

Impact of COVID pandemic on VA practices: Belgium

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Global Networking Session: Pandemic impact on VA



Disclosures

- Clinical nurse specialist in a multi-professional Vascular Access Team @ University Hospitals Leuven (Belgium)
- President of the Belgian Vascular Access Network (BeVANet)
- Expert member of a federal workforce on development of national Vascular Access guidelines (Belgium)
- Lector in training programs for various health care professionals @ University Colleges Leuven – Limburg (UCLL) – KU Leuven (Belgium)
- No other financial disclosures



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Belgian Vascular Access Network



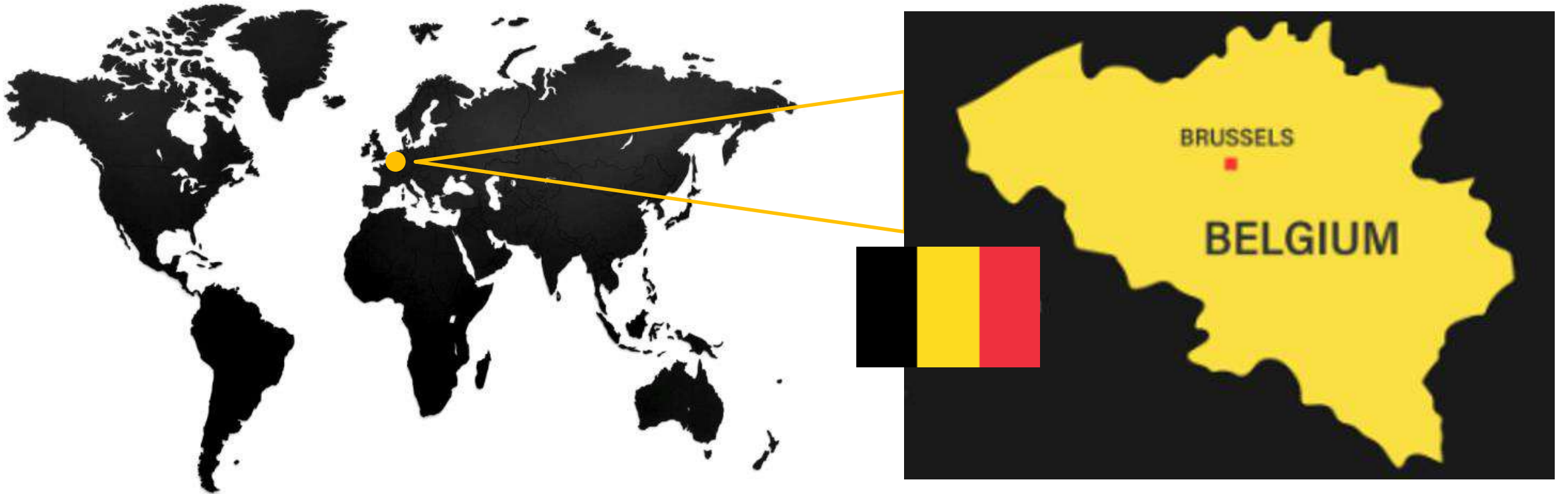
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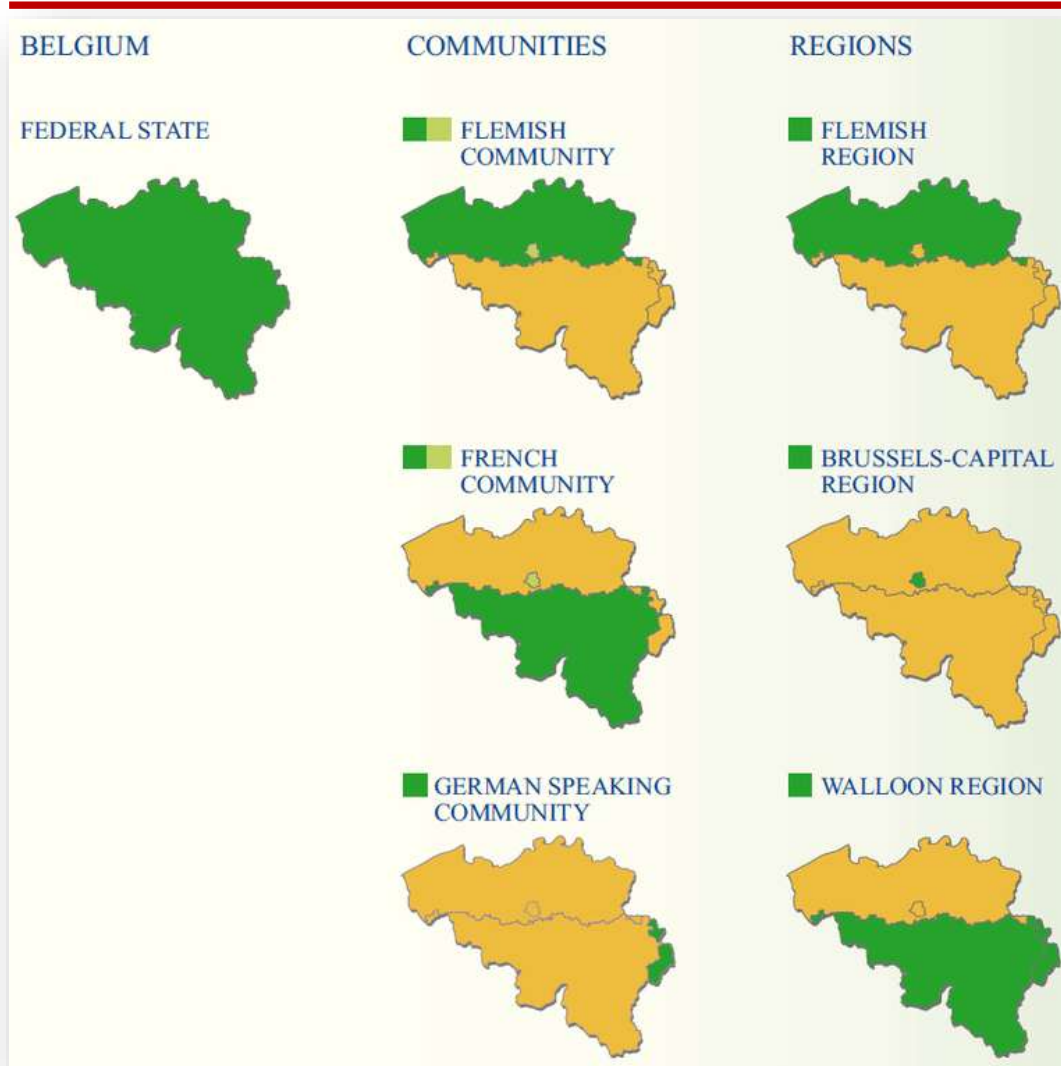
UC Leuven
Limburg
MOVING MINDS

