

# Storage, transportation & use of disinfected endoscopes

Potential risks

## Where to start?

- Storage
- Temperature control
- Humidity
- How long?
- Personal belief – the dark side

## How do you know?

- Not wrapped
- Difficult to mark – serial number
- Are records kept?
- Multiple handlers
- Drying cabinets?
- Tracking & tracing – accessories – part of the scope?

## Change of responsibility

- Endoscopes – rigid processed in SSD
- Endoscopes – flexible processed locally by ?
- Move to transfer responsibility to SSD
- Much ‘wailing and gnashing of teeth’
- Standards, AER (automated endoscope reprocessor)
- The patient

## Observations & other 'blind spots'

- Flush – brush – flush – turn do the other end
- ENT ward – only loan scope to A&E in an emergency
- Transport
- Cleaning
- More 'wailing and gnashing of teeth'

## What I do best

- Discover the 'rule' book
- Follow those rules
- Make sure everyone follows those rules
- Keep the handle bars straight
- What happens when there are no rules?

## Sterile Services & Endoscopy

- Transfer as many of the rules as possible from SSD to Endoscopy
- Look at scope identification – not easy
- AER – treat as if washer disinfectator
- NHS – National Endoscopy Programme – Decontamination Standards for Flexible Endoscopy – March 2007
- BSG Guidelines for decontamination of equipment for gastrointestinal endoscopy - 2003

## Main points:

- The NHS document is an audit tool
- The BSG document recommends:
- All scopes be cleaned at the beginning and end of each list, and between patients
- Manual cleaning using an enzymatic detergent (no mention of manufacturers instructions) then into an AER
- Single use biopsy forceps, guide wires, and change rubber valves on working channels between each process
- All endoscopes must have been exposed to a full decontamination cycle not more than three hours prior to use



## Protection - scope

- Traditionally in SSD outer wrap
- For short scopes – the same, wrap & sterilize
- V-Pro – almost three years
- Long scopes –
- ? Three hours – ?Use a drying cabinet - ?Vacuum packing

## V-Pro

- Vaporised hydrogen peroxide
- Wrapped in Tyvek – shelf life 1 year
- Is transported as any other sterile product
- Have sent it 150 miles for an off site service
- Total success

## Long scopes

- Three hours between process – what is it based on?
- Drying cabinet – time
- Possible cross contamination
- Length of bar code reader
- As yet no standard to judge against

## Vacuum shrink wrapping

- Following drying:
- Place on a tray
- Insert into plastic bag
- Draw vacuum
- Data is available – 21 days Lancer – restrictions do apply

## Vacuum wrapping 2

- Current study
- Place scope in pre-formed tray
- Draw vacuum
- Microbiological study being undertaken –
- Initial outlook – very promising

## Other wrap options:

- Traffic light caps – red & green
- Dependent on staff knowing and understanding the system
- Scope cleaned adjacent to the patient?
- When un-wrapped can we prevent re-colonisation?
- Does it matter?
- Should endoscopes be treated as any other RIMD?

## Advantages of using any form of closed wrap

- The user has no doubt
- If product not clean – can prove who processed it
- Improved shelf life
- Safer to transport
- Improved quality
- Major risk reduction

## If not why not?

- Irrespective of access route, if a biopsy is taken, there will be bleeding
- Olympus training days – nurses – really?
- Do our scope patients deserve a second class service?
- Antibiotics – how long do they have left?
- Could we be doing more harm than good?



## The risks

- Currently too many variables
- Water quality
- Time restrictions
- Too many handlers – cause damage?
- Testing & sampling
- Accountability

## Testing & sampling

- No history of routine testing other than water quality
- Scopes and bio burden testing? Too delicate, too expensive, too few in supply
- What about testing the gloves
- Change the rubber bungs
- Should similar PPE be worn during cleaning?

## Steps required – if only it was possible

- Easy scope identification for tracking & tracing – computerised
- Water tests that give rapid results
- Understanding of ISO 15833 Part 4
- Less reliance on ‘the salesman said.....’
- Understanding of manufacturers instructions and chemistry compatibilities
- Back to Alice in Wonderland

## Communication

- Can't sterilize a flexible scope
- Always done it that way
- Out-patient procedure – do we see the results – are they connected?
- Better control, more efficient service
- Introduce Total Quality Management (TQM)
- Plan to reduce the risk

## Finally

- Improve standards of care for patients
- Improved safety for clinicians
- Reduce the opportunity for contaminated results from previous users
- Allow specialists to specialize
- A major learning curve for all involved
- Communication is back

