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on behalf of the ICU SPIADI group*

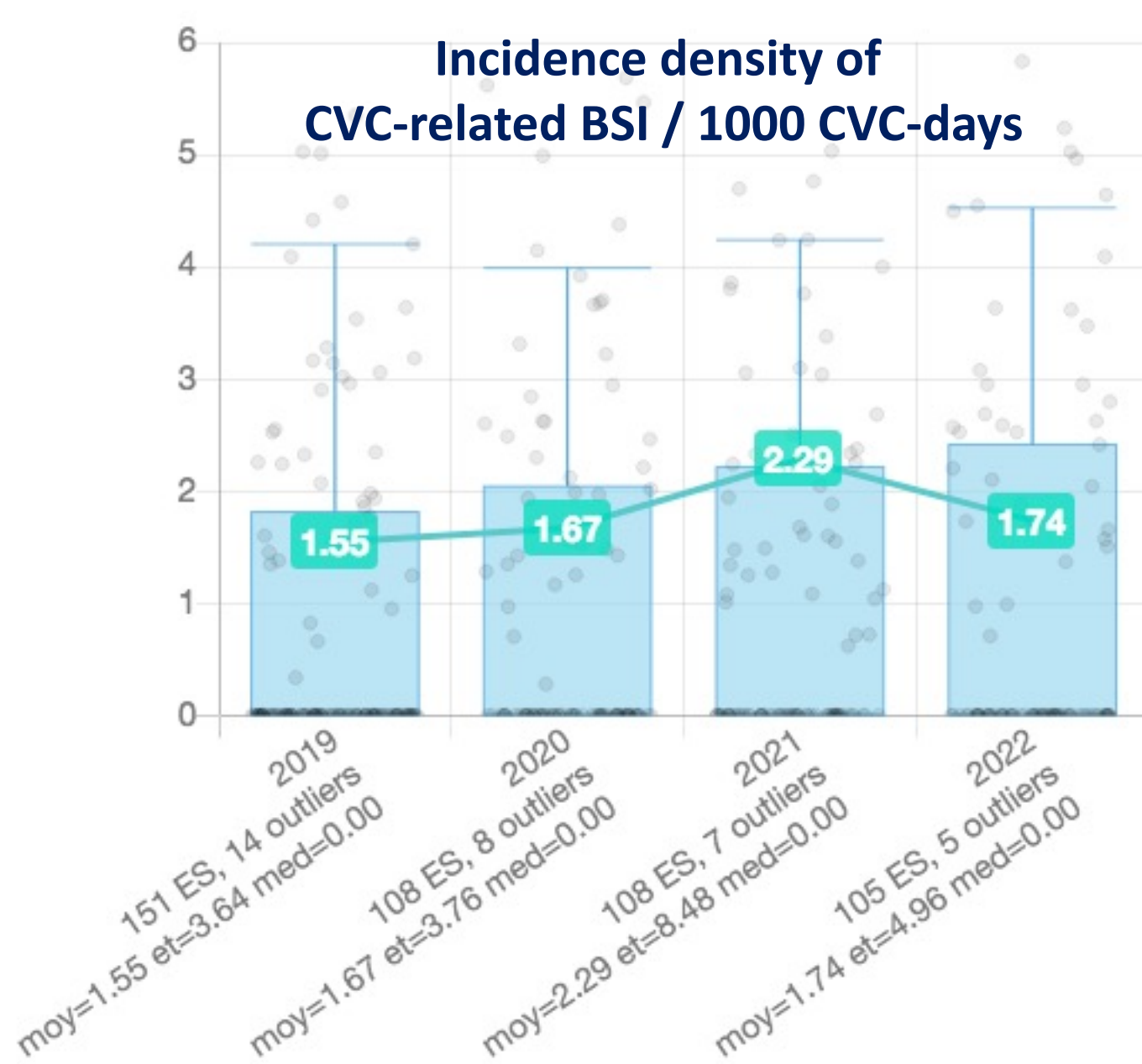
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BACKGROUND