KU LEUVEN

Europe – Belgium



Belgium



- Number of citizens: 11,56 million
- Surface area: 30.528 km²
- Federal constitutional monarchy
- 3 autonomous regions
- 3 linguistic communities

Belgium



Healthcare numbers

- Number of hospitals: 164
- Number of hospital beds: 52.565
- Number of IC beds: 2.037 (16 beds/100.000 citizens)
⇒ during covid + 749 extra were created (total IC-beds 2.831)
- Professionals in health care: 309.409
 - 47.808 physicians
 - 152.067 nurses
 - 109.534 health care assistants
- Professionals working in hospitals: 153.239

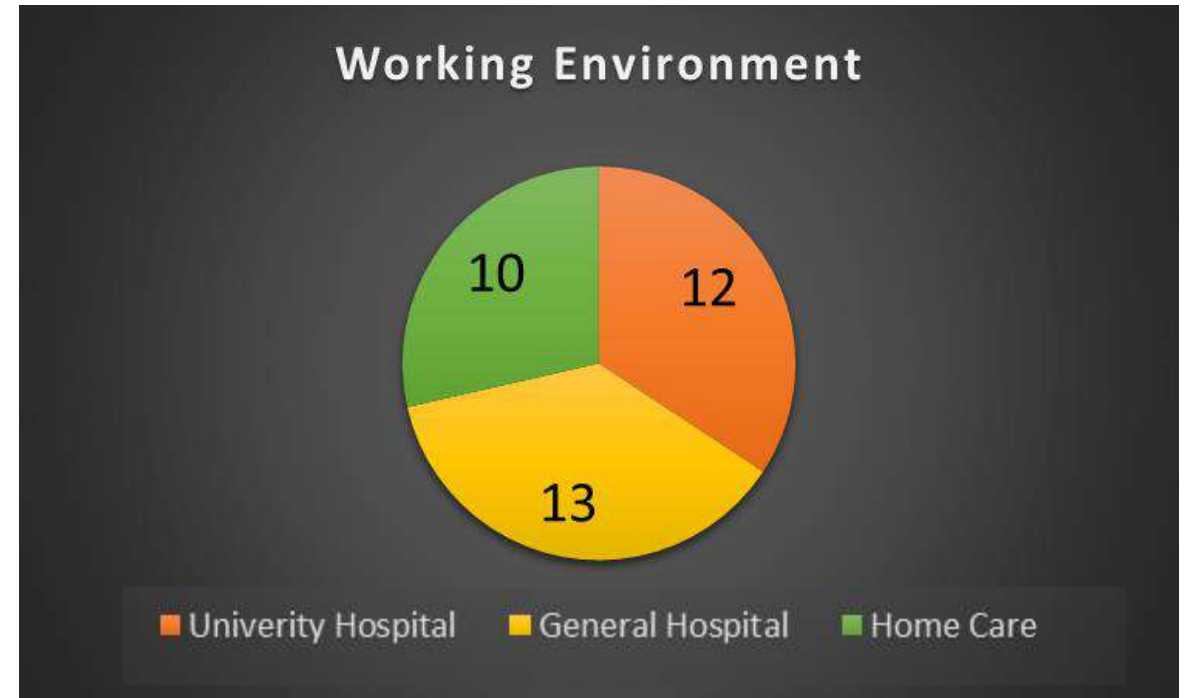
COVID numbers

- Known COVID infections 4.586.564
(395.748/1.000.000 citizens)
- Suspected COVID deaths: 32.776
- Vaccinated population:
 - fully vaccinated 79.9%
 - first booster: 62.3%
 - second booster 24.1%

Changes in VA policy during COVID-19

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- BeVANet survey in Dutch
- sent to 205 health care professionals
- response rate 17% (n=35):
 - Community nurse 6
 - Clinical Nurse Specialist (APN) 5
 - Specialized nurse 4
 - Infection control 3
 - Anaesthesiologist 2
 - Surgeon 2
 - Head nurse 2
 - Nursing manager 1
 - Other 10

