

## NIDCR's 2009–2013 Strategic Plan

*Isabel Garcia, DDS, MPH  
Deputy Director, National  
Institute of Dental and  
Craniofacial Research  
National Institutes of Health.*

The National Institute of Dental and Craniofacial Research (NIDCR) remains committed to improving the oral, dental and craniofacial health of our nation. NIDCR pursues its mission through research, research training and the dissemination of health information to the public and health care professionals. NIDCR has played a leadership role in establishing prevention as a cornerstone of American oral health since its inception in 1948. Past investments have positioned the NIDCR to categorize complex dental, oral and craniofacial diseases and conditions that afflict millions of Americans. A comprehensive research agenda encompassing prevention, early detection and management of these diseases defines our current and future investments.

In consultation with National Institutes of Health (NIH) leadership, the NIDCR engages in long and short-term program planning to identify NIDCR priorities. These efforts develop and use information from several sources and consult a broad range of key stakeholders. The NIDCR also obtains input through a range of conferences and workshops that review emerging scientific opportunities, identify public health concerns and provide state-of-the-science assessments. As a component of the NIH, the NIDCR conducts its planning and priority setting within a larger context that considers input from the Congress and the Administration, the Department of Health and Human Services, the NIH and external peer review.

The 2009–2013 NIDCR stra-

tegic planning process gathered public and stakeholder input about prospective activities, areas of research emphasis, future research approaches, needs and opportunities. The NIDCR obtained this input in several ways, through:

- An open–forum listening session augmented by informal conversations at the American Association for Dental Research meeting in Dallas on April 2, 2008
- An open–forum listening session held in conjunction with the NIDCR Patient Advocates Forum on the NIH campus on April 21, 2008
- Web–based responses from 140 individuals and organizations to 6 strategic planning questions posted on the NIDCR Web site between May and July, 2008
- Two open–forum listening sessions augmented by informal conversations at the International Association for Dental Research meeting in Toronto on July 2–3, 2008
- A series of NIDCR staff meetings to obtain input on NIDCR goals and priorities
- Presentations during National Advisory Dental Research Council meetings
- A feedback session held on Feb. 9, 2009 with stakeholders representing federal agencies, professional dental organizations, dental specialties, voluntary organizations and industry
- Public comment obtained through Web posting of the draft plan during February 2009

The 2009–2013 NIDCR Strategic Plan provides a guide for funding decisions and defines areas that will be closely monitored for key developments and innovations that can be applied to oral, dental and craniofacial health. The goals and objectives presented throughout the plan strike a careful balance between basic and applied research, address workforce issues and confront the vexing

problem of health disparities. The goals and objectives within the plan do not encompass the entire range of NIDCR supported research that collectively contributes to our overall mission, but they do capture the areas that offer the most significant scientific promise in the near term.

The 2009–2013 NIDCR Strategic Plan is built on 4 key goals: widening our scope of inquiry, strengthening the research pipeline, fostering novel clinical research avenues and eliminating oral health disparities.

### **Widening the Scope of Inquiry**

The tools of modern science show us that diseases have no disciplinary boundaries. Our best chance for understanding complex diseases such as cleft lip and cleft palate, ectodermal dysplasias, dental caries, chronic pain and oral cancer is to embrace the newest technologies and advances, as well as opening our doors to expertise from different fields. Thus, the plan's first strategic goal asserts that it is critical we bring the best science to bear on problems in oral, dental and craniofacial health through multi- and interdisciplinary research. This investment requires a healthy marriage between creative individual investigator-driven research and team science approaches.

### **Strengthening the Research Pipeline**

The second strategic goal focuses on the need to work hard to draw curious minds to oral health research. It is our responsibility to inspire and support the next generation of scientists from a diverse array of backgrounds and biomedical and behavioral disciplines. The future of oral health depends on training the scientists of tomorrow and giving them opportunities to make discoveries.

