

CURRENT STATE OF AFFAIRS IN MEDICAL AND DENTAL INTEGRATION

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Today's presentation

- Environmental scan
- Focus on diabetes
- Opportunities for medical and dental providers
- Current activities
- Future directions



University of Iowa Prevention Research Center for Rural Health

Environmental Scan of Oral Health and Chronic Disease Integration

Objective:

To identify best practices for medical and dental integration in public health activities and to identify opportunities to include oral health in the ongoing climate of health care reform.

Project Team:

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 - *Consultants for this project*
- National Association of Chronic Disease Directors (NACDD)
- American Association of Community Dental Programs (AACDP)

Healthy People 2020

OH-14 Increase proportion of adults who receive chronic disease preventive interventions in dental offices

14.3 Testing/referrals for glycemic control

- ▶ 2011-2012 Baseline: 5.7%
- ▶ 2020 Target: 7.3%

D-8 Increase proportion of persons with diagnosed diabetes who have at least an annual dental exam

- ▶ 2008 Baseline: 55.6%
- ▶ 2020 Target: 61.2%

Medical-Dental Integration: Diabetes

- “Patients with undiagnosed or poorly-controlled diabetes may be particularly susceptible to periodontal disease.”⁽¹⁾
- Questionable improvement in metabolic control in people with diabetes after periodontal therapy⁽²⁾⁽³⁾
- Some evidence that periodontal therapy can lead to overall health care cost savings

(1) American Academy of Periodontology. 1999. Parameter on Periodontitis Associated with Systemic Conditions.

(2) Simpson TC, et al. Cochrane Database of Systematic Reviews. 2010; Issue 5. Art. No. CD004714.

(3) Engebretson SP, et al. JAMA. 2013;310(23):2523.

Over one-third of US adults with diabetes are undiagnosed.

From the 2011-2012 NHANES:

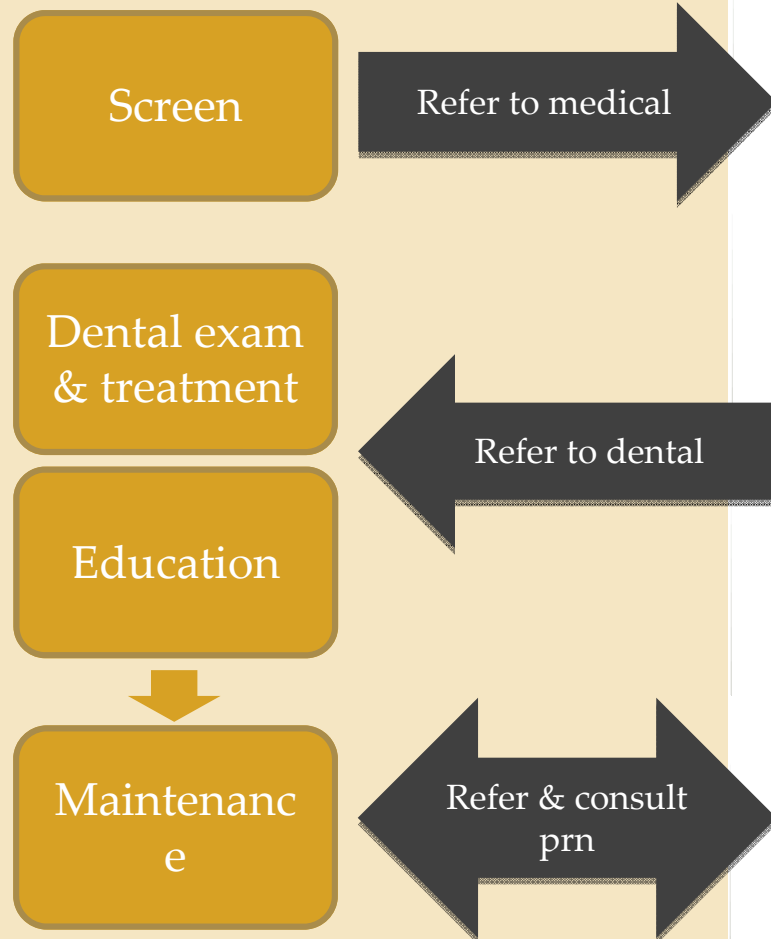
- 12% of US adults have diabetes
 - *Over one-third undiagnosed*
 - *Substantial disparities: nearly half of Asian and Hispanic Americans with diabetes are undiagnosed*
- 38% of US adults have prediabetes

