



Overview of HAIs Surveillance program

What is the surveillance



Surveillance definition



“Surveillance is a **systematic** method of **collecting** and **analyzing** data concerning the **distribution** and **determinates** of a given disease or **event**, followed by the **dissemination** of that information to those who can **improve** the outcomes.”

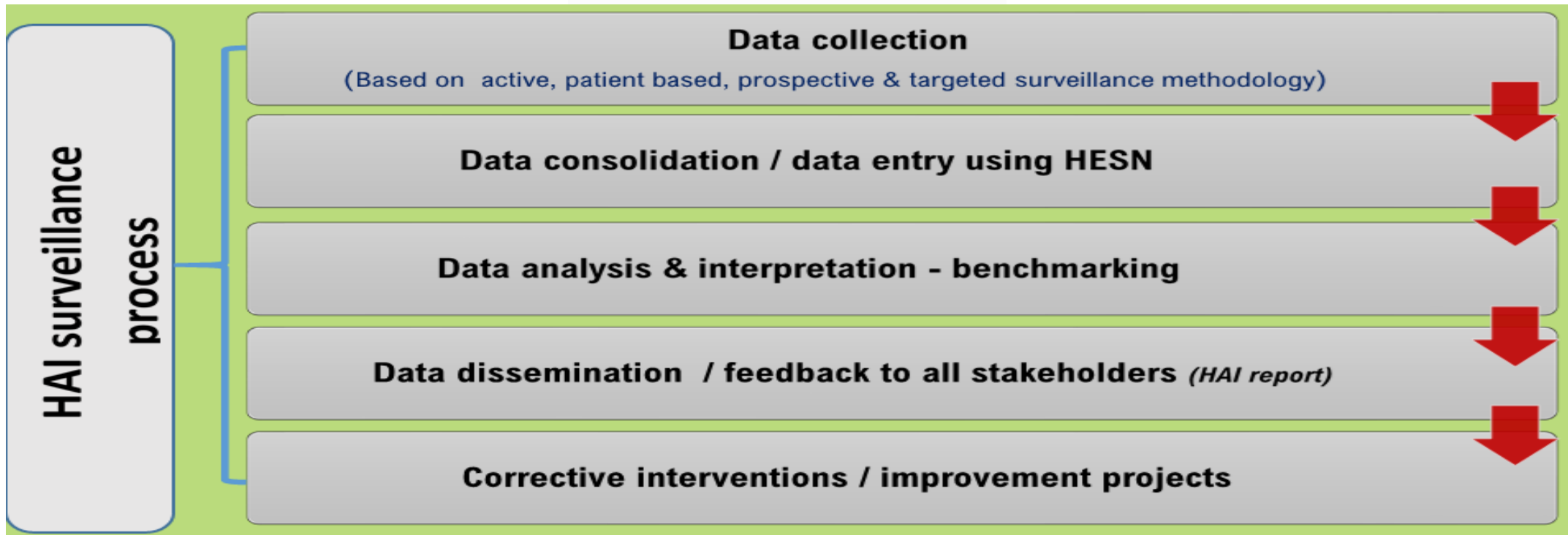
Surveillance Workflow



Control disease and improve health.



HAI surveillance process



How dose a surveillance system become effective



Characteristics of Effective Surveillance



Surveillance is based upon sound **epidemiological and statistical principles**



Data are **properly** collected and analyzed.



Information is shared in a **timely manner** with those who can act to improve IPC practices and the give quality of care.



Efforts **to improve practices** and decrease HAI are a critical part of the surveillance plan.



Characteristics of Effective Surveillance

Surveillance would be most effective if the outcome met the following criteria:

1. Infections with **high prevalence &/or incidence**
2. Infections associated with **high morbidity &/or mortality**
3. Infections associated with **long length of stay**
4. Infections associated with **high treatment cost**
5. **Preventable** infections



Why HAIs Surveillance is important

Importance of HAI surveillance



To measure the incidence (risk) and the prevalence (burden) of HAI and organisms



To work on reducing healthcare associated infections (HAI) using standard bundles



To detect, investigate and control hospital outbreaks of HAI



To establish an endemic rates of HAI



To monitor, evaluate, and implement the necessary preventive measures

Importance of HAI surveillance



To prevent and control HCWs infections and occupational injuries.



