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The impact of COVID-19 on antimicrobial stewardship implementation in UAE hospitals: An exploration informed by the Consolidated Framework for Implementation Research (CFIR)

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Background & Aim

The disruption caused by Coronavirus disease 2019 (COVID-19) on antimicrobial stewardship programmes (ASP) has been acknowledged and recognised. This study uses a theoretical qualitative approach to understand the impact of COVID-19 on ASP implementation in United Arab Emirates (UAE) hospitals.

Methodology

Research tool:

Semi-structured online interviews supported by an interview schedule.

Interview schedule was informed by CFIR2 and the literature.3

Participants:

ASP team members and other healthcare practitioners in UAE hospitals.

Recruitment:

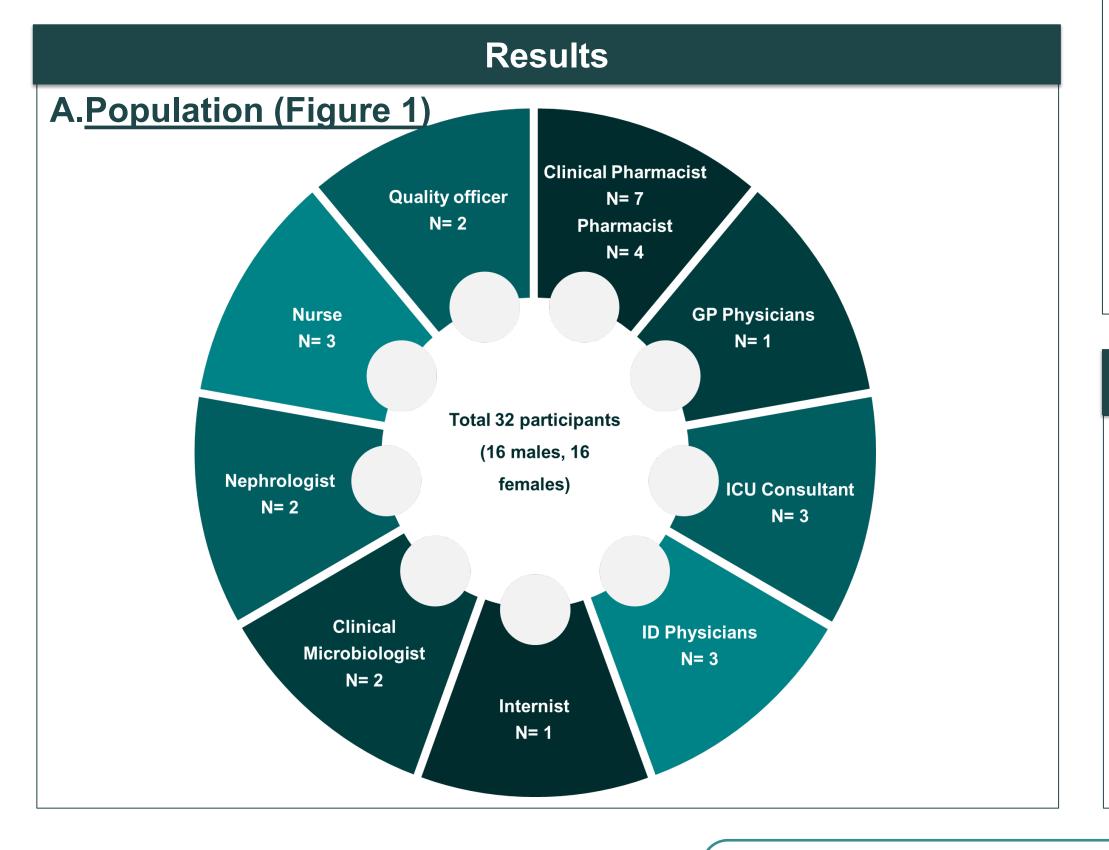
Purposeful and snowball sampling.

Data management:

Audio recorded, transcribed verbatim.

