

International Centre for Oral-Systemic Health (ICOSH)
Gerald Niznick College of Dentistry
Rady Faculty of Health Sciences
University of Manitoba

Summary Status Report - March 1, 2020

Centre Launch:

The International Centre for Oral-Systemic Health (ICOSH) was launched as an Academic Centre through the Office of the Provost in January of 2008 with Dr. Anthony M. Iacopino, Dean of the Gerald Niznick College of Dentistry, serving as the Founding Executive Director. Dr. Iacopino had been recently recruited from the United States and brought a singular expertise as an internationally recognized leader in Oral-Systemic Science to the University. In addition to hundreds of publications and presentations within the field, he served as associate editor for “*Grand Rounds in Oral-Systemic Medicine*”, a unique interprofessional journal dedicated to communicating new scientific information and technical advances to health professionals and the public. He had also been engaged as a highly regarded consultant and key opinion leader for many years on related topics for the dental industry, universities, governments and healthcare systems.

ICOSH was conceived as an Academic Centre because although it would engage in various types of basic, clinical and applied research, the major emphasis would be on developing and implementing resources for interprofessional education and practice as well as advocacy for public policy making oral health a key component of the primary healthcare system. This positioned ICOSH to pursue a mission primarily associated with addressing the knowledge gap that exists between dentistry and other health professions by increasing awareness of the links between oral and systemic health through health professions curriculum reform, continuing education, public policy, and related research. Emphasis is placed on interprofessional investigation of oral-systemic relationships, transfer of associated scientific evidence into interprofessional education, and development of interprofessional models of care that translate into meaningful healthcare policy which recognizes the significance of oral-systemic health. Thus, ICOSH has been operating through three related foci broadly defined as: 1) Education/Practice Models; 2) Public Health Policy; and 3) Research.

Operating Budget:

Initial start-up funding for ICOSH was provided through an industry grant from *Johnson & Johnson* in 2008. This five-year \$650,000 grant was used to provide support for development of interprofessional oral-systemic health education modules for health professions students, interprofessional continuing education programming for the practicing healthcare community, and seed funding for interprofessional research collaborations related to education or basic, clinical and applied sciences projects in oral-systemic health. The funds covered expenses related to staff salaries, materials/supplies, publication/presentation, events and travel.

Initial funding was supplemented through allocation of \$150,000 from the College of Dentistry discretionary budget and by the implementation of a designated College of Dentistry fundraising program and donor account for ICOSH and Oral-Systemic Health (donations have totaled \$50,000 to date). Additionally, merging of the continuing professional development offices within the College of Dentistry and Max Rady College of Medicine enabled the College of Medicine to contribute \$250,000 toward ICOSH-related staff salaries.

A second bolus of external ICOSH funding was provided by the Provincial Government of Manitoba through the Minister of Health in 2011. This five-year \$500,000 grant was to be used to continue developing interprofessional oral-systemic health education modules for health professions students and interprofessional continuing education

programming for the practicing healthcare community. In 2019, permission was obtained from the Minister of Health to reallocate remaining funding to pursue a unique interprofessional education and practice opportunity for Dentistry and Nursing. Currently \$187,000 of this funding remains and is targeted to be used for continuation of the Nursing/Oral Health interprofessional education/practice initiative with the intent of including Pharmacy and Medicine in subsequent curricular cycles.

Infrastructure and Activities:

ICOSH was initially located in the College of Dentistry with a direct reporting line to the Provost. Dr. Iacopino, as Executive Director, would provide progress reports, manage operating budget, administer operations and assign necessary office, meeting and activity spaces as required during Centre development. Ms. Casey Hein (an internationally recognized expert in oral-systemic health continuing education) was recruited to serve as ICOSH Director of Education and assumed responsibility for the entire education portfolio. Dr. Iacopino served as ICOSH Director for both the public health policy and research portfolios.

Dr. Iacopino and Ms. Hein immediately set out to make ICOSH a nucleus and resource for academics, clinicians, researchers and students at the University of Manitoba as well as potential local/national and international collaborators. ICOSH would serve as a platform where like-minded people in the field or those interested in the broad area of Oral-Systemic Health could learn together and work toward common goals in fulfillment of the ICOSH mission. Many individuals around the world have directly contributed to ICOSH activities or benefitted from various ICOSH resources to accomplish their own related projects/initiatives.

Under the direction of Ms. Hein, there have been numerous significant accomplishments within the ICOSH education portfolio. These include a novel oral health curriculum for nondental health professionals, numerous landmark interprofessional continuing education programs, a unique series of symposia/grand rounds presentations, innovative webinars, and keynote presentations at local/national/international meetings. Many of these can be found in the ICOSH Bibliography at the end of this report however, the following major outcomes deserve special mention and additional detail:

1. ICOSH received the 2015 *“William J. Gies Award for Outstanding Innovation – Academic Dental Institution”* from the American Dental Education Association Gies Foundation (a prestigious international award and the first time a Canadian dental school received this award) for the curriculum project entitled *“Oral-Systemic Health Education for Non-Dental Healthcare Providers”* (an innovative oral-systemic healthcare curriculum that teaches non-dental healthcare providers such as physicians, nurses, and pharmacists how to recognize and co-manage diseases/conditions of the oral cavity with dental professionals)
2. ICOSH received the 2015 *“Royal College of Physicians and Surgeons of Canada Innovation Award”* for the oral-systemic health interprofessional continuing education program entitled *“Oral-Systemic Health Day”* (this first-of-its kind event for dentists, dental hygienists, physicians, nurses, pharmacists, dieticians, and medical rehabilitation therapists included foundational concepts in oral-systemic medicine and science as well as simulated case presentations requiring attendees to generate coordinated patient-centered treatment plans for successful co-management)
3. membership in Interprofessional Continuing Professional Development Network for the Health Professions in Manitoba (ICPD Manitoba) with development of oral-systemic health programming for the *“Friday at Noon”* continuing professional development series (this unique lunchtime platform was designed to provide a wide range of timely and challenging interprofessional topics that address current issues and principles of team-based care/collaborative practice)
4. partnership with Rady FHS Continuing Professional Development (CPD) and Offices of Interprofessional Collaboration (OIPC) and Education/Faculty Development (Oefd) to leverage resources for funding external speakers/programming related to IPE/IPCP (Dr. Lorelie Lingard, recipient of the Karolinka Institute Prize for Research in Medical Education, will present *“Collective Competency With Respect to Interprofessional Collaboration”* on May 6th 2020)

Ms. Hein's tenure as the ICOSH Director of Education ended on June 30, 2018. At that time, many of the initial objectives within the education/practice model portfolio had been completed and an infrastructure had been established that would allow for continuation of programming by several faculty/staff members who had emerged as future leaders within the education/practice model portfolio. Dr. Iacopino engaged some of these individuals to set a new direction for the portfolio concentrating specifically on a unique and innovative interprofessional education and practice initiative for the Colleges of Dentistry and Nursing (Nursing and Oral Health IPE/IPCP Initiative). This project is currently ongoing and will be a major focus of ICOSH efforts and resources over the next three years.

