

# Chronic Disease and Oral Health Integration

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# Introductions

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**COLORADO**  
Department of Public  
Health & Environment

# Project Partnership

# Acknowledgments

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# Colorado Context

- Same day billing for medical, dental, and behavioral health - FQHCs can bill three encounters on one day
- Registered dental hygienists are billable providers and have an extensive scope of practice
  - Interim Therapeutic Restorations (ITR)
  - Silver Diamine Fluoride (SDF)
  - Dental hygiene diagnosis
- Adult Medicaid dental benefit - \$1,500 annual cap
- Diabetes point-of-care HbA1c testing in the dental clinic is reimbursable by Medicaid (D0411)

Why chronic disease  
and oral health  
integration?

- Oral health impacts:
  - Quality of life
  - Nutrition
  - Education
  - Employment
  - Mental health
  - Chronic disease
  - Pregnancy
  - Overall health
  
- Dental caries is the #1 chronic disease of childhood and it is almost entirely preventable

Why oral  
health?

# Chronic Disease and Oral Health

- Oral health can influence diabetes control and vice versa<sup>1</sup>
- Colorado adults with diabetes were 3x more likely to have lost all their teeth compared to people without diabetes
- Patients with healthier gums have lower blood pressure and may respond better to blood pressure lowering medications than patients with gum disease<sup>2</sup>

- (1) Preshaw, P., Alba, A., Herrera, D., Jepsen, S., Konstantinidis, A., Makrilakis, K., & Taylor, R. (2012). Periodontitis and Diabetes: a two-way relationship. *Diabetologia*, (55), 21-31. doi:10.1007/s00125-011-2342-y
- (2) Pietropaoli, et. al. (2018). Poor oral health and blood pressure control among US hypertensive adults results from the National Health and Nutrition Examination Survey 2009 to 2014. *Hypertension*. Doi: [10.1161/HYPERTENSIONAHA.118.11528](https://doi.org/10.1161/HYPERTENSIONAHA.118.11528)



- **33%** report that their mouth and teeth are in fair or poor condition; this is the case for **50%** of low income Coloradans
- **32%** say their life is less satisfying due to condition of mouth and teeth
- **19%** of low income Coloradans say the appearance of their mouth and teeth affects their ability to interview for a job
- **25%** of adults avoid smiling due to the condition of their mouth and teeth

# Colorado Snapshot

Data source: ADA Health  
Policy Institute, 2015

<https://www.ada.org/~media/ADA/Science%20and%20Research/HPI/OralHealthWell-Being-StateFacts/Colorado-Oral-Health-Well-Being.pdf>

# Integration along a spectrum

Medical clinic

Ask pts w/ (pre) diabetes if they have a dental home

Provide education on oral health-diabetes links & oral hygiene instruction

Refer pts w/ (pre) diabetes to a dental home

Conduct oral health assessment for pts w/ (pre)diabetes

Integrate dental hygienist to focus on pts w/ chronic conditions

Refer patients to diabetes education programs (internal or external)

Dental clinic

Ask pts w/ (pre) diabetes about medical home

Provide education on oral health-diabetes links

Refer pts w/ (pre) diabetes to a medical home

Conduct risk assessment for (pre)diabetes

Conduct point of care A1c **screening**

Close the loop on referrals

# Diabetes- Oral Health Integration Project (DOHI)



# Colorado Coalition for the Homeless

- Mission: Create lasting solutions to homelessness
- Advocate for, and provide a continuum of, housing and services to improve the health, well-being, and stability of those it serves
- Comprehensive approach addresses the causes of homelessness as well as the consequences, offering critical assistance to over 15,000 individuals and families each year
- Quality assurance and quality improvement are part of CCH values and philosophy



## Why *this* project?

- Alignment with CCH clinical quality priorities
- Opportunity to connect dental patients with a medical home
- Benefits of an integrated health system

