New Dental Care Delivery Systems: Implications for People with Disabilities

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The Institute of Medicine Reports
Themes from the 2011 IOM Reports Related to Oral Health Delivery Systems

- Chronic disease management
- Composition, licensing, and deployment of the Workforce
- Telehealth
- Quality measurement and improvement
- Payment incentives
The 2011 Institute of Medicine Reports

“ACCESS” RECOMMENDATION 8: Congress, the Department of Health and Human Services (HHS), federal agencies, and private foundations should fund oral health research and evaluation related to underserved and vulnerable populations, including:

• New methods and technologies (e.g., nontraditional settings, nondental professionals, new types of dental professionals, and telehealth);

• Measures of access, quality, and outcomes; and

• Payment and regulatory systems.
Care for Chronic Oral Diseases

Acute Care/Surgical Intervention

Chronic Disease Management
Oral Health Quality Improvement In the Era of Accountability

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San Francisco, CA
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.
Drivers of the Quality Movement

#1 – The Cost of Health Care
* PPP=Purchasing Power Parity.
What Changes In Survival Rates Tell Us About US Health Care

EXHIBIT 1

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

SOURCE Authors’ analysis based on data from the sources described in the text. NOTES The dashed line separates 1975 values (blue circles) and 2005 values (red squares). Values are presented for the percentage of forty-five-year-old women surviving fifteen years.
Oral Health Expenses

U.S. National Dental Expenditures 2000 - 2020 ($ Billions)

Oral Health Expenses

Consumer Price Index (CPI) and CPI for Dental Services (% of 2000 dollars)

Out-of-Pocket Health Expenses

Consumer out-of-pocket health care expenditures in 2008

- Prescription drugs (31.0%)
- Dental services $30.7 billion (22.2.0%)
- Other professional services (8.1%)
- Medical supplies (7.6%)
- In-patient care (8.8%)
- Outpatient/ emergency room care (6.4%)
- Physicians' services (15.9%)

Out-of-pocket health care total $138.5 billion

Payers of Oral Health Expenses

Source: CMS National Health Expenditure Projections 2010-2020
Mean US Household Income

Mean Household Income Received by Each Fifth and Top 5 Percent in 2010 Dollars as % of 2000 Dollars

Source: CMS National Health Expenditure Projections 2010-2020
More Spending, but More Decay

Spending on dental services has been rising faster than overall prices for the last decade. But an intermittent survey by the government indicates that the state of the nation's dental health has deteriorated recently, after decades of improvement.

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**Annual change in spending**

- **Dental services:** +8%
- **Overall inflation:** +6%
- **Spending:** +4%
- **2007:** +2%

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**Percentage of children (2-11) with untreated cavities**

- **1971-1974:** 50%
- **1998-1999:** 40%
- **2002-2004:** 30%

**Percentage of adults with untreated cavities**

- **1971-1974:** 30%
- **1998-1999:** 20%
- **2002-2004:** 10%

**Percentage of adults with no teeth (edentulism)**

- **1971-1974:** 15%
- **1998-1999:** 10%
- **2002-2004:** 5%

*Primary (baby) teeth only; 1971-74 data is for children age 2-10.*

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Sources: Centers for Disease Control and Prevention; Bureau of Labor Statistics; Medicare
Drivers of the Quality Movement

#2 – Harm and Variability of Results
IOM Reports on Quality

TO ERR IS HUMAN
BUILDING A SAFER HEALTH SYSTEM

CROSSING THE QUALITY CHASM
A NEW HEALTH SYSTEM FOR THE 21ST CENTURY
Variation in Cost and Outcomes

Dartmouth Atlas of Health Care: Regional Disparity in Medicare Spending

Medicare Reimbursements Per Enrollee

This interactive map demonstrates a vexing issue facing policymakers as they struggle with the cost of health care: Medicare spends vastly different amounts to care for its enrollees depending on where they live, and growth rates vary dramatically across U.S. states and regions. The data show average age-sex-race adjusted Medicare spending per enrollee by state and by hospital referral regions for 1990 and 2006 and the average annual growth rate for the period 1990 to 2006. Hospital referral regions represent regional health care markets for tertiary medical care. The data from the Center for Medicaid and Medicare Services is a 5 percent sample of Medicare spending for people over 65 years old and not enrolled in HMOs.

