Oral Health Integration in Primary Care Project: Tools Developed & Lessons Learned

IHI National Forum
Jeff Hummel, MD, MPH
December 6, 2016
Objectives

• A quick review of why oral health is an essential part of primary care – the case for change
• The Oral Health Delivery Framework
• The oral health integration project
• The most important things we learned
• Data that help tell the story
• Some thoughts on what it means
• Ideas on where it might go next
What is the problem we are trying to solve? *A Prevention Gap*

- Caries and periodontal disease are preventable chronic infectious diseases
- Unacceptably high burden of disease nationwide
- Dental care is the most common unmet health need
- The healthcare system, as currently configured, fails to reach the populations with the highest burden of disease resulting in pervasive health disparities and wasteful spending
We need an *upstream* solution…
a way to intervene *earlier* in the course of disease

The proposal?
Expand the oral disease prevention workforce by engaging primary care teams in the fight against oral disease
Why enlist primary care teams?

Access:
Frequent contact with high-risk groups: Children, pregnant women, adults with diabetes

Skills:
• Disease prevention
• Risk assessment, screening, case-finding
• Help patients navigate the healthcare system
• Engage patients in behavior change
Partnership for Prevention

Primary Care
- Population Health Management and Reporting Tools*
- Quality Improvement Methodology
- Care Coordination
- Management of Chronic Diseases
- Medication List Management

Prevention
- Risk Assessment
- Dietary Counseling
- Oral Hygiene Training
- Smoking Cessation
- Fluoride Varnish
- Fluoride Supplementation
- Antibiotic Rinses
- Screening for Oral Diseases

Dental Care
- Restorative Treatment of Caries
- Endodontics
- Orthodontics
- Deep Scaling and Root Planning for Periodontal Disease
- Crowns and Implants
- Dental X-rays
- Dental Sealants
- Periodic Cleaning
- Mouth Guards

*Including structured EHR data and diagnostic codes, disease registries, and other tools

© Qualis Health, 2016
Care for Ms. G

• Ms. G is a 69 year-old woman suffering from diabetes, hypertension, and asthma.

• Her medical care is managed largely in a primary care clinic, which monitors her blood sugar and blood pressure every 3 months, and adjusts her medications accordingly.

• Her asthma severity is briefly assessed at each visit, and every autumn (before influenza season) her care team reviews her lung function, adjusts her medications if necessary, and makes sure she receives her flu shot.

• At a yearly visit, special attention is given to testing for kidney disease and loss of sensation in her feet. She is seen by an optometrist for an eye exam.
A year ago, her care team began screening for oral disease while assessing her eyes, feet, and kidney function.

The initial oral health assessment showed moderate to severe periodontal disease and several root caries.

The care team trained her in optimal oral hygiene and helped her identify ways she could reduce the sugar content in her diet.

Her primary care provider also referred Ms. G to a dentist with a formal request to evaluate and manage her periodontal disease and root caries.

The referral included a copy of Ms. G’s problem list, medication list, and allergy list.

The dentist returned a consultation note to the referring provider in which the dentist noted his impression, described the interventions taken, and outlined a care plan.
Oral Health: An Essential Component of Primary Care

Published June 2015

- Case for change
- Oral Health Delivery Framework
- Supporting actions from stakeholders
- Case examples from early leaders: Confluence Health, The Child and Adolescent Clinic, Marshfield Clinic

Available at: www.QualisHealth.org/white-paper


© Qualis Health, 2016
**Question**: What will it take to change the standard of care?

1. Clear definition of what can be done in the primary care setting to protect and promote oral health
2. Streamlined process for fitting oral health into an already packed primary care workflow
3. Practical model for a close collaboration between medicine and dentistry
Oral Health Delivery Framework

5 actions primary care teams can take to protect and promote their patients’ oral health. Within the scope of practice for primary care; possible to implement in diverse practice settings.

Preventive interventions: Fluoride therapy; dietary counseling to protect teeth and gums; oral hygiene training; therapy for substance use; medication changes to address oral dryness; referral.


