

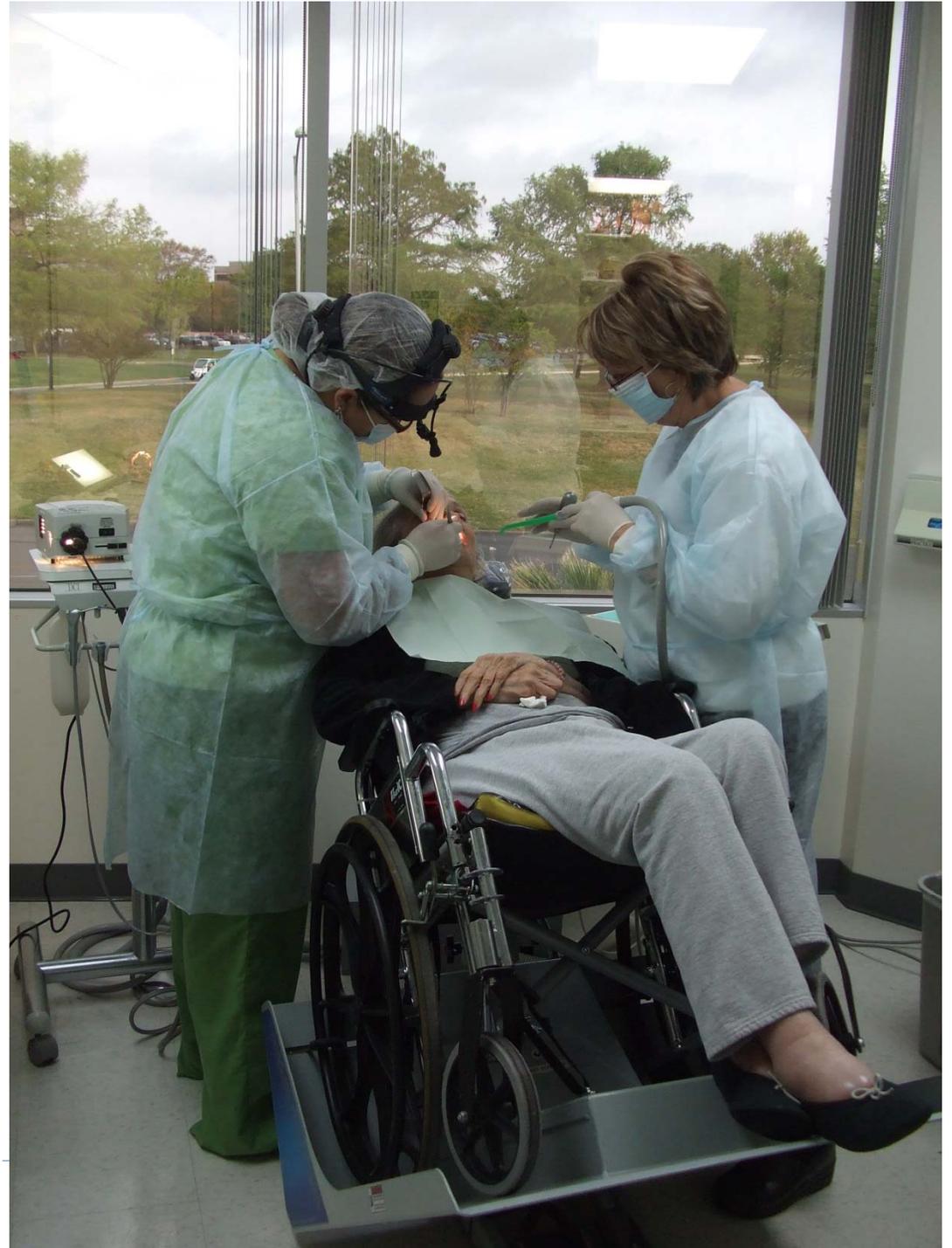


Clinical Management of the Older Adult Dental Patient: Guiding Principles

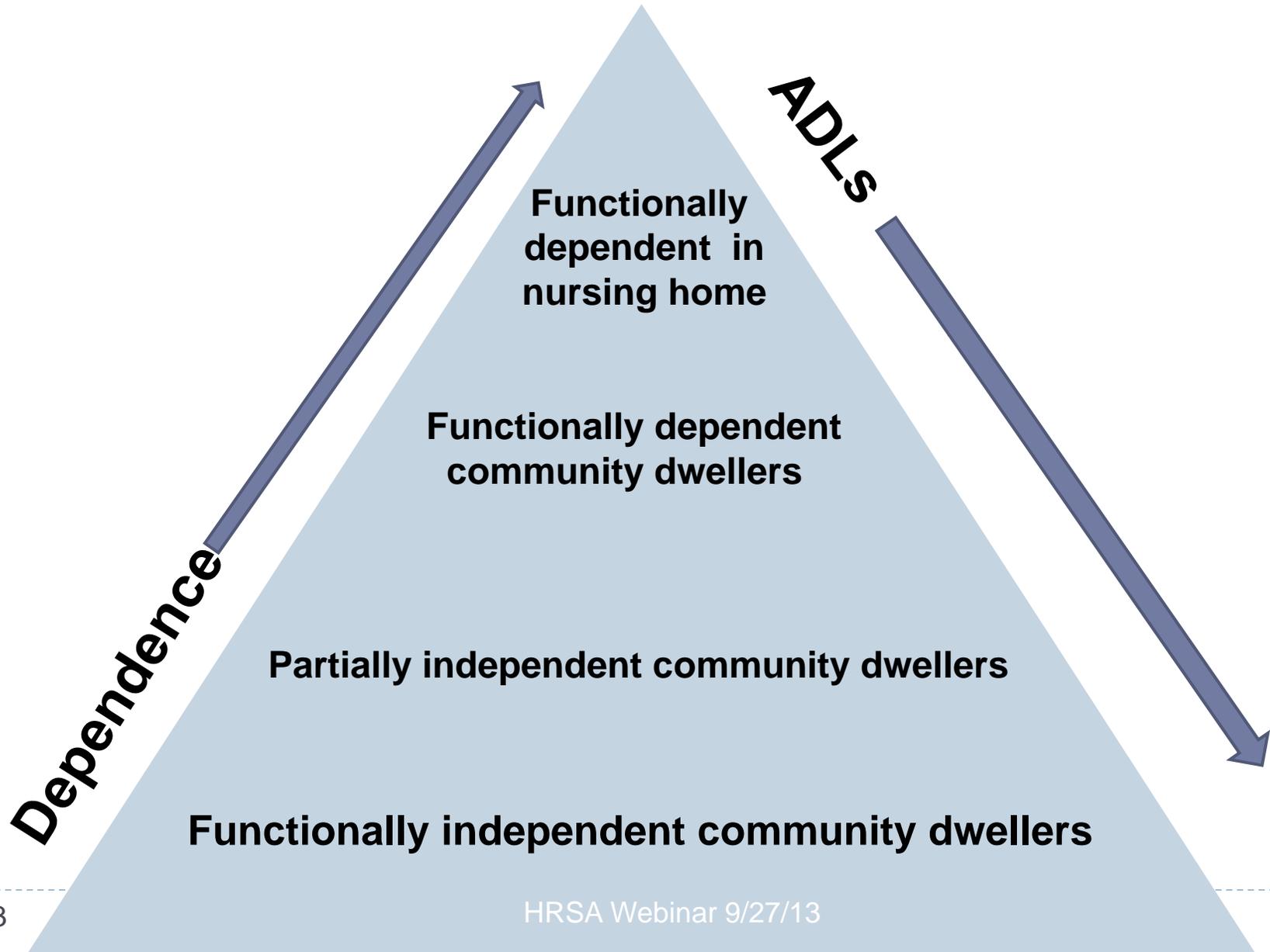
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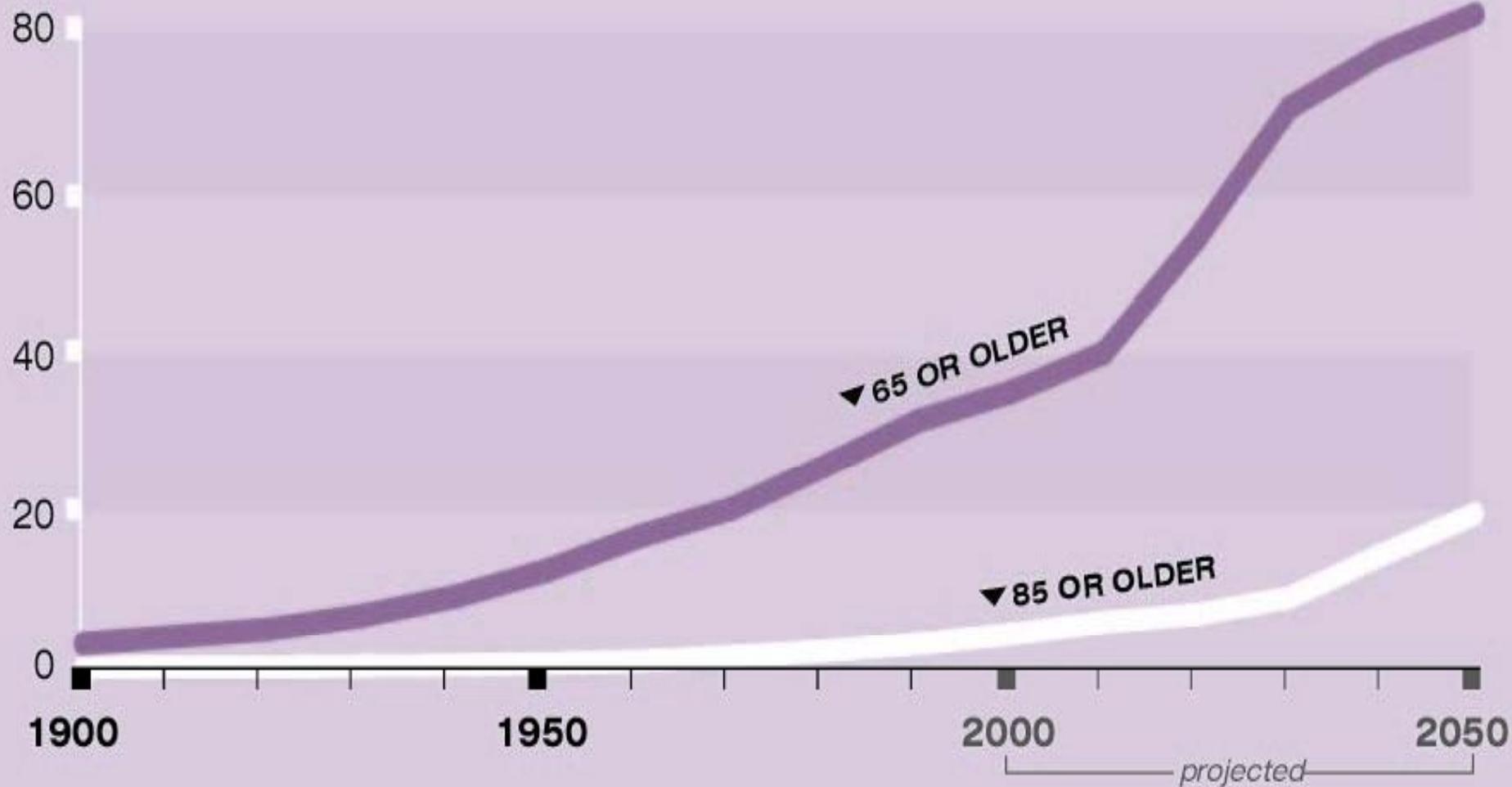
- Community dwellers
- Nursing homes
- Frail elders
- Most over 60 years old
- Average 86 years old
- Medically underserved



Age is only a number



Total number of persons age 65 or older, by age group, 1900 to 2050, in millions



Note: Data for the years 2000 to 2050 are middle-series projections of the population.

Reference population: These data refer to the resident population.

Source: U.S. Census Bureau, Decennial Census Data and Population Projections.

We are living longer.

- ▶ Living longer with multiple serious medical conditions.
- ▶ Living longer with serious limitations.
- ▶ Medically underserved?
- ▶ One of the fastest growing segment of society is the >85+.
- ▶ Do we plan for our patients to become the “old – old”?