To monitor antimicrobial susceptibilities



To analyze temporal trends of aggregated data



To evaluate new products to be used to control infection throughout the hospital

Importance of HAI surveillance



To ensure compliance with national and international regulations



To provide data and statistical analysis for research and publications

Ideal surveillance methodology



- Routine HAI surveillance in most in-patient healthcare facilities should be :
 - **Active** surveillance
 - **Patient-based** surveillance
 - **Prospective** surveillance
 - **Targeted** surveillance
 - Yields **risk-adjusted** incidence rates

Source: CDC, outline for HAI surveillance.

Surveillance program History in KSA



Before 2016

Beginning of 2017



med of 2022



Surveillance History in KSA

292 Hospital



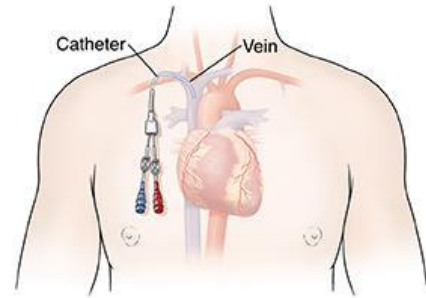
190 Dialysis centre



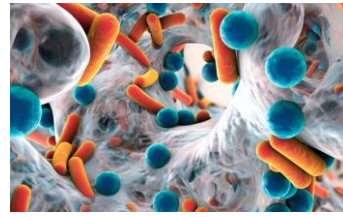
What are the targeted modules to survey



CLABSI



MDRO



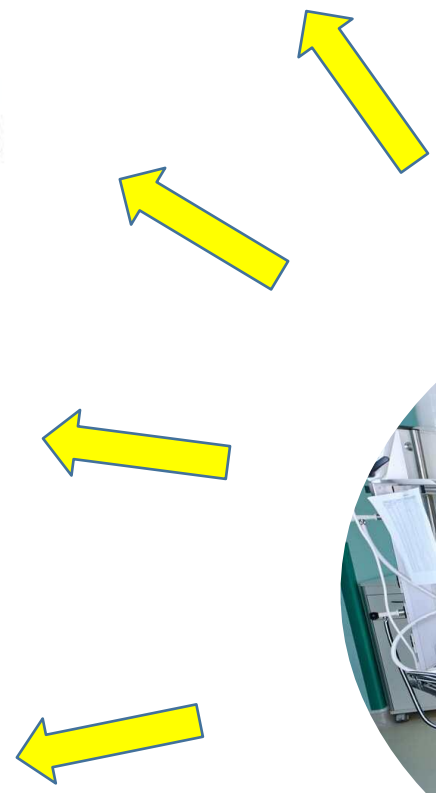
Critical Care Units



CAUTI



VAE



Procedure Related Healthcare associated infections

SSI; Surgical site infections



- Each facility choose from 1-3 procedures that is high volume or high risk.

Device-associated infection

Dialysis events DE ,in outpatient dialysis center of hemodialysis patients.



- Dialysis events related to hemodialysis treatment in outpatients dialysis centers,

Locations involved in surveillance

	Locations					
	Inpatients					Out-patients
	Adult ICU	Pediatric ICU	Neonatal ICU	SCA*	Other wards*	
CLABSI & bundle	Yes	Yes	Yes	Yes	Yes	No
VAE & bundle	Yes	Yes	Yes	Adult only	Adult only	No
CAUTI & bundle	Yes	Yes	No	Yes	Yes	No
DE & bundle	No					Yes
SSI & bundle	Yes					Yes
MDRO & bundle	Yes			Yes		Yes