Briefly, students from the Nurse Practitioner, Dentistry and Dental Hygiene Programs co-managed patients as interprofessional care teams. Interprofessional education in Oral-Systemic Health was provided in the form of classroom and online foundational sessions as well as interactive case-based simulations/discussions. Emphasis was placed on the relationship between poor oral health and chronic inflammatory diseases/conditions, the impact of systemic disease on oral health and the consequences of undiagnosed or poorly managed systemic and oral issues. Integration of primary care and oral health services is particularly relevant for high-risk individuals (children, elderly, those without regular access to healthcare or suffering from multiple chronic inflammatory diseases/conditions). Clinical interprofessional practice patient care rotations took place within the College of Dentistry and Access Downtown Community Clinics with student team members participating and interacting during the entire appointment. Nurse Practitioner students performed a full patient medical assessment followed by an oral health assessment by dental/dental hygiene students. A single care plan was formulated emphasizing collaboration for related systemic and oral health issues that would be best addressed simultaneously in a coordinated manner. Patient care and outcomes were followed via online discussion platforms. This interprofessional primary care model emphasizes undiagnosed conditions, poorly managed conditions and gaps in care. It should improve overall health outcomes through detection of undiagnosed conditions, need for immunizations, suboptimal pharmacy, and lack of regular monitoring/assessment. Proof of principle may lead to community healthcare system or government pilot programs in rural and underserved areas. Notable project outcomes to date are as follows:

1. all foundational education sessions and clinical experiences were embedded successfully in existing Nursing and Dentistry/Dental Hygiene courses along with mechanisms for student assessment
2. student scheduling issues were successfully managed
3. successfully developed and implemented various tools to support comprehensive evaluation and assessment of student/instructor performance and curriculum (student, instructor, and patient surveys; IPE/IPCP SEEQ) as well as patient health outcomes and changes in practice (chart review)
4. robust infrastructure for research/scholarship established with significant funding allocated from project budget to support project research assistant, travel and presentation/publication costs (several significant presentations/publications are currently being prepared)

Under the direction of Dr. Iacopino, there have been numerous accomplishments within the ICOSH public health policy portfolio. Many of these can be found in the ICOSH Bibliography at the end of this report however, the following major outcomes deserve special mention and additional detail:

1. recommendations provided to the Manitoba Long-Term Care Association for managing oral health in long-term care settings (approaches to improve oral care and reduce levels of oral inflammation as a means of decreasing co-morbidities associated with chronic inflammatory diseases/conditions such as cardiovascular disease, respiratory disease, diabetes and arthritis)
2. recommendations provided to the Ontario Agency for Health Protection and Promotion regarding integration of basic/preventive oral health services within primary care models as a means of reducing overall medical spending associated with chronic inflammatory diseases/conditions, adverse pregnancy outcomes and end stage renal disease (dialysis)
3. recommendations provided to Saint Boniface and Victoria General Hospitals regarding management of oral health in patients requiring intubation or wearing removable dentures as a means of reducing aspiration pneumonia (the most common cause of morbidity/mortality in hospital admissions of elderly patients)

One of the major goals for this portfolio was to advocate for healthcare systems innovation that would translate key concepts in oral-systemic medicine to interprofessional community practice. Dr. Iacopino created significant awareness regarding the public health benefits of inclusion of oral health services within the primary care system among government officials/legislators at the Provincial and Federal levels with multiple visits to the Minister of Health and Manitoba Senator in Ottawa. He advocated for highly focused pilot projects in the province of Manitoba that would include preventive and basic oral health services as part of comprehensive healthcare for targeted high-risk populations. Similar projects in the United States demonstrated a significant reduction of overall healthcare spending and improvement in overall health outcomes/quality of life. ICOSH can serve as a major resource for future healthcare policy decisions providing opportunities for significant improvements and cost-savings in the Canadian healthcare system. Recent system changes in Manitoba resulting in the creation of Shared Health Manitoba provide opportunities to establish a new interprofessional healthcare model where dental professionals work collaboratively with other health professionals to optimize patient health, effectively manage cross referral of high-risk patients, and provide multidirectional reinforcement of health and wellness messages. Dr. Iacopino continues to engage in discussions with Dr. Brock Wright, CEO Shared Health Manitoba, regarding future joint efforts and partnerships involving ICOSH. This will be a major focus for this portfolio going forward.

Under the direction of Dr. Iacopino, there have been numerous accomplishments within the ICOSH research portfolio. Many of these can be found in the ICOSH Bibliography at the end of this report however, the following major outcomes deserve special mention and additional detail:

1. partnership with Journal of the Canadian Dental Association (JCDA) to provide a two-year series of monthly manuscripts entitled "*Surveillance Spotlight*" translating best practices and intellectual thought in oral-systemic science to modern dental practice (provided ICOSH with significant exposure in Canada's national dental journal)
2. research study regarding the extent of inclusion of oral-systemic health in curricula of undergraduate medicine, nursing, and pharmacy schools worldwide (the first such analysis ever conducted and provided important validation to pursue the "*Oral-Systemic Health Education for Nondental Healthcare Providers*" curriculum project)
3. partnership with Dr. Valerie Powell, an internationally recognized expert in health data and electronic health records regarding consolidation of medical and dental health information (ICOSH expertise and educational resources facilitated a series of publications on this topic and some significant recommendations to various agencies in the United States government)
4. collaboration with Dr. Khan Zi Liu of the Winnipeg National Research Council regarding development and commercialization of a new approach to objective measurement of oral inflammation (resulted in the first publication of infra-red spectroscopy to measure inflammation in gingival tissues)

Perhaps the most significant interprofessional research collaboration is ongoing and will continue into the future. Dr. Sadeesh Srinathan of the Rady College of Medicine Department of Surgery, one of the founders of the comprehensive VISION study (Vascular Events in Noncardiac Surgery Patients Cohort Evaluation Study), partnered with ICOSH to add an oral health component to the study. Briefly, The VISION study is a large worldwide multi-site prospective observational study of elective non-cardiac surgeries seeking to determine the role of pre and perioperative factors that are predictive of major post-surgical adverse vascular events including MI, stroke and vascular deaths. The overall goal is to develop a risk model for these events comprised of a number of simple predictors that can be easily determined in routine clinical practice. One such source of predictors is the degree of oral inflammation, the hallmark manifestation of periodontal disease. In relation to the VISION study, inflammation, in and of itself, may be predictive of adverse vascular events and is biologically the most plausible means of interacting with systemic health. ICOSH provided funding to Dr. Srinathan in order to facilitate overall progress on the VISION Study and to make adjustments in the Winnipeg cohort protocol that enabled addition of an oral health component (ICOSH support is acknowledged in multiple VISION publications in leading medical journals).