### **Fostering Clinical Research Avenues**

Today, we are on the verge of

many opportunities to develop tailored, preemptive oral health care. More targeted facile diagnostic tests, new drugs and biologics, practice-based research venues and culturally sensitive behavioral interventions will provide novel clinical avenues to improve oral, dental and craniofacial health. Promoting innovative clinical research, the plan's third strategic goal, requires not only resources but also a new mindset to embrace and apply new approaches to solving old problems.

### **Eliminating Oral Health Disparities**

The most challenging issue we face as health professionals, educators and scientists is the stubborn reality that health disparities continue to exist in our country. We must improve our understanding of what causes inequality at individual, community and social levels. This knowledge will inform the development of practical and culturally appropriate interventions. Thus, the fourth strategic goal is to apply rigorous, multidisciplinary

research approaches to eliminate disparities in oral, dental and craniofacial health by improving health in diverse populations.

In charting a course for the next 5 years, NIDCR will be guided by the strategic plan while always considering emerging opportunities, successes and failures on an ongoing basis to inform our planning and program activities. We are ever mindful that the ultimate goal of our scientific efforts is to improve people's lives.

## The Canadian Institutes of Health Research (CIHR) and its Institute of Musculoskeletal Health and Arthritis (IMHA)

Jane E. Aubin, PhD

Scientific Director, Institute of Musculoskeletal Health and Arthritis/Canadian Institutes of Health Research/Professor, Department of Molecular Genetics  
Faculty of Medicine, University of Toronto

### Canadian Institutes of Health Research (CIHR) Overview

The Canadian Institutes of Health Research (CIHR) is the Government of Canada's agency responsible for funding health research in the country, and reports to Parliament through the Minister of Health. CIHR has been operational since the year 2000 and currently holds a budget of C\$928.6 million for 2008–2009. CIHR's mandate is to "excel, according to internationally accepted standards of scientific excellence, in the creation of new knowledge and its translation into improved health for Canadians, more effective health services and products and a strengthened Canadian health care system." CIHR's mission is to transform health research in Canada by funding more research on targeted priority areas, such as population health and health services research, by building research capacity in under-developed areas, training the next generation of health researchers and focusing on knowledge translation, so that the results of research are transformed into policies, practices, procedures, products and services.

CIHR consists of 13 virtual institutes, a structure that is unique in the world. One of these is the

Institute of Musculoskeletal Health and Arthritis (see below). Each institute supports a broad spectrum of research in its topic areas and, in consultation with stakeholders, sets priorities for research in those areas. These institutes bring together all partners in the research process: the people who fund research, those who carry it out and those who use its results, to share ideas and focus on what Canadians need: good health and the means to prevent disease and fight it when it happens.

Through the research it funds, the CIHR helps to:

- Reduce the adverse impact of disease and illness on Canadians, increasing life expectancy, improving quality of life and contributing to a healthy and productive workforce
- Respond quickly and effectively to health crises, such as outbreaks of infectious diseases, by rapidly mobilizing researchers as evidenced during the SARS outbreak
- Contain the high and rising cost of delivering health care by identifying innovative and cost-effective ways of providing health services
- Deliver concrete research evidence to help individual provinces make critical, evidence-based decisions about reforms to their health care systems, reforms that will save money and improve services
- Provide evidence-based decisions about reforms to their health care systems
- Sustain and enrich industry with a rich pipeline of new discoveries
- Ensure the ethical conduct of research by providing leadership on complex challenges, such as the growing burden of obesity and mental health in the workplace, and by launching initiatives in collaboration with partners both in Canada and internationally that are designed

to have a real and tangible impact on these problems

In 2007–08, the CIHR had:

- Expenditures of C\$974.1M, supporting nearly 12,000 health researchers and trainees at 280 universities, teaching hospitals and other health research institutions in every province of Canada
  - Awarded 816 new or renewal grants with an average value of C\$119,000 selected by peer review from applications to the Open Operating Grants program
  - 311 partnership agreements with 247 partners
  - Benefited from 2,400 peer reviewers, each donating an average 15 days work to assess research proposals (equaling 36,000 days of donated work)
  - Held 24 Café Scientifiques, bringing researchers together with the public to exchange new information on the outcomes of health research
  - Reached 21,842 students through its Synapse youth engagement program
- Over its lifetime, the CIHR has:
- Established more than 830 partnership agreements with over 400 organizations, including the National Institutes of Health (NIH)
  - Leveraged more than C\$716.2M in additional funding for CIHR-led health research
  - Established international linkages with researchers from more than 50 countries, including the U.S.

