

University of Vermont  
ScholarWorks @ UVM

Public Health Projects, 2008-present

Public Health Projects, University of Vermont  
College of Medicine

1-21-2016

# Oral Health Intervention: A Multifaceted Approach to Improve Oral Health Care during Pregnancy

Tabitha Ford

Gregory Frechette


Sruthi Sakamori

Caleb Seufert

I-hsiang Shu

*See next page for additional authors*

Follow this and additional works at: [https://scholarworks.uvm.edu/comphp\\_gallery](https://scholarworks.uvm.edu/comphp_gallery)

 Part of the [Community Health and Preventive Medicine Commons](#), and the [Health Services Research Commons](#)

## Recommended Citation

Ford, Tabitha; Frechette, Gregory; Sakamori, Sruthi; Seufert, Caleb; Shu, I-hsiang; Silveira, Patrick; Davis, Wendy; and Fontaine, Kristin, "Oral Health Intervention: A Multifaceted Approach to Improve Oral Health Care during Pregnancy" (2016). *Public Health Projects, 2008-present*. 213.

[https://scholarworks.uvm.edu/comphp\\_gallery/213](https://scholarworks.uvm.edu/comphp_gallery/213)

This Book is brought to you for free and open access by the Public Health Projects, University of Vermont College of Medicine at ScholarWorks @ UVM. It has been accepted for inclusion in Public Health Projects, 2008-present by an authorized administrator of ScholarWorks @ UVM. For more information, please contact [donna.omalley@uvm.edu](mailto:donna.omalley@uvm.edu).

---

**Authors**

Tabitha Ford, Gregory Frechette, Sruthi Sakamori, Caleb Seufert, I-hsiang Shu, Patrick Silveira, Wendy Davis, and Kristin Fontaine

## INTRODUCTION

- Early Childhood Caries (ECC) is the most common chronic disease of childhood<sup>1</sup>
- Mothers' oral health status is a **strong predictor** of the oral health status of their children<sup>2,3</sup>
- **2009:**
  - Vermont spends **\$2.7 million** treating children ages 0-5 with Early Childhood Caries<sup>4</sup>
- **2012:**
  - Vermont lifts the \$495 Medicaid cap on reimbursement for a woman's dental care during pregnancy and up to 60 days after delivery
  - American College of Obstetrics and Gynecology (ACOG) Guidelines on prenatal dental care are published
- **2013:**
  - **74%** of surveyed Vermont providers treating pregnant women are **unaware of the Medicaid change**<sup>5</sup>
  - **82%** of these providers are **not using guidelines** to assess oral health during pregnancy<sup>5</sup>
- **Objective:** To improve prenatal dental referral rates from obstetric providers by facilitating Vermont-specific implementation of ACOG guidelines

## METHODS

### Oral Health Intervention (OHI) components:

1. Interactive Didactic Session
2. Oral Health Referral Protocol (OHRP)
3. Dental Kits & Pamphlet Distribution
4. Patient-Centered Brochure/Checklist
5. Educational Poster

### Provider Intervention:

- **Interactive Didactic Session:** Oral health education, ACOG guidelines, local oral health resources provided to OB/GYN physicians
- **Oral Health Referral Protocol (OHRP):** Designated health providers counsel patients on oral health education, provide treatment authorization letters to dental clinics, facilitate in-clinic dental appointment scheduling. Medical students assume OHRP role once a week.

### Patient Intervention:

- Distribution of dental kits with educational resource pamphlets included
- Patient-centered oral health resource pamphlets provide self-management checklist
- Oral Health Awareness Posters in COGS clinic waiting room
- OHRP connects patients to oral health care providers

### Measurements:

- **Pre/Post-Intervention surveys:** To assess provider knowledge and practices
- **OHRP impact:** Total number of treatment authorization letters received and appointments scheduled at local oral health clinics