For the oral health component, the overall goal is to determine and classify the extent of oral inflammation (severe or not severe) in patients who are enrolled in the VISION study and to determine if this is a risk factor for adverse

vascular events (and secondarily other adverse outcomes such as pneumonia and sepsis). Further, we wish to determine if severe oral inflammation is independent of other risk factors. In order to add the oral health component to the existing Winnipeg VISION cohort, we developed a method of grading oral inflammation, into severe or not severe, that can be carried out quickly by non-dental healthcare personnel. Using a simple set of validated questions that specifically address those elements considered most likely to be indicative of severe oral inflammation, patients were interviewed during the pre-surgical evaluation. The Winnipeg VISION cohort was tracked for one year post-surgery. Data analysis is currently being completed (classification of oral inflammation/presence of adverse vascular events) and work on the first draft of the manuscript for publication has been initiated. If oral inflammation is predictive of adverse vascular events post-surgery, this would be a significant finding potentially making evaluation for oral inflammation a necessary component for many elective non-cardiac surgeries.

Future Directions:

There are three main objectives for ICOSH over the next five-year period. These include:

1. Continuation and expansion of the highly successful Nursing/Oral Health interprofessional education/practice initiative with inclusion of Pharmacy and Medicine in subsequent curricular cycles. Dr. Iacopino will continue to work with the outstanding project leadership teams from the Colleges of Nursing and Dentistry as well as representatives from the Office of Interprofessional Collaboration (OIPC) regarding assessment/improvement of the current curriculum, development/implementation of the expanded curriculum and all associated research publications/presentations (several significant publications/presentations are already in preparation). The remaining ICOSH budget of \$187,000 will adequately cover all expenses associated with these activities.
2. Collaboration with Shared Health Manitoba to develop and implement primary healthcare models that include necessary oral health services as an important component of the initial care plan. Dr. Iacopino has been spending a significant amount of his sabbatical time reading the current literature regarding models of integration for oral health in primary healthcare, consolidation of electronic health records from medicine and dentistry into one common patient health record, and interprofessional approaches to co-managing patients in rural/underserved areas. An extensive reference library has been compiled and Dr. Iacopino's new expertise should prove valuable to Shared Health Manitoba as they go forward with development of more effective/efficient approaches and processes that redefine healthcare in the Province and significantly improve services and health outcomes in rural and underserved areas. Additionally, Dr. Iacopino has had initial discussions with Dr. Lisa Lix, Director of the Data Science Platform in the George & Fay Yee Centre for Healthcare Innovation, regarding the inclusion of oral health data in consolidated electronic medical records (EMRs) for policy-relevant research and decision making (impact of oral health data on artificial intelligence algorithms and machine learning techniques for EMRs).
3. Recruit and develop the future participants/leaders of ICOSH and address financial stability. In his role as Executive Director, Dr. Iacopino will continue to serve as an ambassador for ICOSH and all matters related to Oral-Systemic Health. It will be important to continue to create awareness/enthusiasm, identify future academics/researchers with interests in the field and jointly vision the projects/initiatives that will define the activities of ICOSH in the years ahead. Dr. Iacopino will be heavily involved in discussions regarding renewal of past and present funding sources along with identification of new funding partners as future progress will depend on securing adequate financial resources.

One additional consideration for the future of ICOSH involves the reporting structure. ICOSH currently reports directly to the Provost. However, given the focused nature of its activities within the Rady FHS as well as the history of significant internal funding through the Colleges of Dentistry and Medicine, it may be more appropriate for ICOSH to report directly to the Dean of the Rady FHS or jointly to the Deans of the Gerald Niznick College of Dentistry and Rady FHS.

ICOSH Bibliography 2008-2020:

This ICOSH bibliography represents a listing of the various local/national/international activities undertaken by all ICOSH members and collaborators. Any activities performed on behalf of ICOSH, supported by ICOSH (direct funding, staff resources, expertise) or acknowledged as made possible through the participation of ICOSH are included. The listing is broken down into the broad categories of continuing education (formal courses, symposia and workshops), publications (manuscripts and books/book chapters), presentations (lectures, grand rounds and keynote addresses), and professional engagements (service on committees, boards, taskforces or for professional organizations/government). Unfortunately, the bibliography is not exhaustive or complete as ICOSH is dependent on members and collaborators sending items to the executive director for inclusion.

Continuing Education:

- Hein C. (2018) Targeting Diabetes and Periodontal Disease in Dental Patients
VivaLearning Webinar; Austin, TX.
- Iacopino AM. (2018) Oral-Systemic Medicine and Practice: Basics You Need to Know
Pacific Dental Conference; Vancouver, Canada.
- Hein C. (2018) Obesity and Periodontal Disease: a New Model for Risk Assessment
VivaLearning Webinar; Austin TX.
- Hein C. (2018) Targeting Diabetes and Periodontal Disease in Dental Patients
West Texas Study Club; Odessa, TX.
- Hein C. (2018) Periodontal-Systemic Links: Early Intervention for Periodontal Disease
Cary Study Club; Cary, NC.
- Hein C. (2017) Preventive Cardiology in Dentistry
Seattle Study Club-West Central Wisconsin Section; Eau Claire, Wisconsin.
- Hein C. (2015) Dentists and Dental Hygienist Role as Front-Line Healthcare Providers in Obesity Intervention
Rady FHS Obesity Day Symposium; Winnipeg, Canada.
- Iacopino AM. (2015) Oral Health, Systemic Inflammation, and Interprofessional Management in Modern Practice
Dawson Academy Total Practice and Wellness Symposium; Nashville, TN.
- Iacopino AM. (2015) Oral-Systemic Connections and Interprofessional Practice
Involution Inc. Annual Destination Program; Cancun, Mexico.
- Iacopino AM. (2015) Oral-Systemic Science Update: Adverse Pregnancy Outcomes
DHPro Webinar; Toronto, Canada.
- Nelson T. (2014) Empowering Physicians, Nurses and Other Non-Dental Healthcare Providers to Care for the
Oral Health of Children and Adolescents
Rady FHS Interprofessional Practice Series; Winnipeg, Manitoba.
- Hein C. (2014) Redefining Our Role in Ensuring Periodontal-Systemic Health
South Ohio Study Club; Dayton, OH.