What are the current situation



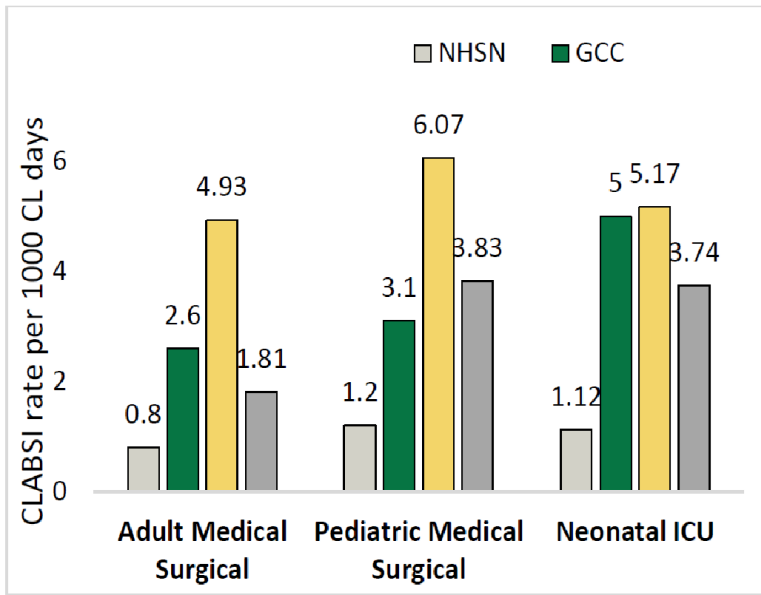


Figure 41 A: International Benchmarks for CLABSI

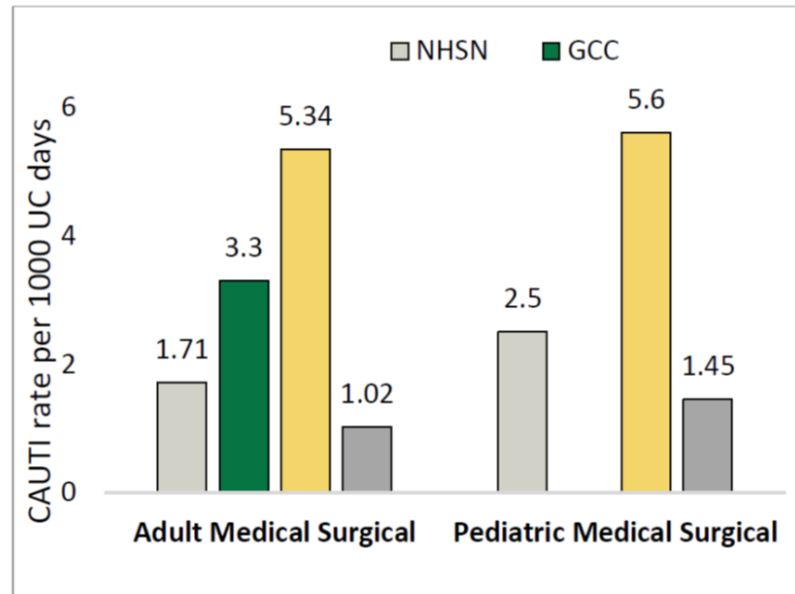


Figure 41 B: International Benchmarks for CAUTI

