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The impact of COVID-19 on antimicrobial stewardship implementation in the United Arab Emirates hospitals: an exploration informed by the Consolidated Framework for Implementation Research (CFIR).

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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.¹ 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:

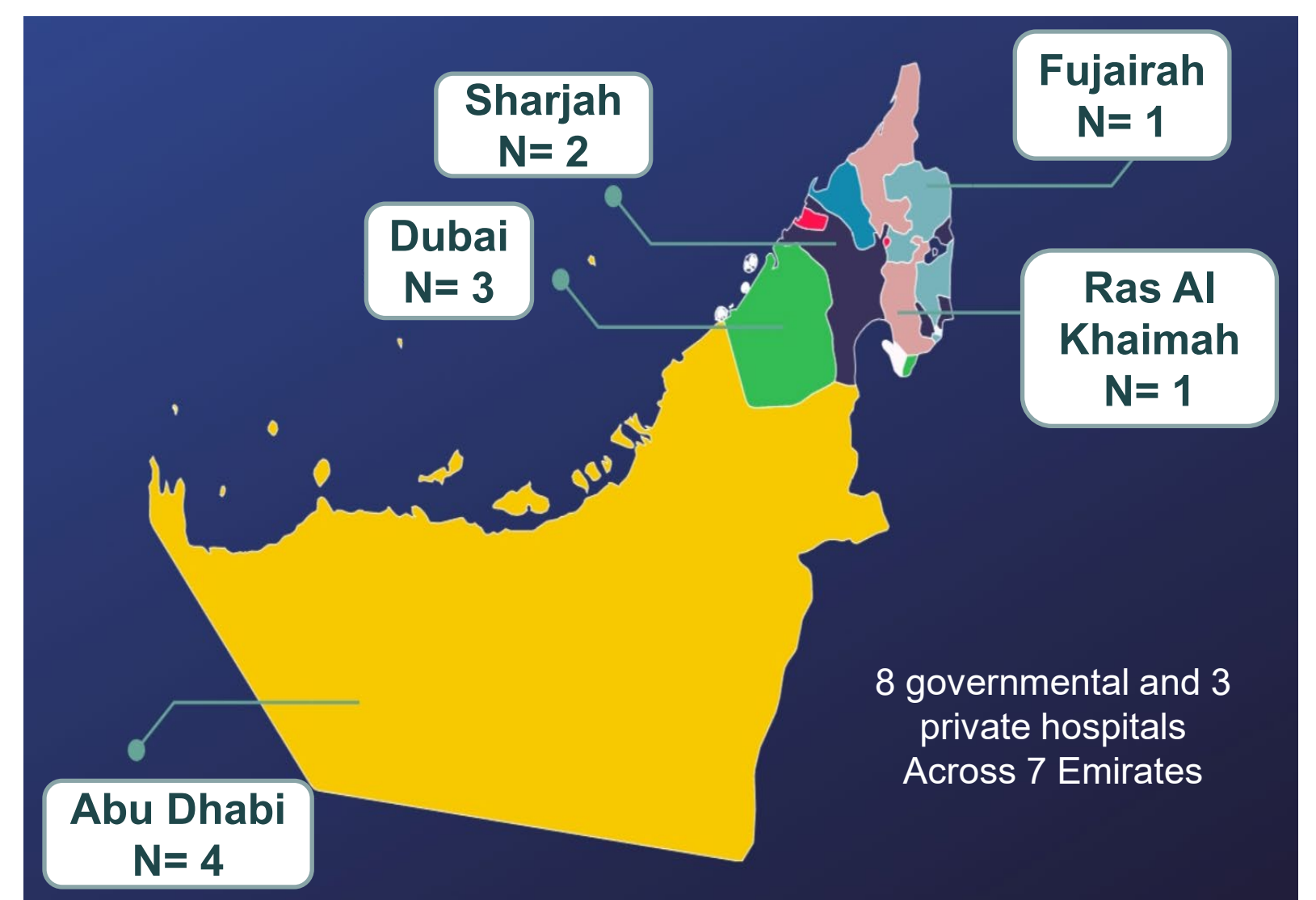
Audio recorded, transcribed verbatim.

