

# Port cleaning survey reveals patients are vulnerable to infection

## Introduction:

VYGON (UK) Ltd has initiated the first national survey examining how effectively needle-free IV access ports are cleaned. The objective of the survey was to understand the current cleaning practices of IV needle-free ports both at a local and national level, and whether they are in-line with national best practice advice.

## Background:

Needle-free devices all have one clear function in common which is the ability to effectively and consistently disinfect the membrane of the device prior to access. epic3 guidelines currently recommend cleaning the ports for a minimum of 15 seconds. If the membrane is not effectively disinfected each time an access occurs, then this will pose considerable risk of bacterial entry to the patient's bloodstream and subsequent Catheter Related Bloodstream Infections (CRSBI).

## Summary:

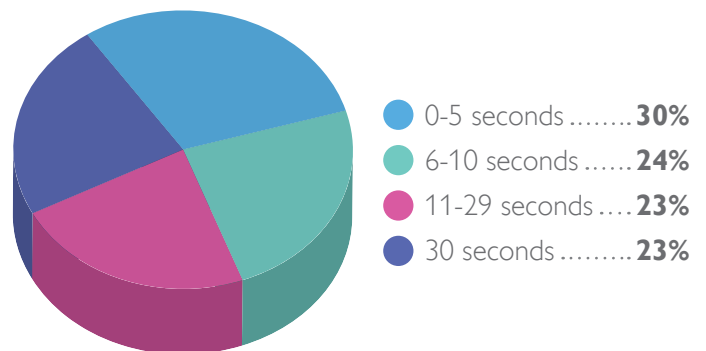
VYGON (UK) Ltd initiated the survey in association with the Aseptic Non-Touch Technique (ANTT) organisation. Responses were collated from a total of 1,237 participants ranging from a variety of different hospital departments including Critical Care, Accident & Emergency, Paediatrics and Cancer Services. These responses revealed that **54%** of hubs are being cleaned for **10 seconds or less**, with **30%** being cleaned for **five seconds or less**.

Other questions included in the survey focused on the type of wipe used, the cleaning technique and glove use. The results revealed that current active disinfection methods make it hard to audit and control current

cleaning practices to ensure all devices are cleaned following epic3 guidelines.

## Key Findings:

Survey question four: 'How long do you normally clean IV access ports?'



The results highlighted that **77%** of IV access ports are being cleaned for **29 seconds or less**, whilst alcohol swab manufacturers recommend that cleaning should take place for **a minimum of 30 seconds**.

epic3 guidelines cite that this should take place for no less than **15 seconds**<sup>1</sup>, unfortunately the above results show that **54%** of ports are being cleaned for **10 seconds or less** with **30%** cleaning for only **five seconds or less**.

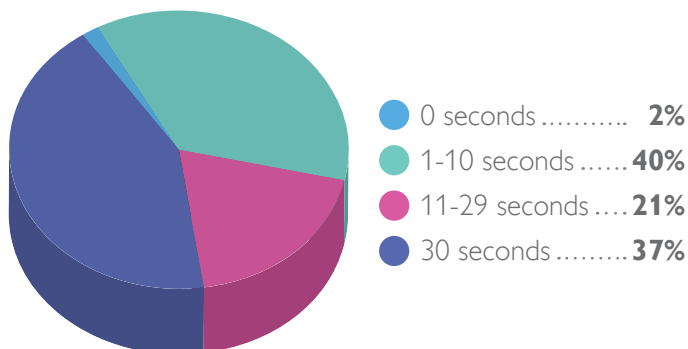
Studies have found that wiping the luer-activated device with 70% alcohol for **three to five seconds** did not adequately disinfect the septal surface<sup>2</sup>. Incorrectly cleaning the port can result in bacteria colonisation on the device and increased risk of CRBSIs, which can cost a Trust at least £3,000 per infection<sup>3</sup>.

## References:

1. H.P. Loveday et al. epic3: National Evidence-Based Guidelines for Preventing Healthcare-Associated Infections in NHS Hospitals in England, Journal of Hospital Infection 86S1 (2014) S1-S70
2. Menyhay SZ1, Maki DG. Preventing Central Venous Catheter-Associated Bloodstream Infections: Development of an Antiseptic Barrier Cap for Needleless Connectors. AM J Infect Control. 2008 Dec;36(10):S174.e1-5. doi:10.1016/j.ajic.20018.10.006.
3. Reducing Healthcare Associated Infections in Hospitals in England; Report by the Comptroller and Auditor General; HC 560 Session 2008-2009, ISBN 978 0 10 295504 0, Publication date: 12 June 2009
4. <http://www.ific.narod.ru/Manual/cost.htm#fig131>-accessed on 17/04/2014.

## Port cleaning survey reveals patients are vulnerable to infection Continued

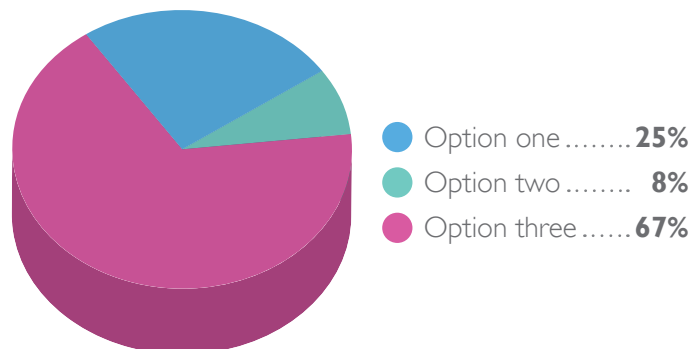
Survey question five: 'How long do you normally let the IV access ports dry before accessing them?'



Results show that **63%** of ports are being accessed within **29 seconds or less**, despite alcohol swab manufacturers recommending that drying time should take place for **a minimum of 30 seconds** or until visibly dry<sup>4</sup>.

epic3 guidelines further recommend that drying time should take place until the port is visibly dry, which can take longer than **30 seconds**. The above results illustrate that **42%** of ports are drying for **10 seconds or less** and **2%** are being accessed without any drying time. Ensuring at least **15 seconds** of scrubbing, and allowing the port to completely dry before use, ensures that the alcohol is having a maximal bactericidal effect. Not allowing the IV port to dry can lead to CRSBIs which can increase the patient's hospital stay by 11 days<sup>1</sup>.

Survey question six: 'How would you describe your normal port cleaning technique?'



The options are:

Option one: It's OK to touch the hub as long as I have sterile gloves on.

Option two: It's OK to touch the hub as long as I have non-sterile gloves on.

Option three: It's never OK to touch the hub.

ANNT guidelines recommend that the port should only be touched using sterile gloves, ensuring that any key parts, such as the membrane, should be avoided where possible. Yet, the results demonstrated that 8% of participants believed that it was 'OK to touch the port with non-sterile gloves'.

### Conclusion:

The findings demonstrate a large variation in cleaning practices across a number of different hospital departments. If these practices are not carried out in-line with national guidelines the risk of CRBSI is increased, which in turn can affect patient recovery time and stay in hospital. Current active disinfection methods make it hard to audit and control cleaning practices to ensure all devices are cleaned correctly. The inconsistencies highlighted suggest a need for standardisation in cleaning practices. 3M™ Curoc™ Disinfecting Caps for needle-free devices offer a unique passive disinfection system, providing instant protection for up to seven days. Implementation of Curoc caps standardises the cleaning of needle-free devices, which in turn makes the audit process quick and easy.

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