

IMPACT OF THIRD-PARTY INFECTION CONTROL ASSESSMENTS ON IPAC PRACTICE COMPLIANCE IN THE DENTAL SETTING

Janessa McGuire BSc, CIC, Maja McGuire BSc, MLT, CIC, Dr. Kevin Katz MD, CM, MSc, FRCPC, Tony Nguyen BSW

ISSUE

Infection prevention and control (IPAC) compliance is a critically important part of staff and patient safety in dentistry. In recent years, concerns about the possible spread of blood-borne diseases, and the impact of emerging, highly contagious respiratory and other illnesses have grown. Dentists and other oral health care workers (OHCW) have a clear responsibility to establish, evaluate, continually update, and monitor their IPAC strategies and protocols [3].

All dentists are strongly encouraged to undertake IPAC policy and procedure audits in their dental offices to ensure that patient safety standards are adhered to, and best practices are implemented [3]. These audits should assess all core components of IPAC, as well as the reprocessing of instruments. While it is preferred to involve external individuals with expertise and certification in IPAC, periodic (i.e., at least annually) audits by internal OHCW with sufficient IPAC knowledge to identify and remediate deficiencies may be reasonable [3]. The level of internal IPAC proficiency is not standardized in Canada.

The project aimed to assess the impact of external third-party assessments, of all aspects of dental infection control, on best practice compliance through awareness of lapses, beyond that identified by current in-house IPAC resources.

PROJECT

A retrospective analysis of IPAC assessments performed by third-party Infection Control Practitioners (ICPs) between January 1st, 2021, and December 31st, 2022, was conducted across 3 dental clinic groups (G1, G2, G3). The dental clinic groups selected all had prior internal IPAC policies in place and current in-house IPAC supports.

The third-party onsite IPAC assessments were each completed using Public Health Ontario's (PHO) dental checklists, Figure 1, Core Elements and Reprocessing, supplemented by additional competencies from the Royal College of Dental Surgeons of Ontario (RCD SO), the College of Dental Hygienists of Ontario (CDHO), and additional items relevant from working in the field. The assessments were conducted from evidence based direct observations, Figure 2, of clinic practices and policy review.

Clinic leadership was provided a detailed report on the core recommendations (CRs) including remediation strategies to address the observed compliance lapses. CRs were issued for observed lapses within PHO's risk categories, Legislative Requirement (LR), High Risk (H) or Medium Risk (M). The clinic leadership was responsible for rectify deficiencies, where listed.

A follow-up visit conducted greater than 4 weeks from initial assessment reviewed the remediation status of the CRs. IPAC education and training was also provided at this time.

Clinics achieving compliance with all essential CRs were awarded a Certificate of Excellence (COE) in IPAC, valid for one year.

