



Health Transformation, Oral Health, and Older Adults

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The US Health Care System is Undergoing Profound Change

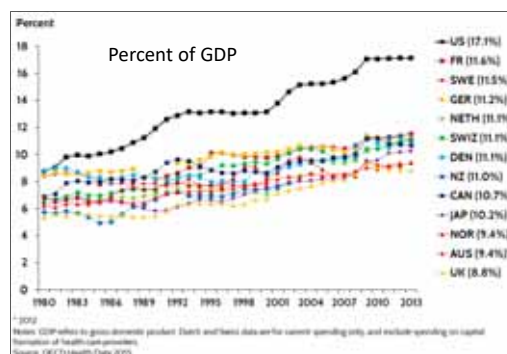


Drivers of the Quality Movement in the U.S. Health Care System

1. the skyrocketing cost of health care unrelated to improvement in health outcomes,
2. increasing understanding of the harm and unwarranted variability our fragmented health care system produces,
3. evidence of the profound health disparities that still exist in the population in spite of scientific advances in care, and
4. increasing awareness of these problems in the age of consumer empowerment.

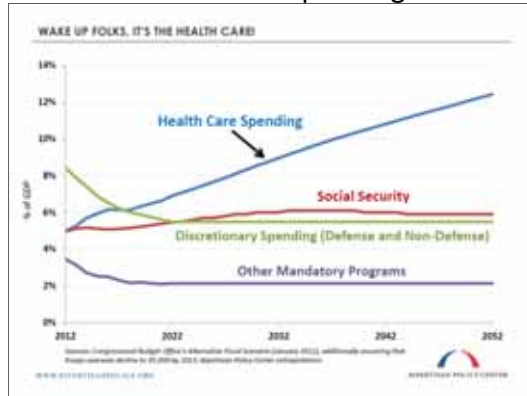


Health Care Spending 1980-2013



<http://www.commonwealthfund.org/publications/issue-briefs/2015/oct/us-health-care-from-a-global-perspective>
Data: OECD Health Data 2015.

Public Health Care Spending vs Debt



Health Care Spending



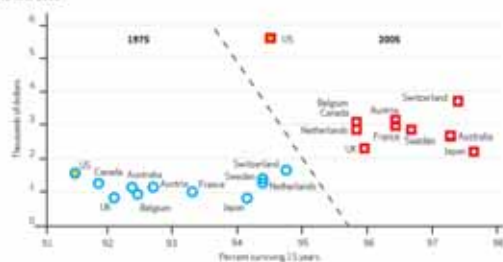
“Medical costs are the tapeworm of American economic competitiveness”

New York Times. May 6, 2017

New York Times: Warren Buffett, at Berkshire Meeting, Condemns Republican Health Care Bill. 5/6/17.
<https://www.nytimes.com/2017/05/06/business/dealbook/warren-buffett-berkshire-health-care.html?action=click&contentCollection=Europe&module=Trending&version=Full®ion=Marginalia&pgtype=article>

What Changes In Survival Rates Tell Us About US Health Care

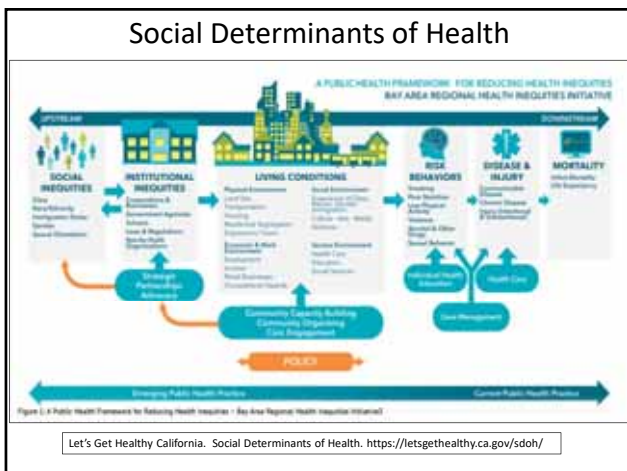
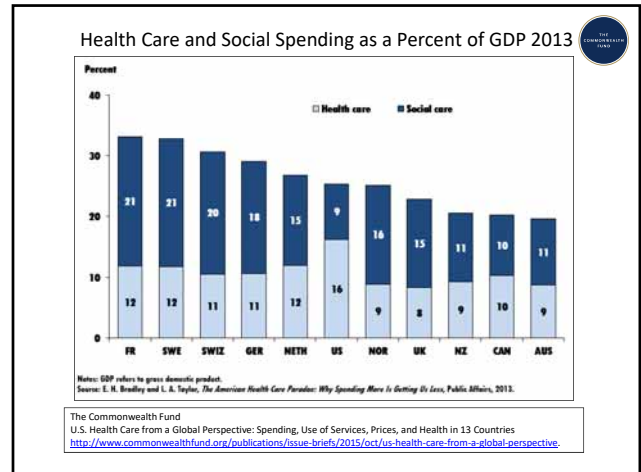
Per Capita Health Spending And 15-Year Survival For 45-Year-Old Women, United States And 12 Comparison Countries, 1975 And 2005



Health Care Outcomes 2007-2010 US vs Best Performing Developed Countries

- Almost 2x more likely to die from a condition amenable to health care interventions before 75 years old than France
- Over 6 times more likely to have lower limb amputations as a consequence of diabetes than UK
- Almost 2x more likely to die in a hospital after admission for acute myocardial infarction than Denmark
- Almost 3x more likely to have post-operative sepsis during hospital stay than Switzerland
- Over 2.5 times more likely to have a foreign object left in the body during a procedure than Denmark

Source: <http://www.commonwealthfund.org/Publications/Chartbooks/2013/Mar/Multinational-Comparisons-of-Health-Data-2012.aspx>
 Data: OECD Health Data 2012.