Current standards of medical care for diabetes

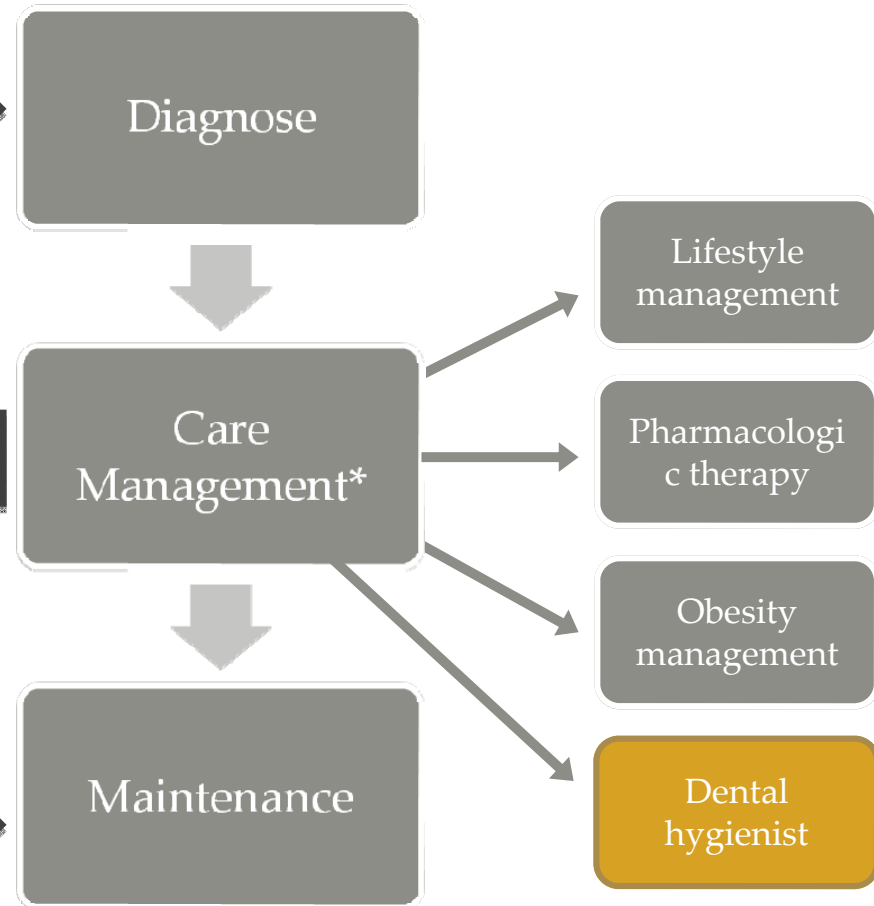
- Periodontal disease is more severe, possibly more prevalent
- Initial care management includes referral to dentist
- Recognition of screening in dental practices with referral to primary care
 - *Need for further research*



Primary Dental Care



Primary Medical Care



*American Diabetes Association. Standards of Medical Care in Diabetes - 2017. Diabetes Care. 2017;40(S1).



University of Iowa

Oral Health Environmental Scan

1. Primary data collection
 - *Survey state oral health programs, chronic disease programs, and local health programs*
2. Literature review
 - *Peer-reviewed research*
 - *State oral health plans*
 - *Grey literature*
3. Key informant interviews

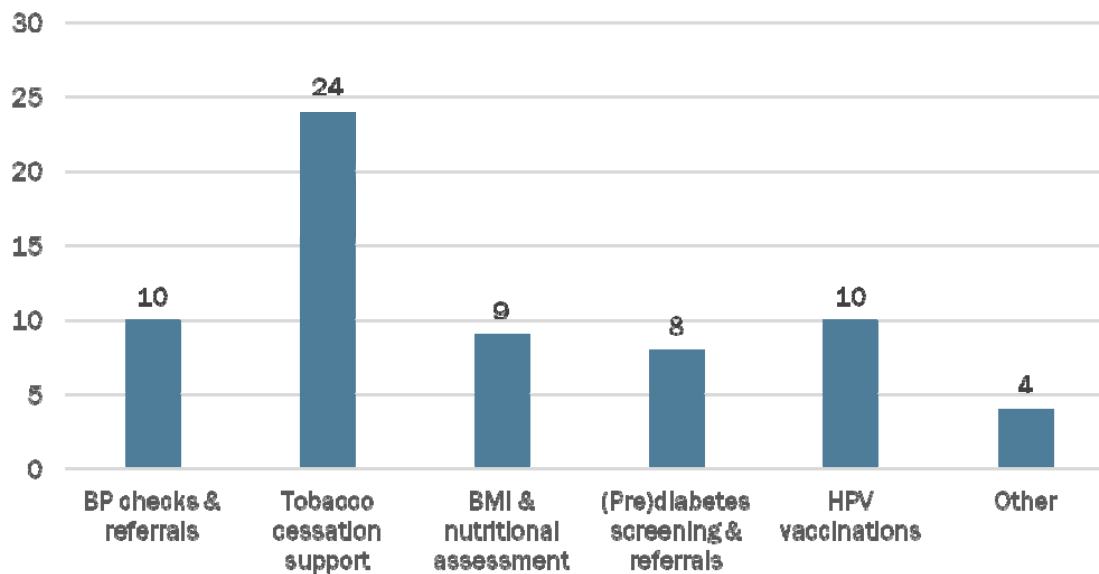
Surveys on Oral Health & Chronic Disease Integration, March 2017