Data analysis:

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

Results

B. Hospitals' demographics (Figure 2)

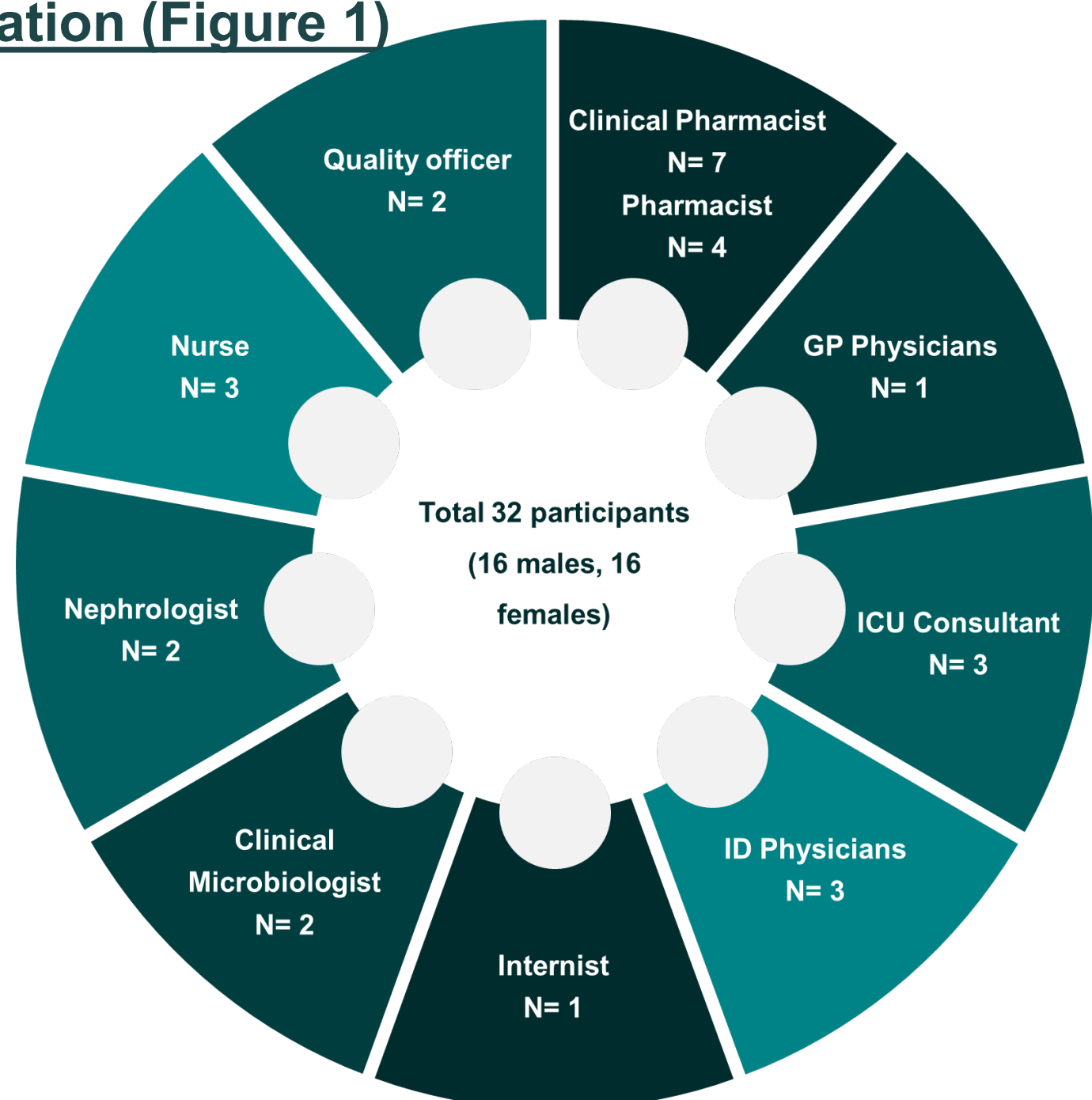


C. Main themes emerging mapped to CFIR domains and constructs (Table 1)

| 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 Domain V: Process | Knowledge and belief about intervention 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 Structural characteristics Implementation climate (capacity for change) |
| | Domain III; Inner setting | Network and communication Adaptability Complexity (intricacy) |
| (3) Efforts to maintain ASP pre-pandemic activities during the pandemic and gradual ASP recovery | 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 |