ANNALS OF MEDICINE
THE COST CONUNDRUM
What a Texas town can teach us about health care.
by Atul Gawande

JUNE 1, 2009
Drivers of the Quality Movement
#3 Health Disparities
Drivers of the Quality Movement
Health Disparities

• The IOM, in the 2003 report on Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care, clearly demonstrated that Racial and ethnic minorities tend to receive a lower quality of healthcare than non-minorities, even when access-related factors, such as patients’ insurance status and income, are controlled.
Oral Health in America: A Report of the Surgeon General

Department of Health and Human Services
U.S. Public Health Service
Although there have been gains in oral health status for the population as a whole, they have not been evenly distributed across subpopulations.

Profound health disparities exist among populations including:

- Racial and ethnic minorities
- Individuals with disabilities
- Elderly individuals
- Individuals with complicated medical and social conditions and situations
Drivers of the Quality Movement in the U.S. General and Oral Health Care Systems

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.
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 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
Improving Quality Through Measurement

Not everything that counts can be counted, and not everything that can be counted counts.

~Albert Einstein

But...

You can’t improve what you don’t measure
Quality Improvement Systems

- **Plan**
  - Objectives, methods, measures, tasks
- **Do**
  - Work the plan
- **Study**
  - Gather data, analyze results
- **Act**
  - Decide what to do next
  - Incorporate the change, make a new plan
Six Aims for Quality Improvement

- Safe
- Effective
- Patient-centered
- Timely
- Efficient
- Equitable

Levels of Quality Improvement Activities

1. Technical Procedures
2. Individual Health Records
3. Dental Practice Operations
4. Community Delivery Systems
5. Population Health Outcomes
Quality Measurement or Improvement Activities in Sectors of the Oral Health Delivery System

- Federal or National Agencies and Programs
- The Oral Health Safety-Net
- Large Group Dental Practices
- The Dental Benefits Industry
- Professional Dental Associations
- Hospital-based Dental Practices
- Dental Practice-based Research Networks
Conclusions

• Lots of people are collecting lots of data
• The vast majority is used to inform or drive program change at large payer or plan levels.
• There are few examples of measurement that directly is tied to performance in a way that influences activities
• Movement from volume to value is not evident in oral health systems
Moving Oral Health Care from Volume to Value**

**Value = health outcomes achieved per dollar spent over the lifecycle of a condition**
The Virtual Dental Home
The Virtual Dental Home Concept Model

Allied Personnel – On-Site
Intake & periodic recall visits, record collection, communication with dentist
Records: Radiographs
Records: Photographs
The Virtual Dental Home Concept Model

Allied Personnel – On-Site
Intake & periodic recall visits, record collection, communication with dentist

Cloud-Based Electronic Health Record
Radiographs
Radiographs
Photographs
Photographs
The Virtual Dental Home Concept Model

Allied Personnel – On-Site
Intake & periodic recall visits, record collection, communication with dentist

Dentist – Off-Site
Record review, decision about dental treatment – what & where

Cloud-Based Electronic Health Record
Study on Telehealth vs In-Person Decision Making
The Virtual Dental Home Concept Model

**Allied Personnel – On-Site**
Intake & periodic recall visits, record collection, communication with dentist

**Dentist – Off-Site**
Record review, decision about dental treatment – what & where

Cloud-Based Electronic Health Record

Disease, needing in-person treatment by dentist?

No

Pacific Center for Special Care, University of the Pacific School of Dentistry, © 2012
The Virtual Dental Home Concept Model

Allied Personnel – On-Site
Intake & periodic recall visits, record collection, communication with dentist

Dentist – Off-Site
Record review, decision about dental treatment – what & where

Cloud-Based Electronic Health Record

Disease, needing in-person treatment by dentist?

No

Allied Personnel – On-Site
Prevention & early intervention procedures, case management, integration into educational, social, general health systems
Community Prevention and Early Intervention Procedures
The Virtual Dental Home Concept Model

**Allied Personnel – On-Site**
Intake & periodic recall visits, record collection, communication with dentist

**Dentist – Off-Site**
Record review, decision about dental treatment – what & where

Disease, needing in-person treatment by dentist?