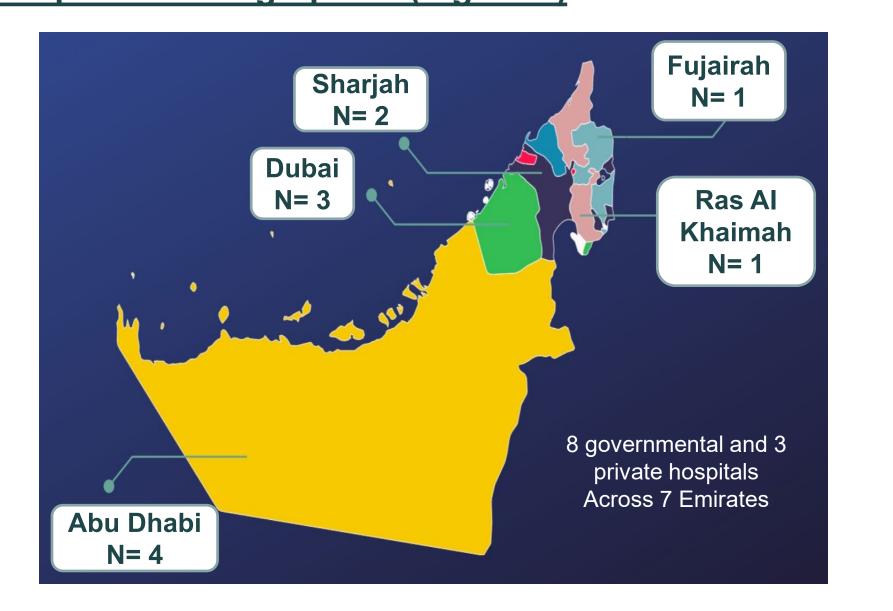
Data analysis:

Independently analysed by two researchers both deductively (based on CFIR) and inductively (based on emerging themes).



Results

B. Hospitals' demographics (Figure 2)



C. Main themes emerging mapped to CFIR domains and constructs (Table 1)

Main theme	CFIR Domain	CFIR constructs
(1) Disruption of ASP activities due to COVID-19 pandemic	Domain I; Intervention characteristics	Complexity (disruptiveness)
	Domain II; Outer setting	Patient needs and resources, cosmopolitanism
	Domain III; Inner setting	Culture (prescribing culture) Implementation climate (relative priority)
	Domain IV; Characteristics of individuals	Knowledge and belief about intervention
	Domain V: Process	Reflection and evaluation
(2) COVID driven new roles and responsibilities added to ASP team members	Domain I; Intervention characteristics	Adaptability
	Domain II; Outer setting	Cosmopolitanism
	Domain III; Inner setting	Structural characteristics Implementation climate (capacity for change) Network and communication
(3) Efforts to maintain ASP pre-pandemic activities during the pandemic and gradual ASP recovery	Domain I; Intervention	Adaptability
	characteristics	Complexity (intricacy)
	Domain II; Outer setting	Cosmopolitanism
	Domain III; Inner setting	Network and communication Readiness for implementation (Access to knowledge and information)
	Domain IV; Characteristics of individuals	Knowledge and belief about the intervention
	Domain V; Process	Planning Reflection and evaluation

Conclusion

Despite the initial disruption of ASP implementation during the peak of the pandemic, the subsequent successful integration of ASP infrastructure, process and personnel to contribute to dealing with the pandemic reflects the high value and well established roles of ASP in UAE hospitals.



"Experience with ASP and having structure and having consultations and having meetings with different stakeholders really allowed us [to help in building national guidelines for COVID], a lot of the infectious disease people are clinical pharmacist and are actually quite solid." [Clinical pharmacist 2]

"It halted everything, because we had to be pulled to cover the covid wards."

[ID physician 1]

 Disruption of ASP activities as a result of COVID-19

Theme 1

"People [prescribers] did not even care about the comments of ASP. So they started all the broad spectrum antibiotics you can imagine, although in many cases it was clear, clear viral infection." [ICU consultant 3]

Theme 2

 COVID driven new roles and responsibilities for ASP team members Efforts to maintain ASP activities during the pandemic and gradual ASP recovery

Theme 3

"Everybody trying to work virtually to reduce contact with others, even our rounds, we used to do rounds, it's virtual rounds, we will do it through WhatsApp" [Clinical pharmacist 1]

"For us as an ASP member in our facility, we provide a daily feedback for the doctor, especially in the Critical care area regarding the treatment plan of covid patients, so it was a huge challenge at the initial phase of covid, but now start to be stabilized and improved."

[Clinical pharmacist 6]

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