© Qualis Health, 2016
Field-Testing a Conceptual Framework

19 diverse healthcare delivery organizations: Private practices, Federally Qualified Health Centers; medical only and on-site dental

Adults with diabetes (12), pediatrics (5), pregnancy (1), adult well visits (1) eCW (5), EPIC (8), NextGen (2), Centricity (2), Success EHS (2)

Direct Technical Assistance
Train-the-trainer with State PCAs

Oregon Primary Care Assoc.
Kansas Assoc. Medically Underserved (*)
Massachusetts League of CHCs

*Support also provided by:
Kansas Health Foundation
United Methodist Health Ministry

© Qualis Health, 2016
Field-Testing Results: Future Tools

“Oral Health Integration Implementation guide”

Toolkit for primary care teams (Avail Oct 2016)

- Workflow maps
- Referral agreements
- Patient engagement strategies
- Patient/family education resources
- EHR templates
- Case examples
- Impact data and more

© Qualis Health, 2016
Nothing Happens without Leadership

• Define program goals
  – Target population
  – Clinical standard of care

• Define program & pilot teams

• Establish timeline for the program
  – Schedule the kickoff meeting with pilot team
  – Workflow optimization
  – Adapting Health IT
  – Building quality reports

• Develop plan for spread

• Commit necessary resources
Program & Pilot Teams

Program Team

Organizational leadership including QI and IT

Pilot Team

Clinic and team leadership

Care team and representative from QI and IT
Lessons Learned: Recruitment

• Vision of “whole person care” is a must
  – Essential role of clinical champion with committed care team
  – Support of leadership is key
  – Value of learning population health skills for value-based reimbursement

• Set expectations lower rather than too high
  – Avoid overwhelming practice
  – Simply opening the door is a success
  – EHR changes often daunting
Program & Pilot Timelines

1. Leadership meeting
2. Kick-off meeting
3. Oral Health IT Assessment
4. Workflow optimization mapping
5. Complete task list from mapping
6. Test and modify future state
7. Map referral workflow
8. PDSA workflow and referrals until stable
9. Spread

- Define program goals and outline the quality improvement strategies to achieve them.
- Modify EHR to support workflow
- Build report for workflow metrics
- Run reports monthly to guide PDSAs
- Turn on workflow reports
- Modify EHR to support referrals
- Build referrals reports
Clinical Content Training

• Anatomy & Pathophysiology
  – **Saliva**: protective role; medication side effects
  – **Teeth**: demineralization balance; caries
  – **Gums**: spectrum of periodontal disease

• Target Population
  – Caries of childhood
  – Periodontal disease in adults with diabetes
  – Threats to oral health during pregnancy

© Qualis Health, 2016
Standard of Care in a Protocol

Information Criterion

- Average days/wk brush twice 2 min with fluoride & floss?
- Average number daily starchy/sweet snacks/drinks
- Anyone in immediate family tooth decay in past year?
- Inadequate saliva on exam
- Acid taste in mouth on daily or near daily basis
- Tooth pain/gum bleeding with eating/flossing?
- Visual signs of tooth decay?
- Visual signs of gum inflammation?

Clinical Condition

- Oral Hygiene Risk
- Dietary Risk
- Bacterial Colonization In Family
- Oral Dryness
- Acid Reflux
- Symptoms of Active Dental Disease
- Tooth Decay
- Gum Inflammation

Primary Care Action

- Fluoride Varnish
- Medical Therapy
- Oral Hygiene/Dietary Coaching
- Referral to Dentistry

© Qualis Health, 2016
Who will do this new work? *It depends*

- Size and structure of the practice
- Provider comfort with delegation
- Needs and preferences of patient population
- Visit type

*There are many options.*
Approaching Workflow Optimization

- We found less need to redesign workflow.
- The real challenge was fitting a few new steps into an already full workflow.
- Opportunities to engage clinical assistants in clinical work, but beware the bottleneck.
- Interactive workflow mapping
  - Butcher paper & sticky notes are inefficient.
  - We need something fun, fast and engaging for entire team.
Ambulatory Visit Structure
Care Team prepares for visit

MA reviews preps charts for Chronic Illness and Preventive Care night before

MA assures translation services are ordered if necessary

MA sends secure message to patients who have not filled out pre-visit clinical information in portal