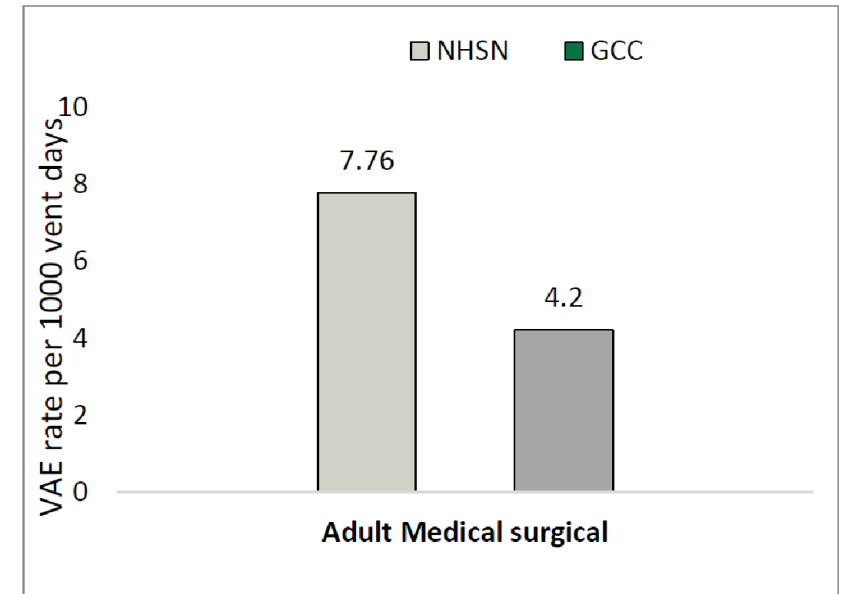


Figure 41 D: International Benchmarks for VAE

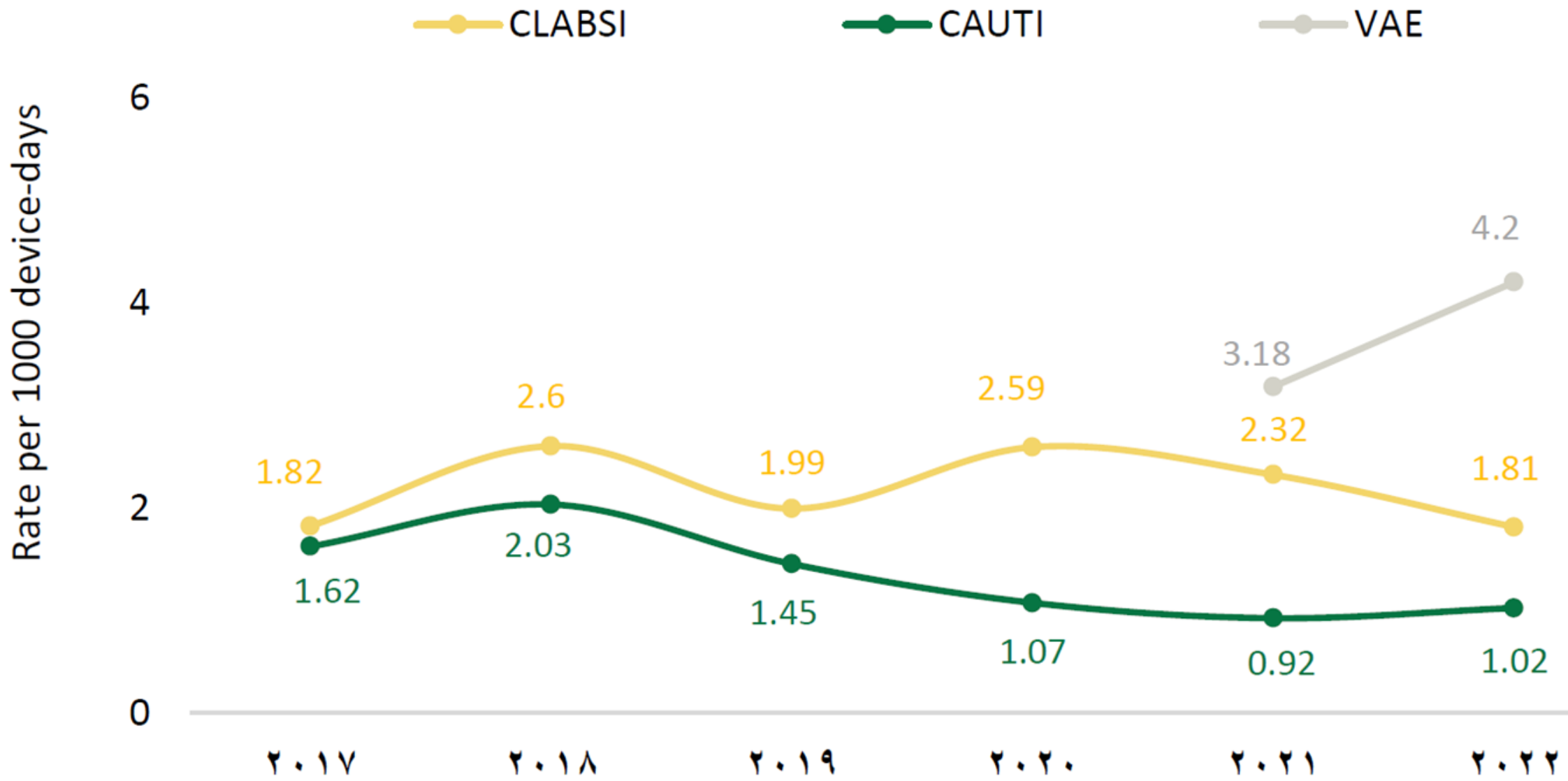


Figure 39: Trends of Healthcare-associated Infections in Adult Medical Surgical ICU