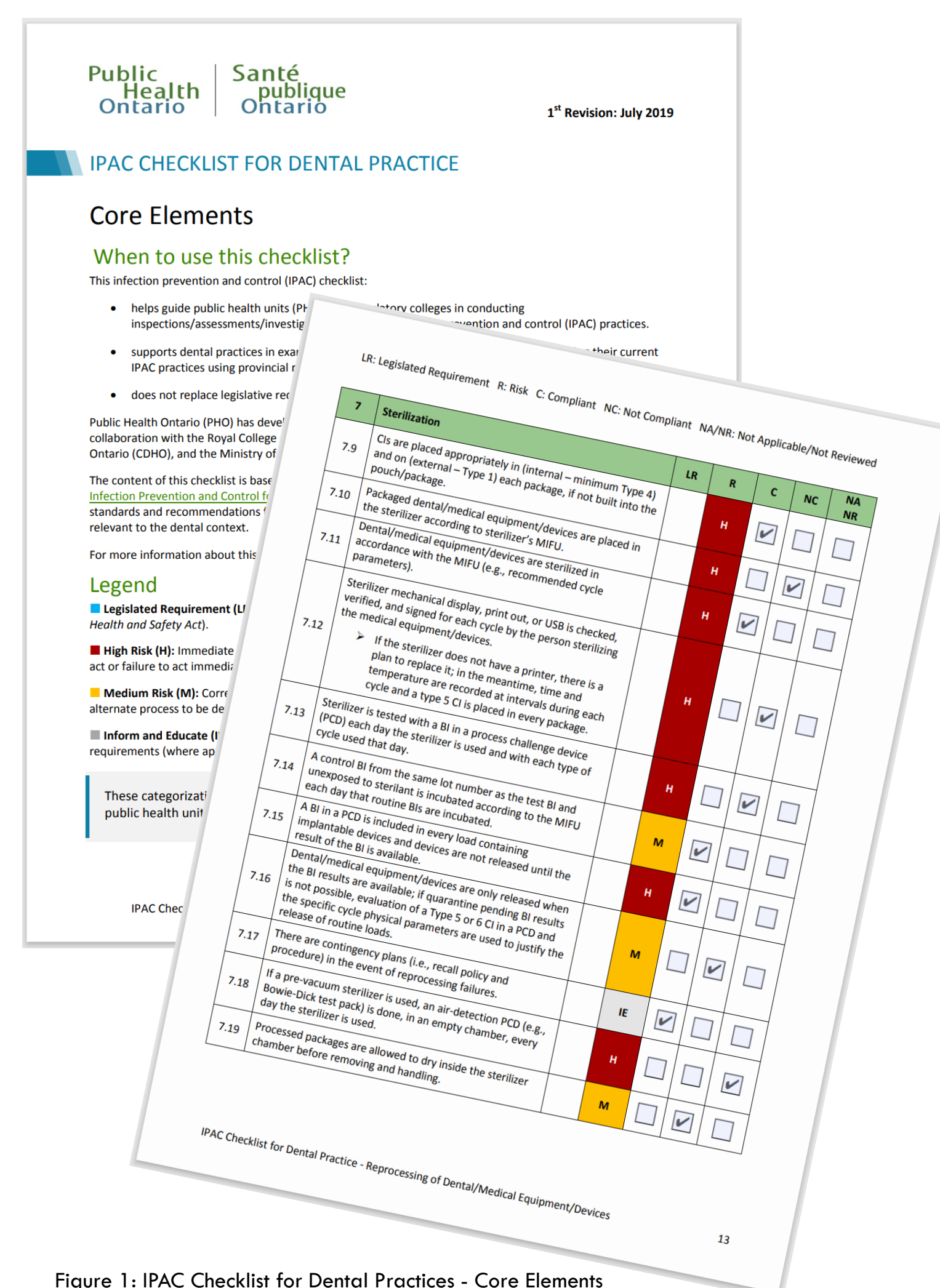


Figure 1: IPAC Checklist for Dental Practices - Core Elements

Retrospective analysis data was collected through audits of clinic reports from the study term. CRs, were cross referenced with PHO's checklist categories and elements.

Categories include, Reception/ Waiting Area; Environmental Cleaning; Hand Hygiene, Personal Protective Equipment (PPE); Reprocessing- Reprocessing of Dental Equipment, Record Keeping, Physical Space, Single Use Devices, Cleaning of Semi-critical and Critical equipment, Chemical Products for Disinfection, Sterilization, Storage; Dental Unit Waterlines and Water Quality; Dental Handpieces and Other Intraoral Devices; Suction Lines; Medication Room/Area; Injectable Medication Vials or Solutions; Multidose Vials; Aseptic Technique; Sharps Safety Program; Specimen Handling; Blood Collection and Testing Devices; Dental Radiography; Dental Laboratory; Policies and Procedures; Education and Training; and Occupational Health and Safety.



Figure 2: Clinic Assessment Observations

RESULTS

Assessment Group	Assessments Conducted (#)	Core Recommendations Issued (#)
G1	34	207
G2	25	336
G3	51	722
Totals	110	1,265

Table 1: Assessments Conducted with Total Number of Core Recommendations Issued by Study Group

Group 1 (G1) had 34 assessments conducted over the study term. Of these assessment, 207 total CRs addressing practice lapses were identified. G2 had 25 assessments (336 total CRs), and G3 had 51 assessments (722 total CRs). Table 1 shows a total of 110 reports were audited, identifying a total of 1,265 CRs issued across all 3 Groups. Across the 3 clinic groups, there was a mean of 10 CRs issued per clinic (range 0-24). Only one clinic had no CRs issued.

Within all the data, the PHO assessment categories with the highest occurrence of CRs were Reprocessing Record Keeping (n=455, 36% of CRs), Cleaning of Semi-critical and Critical Devices (n=166, 13% of CRs), and Dental Unit Water Lines management (n=100, 8% of CRs), as referenced in Table 2. A category includes many sub elements. Sub elements may range from LR, H, and M. Sub element occurrence is referenced in Table 3.