- State & Territorial Oral Health Programs
 - *With ASTDD (N=26)*
- State & Territorial Chronic Disease Programs
 - *With NACDD (N=19)*
- Local oral health organizations
 - *With AACDP (N=30)*
 - 7 Local health departments
 - 7 Local non-profits
 - 11 CHCs

Survey of State Oral Health Programs

N=26

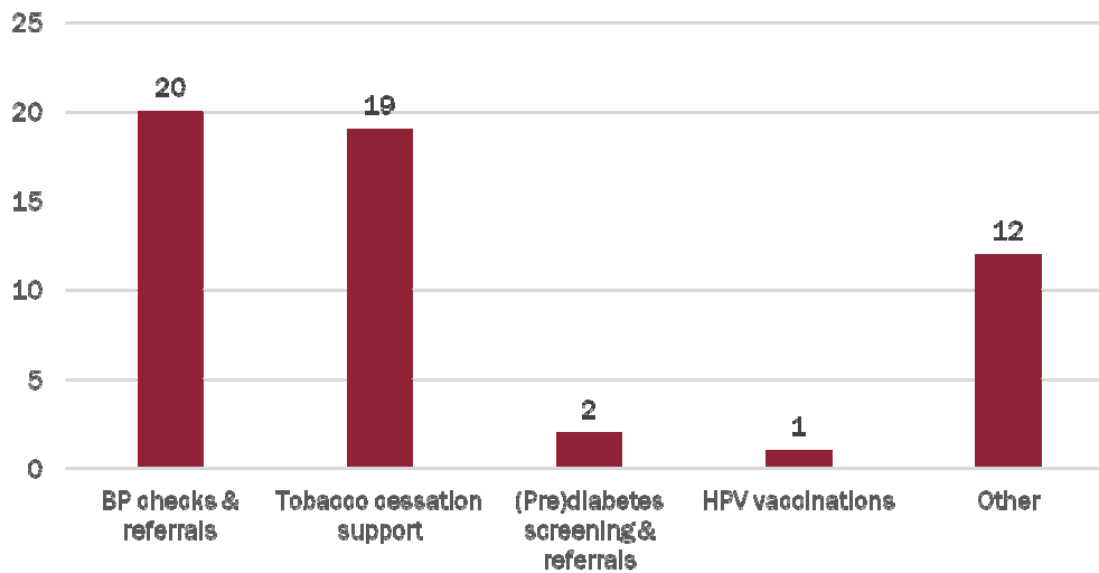
Which of the following activities, performed by dental providers does your state oral health program support?



Survey of Local Oral Health Activities

N=30

Which of the following activities, performed by dental providers does your organization perform?



Review of State Oral Health Plans

5 of 18 current state plans directly address the topic of diabetes

“Incorporate oral health education, prevention and referral with Diabetes Self-Management Education programs and other chronic disease programs.”

Idaho Oral Health Action Plan 2015-2010

“Promote use of risk assessment (periodontal disease, diabetes, tobacco use, etc.) among medical and dental providers.”

Minnesota Oral Health Plan 2013-2018

“Reimburse dental professionals for chronic disease prevention activities, including diabetes screening...”

Strategic Plan for Oral Health in Oregon 2014-2020

High levels of acceptability of diabetes screenings in dental settings among medical and dental providers

- Majority of dentists (76%) agreed it is important for dentists to perform chairside screening for diabetes⁽¹⁾
- Majority of dentists (56-84%) willing to perform finger-stick testing⁽¹⁾⁽²⁾
- Majority of hygienists (79%) think it is important for dental providers to perform chairside screening for diabetes⁽³⁾
- Majority of physicians (71%) think it is valuable for dentists to screen for diabetes ⁽⁴⁾

(1) Greenberg et al. J Am Dent Assoc. 2010;141(1):52.

(2) Barasch et al. J Am Dent Assoc. 2010;143(3):262.

(3) Greenberg et al. Int J Dent Hygiene. 2016. DOI:10.1111/idh.12217

(4) Greenberg et al. J Public Health Dent. 2015;75:225.

High levels of patient acceptability

- Majority of patients (90%) agree that the dental visit is a good place to have blood glucose testing done⁽¹⁾
- Blood glucose testing in the dental office is⁽²⁾
 - A good idea (83%)
 - Easy (86%)
 - Useful (79%)

(1) Rosedala & Strauss. Int J Dent Hygiene. 2012;10:250.