Dental Collapse in Older Adults

- ▶ Inevitable decline from age 65 – 100
 - ▶ Decrease in saliva
 - ▶ Decrease in dexterity
 - ▶ Decrease in ability to tolerate dental care
 - ▶ Decrease in ability to express needs
 - ▶ Decrease in access to dental office/dental care
 - ▶ Decrease in ability to pay for dental care

🔑 Are our clinical strategies grounded in prevention?





*Failure of multiple previous care systems?
Lack of a prevention focus?*

Oral Health of Older Adults

- ▶ 17.1% of adults aged 65-74 have untreated coronal caries
- ▶ 37.9% of adults >75 have untreated root surface caries
- ▶ 24% of adults aged 65-74 have lost all of their teeth
- ▶ 12.7% of adults 45-74 have moderate/severe periodontitis

Data Source: 1999 – 2004
National Health & Examination Survey, CDC, NCHS

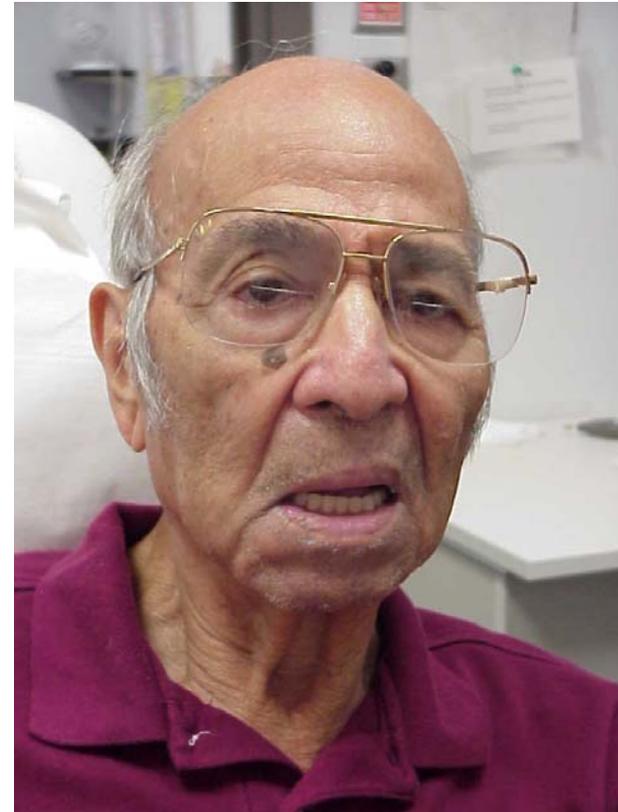
Guiding Principle:

When treating older adults, prevention is key.



Prevention: Individualized Plan

- ▶ Smoking cessation
- ▶ Oral cancer screening
- ▶ Glycemic control
- ▶ Fluoride varnish/gel/rinse
- ▶ Dental sealants
- ▶ Xylitol products
- ▶ Dry mouth products
- ▶ Nutritional counseling
- ▶ Patient and family education
- ▶ Scheduled regular dental follow ups
- ▶ Oral care products
- ▶ Oral hygiene instruction/demonstrations





Older adult patients will become frail elders

- ▶ **Limited perspective.**
- ▶ **Treatment as core.**
- ▶ Rule bound
- ▶ Cookie cutter approaches
- ▶ Focus on solving immediate problem
- ▶ Focus on surface features of the problems
- ▶ **Long term perspective.**
- ▶ **Prevention as core.**
- ▶ Adapt to circumstances
- ▶ Individualized strategies
- ▶ Focus on managing the problem
- ▶ Focus on underlying problems