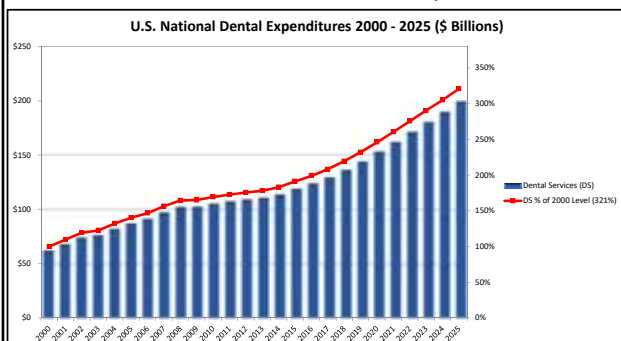
REPORT IN BRIEF
MARCH 2016

Institute of Medicine

A FRAMEWORK FOR EDUCATING HEALTH PROFESSIONALS TO ADDRESS THE SOCIAL DETERMINANTS OF HEALTH

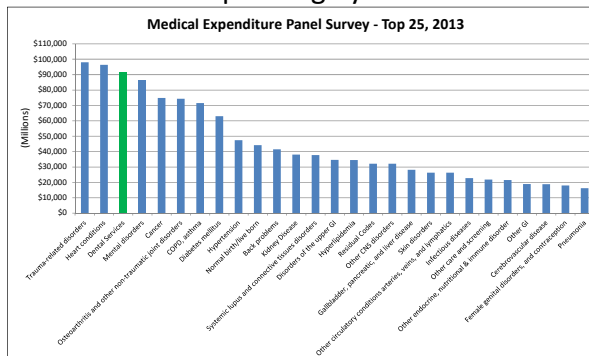
A Framework for Educating Health Professionals to Address the Social Determinants of Health

National Oral Health Expenses



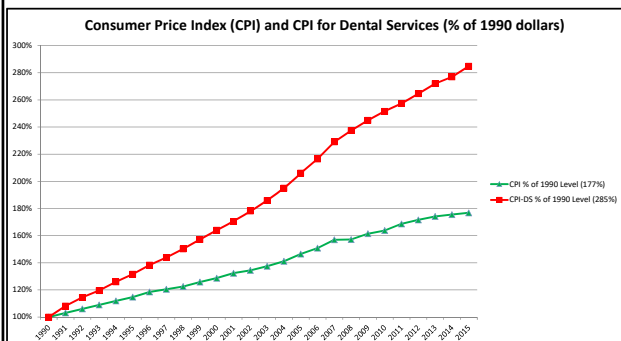
Source: CMS National Health Expenditure NHE Historical and projections,
<http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html>
<http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected.html>

Health Spending by Condition



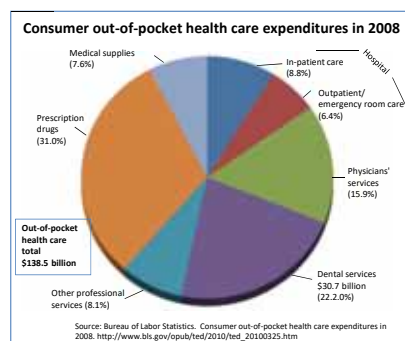
General Health: MEPS: Expenditures by Medical Condition 2013, Table 3
http://meps.ahrq.gov/data/states/tables_compendia_hip_interactive.jsp?SERVICE=MESIPocketDB_PROGRAM=MEPSPGM.T.C.SAS&File=HCY2013&Table=HCY2013NSFCNDPKSF6C_Debuy
 Dental Health: MEPS: Expenditures per Person by Health Care Service, 2012, Table 3

Oral Health Expenses

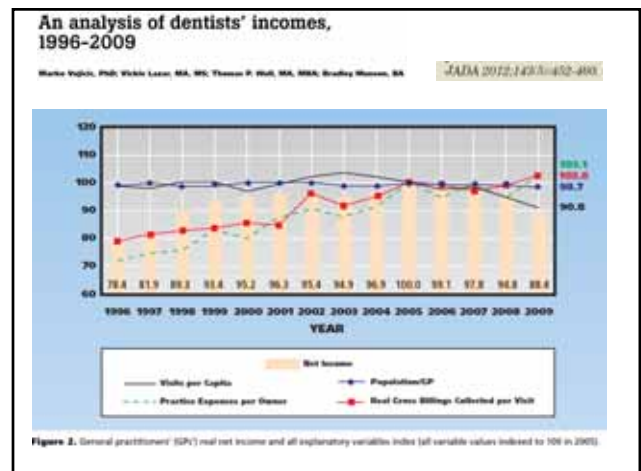
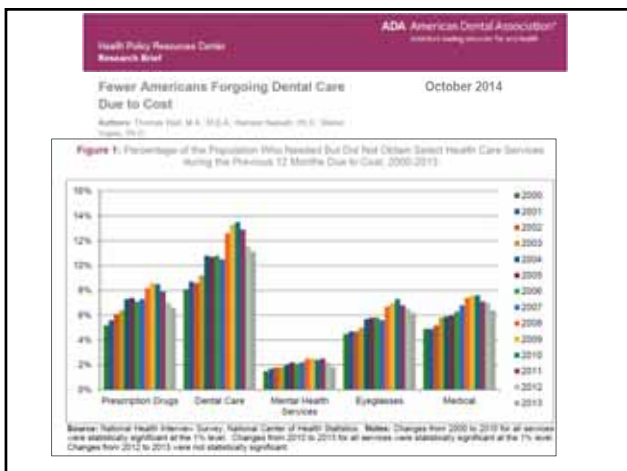
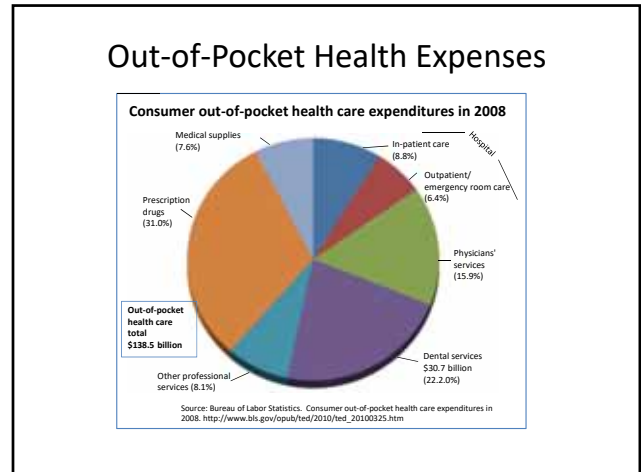
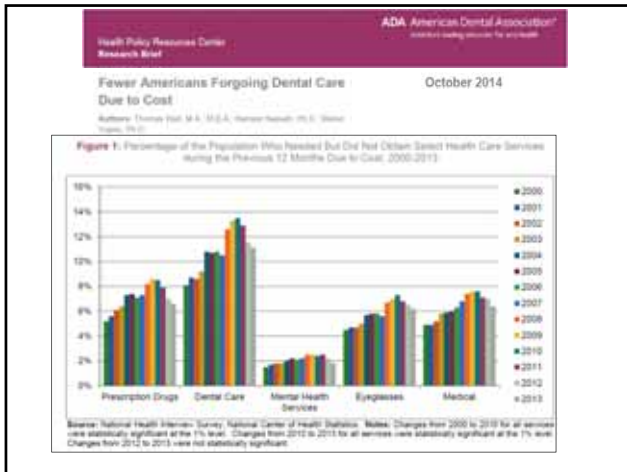


