The individual responsibility for protecting patients from infection isn’t new – it’s always been at the core of healthcare practice.

The founders of the professions of medicine and nursing stressed the essential need for patient safety:

**“Primum non nocere”** - (First, do no harm)

...originated from the writings of Hippocrates, the father of medicine, where he said:

**“As to diseases, make a habit of two things – to help, or at least to do no harm.”**

Complacency:

A feeling of contentment or self-satisfaction, especially when coupled with an **unawareness of danger, trouble, or controversy**

Healthcare workers **MAY** see obvious harm when it occurs but more often than not staff do not see the “near misses” – and this feeds the complacency.
Complacency prevents us from seeing:

✓ Sources of harm
✓ Near misses
✓ Ourselves as sources of harm

‘I hear you – but is it really a problem?’

- Why does “Dr. Jones” still do bronchoscopy procedures in a room that has no negative air exchange on a TB positive patient?
- Why does nurse “Betty” still not wear PPE or a face shield when assisting for endoscopy procedures?
- Why does technician “Bob” still not do a proper leak test prior to disinfection or use gloves when handling disinfected instruments?
- Why are contaminated instruments not labeled and transported properly to decontamination?

What else are we up against?

**Emerging & New Technologies** are excellent for advancing our diagnostic and therapeutic options BUT...

- Complexity of healthcare interventions = risk of personal failures that can harm patients

GI → Automation in cleaning, disinfection & sterilization as well as more complex medical devices introduce tremendous training & competency requirements

If you are going to automate it... There has to be someone to run it...

Human factors

✓ Intense workloads
✓ Continuing high procedure counts
✓ Staff fatigue & shortage of staff
✓ Length of time employed & practicing in a given position
✓ Compliance with hand washing, uniform and hygiene equipment safety & surface disinfection
Hospital Acquired Infection (HAI) or Nosocomial infections
✓ Infection acquired in hospital where the patient was admitted for reasons other than the infection

HAI's are among the leading causes of death in Canada...

More than 200,000 patients get infections every year while receiving healthcare in Canada; more than 8,000 of these patients die as a result.

- Public Health Agency of Canada – HAI

Each person working in healthcare, whether it be in a clinical or non-clinical role, is responsible for taking active measures to minimize the risk of HCAI by modifying ingrained behaviors and to break the chain of infection.
For an infection to occur – 3 criteria must be met:
A. Sufficient number of pathogenic microorganisms must invade the body
B. The pathogens must find an appropriate portal of entry
C. The target host must be susceptible

The Big Four” Pathogens in GI
- \textit{Clostridium difficile}
- \textit{Pseudomonas aeruginosa}
- Methicillin resistant \textit{Staphylococcus aureus (MRSA)}
- Vancomycin resistant \textit{Enterococcus (VRE)}

Biofilms within GI Endoscopy
- A biofilm is a structured community of microorganisms encapsulated within a self-developed polymeric matrix and adherent to a living or inert surface.
- Formation of a biofilm begins with the attachment of free-floating microorganisms to a surface.
- If the colonists are not immediately separated from the surface, they can anchor themselves more permanently using cell adhesion.
Many organisms have been shown to produce biofilms:
- Staph aureus (MRSA), Pseudomonas aeruginosa, Klebsiella pneumoniae
- Biofilms are a potential source of infection when the biofilm-associated cells detach
- Biofilms have been found in AER's & high level disinfectant solutions

Routine infection prevention and control practices within GI endoscopy:

1) The approach to infection control in which all human blood and body fluids are treated as if known to be infectious
2) All medical devices received for reprocessing are considered potentially infectious

Disease transmission has occurred via endoscopy
Endoscopes are complex and difficult to reprocess
- Biofilms present added challenge

Reprocessing personnel
- Shortcuts due to high procedure volume, rapid turnaround, short staffing
- Training certification required
- On-going competency & Recertification
- Manager responsibilities

Automated Endoscope Reprocessors, accessories & filters are a significant source of failure during high level disinfection, PM
- Storage cabinets & conditions out of compliance
- Drying of instruments is poorly understood
- Design of MDRD department (separation of clean/dirty)
- Transportation of medical devices continues to be a problem
Why AUDIT in GI?

- Infection Control Practitioners audit GI infrequently if at all
- Accreditations are not done frequently enough to ensure that the GI suite is meeting all of the guidelines
- Vendor partners can provide specific information regarding their equipment but often times this information conflicts with hospital policies & procedures — this leads to confusion and auditing can identify discrepancies

GI – Suite Compliance Review

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GI – Suite Compliance Review

Processes reviewed to meet standards:
- Procedure room and backside cleaning
- Transportation to/from procedure room
- Pressure and leak testing
- Automated/manual cleaning and disinfection
- Embyrying and storage
- Current endoscope care

Results:

Areas that meet or exceed standards

- Recommend any potential improvements towards achieving best practices
- Identify inefficiencies to help streamline workflow and improve capacity
- Provide solutions to encourage repetition of high-level performance

Areas that do not meet standards

- Define critical areas that need immediate attention and provide an action plan
- Identify areas that do not meet guidelines
- Suggest an action plan for areas that may not meet accepted standards