Results

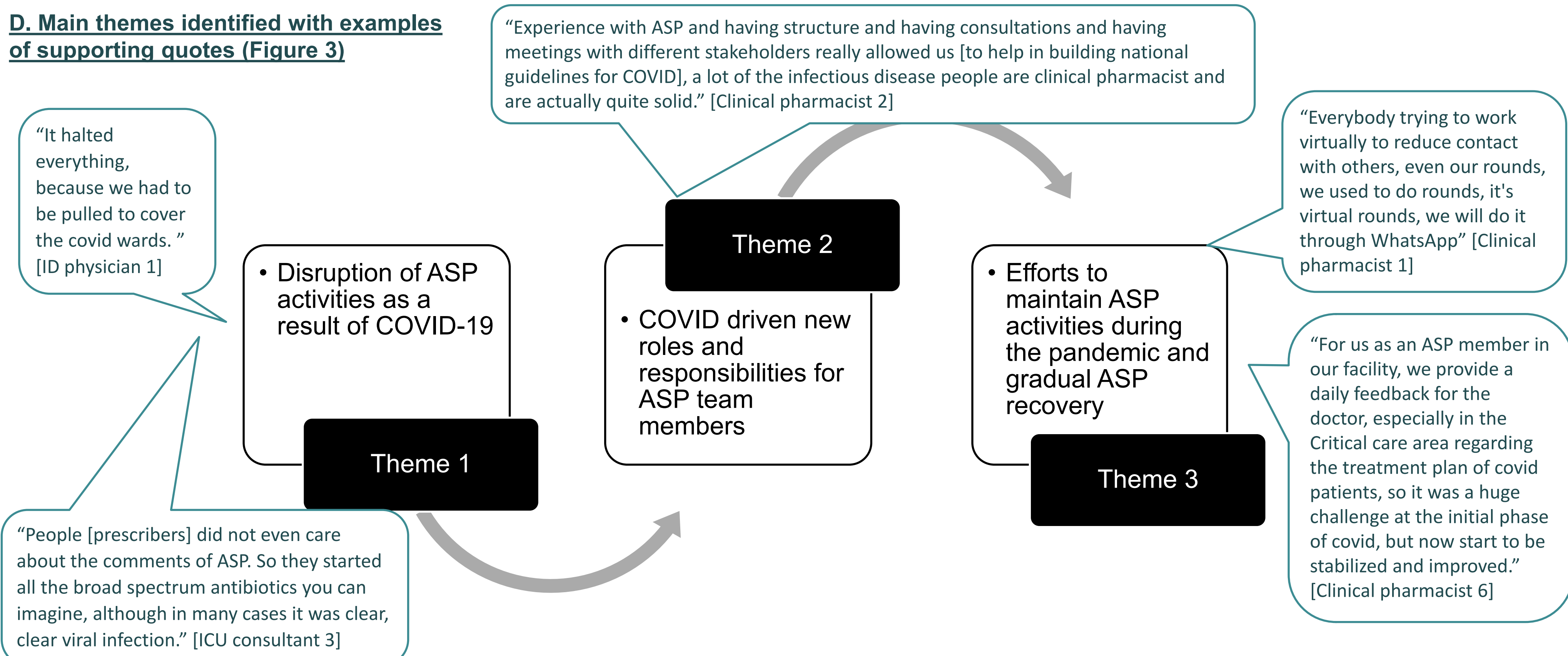
A. Population (Figure 1)



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.

D. Main themes identified with examples of supporting quotes (Figure 3)



References

- (1) Pierce J, Stevens MP. COVID-19 and antimicrobial stewardship: lessons learned, best practices, and future implications. *International journal of infectious diseases: IJL: official publication of the International Society for Infectious Diseases*. 2021; 113:103-108.
- (2) Damschroder LJ, Aron DC, Keith RE, Kirsh SR, Alexander JA, Lowery JC. Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implementation Science: IS*. 2009; 4:50-50.
- (3) Hashad N, Perumal D, Stewart D, Tonna AP. Mapping hospital antimicrobial stewardship programmes in the Gulf Cooperation Council states against international standards: a systematic review. *The Journal of hospital infection*. 2020; 106(3):404-418.