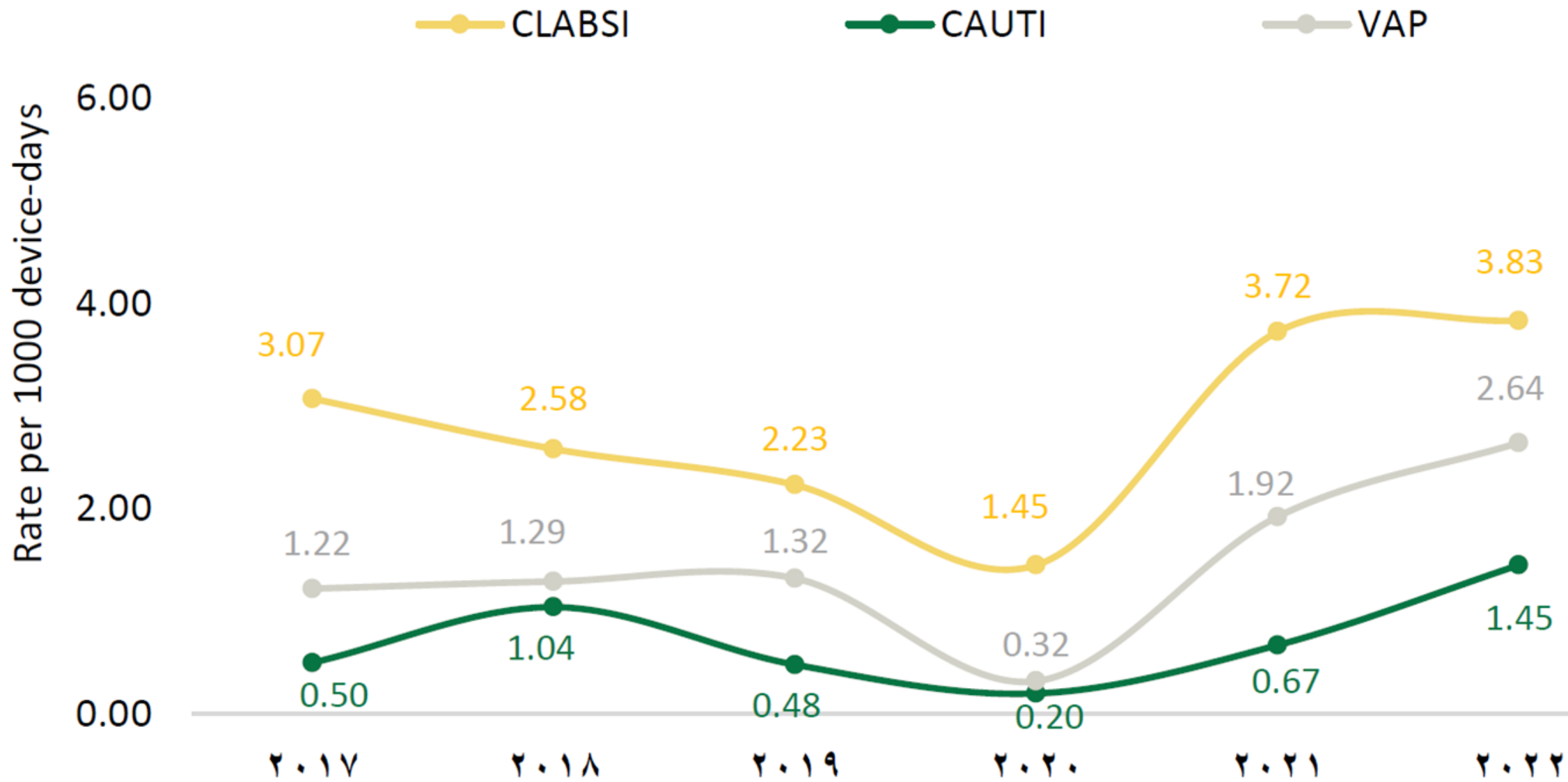


Figure 40: Trends of Healthcare-Associated Infections in Pediatric Medical Surgical ICU

