



# A Midwifery Initiated Dental Service: An Australian First

## Category: Healthy Living

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Presenter: Professor Maree Johnson, Director

Centre for Applied Nursing Research  
(a joint facility between SWSLHD & UWS) for the MIOH-DS Team



## Research Team

Dr Ajesh George - Senior Research Fellow, Centre for Applied Nursing Research/ SWSLHD/University of Western Sydney.

Professor Maree Johnson - Director, Centre for Applied Nursing Research/ SWSLHD/University of Western Sydney.

Dr Shilpi Ajwani - Head, Oral Health Research, Sydney and SWSLHD Oral Health Services/ Sydney Dental Hospital.

Dr Sameer Bhole - Area Clinical Director, Sydney and SWSLHD Oral Health Services/ Sydney Dental Hospital.

Professor Hannah Dahlen - Professor of Midwifery, University of Western Sydney.

Ms Sharon Ellis - Antenatal Service Manager, SWSLHD.

Professor Anthony Blinkhorn - NSW Chair of Population Oral Health, University of Sydney.



# Health Challenge

- Disadvantaged women in Australia
  - high prevalence of dental problems during pregnancy (>60%)
  - few seek dental care (30%) or
  - receive oral health advice during antenatal care (10%)
- Midwives, as the main providers of maternity care in Australia, are ideally placed to screen, educate and refer women to dental services when indicated.
- Preliminary research with midwives and women identified.
- Midwives assessing oral health was acceptable (with appropriate training).
- A midwife to dentist pathway, with dental services located within close proximity to the antenatal clinic, had the potential to improve access to dental care for women.



# Getting the right team together to 'make it happen'

Academics, health systems researchers, service providers and policy-makers came together (universities, service organisations):

- Centre for Applied Nursing Research is the leader of the project: **Dr. Ajesh George**, Research Fellow and Dentist (previously SWSAHD and now UWS) and **Professor Maree Johnson** (UWS), Director, nurse and epidemiologist, experienced in changing midwifery practice, and designing health services).
- Previously SWSAHD: **Dr Sameer Bohl** and **Dr. Shilpi Ajwani**, S & SWS OHS & SDH.
- UWS – Professor of Midwifery **Hannah Dahlen**
- SWSLHD - Campbelltown Antenatal Clinic led by **Sharon Ellis**
- NSW Oral Health Strategy leaders **Professor Anthony Blinkhorn**.

*(Dr Margie Duff, Consultant Midwifery Educator (now of UWS), Executive Director of the Australian College of Midwives).*



# Making it happen

Midwifery-Initiated Oral Health Dental Service (MIOH-DS) was developed and implemented in south-western Sydney (SWS)

- A pregnancy oral health brochure (Aboriginal, non-Aboriginal and multilingual)
- An online education program for midwives
- A referral pathway
- A service agreement between SWSLHD and Oral Health Services- priority access to pregnant women in the MIOH-DS

Keep smiling while you are pregnant



Taking care of your gums and teeth during pregnancy is important for you and your baby