### Institute of Musculoskeletal Health and Arthritis (IMHA) Overview

IMHA's vision is to sustain health and enhance quality of life by eradicating the pain, suffering and disability caused by arthritis, musculoskeletal, oral and skin conditions. To achieve its vision, IMHA supports excellent research

to enhance active living, mobility and movement and oral health, and addresses the causes, prevention, screening, diagnosis, treatment, support systems and palliation for a wide range of conditions related to bones, joints, muscles, connective tissue, skin and teeth. After an extensive consultation process, IMHA launched its second strategic plan in 2008, in which it re-stated its focus on 3 Strategic Research Priorities.

### **Physical Activity, Mobility and Health**

Research under this theme will create a better understanding of the relationships among physical activity, mobility and MSK health at every level, including the positive effects of motions and forces on the cellular behavior of joint tissues and the well being of individuals. The psychosocial aspects of exercise, activity and sports on populations are also relevant.

### **Tissue Injury, Repair and**

### **Replacement**

This theme supports innovative research into the cause and prevention of the physical, psychological, psychosocial and economic impacts of acute and chronic injury and prostheses. Potential research areas include novel drug or cell delivery models and approaches, application of tissue-engineered biomaterials as conduits or shunts in tissue regeneration and the ethical consequences of regenerative medicine based on tissue engineering strategies.

### **Pain, Disability and Chronic Disease**

The primary focus of this theme is to better understand the genetic and environmental causes, optimal treatment and elimination of pain and disability in all IMHA disease areas. A second area of significance is the need to understand the relationship between chronic diseases and conditions within IMHA's mandate (e.g., skin and bone diseases and diseases that compromise oral

health). The impact of chronic musculoskeletal, oral and skin diseases on general health and well-being is also of utmost importance.

Since their inception, CIHR and IMHA have supported oral health research in topics across all of IMHA's strategic priorities and related areas, spanning health services and policy, biomedical, clinical and public and population health research. Capacity in oral health research is being increased by ongoing support through grants, training awards and the Strategic Training in Health Research program. In addition, IMHA continues to support a large number of conferences and workshops, including ones sponsored by the Canadian Dental Hygienists Association, to enhance opportunities for IMHA stakeholders to meet together with partners to identify research gaps, prioritize research questions to address them and set national agendas in health research and knowledge translation.

## Update on Healthy People 2020

Dolores M. Malvitz, RDH, DrPH  
Public Health Consultant,  
American Dental Hygienists'  
Association

For 30 years, the U.S. government has published a set of health objectives for the nation, now known as *Healthy People*. This collaborative effort has been grounded in the notion that establishing objectives and providing benchmarks to monitor progress over time can motivate, guide and focus action within public health agencies (federal, state, local), as well as by their private-sector partners. Initiated in 1979, after the *Surgeon General's Report on Health Promotion and Disease Prevention* called attention to social and behavioral determinants of health, the exercise has continued each decade. While the goal of improving health for all Americans remained unchanged, the 3 publications (1979 to 1990; 1990 to 2000; 2000 to 2010) differed in specific goals, content and processes used to establish objectives.

From 1990 to 2010, *Healthy People* approximately doubled in size – from 226 to 467 objectives and 15 to 28 priority (or focus) areas. When sub-objectives for demographic groups are counted, the overall number of objectives reaches 823. Databases used to track objectives have expanded correspondingly, e.g., the 17 oral health objectives for 2010 rely on 5 major surveillance systems and periodic data collection efforts by 5 organizations. Given limited resources, the Office of Disease Prevention and Health Promotion (ODPHP, the unit within the Department of Health and Human Services that oversees *Healthy People*) began planning in 2006 for the 2020 cycle of objectives by contracting with the National Opinion Research Center (NORC) to as-

sess the framework and process for *Healthy People*.