Individualized Oral Care Aids

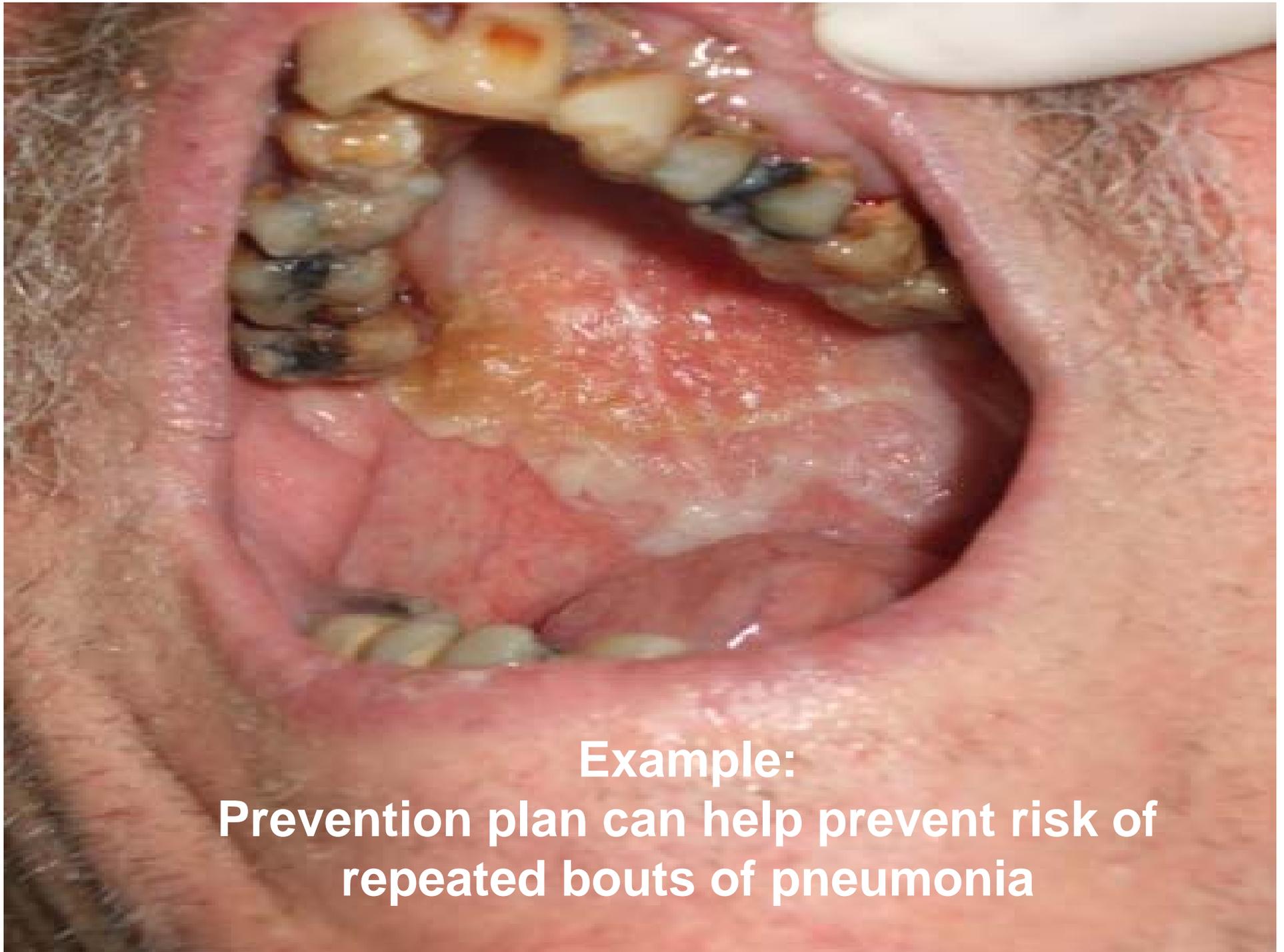




Individualized Preventive Plan Included:

- ✓ Modified toothbrush handle
- ✓ Glycemic control
- ✓ Fluoride varnish
- ✓ Dental sealants
- ✓ Nutritional counseling
- ✓ Oral hygiene instruction
- ✓ Xylitol products
- ✓ Regular dental follow ups
- ✓ Oral cancer screening

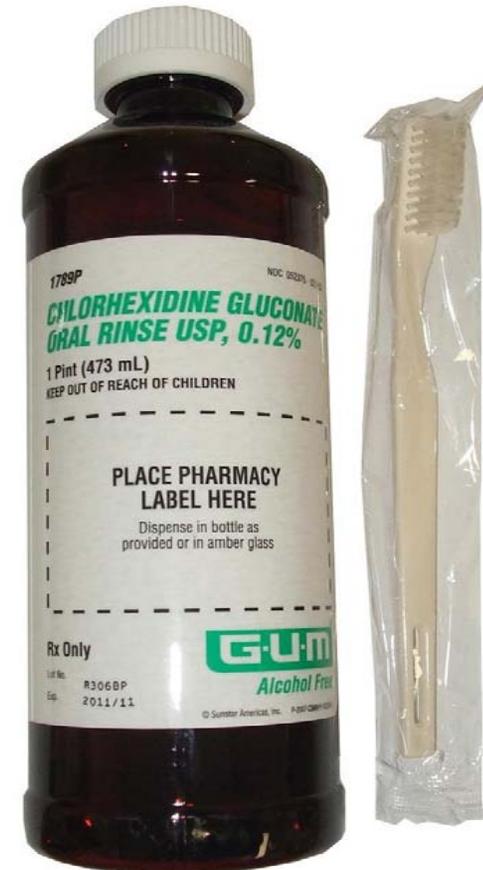




**Example:
Prevention plan can help prevent risk of
repeated bouts of pneumonia**

Chlorhexidine Gluconate

- ▶ “Oral decontamination using topical antimicrobial agents such as chlorhexidine gluconate appears to be effective in reducing the rate of pneumonia in vulnerable population.”
- ▶ JADA, Vol. 138
<http://jada.ada.org> Sept 2007
- ▶ Preprocedural brushing on every patient prior to treatment







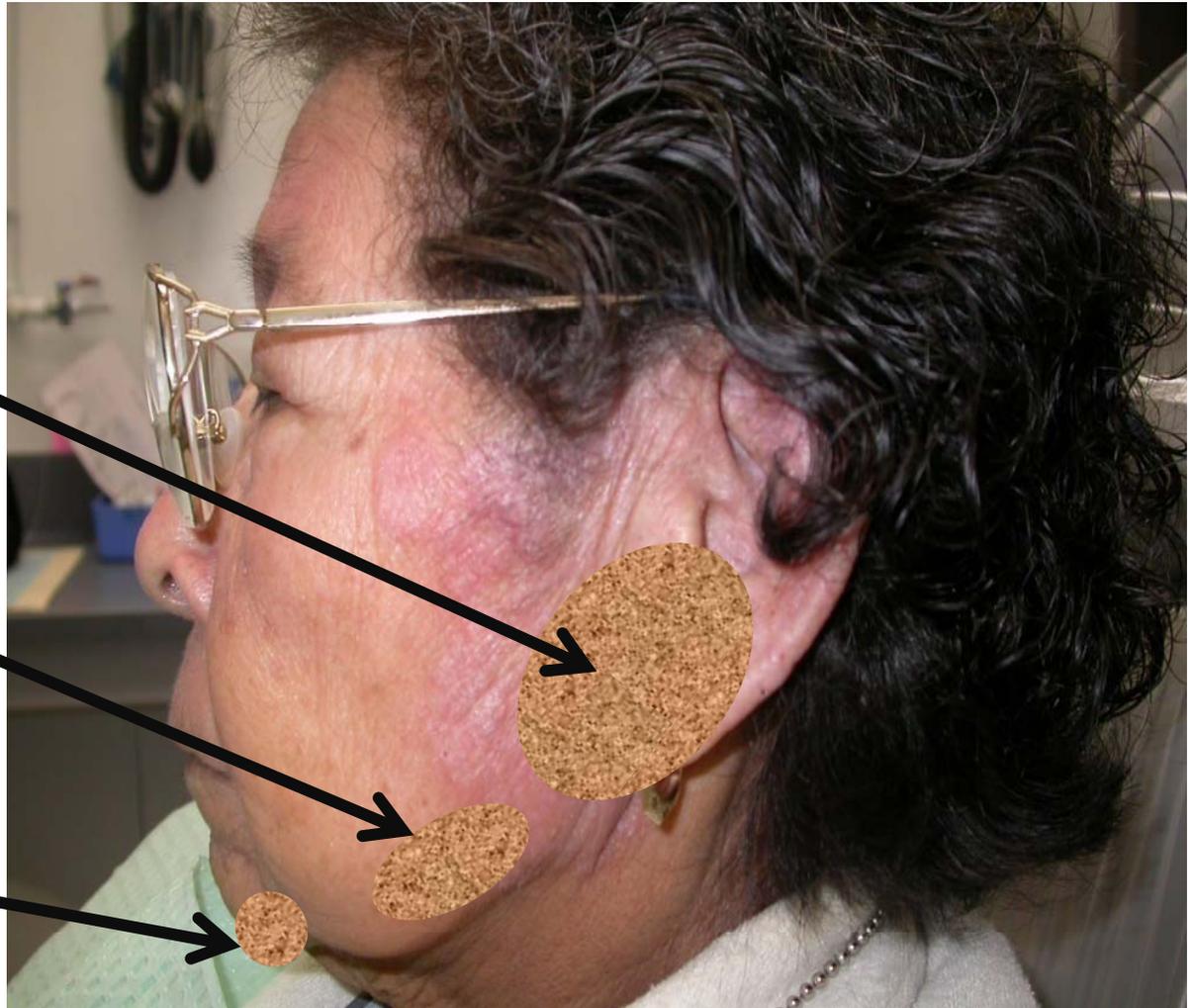
Take the long term perspective on prevention.