# MIOH-DS Program



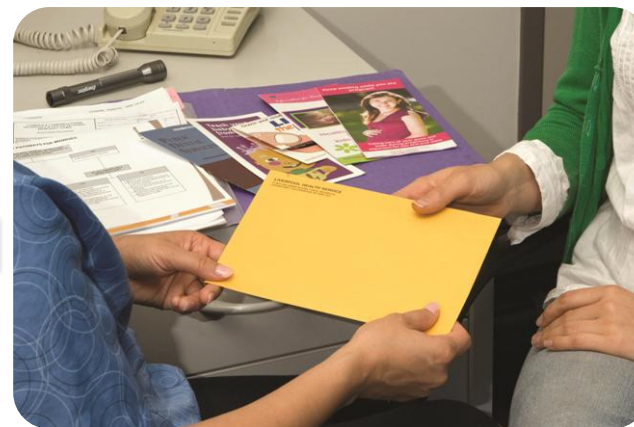
Oral health education



Oral health assessment



Dental treatment at public  
dental services

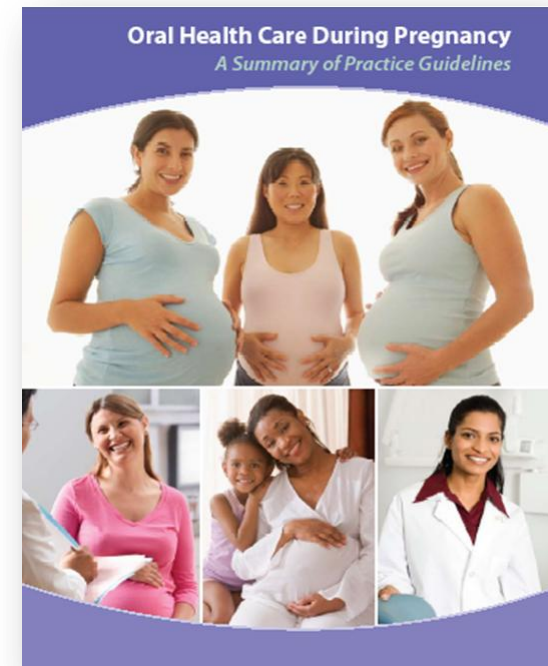


Dental referral

# Aim/Study Outcomes

We aimed to improve pregnant womens'

- **Uptake of dental services** – assessed from post questionnaires, database of study dental clinics
- **Oral health knowledge** – assessed from 11 knowledge items in pre and post questionnaire
- **Oral health status** – bleeding and plaque measured using Sulcus bleeding index and approximal plaque index
- **Quality of life** [QOL] relating to oral health assessed using a validated item



# Methods

## Design

- Randomised controlled trial undertaken at Campbelltown Hospital

## Sample

- 368 women invited to participate (Nov 11- June 12)
- 294 recruited and randomised (80% response rate).
- 150 followed up till end of study (Figure 1)