MA assures that patients on schedule have all necessary reports available for visit

Behavioral health team social worker reviews schedule day before and alerts MA to specific issues

Care team has structured Provider & MA huddle at start of day

Provider reviews Pt charts prior to clinic

Nurse Educator reviews charts for patients of special interest prior to clinic
Current State

**Patient schedules visit**
- Receptionist staff prepares for visit
- Care Team prepares for visit
- Patient checks in at Front Desk
- MA rooms patient
- NP conducts encounter
- RN sees patient
- End of visit activities
- Patient leaves

**PSR validates:**
- insurance
- demographics

**Pt makes appt:**
- at end of visit
- by phone
- by Pt navigator
- by consulting RN
- clinic walk in
- PCP referral

**Reminder call 2d before visit, noted in chart**
- If pt raises clinical issues alert care team
- Info forms mailed
- Set up translation services
- Assemble outside records

**Log on – verify ID**
- Set up interpreter
- CC, VS; review meds/Allergies
- Order & pend tests
- Enter results in chart
- Assure all documents available
- Flu shot
- Set up room
- Put Pt Ed pack out for NP
- Enter info from questionnaire in chart
- MyChart sign up
- blue dot
- Discuss with NP

**Review chart**
- Evaluate Pt
- Review Meds & Problem List
- Place/sign orders: genetic screening, US, labs, referrals
- Evaluate EPDS scores
- Document visit
- Review Pt Ed packet
- Print AVS
- Lync message & talk to RN to complete Pt Ed

**Review meds**
- Order vitamins
- Review OB Pt info packet
- Address questions and concerns
- Review AVS
- Document
- Update Prob List
- Review EPDS
- Place & pend referrals
- Review orders & explain next steps

**MA reviews record for any complications**
- MA assures lab & US reports are in EHR
- RN views NP schedule for Pts needing help with Pt Ed help
- RN & NP discuss select Pt for RN involvement
- NP reviews Pt charts prior to clinic

**white dot on chart for arrived**
- verify demographic/insurance info
- collect co-pay & balance
- print label, send to BR with cup
- Collects mailed questionnaire
- green dot on chart for ready

**Handoff from MA to NP**

**Handoff from NP to RN**

**Handoff from MD to Front Desk**
Purpose of Future State Workshop

• Agree on way to identify patients needing oral health screening
• Agree on the oral health tasks from to insert into workflow
• Decide who does which task and when
• Identify a way to get the information required for each task to the right person at the right time
Gather & document dental insurance information

Identify patients on schedule for oral health screening

Gather & document name of regular dentist

Gather & document time since last dental appointment

Enter & pend order for referral to dentistry

Ask: Gather & document answers to oral health screening questions

Look: perform oral health screening exam & document findings

Patient schedules visit

Front Desk prepares for visit

Care Team prepares for visit

Patient checks in at Front Desk

Medical Assistant rooms patient

Provider conducts encounter

End of visit activities

Patient leaves

Decide: Identify OH risk factors and make presumptive diagnosis. Document both

Act: Sign orders for patient education to reduce risk factors

Act: Sign orders for fluoride varnish

Act: Sign orders for referral to dentistry

Act: Patient education to reduce risk factors

Act: Apply fluoride varnish

Act: process referrals

Hand off

Hand off

Hand off
Identify patients on schedule for oral health screening

Ask: Gather & document answers to oral health screening questions

Look: perform oral health screening exam & document findings

Enter & pend order for referral to dentistry

Decide: Identify OH risk factors and make presumptive diagnosis. Document both

Act: Sign orders for patient education to reduce risk factors

Act: Sign orders for fluoride varnish

Act: Coaching to reduce risk factors

Act: Sign orders for referral to dentistry

Act: Apply fluoride varnish

Patient schedules visit

Front Desk prepares for visit

Care Team prepares for visit

Patient checks in at Front Desk

Medical Assistant rooms patient

Provider conducts encounter

End of visit activities

Patient leaves

Act: process referrals

Enter & pend order for referral to dentistry
Lessons Learned: Workflow

• New workflow optimization tools minimize time care team is away from patient care
  – 1 hr Webinar with clinic manager to map current state, care team reviews draft and corrects
  – 1-hr lunch session with care team for future state
• Still must have the right people in the room
• MD/MA teamlets are maxed out
  – No bandwidth for end-of-visit activities
  – Rooming patients is the bottleneck
Health IT Support for Oral Health