- Iacopino AM. (2014) Oral-Systemic Science Update: Cardiovascular Disease and Stroke
DHPro Webinar; Toronto, Canada.
- Hein C. (2014) Intersection of Obesity and Periodontal Disease: Model for Risk Assessment
Seattle Study Club-Palo Alto Section; Palo Alto, CA
- Muller S. (2013) Empowering Physicians, Nurses and Other Non-Dental Healthcare Providers in the Prevention and Early Detection of Oral and Oropharyngeal Cancer
Rady FHS Interprofessional Practice Series; Winnipeg, Manitoba.
- Iacopino AM. (2013) Preparing the Landscape for Interprofessional Education
ADEA Webinar; Washington, DC.
- Iacopino AM. (2013) Oral Disinfection and Biofilms: The Role of Oral Rinses and Essential Oils
Pacific Dental Conference; Vancouver, Canada.
- Iacopino AM. (2013) Oral-Systemic Science Update: Oral-Systemic Connections
DHPro Webinar; Toronto, Canada.
- Hein C. (2012) Targeting Periodontal Disease in Patients with Diabetes
Rady FHS Academic Half Day Series; Winnipeg, Canada.
- Iacopino AM. (2012) Diabetes and Oral Health: Update and Clinical Implications
DHPro Webinar; Toronto, Canada.
- Hein C. (2012) Emerging Evidence Supporting Periodontal-Systemic Links and Interprofessional Patient Care
Gerald Niznick College of Dentistry Satellite Series; Calgary, Canada.
- Hein C. (2012) Emerging Models of Interprofessional Patient Care: Implications for the Dental Team
Gerald Niznick College of Dentistry Satellite Series; Ottawa, Canada.
- Hein C (2012) Redefining Our Role in Ensuring Periodontal-Systemic Health
Central Texas Study Club; Austin, TX.
- Hein C. (2011) The Systemic Impact of Periodontal Disease: What Does it Mean for Physicians, Nurses, Dentists, Dental Hygienists and all the Health Professions?
Bunting Study Club; Ann Arbor, MI.
- Hein C. (2011) The Systemic Impact of Periodontal Disease: What Does it Mean for Physicians, Nurses, Dentists, Dental Hygienists and all the Health Professions?
St. Helen's Shadow Study Club; Vancouver, WA.
- Iacopino AM. (2011) Managing Oral Health in Cognitively Impaired Elderly and Institutional Settings
Manitoba Long Term & Continuing Care Association Annual Meeting; Winnipeg, MB.
- Hein C. (2010) The Systemic Impact of Periodontal Disease: What Does it Mean for Physicians? Nurses, Dentists, Dental Hygienists and all the Health Professions?
Seattle Study Club-Melbourne Section; Victoria, Australia.

- Hein C. (2010) Risk Assessment for Periodontal Disease and Systemic Diseases as the Cornerstone of Contemporary Periodontal Therapeutics
Seattle Study Club-Port City Section; Wilmington, NC.
- Iacopino AM. (2010) Oral Health and Interprofessional Management of Chronic Inflammatory Diseases
Manitoba Interprofessional Continuing Professional Development Rounds; Winnipeg, MB.
- Hein C. (2010) Significance of Oral-Systemic Health Building Allied Healthcare Teams
Seattle Study Club-Upstate Section; Greenville, SC.
- Iacopino AM. (2010) Oral-Systemic Medicine in Younger and Older Patients
Alaska Dental Society Annual Meeting; Seward, AL.
- Hein C. (2010) Applying Periodontal-Systemic Research: Collaborative Healthcare Community
Seattle Study Club-Somerset Section; Somerville, NJ.
- Iacopino AM. (2010) Oral-Systemic Connections and Interprofessional Practice
Manitoba Dental Association Annual Meeting; Winnipeg, MB.
- Hein C. (2010) The Systemic Impact of Periodontal Disease: What Does it Mean for Physicians, Nurses, Dentists, Dental Hygienists and all the Health Profession
Seattle Study Club-Adelaide Section; Adelaide, Australia.
- Hein C. (2009) Oral-Systemic interrelationships: Integration Into Clinical Practice
Seattle Study Club-Seattle Section; Seattle, WA.
- Hein C. (2009) Rethinking the Significance of Periodontal Disease for Systemic Health
Seattle Study Club-Houston Section; Houston, TX.
- Hein C. (2009) Overview of Oral-Systemic Research: Redefining Dentistry's Role in Healthcare
Gerald Niznick College of Dentistry Tropical Series; Nuevo Vallarta, Mexico.
- Hein C. (2009) Diabetology in 21st Century Dentistry: The New Practice Imperative
Seattle Study Club-Roanoke Section; Roanoke, VA.
- Hein C. (2009) Risk Assessment for Periodontal Disease and Systemic Diseases as the Cornerstone of Contemporary Periodontal Therapeutics
Seattle Study Club-Palo Alto Section; Palo Alto, CA.
- Iacopino AM. (2008) Perio-Systemic Connections and New Practice Models
University of Manitoba Tropical Series; Cancun, Mexico.
- Hein C. (2008) Rethinking the Significance of Inflammation Related to Chronic Periodontitis and its Threat to Whole Body Health
Seattle Study Club-Port Huron Section; Port Huron, MI.
- Hein C. (2008) Implementing Periodontal-Systemic Research through Medical-Dental Collaboration
Ritz Charles Study Club; Carmel, IN.

- Hein C. (2008) Redefining Dentistry's Role Within the Healing Arts: Applying What We Know About Periodontal-Systemic Links
Greater Lafayette Study Club; Lafayette, IN.
- Hein C. (2008) Implications of Oral-Systemic Research: Redefining the Role of Oral Health in Overall Health
Gerald Niznick College of Dentistry Professional Development Workshop; Winnipeg, Canada.
- Hein C. (2008) Rethinking the Significance of Inflammation Related to Chronic Periodontitis and its Threat to Whole Body Health
Heartland Study Club; Fargo, ND.

Publications (Manuscripts):

Spence J, Srinathan S and Vascular Events In Noncardiac Surgery Patients Cohort Evaluation (VISION) Study Investigators (2019). Association between complications and death within 30 days after noncardiac surgery. *CMAJ* 191:E830-E837.

Lavigne S, Doupe M, Iacopino AM, and Mahmud S (2018). The effects of power toothbrushing on C-reactive protein levels in nursing home residents: a randomized controlled trial. *Can J Dent Hyg* 52:20-27.