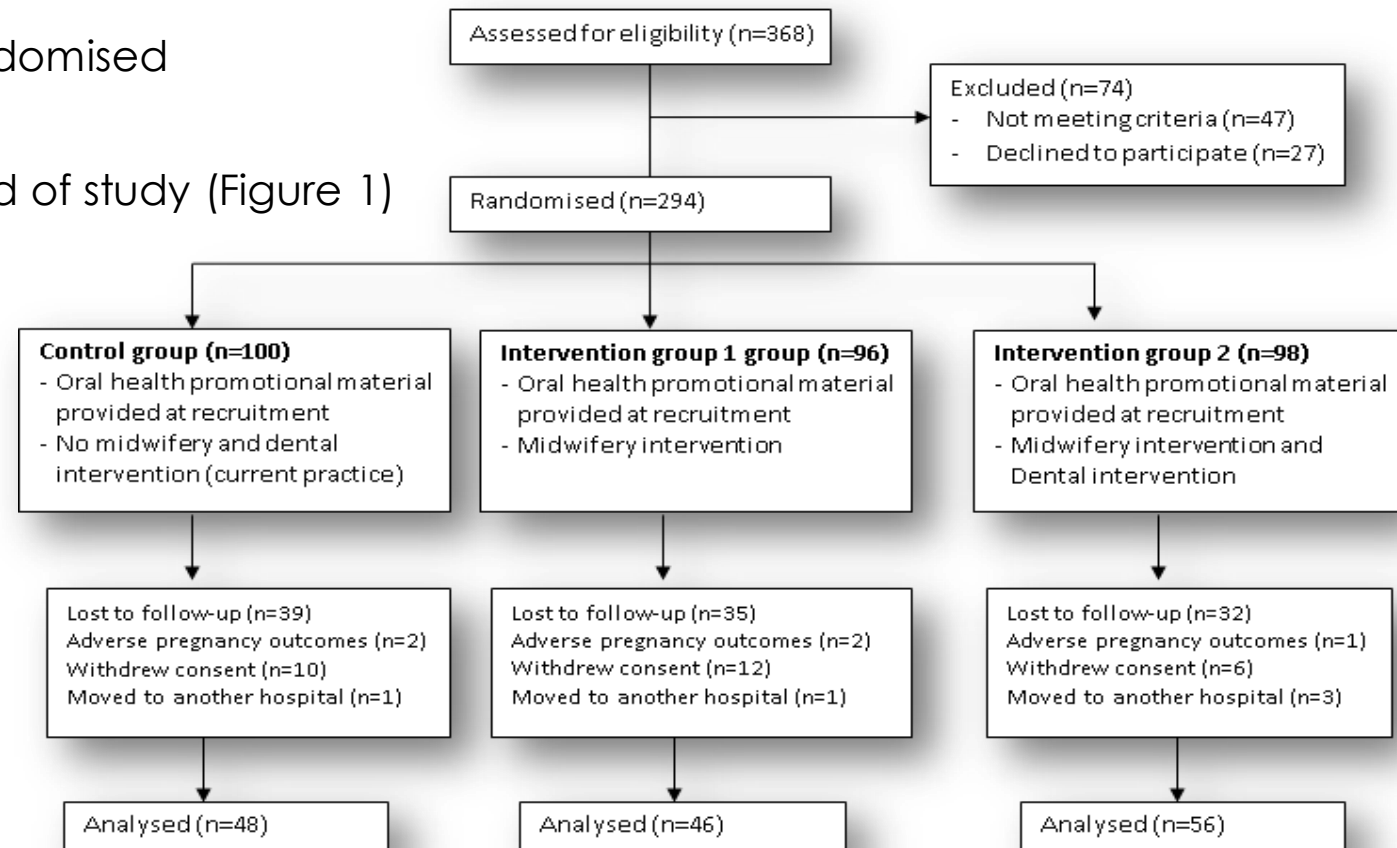
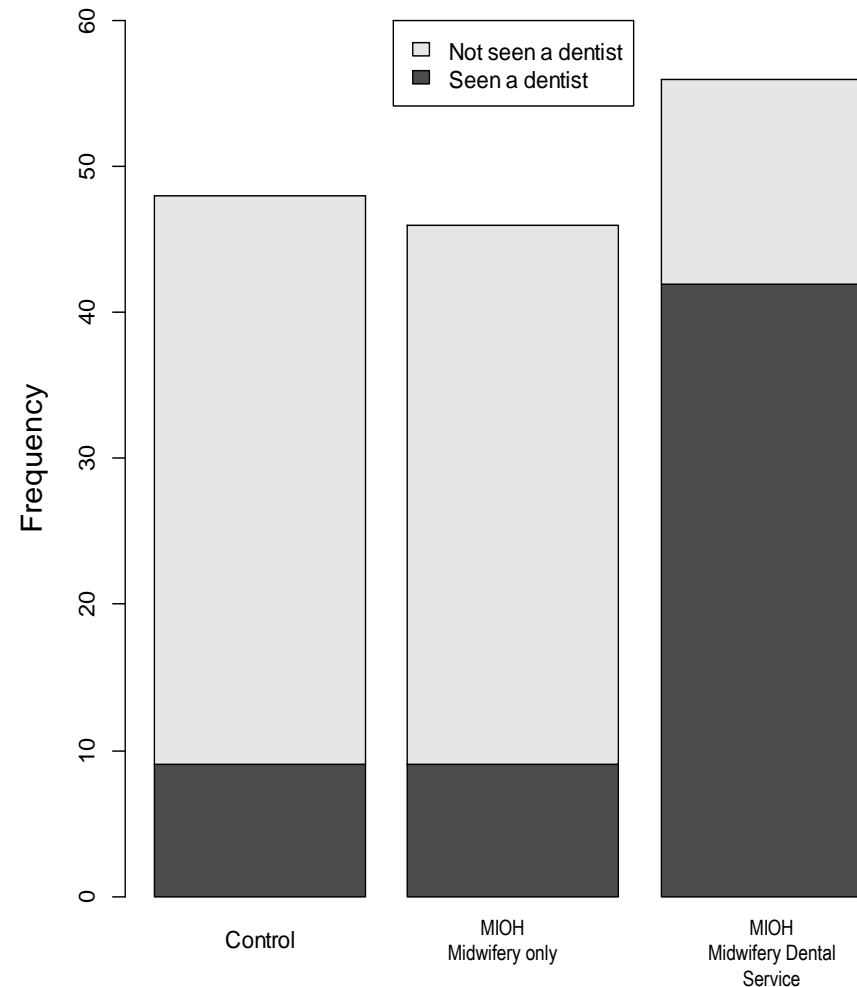


Figure 1: Trial Flow Diagram

# Results achieved

- Uptake of dental services in MIOH-DS group compared to MIOH/control group [75% (n=42) vs. 20% (n=9) vs. 19% (n=9)].



