

Dentistry Inter-Professional Learning

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*Why should dentists know more
about the Science and Practice of
other health professions?*

*Why should other health
professions know more about the
Science and Practice of Dentistry?*

Signs and Symptoms



Diagnosis

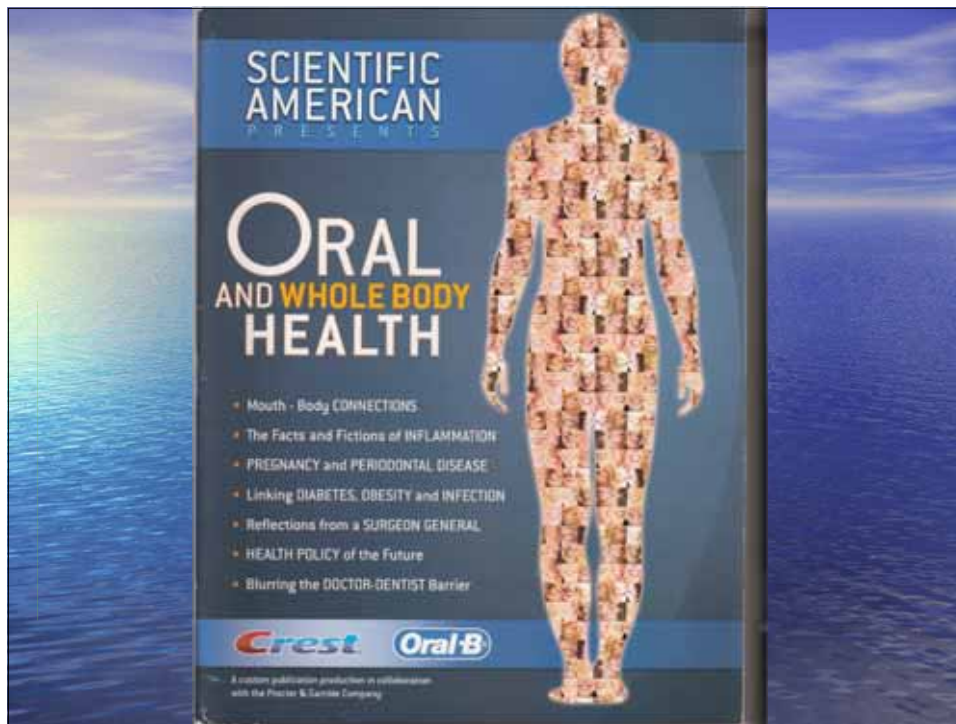


Treatment

Hallmarks of a Professional

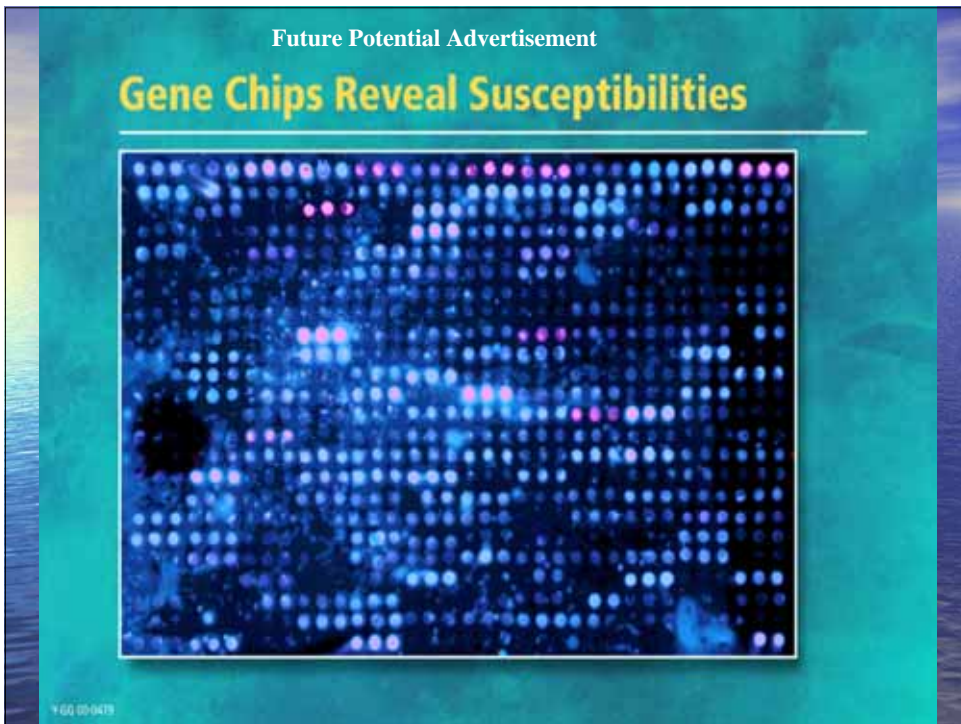
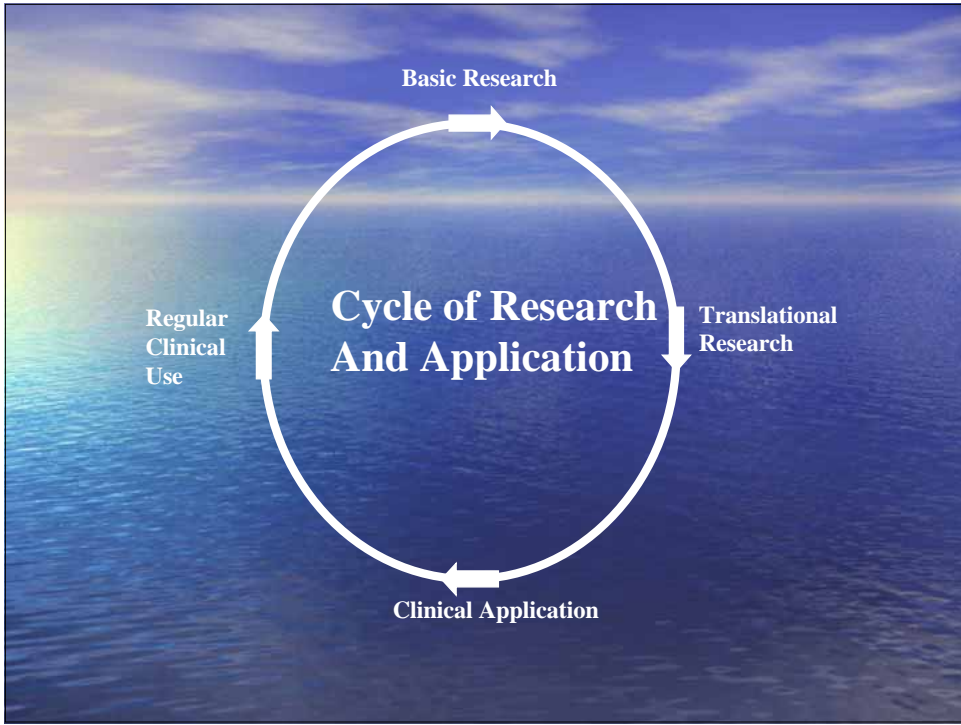
The ability to take a convergent knowledge base and convert it into professional services that are tailored to the unique requirements of the client system, which demands divergent thinking skills.

Schein, 1958



Oral-Systemic Disease Correlations have been identified

- Periodontal disease correlated with cardiovascular disease
- Oral health correlated with pre-term birth and low birth weight newborns
- Periodontal disease correlated with diabetes
- Osteonecrosis of the jaws linked to treatments for osteoporosis
- Diagnostic potential of saliva for systemic disease has been recognized



• The Future of Dental Practice

- Chairside test of saliva to identify salivary protein isoforms associated with increased dental caries risk
- Chairside tests on DNA isolated from desquamated buccal epithelial cells to identify SNPs associated with increased risk for dental caries
- Implementation of dental caries prevention strategies linked to genetically established risk assessment.
- Delivery of oral health care based on clearly established disease risks and not simply on disease incidence.