**Allied Personnel – On-Site**
Prevention & early intervention procedures, case management, integration into educational, social, general health systems

**Cloud-Based Electronic Health Record**

**Community On-Site Allied Personnel Care**
(least expensive, most cost avoidance)

**University of the Pacific Program management**
The Virtual Dental Home Concept Model

**Allied Personnel – On-Site**
Intake & periodic recall visits, record collection, communication with dentist

**Dentist – Off-Site**
Record review, decision about dental treatment – what & where

**Disease, needing in-person treatment by dentist?**

**Allied Personnel – On-Site**
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The Virtual Dental Home Concept Model

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**Dentist – Off-Site**
Record review, decision about dental treatment – what & where

**Cloud-Based Electronic Health Record**

**Disease, needing in-person treatment by dentist?**

- **No**
  - **Allied Personnel – On-Site**
  Prevention & early intervention procedures, case management, integration into educational, social, general health systems
  - **University of the Pacific Program management**

- **Yes**
  - **Dentist – On-Site**
  Disease treatment

**Community On-Site Allied Personnel Care**
(least expensive, most cost avoidance)
The Virtual Dental Home Concept Model

Allied Personnel – On-Site
Intake & periodic recall visits, record collection, communication with dentist

Dentist – Off-Site
Record review, decision about dental treatment – what & where

Cloud-Based Electronic Health Record

Community On-Site Allied Personnel Care
(least expensive, most cost avoidance)

Disease, needing in-person treatment by dentist?

No

Yes

Allied Personnel – On-Site
Prevention & early intervention procedures, case management, integration into educational, social, general health systems

University of the Pacific Program management

Dentist – On-Site
Disease treatment

Pacific Center for Special Care, University of the Pacific School of Dentistry, © 2012
The Virtual Dental Home Concept Model

Allied Personnel – On-Site
Intake & periodic recall visits, record collection, communication with dentist

Dentist – Off-Site
Record review, decision about dental treatment – what & where

Cloud-Based Electronic Health Record

Allied Personnel – On-Site
Prevention & early intervention procedures, case management, integration into educational, social, general health systems

Community On-Site Allied Personnel Care
(least expensive, most cost avoidance)

University of the Pacific Program management

Disease, needing in-person treatment by dentist?

No

Dentist – On-Site
Disease treatment

Yes
The Virtual Dental Home Concept Model

Allied Personnel – On-Site
Intake & periodic recall visits, record collection, communication with dentist

Dentist – Off-Site
Record review, decision about dental treatment – what & where

Disease, needing in-person treatment by dentist?

No

Allied Personnel – On-Site
Prevention & early intervention procedures, case management, integration into educational, social, general health systems

University of the Pacific
Program management

Community On-Site
Allied Personnel Care (least expensive, most cost avoidance)

Yes

Dentist – On-Site
Disease treatment

Community On-Site
Dentist Care (moderate expense, moderate cost avoidance)

Cloud-Based
Electronic Health Record
The Virtual Dental Home Concept Model

Allied Personnel – On-Site
Intake & periodic recall visits, record collection, communication with dentist

Dentist – Off-Site
Record review, decision about dental treatment – what & where

Disease, needing in-person treatment by dentist?

No

Allied Personnel – On-Site
Prevention & early intervention procedures, case management, integration into educational, social, general health systems

Yes

Dentist – On-Site
Disease treatment

Dentist – Dental Office
Disease treatment

Dentist – Dental Clinic
Disease treatment

Cloud-Based Electronic Health Record

Community On-Site Allied Personnel Care (least expensive, most cost avoidance)

University of the Pacific Program management

Community On Site Dentist Care (moderate expense, moderate cost avoidance)
Improving Oral Health as a Culture Change Initiative

Developing an Oral Health Program
In Residential Care Facilities
The Residential Care Demonstration Project
OVERCOMING OBSTACLES TO ORAL HEALTH

A training program for caregivers of people with disabilities and frail elders

UNIVERSITY OF THE PACIFIC
Arthur A. Dugoni School of Dentistry

5th edition
Overcoming Obstacles Program

• Collaborators
  – Pacific School of Dentistry
  – Apple Tree Dental
  – California Dental Association
  – California Dental Hygiene Association
  – American Dental Association Elder Care Committees
  – California Association of Health Facilities
  – American Health Care Association
OVERCOMING OBSTACLES TO ORAL HEALTH
A training program for caregivers of people with disabilities and frail elders