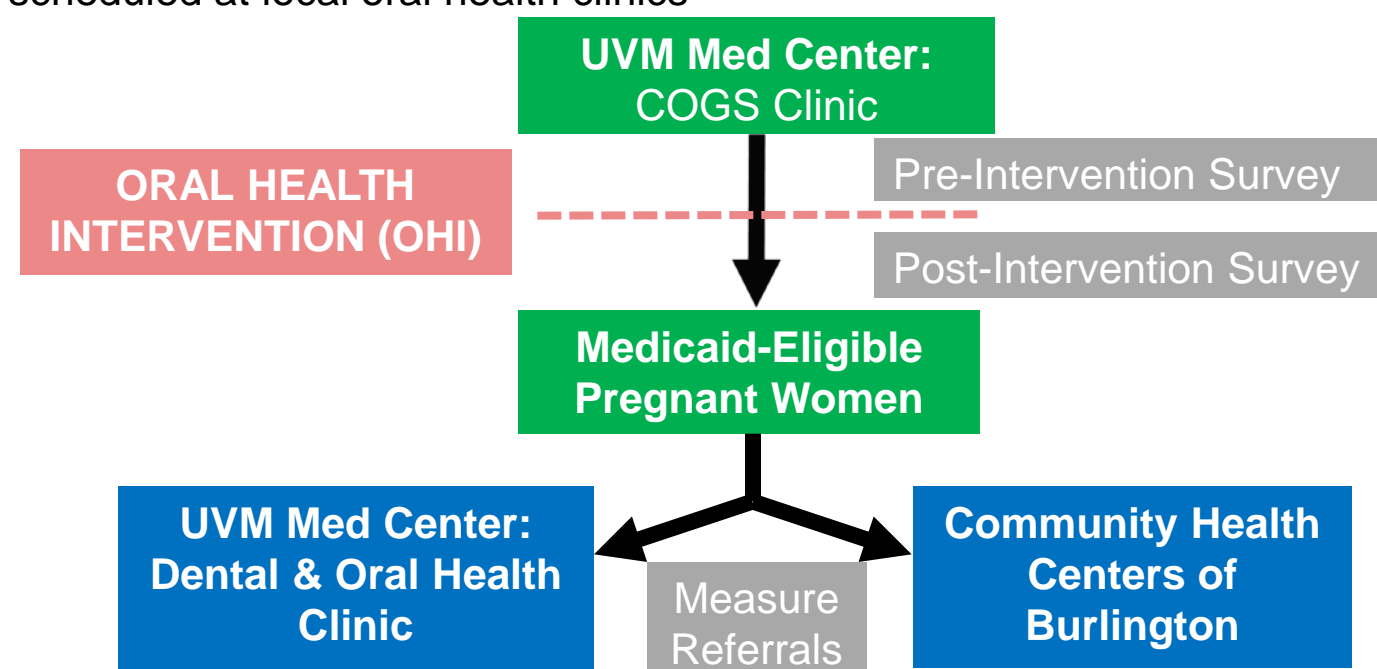


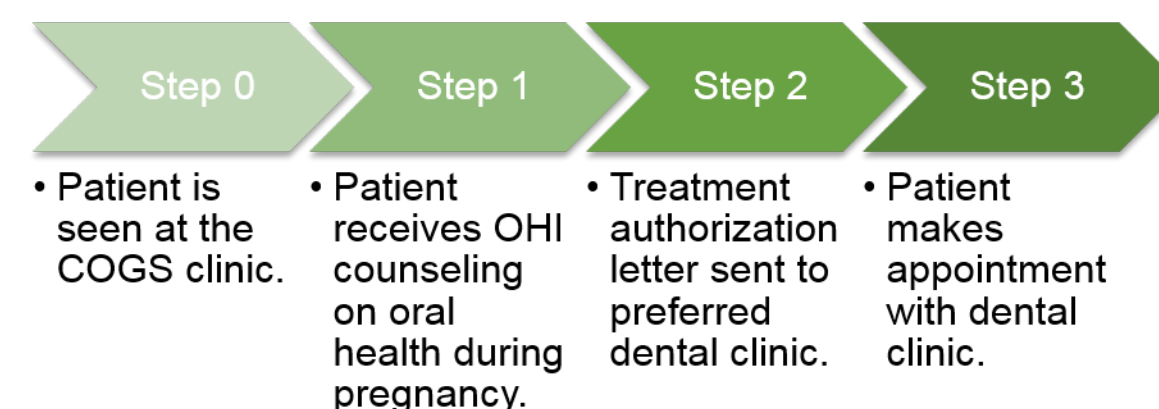
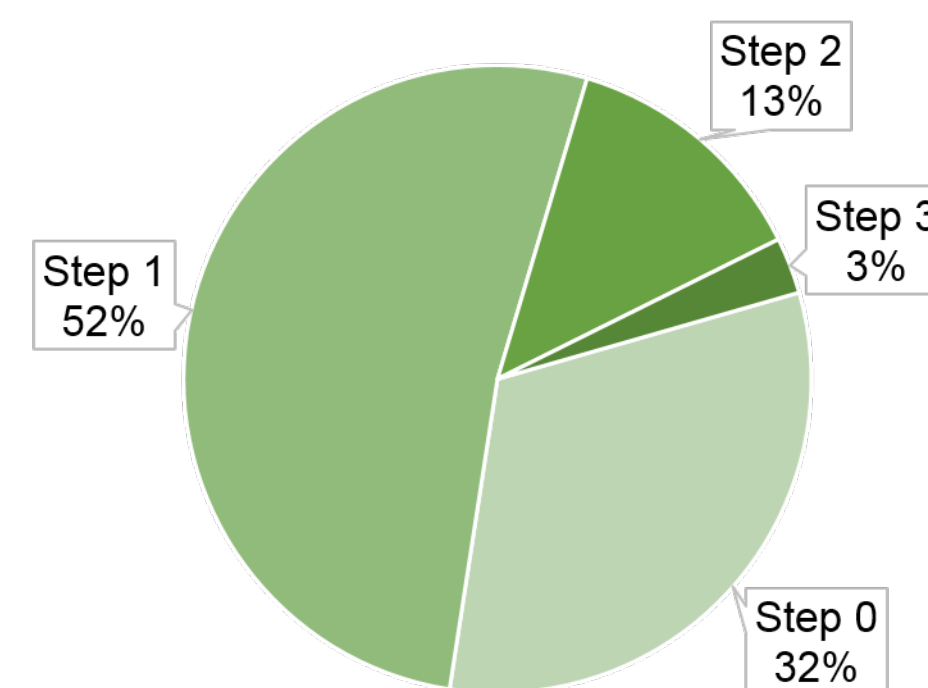
Fig 1. Oral Health Intervention Methods

## RESULTS

### Patient Results:

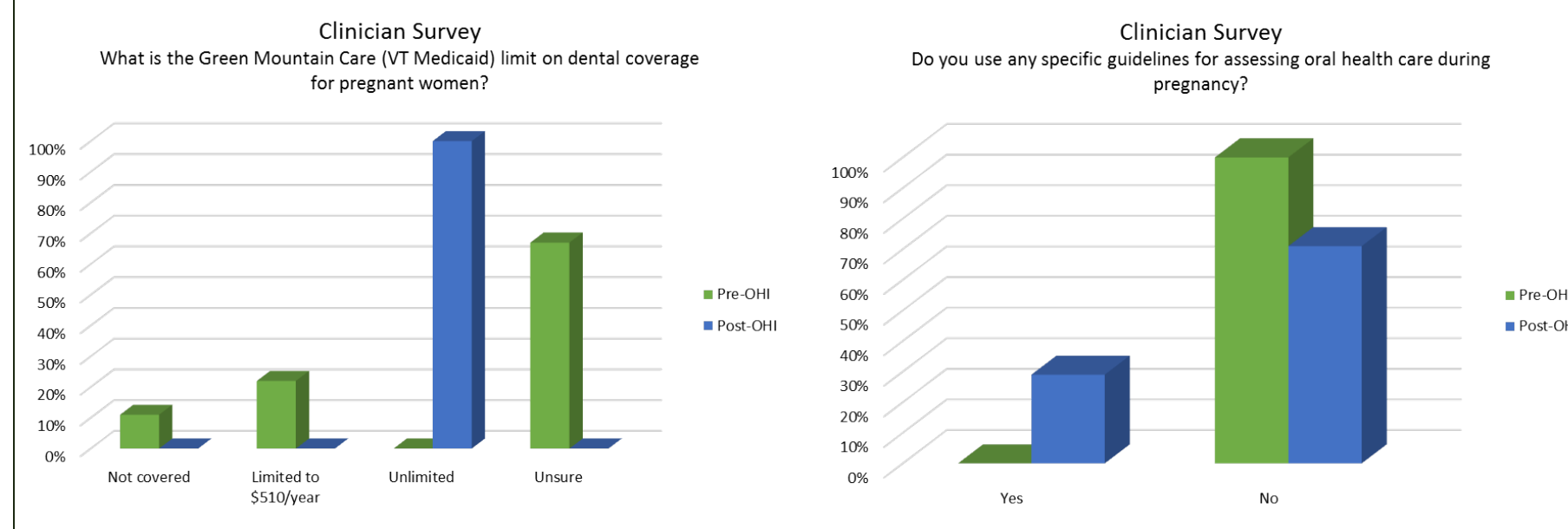
- Out of 69 patients seen at the COGS (Comprehensive Obstetrics and Gynecologic Services) Clinic from October 30<sup>th</sup> to December 12<sup>th</sup>, 2014, 47 patients were counseled about dental care during pregnancy. Of those 47 patients, 13 were referred and 2 made appointments.

