



The development of remote dental tele-health services

An innovative approach
to providing oral health care
to Australia's most remote communities



Background

The TCHHS with other area health services provides health care to some of the most remote communities in Australia

- Remote communities have a severe **burden of oral disease**, particularly among children
- These communities have very **limited access to dental personnel** due to their remoteness



Burden of child oral disease

Healthy teeth and gums



Early childhood caries





Burden of child oral disease

Child dental general anaesthetics' for early childhood caries are undertaken at very high cost to individuals, families, communities and the health service.

The costs to the health service include: patient and carer transport (\$900 return flight each), hospitalisation, accommodation, general anaesthesia and oral surgery



Limited access to dental care

Due to their remoteness the outer island communities of the Torres Strait have particularly limited access to dental care.

- There are no dental facilities on the outer islands
- There are no dental personnel on the outer islands





Remote primary health personnel

Remote Aboriginal and Torres Strait Islander Health Workers and nursing personnel have a potentially key role in preventing early childhood caries in remote communities



Telehealth technologies

Health Workers and nursing personnel can be supported in their oral health role through the use of telehealth technologies including:

1. **online training**
2. **video-conferencing** to provide ongoing mentoring for remote health personnel undertaking oral health activities
3. **use of the intra-oral camera** to support clinical dental telehealth consulting



1. Online training

TCHHS has recently developed oral health training for remote health personnel including:

- **Face-to-face** workshops (2014)
- **Online** oral health training (2015)

This training has been developed with Dr David Walker who holds a bachelors degrees in dentistry, a masters degree in health personnel education and a doctorate in Indigenous oral health research.



2. Video-conferencing

This project will support the use of video-conferencing by the regional dental team to mentor remote health personnel in their oral health activities including:



- Community oral health promotion activities
 - Clinical dental tele-consulting



3. Intra-oral camera



- This project introduces the use of the intra-oral camera to take high quality photographs and videos within the mouth
- The intra-oral camera can be linked to an online computer to transmit these images live to the regional dental team to support clinical dental telehealth consultation in remote communities
- This supports shared diagnosis, triage and referral and is an important tool for patient education in high risk patients



Dental clinical telehealth consultations

Dental clinical telehealth consultations will be conducted in remote communities using video-conference and intra-oral camera technologies

Dental personnel are able to interact with the patient and remote practitioner through the video-conference units and to also view the mouth in high detail through the remote health personnel's use of the intra-oral camera which is linked to both their computer screens



Implementation

This project will be implemented:

- Over a twelve month period
- With the 15 remote primary health centres of the Torres Strait and the Thursday Island dental team.

Project implementation costs:

- 0.6 FTE oral health training consultant
- 0.4 FTE project manager
- Intra-oral cameras (approx \$6,000 each)
- Travel



Outcomes

This project is a high value project which takes an innovative approach to:

- Provide training, support and dental clinical consultation capacity to remote area primary health personnel without dental facilities
- Reduce the impact of early childhood caries on infants and children in remote Indigenous communities
- Reduce the number of children requiring multiple dental extractions in distant regional hospitals and associated costs



Conclusion

Through the development of online oral health telehealth training materials and management protocols, the project develops an approach which is **scaleable and sustainable** and which is **transferrable** to other health services providing remote oral health care