UNIVERSITY OF THE PACIFIC
Arthur A. Dugoni
School of Dentistry

5th edition
The CD (for use in a computer) contains:
• The Direct Caregiver Workbook
• The Daily Mouth Care planning and tracking form
• The Administrators and Trainers Manual
• Pre and Post-Tests
• A presentation that covers the concepts in the Direct Caregiver Workbook with a presentation script
• The Direct Caregiver Video formatted for playback on a computer
• The MDS Oral Health Assessment Video for nursing staff working in health licensed facilities formatted for playback on a computer

The DVD (for use in a DVD player) contains:
• The Direct Caregiver Video with three choices:
  • Part I - the Direct Caregiver Workbook chapters 1-6
  • Part II - the Direct Caregiver Workbook chapters 7-13
  • The entire Video - Direct Caregiver Workbook chapters 1-13
• The MDS Oral Health Assessment Video for nursing staff
Components of the Program

• Decide to make oral health a priority
• Make a plan
• Conduct ongoing training
• Do follow-up mentoring and coaching
• Perform regular monitoring and feedback
• Provide incentives
• Incorporate oral health activities into the culture of the facility
Making a Difference in Long Term Care
The Virtual Dental Home: Cost of Providing Care vs. Cost of Neglect

Cost of providing care
(salaries, materials, equipment, infrastructure)

Cost of Neglect
(transportation, cost of dental treatment, costly hospital ED/OR visits, associated medical problems, lost days of school and work)

Community on-site care delivered by allied personnel emphasizing prevention and early intervention
The Virtual Dental Home: Cost of Providing Care vs. Cost of Neglect

Cost of providing care
(salaries, materials, equipment, infrastructure)

Cost of Neglect
(transportation, cost of dental treatment, costly hospital ED/OR visits, associated medical problems, lost days of school and work)

Community on-site care delivered by dentists using movable or portable equipment

Community on-site care delivered by allied personnel emphasizing prevention and early intervention
The Virtual Dental Home: Cost of Providing Care vs. Cost of Neglect

Cost of providing care
(salaries, materials, equipment, infrastructure)

Cost of Neglect
(transportation, cost of dental treatment, costly hospital ED/OR visits, associated medical problems, lost days of school and work)

Dental Office or Clinic Care
delivered by dentists using fixed equipment in fixed offices

Community on-site care
delivered by dentists using movable or portable equipment

Community on-site care
delivered by allied personnel emphasizing prevention and early intervention

Pacific Center for Special Care, University of the Pacific School of Dentistry, © 2012
The Virtual Dental Home: Cost of Providing Care vs. Cost of Neglect

Cost of providing care (salaries, materials, equipment, infrastructure)

Cost of Neglect (transportation, cost of dental treatment, costly hospital ED/OR visits, associated medical problems, lost days of school and work)

- Hospital ED/OR Care delivered by dentists or physicians in the hospital ED or OR
- Dental Office or Clinic Care delivered by dentists using fixed equipment in fixed offices
- Community on-site care delivered by dentists using movable or portable equipment
- Community on-site care delivered by allied personnel emphasizing prevention and early intervention
The Virtual Dental Home Sites

California

San Francisco
San Jose
Los Angeles
San Diego
Sacramento
Stockton
Modesto
Fresno
Bakersfield
Barstow
Colorado
Nevada
Pacific Ocean
Oral Health Systems for Underserved Populations

Geographically Distributed

Telehealth Enabled

Collaborative

Prevention Focused

Systems of Oral Health Care Without Walls
Moving Oral Health Care from Volume to Value**

**Value** = health outcomes achieved per dollar spent over the lifecycle of a condition
New Dental Care Delivery Systems: Implications for People with Disabilities

Opportunities in New York
Recommendations

• Problems (opportunities)
• Principles
• Process
Recommendations

• Problems (opportunities)
  – Data on who is being/not being served and how and why
  – Clarify/expand scope of practice/waivers/financing (MC)

• Principles
  – The Triple Aim
  – Bring care to where people are
  – Emphasize prevention and early intervention
  – Foster collaboration: DDS->allied personnel ->telehealth
  – Foster collaboration: Embed oral heath in environment

• Process
  – Set priorities
  – Pilot Project