Abstract: Before 2006, adults seeking urgent care in South Australian publicly-funded dental clinics were managed on a “first-come-first-served” basis. In 2006, a standardized set of eight questions were asked of people seeking urgent care, and responses were used to assign three levels of priority: < 24 hours, 1–7 days or 8+ days.

Objectives: To evaluate the impact of a new triage system used to prioritize care for adults seeking urgent dental care in the public sector.

Methods: A pre-post intervention design was used to test changes in four outcomes at four selected clinics: 1) % of dentists’ assessment of patient urgency > 8 days 2) % of clinicians’ time devoted to non-urgent, general dental care; 3) patient scores on the 14-item Oral Health Impact Profile (OHIP-14) 4 weeks after treatment; 4) patient rating of degree to which treatment goals were achieved 4 weeks after treatment. Chi-square tests and t-tests were used to evaluate group changes following introduction of the triage system.

Results: 1,758 people aged 18–91 years who sought urgent care during the 20 week study period were enrolled: 728 before, and 1013 after the new triage system. Dentists’ assessment of urgency 8+ days dropped from 22.2 to 13.9% (P < 0.05). Mean OHIP-14 scores increased from 1.43 to 1.58 (P < 0.05) signaling more adverse impacts from dental conditions. There was a marginal (P = 0.08) decrease in goal attainment score, indicating a small deterioration in perceived benefit of care. Clinic time devoted to general dental care increased from 34.0 to 46.0% (P = 0.01).

Conclusion: The triage system increased the percentage of clinical time devoted to non-urgent, general dental care in public dental clinics without compromising system ability to attend to urgent oral care needs. Priority oral care was provided to those reporting more severe impacts from dental conditions and assessed by dentists as needing more urgent dental care.

Background
- Australian public dental services for adults include a priority (same day) dental service and general dental care.
- Priority patients are meant to be those clients dentists would judge need urgent care.
- Access to priority public dental services is traditionally via chronological ordered queuing with a limited discretion exercised by reception staff.
- There were concerns that existing processes were inequitable, lacked consistency across clinics and provided an incentive to seek priority public dental services instead of general dental care.

Aims
1. To determine if a triage system was able to more accurately identify those patients needing priority care.
2. To quantify the impact of a triage system on self-reported oral health impacts and dental goal attainment.
3. To determine the impact of a triage system on the provision of general dental care.

Intervention
The triage system was an empirically derived and tested set of eight standardized questions asked of people seeking priority dental care. Responses were used to generate scores and assign three levels of priority of access: < 24 hours, 17 days or 8+ days.

Methods

Study design
This was a multi-site, community trial with a pre-post-intervention design. Four community dental clinics were selected by the SA Dental Service (SADS) to represent the region as a whole. Pre-intervention involved traditional chronological queuing and receptionists as gatekeepers to priority care and post-intervention used a new triage system.

Study population
All people phoning the participating SADS clinics requesting priority care and who were eligible for public dental care.

Sample size
Pre-intervention sampling was done for four weeks and post-intervention sampling was done for eight weeks. All calls for care by eligible persons were included in the sample.

Data collection
Four separate data sources were used in the analysis. 1) the retrieval of patient details from the management information system, 2) the completion of a computer assisted telephone interview (CATI), 3) a mail questionnaire and associated follow-up mail outs and reminders and 4) the extraction of service and treatment provision data. Person level data were linked using a unique identifier.

Analysis
Four outcome variables were used: dentists’ assessment of urgency, OHIP-14, Dental Goal Attainment and percentage of type of care delivered, compared by pre- and post-intervention.

Results

Table 1: Distribution of dentists’ assessment of priority for pre and post intervention.

<table>
<thead>
<tr>
<th>Type of Care</th>
<th>Pre intervention</th>
<th>Post intervention</th>
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<tbody>
<tr>
<td>&lt; 24 Hours</td>
<td>158 (17.0)</td>
<td>126 (11.8)</td>
</tr>
<tr>
<td>1–7 Days</td>
<td>592 (67.4)</td>
<td>762 (76.2)</td>
</tr>
<tr>
<td>8+ Days</td>
<td>119 (13.1)</td>
<td>170 (16.0)</td>
</tr>
<tr>
<td>Total</td>
<td>1,069 (100.0)</td>
<td>1,068 (100.0)</td>
</tr>
</tbody>
</table>

Table 1 shows that dentists’ assessment of low urgency 8+ days dropped from 22.2 to 13.9% (P < 0.05) after the triage was introduced amongst those persons who did access care, indicating that the triage system was better able to discriminate those who were professionally judged to not need urgent dental care.

Dental goal attainment scores were measured on a visual analogue scale. Scores ranged between 0 and 7.5. Figure 2 shows significant differences post-intervention were found for those receiving dental care with SA Dental service and those receiving no care at all. For those receiving no treatment, the drop in goal attainment scores may reflect a protest against the computerised approach to triage for access to care.

Figure 3. % of type of care delivered, shows that since the introduction of the triage at the end of 2006 in all SADS clinics, the proportion of general dental care provided has significantly increased from 34% in 2006 to 46% in 2007 and has been maintained at a comparable level through 2008.

Strengths and limitations
- Strength of the study lies in the use of empirically developed and trialled triage system using a pre-post method and a multi-centre patient sample.
- Limitations to study are that system level health service changes cannot be measured with short follow up of eight weeks and other confounding factors such as changes to work behaviours and services provided could not be controlled.

Conclusions
- An empirically derived triage system enabled better targeting of scarce dental resources to those who need them most.
- The triage has enabled better targeting of priority public resources to those who needed priority care most.
- Triage has been associated with more non-urgent general dental care being provided.

References