

# Rural health licensure and dental therapy Minnesota Initiatives: Leon Assael



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United States Department of  
**Health & Human Services**

- Surgeon General's Report on Oral Health, 2000
  - What is oral health?
  - What is the status of oral health in America?
  - What is the relationship between oral health and general health and well being?
  - How is oral health promoted and maintained and how are oral diseases prevented?
  - What are the needs and opportunities to improve oral health?

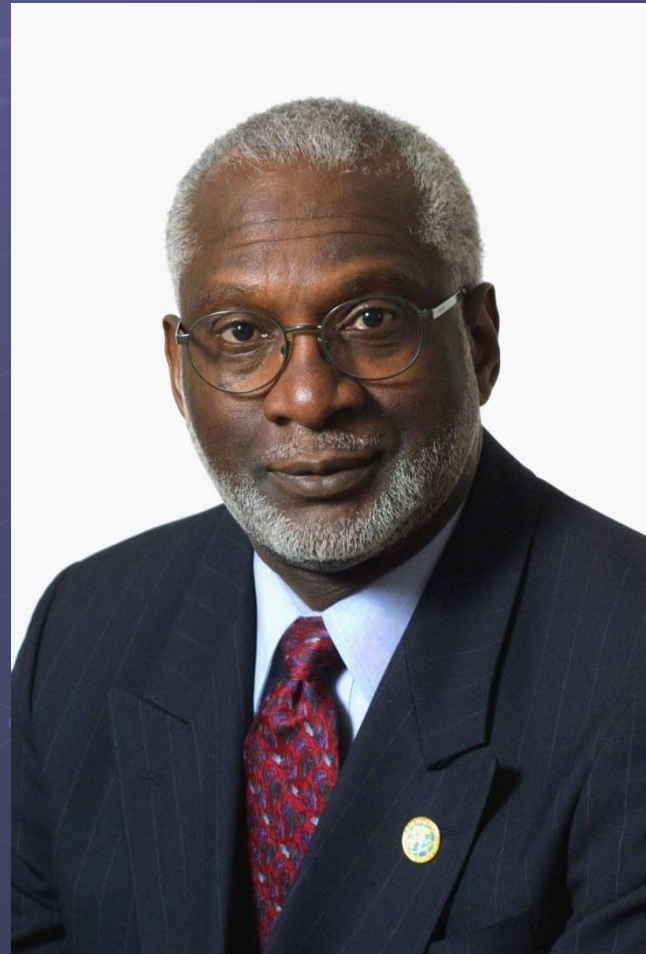


# What is oral health?

- Optimal contribution of the structure and function of the oral cavity to the well being of the patient

# What is the status of oral health in America? David Satcher MD

- a “silent epidemic” of dental and oral diseases is affecting some population groups. This burden of disease restricts activities in school, work, and home, and often significantly diminishes the quality of life. Those who suffer the worst oral health are found among the poor of all ages, with poor children and poor older Americans particularly vulnerable. Members of racial and ethnic minority groups also experience a disproportionate level of oral health problems. Individuals who are medically compromised or who have disabilities are at greater risk for oral diseases, and, in turn, oral diseases further jeopardize their health.





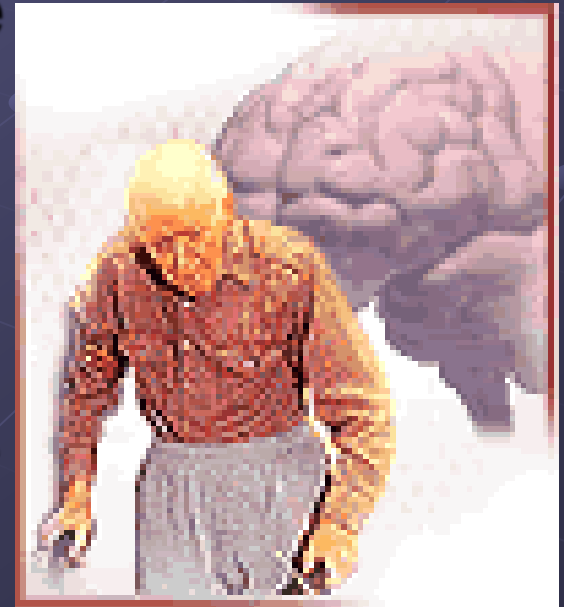
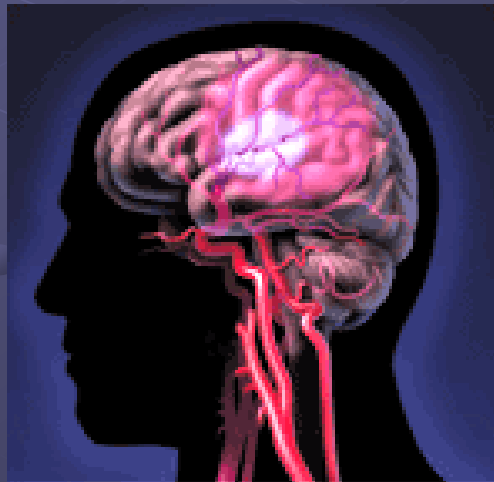
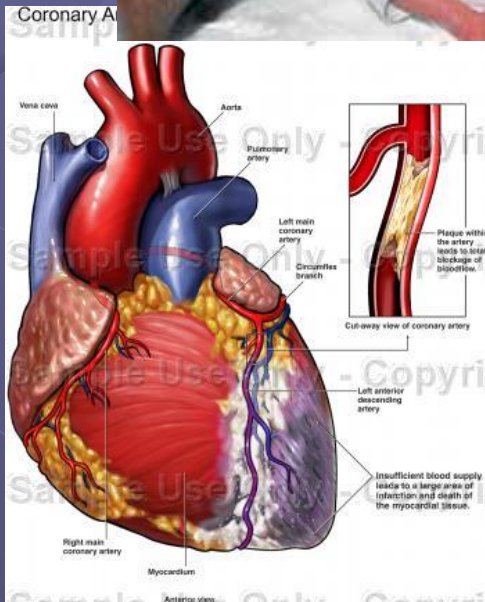
# Some Evidence regarding oral health and general health

