

10-point endodontic outcomes checklist

Use this chairside checklist when outcome risk needs to be made visible. The aim is controlled diagnosis, infection control, apical management, shaping, obturation, restoration, review, and retreatment judgment.

01

DIAGNOSE AND PLAN

Name the baseline risk

Outcome confidence starts with the pre-operative diagnosis, not the file sequence.

Healing rates are influenced by the starting condition of the tooth. A tooth with a pre-operative lesion, symptoms, retreatment history, cracks, or poor restorability carries a different risk profile from a vital primary case. Record pulpal and periapical diagnosis, lesion size, restorative status, periodontal context, and patient factors before the technical plan is chosen. This keeps the outcome conversation honest and gives the clinician a baseline for later review.

[YouTube: Endodontics | Pulpal and Periapical Diagnoses](#)

02

DIAGNOSE AND PLAN

Control infection before speed

Endodontic success is biological healing supported by technical control.

A fast preparation is not the same as an effective preparation. Instrumentation creates access for irrigation, removes infected dentine where possible, and supports obturation, but the clinical aim is infection control. Maintain patency where appropriate, clean flutes, refresh irrigant, and avoid debris compaction. When the canal becomes blocked, ledged, or over-enlarged, the biological objective becomes harder to achieve.

[YouTube: How to perform successful endodontic treatment](#)

03

CONTROL THE APICAL THIRD

Respect the apical limit

Apical extent is one of the clearest technical variables linked to healing.

Outcome literature supports controlled root filling close to the canal terminus while avoiding extrusion. Ng, Ricucci, and related prognosis data keep length control inside a broader outcome frame: apical status, patency, absence of overfill, restoration quality, and review. Use working length evidence, tactile feedback, and apical-control discipline together rather than treating length as a single number.

[YouTube: Apical control in Endodontics - Dr Heinrich Dippenaar \(WEB70\)](#)

04

CONTROL THE APICAL THIRD

Preserve the original pathway

Procedural error converts a treatable case into an outcome risk.

Transportation, ledging, perforation, zipping, or file separation can reduce healing predictability by changing the prepared pathway or blocking disinfection. Small-file scouting, reproducible glide path confirmation, short engagement, and careful feedback protect the original canal course. Avatar Tip and Transform Technology fit here: they are not outcome claims by themselves, but they support the clinical behaviour that outcome evidence rewards: centred advancement, control in curvature, and respect for the apical third.

[YouTube: Apical Sizes in Modern Endodontics](#)

05

SHAPE, CLEAN, AND SEAL

Shape for irrigation and seal

Preparation quality matters because it creates the conditions for cleaning and obturation.

Outcome evidence links obturation quality to prognosis, but obturation quality is built earlier. A controlled preparation creates space for irrigant exchange, removes restrictive interference, and gives the filling material a stable pathway. The clinical balance is important: too little shape limits cleaning and seal, while too much shape removes dentine and increases procedural risk. The target is a reproducible preparation that serves disinfection and obturation rather than a shape created for appearance alone.

[YouTube: How to obturate lateral canals: a case study](#)

06

SHAPE, CLEAN, AND SEAL

Obturate densely without extrusion

Dense obturation supports healing when it is paired with apical control.

A radiographically dense fill is useful only when it is biologically positioned and supported by cleaning. Voids, short fills, and overextension each signal different failure risks. The apical stop, canal taper, irrigation sequence, and final cone fit all affect whether obturation will seal predictably without extrusion. Use the fill as a final check on the preparation path rather than as an isolated technical endpoint.

[YouTube: Obturation & Restoration](#)

07

SHAPE, CLEAN, AND SEAL**Restore the tooth promptly**

Long-term survival depends on endodontics and restoration working together.