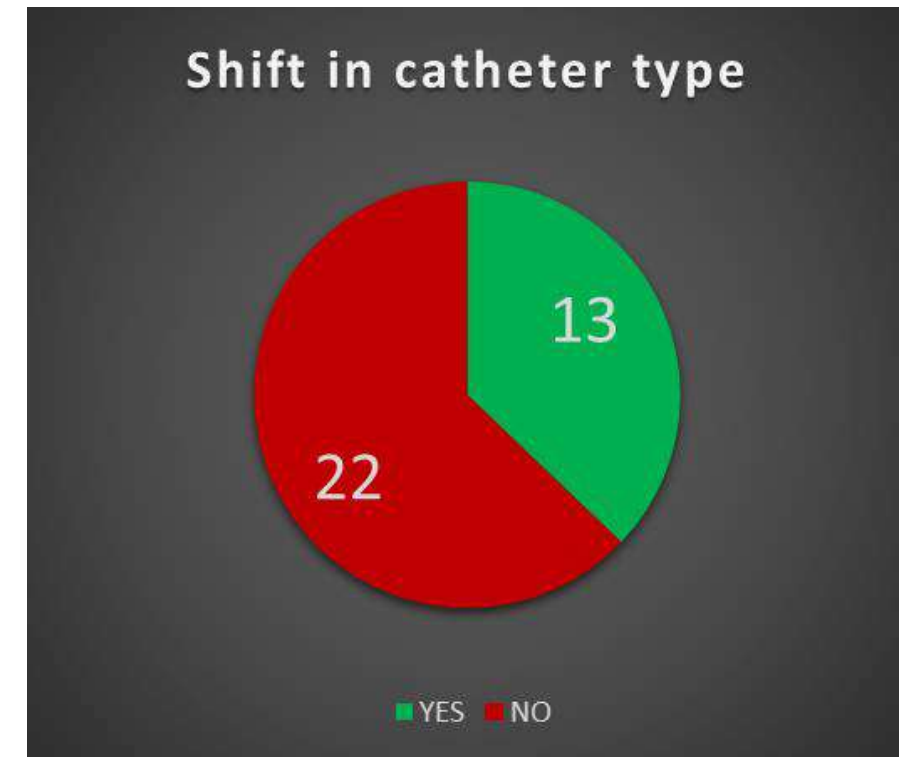


Changes in VA policy during COVID-19

Were there shifts in **catheter type** that were inserted

Yes: 37%

- University and general hospitals
- home care
- More PICC and midlines
 - Treatment @ home
 - Insertions @ bedside
 - Reduction close physical contact time
 - Placement in upright position
- Shift from PICC to midline



Changes in VA policy during COVID-19

- Were there shifts in **type of professionals** who inserted catheters (profession/discipline)?

Yes: 14%

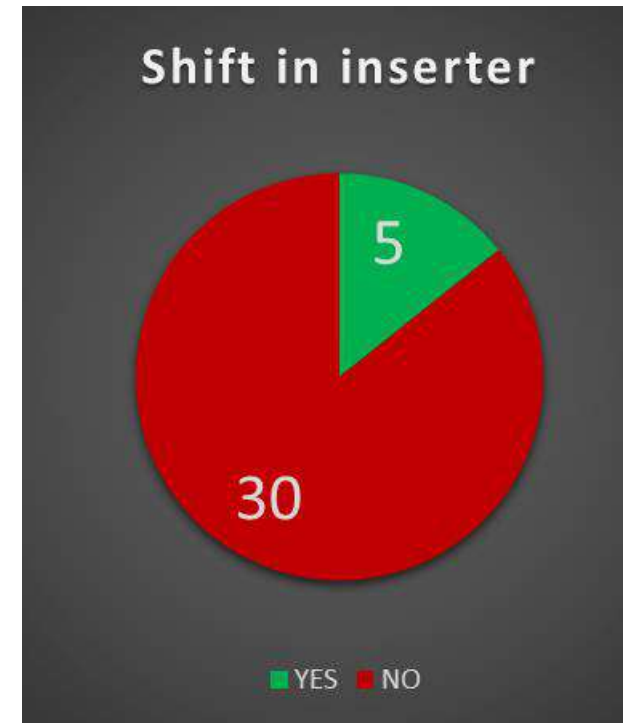
- General and university hospital

- More by anaesthesiologist

- PICC-team \Rightarrow anaesthesiologist

- PICC \Rightarrow midline
- Already exposed

- Radiologist inserting PICC lines



Changes in VA policy during COVID-19

- Was there an impact on the used **materials** during catheter **care or administration** of IV-therapy ?

Yes: 26 %

- university hospital and general hospital
- Home care

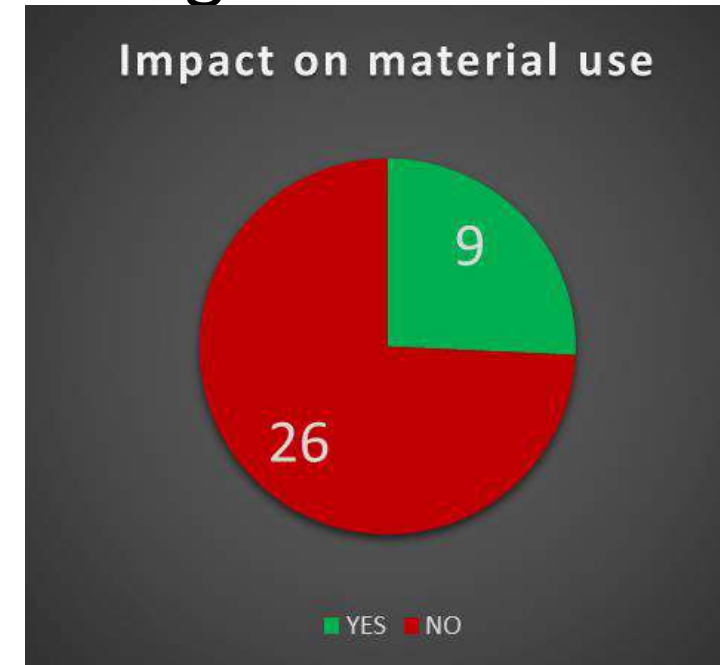
- Various stock shortage/ supply problems

