

## An edge over diagnostic setup

### Abstract

Diagnostic setup proposed by H.D. Kingsley serves as a practical aid in treatment planning and diagnosis. These setups have some inherent shortcomings. A simple technique of duplication of the setups in dental stone can solve problems encountered before as well as provide many other advantages over the conventional procedure. The diagnostic setup is prepared by the conventional method [Figure 1]. An alginate impression is then taken of the setups and poured in dental stone to obtain the derived treatment model [Figure 2]. The same setup can now be further modified for alternate lines of treatment. Subsequently models could then be obtained as required [Figure 3].

**Keywords:** Diagnostic setup, study models, kesling

### Introduction

Diagnostic setup proposed by Kesling<sup>[1]</sup> serves as a practical aid in treatment planning and diagnosis. Some of the advantages of the conventional setup<sup>[2]</sup> include:

- To determine and visualize the resultant occlusion
- Tooth size – arch length discrepancies can be better optimized
- Useful aid in asymmetric extraction and combined surgical orthodontic treatment planning.

These setups have some inherent shortcomings.<sup>[3,4]</sup> First, patients for whom multiple treatment options are thought of, multiple diagnostic setups need to be made which would be very laborious and time-consuming. Furthermore, the patients may not fully appreciate the wax setups shown to them.

A simple technique of duplication of the setups in dental stone can solve problems encountered before as well as provide many other advantages over the conventional procedure.

### Procedure

The diagnostic setup is prepared by the conventional method [Figure 1]. An alginate impression is then taken of the setups and poured in dental stone to obtain

the derived treatment model [Figure 2]. The same setup can now be further modified for alternate lines of treatment.<sup>[5]</sup> Subsequently, models could then be obtained as required [Figure 3].

The advantages of this simple technique are:

- Better visualization of treatment results for the operator as well as the patient
- Multiple treatment models for the same patient
- More accurate fabrication of customized archwires
- Plaster models are dimensionally more stable as compared to the wax setups
- Greater patient motivation
- More precise bracket positioning of lingual appliances



**Figure 1:** Pretreatment study models and diagnostic setup

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Figure 2: Alginate impression of Kesling setup and derived treatment model

- Accurate fabrication of tooth positioners if required.

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#### Conflicts of interest

There are no conflicts of interest.



Figure 3: Multiple treatment models of proposed treatment plans

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