Dental infection prevention and control is a system of policies and procedures designed to ensure the use of best practices to enhance safety and reduce the risk of transmitting potentially dangerous microbes. An effective infection prevention and control program hinges on assuring the quality of the preventive policies and procedures.

LEARNING OBJECTIVES

After reading this publication, the reader should be able to:

- describe a danger from becoming complacent about infection control and safety.
- define Quality Assurance.
- describe models to address Quality Assurance of infection control procedures.
Dr. Lutane’s dentist friend and colleague Dr. Metley was visited by an inspector from the Oral Health Division of the State Department of Health. Apparently, a patient had complained to the Division that Dr. M used non-sterile instruments that were unpackaged in a drawer that was open at chairside during the appointment. The inspection confirmed this and also detected several other infection control breaches resulting in the office being closed until the problems were remediated.

This prompted Dr. L to think about his own office’s procedures. Dr. L opened his practice three years ago with a clinical staff of two assistants, one hygienist and a part-time dentist associate. He appointed Poppy (the main dental assistant) as the Infection Control Coordinator (ICC) and charged her to base their infection control and safety program on regulations from the Occupational Safety and Health Administration (OSHA)\(^1,2\) and recommendations from the Centers for Disease Control and Prevention (CDC).\(^3\)

He admitted to himself that as he was working hard caring for patients and developing a strong patient base, he probably had not given adequate oversight to the office’s infection control program. He had confidence in Poppy’s abilities, for she was (as was he) a member of the Organization for Safety, Asepsis and Prevention (OSAP). Nevertheless, even though neither he nor Poppy was aware of any infection control problems and they felt that things seemed to be going OK, they both agreed that assessment of the quality of their disease prevention efforts was long overdue.

So, Poppy reviewed OSHA’s Bloodborne Pathogens Standard\(^1\) and the Hazard Communication Standard\(^2\) and used the CDC’s infection prevention checklist\(^3\) for the assessment, but she realized that drilling down on each regulation and recommendation was necessary for Quality Assurance.

For example, the CDC’s recommendation “clean and heat sterilize critical and semi-critical dental instruments before each use”\(^4\) involves several critical steps\(^5\) each of which must be assessed to ensure the overall correct performance.
POTENTIAL CONSEQUENCES:
A lack of attention to the quality of a procedure or program can lead to complacency, which is often accompanied by an unjustified feeling of being pleased with oneself or with one’s situation or achievements. Complacency can easily set in with thoughts like “things seem to be going OK” or “we’ve never had a problem with this.”
If the quality of an infection prevention and control program is not routinely assessed, you may not know if problems exist that could place patients and dental healthcare workers at increased risk of acquiring infectious diseases. Also, a lack of assessment leads to not knowing if you are in compliance with any recent changes in regulations or recommendations.
The closing of Dr. Metley’s office was partly based on non-compliance with CDC’s recommendation to package instruments before sterilization. The recommendation is:
“Before sterilization of critical and semicritical instruments, inspect the instruments for cleanliness then wrap or place them in containers designed to maintain sterility during storage.”
Placing unpackaged instruments in a chairside drawer that is open during treatment allows for recontamination from the air, from contact with the non-sterile instrument holders in the bottom of the drawer and from contaminated fingers during retrieval of the instruments.

Are you ready to provide the Safest Dental Visit™?
Readiness is an important concept that should be engrained in providing any healthcare service. It relates to a variety of terms including:
- attentiveness;
- awareness;
- compliance;
- mindfulness;
- vigilance;
and is assessed by such procedures as:
- process improvement;
- risk assessment;
- evaluation; and
- monitoring.
Overall these terms and procedures reflect the process of Quality Assurance which includes two principles:

1) “Fit for the Purpose”
A program/procedure should be suitable for the intended purpose. For example, in regards to infection control, it should prevent or reduce the spread of microbes; and

2) “Right the First Time”
Mistakes should be eliminated. For example, the mistake of not cleaning before disinfecting a contaminated surface would be detected and corrected.

UNDERSTANDING QUALITY ASSURANCE
As with infection prevention and control, the understanding of Quality Assurance hinges on the WHAT, the WHY and the HOW of the process.

WHAT: Quality Assurance is the maintenance of a desired level of quality in a procedure, especially by means of attention to every stage of the process.

WHY: An organization must use Quality Assurance to ensure that a procedure is designed and implemented correctly. This helps reduce problems and errors in the final activity. It’s a way of preventing mistakes.