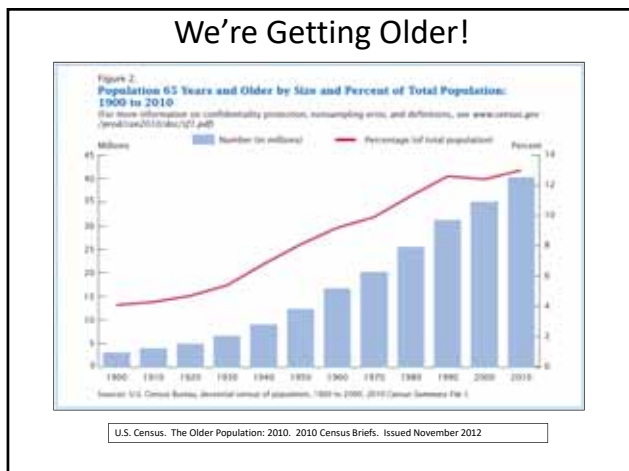
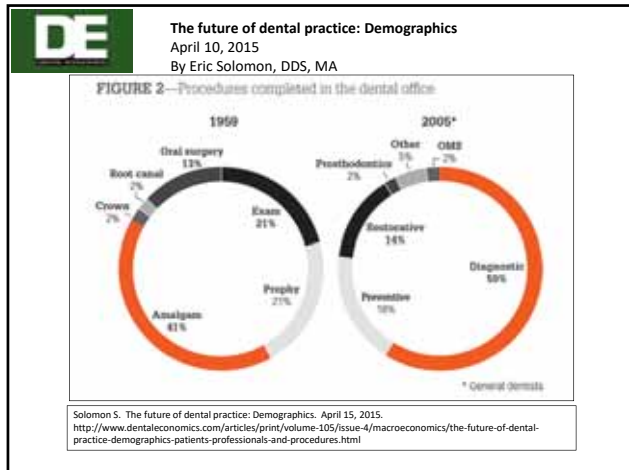
Source: Bureau of Labor Statistics: Consumer Price Index
http://www.bls.gov/cpi/cpi_dr.htm

Out-of-Pocket Health Expenses



Source: Bureau of Labor Statistics. Consumer out-of-pocket health care expenditures in 2008. http://www.bls.gov/opub/ted/2010/ted_20100325.htm

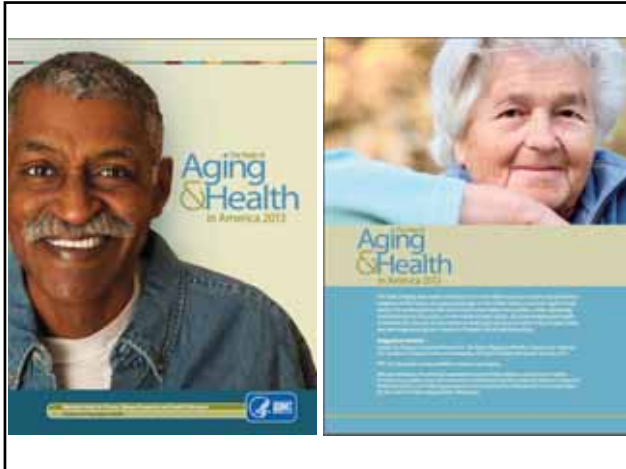




Facts About an Aging America

- Life expectancy from birth¹
 - 1900 – 47.3 years (46.3 for males and 48.3 for females)
 - 2010 – 78.7 years (76.2 for Males and 81.0 for females)
- Life expectancy at age 65¹
 - 1950 – 13.9 years (12.8 for males and 15.0 for females)
 - 2010 – 19.1 years (17.7 for males and 20.3 for females)
- 42% of babies born in 1920 were expected to live past age 65. In 2000, that number was 83%.

1. CDC. Health United States, 2012
2. Facts and Figures About an Aging America. 2009, The MacArthur Foundation Research Network on an Aging Society.



The Baby Boomers: Born: 1946-1964

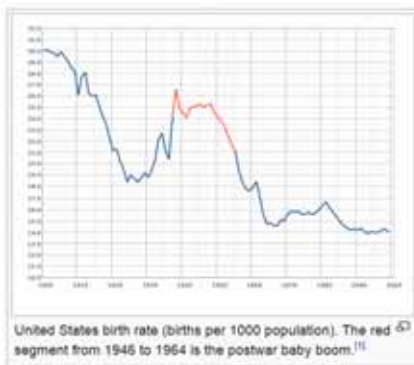


"Almost exactly nine months after World War II ended, "the cry of the baby was heard across the land," as historian Landon Jones later described the trend. More babies were born in 1946 than ever before: 3.4 million, 20 percent more than in 1945."

This was the beginning of the so-called "baby boom."

In 1947, another 3.8 million babies were born; 3.9 million were born in 1952; and more than 4 million were born every year from 1954 until 1964, when the boom finally tapered off. By then, there were 76.4 million "baby boomers" in the United States. They made up almost 40 percent of the nation's population.

The Baby Boomers, Born: 1946-1964




CDC. Vital Statistics of the United States, 2003, Volume I, Natality, Table 1-1 "Live births, birth rates, and fertility rates, by race: United States, 1909-2003. <http://www.cdc.gov/nchs/products/vsus.htm>

The Baby Boomers: Impact on Society



CDC. National Center for Chronic Disease Prevention and Health Promotion. The State of Aging & Health in America 2013