⇒ sometimes product of lower quality

- Implementation of subcutaneous anchor device

⇒ reduction in contact time during dressing change

⇒ less logistic problems for material delivery for home care

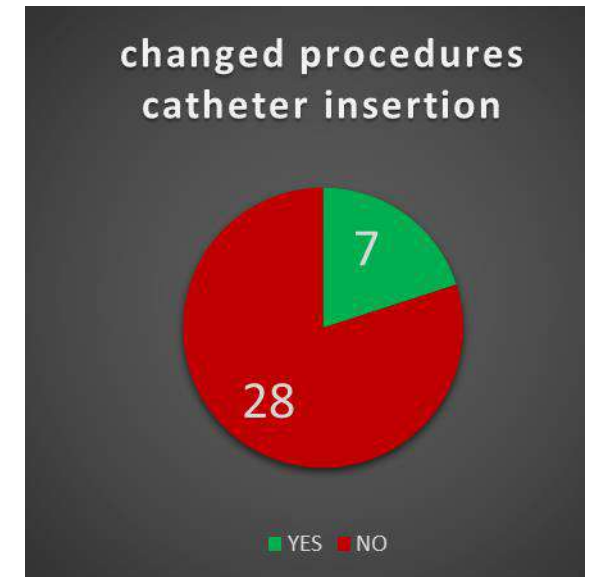


Changes in VA policy during COVID-19

- Were any procedures changed because of COVID in the context of catheter **insertion**?

Yes: 20% all university hospitals

- COVID testing prior to VA insertion
- Bedside procedures
- VA insertions at the end of OR program
- PICC and TIVAD as preferred choice COVID patients
- PIVC insertion due to the lack Huber needles to access TIVAD for power injection

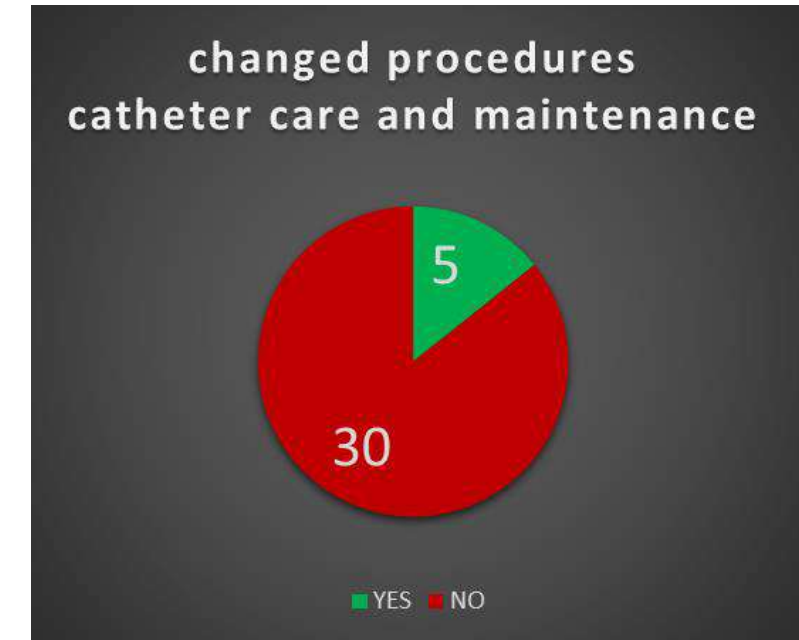


Changes in VA policy during COVID-19

- Were there any procedural changes due to COVID in the context of catheter **care and maintenance**?