HOW: Two suggested improvement models for the ICC to address the Quality Assurance of an infection control procedure are presented in “STRATEGIES” on page 4.
**PDCA Model**

(Plan | Do | Check | Act)

**PLAN**
1. Determine WHAT regulations/recommendations (R/R) apply to the procedure being assessed by reviewing the Bloodborne Pathogens Standard from OSHA¹ and the infection control guidelines from the CDC.³
2. Confirm that personnel performing the procedure have an understanding of WHY the specific R/R are needed and what the procedure is supposed to accomplish when performed correctly. Provide training if necessary.
3. Analyze the R/R to determine how to comply, obtain what is needed to comply and state when it should be performed.
4. Decide HOW to perform the procedure and write a Standard Operating Procedure (SOP) with total staff input.

**DO**
1. Perform the SOP.

**CHECK**
2. Receive feedback from those performing the SOP to identify any problems and obtain suggestions for improvements.
3. Confirm that the SOP is providing compliance with the R/R.

**ACT**
1. Make any necessary changes in the SOP to achieve process improvements and Quality Assurance.
2. Periodically monitor performance to assure continuous compliance (consistency).

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**DMAIC Model**

(Define | Measure | Analyze | Improve | Control)

**DEFINE**
1. Identify WHAT specific procedure will be analyzed.
2. Determine WHY the procedure is performed and what R/R apply.
3. State what the procedure is supposed to achieve and when it is to be performed.
4. Identify the SOP if available.

**MEASURE**
1. Observe the procedure as currently performed.
2. Document each step in detail, including what is done, what is used to perform the procedure and when it is performed.

**ANALYZE**
1. Have the office staff review and analyze the measurements.
2. Compare with any current SOP.
3. Identify root causes of any problems detected.

**IMPROVE**
1. Determine ways to eliminate the causes of the problems detected.
2. Brainstorm with the team and select the final solutions that address the root causes.

**CONTROL**
1. Perform trial runs using the improved procedure.
2. Create the new final SOP.
3. Institute the improved procedure.

Subsequent 2020 issues of *Infection Control in Practice* will demonstrate the use of models to perform Quality Assurance for specific infection control procedures. Additional information on Quality Assurance and process improvement is available.⁷⁻⁹
What’s Wrong With This Picture?
Can you identify the breach(es) in infection prevention in this photo of a dental clinician greeting patients in the reception area?

Answer: The clinician risks cross-contamination of patients in the reception area, and self-contamination, by not removing all contaminated Personal Protective Equipment (PPE) following patient treatment procedures. All PPE is to be removed before exiting the treatment room.

Educational Spotlight

May 28-30, 2020 | Hyatt Regency Minneapolis | Minneapolis, MN

Feeling Frustrated In Your Infection Prevention Role?

Don’t stay isolated in your professional role, whether clinical, supervisory, academic or consultant. Connect with the most innovative thinkers in dental infection prevention, occupational health, and patient safety at the 2020 OSAP Annual Conference where you will learn all the latest updates on evolving guidance and emerging infection prevention and safety issues.

Pre-Conference Course! Enroll in Basic Training – Dental Infection Prevention and Safety, a comprehensive, 1.5-day course designed for those who work in FQHCs, IHS/Tribal Health Organizations (including Tribal Urban Clinics), and Public Health. The course is presented by experts in dental infection prevention and patient safety. Receive up to 11 hours of CE credit, resources and much more!

For program details go to: osap.org/page/2020annualconf

Questions about the program, logistics, or registration? Email: Office@OSAP.org
Or call: Phone: +1 (410) 571-0003 | US & Canada: +1 (800) 298-6727
Glossary

**Critical instruments**: Patient care items that penetrate soft tissue, contact bone, enter into or contact the blood-stream or other normally sterile tissue.

**Process improvement**: The proactive task of identifying, analyzing and upgrading an existing program, process, procedure, or product.

**Risk assessment**: (in public health) The process of characterizing the nature and likelihood of a harmful effect to individuals or populations from certain human activities.

**Root cause**: A factor that caused a nonconformance and should be permanently eliminated through process improvement.

**Safest Dental Visit™**: An OSAP concept that is a collaborative effort to support an increased commitment to infection control and safety in dentistry, to help ensure that every visit is the safest dental visit for patients and providers.

**Semicritical instruments**: Patient care items that contact mucous membranes or non-intact skin, will not penetrate soft tissue, contact bone, enter into or contact the blood-stream or other normally sterile tissue (Note: non-critical instruments contact intact skin).