Lack of Saliva: Serous loss > Mucous loss

Parotid Gland

Submandibular Gland

Sublingual Gland



Products for patients with dry mouth

- ▶ **1. Oral Moisturizers**
 - ▶ Oralbalance, Moi-Stir, Salivart
- ▶ **2. Topical Fluoride Varnishes**
 - ▶ DuraFlor (5% NaF)
- ▶ **3. Brush on Gels**
 - ▶ Prevident (1.1% NaF)
- ▶ **4. Mouth rinses**
 - ▶ Prevident (0.2% NaF) Periogum (0.12% Chlorhexidine Gluconate)
- ▶ **5. Xylitol containing Chewing Gums**
 - ▶ Biotene
- ▶ **6. Pharmaceuticals**
 - ▶ Salagen (Pilocarpine), Evoxac (Cevimeline)



Guiding Principle:

Determine your patient's medical stability.



Clues From Patient's Medical History:

- ▶ Determine if your patient is a reliable historian.
- ▶ When was last time patient saw their doctor?
- ▶ When was last hospitalization? What was it for?
- ▶ What medications is patient taking? What dosage?
 - ▶ Example: clonidine?
 - ▶ Example: coumadin?
- ▶ What previous surgeries has patient had?
- ▶ Does patient have congestive heart failure?
 - ▶ Compensated or non compensated?

Additional Questions & Visual Cues

- ▶ How are you feeling today?
- ▶ Did you take your medications this morning?
- ▶ Overall appearance & demeanor
- ▶ Ease of respiration
- ▶ Swollen extremities, pitting edema
- ▶ Confusion, change in demeanor



High Quality Equipment = Reliable Information

Age-Related Changes:

- ▶ Structural Changes in Vasculature
- ▶ gradual build-up of atherosclerotic plaque
- ▶ thicker/less pliable arterial walls

Physiological Result:

- ▶ progressive increase in systolic BP
- ▶ slight increase in diastolic BP
- ▶ increase time to return to normal resting rate



Which individual presents a greater risk?

- ▶ “Joe”
 - ▶ 68 years old
 - ▶ 20 years hypertension
 - ▶ 2 years ago changed eating habits to be mainly low salt/low fat.
- ▶ “Henry”
 - ▶ 78 years old
 - ▶ 20 years hypertension
 - ▶ 2 years ago had quadruple bypass surgery



Routine Dental Procedures = Low CV Risk

Dental Procedures:

- ▶ No loss of body fluids
- ▶ Minimal/no blood loss
- ▶ Short appointments
- ▶ Usually under local anesthesia
 - ▶ Provides the greatest margin of safety

Increased CV Risk :

- ▶ Fluid shifts
- ▶ Blood loss
- ▶ Duration/length of the procedure
- ▶ General anesthesia
- ▶ Physiological stress
- ▶ Psychological stress

J Am Coll Cardiol 2002;39:542-553



Risk Stratification:

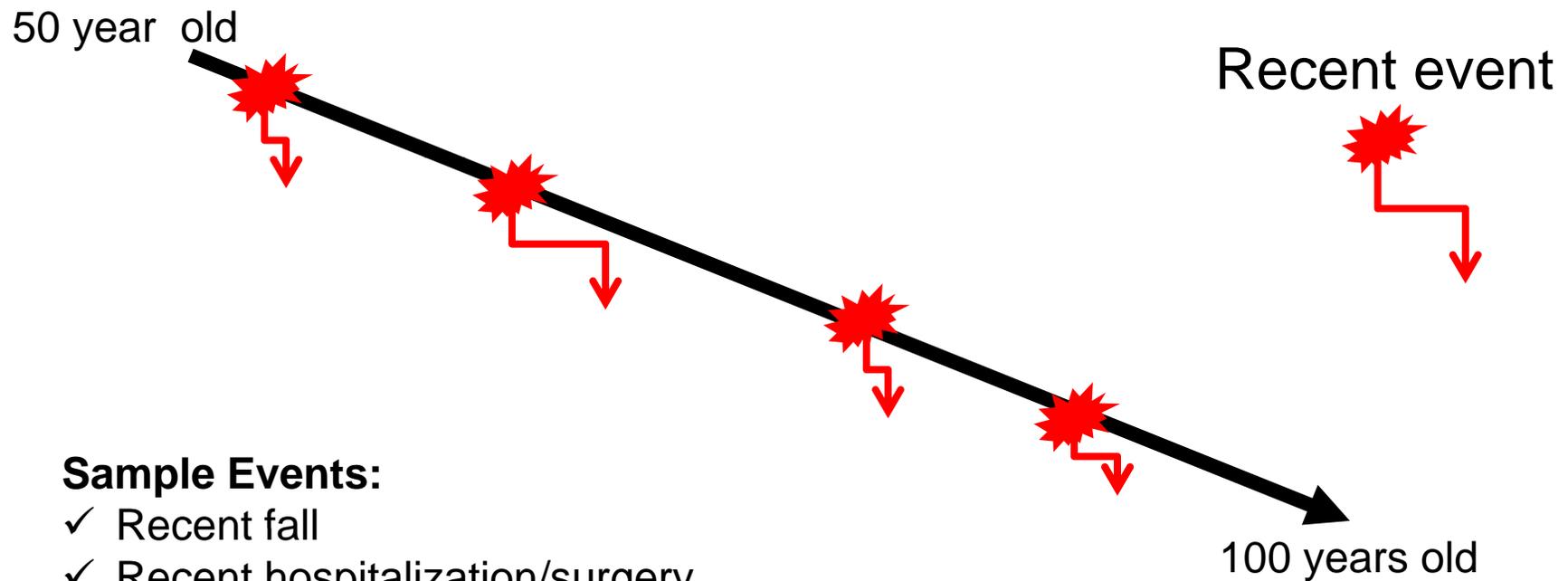
Minor predictors of increased CV risk

- Advanced age
- Atrial fibrillation
- Low functional capacity
- History of stroke
- Uncontrolled hypertension (> 180/110 mm/Hg)

J Am Coll Cardiol 2002;39:542-553



Recent Change May Signal Rapid Decline. Be alert to potential trigger events.