The Baby Boomers: Impact on Society


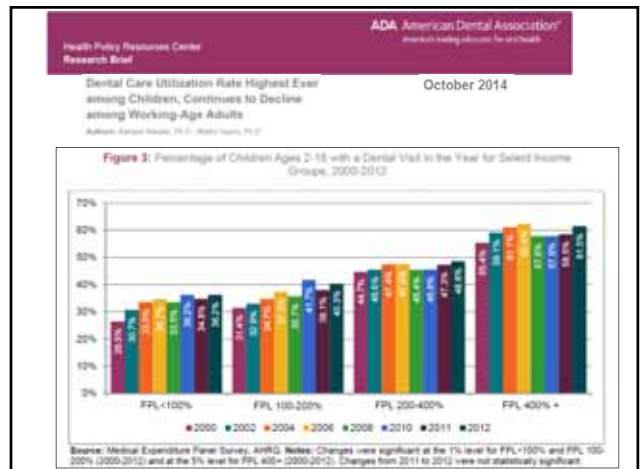
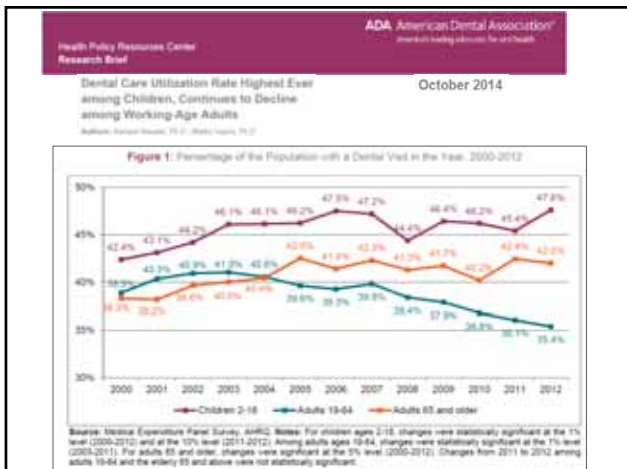


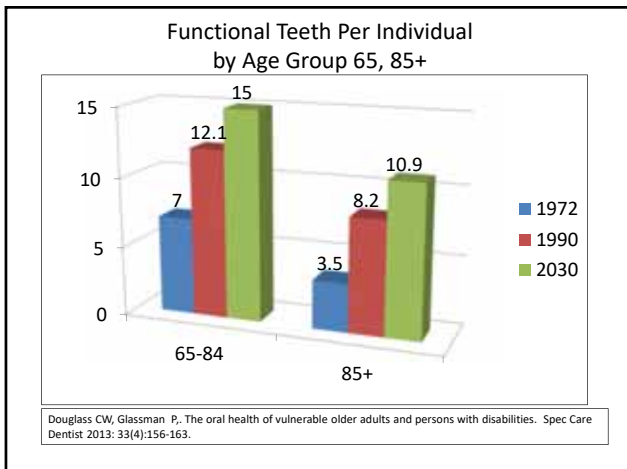
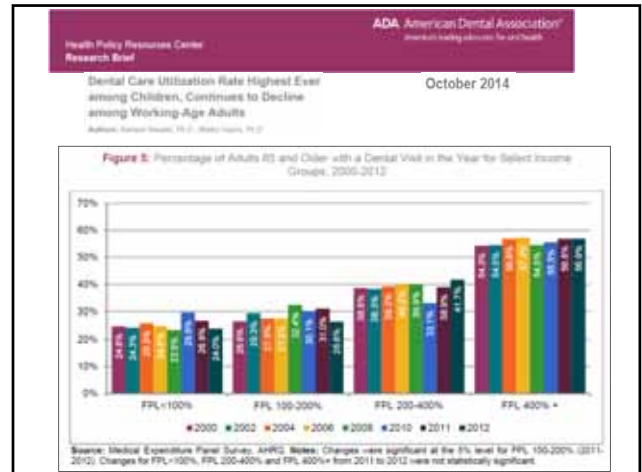
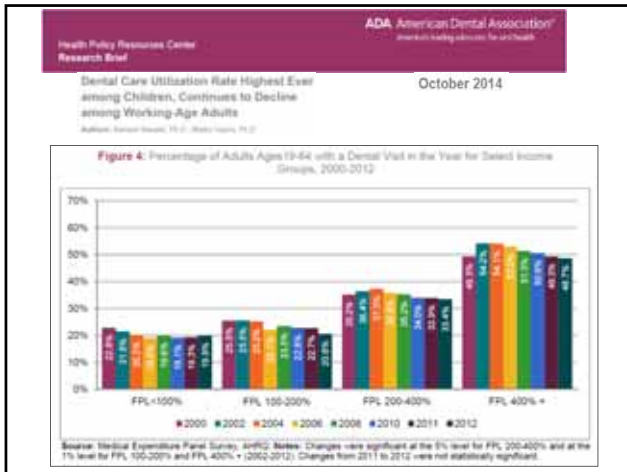
2011 +

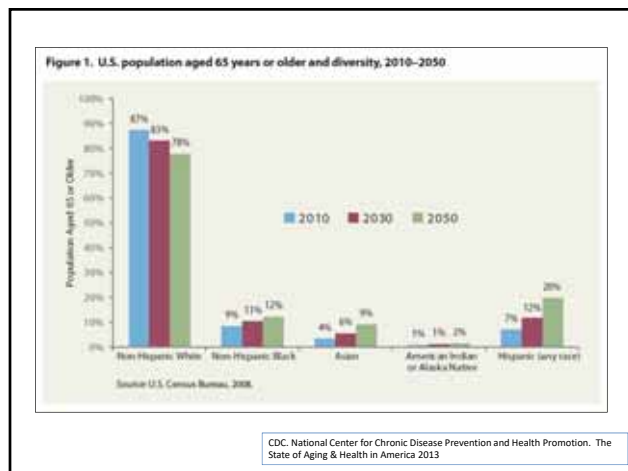
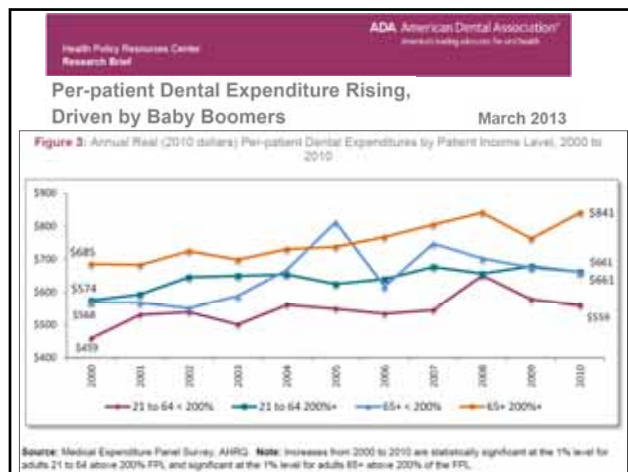
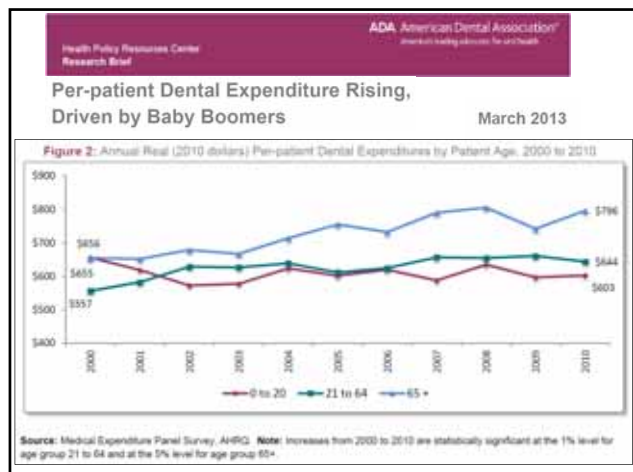
2023-27 +