Sanchez-Ramirez DC, Long H, Mowat S, and Hein C (2018). Obesity education for front-line healthcare providers. *BMC Med Educ* 18:278-282.

Biccard BM, Srinathan S and Vascular Events In Noncardiac Surgery Patients Cohort Evaluation (VISION) Study Investigators (2018). Myocardial injury after noncardiac surgery (MINS) in vascular surgical patients: a prospective observational cohort study. *Ann Surg* 268:357-363.

Hein C (2017). Changing the trajectories of diabetes and periodontitis. *Dimensions Dent Hygiene* 15:40-43.

Devereaux PJ, Srinathan S and Vascular Events In Noncardiac Surgery Patients Cohort Evaluation (VISION) Study Investigators (2017). Association of postoperative high-sensitivity troponin levels with myocardial injury and 30-day mortality among patients undergoing noncardiac surgery. *JAMA* 317:1642-1651.

Lavigne S, Doupe MB, Iacopino AM, Mahmud S and Elliott L (2017). The effects of power toothbrushing on periodontal inflammation in a nursing home population: a randomized controlled trial. *Int J Dent Hyg* 15:328-334.

Hein C and Batista E (2017). Risk assessment for obesity and periodontal disease. *Decisions in Dent* 3:42-46.

Hein C and Batista E (2017). Identifying patients at risk for inflammatory-driven conditions. *Dimensions Dent Hygiene*; 15:47-53.

Mowat S, Hein C, Walsh T, MacDonald L, Grymonpre R, and Sisler J (2017). Changing health professionals' attitudes and practice behaviors through interprofessional continuing education in oral-systemic health. *J Dent Educ* 81:1421-1429.

Hein C and Williams R (2017). The impact of oral health on general health: educating professionals and patients. *Current Oral Health Report* 4:8-13.

Berwanger O, Srinathan S and Vascular Events In Noncardiac Surgery Patients Cohort Evaluation (VISION) Study Investigators (2016). Association between pre-operative statin use and major cardiovascular complications among patients undergoing non-cardiac surgery. *Eur Heart J* 37:177-185.

Hein C (2016). Diabetes and Periodontitis: Dental Hygienist's Perspective. *Current Oral Health Report* 3:28-35.

Hein C and Batista EL (2014). Obesity and cumulative inflammatory burden: a valuable risk assessment parameter in caring for dental patients. *J Evid Based Dent Pract* 4:17-26.

Botto, F, Srinathan S and Vascular Events In Noncardiac Surgery Patients Cohort Evaluation (VISION) Study Investigators (2014). Myocardial injury after noncardiac surgery: a large, international, prospective cohort study establishing diagnostic criteria, characteristics, predictors, and 30-day outcomes. *Anesthesiology* 120:564-578.

Hein C (2013). Innovative oral health curriculum: filling the void for physicians and other non-dental healthcare providers. *Hygiene Today* 32:84-87.

Devereaux PJ, Srinathan S and Vascular Events In Noncardiac Surgery Patients Cohort Evaluation (VISION) Study Investigators (2012). Association between postoperative troponin levels and 30-day mortality among patients undergoing noncardiac surgery. *JAMA* 307:2295-22304.

Hein KP, Schownwetter D and Iacopino AM (2011). Inclusion of oral-systemic health in curricula of undergraduate medicine, nursing, and pharmacy in English speaking universities. *J Dent Ed* 75:1187-1199.

Iacopino AM (2011). Integrating oral health and medicine: impending change in the Canadian healthcare system? *J Can Dent Assoc* 77:b25.

Nogueira-Filho G, Iacopino AM and Tenenbaum HC (2010). Prognoses in implant dentistry: a system for classifying the degree of peri-implant mucosal inflammation. *J Can Dent Assoc* 77:b8.

Iacopino AM (2010). Oral hygiene and patient self-report as risk indicators for cardiovascular disease. *J Can Dent Assoc* 76:a143.

Iacopino AM (2010). Sjögren syndrome: reduced quality of life as an oral-systemic consequence. *J Can Dent Assoc* 76:a98.

Iacopino AM (2010). Epigenetics: new explanations for old problems? *J Can Dent Assoc* 76:a76.

Xiang X, Sowa MG, Iacopino AM, Man A and Liu KZ (2010). An update on novel non-invasive approaches for periodontal diagnosis. *J Periodontol* 81:186-198.

Iacopino AM (2010). Models for interprofessional practice: innovative collaboration between nursing and dentistry. *J Can Dent Assoc* 76:16-17.

McNicol A and Israels SJ (2010). Mechanisms of oral bacteria-induced platelet activation. *Can J Physiol Pharmacol* 88:510-524.

Iacopino AM and Tenenbaum HC (2009). Current concepts in diabetes management: comprehensive interprofessional care including oral health. *Can J Diabetes* 33:146-147.

Iacopino AM (2009). New "syndemic" paradigm for interprofessional management of chronic inflammatory disease. *J Can Dent Assoc* 75:632-633.

Iacopino AM (2009). Management of systemic inflammation by dentists and physicians: new guidelines. *J Can Dent Assoc* 75:570-571.

Hein C (2009). A chance to influence the insurance industry with evidence of periodontal-systemic relationships. *Compend Contin Educ Dent* 30:26-32.

Iacopino AM (2009). Healthcare reform and oral health: the most important oral-systemic relationship. *J Can Dent Assoc* 75:504-505.

Iacopino AM (2009). Relationship between periodontal disease and dementia: real or imagined? *J Can Dent Assoc* 75:426-427.

Okunseri C, Mehta J, Bajorunaite R, Hodgson B and Iacopino AM (2009). Factors associated with receipt of preventive dental treatment procedures among adults in Wisconsin. *Gend Med* 1:272-276.

Iacopino AM (2009). Relationship between stress, depression, and periodontal disease. *J Can Dent Assoc* 75:329-330.

Iacopino AM (2009). Reduction of oral microbial burden via alcohol-containing rinses: safety and efficacy. *J Can Dent Assoc* 75:260-261.

Iacopino AM (2009). Oral biofilms: the origin of cross-reactive antibodies involved in systemic disease? *J Can Dent Assoc* 75:180-181.

Iacopino AM (2009). Relationship between obesity and periodontal disease: increasing evidence. *J Can Dent Assoc* 75:92-93.

Hein C (2009). Translating evidence of oral-systemic relationships into models of interprofessional collaboration. *J Dent Hygiene* 83:188-189.

Powell VJH and Din FM. (2009). The medical-dental home: achieving comprehensive care for chronic illness through integrating medical-dental care and data. *Medical Home News* 1:5-7.