# Implementation at the Coalition

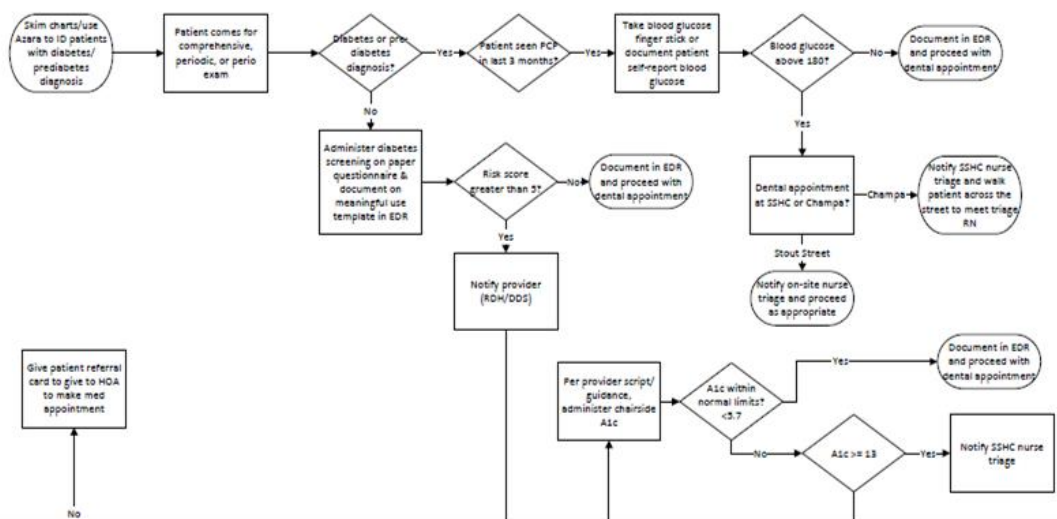
- Screening in dental clinic using American Diabetes Association (ADA) guidelines
  - Diabetes and prediabetes risk assessment questionnaire
  - Point-of-care HbA1c test (DO411)
- Bidirectional Referrals
  - Dental to medical and medical to dental
  - Evidence-based diabetes prevention and management programs
- CCH Diabetes Education Group
  - National Diabetes Prevention Program (NDPP)
  - Diabetes-Self Management Education (DSME)

# Changes to Support Implementation

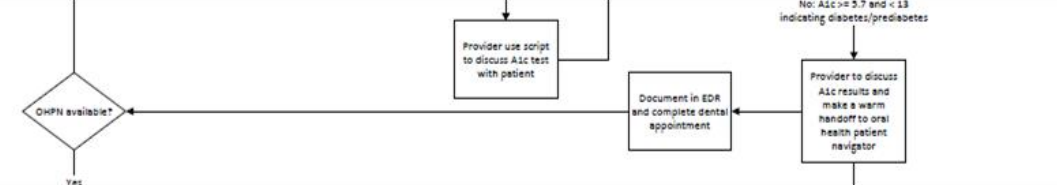
- Health Information Technology
  - EHR: NextGen
  - EDR: QSI
  - AZARA population health
  - Health Promotion Plan
- Workflows
  - Assessment, screening for (pre)diabetes, and referral from dental to medical
  - (Pre)diabetes diagnosis and referral from medical to dental
- Diabetes/prediabetes education curriculum
  - American Association of Diabetes Educators training



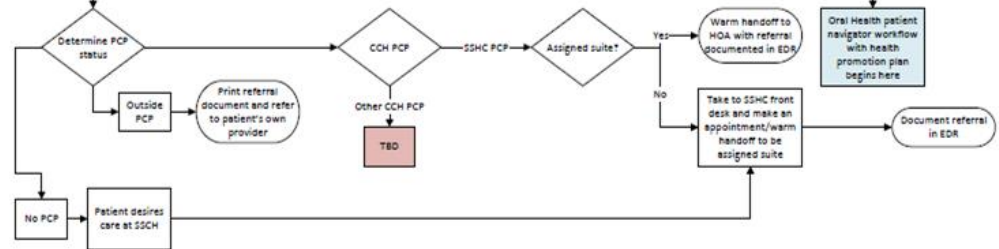
DA/RDH



Provider (RDH or DDS/ DMD)



Oral Health Pt Navigator



# Dental to Medical Workflow

## Are you at risk for type 2 diabetes?

Patient declined screening

**Your score**

1. **How old are you?**.....

Less than 40 years (0 points)  
 40-49 year (1 point)  
 50-59 years (2 points)  
 60 years or older (3 points)

2. **Are you a man or a woman?**.....

Man  Woman

3. **If you are a woman, have you ever been diagnosed with gestational diabetes?..**

Yes  No

4. **Do you have a mother, father, sister or brother with diabetes?**.....

Yes  No

5. **Have you ever been diagnosed with high blood pressure?**.....

Yes  No

6. **Are you physically active?**.....

Yes  No

7. **What is your weight category?**.....

ft.  in.  lbs.

