Errors in Impressioning
Dental Impression

An unequivocal negative likeness, or copy in reverse, of the surface of an object, an imprint of the teeth and adjacent structures
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Dental Impression

It was reported that 89% of impressions had 1 or more observable errors.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Percent occurrence*</th>
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</thead>
<tbody>
<tr>
<td>Voids or tears at finish line</td>
<td>50.7 (98)</td>
</tr>
<tr>
<td>Putty exposure through wash</td>
<td>44.0 (85)</td>
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<tr>
<td>(in double-step technique)</td>
<td></td>
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<tr>
<td>Air bubbles at finish line</td>
<td>40.4 (78)</td>
</tr>
<tr>
<td>Pressure of tray on soft tissue</td>
<td>38.3 (74)</td>
</tr>
<tr>
<td>Inadequate retention of material to tray</td>
<td>33.7 (65)</td>
</tr>
<tr>
<td>Flow problems</td>
<td>23.8 (46)</td>
</tr>
<tr>
<td>Retraction cord attached to impression</td>
<td>6.2 (12)</td>
</tr>
</tbody>
</table>

Of 193 impressions for FPD evaluated by 3 examiners, 172 (89.1%) had 1 or more detectable errors.

*Percentages relate to 193 impressions. Total number in parentheses.
Dental Impression
Let’s take a look at common impression errors
And discuss strategies to prevent them…
Hemostasis must be achieved to record an impression with accurate detail.
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Tray selection and seating are responsible for this example
Stock trays are not always the answer. Tray size and proper seating are critical.
Seating the tray posterior to anterior can also cause this repeated defect
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Movement during seating can cause loss of marginal detail.

Take a look at the irregular shape of the finish line … blood, saliva, ???
Really?!?
Tray selection has a huge impact on the overall success of impressions
Seating errors will distort the impression
Bite Registration

Bad …
Needs to have more contact on adjacent teeth

Good occluding contacts evident
Bite Registration
Practice Seating the Tray!

- Seat the tray without impression material and instruct patient how to close into a normal bite.

- Pay attention when recording a bite record unilaterally as the patient may go into lateral excursion on that side.

- Instruct patient that once the tray is seated they should refrain from any movements of the tray thereby to minimize distorting the impression material at a critical phase during its set.
There are multiple errors on this impression…
contact with the tray and loss of marginal detail

Choice of viscosity, tray seating, or position errors could be the cause.
No side support of the tray and not enough wash material can account for the V-shaped voids or drags along buccal or lingual surfaces. Viscosity of the tray material is also an influence.
Not enough tray material to support the wash material is the problem here.

Also cotton rolls should be removed from impression for disinfection purposes.
Problems with relines and additions
Problems with relines and additions
Was the wash material syringed into a saliva- or blood-filed sulcus? Fluid control is critical to capturing all the marginal details.
Syringing technique is responsible for this V-shaped defect.

Likely caused by starting/stopping in the same location
Syringing technique is responsible for this V-shaped defect. Also, note the lack of tray material to support the wash material along the lingual of the prep.
Syringing technique is responsible for this V-shaped defect ... likely caused by starting/stopping in the same location
Multiple Errors

Wash

Tray
Note the voids at approximately the same location on both prep. Syringing of wash should not begin/end at the same location. Go around twice, and end at a different location then wear you began.
Thank You