Wilder RS, Iacopino AM, Feldman CA, Guthmiller J, Linfante J, Lavigne S and Paquette D (2009). Periodontal-systemic disease education in United States and Canadian dental schools. *J Dent Educ* 73:38-52.

Hein C (2009). Translating evidence of oral-systemic relationships into models of interprofessional collaboration. *J Dent Hyg* 83:188-189.

Iacopino AM (2008). Practicing oral-systemic medicine: the need for interprofessional education. *J Can Dent Assoc* 74:866-867.

Iacopino AM (2008). Relationship between oral health and nutrition: synergistic and bidirectional. *J Can Dent Assoc* 74:771-772.

Okunseri C, Bajorunaite R, Abena A, Self K, Iacopino AM and Flores G (2008). Racial and ethnic disparities in the acceptance of Medicaid patients in dental practices. *J Public Health Dent* 68:149-153.

Iacopino AM (2008). Relationship between periodontal disease and general health: role of inflammation. *J Can Dent Assoc* 74:695-696.

Iacopino AM (2008). Relationship between periodontal disease and cancer: myth or reality? J Can Dent Assoc 74:589-590.

Hein C (2008). Scottsdale revisited: role of dental practitioners in screening for undiagnosed diabetes and the medical comanagement of patients with diabetes or those at risk for diabetes. Compend Contin Educ Dent 29:538-540.

Hein C (2008). Does periodontal disease increase the risk of pancreatic cancer? Dimensions Dent Hygiene 7:28-33.

Iacopino AM (2008). Translation of oral-systemic science to clinical practice. J Can Dent Assoc 74:496-497.

Hein C (2008). Exploring the relationship: A closer look at the association between periodontal disease and rheumatoid arthritis. Dimensions Dent Hygiene 3: 30-33.

Iacopino AM (2008). Surveillance spotlight: current concepts in oral-systemic health. J Can Dent Assoc 74:418-419.

Hein C (2008). Maternal infections- Understanding the threat; what evidence says about the relationship between periodontal infection and preeclampsia? Dimensions Dent Hygiene 10:32-35.

Hein C (2008). Exploring the significance of Helicobacter pylori within the oral cavity. Dimensions Dent Hygiene 5: 16-21

Publications (Books/Chapters):

Acharya A, Powell V, Torres-Urquidy MH, Posteraro RH, Thyvalikakath TP, eds. (2019). Integration of Medical and Dental Care and Patient Data, Second Edition, Springer-Nature, <https://www.springer.com/us/book/9783319982960>.

Hein C and Kilsdonk J (2019). The Need for Interprofessional Medical-Dental Education. In: Integration of Medical and Dental Care and Patient Data Second Edition (Acharya A, Powell V, Torres-Urquidy MH, Posteraro RH, and Thyvalikakath TP eds). Springer-Nature, https://www.springer.com/us/book/10.1007/978-3-319-98298-4_16.

Powell V, Din FM, Acharya A, Torres-Urquidy MH, eds. (2012). Integration of Medical and Dental Care and Patient Data, Springer-UK (Medicine) <http://www.springer.com/public+health/book/978-1-4471-2184-8>.

Hein C (2010). The Role of the Professional in Educating the Public About the Importance of Oral Health. In: Periodontal Disease and Overall Health: A Clinician's Guide (Genco RJ and Williams RC eds). Professional Audience Communications, Inc. Yardley, PA, 288-304.

Iacopino AM (2009). Integrating Science and Scholarship Into Dental Education: Current Concepts and Future Models. In: Beyond the Crossroads: Change and Innovation in Dental Education (Kalkwarf K ed). Commission on Change and Innovation in Dental Education, American Dental Education Association, Washington, DC, 42-54.

Powell VJH, Din FM (2008). Call for an Integrated (Medical/Dental) Health Care Model that Optimally Supports Chronic Care, Pediatric Care, and Prenatal Care as a Basis for 21st Century EHR Standards and Products. In: EHR Position Paper (HRSA-DHHS eds). https://www.researchgate.net/publication/338178280_Call_for_an_Integrated_MedicalDental_Health_Care_Model_that_Optimally_Supports_Chronic_Care_Pediatric_Care_and_Prenatal_Care_as_a_Basis_for_21st_Century_EHR_Standards_and_Products_EHR_Position_Paper_2

Din FM and Powell VJH (2008). Integration of Medical and Dental Records to Improve Healthcare Outcomes, Costs, and Overall Public Health. In: Report to Obama-Biden Transition Team (HRSA-DHHS eds).
http://s3.amazonaws.com/rdcms-himss/files/production/public/HIMSSorg/policy/d/hc_comm_discussion/MoonTownship_record_report_Obama_Admin.pdf

Presentations:

Powell V and Mazlo S. (2020) Advice for Oral Health and Medication, an Interprofessional Approach to Educate Health Care Professionals Regarding Oral Health Side Effects of Commonly Prescribed Drugs
Metro Community Health Center/University of Pittsburgh School of Dental Medicine; Pittsburgh PA.

Powell V. (2020) Oral/Systemic Machine Learning in Healthcare: A Route Toward Interprofessional Care
Robert Morris University School of Engineering, Mathematics and Sciences; Moon Township, PA.

Hein C and MacDonald L (2018) Culture of Interprofessional Collaboration: Multidisciplinary Oral-Systemic Health Day
ADEA Annual Session Education Symposium; Orlando, FL.

Iacopino AM. (2017) Teaching Interprofessional Collaboration Through Critical Thinking and Reflection
ADEA Annual Session Education Symposium; Long Beach, CA.

Hein C. (2017) Oral-Systemic Science: Where did it Begin and Where is it Today?
Teach Me Dental Comprehensive Healthcare Series; Chevy Chase, Maryland.

Hein C. (2017) A Best Practice Approach to Target Diabetes and Obesity in Dental Patients
North Dakota Dental Hygienists Association; Fargo, North Dakota.

Hein C. (2016) Periodontal-Systemic Links: Evidence and Incorporation Into Patient Care
Southwest District Dental Society; Las Cruces, New Mexico.

Hein C. (2016) Redefining our Role in Ensuring Periodontal-Systemic Health: a Best Practice Approach to Targeting Diabetes in Dental Patients
LeHigh Valley Health Network; Bethlehem, PA.

Iacopino AM. (2016) Interprofessional Education and Orthodontics: A Procrustean Bed?
AAO Keynote Address, ADEA Annual Session; Denver, CO.

Hein C. (2016) Importance of the Oral and Head/Neck Examination
Canadian Physician Assistant Association Annual Conference; Winnipeg, Canada.

Iacopino AM. (2014) Morphing Prototypically Obsolete Lectures to Technologically Interactive Learning Alternatives
ADEA Annual Session Education Symposium; San Antonio, TX.