The NORC Report, submitted in January 2007, recommended several major changes:

- Narrow the scope by reducing the number of topic areas and objectives
- Organize objectives by health risks and determinants, rather than diseases, to focus attention on the root causes of poor health
- Target the public health community as *Healthy People's* primary audience
- Articulate a clear vision for the initiative, thus creating a united effort to achieve common goals
- Develop dissemination strategies to engage partners

During the spring and summer of 2008, 6 regional hearings and web-based solicitations sought comments on the NORC proposals.

In February 2008 (preceding that comment period), an ad hoc work group on oral health met for the first time. Convened by the Association of State and Territorial Dental Directors, it was comprised of 15 representatives from professional and advocacy organizations in oral health, as well as an equal number of persons from the oral health units of federal agencies responsible for establishing and monitoring oral health objectives within *Healthy People*. The group's task was to ensure submission of testimony addressing the oral health community's concerns. A second meeting of the group occurred a year later (March 2009) to recommend which 2010 objectives should be retained, modified or deleted for 2020, and which new objectives should be added. Some 27 separate objectives were considered. While consensus of the work group was to serve as the basis for memoranda that oral health leads within federal agencies submitted to the ODPHP, the process did not include sharing these memoranda with meeting attend-

ees.

Late in 2008, the Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives (comprised of 13 experts with diverse expertise on varied aspects of public health) released the vision, mission and goals for *Healthy People 2020* (HP2020). As promised, the vision is crisp and memorable – “A society in which all people live long, healthy lives.” The mission lists 5 things HP2020 should accomplish:

- Identify nationwide health improvement priorities
- Increase public awareness and understanding of the determinants of health, disease and disability and the opportunities for progress
- Provide measurable objectives and goals that can be used at the national, state and local levels
- Engage multiple sectors to take actions to strengthen policies and improve practices that are driven by the best available evidence and knowledge
- Identify critical research and data collection needs

The overarching goals established for HP2020 are to:

- Eliminate preventable disease, disability, injury and premature death
- Achieve health equity, eliminate disparities and improve the health of all groups
- Create social and physical environments that promote good health for all
- Promote healthy development and healthy behaviors across every stage of life

An action model, depicting how these goals might be achieved, has been posted on the *Healthy People* Web site (Figure 1).

Over the next year, the schedule for release of documents and comment by stakeholders will be tight, thus the *Healthy People* Web site (<http://www.healthypeople.gov/HP2020>) should be visited fre-

quently for updated information. The ODPHP has said that the remaining framework for HP2020 (e.g., focus areas, criteria for inclusion of objectives, target-setting methods for individual objectives) will be posted by June 2009 and followed by a 60-day comment period. Draft objectives will become available in autumn 2009, again with public comment invited. While the ODPHP indicated that release of the final 2020 document should occur early in 2010, it also admitted this schedule is ambitious for completing clearance, particularly given a new HHS Secretary.

Some certainties exist. *Healthy People* will focus on an ecological approach to health promotion. Its objectives will be organized by interventions, determinants and outcomes. No printed version will be released — it will be available online, as a searchable, multilevel and interactive database that helps stakeholders access metrics and guidance about effective interventions, as well as identify priorities.