**Total score**

Height	Weight (lbs.)		
4' 10"	119-142	143-190	191+
4' 11"	124-147	148-197	198+
5' 0"	128-152	153-203	204+
5' 1"	132-157	158-210	211+
5' 2"	136-163	164-217	218+
5' 3"	141-168	169-224	225+
5' 4"	145-173	174-231	232+
5' 5"	150-179	180-239	240+
5' 6"	155-185	186-246	247+
5' 7"	159-190	191-254	255+
5' 8"	164-196	197-261	262+
5' 9"	169-202	203-269	270+
5' 10"	174-208	209-277	278+
5' 11"	179-214	215-285	286+
6' 0"	184-220	221-293	294+
6' 1"	189-226	227-301	302+
6' 2"	194-232	233-310	311+
6' 3"	200-239	240-318	319+
6' 4"	205-245	246-327	328+

**1 point**   **2 points**   **3 points**

If you weigh less than the amount in the left column: **0 points**

Adapted from Bang et al. Ann Intern Med 151:775-783, 2009. Original algorithm was validated without gestational diabetes as part of the model.

### A1c

Patient agrees to do A1c screening   A1c Score:

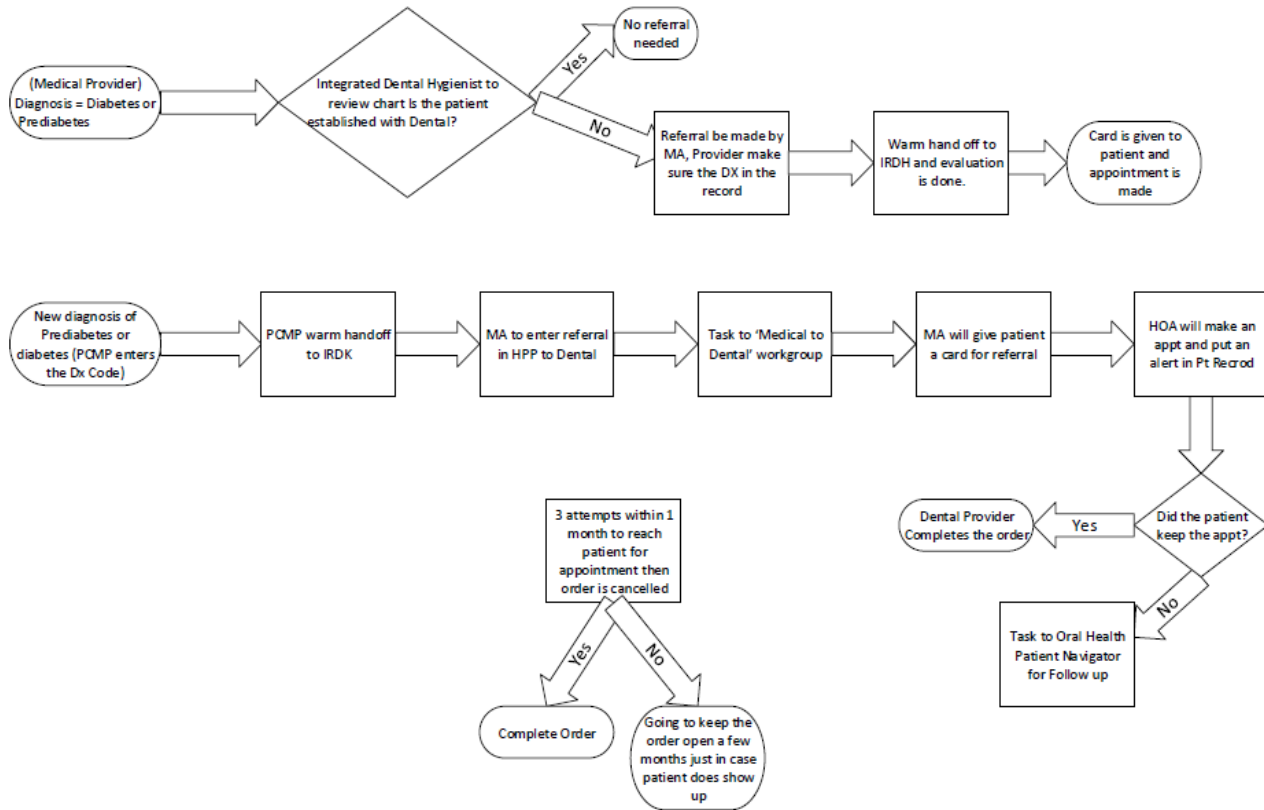
Patient declined A1c screening

A1c Date	A1c Score	Screening Score	Patient Declined Screening	Patient Declined A1c
07/25/2018	6.50	8		