Hein C. (2014) Interprofessional Collaboration in Oral-Systemic Health of Older Individuals
University of Tennessee College of Nursing; Memphis, TN

Hein C. (2014) Ensuring Oral-Systemic Health: A Best Practice Approach to Target Diabetes in Dental Patients
Dalhousie University; Halifax, Canada.

Iacopino AM. (2013) Oral-Systemic Science and Practice: Biochemistry, Physiology, and Inflammation
University of Manitoba School of Dental Hygiene Alumni Association Symposium; Winnipeg, Canada.

Iacopino AM. (2013) Preparing Faculty for the IPE Curriculum: Transforming the Learning Landscape
ADEA Annual Session Education Symposium; Seattle, WA.

Hein C. (2013) Oral-Systemic Health Education: Teaching and Learning with Emerging Technologies & Informatics
ADEA Annual Session Education Symposium; Seattle, WA.

Iacopino AM. (2012) Oral-Systemic Science Update
Manitoba Dental Hygienists Association Symposium; Winnipeg, Canada.

Hein C. (2012) Targeting Obesity in Dental Patients
University of the Pacific Annual Dental Hygiene Conference; San Francisco, CA.

Hein C. (2012) The New Periodontal Disease: Navigating Emerging Solutions
American Dental Hygienists Association Annual Session; Phoenix, AZ.

Iacopino AM. (2012) Oral-Systemic Medicine: Applications for Interprofessional Practice
University of Manitoba Faculty of Medicine Resident Grand Rounds; Winnipeg, Canada.

Hein C. (2012) Periodontal-Systemic Links: Is there Real Evidence?
El Paso Dental Conference; El Paso, TX.

Iacopino AM. (2012) Tooth Bleaching: Science, Myths, Patient Management
Oral-B Annual Symposium; Toronto, Canada.

Hein C. (2012) Diabetology in Dentistry
Congrès Annuel De L'ordre Des Dentistes Du Québec; Montreal, Canada.

Iacopino AM. (2012) Interprofessional Education: The Dean's Role in Leading Change
North American Dental Deans Institute; Newberg, OR.

Iacopino AM. (2012) Oral-Systemic Science and Interprofessional Practice
American Academy of Oral-Systemic Health; Cleveland, OH.

Hein C. (2011) The Systemic Impact of Periodontal Disease: What Does it Mean for Physicians, Nurses, Dentists,
Dental Hygienists and all the Health Professions?
Delaware State Dental Society; Wilmington, DE.

Hein C. (2011) Preventive Cardiology and Diabetology in Dentistry
Yankee Dental Congress; Boston, MA.

Iacopino AM. (2011) Basic Concepts in Oral-Systemic Health
CIHR-IMHA Café Scientifique; Winnipeg, Canada.

Hein C. (2011) Summary of Biological Plausibility of Various Periodontal-Systemic Links
RDH Under One Roof Series; Chicago, IL.

Hein C. (2011) Diabetology in Dentistry
Annual Session of the American Academy of Oral-Systemic Health; Chicago, IL.

Hein C. (2011) Targeting Obesity in Dental Patients
Yankee Dental Congress; Boston, MA.

Hein C. (2011) The Systemic Impact of Periodontal Disease: What Does it Mean for Physicians, Nurses, Dentists, Dental Hygienists and all the Health Professions?
Howard County Dental Hygienist Association; Columbia, MD.

Hein C. (2011) Targeting Obesity in Dental Patients
Mississippi Dental Hygienists Association; Oxford, MS.

Hein C. (2011) The Threat of Periodontal Disease in Pregnancy
Yankee Dental Congress; Boston, MA.

Iacopino AM. (2011) Oral and Systemic Inflammation
Oral-B Annual Symposium; Toronto, Canada.

Iacopino AM. (2011) Managing Oral Health in Long-Term Care Settings
Manitoba Long-Term Care Association Annual Meeting; Winnipeg, Canada.

Iacopino AM. (2011) An Interprofessional Approach to Integrative Sciences Dental Curricula
ADEA Annual Session CCI Session Program; San Diego, CA.

Hein C. (2010) Clinical Pathway for Progressive Diagnosis and Treatment of Periodontal Disease
Annual Session of the Texas Dental Association; San Antonio, TX.

Iacopino AM. (2010) Oral-Systemic Science: Implications for Clinical Practice
Kenora-Rainy River Dental Society; Dryden, Canada.

Iacopino AM. (2010) Oral-Systemic Science: Review and Implications for Public Health
Ontario Agency for Health Protection and Promotion; Toronto, Canada.

Hein C, Schonwetter D, and Iacopino AM. (2010) Inclusion of Oral-Systemic Health in Curricula of Undergraduate Medicine, Nursing, and Pharmacy in English Speaking Universities
ADEA Annual Session Education Symposium, Washington DC.

Iacopino AM. (2010) Bugs, Biofilm, and Magic Bullets: Implications for Clinical Practice
IGY Technologies Conference; Thunder Bay, Canada.

Hein C. (2010) The New Frontier of Preventive Cardiology in Dentistry
Minnesota Dental Association Annual Star of the North Meeting; Saint Paul, MN.

Hein C (2010) Diabetology in 21st Century Dentistry: The New Practice Imperative
Annual Session of the Texas Dental Association; San Antonio, TX.

Iacopino AM. (2010) New Models for Biomedical Sciences Instruction
ADEA Annual Session Section Program; Washington, DC.

Hein C (2010) The Systemic Impact of Periodontal Disease: What Does it Mean for Physicians, Nurses, Dentists, Dental Hygienists and all the Health Professions?
Western Maryland Regional Medical Center; Cumberland, MD.

Hein C. (2010) Implications of Emerging Evidence of Periodontal-Systemic Links
Max Rady College of Medicine Primary Care Physician Grand Rounds; Winnipeg, Canada.

Hein C. (2010) Hygienist Role in Management of Periodontal Disease and Systemic Conditions
Royal Australasian College of Dental Surgeons; Adelaide, Australia, Australia.

Hein C. (2010) Preventive Cardiology in Dentistry: New Frontier in Medical-Dental Collaboration
Annual Session of the Texas Dental Association; San Antonio, TX.

Hein C. (2010) The New Frontier of Preventive Cardiology in Dentistry
Michigan Dental Association Annual Spirit of Michigan Meeting; Novi, MI.

Hein C. (2010) Diabetology in 21st Century Dentistry: The New Practice Imperative
Michigan Dental Association Annual Spirit of Michigan Meeting; Novi, MI.