The existing page cites four-year tooth survival of approximately 95% in prospective outcome work, but survival is not achieved by canal treatment alone. Coronal leakage, cuspal fracture risk, inadequate ferrule, and delayed restoration can undermine an otherwise controlled endodontic procedure. Plan the restorative pathway before treatment, seal promptly, and review whether the tooth is protected from reinfection and structural failure.

[YouTube: Video Lecture : Restoration Of Endodontically Treated Tooth](#)

08

REVIEW AND DECIDE**Review healing over time**

A persistent radiolucency needs context before retreatment is chosen.

Apical healing can take time, and a radiograph is a moment in a longer biological process. Compare symptoms, percussion, sinus tract status, lesion size, periodontal findings, restoration quality, and previous baseline images. Do not retreat only because a radiolucency remains visible if the clinical picture is improving. Equally, do not ignore persistent symptoms, enlarging lesions, coronal leakage, or missed anatomy. Review is a structured decision, not a reflex.

[YouTube: Not every tooth with a periapical radiolucency needs endodontic retreatment](#)

09

REVIEW AND DECIDE**Treat failure as cause-finding**

Retreatment is most controlled when the reason for persistence is defined.

Persistent apical periodontitis should trigger a cause-finding sequence. Check for missed canals, inadequate access, short or overextended filling, coronal leakage, separated instruments, ledges, perforation, cracks, periodontal involvement, and restorative failure. CBCT may be useful when the cause is not visible on periapical radiographs. Retreatment should be entered with a clear hypothesis and an exit plan, including referral when visibility, anatomy, or restorability makes control uncertain.

[YouTube: Endodontic Retreatment Explained](#)

10

REVIEW AND DECIDE**Link survival to the whole pathway**

The outcome is a retained, restorable, symptom-free tooth in function.

Healing percentages and survival percentages describe different endpoints. Primary and secondary treatment can both produce high healing rates when case selection, infection control, apical management, obturation, and restoration are controlled. Tooth survival also depends on structure, periodontal status, occlusion, restoration, and patient maintenance. Use the full pathway as the outcome frame: diagnose, disinfect, shape, seal, restore, review, and decide early when referral protects the tooth.

[YouTube: Endodontic Outcomes](#)

SOURCE BASE

The Evidence checklist combines outcome literature with a 20-video YouTube review focused on endodontic diagnosis, apical periodontitis, apical control, obturation, restoration, retreatment, and long-term tooth survival. The checklist uses those sources to support clinical decision-making around controllable outcome variables, not to claim that any file system alone determines healing.

- Ng Y-L, Mann V, Gulabivala K. A prospective study of factors affecting outcomes of nonsurgical root canal treatment: Part 1: periapical health. *International Endodontic Journal*. 2011;44(7):583-609. doi:10.1111/j.1365-2591.2011.01872.x.
- Ng Y-L, Mann V, Gulabivala K. A prospective study of factors affecting outcomes of non-surgical root canal treatment: Part 2: tooth survival. *International Endodontic Journal*. 2011;44(7):610-625. doi:10.1111/j.1365-2591.2011.01873.x.
- Friedman S, Abitbol S, Lawrence HP. Treatment outcome in endodontics: the Toronto Study. Phase 1: initial treatment. *Journal of Endodontics*. 2003;29(12):787-793. doi:10.1097/00004770-200312000-00001.
- Ricucci D, Siqueira JF Jr, Bate AL, Pitt Ford TR. Histologic investigation of root canal-treated teeth with apical periodontitis: a retrospective study from twenty-four patients. *Journal of Endodontics*. 2009;35(4):493-502. doi:10.1016/j.joen.2008.12.014.
- EndoTech NZ English-only curated YouTube outcomes review: 20-video set revised on 2026-06-03 for English-language clinical education links.
- American Association of Endodontists. Endodontic Retreatment Explained. YouTube.
- NIOM. How to perform successful endodontic treatment. YouTube.
- South African Dental Association. Apical control in Endodontics - Dr Heinrich Dippenaar (WEB70). YouTube.