Yes: 14%

- university hospital
- Home care
- prolonged time interval for flushing of an unused TIVAD
- mandatory mouth mask on patient and nurse
- anesthesiologists involved in maintenance and problem solving of VA with complications



Changes in VA policy during COVID-19

- Do you think that Covid had an impact on the number of catheter **complications**? Yes: 30%

- university hospital en general hospitals

- More bloodstream infections, thrombosis

- More functional problems

- ⇒ General condition of COVID patients

- ⇒ More outpatient care / less intensive follow up

- ⇒ Less adherence to procedures/protocols – less monitoring

- ⇒ Catheter management by less experienced professionals



SURVEILLANCE OF BLOODSTREAM INFECTIONS IN BELGIAN HOPITALS

Central line-associated bloodstream infections
Data up to and including 2020



HQR - CSS, plenary session, Brussels, 1 February 2022

Els Dierckx, MD, MPH, PhD

be

Results – incidence Belgium and regions



Mean incidence of CLABSI, hospital-wide and at ICU, by region, Belgium 2013-2020

Belgium 2019 compared to 2020

CLABSI incidence, hospital wide, per 10,000 pd increased 26%.

Results – incidence by quarter



Mean incidence of CLABSI, hospital wide and at ICU, by quarter, Belgium 2013-2020



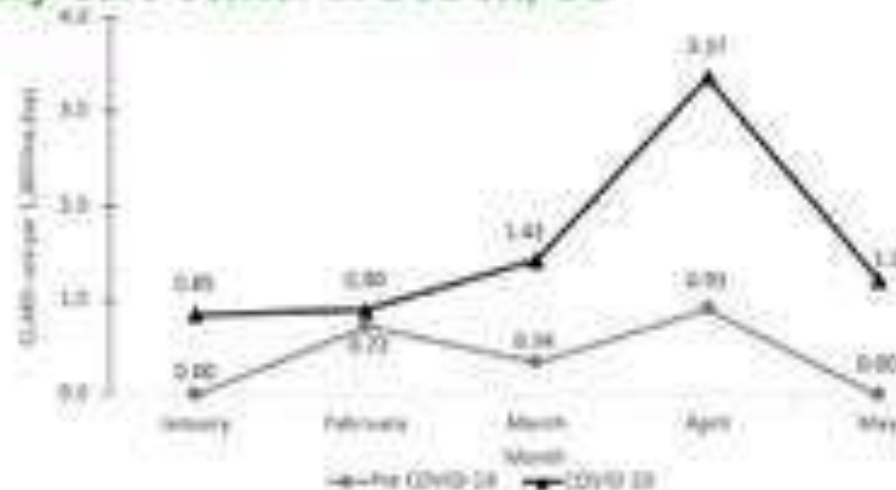
Conclusion – similar findings

US National Healthcare Safety Network data

	2020 Q1	2020 Q2	2020 Q3	2020 Q4
CLABSI	↓ -11.8%	↑ 27.9%	↑ 46.4%	↑ 47.0%

Changes in the 2020 CLABSI standardized infection ratios for acute-care hospitals, compared to 2019 quarters

Data from an academic tertiary-care center in Detroit, US



CLABSI per 1,000 central-line days, between Jan and May, 2019 (Pre COVID-19) and 2020 (COVID-19)

Increase CLABSI incidence

Hypothesis

- Heavy working conditions and critical ill patients at admission → poorer infection prevention and control (e.g. CLABSI bundle requirements)
- Different patient population due to COVID-19 → delayed care and stopping elective/routine care → more severe ill and weaker patients at admission → weaker immunity system → more susceptible to develop HABSI/CLABSI

Conclusions

- Only small sample size
- Multiple professionals from the same hospital/organisation
- COVID had a negative impact
- There were also some positive changes
 - Testing new materials
 - Rethinking procedures
 - Rethinking care models
 - Learning from other professions
 - ...

Contact information

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