• It's all about Clinical Decisions Support: “The 5 Rights”
  – Who needs screening?
  – Template to prompt Oral Health Delivery Framework
    • Ask
    • Look
  – Order sets to help guide protocol-based interventions
COU Oral Health: Cousle Test

Demographic Dental Information:

Name of regular dentist: [Field]
Date of last dental appointment: [Field]

No Oral Screening Has Been Documented

Screening:

Oral Health Screening Questions:
On average, how many days per week do you brush your teeth for at least 2 minutes, twice daily, using fluoride toothpaste AND floss at least once daily?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7

On average, how many desserts, sugary snacks, or sugary drinks total do you have daily?

- 1 or less
- 2 to 3
- 4 to 5
- 6 or more

Do you commonly experience dry mouth? (e.g., requiring swallowing water to eat crackers)

- Yes
- No

Do you experience tooth pain or bleeding gums when you eat or brush your teeth?

- Yes
- No

Oral Health: Screening Exam

- Normal
- Oral dryness
- Poor oral hygiene
- Signs of caries
- Signs of periodontal disease
- Broken teeth
- Missing teeth
- Edentulous
- Other

Other: [Field]

Patient is already under the care of a dentist for the above findings

Interventions

Current Medications

- COUMADIN 5MG TABS (WARFARIN SODIUM)
  - Take one tablet by mouth once daily

Current Problems:

- POOR MUSCLE TONE (ICD-781.95)
  - (CD10-R29.090)
- GERD (ICD-530.11) (CD10-K21.0)

Current Allergies:

- POOR MUSCLE TONE (ICD-781.95)
  - (CD10-R29.090)
- GERD (ICD-530.11) (CD10-K21.0)


Prev Form (Ctrl+PdUp) Next Form (Ctrl+PdDn) Close [Button]

© Qualis Health, 2016
The Organizational Size Conundrum

• **Too small:** inadequate resources
  – EHR features limited to MU minimum
  – No one with skills to modify the UI

• **Too big:** Multi-specialty delivery systems
  – Priorities inflexible and decided well into future
  – EHR locked down for better standardization

• **Just right:** multiple sites - innovative leaders
  – Agile and able to make decisions
  – Able to modify EHR to support innovation
Population Health Process Measures

Population reporting for value-based reimbursement

• Point-in-time rolling look back
• Who is in the population?
• Who has been assessed?
• What was found?
• What was done?
• What happened?
• Both numerators and denominators are required

Productivity reporting for fee-for-service reimbursement

• Reporting interval
• How many office visits?
• How many assessments?
• How many times found?
• How many times done?
• How did it affect revenue?
• Frequently only the numerators count
The 12-Month Rolling Look Back

1-yr look back to identify members of subpopulation who have been evaluated within 12 months
Population Oral Health

- People in target population
- People assessed within the past year
- People with positive finding on assessment
- People receiving corresponding intervention

© Qualis Health, 2016
Percent of Target Population Assessed

Sound Family Medicine Pilot Team

Sound Family Medicine Spread Team

Formal spread kickoff

“Organic spread”

© Qualis Health, 2016
Prevalence of Caries by Site

© Qualis Health, 2016
Prevalence of Periodontitis by Site

© Qualis Health, 2016
Referral for gum inflammation

© Qualis Health, 2016
Lessons on using EHR Data for QI

• EHRs notorious for reporting challenges
• Limit structured data capture and reporting efforts to parameters that matter to patients
  – Who is in the target population
  – Who has been assessed
  – Actions that matter: Fluoride varnish, referrals
• Use usual data capture methods if possible
  – Diagnosis codes for findings
  – Orders for actions
  – Use assessment as a marker for Pt Ed
A Practical Model for Close Collaboration Between Medicine & Dentistry

