INFECTION CONTROL RISK ASSESSMENT – ULTRASOUND PROBES

Infection Prevention and Control (IPC) protocols are developed to keep the patient and medical staff safe. That is why it is so important to take a proactive approach to prevent infections from occurring by undertaking an infection control risk assessment.[1-2]

An infection control risk assessment is more than just running down a list of potential hazards and informing personnel of best practices. A sophisticated infection control risk assessment is a living document that forms the foundation of any comprehensive IPC program. The policy evolves over time as goals and measurable objectives change, while maintaining a solid framework for consistent patient safety.

The ultrasound probe risk assessment is designed to determine the risk for each hazard in how bad and how likely the potential harm can occur during the reprocessing (cleaning, disinfection and traceability) of ultrasound probes. The risk matrix is used to determine the risk level. A facility should aim to reduce all potential risks to the lowest risk rating through control measures for each hazard, list the measures you will be taking to minimise the risk identified.

Risk Matrix, example below, could be used to determine risk for each hazard: (how bad and how likely) and consequently identify risk prominence and areas for improvement

S X L = Risk (VL to EH)	Likelihood of Harm (L)		
Severity of Harm (S)	Unlikely	Possible	Probable
Slight	Very Low (VL)	Low	Medium
Moderate	Low	Medium	High
Severe	Medium	High	Extremely High (EH)

Infection Control Risk assessment – POCUS probe disinfection example

Hazard	What or Who Exposed - List who might be harmed from this activity – at risk group or equipment contaminated	Severity of Harm	Likelihood of Harm	Risk	Control Measures For each hazard, list the measures you will be taking to minimise the risk identified	Observations & Additional Comments	Risk For each hazard, decide the level of risk after your controls are in place
Cleaning Cross-contamination Occur during cleaning after the patient exam.	Staff, New Patient and Equipment	Severe	Possible	High	Implement Chronos. An aseptic technique used in cleaning and loading the probe into Chronos for disinfection	Chronos training video shows how the technique is achieved. Online quiz for certification	Very Low
Disinfection Chemicals and fumes can cause burns and skin irritation	Staff	Moderate	Probable	High	Implement Chronos Chemical Free – Ultraviolet Light High Level Disinfection		Very Low
Chemical Indicator (CI) or Test strip (TS) needs to be manually checked to determine if the cycle has passes	The staff member does not check CI/TS has passed and exposes patient or staff to an infected probe	Moderate	Possible	Medium	Implement Chronos. Automated Verification System replaces the manual process of checking chemical indicators and test strips. This breakthrough technology consists of a monitoring and an independent control system (ICS).	ICS operates similar to Parametric Release providing extra reassurance and saves time in automatically validating every disinfection cycle – Removes the guesswork	Very Low
After a Chemical HLD system completes a cycle chemical	If chemical residuals are not removed from the probe it can lead to chemical burns and skin	Moderate	Possible	Medium	Implement Chronos. No chemical residuals	Removes the risk of residuals left in crevices or needle groove/indent	Very Low

residual is left on the probe	irritation to staff and patients. In the case of IVF, the risk of exposure to toxic residuals can impact oocyte retrieval, embryo transfer and other IVF applications during pelvis ultrasound probe procedures.						
After disinfection, some chemical processes use non-sterile drying wipes to remove chemical residual off the probes	Using non-sterile drying wipes can lead to a risk of cross-contamination of the disinfected probe	Slight	Probable	Medium	Keep non-sterile drying wipes in a closed area to reduce cross-contamination or use Chronos a non-chemical system to disinfect all probes		Very Low
The probe is Low Level Disinfected and placed inside a probe cover – 5 to 13% of probe covers can be compromised by micro-tears or perforation from sharps – trocar/ needle		Moderate	Probable	High	High Level Disinfect probes removes the risk of cross-infection if the probe cover has micro-tears of perforated		Very Low
Traceability Recording manually the disinfection cycle information that Includes: date and time, scanner and	Manual traceability systems using paper logbooks may not record every disinfection cycle accurately. This can be costly if patients are recalled	Severe	Possible	High	Chronos traceability system electronically captures and stores data on Chronos during the disinfection cycle.	The digital disinfection records can be manually linked to a patient profile. This process can also be automated through	Very Low

transducers identifiers, the name of the person performing disinfection and chemical agents with batch numbers. This documentation must be stored for a period prescribed by the local policy.					Over 100,000 disinfection records are stored in an Internal secured storage The creation of accurate digital records reduces human error, saves time, thus improves compliance and audit-readiness.	a third-party software accessing Germitrac API web services to retrieve disinfection data and link it to a patient record. (Electronic Medical Records (EMR) or Electronic Patient Record (EPR)	