Dental hygiene researchers should be interested in the broad

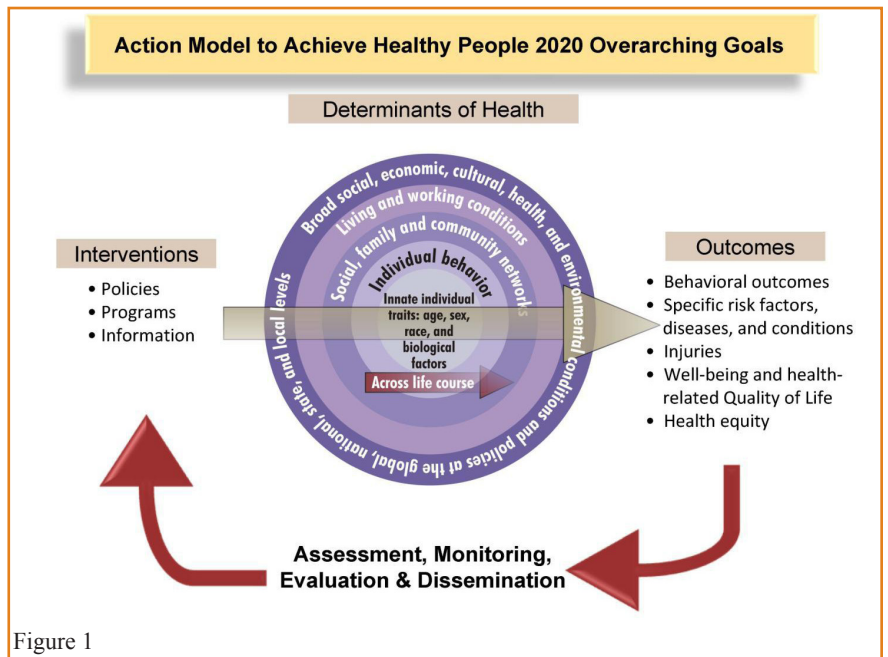


Figure 1

array of *Healthy People* objectives, because they serve as the foundation for health efforts by the federal government (e.g., health policies, allocation of funding for public health interventions and research). State and local health agencies also use *Healthy People* to choose priorities for their limited resources.

Well-chosen research questions, selected through true collaboration with public health professionals and congruent with the National Dental Hygiene Research Agenda, could make critical contributions to improving the effectiveness and efficiency of all programs with oral health content.

# The American Dental Hygienists' Association National Dental Hygiene Research Agenda

Jane L. Forrest, RDH, EdD  
University of Southern California, School of Dentistry

## Introduction

The aims of this paper are to highlight the American Dental Hygienists' Association (ADHA) National Dental Hygiene Research Agenda (NDHRA) as a strategic guide for conducting oral health research, examine the status of the existing body of dental hygiene research and identify mutual areas of interest and research priorities shared among different organizations.

## The ADHA NDHRA as a Strategic Guide for Conducting Oral Health Research

Reaching a consensus on a research agenda is a prerequisite for a profession to advance its research efforts. Using a systematic approach to updating the agenda on an ongoing basis allows it to remain viable and responsive to changing needs – it serves as our “roadmap.” The ADHA NDHRA was first conceptualized in 1993 as a working model for guiding research efforts to purposefully expand the profession's body of knowledge, encourage collaborative research and to guide education and practice.<sup>1</sup> Consensus on 5 broad categories containing 37 specific research topics was reached in 1995 using the Delphi technique.<sup>2</sup> In 2000, participants at the fourth ADHA National Dental Hygiene Research Conference confirmed that the agenda was still relevant. Health services research, access to care/underserved populations and health promotion/disease prevention were identified as priorities.<sup>3</sup>

Table 1. Research that Supports Dental Hygiene Clinical Practice<sup>5</sup>

MEDLINE Indexed Research that Supports Clinical Dental Hygiene Practice	Primary Journals Containing Systematic Reviews
Between 1990 – 2005:	•British Dental Journal•Caries Research
112 meta-analyses in 40 journals and Cochrane Library •50% located in 7 journals and Cochrane Library •50% located in 33 other journals	•Community Dentistry & Oral Epidemiology •Journal of the American Dental Association •Journal of Clinical Dentistry
1707 RCTs •70% located in 32 journals •30% located in 174 journals	•Journal of Clinical Periodontology •Journal of Public Health Dentistry •Cochrane Database Library

In 2006, the second Delphi study was conducted to re-examine the categories and topics to determine whether these priorities reflected current global health care issues as well as issues that impact the profession. After 3 rounds of mailings, the original 5 agenda categories were updated and a consensus was reached on 42 topics.<sup>4</sup> However, findings on the knowledge and use of the former NDHRA indicated that work is needed to better promote, coordinate and integrate its use by dental hygienists. In order to do so, several significant issues must be addressed by the ADHA, educators and other dental hygiene organizations, including:

- Making a commitment to using the agenda to guide research and funding so that limited resources are used most effectively
- Socializing students to the research process so that scientific inquiry is valued and becomes the norm for problem solving
- Creating a system to monitor the progress and outcomes of our research, training and dissemination activities
- Evaluating the merit of the research to better support clinical decision-making

## Examine the status of the existing body of dental hygiene research

The body of research evidence that supports clinical dental hygiene practice cuts across several disciplines. Most of this research is not found within the dental hygiene body of literature. For example, studies on prevention and therapy related to caries, periodontal diseases and oral cancer have been conducted by investigators, the majority of whom are not dental hygienists and do not publish in dental hygiene journals. The most relevant systematic reviews/meta-analyses are found in 7 journals and the Cochrane Collaboration Library (Table 1).<sup>5</sup> However, these only represent 50% of the studies, while the remaining 50% are found in 33 other journals. When looking at randomized controlled trials, the location of high level evidence is even more widely distributed among 200 journals.

Identifying research conducted by dental hygienists is more difficult due to the lack of a monitoring system. In an attempt to identify who is doing what, poster abstracts presented at the ADHA Annual Session in 2007 and 2008 and at this conference were examined to see under which research agenda category the studies could be classified. Overall, there appears to be a gap between those areas identified as priorities (e.g., Health Services Research, Health Promotion) and the

area receiving the most attention, Professional Education and Development (Table 2).

**Identify mutual areas of interest and research priorities that are shared among other research initiatives**

An extensive review of health-related literature and major governmental and foundation reports were conducted in structuring the Delphi study so that there are many areas of shared concern. These include: evidence-based practice, where the focus is on effectiveness and outcomes of care and translating research findings into practice, health promotion/disease prevention, so that new knowledge from health communications is being used to promote healthy behaviors and improve health literacy and improving access to care by reducing health disparities, eliminating barriers and designing better systems of delivery. In addition, there is a shared interest in enhancing the research infrastructure through expanding the research workforce and training opportunities.

In summary, the most important aspects of having a national research agenda are its utilization as a strategic guide to keep us focused on established priorities and its support for building a strong research infra-

**Table 2. NDHRA Categories and Research Poster Abstract Categorization**

Meeting	Agenda Category					Total
	Health Promotion/ Disease Prevention	Prof Education & Development	Clinical DH Care	Health Services Research	Occupational Health/ Safety	
ADHA (2007/08)	7	31	15	1	0	54
NADHRC (2009)	11	9	14	4	0	38
Total	18	40	29	5	0	92

structure and body of knowledge. In addition, it aligns dental hygiene with other major health professional organizations and contributes to the credibility of the profession by being able to share our goals with the broader scientific community.

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## Canadian Dental Hygienists Association: Creation and Capacity Building in the 21st Century

Salme E. Lavigne, RDH, BA,  
MSDH

Professor & Director, School of  
Dental Hygiene,  
University of Manitoba

Canada is a nation committed to the provision of high quality, affordable and accessible health care. Dental hygienists as independent, self-regulated primary health care providers contribute to the health and well-being of Canadians. The Canadian Dental Hygienists Association (CDHA), as the “collective voice and vision of dental hygienists in Canada advancing the profession, supporting the members and contributing to the oral health and general well-being of the public,” recognizes the need for a strong research base to support the profession.

We invite Canadian researchers to apply for funding through the Canadian Institutes of Health Research (CIHR), the leading health research agency in Canada, and the Canadian Foundation for Dental Hygiene Research and Education (CFDHRE).

To provide a foundation for dental hygiene research, CDHA developed a research agenda in 2003<sup>1</sup> and created a supplemental research document in 2008.<sup>2</sup> CDHA developed these documents within the context of the many disparities and gaps in the delivery of oral health services in Canada, documented by the Federal, Provincial and Territorial Dental Directors, the Canadian Association of Public Health Dentistry and the CDHA. With the specific purpose of identifying research endeavors that would ultimately enhance the oral health outcomes for

individuals and the public, CDHA used the 4 pillars of the CIHR as the framework for our research agenda. These 4 pillars represent a shift away from traditional biomedical models of research towards a focus on population health, health services and clinical research.