Year	CLABSI	VAP
2017	4.73	1.21
2018	6.61	2.3
2019	4.52	1.52
2020	2.9	0.85
2021	3.87	0.7
2022	3.74	1.03

Table 34: Trends of Healthcare-Associated Infections (Rates) in Neonatal ICU

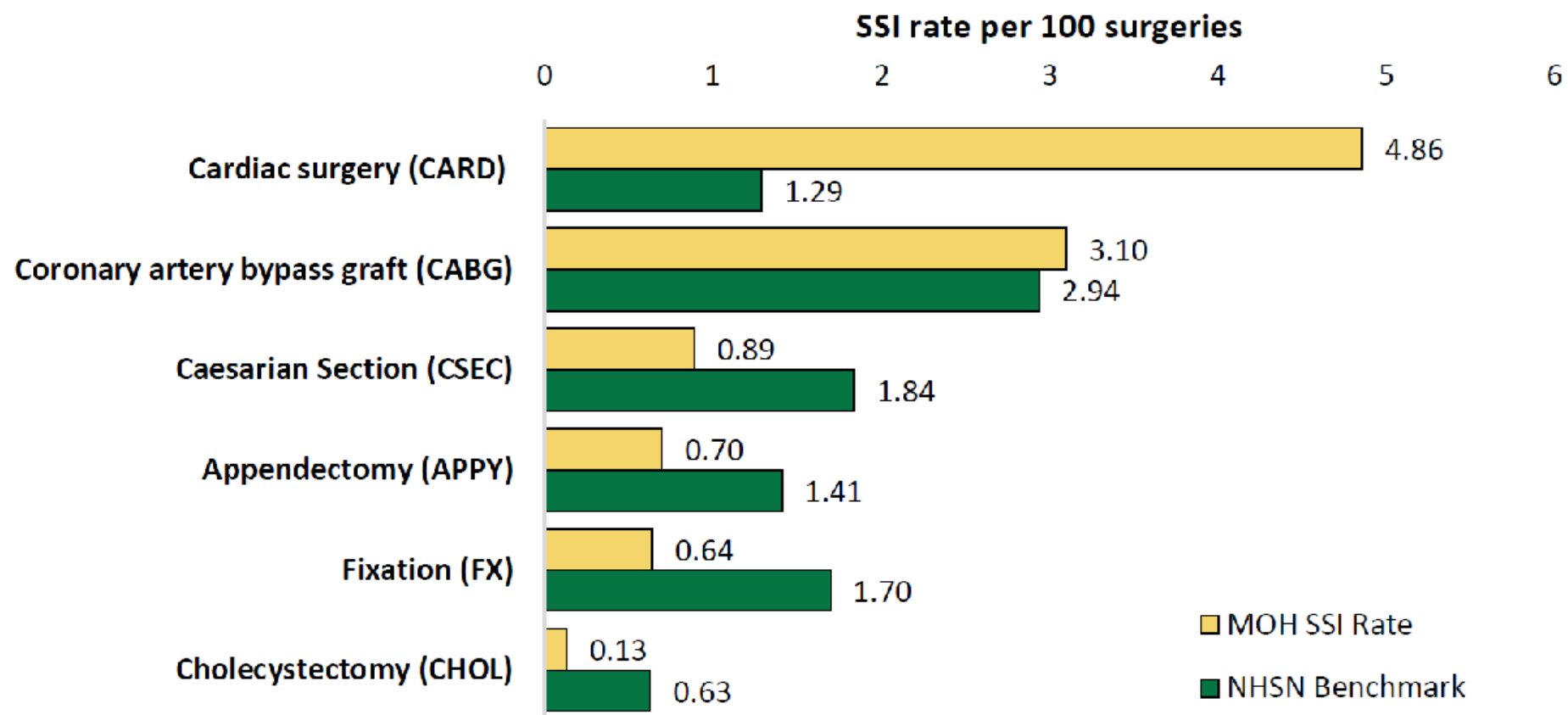


Figure 37: SSI rates in MOH and NHSN