**Figure : Uptake of dental services among three groups of pregnant women**



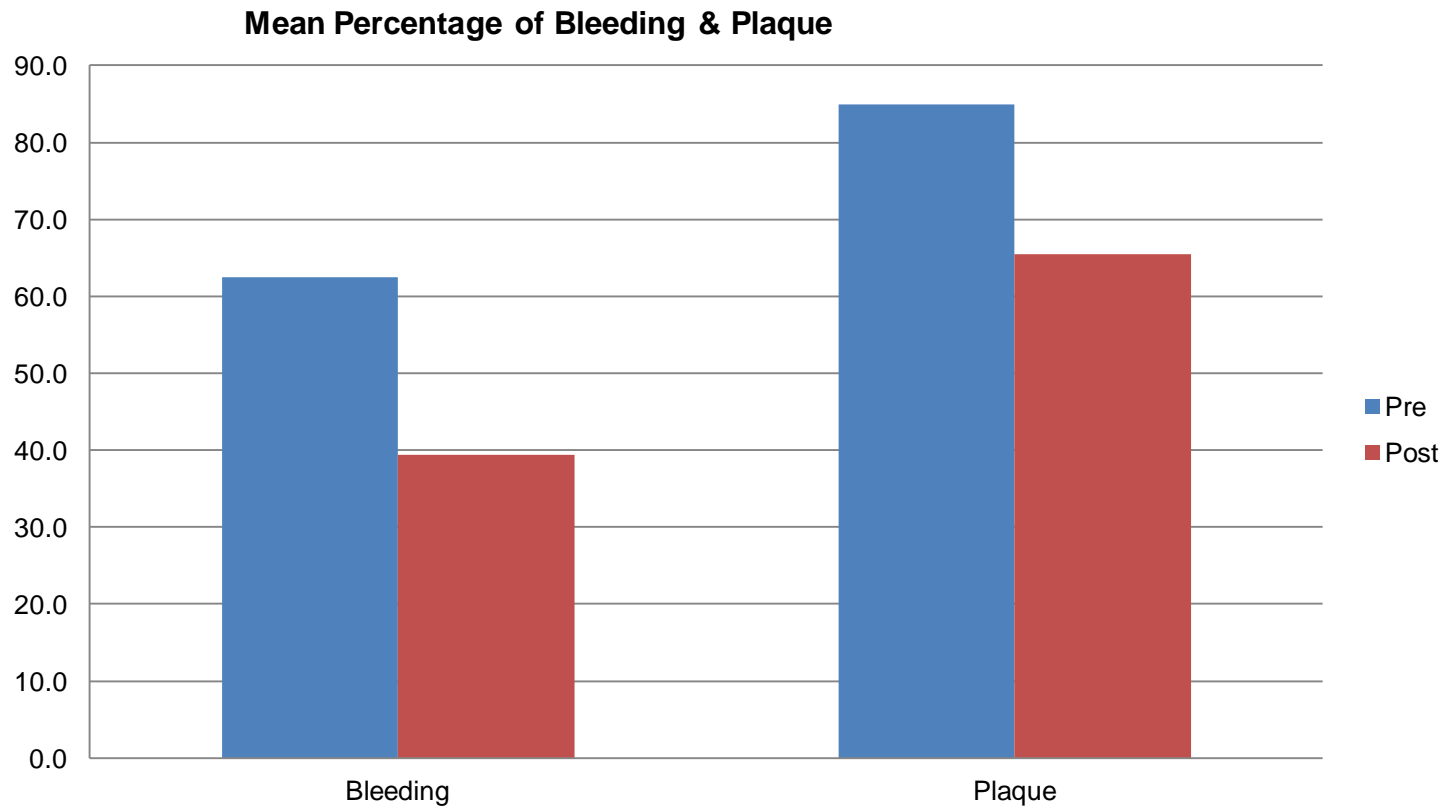
# Knowledge and oral health quality of life between groups

- Significant improvement was seen in oral health knowledge within all groups with the most improvement in the MIOH-DS group.

	Group 1	Group 2	Group 3	F (sig)
	M (SD) n = 48 Control	M (SD) n = 46 MIOH	M (SD) n = 56 MIOH-DS	
<b>Knowledge</b>				
Difference between pre and post	.59 (1.557)	.86 (1.698)	1.17 (1.886)	1.255 (.288)
<b>Quality of life</b>				
Post-test	2.80 (1.079)	3.21 (.871)	3.38 (.882)	4.326 (.015)**

# Oral health status improved MIOH-DS Group

- Significant reduction ( $p < 0.05$ ) in gingival bleeding (23%) and plaque (19.5%) in Intervention Group 3 (MIOH-DS) at follow up.



# Conclusions

- A large number of women have dental health problems during pregnancy and do not seek dental care.
- The MIOH-DS has substantially increased the uptake of dental services and improved quality of life and oral health status.
- Midwives play a vital role in raising awareness of the importance of oral health problems during pregnancy.
- The need for priority access to free dental service for disadvantaged pregnant women has been supported.
- Affordable access to dental services for *all* pregnant women should be considered in policy.
- Victoria Dental Services have adopted the MIOH-DS and are expanding it statewide. Potentially also within South Australia and Tasmania shortly.
- The program is being extended into Aboriginal communities through nurses and could be transferred into general practice.
- A multicentre trial funded by the NHMRC is underway.

# ***What we have learnt***

- Consumers' and health professionals' viewpoints played a vital role in shaping this new health initiative ie. addressing barriers when raised.
- Having the right team to 'make things happen' was vital.
- Having the courage to challenge the scope of practice in midwifery with the support of professional bodies was essential.
- The policy implications of this initiative remain a challenge.