CDC, National Center for Chronic Disease Prevention and Health Promotion, The State of Aging & Health in America 2013

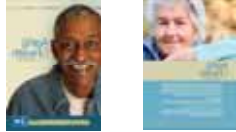
The Baby Boomers: Impact on the Dental Industry





Aging America and Oral Health



Common in Total Population

- Oral Health Conditions
 - Chronic oral diseases
 - Caries
 - Periodontal disease
- Income/oral health benefit coverage



The Oral Health of Older Americans

By: Christopher M. Sengen, D.D.S., Ph.D.
Ellen A. Kinnaman, Ph.D.
Joan A. Scheraga, D.D.S., M.P.H.



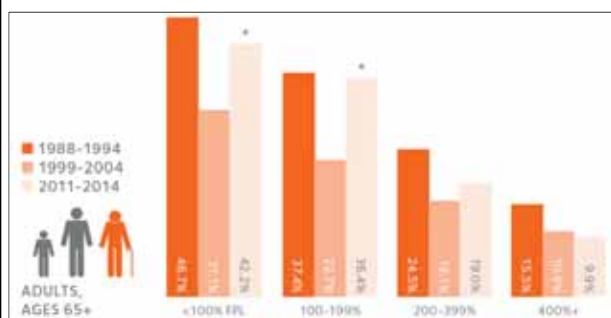
- Nearly one-third of persons 65 years of age and older have untreated dental caries.

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

Health Policy Institute
ADA: American Dental Association
September 2016

Untreated Caries Rates Falling Among Children, Rising Among Low-Income Adults and Seniors

PREVALENCE OF UNTREATED CARIES, BY INCOME LEVEL AND AGE GROUP



Aging America and Oral Health



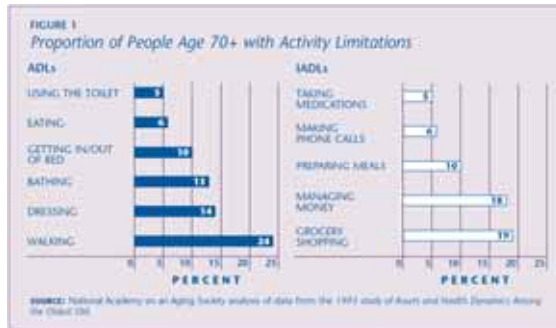
Common in Total Population

- Oral Health Conditions
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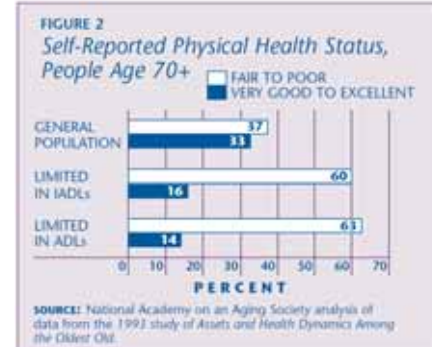
Common in Older Adults

- General Health Conditions
 - Physical health
 - Mental health
 - Mobility
- Dependency
 - Range from partial to deficits in IADLs and ADLs

