Oral health literacy for an aging population?
What we did not consider when they were young and what can we do about it now!
What conversations have we had with patients (and caregivers) and what can we do about it now!
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"Financial Disclosure”

Dr. Mark S. Wolff, is declaring that he has no conflicts of interest related to this presentation, that are not related his responsibilities to University of Pennsylvania School of Dental Medicine.
Oral health literacy for an aging population?

Who needs Oral Health Education for Aging?
  Patient?
  Caregiver?
  Dentist?
  Society?
Is tooth loss inevitable?
Is tooth loss inevitable?

49% of Seniors believe tooth loss is inevitable!

Canadian Dental Association Patient Survey 2005
Subjects for this hour

Changing concepts in aging

Changes in our treatment and caregivers information

New management of Caries

Questions
Education

More than 1/2 of adults believe that tooth loss is a normal part of aging.

More than 1/2 of older adults do not think they need to clean their mouth when removing dentures overnight.

Most older adults and care givers do not realize the relationship between poor oral health and systemic health.

70 percent of those who have trouble eating because of problems with their teeth haven’t gone to the dentist in the past year.

Most older adults, particularly those that are poor and have little education, just “accept the inevitable” of tooth loss.

Tara A. Cortes, PhD, RN, FAAN, Executive Director, Hartford Institute for Geriatric Nursing and Professor, NYU Rory Meyers College of Nursing.
Education

Generations of the healthcare workforce have little oral health knowledge

Dentists do not routinely check the mouth for signs of systemic disease

Too often Home Health Aides are negligent with oral hygiene

Patients with dementia pose a unique problem

Interprofessional communication amongst professionals related to oral health is limited

Tara A. Cortes, PhD, RN, FAAN, Executive Director, Hartford Institute for Geriatric Nursing and Professor, NYU Rory Meyers College of Nursing
We are getting older!

<table>
<thead>
<tr>
<th>Year</th>
<th>Life expectancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1776</td>
<td>35</td>
</tr>
<tr>
<td>1900</td>
<td>47</td>
</tr>
<tr>
<td>1950</td>
<td>68</td>
</tr>
<tr>
<td>1960</td>
<td>69.7</td>
</tr>
<tr>
<td>1991</td>
<td>76</td>
</tr>
<tr>
<td>2018</td>
<td>78.6</td>
</tr>
</tbody>
</table>

Year 2000 - 16% of U.S. population >65
Year 2030 - 20% of U.S. population >65

What are the Demographics For Elder Care

In Canada (2011) for example

Population aged 65 and over: 4,945,000

- Living in private dwellings: 4,551,905 (92.1%)
- Living in collective dwellings: 393,095 (7.9%)
  - Living in special care facilities: 352,205 (7.1%)
  - Living in other collectives: 40,890 (0.8%)
- Living in nursing homes, chronic care and long-term care hospitals: 224,280 (4.5%)
- Living in residences for senior citizens: 127,925 (2.6%)

What are the Demographics For Elder Care

In Canada (2011):

Population aged 90 and over:

- Lived in private households - 56.5%
  - lived alone - 28.7%
- Part of couples - 12.2%
- Lived with others - 15.7%, (such as adult children)
- Lived in collectives - 43.5%
  - (such as nursing homes or residences for senior citizens)

Seniors (65 and older)

- 92% of seniors have had decay
- 25% of seniors have no teeth
- 23% have untreated caries
- 90% have income less than or equal to 200% of the poverty level

The increase in restorative work required by patients between now and 2030 will be in those over the age of 50
Seniors (65 and older)

7 percent of adults 65 years and older reported having tooth pain at least twice during the past 6 months.

Oral health problems, whether from missing teeth, ill-fitting dentures, cavities, gum disease, or infection, can cause difficulty eating and can force people to adjust the quality, consistency, and balance of their diet.
Seniors (65 and older)

Percent of persons 70 years of age and older who have trouble biting or chewing by educational level, 1995

<table>
<thead>
<tr>
<th>Years of Education</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 8</td>
<td>23%</td>
</tr>
<tr>
<td>9 - 11</td>
<td>17%</td>
</tr>
<tr>
<td>12</td>
<td>13%</td>
</tr>
<tr>
<td>13+</td>
<td>10%</td>
</tr>
</tbody>
</table>

Source: National Health Interview Survey, Second Supplement on Aging.
What is the State of Oral Health in Our Aging Population?

*Periodontal disease is widespread in adults over 65 years old; it has been reported 67.4% of the aged population in New York State has periodontitis with 12% reporting severe periodontitis*

Aging

Defined by time

Adapted from I Pretty et al. The Seattle Care Pathway for securing oral health in older Patients. Gerodontology 2014; 31 (Suppl. 1): 25–30
There are biologic consequences of aging!

Adapted from I Pretty et al. The Seattle Care Pathway for securing oral health in older Patients. Gerodontology 2014; 31 (Suppl. 1): 25–30
Relationship Between Aging

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Relationship Between Aging and Dependency

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Relationship Between Aging and Dependency

Is It Time to “Undo” Prior Dentistry

Adapted from I Pretty et al. The Seattle Care Pathway for securing oral health in older Patients. Gerodontology 2014; 31 (Suppl. 1): 25–30
Relationship Between Dependency and Needing Accommodation

What are the Age-appropriate “Accommodations”

Adapted from I Pretty et al. The Seattle Care Pathway for securing oral health in older Patients. Gerodontology 2014; 31 (Suppl. 1): 25-30
Economics and Oral Health

People with lower incomes have more co-morbidities

People with lower incomes have less access to healthcare

High-income beneficiaries were almost three times as likely to have received dental care in the previous 12 months as compared to low-income beneficiaries

42% of people over 65 in West Virginia are toothless compared to 14% in California

Many high-income beneficiaries – even those with dental insurance – paid a sizable portion of their bills out of pocket.