Sample Events:

- ✓ Recent fall
- ✓ Recent hospitalization/surgery
- ✓ Sudden dizziness
- ✓ Sudden weakness
- ✓ Sudden confusion

Recent Changes May Indicate:

- ▶ That patient should see their physician before continuation of dental treatment.
- ▶ Rapid decline may be just around the corner.
- ▶ Need to communicate with patient's physician.
- ▶ Need to modify treatment priorities.
- ▶ Need to modify treatment execution.
- ▶ Need to hold off on treatment or refer.

Guiding Principle:

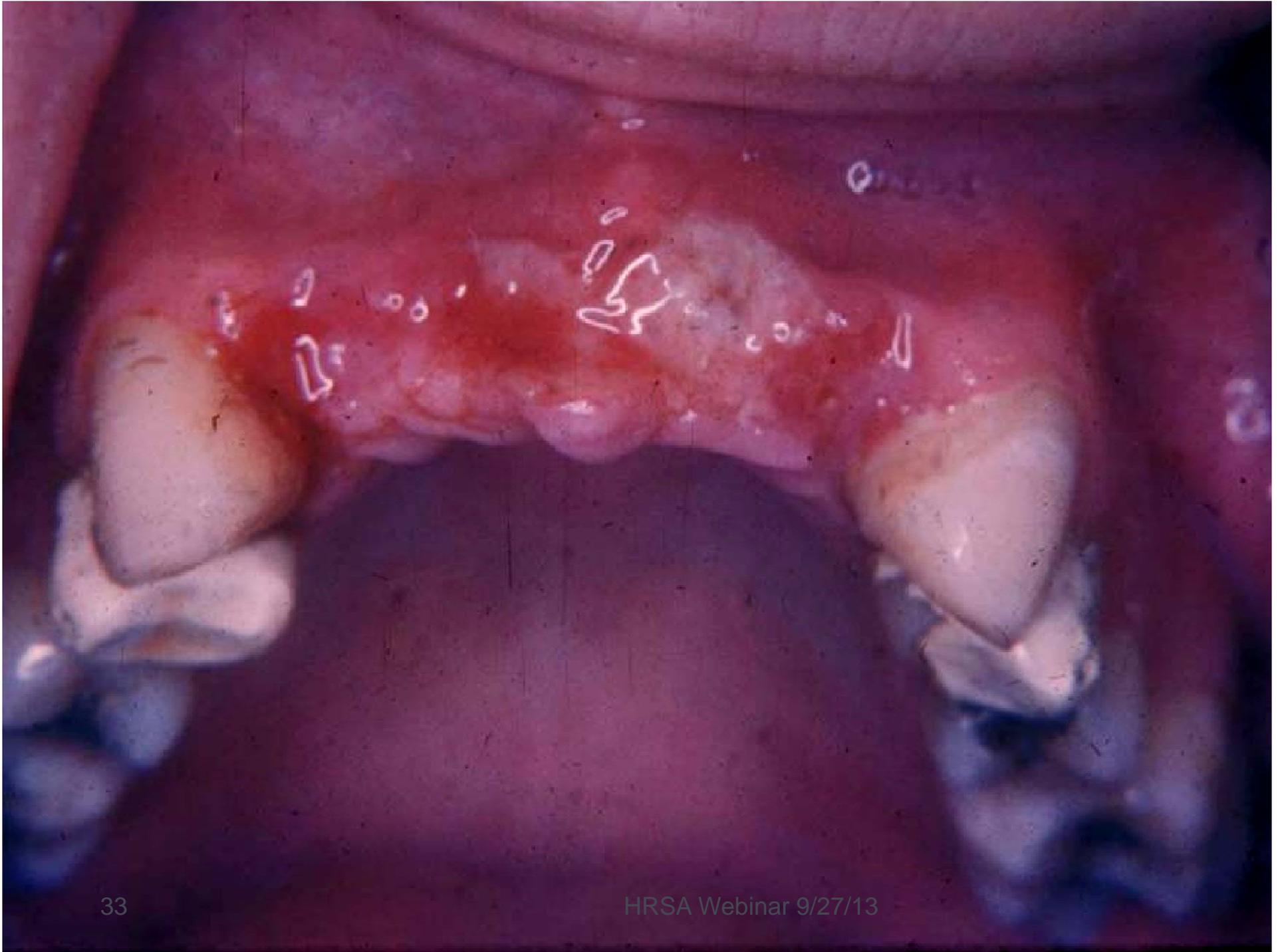
Medical problems can present differently & less dramatically.



Older adults as medically underserved.

- ▶ Not all older adults get “tested” .
- ▶ 35% of all older adults have clinically unrecognized heart attack, also known as a “silent MI”.
- ▶ Heart attack may present as a toothache.
- ▶ Fatigue & shortness of breath rather than chest pain can be a manifestation of heart attack.
- ▶ Confusion can be sign of:
 - ▶ Urinary tract infection
 - ▶ Ibuprofen overdose
 - ▶ Dehydration
- ▶ Look for clues.





Presentation of Hypoglycemia:

Younger Adult Diabetics

- ▶ Dramatic autonomic warning signs:
 - ▶ Sweating
 - ▶ Shakiness
 - ▶ Increased heart rate
 - ▶ Self treatment

Older Adult Diabetics

- ▶ May have more nonspecific warning signs:
 - ▶ Dizziness/weakness/confusion
 - ▶ May experience severe hypoglycemia before symptoms are recognized.
 - ▶ “Hypoglycemic Unawareness”
 - ▶ Due to autonomic impairment
 - ▶ Less ability for self treatment
 - ▶ Potentially life threatening

Using Blood Glucose Levels

Stat blood glucose level



- ▶ Snapshot only
- ▶ 100 – 120 is “normal”
- ▶ Primary prevention issue?