(2) Barasch et al. J Am Dent Assoc. 2012;143(3):262.

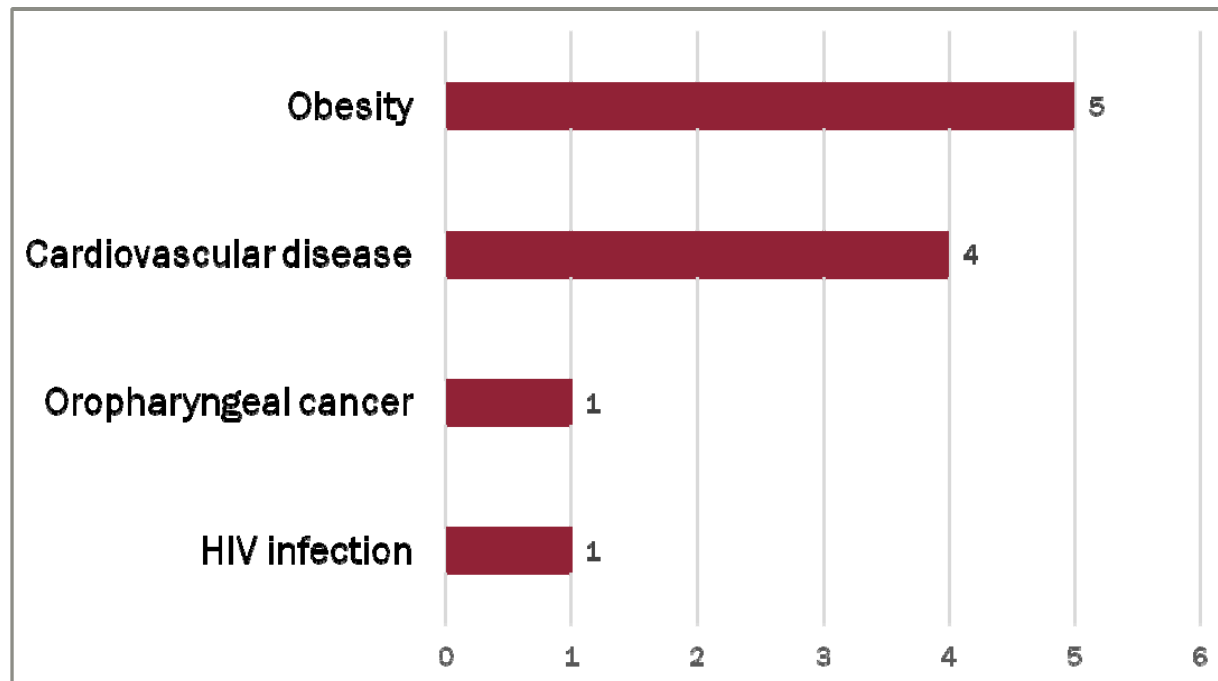
Patient health outcomes

- Lifestyle changes
 - *49% with at least 1 positive change by 6 months⁽¹⁾*
- Reduction in A1C
 - *In diabetics: reduced 1.5% from baseline⁽¹⁾*
- Follow-ups with primary care physician
 - *55% within 3 months⁽²⁾*