- Poor oral health is evident in (and empirically/mechanistically linked to)
  - Premature low birth weight babies in pregnant women with poor oral health
  - Myocardial infarction
  - Movement disorders in elderly
  - Stroke
  - GERD
  - Nutritional deficiencies in children and elderly

# Dental Disease Associated with systemic diseases



- Premature low birth weight babies
- Myocardial Infarction
- Senile dementia
- Stroke





# Burden of Oral Disease in US

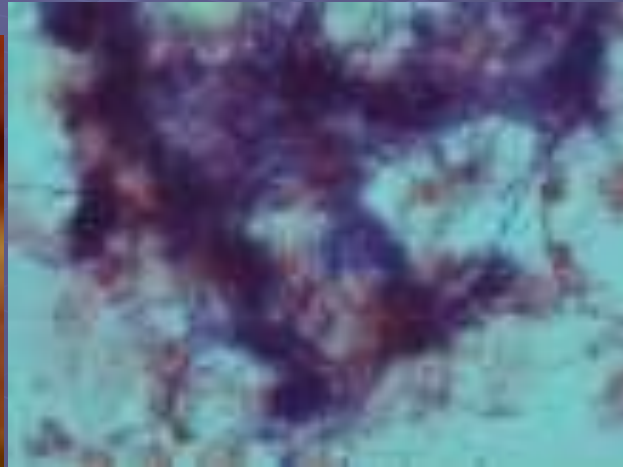
- Dental caries, >50% of preschoolers and 280 million americans
- Periodontal disease: active in >50%
- Oral cancer: 30,000 new cases per year with 40% five year survival
- Cleft lip and palate: 1/600 births
- Temporomandibular disorders: 30-40% of adult population

# Historical

- Caries is like polio or tuberculosis
- The development of dentistry as a profession rather than a specialty
- Development of dentistry's scope of practice
- Development of dentistry's payment system
- Workforce development and changes



# Dental Caries



# Caries, an infectious disease

- 70-90% of children by the second grade
- Over 1 million lost school days each year due to odontalgia
- Developing pain behavior/subsequent drug use?
- The MOST common unmet health need





# Early childhood (milkbottle) caries

- Diet
- Hygiene
- Exposure to pathogens
- Fluoride dose
- Vitamin D dose
- Aluminum and heavy metal exp.



# Meth mouth



- Smooth surface rapidly advancing caries associated with Methamphetamine use
- Xerostomia, immunosuppression, diet
- Psychosocial aspects of addiction



# Caries and head and neck infection

## ● Catastrophic potential

- Airway obstruction
- Sepsis
- Necrotizing fasciitis
- Cavernous sinus thrombosis



# Today

- The dentist workforce conundrum
- Direct restoration of teeth
  - 1970's 40% of practiced, today 16%
- The Duluth story
- The Northwest Minnesota Story
- 120 billion dollars/ 250 million is NDAK share
- 5 million per week
- 85 dollars/ Diamante Driver