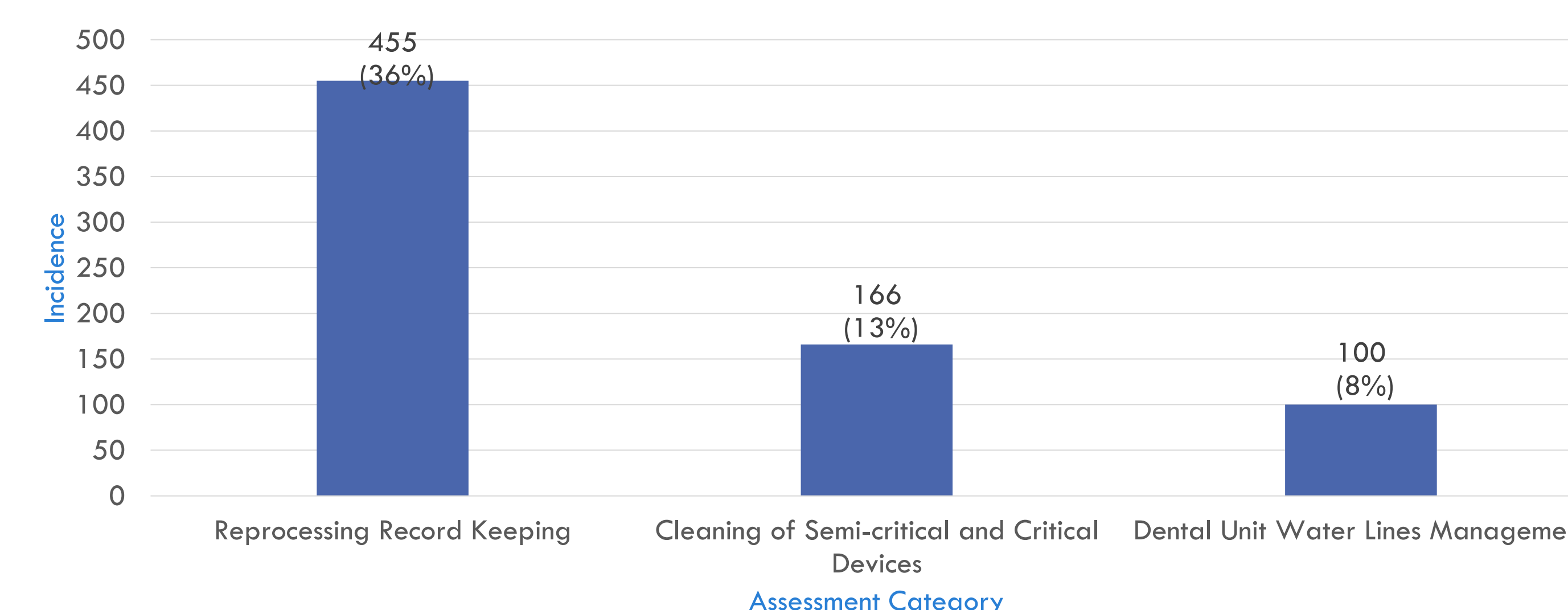


Table 2: Public Health Ontario Checklist Categories with the Highest Incidence of Core Recommendations Reference: PHO Checklist IPAC Dental Core- category section 7, and Reprocessing- sections 1, 5

Top Compliance Lapse Elements	Incidence	Risk Category
Maintaining/reviewing log of test results during sterilization	63	H
Critical and semi critical medical equipment/devices labelled as single-use are not reprocessed and/or reused	61	H
Appropriate labelling of sterilization pouches/packages	52	M
Sterilizer cycle/load verification and sign off	50	H
Dedicated education for reprocessing staff	42	M
Overall lapse element incidence across all Groups	1131	

Table 3: The 5 Most Common Lapse Elements Identified During IPAC Assessment.

All assessed clinics who remedied their identified CRs were able to achieve a COE.

LESSON LEARNED

Preliminary data demonstrates an overall gap in IPAC best practice lapse awareness in clinics with prior internal IPAC resources. Furthermore, data demonstrated the magnitude and value in having third-party assessment in both identifying and translating the observed deficiencies to specific CRs with corresponding remediation strategies for practice correction.

Identification of clinic specific sources of IPAC practice non-compliance can inform clinical practice and decision making, allowing for change in practice, and ultimately safer care. Failure to recognize IPAC compliance issues leads to potential risk to patients and team members.

CR remediation steps included enhancement or change to practice, education and training, processes, environment, and policy, as needed.

Complexities to achieving a COE included staff turnover, old equipment, time constraints, lack of focus on IPAC, or insufficient in-house IPAC expertise.

An annual IPAC assessment is critical for identifying practice compliance issues and translating best practice to clinical application. External third-party IPAC assessment has benefit for clinics with internal IPAC programming. The extent of value for clinics without prior internal IPAC systems will be detailed in a later study.

IMPLICATIONS FOR PRACTICE

Annual IPAC assessment by external third-party ICPs, trained in dentistry standards, provides oral health care workers with the lapse awareness and knowledge to properly implement necessary IPAC measures.

IPAC assessments, awareness, and feedback loop can assist dental clinics in consolidating legislation, published standards and recommendations from government and other agencies, regulatory bodies and professional associations, as well as affect patient and staff safety.

REFERENCES

- Ontario Agency for Health Protection and Promotion (Public Health Ontario). IPAC checklist for clinical office practice: reprocessing of medical equipment/devices. Toronto, ON: Queen's Printer for Ontario; 2019. [IPAC Dental Checklist - Reprocessing \(publichealthontario.ca\)](#)
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