**OHI Impact on COGS Patients**  
Percentage of patients reaching OHI intervention step and not beyond.



### Provider Results:

- Of the 9 physicians at the COGS clinic who were surveyed, none were aware of the current lifting of the Medicaid cap on oral health care during pregnancy. After administration of the OHI didactic session, 100% are aware of the cap lifting.
- With this knowledge, physicians are more likely to utilize ACOG guidelines



## DISCUSSION

### Conclusions

- The data suggest that the OHI is a feasible model for improving access to oral health care among Medicaid eligible pregnant women of Chittenden County

### Limitations

- 98% of patients at the COGS clinic are undergoing substance abuse treatment during pregnancy, increasing barriers to care
- Time limitations caused difficulties in tracking dental appointment attendance
- Our OHI model was limited to two oral health clinics in Chittenden County
- Patients with existing dental care providers were not excluded from counseling
- OHI application consistency was challenged by busy departmental workflow



### Future areas of exploration

- Our study builds upon previous research to assess OB/GYN provider knowledge of the lifting of the Medicaid cap and to assess patient barriers to dental care
- Future areas of interest include helping pregnant women follow through with appointments by reducing other barriers such as transportation
- Incorporating ACOG oral health recommendations into the UVM Medical Center health record system may facilitate consistent patient counseling and referrals



Fig 2. OHI Poster & Brochure with checklist (left). Oral Health Intervention desk at COGS Clinic (right).

## REFERENCES

1. Dye BA, Tan S, Smith V, Lewis BG, Barker LK, Thornton-Evans G, et al. Trends in oral health status: United States, 1998-1994 and 1999-2004. National Center for Health Statistics. Vital Health Stat. 2007; 11(248).
2. Dye BA, Vargas CM, Lee JJ, Magder L, Tinanoff N. Assessing the relationship between children's oral health status and that of their mothers. Journal of the American Dental Association. 2011; 142(2):173-83.
3. Chaffee BW, Gansky SA, Weintraub JA, Featherstone JD, Ramos-Gomez FJ. Maternal oral bacterial levels predict early childhood caries development. Journal of dental research. 2014; 93(3):238-44.v
4. Department of Vermont Health Access. 2009 VUHDDS outpatient procedure records for VT residents, ages 0-5 with procedure in ICD-9-CM range 521.0-521.09: Dental Caries. Unpublished raw data. 2012.
5. Chaves K, Gardiner H, Greene S, et al. Ensuring Access to Dental Care for Pregnant Women in Vermont. Poster presented at UVM COM. 2014.

## ACKNOWLEDGEMENTS

This intervention would not be possible without the help, encouragement and support of the staff at the Comprehensive Obstetrics and Gynecologic Services Clinic at the University of Vermont Medical Center, the University of Vermont Dental and Oral Health Clinic and the Dental Clinic at the Community Health Center of Burlington. Specifically we would like to acknowledge several integral people who advanced our cause at these various institutions: Maureen Cassidy, RN, Roberta Soil, CSW, Natalie Feldman, MD, Mose Snyder, DDS, and Diana Greenough, DM.