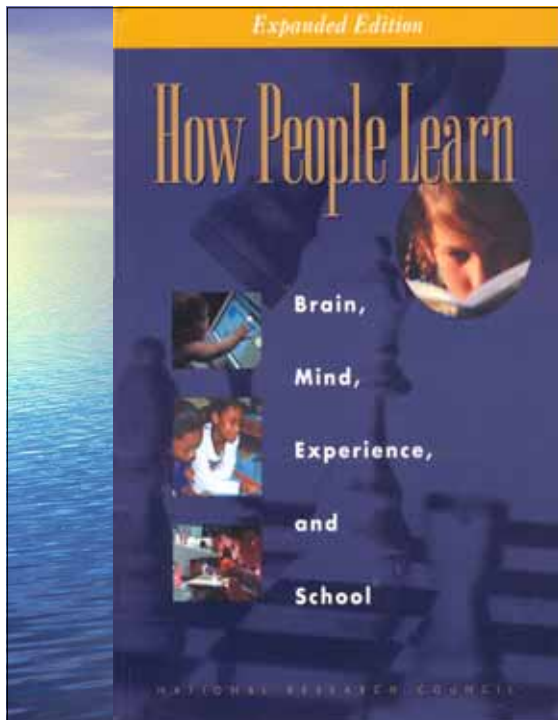
Craniofacial birth defects – an example of the success of interprofessional collaboration and learning with successful outcomes for patients based on the craniofacial teams coordinating care.

Institute of Medicine Report

Dental Education at the Crossroads: Challenges and Change

- Five Concerns related to present curricula:
 - 1. Basic science concepts and methods weakly linked to clinical education and experience
 - 2. Curricula insufficiently attuned to current and emerging dental science and practice
 - 3. Problems implementing comprehensive patient care as a model for clinical education
 - 4. Linkages between dentistry and medicine weak
 - 5. Overcrowded curricula give students too little time to consolidate concepts and develop critical thinking skills

Institute of Medicine
National Academy of Sciences
1994



Expanded Edition

How People Learn

Brain,
Mind,
Experience,
and
School

NATIONAL RESEARCH COUNCIL

Evaluation of publications on the analysis of learning

Conducted by the National Academy of Science

Thorough analysis of the links between pedagogy and learning and the effectiveness of different strategies for creating learning environments.

On Recall and Application -

“The closer the resemblance between the situation in which something is learnt and the situation in which it is to be applied, the better the performance and the easier it is in respect of recall and application.”

Schmidt HG

The Knowledge Dimension	The Cognitive Process Dimension					
	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual Knowledge	1 st yr					
Conceptual Knowledge						
Procedural Knowledge						
Meta-cognitive Knowledge						Last yr

Table 1: The Revised Taxonomy Table

Progression of students through the stages of Blooms Taxonomy
And different knowledge dimensions/assessments

Some Examples of Interprofessional Linkages with Dentistry

- New York University College of Dentistry incorporated the College of Nursing
- University of Southern California School of Dentistry incorporated the Departments of Physical Therapy and Occupational Therapy
- University of Washington, pediatrics is a driving force in the community oral health initiative
- Pediatric Residencies now require a component of oral health in the hospital training programs

Patient populations with special needs and multiple care provider strategies

- Craniofacial anomalies and syndromes
- Cancer
- Cardiac
- Facial trauma and reconstruction
- Marginalized high risk populations
- Children
- Senior Citizens



Everything that enters the body, the air you breath, the food you eat, the water you drink, goes first through the oral cavity. The oral sensory system, oral immune system, oral disease status all have systemic implications.

Challenges for IP Learning in Dentistry

- Curriculum already overwhelmed with clinical skills competency development
- Hard and soft tissue surgical procedures
- Postgraduate residency programs optional
- Clinical IP scenarios require skills at Postgraduate level

Future Directions

- Establish competencies for inter-professional clinical activity
- Develop curriculum with learning objectives to support development of such competencies
- Prioritize these curricular needs against competing curricular needs
- Develop innovative electronic learning environments that are less patient and infrastructure intensive
- Postgraduate Continuing professional education most likely vehicle to develop interprofessional skills

Oral manifestations of systemic disease.

Systemic manifestations of oral disease.

Comprehensive interprofessional approach to health promotion and disease prevention.

