# ICON
# Index of Complexity, Outcome and Need

## COMPONENT 1 — AESTHETIC ASSESSMENT

Ten pictures ranking dental attractiveness

## COMPONENT 2 — UPPER ARCH CROWDING / SPACING

- The difference between the sum of the mesio-distal tooth diameters and the available arch circumference in the upper arch reduced to a 5 point score
- Impacted teeth in either arch immediately score 5

   **Impacted teeth must be unerupted and either:**

   a) Ectopic or impacted against an adjacent tooth (excluding third molars but including supernumerary teeth)

   b) Possess less than or equal to 4mm of space between the adjacent permanent teeth. Use average canine and premolar widths to estimate the potential crowding in the mixed dentition, namely, 7mm for pre-molars, lower canine, and 8mm for upper canine

- Spacing in one part of the arch will cancel out crowding elsewhere
- Retained deciduous teeth (without permanent successor) and erupted supernumerary teeth score as space (unless they are to be retained to obviate the need for prosthesis)
- Lost teeth due to trauma or extraction should be counted as space (unless space is maintained for a prosthetic replacement).

## COMPONENT 3 — CROSSBITE

- Anterior and posterior transverse discrepancies of cusp to cusp or greater in intercuspal position

## COMPONENT 4 — INCISOR OPEN BITE / OVERBITE

- Open bite (except developmental conditions) is measured to the mid-incisal edges
- Deep bite is measured to deepest part of overbite
- If both traits are present only the highest score is counted

## COMPONENT 5 — BUCCAL SEGMENT ANTERO-POSTERIOR

- Quality of buccal segment interdigitation is measured (not Angles classification)
- Both sides are scored then added together

## B. ICON SCORING PROTOCOL

- Measure all 5 traits according to the protocol above to obtain a set of scores
- Multiply the scores by their respective weights
- The sum of the weighted scores is the ICON score for the case
- Pre-treatment scores give the treatment need and complexity grades
- End of treatment scores gives the acceptability
- Pre-treatment - 4 x post treatment scores gives the degree of improvement

## A. ICON SCORING METHOD

| COMPONENT | 0 | 1 | 2 | 3 | 4 | 5 | Weight |
|---|---|---|---|---|---|---|---|
| 1 Aesthetic assessment | Score 1 to 10 | | | | | | 7 |
| 2 Upper arch crowding | < 2mm | 2.1 to 5mm | 5.1 to 9mm | 9.1 to 13mm | 13.1 to 17mm | > 17mm | 5 |
| Upper spacing | < 2mm | 2.1 to 5mm | 5.1 to 9mm | >9mm | | Impacted teeth | 5 |
| 3 Crossbite | No crossbite | crossbite present | | | | | 5 |
| 4 Incisor open bite | Edge to edge | < 1mm | 1.1 to 2mm | 2.1 to 4mm | >4mm | | 4 |
| Incisor overbite | < 1/3 lower incisor coverage | 1/3 to 2/3 coverage | 2/3 up to fully covered | Fully covered | | | 4 |
| 5 Buccal segment antero-posterior | Cusp to embrasure only. Class I, II or III | Any cusp relation up to but not including cusp to cusp | Cusp to cusp | | | | 3 |

## C. INTERPRETATION OF ICON SCORES

| NEED AND ACCEPTABILITY | THRESHOLD |
|---|---|
| Pre-treatment need | > 43 treatment need |
| End treatment acceptability | < 31 acceptable |

| COMPLEXITY GRADE (PRE-TREATMENT) | SCORE RANGE |
|---|---|
| Easy | < 29 |
| Mild | 29 to 50 |
| Moderate | 51 to 63 |
| Difficult | 64 to 77 |
| Very difficult | > 77 |

| IMPROVEMENT GRADE (PRE-TREATMENT SCORE - 4 x POST-TREATMENT SCORE) | SCORE RANGE |
|---|---|
| Greatly improved | > -1 |
| Substantially improved | -25 to -1 |
| Moderately improved | -53 to -26 |
| Minimally improved | -85 to -54 |
| Not improved or worse | < -85 |