



Objectives

To provide predictable and reproducible chairside interim restorations for full-mouth rehabilitation using sequential matrices designed to adapt to both unprepared natural teeth and prepared teeth. This technique enables the clinician to accurately replicate key prosthodontic parameters established during the diagnostic phase—such as the occlusal plane, occlusal scheme, midline, and vertical dimension—without the risk of overseating a conventional full-arch matrix which lacks a predictable verticle stop.

Materials & Methods

A 55-year-old female presented to the prosthodontic clinic with a diagnosis of generalized full-mouth erosion. A full-mouth rehabilitation was planned to restore the patient to her original vertical dimension using all-ceramic crowns.

After establishing the correct vertical dimension intraorally, a digital diagnostic wax-up was performed. Utilizing Exocad software, a common challenge was addressed: the tendency for a full-arch matrix to seat incorrectly or cant during the fabrication of the first round of provisionals.

To overcome this, sequential matrices were fabricated with hard-tissue stops on select teeth. This eliminated the need for repeated adjustment or intraoral corrections. Teeth were prepared and provisionalized in a sequential order that corresponded to each sequential matrix.

The case then proceeded to a round of milled PMMA provisional restorations to fine-tune esthetics and function before moving to final restorations.

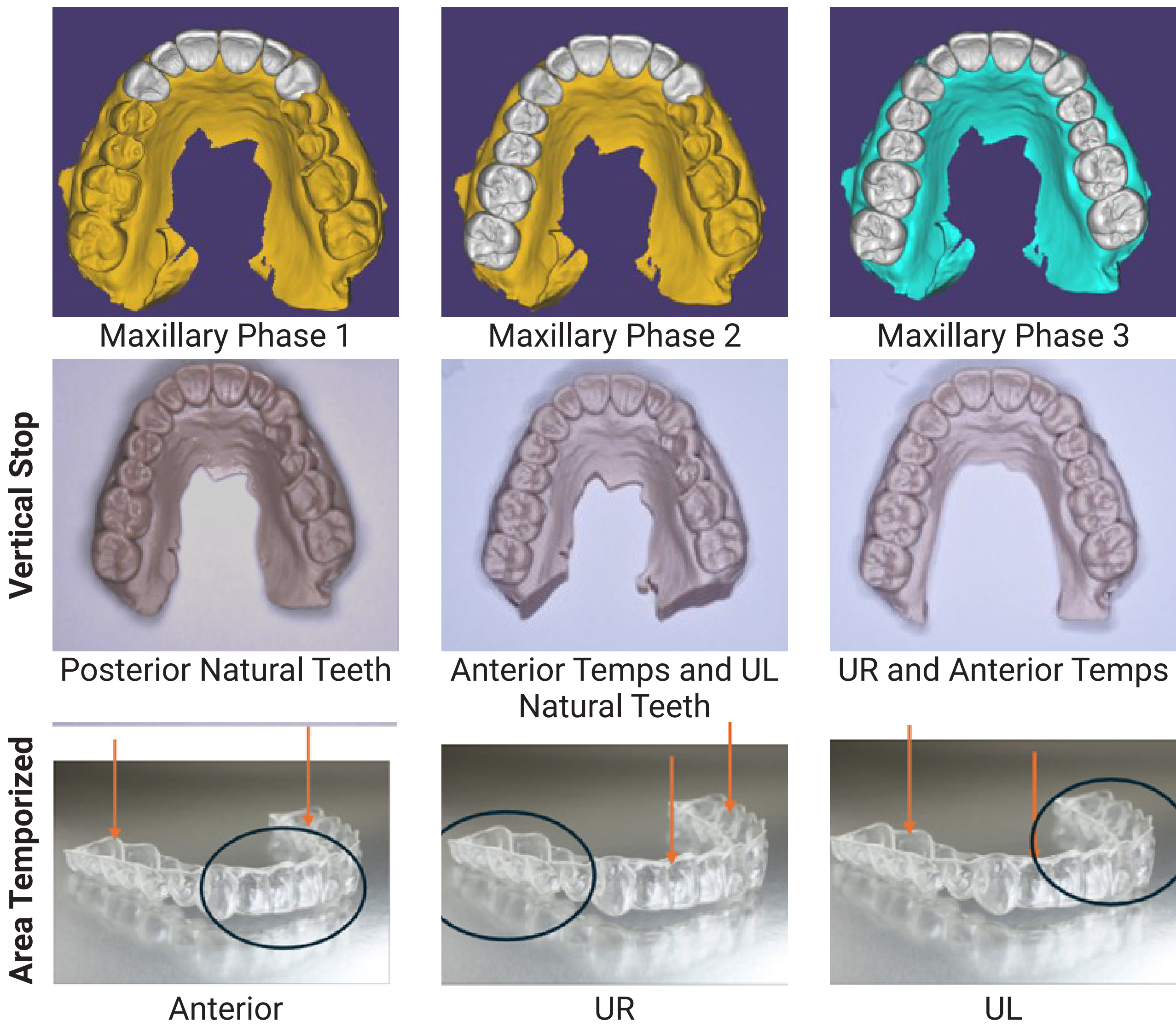


Figure 1. Sequential matrix algorithm



Figure 3. Chairside interims showing predictability of technique

Outcome/Follow Up

The use of sequential matrices on both the maxillary and mandibular arches allowed for a closer replication of the digital wax-up directly in the patient’s mouth. It also enhanced patient satisfaction after day one. As a result, the patient received provisionals that more accurately reflected the final restorations, immediately after tooth preparation.

This minimized changes during the prototype phase, reducing the potential for additional prosthodontic complications and shortening overall treatment time. This technique may allow some clinicians to move directly from provisionals to final restorations, bypassing the prototype phase altogether—improving clinical efficiency and patient satisfaction.



Conclusion

Through the integration of digital technology and a sequential matrix protocol, this patient with a complex clinical presentation underwent full-mouth rehabilitation with minimal complications. This is not a simple workflow to do in a conventional manner, highlighting the value of digital workflows. This technique offers a reproducible approach for clinicians aiming to deliver more predictable and esthetically accurate provisional restorations that closely mimic the final outcome.

Citation

El-Kerdani T, Nimmo A. A Single Visit Direct Technique to Provisionally Restore Occlusion for a Full-Mouth Rehabilitation: A Clinical Report. J Prosthodont. 2016 Jan;25(1):66-70. doi: 10.1111/jopr.12267. Epub 2015 Feb 6. PMID: 25659611.