For those with incomes just over the federal poverty level, 27 percent of those without dental insurance had a dental visit in the previous year compared to 65 percent with dental insurance

Only 12% of older Americans had some sort of dental insurance
What are the Demographics For Elder Care

Sixty-five plus in the United States

The Need for Personal Assistance With Everyday Activities Increases With Age

Percentage of persons needing assistance with everyday activities, by age: 1990-91
(Civilian noninstitutional population)

- 85 and over: 50%
- 80-84: 31%
- 75-79: 20%
- 70-74: 11%
- 65-69: 9%
- 15-64: 2%

http://www.census.gov/population/socdemo/statbriefs/agebrief.html
U.S. Census Bureau, Population Division  Last Revised: October 31, 2011

- Under 5 years: 0.8% with disability, 99.2% without disability
- Ages 5-17: 5.4% with disability, 94.6% without disability
- Ages 18-64: 10.4% with disability, 89.6% without disability
- Ages 65 and over: 35.4% with disability, 64.6% without disability
What are the available dental treatments for an aging population?
Repair of Prior Complex Therapy

Repair, Replace
Repair of Prior Complex Therapy

Repair, Replace or Not
Fluoride Varnish Treatment
A bit of History of Fluoride Varnishes

• 1964 – Schmidt
  • Trying to prolong the contact time, he incorporated NaF in a natural resin (Rosin, formerly known as colophony). Later it was registered as Duraphat®

Carlos González-Cabezas, DDS, MSD, PhD
Why Fluoride Varnish?

Simple to apply
Safe
Low unit cost
No special equipment or cleanings needed
Proven Record in Decay Reduction
IT WORKS!
40-70% Reduction!
Silver Diamine Fluoride

Silver Diamine Fluoride: A Caries “Silver-Fluoride Bullet”

A. Rosenblatt1,2,3, T.C.M. Stamford3, and R. Niederman1,4

1The Forsyth Institute, 140 The Fanway, Boston, MA 02115, USA; 2Children’s Hospital Medical Center, Boston, MA, USA; 3School of Dentistry, University of Pernambuco, Recife, Pernambuco, Brazil; and 4Goldman School of Dental Medicine, Boston University, Boston, MA, USA; *corresponding author; arosenblatt@forsyth.org


R. NIEDERMAN 2010
Silver Diamine Fluoride

Yasmi O Crystal DMD, MSc, FAAPD
Atraumatic Restorative Therapy

History of Atraumatic Restorative Therapy

J.E. Frencken in the mid-1980s as part of a primary oral health-care program of the dental school in Dar es Salaam, Tanzania

Made possible by the development of glass ionomer cements (GIC)

Developed to meet the needs of developing nations... currently being adapted for the care of pediatric patients world wide
Surgical Therapy

What are the Thresholds?

Active disease

Lesion that can not be reversed or arrested

Lesions that have penetrated to the outer third or middle third of the dentin
Summary- Caries Management in Aging Population

Prevention as a priority, surgical intervention only used as a last resort - Manage a Patient’s Risk

Adapted from Caries Management Pathways 2012
Summary - Caries Management in Aging Population

Prevention as a priority, surgical intervention only used as a last resort - Manage a Patient’s Risk

All Patients Requiring Restorative Care Are At Risk

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All Patients at Risk, Regardless of Age, Should Receive Fluoride Varnish 3-4x/year

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All Patients at Risk Should Receive Enhanced Homecare

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Summary - Caries Management in Aging Population

Prevention as a priority, surgical intervention only used as a last resort - Manage a Patient’s Risk
All Patients Requiring Restorative Care Are At Risk
All Patients at Risk, Regardless of Age, Should Receive Fluoride Varnish 3-4x/year
All Patients at Risk Should Receive Enhanced Homecare
All Patients at Risk Should Receive Dietary Counseling

Adapted from Caries Management Pathways 2012
Charge for our profession

There ARE no “SPECIAL NEEDS”
Charge for our profession

There ARE no “SPECIAL NEEDS”
There is no “special equipment”
Charge for our profession

Practice Guidelines

Cover Story

Evidence-based clinical practice guideline on nonrestorative treatments for carious lesions

A report from the American Dental Association

Rebecca L. Slayton, DDS, PhD; Olivia Urquhart, MPH; Marcelo W.B. Araujo, DDS, MS, PhD; Margherita Fontana, DDS, PhD; Sandra Guzmán-Armstrong, DDS, MS; Marcelle M. Nascimento, DDS, MS, PhD; Brian B. Nový, DDS; Norman Tinanoff, DDS, MS; Robert J. Weyant, DMD, DrPH; Mark S. Wolff, DDS, PhD; Douglas A. Young, DDS, EdD, MS, MBA; Domenick T. Zero, DDS, MS; Malavika P. Tampi, MPH; Lauren Pilcher, MSPH; Laura Banfield, MLIS, MHSc; Alonso Carrasco-Labra, DDS, MSc
Charge for our profession

There ARE no “SPECIAL NEEDS”
There is no “special equipment”
There must be a moral commitment to care through the lifetime!
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OTHER PROFESSIONS MUST TAKE RESPONSIBILITY FOR ORAL HEALTH

Penn Dental Medicine
Charge for our profession

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We MUST speak with caregivers and patients
We MUST expand the workforce...
Other Professions MUST take responsibility for oral health
ORAL HEALTH IS PART OF HEALTH!
79% of thrombi contaminated with ORAL bacteria...
“DNA from viridans streptococci in aspired thrombi of patients with acute ischemic stroke”
“The moral fabric of any country is how it treats those in the dawn of light, those in the twilight of life and those living in the shadows in between.”

Hubert Humphrey