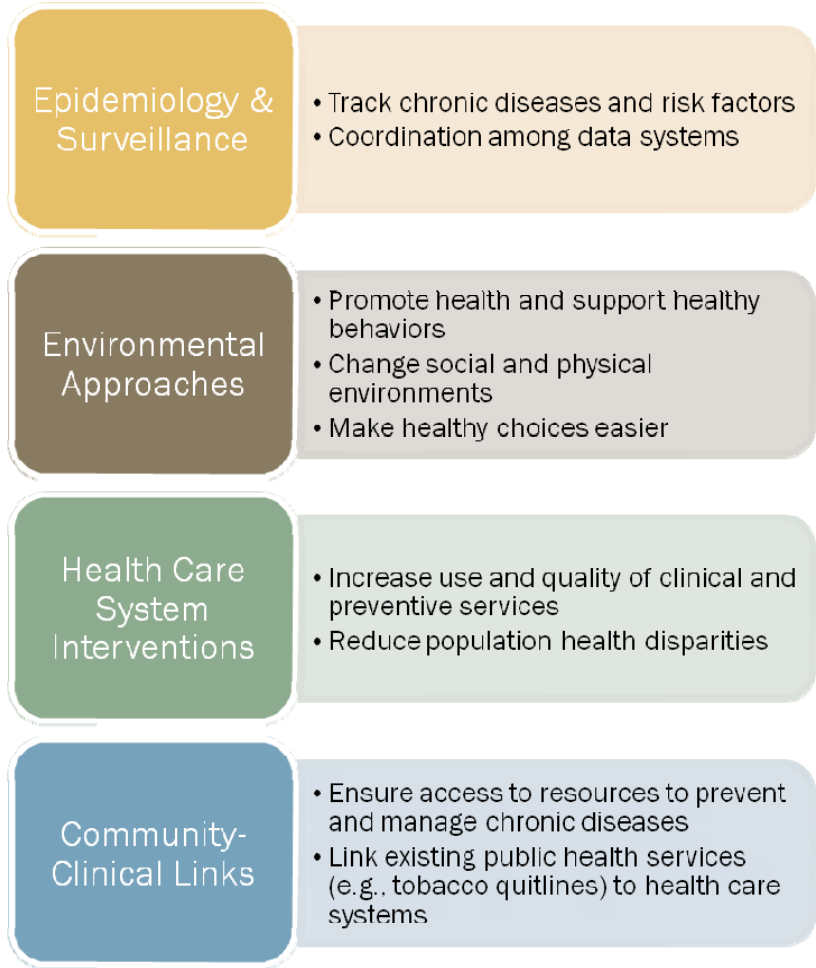
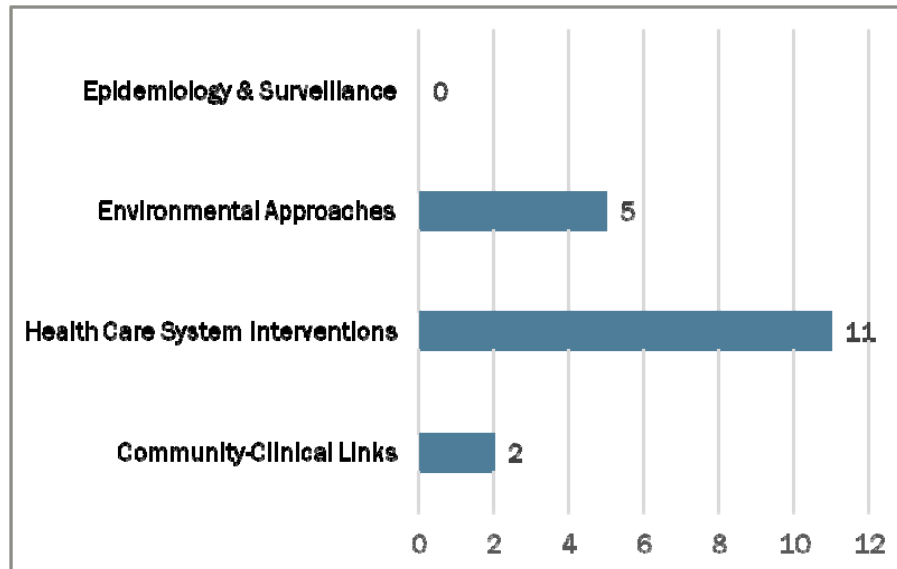
(1) Lalla, et al. J Clin Periodontol. 2015;42:228.