Iacopino AM. (2009) Oral-Systemic Science: Review and Implications for Research and Clinical Practice
Saint Boniface Hospital Research Centre Institute of Cardiovascular Sciences; Winnipeg, Canada.

Hein C. (2009) Redesigning Patient Care Through Application of Periodontal-Systemic Medicine
Arizona Dental Association Western Regional Dental Convention; Phoenix, AZ.

Iacopino AM. (2009) Oral-Systemic Health: State-of-the-Art Update and Implications for Healthcare Services
Manitoba Society of Periodontists; Winnipeg, Canada.

Hein C. (2009) The New Frontier of Preventive Cardiology in Dentistry
American Academy of Cosmetic Dentistry Annual Scientific Session; Honolulu, HI.

Iacopino AM. (2009) Oral-Systemic Health: New Concepts and Models for Comprehensive Health Services
University of Manitoba Faculty of Medicine Mini Medical School Symposium; Winnipeg, Canada.

Hein C. (2009) Oral-Systemic Medicine: Redefining the Role of Dentistry in Healthcare
Rocky Mountain Dental Conference; Denver, CO.

Iacopino AM. (2009) Oral-Systemic Science: Implications for Interprofessional Education and Research
University of Manitoba Faculty of Pharmacy; Winnipeg, Canada.

Hein C. (2009) Diabetology in 21st Century Dentistry: The New Practice Imperative
Baltimore Innovative Dental Seminars; Baltimore, MD.

Hein C. (2009) Periodontal-Systemic Relationships: What Does it Mean for Physicians, Nurses,
Dentists, Hygienists and all the Health Professions?
Manitoba Dental Hygienist Association; Winnipeg, Canada.

Hein C. (2009) Translating Evidence of Oral-Systemic Relationships into Models of Interprofessional Collaboration
North American Dental Hygiene Research Conference; Bethesda, MD.

Hein C. (2009) Risk Assessment for Periodontal and Systemic Disease as the Cornerstone of
Contemporary Periodontal Therapies
New Horizons Hygiene Study Club; St. Louis, MO.

Hein C. (2009) Diabetology in 21st Century Dentistry: The New Practice Imperative
American Academy of Cosmetic Dentistry Annual Scientific Session; Honolulu, HI.

Hein C. (2009) The Interrelationship between Diabetes and Periodontal Disease: Opportunities for Medical- Dental
Collaboration in Education and Research
Max Rady College of Medicine Department of Endocrinology Grand Rounds; Winnipeg, Canada.

Hein C. (2009) Clinical Pathway in Progressive Diagnosis and Treatment of Periodontal Disease
Mobile Area Dental Society; Mobile, AL.

Hein C. (2009) Oral-Systemic Relationships: Applying the Research in Everyday Dentistry
Arizona Dental Association Western Regional Dental Convention; Phoenix, AZ.

Hein C. (2009) New Frontiers in the Application of Periodontal-Systemic Research
Seattle Study Club National Symposium; Cancun, Mexico.

Hein C. (2009) Medical-Dental Collaboration in Screening for Oral and Systemic Diseases
Rocky Mountain Dental Conference; Denver, CO.

Iacopino AM. (2008) Oral-Systemic Science: Current Update and Research Implications
National Research Council; Winnipeg, Canada.

Iacopino AM. (2008) Perio-Systemic Connections and Oral Health in Geriatric and Alzheimer Patients
Alzheimer's Association; Thunder Bay, Canada.

Hein C. (2008) The Relationship Between Periodontal Disease and Increased Risk for Various Systemic Diseases
American Dental Association Annual Meeting; San Antonio, TX.

Iacopino AM. (2008) Integration of Oral-Systemic Science Into Health Professions Curricula: The Final Frontier
IADR Annual Session Johnson & Johnson Symposium; Toronto, Canada.

Iacopino AM. (2008) Perio-Systemic Connections and Oral Health in Elderly Patients
Saint Boniface General Hospital Grand Rounds; Winnipeg, Canada.

Powell V. (2008) Integration of Medical and Dental Records for Chronic Care
Vista Symposium; Shepherd University, Shepherdstown, WV.

Hein C. (2008) Oral-Systemic Research: Relevance to the Nursing Profession
Rady FHS College of Nursing; Winnipeg, Canada.

Hein C. (2008) Oral-Systemic Research: Relevance to Dieticians
University of Manitoba Faculty of Human Ecology; Winnipeg, Canada.

Hein C. (2008) Implementing Periodontal-Systemic Research through Medical-Dental Collaboration
Allegany-Garret County Dental Society; Cumberland, MD.

Hein C (2008) Practical Application of Periodontal-Systemic Research to Everyday Patient Care
American Dental Association Annual Meeting; San Antonio, Texas.

Hein C. (2008) Recognizing the Link between Gum Disease and Diabetes
American Association of Diabetes Educators Annual Meeting; Washington DC.

Hein C. (2008) Oral and Medical Health
America's Health Insurance Plans (AHIP) Institute Meeting; San Francisco, CA.

Hein C. (2008) Oral-Systemic Relationships: Applying the Research to Everyday Dentistry
Canadian Association of Public Health Dentistry Annual Meeting; Halifax, Canada.

Hein C. (2008) Periodontal-Systemic Research and its Impact on Current Dental Practice
University of Pittsburgh Bowser Memorial Lecture; Pittsburgh, PA.

Hein C. (2008) Oral-Systemic Health: Real Life Applications
Southwest Dental Conference; Dallas, TX.

Hein C. (2008) Redefining Dentistry's Role Within the Healing Arts
Seattle Study Club National Symposium; Maui, HI.

Professional Engagements:

Iacopino AM. (2018-2019)	Member - Shared Health Manitoba/Univ of Manitoba Health Sciences Joint Council
Iacopino AM. (2014-2015)	Member - Rady FHS Interprofessional Education Subcommittee
Iacopino AM. (2013-2017)	Member – Salme Lavigne PhD Committee, Rady FHS Dept Community Health Science
Hein C. (2010-2018)	Chief Operating Officer - OralHealthEd.Com E-Learning Center
Iacopino AM. (2009-2016)	Consultant - IGY Immune Technologies & Life Sciences
Iacopino AM. (2008-2017)	Consultant - Johnson & Johnson Global Healthcare
Iacopino AM. (2008-2013)	Consultant - Colgate Palmolive Oral Care Division
Iacopino AM. (2008-2019)	Oral-Systemic Health Media Spokesperson - American Dental Association/Canadian Dental Association
Hein C. (2008-2011)	Section Editor Oral Systemic Medicine – Compendium of Continuing Education in Dentistry
Hein C. (2008-2010)	Journal Editor-in-Chief for " <i>Inside Dental Hygiene</i> "