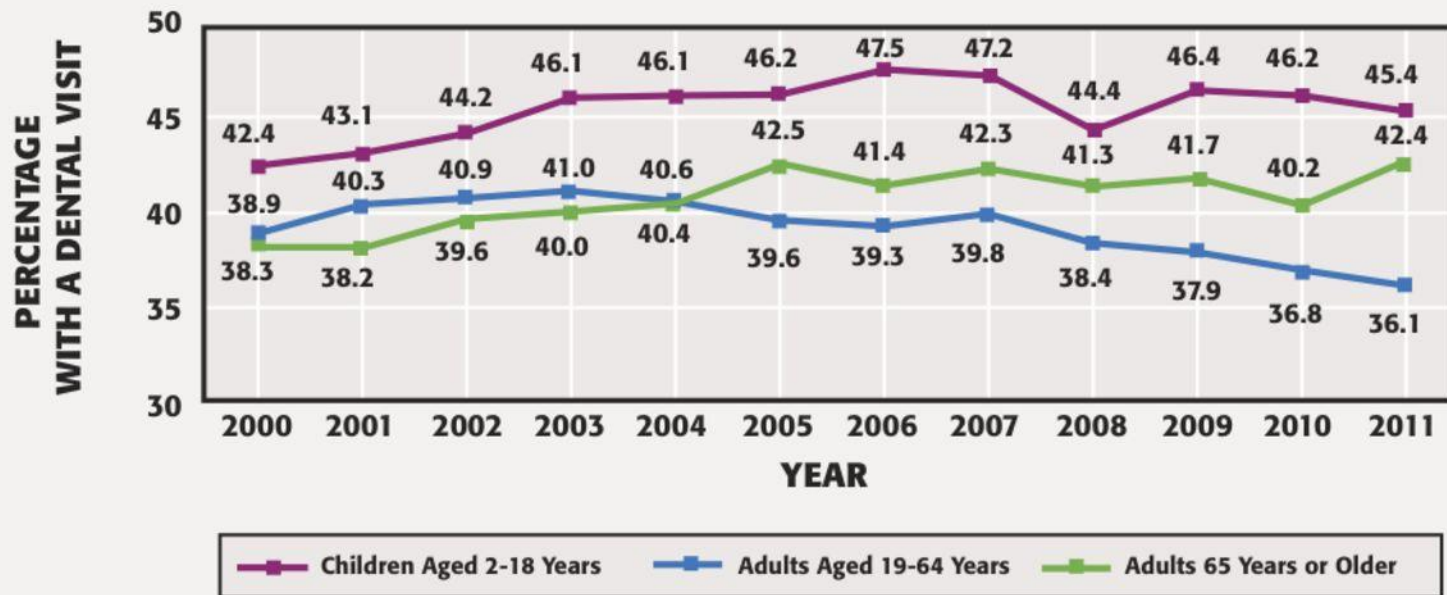
# Changes in Science

- Medical management of caries
- Overtreatment
- Perverse incentives: # 19, 20 ,21
- Payment for services not for outcomes of disease management



# Economic model does not support good oral health

- Perversity of Increased Disease
- decreased demand 54% to 36%
- Unsustainable economic model for dental practice for both dentist and patient
- No private dental insurance: prepaid care not insurance unless public or union
- Solo practice model > 80%
- 2% in interprofessional practice



**Figure 1.** Percentage of the population with a dental visit in the past 12 months. Source: Nasseh and Vujjic.<sup>2</sup>

Vujjic, M. et al. JADA 2014;145:2:118-121

# The Minnesota Story

- Status quo in Minnesota: .44 visits, assisted living, no access for public pay
- Interprofessional Education
- Intraprofessional Education: side by side education to the same standard
- The accountable Care Organizations
- The triple aim



# Rural Health and Oral Health A Minnesota plan for the future



**May 9, 2014**

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# Building Bridges to a Dental Career

- a multi-dimensional program funded by the Human Resources and Services Administration (HRSA) consisting of the Saturday Academy (for middle and high school students), Summer Dental School Experience (for college students), the Post-baccalaureate program for those who have unsuccessfully applied to dental school and the Pre-matriculation program for disadvantaged students entering dental school



# Early Decision Rural Dentistry Track

- This program recruits college students from rural communities who have demonstrated a strong interest in dentistry and in practice in rural areas. This program is funded by HRSA through the MN Department of Health. Students are required to have a rural dentist as mentor, fulfill GPA requirements set by the DDS Admissions Committee and complete a health project in a rural community during their summer breaks



# National Dental Pipeline Program

- Funded by the Robert Wood Johnson Foundation and in collaboration with the Brian Coyle Community Center, this program focuses on culture specific recruitment of Somali high school youths in the Cedar Riverside neighborhoods. Fifteen Somali high school students (13 males and 2 females) were selected from the youth program of the Brian Coyle Center for a 10 month of didactic and hands-on experiences to enable them to explore dentistry as a career.