The 4 pillars and some examples of corresponding research:

### Biomedical Research

- Immunology – periodontology, oral cancer and dental caries
- Periodontal – systemic health connections
- Genetic conditions and oral health
- Nutrition and oral conditions

### Clinical Research

- Oral diseases risk assessment
- Ergonomics and patient care
- Antimicrobials and anticariogenic agents effectiveness
- Outcomes evaluations

### Health Services Research

- Clinical decision-making
- Cost-effectiveness/benefit analysis of dental hygiene services
- Financing services
- Service delivery mechanisms
- Oral care and quality of life

### Social, Cultural, Environmental and Population Health

- Oral disease distribution patterns
- Social and economic impact of oral disease on populations
- Equity and service provision
- Culturally and linguistically relevant services

CDHA reviewed the Research Agenda in 2008 and added 13 key themes for the 21<sup>st</sup> century to improve the oral health and well-being of Canadians. The 13 themes are based on the new national framework for oral health developed by the Federal, Provincial and Territorial Dental Directors in their 2005 Canadian Oral Health Strategy (COHS) document to col-

lectively meet national challenges in oral health.<sup>3</sup> The COHS is consistent with the World Health Organization’s definition of good health, which emphasizes that good health is not merely the absence of disease or infirmity, it is also a reflection of the social and mental well-being of people in a community.

These 13 themes and 4 pillars provide some very broad guidelines for research. Dental hygiene research in Canada is young and developing and we did not want to place unnecessary limits that may hamper the growth of this evolving research community.

CDHA is guided by these principles for research:

- Ethical issues underpin all areas, and ethical conduct is the first consideration
- Acceptable evidence from research includes both qualitative and quantitative approaches
- Interprofessional and intersectoral partnerships are preferred
- Cultural and linguistic sensitivities are requisite
- Participatory research is essential for the empowerment of individuals and communities
- Vulnerable populations should be considered as a cross cutting theme wherever possible

CDHA groups research recommendations within 4 main priorities:

### Increase research capacity

- Build a foundation of research culture in dental hygiene education
- Expand opportunities for dental hygiene researchers
- Create a home for Canadian dental hygiene research
- Expand the CDHA role in fostering research

### Improve knowledge translation

- Identify, utilize and enhance communication strategies for research
- Create a knowledge transfer

designate

- Provide consumer decision-support aids

### **Enhance research activity through collaboration and partnerships**

- Advocate for new collaborations to address research priorities in oral health
- Align with research and funding institutions

### **Obtain a clearer picture of the state of current dental hygiene research and researchers**

- Conduct a survey of dental hygiene researchers to determine the breadth of research topics
- Conduct a survey to determine the educational path taken by dental hygiene researchers

We are making swift and crucial progress in implementing these recommendations. We have developed a database of dental hygiene researchers that connects researchers and inspires non-researchers. This database will soon be open to international researchers, to in-

crease the synergy of these connections. Two important collaborative relationships were developed. An affiliate partnership with the Canadian Cochrane Network and Centre enabled us to deliver systematic review workshops — the hallmark of knowledge translation activities. The Canadian Foundation for Dental Hygiene Research and Education collaborated with CIHR's Institute of Musculoskeletal Health and Arthritis to develop the inaugural Masters Award in Dental Hygiene. This giant step forward for dental hygiene research celebrates the unique perspective dental hygienists apply to oral health research.

Oral health research conducted by dental hygienists in collaboration with key partners will contribute significantly to the overall health and well-being of the Canadian public. Research findings will guide the practice of dental hygiene by increasing the evidence base for the delivery of high quality, effective and efficient oral health care and will support the modernization

of Canada's approach to health and health care and contribute to the improvement of access to oral health care services for the unserved and underserved populations. The CDHA will continue to lead dental hygiene in Canada in promotion and support of research with the ultimate goal of improving the oral health of Canadians.

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