• Just scratching the surface

• Three models to consider
  – Formal relationship with community dentists
    • Learning to recognize other and exchange information efficiently
  – Co-located dental practice in same organization
    • Working together with common goals
  – Integrated teams: a vision for the future
Formal Referrals to Community Dentists

Primary Care Workflow: Referral to Dentistry

Clinical Assistant asks, looks, makes preliminary decision, pends referral order

Provider reviews completes & signs referral

Clinical Assistant reviews referral expectations

Pt leaves with referral

Referral Coordinator processes and sends referral

Pt leaves with referral

Report is entered in EHR

Dental Office Workflow: Referral from Primary Care

Dental office processes referral

Pt makes appointment

Pt has appointment with dentist

Dentist writes consultation report

Dental office sends consultation report to referring provider office

© Qualis Health, 2016
## Information Exchange

<table>
<thead>
<tr>
<th>Dentist needs from PCP</th>
<th>PCP needs from Dentist</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Service requested and reason for referral</td>
<td>• Date patient seen</td>
</tr>
<tr>
<td>• Additional relevant clinical data</td>
<td>• <strong>Impression</strong>: What was found, e.g.,</td>
</tr>
<tr>
<td>– Problem list (abbreviated to relevant issues)</td>
<td>– Caries in multiple teeth</td>
</tr>
<tr>
<td>– Current med list</td>
<td>– Periodontal disease: level severity</td>
</tr>
<tr>
<td>– Allergy list</td>
<td>• <strong>Disposition</strong>: What was done</td>
</tr>
<tr>
<td>– Relevant medical/surgical history</td>
<td>– Procedures</td>
</tr>
<tr>
<td>– Pertinent labs and imaging</td>
<td>– Any meds prescribed</td>
</tr>
<tr>
<td></td>
<td>• Brief treatment &amp; follow-up plan</td>
</tr>
</tbody>
</table>

© Qualis Health, 2016
Lessons Learned: Referral Network

• Referral network is challenging
  – Clinicians often don’t know dentists
  – Many dentists are not looking for patients

• Network Building Strategies
  – CHCs growing dental practices on Medicaid
  – Bundling: Dentists with empty chairs often welcome mixed insurance stream of patients
  – Person relationships are valuable

• Information exchange is often primitive
In-House Referrals are actually Handoffs with specific information requirements
For Formal Referrals Frequently Most of the Work is Done by the Referral Coordinator
Doing “right now’s job right now” saves total work
Care Integration and the Paradox of Primary Care

Fragmentation amplifies quality differences between primary care and specialty

Integration enhances primary care’s ability to provide value

Primary Care’s Liability:
- Lower quality than specialty for single diseases

Primary Care’s Value:
- Better whole person health
- Better population outcomes
- Greater equity
- Lower total cost
Future Directions: Clinical Outcomes

• Validated 4-point scales exist that can be mapped to SNO-MED codes
  – Caries: ADA Caries Classification System (CCS)
  – Periodontal disease AAP/CDC

• Both describe most severe tooth or tissue
  – No disease, mild, moderate, severe

• Both can be adapted to population health
  – Caries add score for involvement of pulp
  – Periodontal disease add score for healthy gingiva
Future Directions: Collaborative Model

• Primary Care & Dentists in the same organization with aligned incentives
• Shared accountability for outcomes of target population
• Strategy:
  – Preventive screening in primary care
  – Treatment and disease severity assessment in dentistry
Collaborative Care Outcomes

• Quality of care:
  – Fluoride varnish children and adolescents
  – Sealants for children
  – Adults screened

• Population health
  – Caries: severity profile
  – Periodontal disease: severity profile

• Utilization/Risk
  – ED utilization for dental disease
  – OR anesthesia for caries in kids
Support From

National Interprofessional Initiative on Oral Health

engaging clinicians, eradicating dental disease

DentaQuest Foundation

REACH Healthcare Foundation

Washington Dental Service Foundation

Community Advocates for Oral Health

© Qualis Health, 2016
Learn More

Resources available at: www.QualisHealth.org/white-paper

Jeff Hummel, MD, MPH
e-mail: jeffh@qualishealth.org