# Outcomes

- 20% ethnically Diverse students including substantial southeast Asian and east African students
- 15 students from rural communities
- 7 current Native Americans
- 6 Hispanic students in class of 2017

# Address the Need: Access to Care

## Initiatives (current)

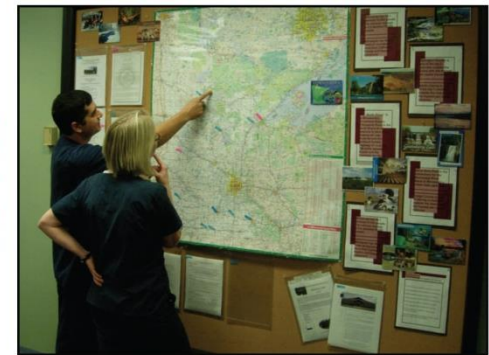
- GPR Clinic
- Pediatric Dental Clinic
- Promote rural job opportunities
- New DDS admissions policies/recruitment programs
  - Enhance geographic & cultural diversity of student body
  - Develop interest in dental careers among students from underrepresented communities.

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### Promoting Rural Job Opportunities

Bulletin board posting  
Limited to Greater Minnesota  
Associateships available  
Communities searching  
Lifestyles showcased



### Summer Dental Experience

(for students from under-represented communities)

20 college students  
Understand dental profession  
Learn about applying to dental school  
Develop a coursework plan



# Address the need: Access to Care

## Initiatives (current)

- Community-based service learning
  - Graduation requirements: 6-8 weeks outreach exp.
  - Students staff clinics in underserved communities
    - 10 outreach sites
    - 2 externships to-come
  - More likely to consider practice in underserved areas after graduation.







# New outreach sites

IHS Externship Opportunities Summer 2013



Chief Redstone Health Clinic  
Wolf Point, MT



Quentin N. Burdick Memorial  
Health Care Facility  
Belcourt, ND



# Proposed Program

- Identify and admit students to a customized program with the goal of producing an oral health workforce for rural Minnesota
- The curriculum will specifically address the special nature of the rural practice environment
- The recruitment and retention of rural oral health professionals well prepared for rural practice is the goal of the program

# Why don't many people have good oral health in North Dakota?

- Sociologic acceptance of disease burden
- Maldistribution of resources
- Ability to pay
- Denial of need
- Inadequate population based preventive services

- Oral health literacy
- Social determinants of health
- Overall health status
- Complexity of system
- Oral health disconnect to human health in health system and ACO's
- Reimbursement



# Why Should North Dakota Consider Dental Therapy?

- A new more robust team member
- A cost effective means to treat dental caries
- Dental therapy is for caries what dental hygiene has been for periodontal disease

# Today's Minnesota DDS/DT Team in action

- Private practice
- Public health
- Rural/urban
- FQHC
- Hennipin County Medical Center
- Native american health center
- Elder care
- Pediatric dental services

Can/will dental therapy make a healthier society at lower cost and with a better patient experience?





# Need for Dental therapy



# Who?



## **Summer Dental Experience**

(for students from under-represented communities)

20 college students

Understand dental profession

Learn about applying to dental school

Develop a coursework plan

# What?





- What is appropriate length for dental therapy education?
- What are appropriate prerequisites for dental therapy education?

## ● Is dental therapy good for dentistry?

- Higher job satisfaction
- Higher income
- Total retention of DT in practices that have dental therapists.

## ● Is it good for individual dental practices?

- What is the appropriate scope of education and practice for dental therapy?
- How do dental therapists fit into an oral health care team with regard to settings? Supervision? Quality care management?



# Where

## Promoting Rural Job Opportunities

Bulletin board posting  
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Lifestyles showcased



- Is DT education best done in dental schools?
- Community settings?
- Regional/community colleges?

# Why?





# Assessment

- Do dental therapists provide good care?
- Do they make patients and populations healthier?

# Barriers

- What are the barriers to developing dental therapy
- How important is oral health and dental therapy in the new health care models?
- Are different models of education helpful?
- What are your direct observations?
- Predictions?



■ Program in Dental Therapy

- **Single standard of care**
- **Competency requirements identical** to those for DDS students (within defined scope of practice)
- Program **structured to complement** rather than compete with other dental professionals
- Program will provide a foundation for **professional advancement and career growth**
- Graduates will contribute to **reducing the cost of care** and to **improving access** for underserved communities
- Education occurs in a professional environment which includes dental hygienists & dentists, to ensure graduates prepared to **work in a team setting**
- Program can be **replicated by other dental schools**





# What are the needs and opportunities to improve oral health in North Dakota?

- Access to Care
- Build a more robust oral health care team
- Integrated medical, dental health care delivery
- Common education of health professionals
- Consumer directed health care
- Basic skill in primary care medicine and nursing
  - Exam, risk assessment
  - Medical management of caries
  - Nutrition and hygiene instruction