Links to Resources

### QUESTIONS FOR ONLINE QUIZ

1. What are two principles of quality assurance?
   - a. Cost Analysis and Brainstorming
   - b. Fit for the Purpose and Right the First Time
   - c. Reprimand Poor Performance and Fit for the Purpose
   - d. Right the First Time and Reprimand Poor Performance

2. What process is defined as characterizing the nature and likelihood of a harmful effect to individuals or populations from certain human activities?
   - a. Continuous improvement
   - b. Quality assurance
   - c. Readiness
   - d. Risk assessment

3. Not knowing if you are in compliance with any recent changes in regulations or recommendations is a danger of:
   - a. brainstorming.
   - b. complacency.
   - c. quality assurance.
   - d. root cause analysis.

4. What is true about critical or semicritical instruments?
   - a. Critical instruments only contact mucous membranes
   - b. Semicritical instruments need not be sterilized for reuse
   - c. Critical instruments enter soft tissues
   - d. Semicritical instruments only contact intact skin

5. The improvement model DMAIC stands for:
   - a. Decide, Manage, Aspire, Initiate, Create.
   - b. Define, Measure, Analyze, Improve, Control.
   - c. Develop, Multiply, Affect, Interact, Conclude.
   - d. Do, Manipulate, Act, Identify, Comply.

6. Attentiveness, awareness, compliance, mindfulness and vigilance best relate to what term?
   - a. Assessment
   - b. Brainstorming
   - c. Performance
   - d. Readiness

7. The improvement model PDCA stands for:
   - a. Perform, Define, Control, Analyze.
   - b. Plan, Do, Check, Act.
   - c. Practice, Diversion, Compliance, Analysis.
   - d. Preparedness, Determination, Continuance, Assessment.

8. Who originated the concept of The Safest Dental Visit™?
   - a. CDC
   - b. FDA
   - c. OSAP
   - d. OSHA

9. What does the CDC recommend should be done to contaminated dental instruments before heat sterilization?
   - a. Clean, inspect and package
   - b. Clean and package
   - c. Clean and inspect
   - d. Clean

10. What activity is defined as the proactive task of identifying, analyzing and upgrading an existing program, process, procedure, or product?
    - a. Effective analysis
    - b. Process improvement
    - c. Quality control
    - d. Readiness

### KEY TAKEAWAYS

1. Are you ready to provide the Safest Dental Visit™?
2. Don’t become complacent about performing infection control and safety procedures.
3. Perform **Quality Assurance** on infection control and safety procedures to ensure compliance and prevention of disease spread.
Education and Credentialing Updates

EARN THE OSAP-DALE FOUNDATION DENTAL INFECTION PREVENTION AND CONTROL CERTIFICATE™ IN ONLY 3 STEPS:

1. Complete the OSAP-DALE Foundation online CDEA® module: Understanding CDC’s Summary of Infection Prevention Practices in Dental Settings ($30)

2. Complete the OSAP-DALE Foundation Dental Infection Prevention and Control eHandbook™ ($225)

3. Pass the OSAP-DALE Foundation eHandbook Assessment™ ($50)

NOTE: Steps 1 and 2 can be completed in any order but are required to get access to the ehandbook assessment.

DISCOVER THE PATHWAYS TO CERTIFICATION
Select the type of certification program below best suited to elevate your career. Click on each title to learn more.

- Certified in Dental Infection Prevention and Control™ (CDIPC™) — A clinically-focused professional certification
- Dental Industry Specialist in Infection Prevention and Control™ (DISIPC™) — An industry (dental trade)-focused professional certification

For the latest information visit: dentalinfectioncontrol.org

HAVE YOU HEARD?
The Official OSAP Podcast

Check out the official OSAP Podcast with Michelle Lee, Executive Director of OSAP, who will be bringing you weekly infection control tips and information with subject matter experts.

She is amassing a collection of relevant topics for dental practices including a conversation with an attorney about compliance issues, sterilization challenges in orthodontic practices, light-curing units as a potential safety hazard, providing oral health care access to HIV patients and much more. Each podcast is less than 20 minutes; a quick way to stay on top of important infection control issues. OSAP’s podcast is on the Dental Podcast Network, Channel One.

Check it out ‘hear’!

QUICK BITES

Take the Micro-Learning Silent Video Challenge!

Can you identify the actions in this short video that breach infection control before a dental procedure?
osap.org/2020-02video

Challenge your knowledge and compare to the lesson below.
The Scenario: Cross-contamination

The Lesson: The clinician causes cross-contamination by holding the tablet in gloved hands, contaminating the gloves prior to patient treatment. The clinician is not wearing protective eyewear assuming treatment will proceed. Also, the clinician’s bare forearms will become contaminated depending on the procedure performed. The patient will need to be given protective eyewear.

In Case You Missed This!
The American Dental Association convened a panel that recently published guidelines on the administration of antibiotics for oral conditions.