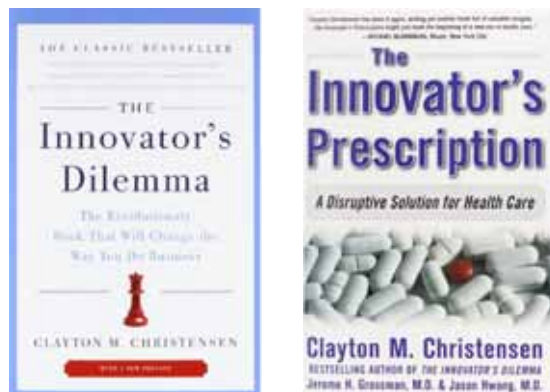
Aging and Disability



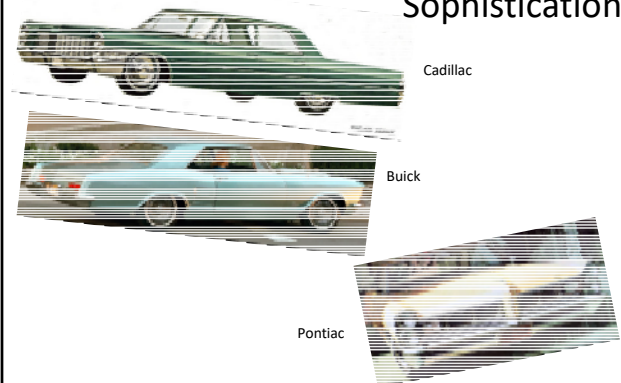
Aging and Disability/Dependency



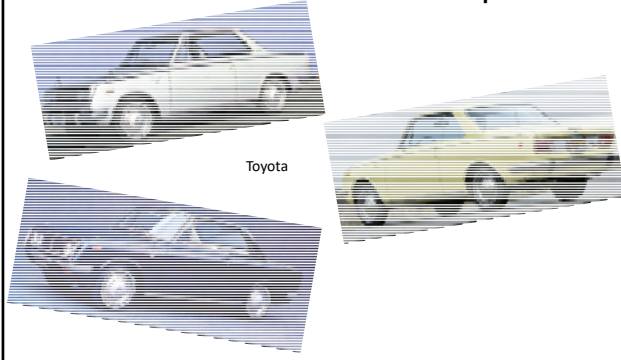
Disruptive Innovation



U.S. Automobiles 1960s -> Luxury, Sophistication



Japanese Automobiles 1960s -> Basic Transportation



Disruptive Innovation

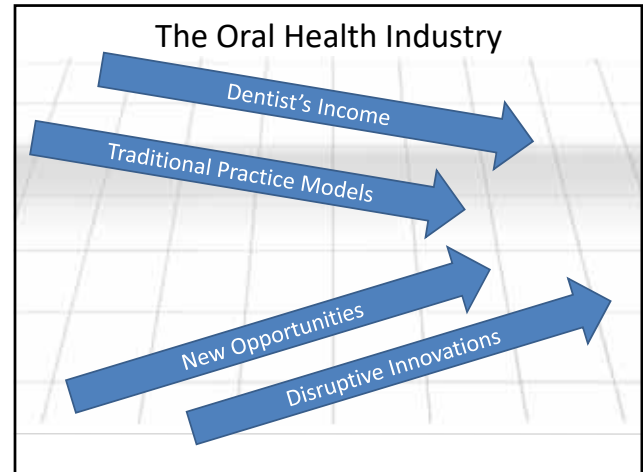
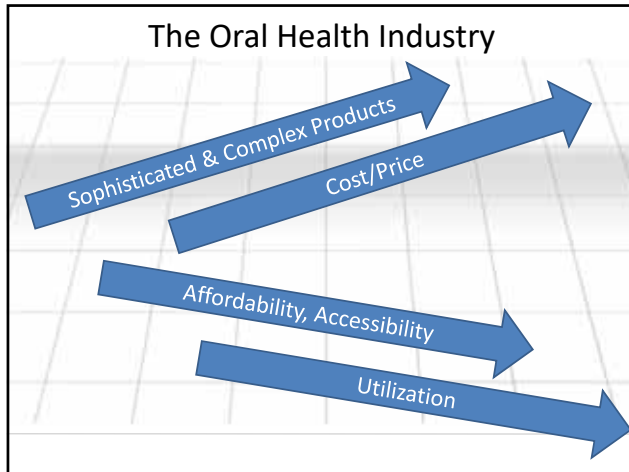
- Disruptive innovation, describes a process by which a product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up market, eventually displacing established competitors.

Disruptive Innovation

- Companies tend to innovate faster than their customers' needs evolve
- Their products or services become too sophisticated, too expensive, and too complicated for many customers in their market.
- Historically the greatest profitability has been achieved by charging the highest prices to their most demanding and sophisticated customers at the top of the market.

Disruptive Innovation

- However, by doing so, companies unwittingly open the door to "disruptive innovations" at the bottom of the market.
- An innovation that is disruptive allows a whole new population of consumers at the bottom of a market access to a product or service that was historically only accessible to consumers with a lot of money or a lot of skill.



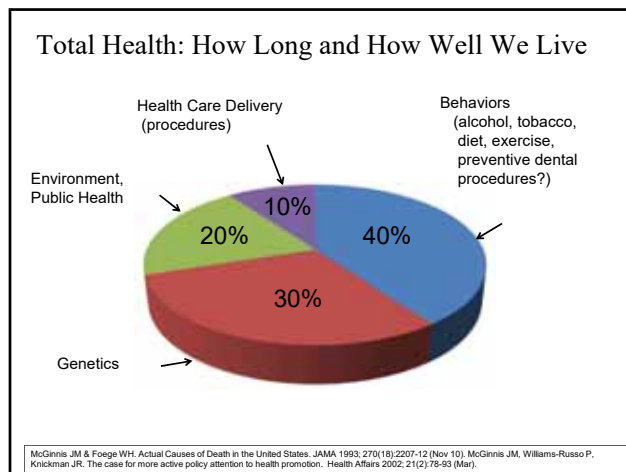
The 2011 IOM Reports on Oral Health



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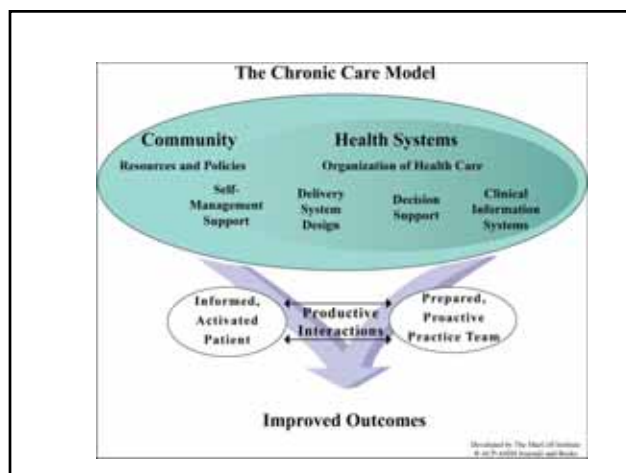
Trends in Oral Health Care Impacting Oral Health for Older Adults

- Oral diseases as chronic diseases
- Integrated care in the community structures
- Daily mouth care
- Telehealth-connected team care
- Care systems based on oral health improvement



Care for Chronic Oral Diseases

Acute Care/Surgical Intervention	Chronic Disease Management
<ul style="list-style-type: none"> Provider-centric model Care delivered in fixed offices and clinics "Treatment" based on discrete procedure-based episodes of care Payment based on discrete procedure-based episodes of care Emphasis on surgical interventions 	<ul style="list-style-type: none"> Patient-centric model Care delivered where people are to the extent possible "Management" based on maintaining health across the life-cycle of a condition Payment based on value of health improvement across life-cycle of a condition Emphasis on risk assessment, prevention, and early intervention, using biological, medical, behavioral, and social tools



American Dental Association Action for Dental Health

Goal: Through ADA continuing education, train at least 1,000 dentists to provide care in nursing homes by 2020, and increase the number of dentists serving on advisory boards or as dental directors of long-term care facilities.

Goal: At least ten state dental associations committed to implementing a long-term care program to improve the oral health of nursing home residents by 2015.




Dentistry in Long-term Care: Creating Pathways to Success

<http://success.ada.org/en/dentistry-in-long-term-care-course>

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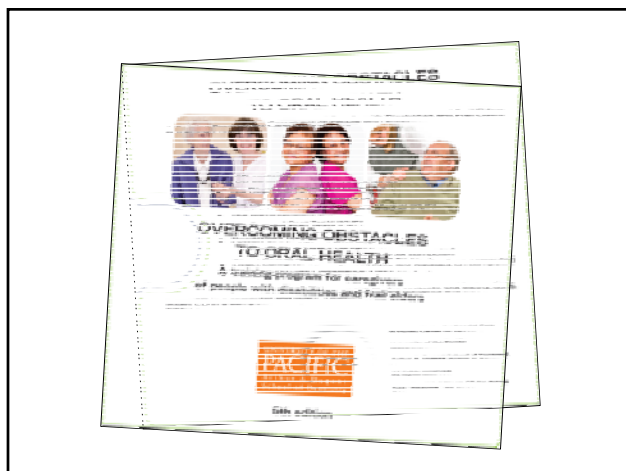


Topics:

- Organizations of long-term care facilities, who works there?
- Getting involved: choosing a delivery model that works for you
- Regulatory and legal compliance
- Creating and organizing an oral health program
- Working with complex patients
- Financial considerations in LTC
- Establishing an environment for effective daily mouth care
- Staying current: accessing the scientific literature

Dentistry in Long Term Care: Creating Pathways To Success

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OVERCOMING OBSTACLES TO ORAL HEALTH

A Training Program for Caregivers of People with Disabilities and Frail Elders

The DVD contains:

- 1) The Direct Caregiver Video with three choices:
- 2) Part I—Direct Caregiver Workbook, Chapters 1-6
- 3) Part II—Direct Caregiver Workbook, Chapters 7-13
- 4) The entire video
- 5) MDS Oral Health Compliance Video for nursing staff working in health licensed long-term care facilities.

