenda and Public Health interface: a framework for improving care

Adeera Levin¹ and Francesco Locatelli² Guest Editors

¹Department of Medicine, University of British Columbia, Vancouver, British Columbia, Canada and ²Department of Nephrology and Dialysis and Renal Transplant, Alessandro Manzoni Hospital, Lecco, Italy

Correspondence and offprint requests to: A. Levin; E-mail: alevin@providencehealth.bc.ca

The current edition of Nephrology Dialysis and Transplantation celebrates the breadth and depth of knowledge, research and understanding of CKD as of 2012 around the world. Nephrology as a specialty has seen much change over the years: from a specialty of physiology and glomerular diseases, predominantly, to one that was able to offer dialysis and transplantation as life-saving therapies to people and ultimately to one that embraces all of these and the burden of chronic disease and its attendant comorbidities as well. The complexity of the human condition is embodied in the study of nephrology, and the challenges facing people around the world are similar and different in the context of CKD. Underdiagnosis leads to poor outcomes, diagnosis stresses primary care and specialty resources, and the care of those requiring renal replacement therapy stresses health-care resources [1–6]. The condition itself takes a huge toll on the patients and their families, living with uncertainty, depression and various symptoms of kidney disease or its associated comorbidities [7, 8]. As a public health problem, it is clear that chronic kidney disease is increasingly recognized as a major burden in all societies [1, 9, 10].

A diverse group of authors have developed papers on topics related to epidemiology of CKD in different parts of the world, high-risk populations and states, patient outcomes and methodological issues in the use of administrative data bases and equation development and implementation. Together, the articles serve as a reminder of the volume of work which has been undertaken to help inform clinical care and policy. Through efforts of regional, national and international societies, there has been a palpable change in public policies in many countries, while others continue to struggle with implementation of basic reporting and collating of data. Nonetheless, the importance of ensuring true knowledge translation through interfaces between research and public health cannot be overstated [11].

Chronic kidney disease serves as a multiplier of risk in all populations [12, 13]. As a chronic disease, it is complex given the interface with other conditions (such as diabetes and cardiovascular disease). Risk factors of low birth weight, obesity and hypertension are growing superimposed on environmental and genetic influences may serve to amplify existing incidence rates of disease over time [14–17]. The papers within this edition reflect the growing understanding of specific conditions (pregnancy, pre-eclampsia, acute kidney injury) and the prevalence and incidence rates in different countries or regions (India, China, Brazil, Turkey, Australia, Europe). In addition, the performance of various equations in different groups, as well as the evaluation of specific interventions (such as exercise, combined specialty clinics and engagement of primary care), is reviewed. The utility and limitations of using administrative databases, planning appropriately designed trials and conducting research in the developing world are other subjects explored herein. Finally, the need for an integrated translational approach to drug discovery and development so as to offer patients new therapies is also described.

A framework that includes four pillars of research: biomedical sciences, clinical research, health system studies and population research, is the key to improving the outcomes of patients with CKD (Figure 1).

There is a need to support basic science discoveries to inform and enrich our understanding of physiology and disease states. These discoveries in turn inform and generate novel targets and mechanisms to foster drug or therapeutic developments. Understanding the heterogeneity of populations through administrative, research and clinical databases, some of which have large bio-bank components, will inform the best design of clinical trials. Determining key questions of importance for patients, clinicians and health-care administrators then will the appropriate design of different trials and studies to answer those questions, ideally leveraging existing resources and initiatives [18]. Lastly, the determination of the best method for putting research findings into practice is most challenging, be it locally or internationally, given the diversity of health-care systems around the world. There is an increasingly recognized need for more attention and
time to be paid to this knowledge translation, as is evidenced in many countries now advocating and calling for ‘patient-focused research initiatives’ within their national funding competitions. Lastly, the impact of research on public policy, screening programs in high-risk individuals, primary care initiatives and determining the impact of resource alignment with outcomes, has come more clearly into focus (Figure 2).

The new research agenda for CKD needs to encompass all of these pillars with a clear and sustained focus on improving patient outcomes, through constant discovery and iteration, throughout the continuum of kidney disease.

Conflict of interest statement. None declared.

References


Received for publication: 24.4.12; Accepted in revised form: 24.4.12