(2) Rosedale MT, et al. Int J Dent Hygiene. DOI:10.1111/idh.12214

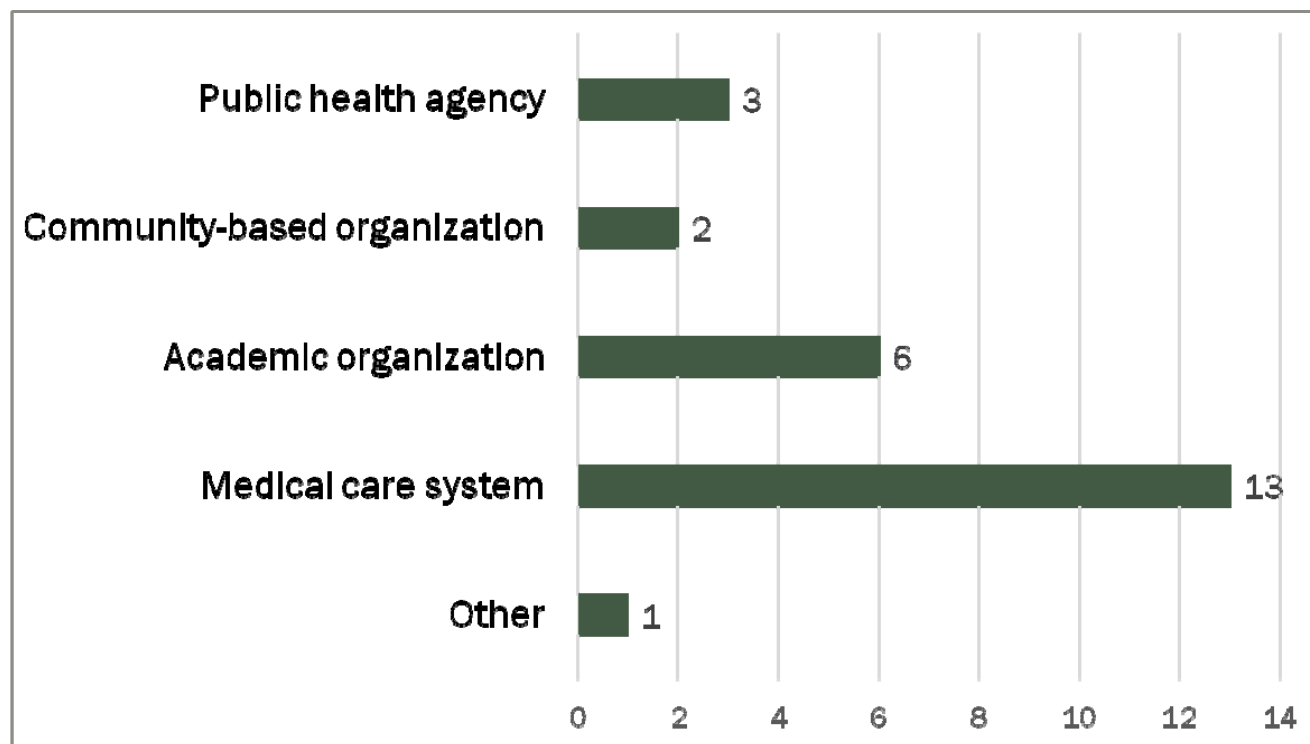
Among integrated activities identified by our literature review, 18 target diabetes. Many also target additional risk factors or chronic diseases.



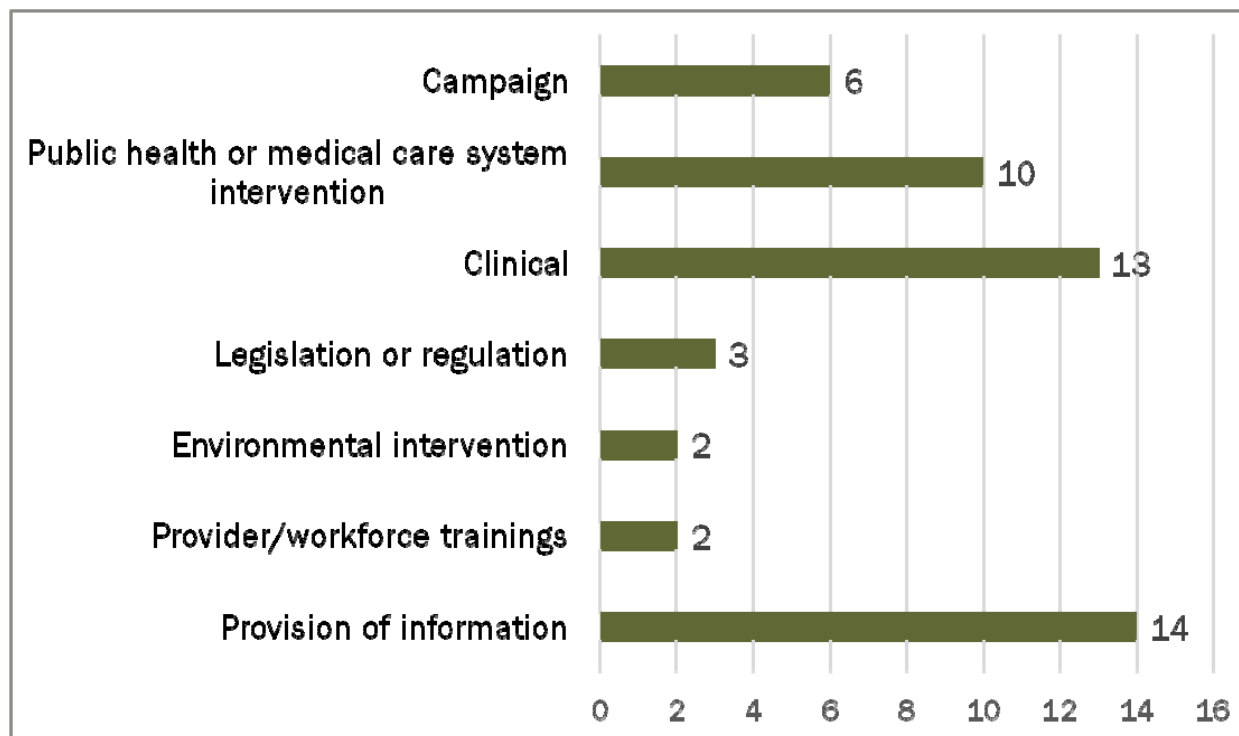
CDC Domain of Chronic Disease Prevention