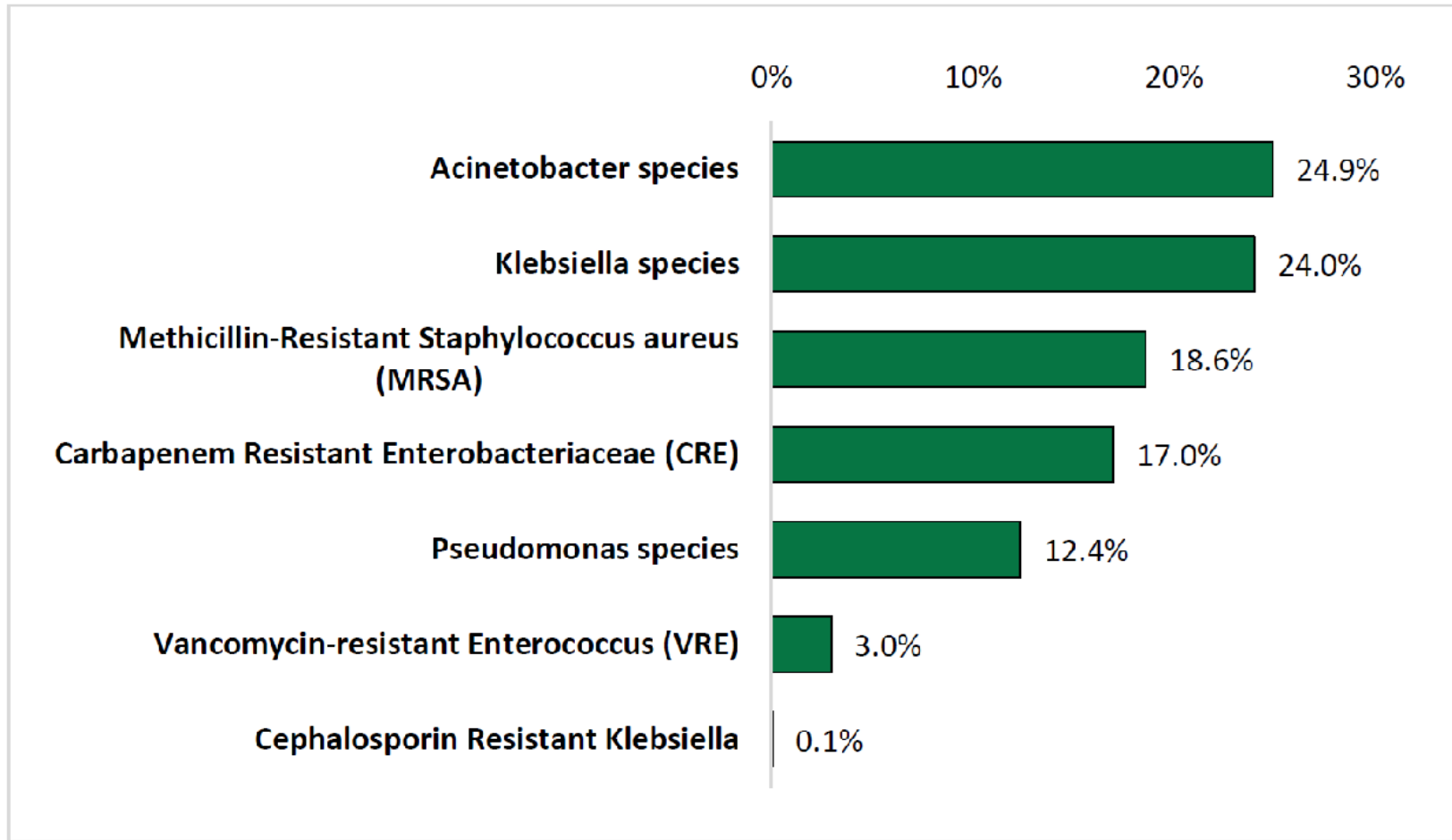


Figure 38: Frequency of Multidrug-Resistant Organisms

Dialysis information	Total Number
Total number of Dialysis Centers included in Surveillance Program	MOH= 128 Davita= 23 Diaverum= 39
National Rate of Dialysis Events	0.86