# Digital Diabetes Risk Assessment Questionnaire

# Medical to Dental Workflow

## Medical to Dental Workflow



# Data collection and reporting

- Ability to create and modify reports
- Monthly data collection
- Refining metrics
- Data:
  - Risk assessment questionnaires administered
  - Point-of-care A1c tests administered
  - Point-of-care A1c test results
  - Medical to dental referrals
  - Dental to medical referrals

<b>DOHI Project Measures February 2018 – May 2019</b>	
<b>Category</b>	<b>Total</b>
Questionnaires Given	1056
POC A1c Administered	266
A1c < 5.7	155
A1c ≥ 5.7	112

# Lessons Learned: Compliance and Logistics

- CLIA waivers may be needed to do point-of-care (POC) A1c testing; waiver is test- and site-specific
- Patient consent process for POC test
- Documented policies and procedures for risk assessment, POC test, referrals, and follow-up
- Coordinating with billing department to ensure needed documentation is complete for D0411 and how this test will be handled for sliding fee scale patients
- State scope of practice considerations for utilizing POC test
- Staff compliance and training

# Project Successes

- Oral Health Patient Navigator
- Staff training
  - Smiles for Life for primary care providers and oral health staff
  - American Diabetes Educational Association Levels I,II, III, and Manager Level certifications
- Reimbursement for POC test - D0411
- Selection of improved POC A1c device



# Project Challenges

- Supporting an at-risk homeless population with few resources
- Coordinating Dental and Medical staff to attend meetings
- Maintaining buy-in from clinical staff to keep meeting schedules and prioritize project
- Loss of DOHI Nurse Lead with no replacement nurse due to staff shortage
- Difficulty identifying options for (pre)diabetes education and time spent managing staff training
- Errors in screening results with initially-selected A1c device
- Maintaining focus and shared understanding with new CCH leadership

# Next Steps - DCVDOHI

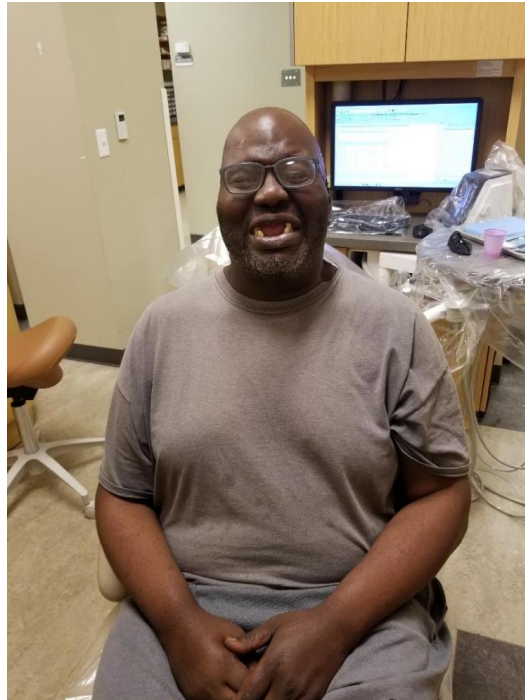
- Diabetes-Cardiovascular Disease Oral Health Integration
- Expand existing workflow to include screening for hypertension
- Adjust referral criteria to build on existing practice of taking blood pressure at each appointment
- Expand Core Team to include on-call nurse and others TBD
- Utilize DCVDOHI toolkit developed with lessons learned from DOHI





# Patient Story

- Reggie Watkins



# Q&A

- Is this something you have considered, or would consider, for your Community Health Center?
- What would you need to move forward?
- Other questions?

## Contact us!

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# Resources

- Integration Tools
  - [CCHN Oral Health Integration Manual](#)
  - [Organized, Evidence-Based Care: Oral Health Integration](#)
  - [THE MOUTH: The Missing Piece to Overall Wellness and Lower Medical Costs](#)
  - [Working Together to Manage Diabetes](#)
  - [ADA Risk Assessment](#)
  - [American Association of Diabetes Educators](#)
  - [Smiles for Life Oral Health](#)
  - [American Dental Association Guide to HbA1c Point of Care Testing and Reporting](#)
- Practice Transformation
  - [Oral Health Disparities Collaborative Implementation Manual](#)
  - [The Primary Care Team Guide](#)
  - [The 10 Building Blocks of Primary Care](#)
  - [Institute for Healthcare Improvement \(IHI\) Quality Improvement Resources](#)
  - [Safety Net Medical Home Initiative Resources & Tools](#)