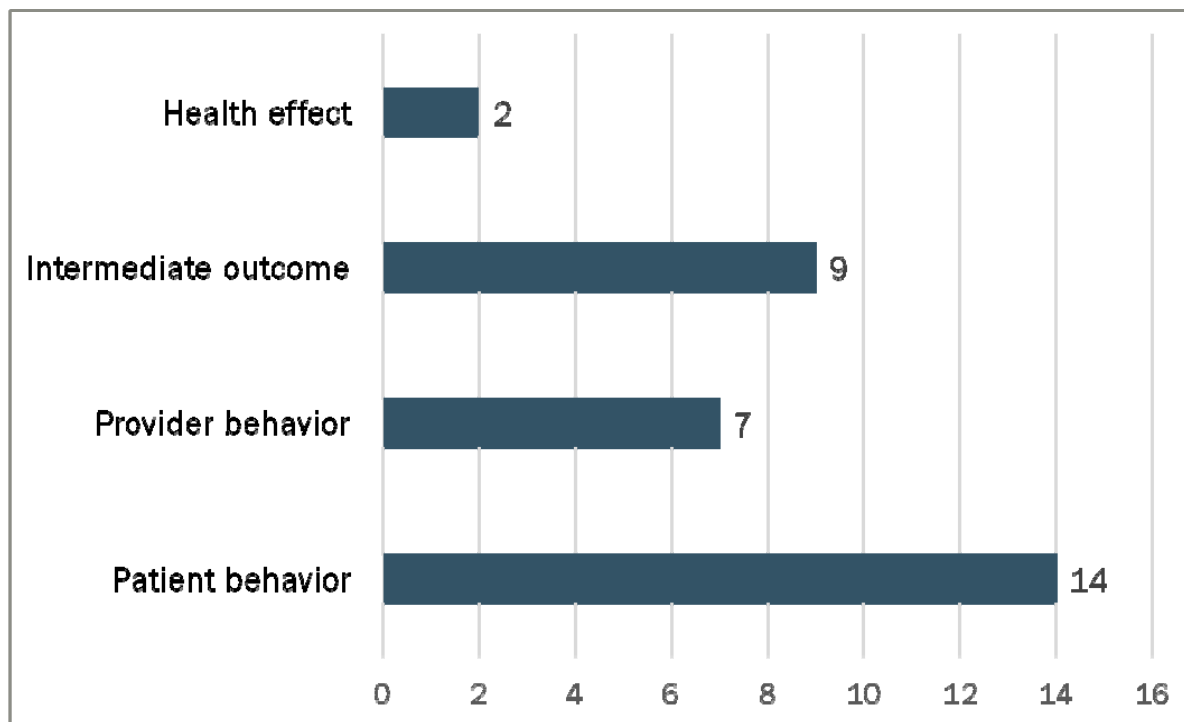
Intervention Settings



Intervention Components



Outcome Measures



ElderSmile

AHRQ Health Care Innovations Exchange

- Intervention: dental school faculty, staff and school provide dental screenings, along with screenings for hypertension and diabetes.
 - *Referrals to PCPs and dental clinic as indicated*
- Target population: Seniors at community centers
- Implemented: 2010
- Evidence Rating: Suggestive
 - *Post-implementation data on proportion of participants identified as at-risk, proportion of referrals who attended a follow-up appointment*

Diabetes Health Outcomes Program

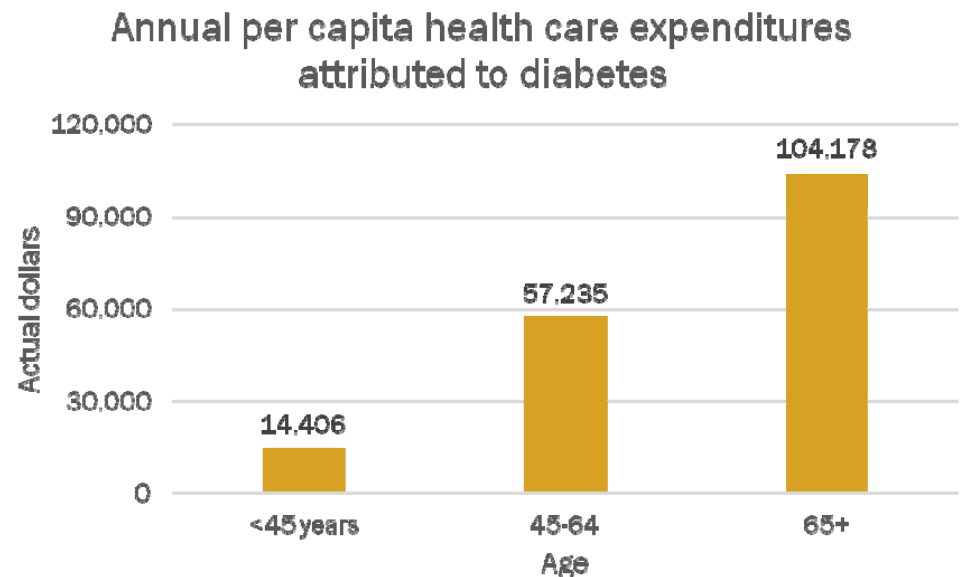
- Hamilton Health Center, Pennsylvania
- Intervention: coordinated and supportive services
- Target population: uninsured diabetics (N=189)
- Implementation: 2007-2009
- Primary outcome measure: A1c \leq 7.0%

