



EDITORIAL

DOI: 10.17126/joralres.2015.002

The 21st century is defined by several emerging trends, including *globalisation, the graying of the population, a fast-changing technological world, dissemination of information via the web, environmental challenge and awareness, energy crisis, and global development*, just to name a few. There is evidence for all of these trends in the Chilean context. These are important challenges to oral health providers in Chile and the wider Chilean society. To respond to the challenges and to take advantage of the opportunities in oral health care, it is essential to have a well prepared oral health workforce fully engaged in evidence based practice, with prompt access to new developments and information and for that access to a virtual library and a strong research culture as its building pillars. All of this highlights the need to enhance a research culture amongst general dental practitioners (GDP) in order to support, attract, train and nurture new cohorts of oral health researchers.

To develop research capacity, resources are required. To attract resources and funding, infrastructure and research experience are required. Most oral health research is sponsored and funded by the government and academic centres. The role of governmental agencies, such as the National Commission for Scientific and Technological Research (CONICYT), are fundamental to increasing research in Chile. However, to further develop research, there is a need to create opportunities for researchers and GDP to work together to define research questions and undertake research. A way to kick-start this process is the development of practice-based research networks (PBRNs). Consider the following: while clinical trials are conducted under controlled environments the majority of patients receive health care in primary care settings¹. PBRNs provide opportunities to link clinicians, industry and academic researchers to test research questions in 'real-world' settings². That is, it allows for research to be

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conducted in working dental practices, with real-life patients, on topics relevant to daily clinical practice. Thus, forming collaborations aimed at conducting research projects in areas relevant to practitioners and that inform the delivery of health care and health policies.

A PBRN is a group of health care providers or practices that are networked for the purpose of increasing research that identifies pathways for improving the quality of health care and health outcomes, designing, implementing, evaluating, and diffusing solutions to real-world problems in clinical practice. PBRNs bring academic researchers together with groups of primary care practitioners and other researchers, using an organizational structure independent of any single research project. PBRNs also allow health care providers, practicing in non-university based community environments, devoted principally to the care of patients, to engage with investigators experienced in clinical and health services research, while at the same time enhancing the research skills of the network members.

The feasibility of PBRNs is now well established. Dental PBRNs (DPBRN) have also emerged as well, in USA, Australia, Europe and Japan (e.g. CROWN, PEARL network; VADER; NW Precedent in USA; EviDent, in Australia). Extensive worldwide experiences over the last 30 years indicate that research networks can make major contributions to framing of appropriate oral health policies, best practices, and to ensure that proven treatments are routinely implemented by dentists^{3,4}. The use of DPBRNs facilitate the creation and incorporation of new knowledge into dental clinical practice as they fundamentally reshape the way in which the evidence is gathered, analysed, interpreted, disseminated and used. Thus, they have the capacity to produce high quality science, making GDPs part of the evidence-based/informed cycle. Additionally, the implementation and results from trials



can be facilitated with PBRNs. PBRNs provide information on how study findings can be translated into effective public health programs. This type of research will assist decision makers when designing policies that affect a country's oral health and oral health care.

International organizations, such as IADR and NID-CR promote and encourage the formation of these networks. Moreover, dental practitioners value research and have shown interest in participating in general practice-based research⁵. However, to date, none have been established in Latin-American. The opportunity exists to make the Chilean DPBRN a reality. The opportunity would be to use other experiences that, without being models, can guide and allow learning from its successes and failures. Furthermore, the Regions of Bio-Bio, Araucanía, Los Ríos and Los Lagos cover a vast area of the national territory, are relatively sparsely populated and their population faces a surprising range of unique health and social profiles: social, cultural, remote, indigenous, service-related, and specific diseases and conditions, to

name a few. These regions also have an excellent health and academic infrastructure. As such they are particularly well suited to provide leadership and a model for the development of a DPBRN.

To conclude, a Chilean DPBRN would represent an important landmark in dentistry, but that should be just the beginning. In this way, a Chilean DPBRN would have several advantages it would implement an idea widely recognized as needed for the 21st century, including Chile and Latin America, which will continue to evolve. It is my belief that, as has done in the past, the oral health profession would seize this opportunity and focus its creative and participative capacity, with innovative and renovative attitudes, and provide leadership and create the first Chilean/Latin-American DPBRN.

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