Insert DVD into a DVD player and click on the menu item for the video option of your choice.




OVERCOMING OBSTACLES TO ORAL HEALTH


A Training Program for Caregivers of People with Disabilities and Frail Elders

The CD contains:

- 1) The Direct Caregiver Workbook (PDF)
- 2) The Daily Mouth Care Plan (PDF)
- 3) The Administration and Training Manual (PDF)
- 4) The Pre and Post Tests (PDF)
- 5) PowerPoint presentation
- 6) Overview of Direct Caregiver workbook
- 7) Direct Caregiver Video (for playback on computer)
- 8) MDS Oral Health Compliance Video (for playback on computer)



Insert CD in a computer and open "ReadMe" file for contents and instructions.





Expanding Dental Practices into Long-term Care

Dentistry in Long-term Care is a Team Sport

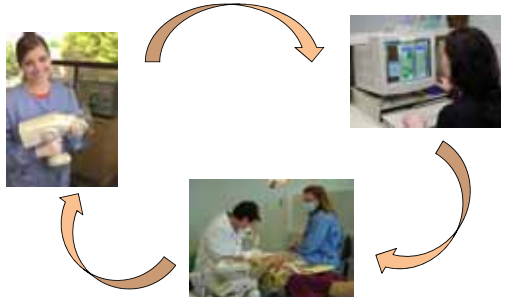



Dental Care is a Team Sport





The Virtual Dental Home



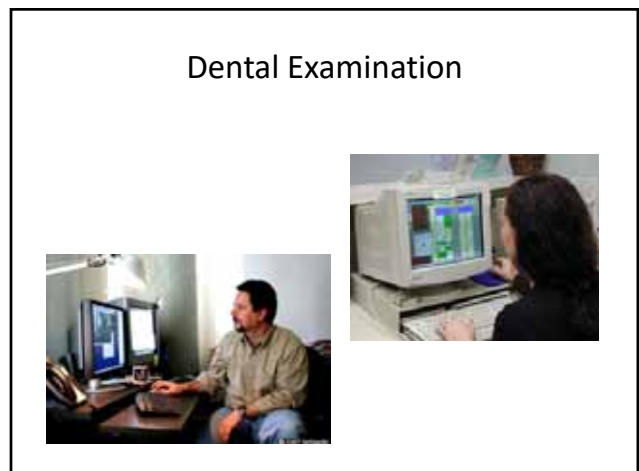
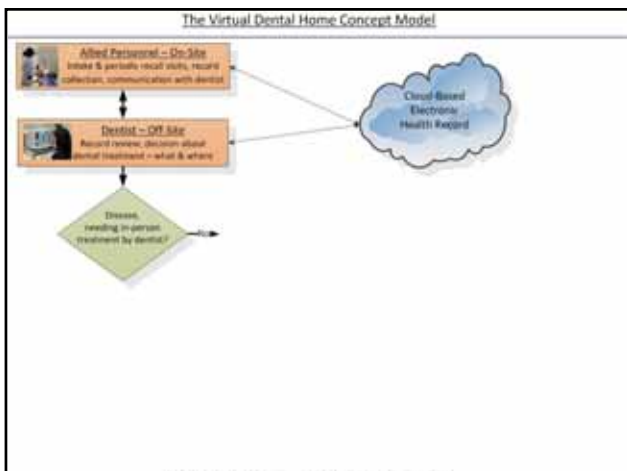
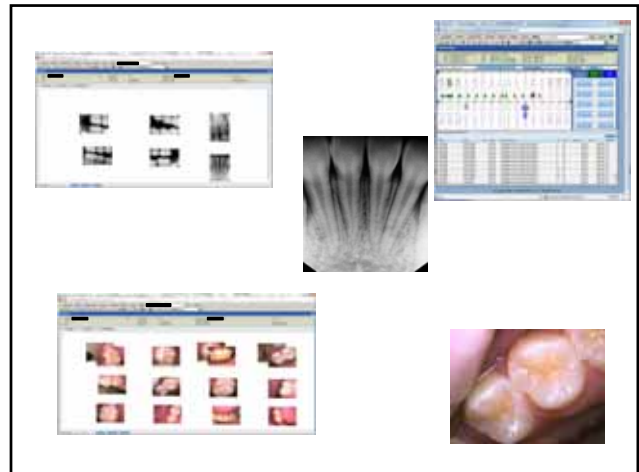
<http://www.virtualdentalhome.org>