Medical-Dental Co-Location

- Diabetes Healthy Outcomes Program
- Marshfield Clinic
 - *WI*
- Neighborcare Health
 - *Seattle, WA*
- Kaiser Permanente Northwest – Cedar Hills Dental & Medical Office
 - *Beaverton, OR*

Economic Costs of Diabetes

- \$245 billion in 2012
- 1 in 5 health care dollars
- Accounts for 59% of health care expenditures for population aged 65+



Some evidence that dental care reduces overall healthcare costs in high risk populations

- Periodontal treatment reduced net healthcare costs in newly diagnosed diabetics⁽¹⁾
- Screening for chronic conditions in dental settings results in cost savings of \$14-21 per person within one year⁽²⁾
- Adding periodontal treatment benefit to Medicare could save \$64 billion over a 10-year period⁽³⁾

(1) Nasseh K, et al. Health Econ. 2016. DOI:10.1002/hec.3316

(2) Nasseh K, et al. Am J Public Health. 2014;104(4):744.

(3) Avalere Health. (2016) Pacific Dental Services Foundation. Available at:
http://pdsfoundation.org/downloads/Avalere_Health_Estimated_Impact_of_Medicare_Periodontal_Coverage.pdf

Cigna Oral Health Integration Program

C. MEDICAL INFORMATION AND ELIGIBLE PROCEDURES

By checking the box(es) below, I confirm that based on the terms of my plan, I have one or more of the conditions listed and am eligible for this additional dental coverage. I understand that filling out and mailing this form does not guarantee payment and that plan maximums may apply.

- | | | | |
|---|---|---|--|
| <input type="checkbox"/> Cardiovascular | <input type="checkbox"/> Diabetes | <input type="checkbox"/> Organ Transplants | <input type="checkbox"/> Maternity (please list due date): |
| <input type="checkbox"/> Cerebrovascular (Stroke) | <input type="checkbox"/> Chronic Kidney Disease | <input type="checkbox"/> Head and Neck Cancer Radiation | _____ |

ELIGIBLE PROCEDURES

Cardiovascular, Cerebrovascular (Stroke) and Diabetes:

- D4341 - Periodontal Scaling and Root Planing - 4 or more teeth per quadrant
- D4342 - Periodontal Scaling and Root Planing - 1-3 teeth per quadrant
- D4910 - Periodontal Maintenance*

Chronic Kidney Disease, Organ Transplants and Head and Neck Cancer Radiation:

- D1206 - Topical Application of Fluoride Varnish***
- D1208 - Topical Application of Fluoride - Excluding Varnish
- D1351 - Sealant - One Tooth***
- D1353 - Sealant Repair - per tooth**
- D4341 - Periodontal Scaling and Root Planing - 4 or more teeth per quadrant
- D4342 - Periodontal Scaling and Root Planing - 1-3 teeth per quadrant
- D4910 - Periodontal Maintenance*

Maternity:

- D0120 - Periodic Oral Evaluation**
- D0140 - Limited Oral Evaluation**
- D0150 - Comprehensive Oral Evaluation**
- D0180 - Periodontal Evaluation
- D1110 - Prophylaxis - Adult (Cleaning)**
- D4910 - Periodontal Maintenance*
- D4341 - Periodontal Scaling and Root Planing - 4 or more teeth per quadrant
- D4342 - Periodontal Scaling and Root Planing - 1-3 teeth per quadrant
- D9110 - Palliative Treatment



Aetna's Medical-Dental Integration Program

- Targets members with diabetes, CVD, or pregnancy
- Enhanced dental benefits
- Medical costs lowered by 17%
- Diabetes control improved by 45%
- Fewer hospital admissions
- Reduced pre-term deliveries

Challenges

- Time during medical and dental visits
- Education
- Need for evidence-based and professional guidelines
- Payment structure
 - *CDT 2018 will include a code for diabetes screening*

CDC Domains of Chronic Disease Prevention