Total number of patients registered in HESN, for chronic hemodialysis (Patient months)	147360
Total number of events	1270

Table 28: Data of Dialysis Centers

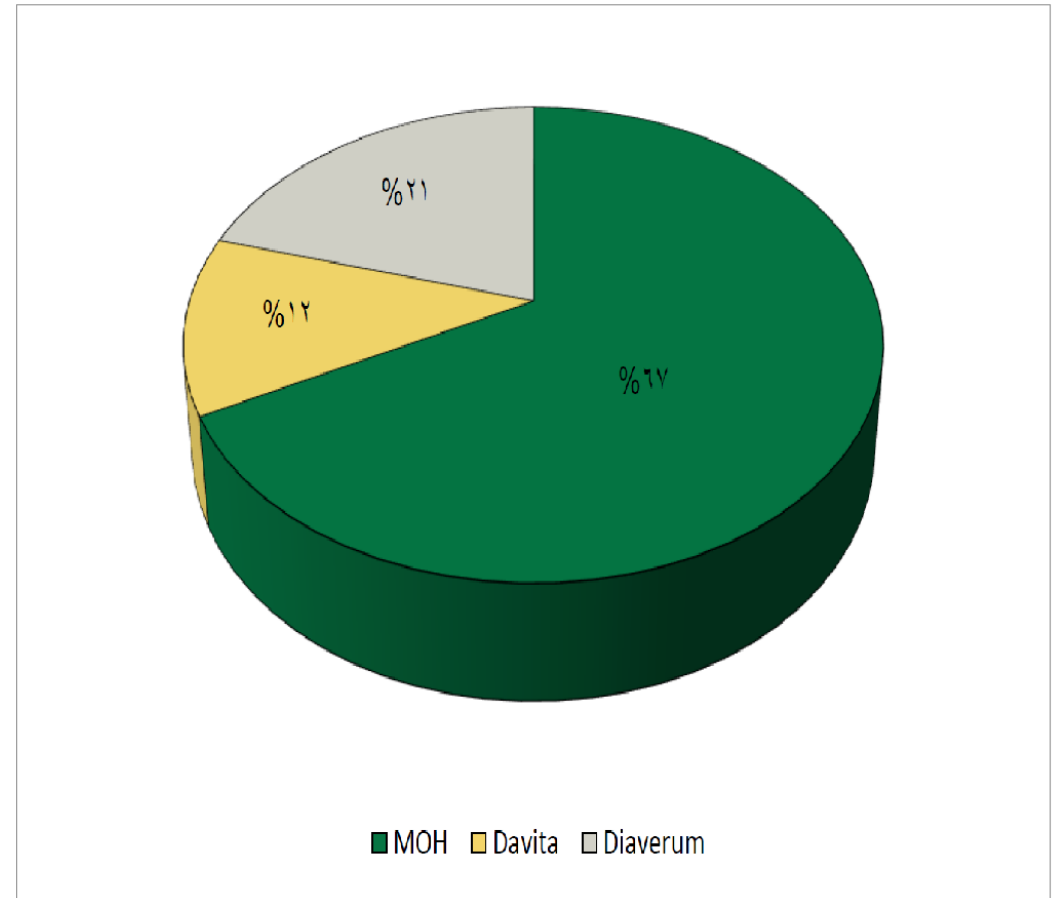


Figure 35 A: Dialysis Centers included in Surveillance Program

Thank you

Any questions



References:



**CDC-NHSN National healthcare
Safety Network manual**

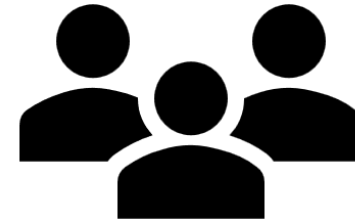


**MOH-HAIs Surveillance
manual**



**GDIPC-Annual Report
2022**

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GDIPC