Cultural beliefs and safety concerns that pregnant women hold about dental care during pregnancy were also addressed through a poster developed by the dental service, with the message in seven languages ‘Dental treatment is safe and important during pregnancy’.

**Results:** There was a fourfold increase in the number of pregnant women accessing dental services (121 women in 2014 to 492 in 2016). Approximately 100 midwives attended the professional development workshops. The patient feedback survey indicated that the education session was useful and eliminated their fear and other cultural barriers.

**Conclusions:** Increasing oral health understanding and awareness among midwives and pregnant women supports improved oral health outcomes of pregnant women and their children, and a partnership between services facilitates interdisciplinary referrals. Evaluation of interventions were undertaken and results are available.

**FC120**

**Improving Access to Dental Services for Supported Residential Services Residents**

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**Aim:** To increase and improve access to oral health services for residents of Supported Residential Services (SRS), through the use of functioning programs and an outreach model to residents.

**Material/Methods:** The outreach model involves dental staff going to residential facilities to promote better oral health for residents. This includes the screening and referral for treatment for residents and individual and group information and education sessions to residents, staff and proprietors. A collaborative partnership exists with the medical and allied health access workers which assists with transport to and from treatment.

This initiative seeks to address many barriers with this client group, particularly the difficulty for residents to travel to services, and it is hoped that through the project, there will be an increase in the use of dental services and more serious long-term problems will be alleviated.

**Results:** In 2011/2012 92% of SRS residents screened required treatment compared to 45% requiring treatment in 2012/2013. A decline in the number of residents requiring treatment demonstrates the effectiveness of this initiative and the overall goal of decreasing long term problems.

For the 2013/2014 financial year it was planned that 255 residents would be screened and/or provided with oral health education, 352 residents received the outreach service.

**Conclusions:** The service model is successful in ensuring access of SRS residents to previously unattended dental care and education, which in turn improves the oral health of residents and decreases the need for emergency care and reduce the burden on the health system.

**Free Communication Session 31 | 30.08.2017, 10:15–11:15 | Room A9.11**

**Theme: Prosthodontics**

**FC121**

**A Numerical Investigation on Preparation Parameters for Restoring Premolars**

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**Aim:** The aim was to investigate the effect of preparation design parameters of a premolar restored with two different CAD/CAM ceramic crowns by using a numerical method.

**Materials and methods:** By digitizing a restored first maxillary premolar with a micro-CT scanner and using a medical image processing software (Mimics), a 3D model was created. The surface of the restored tooth components was extracted by a surface meshing software (3-matic). To create different preparation designs, SolidWorks was employed, in which by considering three convergence angles (6, 8 and 12) and two preparation heights (3.1 mm and 4.1 mm), six models were created. To generate a desirable mesh network, a mesh generator software (FE-mesh) was utilized. Lithium disilicate (LD) and polymer-infiltrated ceramic (PIC) were used as ceramic crown materials. A 5.0 mm stainless steel hemispherical indenter was employed to apply load on the occlusal surface. To analyze the twelve models, ABAQUS was used.

**Results:** The preparation height had a major effect in the values of stress in the restored tooth models. The maximum principal stress in contact area was lower in stiffer ceramic crown (LD) compared to PIC. Convergence angle had no considerable effect on stress distribution of ceramic crown in all models.

**Conclusions:** The preparation design height played a remarkable role compared to convergence angle. The enamel in the restored tooth was found as a supporter for ceramic crown. An optimum condition for a durable crown restoration in premolars depended on the restorative material and the geometry of preparation design.

**FC122**

**Shear Bond Strength of Cast Alloys and Lithium Disilicate**

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**Aim or purpose:** To evaluate the shear bond strength of two coping materials (non-nickel chrome-based cast alloy and lithium disilicate ceramic (IPS Empress) to four different core foundation materials (resin composite, cast metal alloy, lithium disilicate, and dentin), luted with adhesive resin cement (RelX Unicem).

**Materials and methods:** Specimens (N = 56) were fabricated and divided into eight groups (n = 7 per group). Each coping material