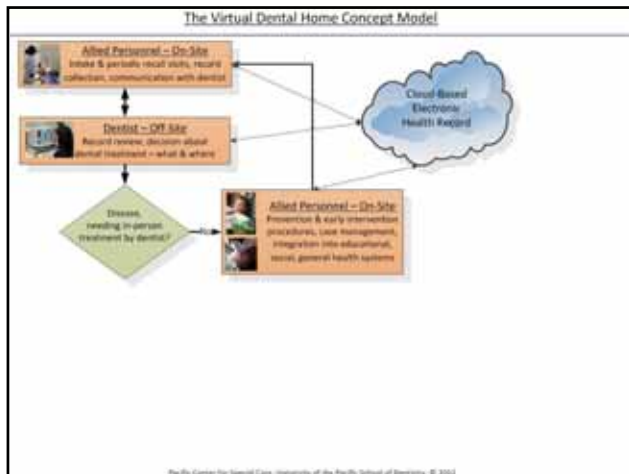
EHR: Radiographs



EHR: Photographs

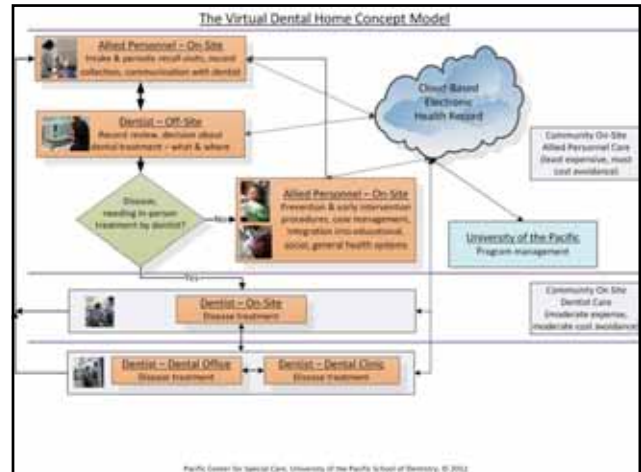






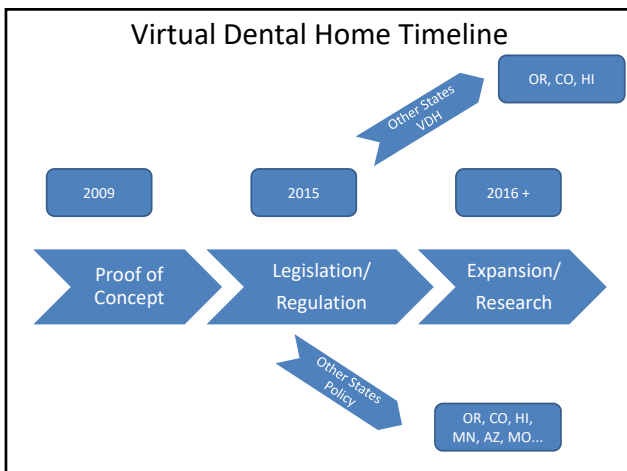
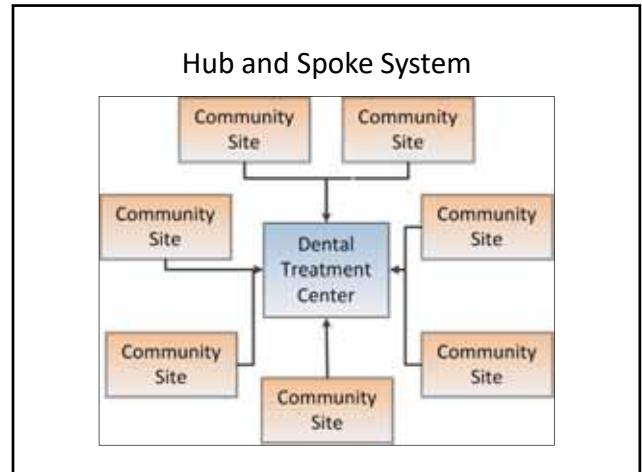
Community-based Prevention and Early Intervention Procedures





Oral Health Systems for Underserved Populations

Telehealth-Connected Teams



The Legal and Regulatory Environment

There are a number of legal and regulatory issues to consider when designing or implementing a telehealth-connected system of care. These issues are briefly described here.

Legal and Regulatory Environment

Ability to use telehealth

- Scope of practice laws, regulation, interpretation
 - Ability of allied personnel to collect diagnostic records prior to a patient being seen by a dentist
 - Ability of allied personnel to perform procedures in locations separate from dentists
 - Understanding that dentists can develop a diagnosis and treatment plan without an in-person visit with the patient

Dentist Examination

ADA CDT 2017 Definitions

- “Clinical Oral Evaluations”
 - “... recognize the cognitive skills necessary for patient evaluation. The collection and recording of some data and components of the dental examination may be delegated; however, the evaluation, which includes diagnosis and treatment planning, is the responsibility of the dentist.”

Dentist Examination

ADA CDT 2017 Definitions

- “Clinical Oral Evaluations”
 - There is nothing in these definitions that specifies whether data is collected and evaluated in person or not or whom it is collected by.
 - The critical component is that it is the dentist’s cognitive skills used in interpreting the information that cannot be delegated and that must be performed by the dentist.

Legal and Regulatory Environment

Ability to be paid for services performed using telehealth technologies

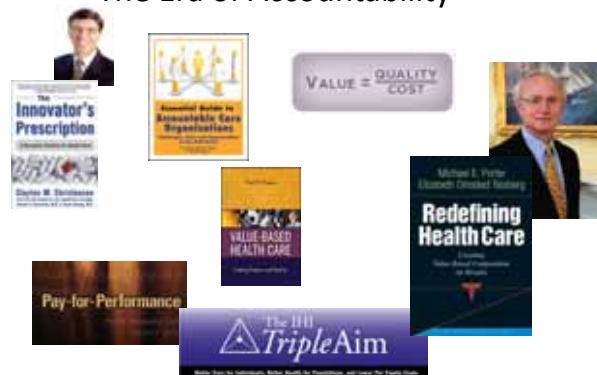
- Principle: consider telehealth technologies as communication tools, distinct from the health services that are being provided.
- Require payors to pay for covered services whether performed in-person or with the use of telehealth technologies
- Include store-and-forward as well as real time

Legal and Regulatory Environment

Ability to be paid for services performed using telehealth technologies

- Suggested language:
- “face-to-face contact between a health care provider and a patient is not required for services performed using real time or store-and-forward teledentistry.”

The Era of Accountability



The Triple Aim



- improving the experience of care
- improving the health of populations
- reducing per capita costs of health care

The Quadruple Aim



The Era of Accountability

The Urban Institute

Moving Payment from Volume to Value: What Role for Performance Measurement?

Timely Analysis of Immediate Health Policy Issues
December 2010
Robert A. Berenson

Health Care Transformation and Older Adults

- Dental Practice =
 - Geographically distributed
 - Telehealth enabled
 - Oral health teams
- Chronic disease management
 - using biological, medical, behavioral, and social tools
- Integrated with general health, educational, and social service systems
- Interacting with the majority of the population
- Focused on oral health outcomes in the ***Era of Accountability***



UNIVERSITY OF THE PACIFIC
Arthur A. Dugan
School of Dentistry

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Publications

The Pacific Center for Special Care has published articles related to providing dental care to underserved communities.

Publications



- **Telemedicine - Improving Oral Health Using Telehealth-Connected Home (August 2010)**
- **The Virtual Dental Home Demonstration Report (June 2010)**
- **Executive Summary**
- **Full Report**
- **Policy Brief - The Costs of Neglect of Dental Insurance: Assess the Impact of the Virtual Dental Home**

Journal Articles

The Virtual Dental Home was featured in the July 2012 edition of the California Dental Association Journal:

- **Virtual Dental Home: Bridging Oral Health to Underserved Populations**
- **Using Telehealth Technologies to Improve Oral Health for Vulnerable and Underserved Populations**
- **In Person versus "Virtual" Dental Examination: Comparisons Between Screen-Making Modalities**
- **Community-Based Prevention And Early Intervention Strategies**
- **The Virtual Dental Home: Implications for Policy And Strategy**
- **Providing Oral Health Through Community Engagement**

<http://www.virtualdentalhome.org>



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