A1C level



- ▶ Estimated average
- ▶ “6” or “7” is good
- ▶ Primary prevention issue?

A1C

Estimated Average Glucose

▶ 5	97	(76–120)
▶ 6	126	(100–152)
▶ 7	154	(123–185)
▶ 8	183	(147–217)
▶ 9	212	(170–249)
▶ 10	240	(193–282)
▶ 11	269	(217–314)
▶ 12	298	(240–347)

Glycosylated Hemoglobin

is a form of hemoglobin used primarily to identify the average plasma glucose concentration over prolonged periods of time.

Guiding Principle:

Be alert to problems of adverse drug reactions.



Common Pattern Seen in Older Adults:

- ▶ Older adults will have gait limitations:
 - ▶ Diabetic neuropathy
 - ▶ Strokes/Arthritis/Muscle Weakness
- ▶ Older adults will be on:
 - ▶ Cardiac meds = Hypotension = dizziness
 - ▶ Diuretics = Dehydration = dizziness
 - ▶ Diuretics = Incontinence

Normal Aging Process + Medical Conditions

- ▶ **Reduced clearance & increased sensitivity**
 - ▶ **Result of kidney /liver function, body mass, cardiac output, and hydration status.**
 - ▶ **Ability to metabolize drugs from the body declines with age.**
 - ▶ **Potential BP emergencies = too high/too low**

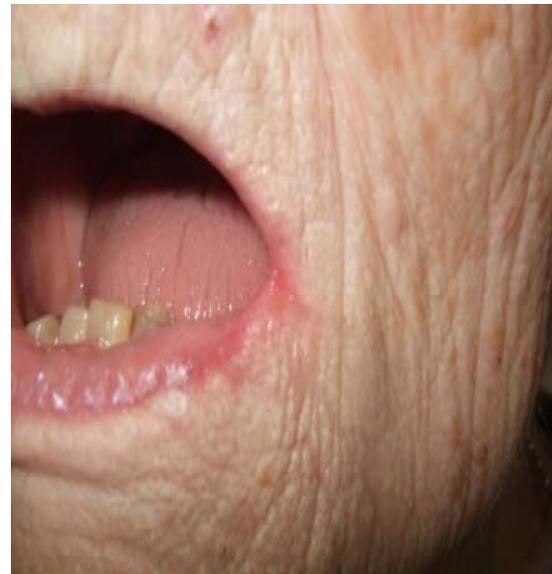
Dentist recommended/prescribed medications:

Common:

- ▶ **Analgesics**
 - ▶ Controlled pain relievers
 - ▶ Acetaminophen
 - ▶ NSAIDS
- ▶ **Anxiolytics**
 - ▶ Ativan
 - ▶ Valium
- ▶ **Antimicrobials**
 - ▶ Antibiotics
 - ▶ Antifungals

All too common:

- ▶ “Reflex” prescribing.
- ▶ “Over” prescribing.
- ▶ “Convenience” prescribing.

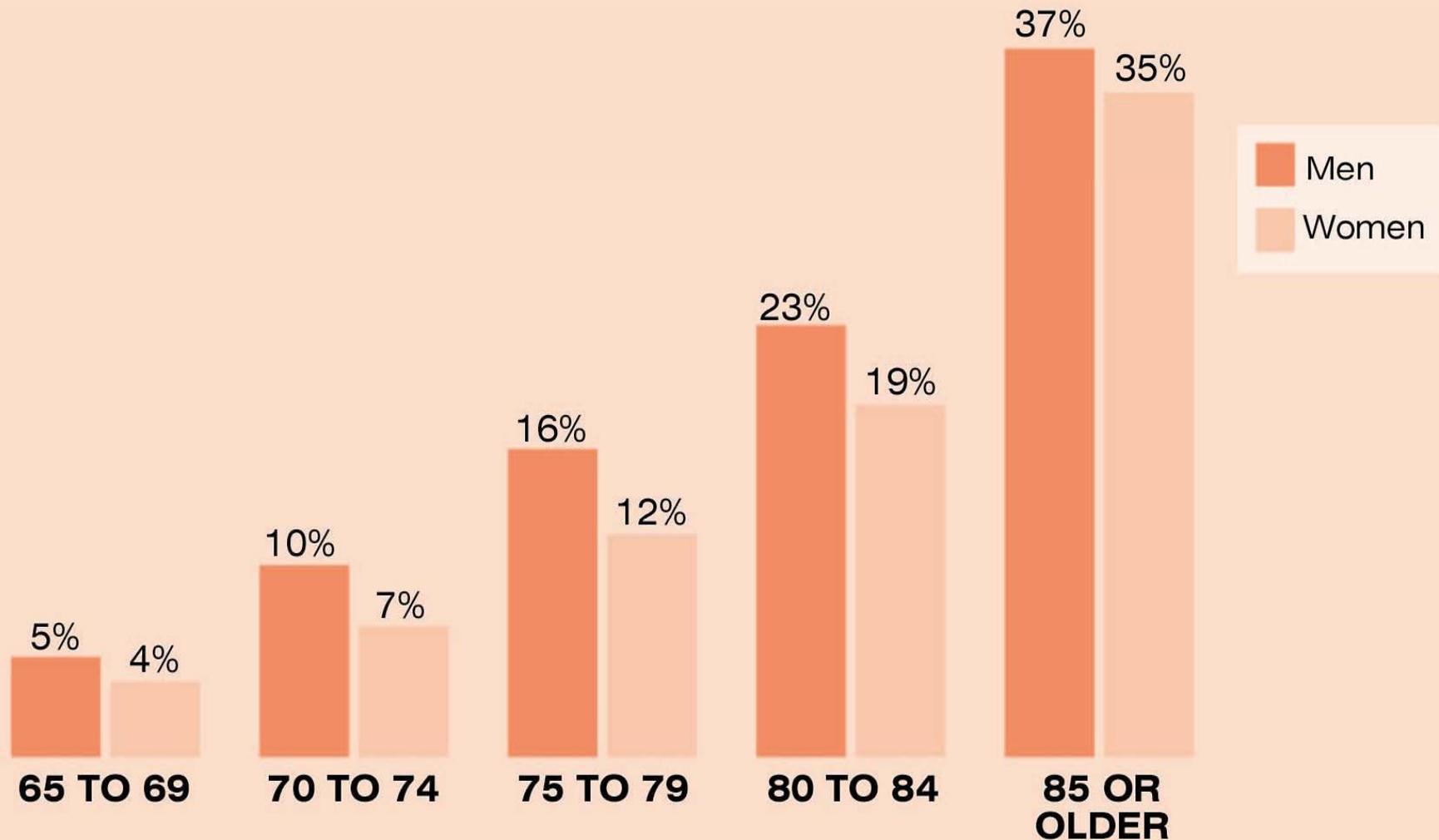


Guiding Principle:

Older adults underreport serious illnesses and may not receive routine medical care.