- Nationwide 3-month survey in ICUs
 - 32% of CVC-related BSI occur < 8-days after CVC insertion
 - 49% of CVC-related BSI associated with a *staphylococci*
- Non compliance with maximal sterile precautions during CVC insertion is associated with early CVC-related BSI
- Use of the Ultrasound guidance (USG) for CVC insertion is recommended in French ICUs (Soc. Fr. Hyg. Hosp., 2013; Soc. Fr. Anesth. Reanim., 2015; Soc. Réanim. de lang. Fr., 2019)
- USG may increase the infectious risk for CVC-related infection in ICU (Buetti et al., CID, 2021)

2 goals

OUR STUDY :

1-inventory of the use of USG during CVC insertion

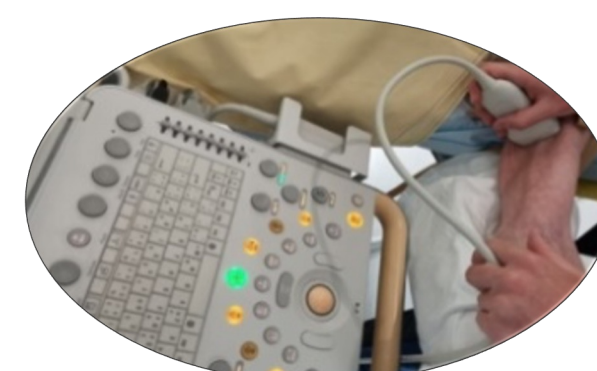
2- Evaluation of infectious risk associated with the use of USG during CVC insertion

METHODS

- questionnaires for clinicians insertion CVC in ICU patients
- direct observations of intensivists performing CVC insertion with USG, by infection control local teams.

- Frequency of the use of USG
- Training of intensivists
- Standardized procedure available
- Preparation of their ultrasound system

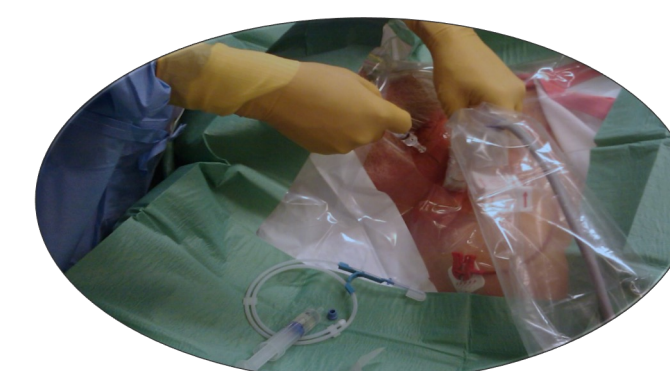
INSERTION
SITE
MARKING



SKIN
ANTISEPSIS



CATHETER
INSERTION



- Hand hygiene before marking, before antisepsis and before CVC insertion
- Sterile gloving immediately prior to insertion
- Gels for insertion site marking and catheter insertion
- Sterile protective sheath covering the probe for insertion

RESULTS

- 26 participating hospitals
- 111 questionnaires
- 36 direct observations of intensivists performing CVC insertion with USG
- 15 major results presented (on the left side, the expected)

GENERAL

Training
program

Standardized
procedure

- USG use for the insertion of CVC
- Training of intensivists in the use of USG
- Available standardized procedure

111
questionnaires

36
observations

98 (88.3%)

59 (56.2%)

18 (17.1%)

16 (44.4%)

84 (75.6%)

71 (72.4%)

69 (70.4%)

21 (58.3%)

10 (47.6%)

15 (71.4%)

16 (76.2%)

SKIN ANTISEPSIS

Hand
Hygiene

Gloves removal
at the end of antisepsis

- Compliant hand rubbing
- Gloves removal at the end of skin antisepsis

17 (63.0%)

15 (55.6%)

INSERTION OF THE
CATHETER

Surgical
Hand
Hygiene

Sterile
gloves

Sterile
sheath

Sterile
gel

No touch of the US system with sterile gloves

- Surgical hand hygiene followed by sterile gloving
- Sterile sheath covering the probe
- Sterile sheath covering the probe and cable
- Using single-dose sterile gel
- No contact with the US system during insertion

12 (33.3%)

105 (100%)

101 (96.2%)

36 (100%)

32 (88.9%)

36 (100%)

33(91.7%)

CONCLUSIONS

- USG is commonly used for CVC insertion.
- Hand hygiene is not optimal in 2 out of 3 cases.
- There is a for increased training of practionners over the need to ensure surgical asepsis conditions during CVC placement.