Percentage of persons age 65 or older with moderate or severe memory impairment, by age group and sex, 1998



Note: Definition of moderate or severe memory impairment: four or fewer words recalled (out of 20) on combined immediate and delayed recall tests.

Reference population: These data refer to the civilian noninstitutional population.

Source: Health and Retirement Study.





When is physician input warranted?

- ▶ When you need more information:
 - ▶ H & P = history and physical
 - ▶ MARS = Medical Assessment Records
 - ▶ Last hospitalization
 - ▶ Recent tests
- ▶ Do not ask for “clearance”
- ▶ Do not ask open ended questions
- ▶ Dentist makes the decision to treat or not to treat
- ▶ Remember - stability can change overnight
- ▶ Do not take off any physician prescribed medication

My Sample Medical Communication (Consult)

Dear Dr.. - John Doe, a mutual patient of ours presented to my office with multiple abscessed teeth that will require extracting. I anticipate that the surgery will be routine. Please review the following:

Additional information is requested – fax/email by 10/13/13.

most recent history and physical

medication list

recent hospitalization

Cardiac, stress reduction, and bleeding protocols in place.

INR to be taken in office immediately prior to surgery.

Indicate patient's target INR. _____

Antibiotic prophylaxis – 2 grams AMOX one hour before surgery.

If you have any additional concerns, please contact me directly.

Guiding Principle:

Weigh potential risks/ benefits Of dental treatment versus no treatment in light of *entire situation*.



Evaluate in Terms of Key Risks:

Risks of Dental Treatment:

- ▶ Post treatment infection
- ▶ Pain/swelling/suffering
- ▶ Bleeding
- ▶ Medication adverse reaction
- ▶ Treatment complications
- ▶ Procedural accident
- ▶ Medical emergency

Risks of No Dental Treatment:

- ▶ Systemic infection
- ▶ Pain/swelling/suffering
- ▶ Additional tooth loss
- ▶ Loss of function
- ▶ Diet decline
- ▶ Loss of self esteem
- ▶ Medical emergency

Evaluate risks in light of entire situation.

Example:
Patient is taking coumadin
because of a recent stroke.



- ▶ What is need?
- ▶ How urgent?
- ▶ Anti thrombotic?
 - ▶ If yes – why?
 - ▶ Antiplatelet? Anticoagulant?
- ▶ Have protocols in place
 - ▶ Take INR
 - ▶ International normalized ratio
 - ▶ Treatment modification
 - ▶ Local hemostatic measures

Coumadin & Routine Dental Procedures

Patients need not interrupt their warfarin therapy before undergoing most dental procedures, provided the INR is within the therapeutic range.

A meta-analysis of studies involving 774 patients undergoing various dental procedures showed that 98% of those receiving continuous anticoagulation had no serious bleeding problems after dental surgery (extractions, alveolar surgery, and gingival surgery). The 2% (n = 12) who had bleeding required systemic control, but none was seriously compromised. In patients who discontinued anticoagulation, 4 of 500 died of embolic complications, and had two nonfatal complications.

The current recommendation in the dental literature is to maintain a therapeutic INR during dental surgery and control bleeding using local measures like tranexamic acid mouthwash.

Wahl MJ. Myths of dental surgery in patients receiving anticoagulant therapy. *J Am Dent Assoc.* 2000;131:77-81.

Campbell JH, Alvarado F, Murray RA. Anticoagulation and minor oral surgery: should the anticoagulation regimen be altered? *J Oral Maxillofac Surg.* 2000;58:131-135.



Local measures /Treatment modification:

- ▶ Watch and see approach
- ▶ Pressure – damp gauze
- ▶ Primary closure – i.e. sutures
- ▶ Meticulous technique/precaution with injections
- ▶ Thrombin – (Thrombogin®)
- ▶ Absorbable products
 - ▶ gelatin sponge=Gelfoam®/cellulose=Surgicel®/collagen=Collaplug®
- ▶ Use oral solutions that inhibit fibrinolysis
 - ▶ Tranexamic acid, Aminocaproic acid



Develop Specific Clinical Protocols:

- ▶ Stress reduction protocol
- ▶ Bleeding precautions protocol
- ▶ Cardiac precautions protocol
- ▶ Bisphosphonate protocol
- ▶ Aspiration risk protocol
- ▶ Patient preparation protocol
 - ▶ Vitals (blood pressure/pulse) using quality equipment
 - ▶ “Did you take all your medications this morning?”
 - Common wrong assumption by elders and blood thinners?

Documentation of Risk/Benefit

Sample Phrases:

- ▶ *Patient does not obtain routine medical care. Dental care will be limited to treatment where benefits clearly outweigh risks.*
- ▶ *Patient is an unreliable historian. Limited expressive communication post stroke. Receptive communication is uncertain. Medical communication with primary care physician is needed.*
- ▶ *Patient presents with dental collapse and continued decline – unable to tolerate long appointments. Low patient motivation. Goal is to keep salvageable teeth serviceable.*
- ▶ *An argument can be made to extract teeth #'7,8,9,10 because of poor long term prognosis. However, due to patient's recent hospitalization, primary treatment goals will be caries stabilization and aggressive prevention.*





Summary Guiding Principles: Older Adult

- ▶ Prevention is key
- ▶ Determine your patient's medical stability
- ▶ Medical problems can present less dramatically/specifically
- ▶ Be alert to problems related to adverse drug reactions
- ▶ Underreporting of medical conditions is common
- ▶ Risk/benefit of tx versus no tx in light of entire situation



▶ Questions?