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Theoretical exploration of development and implementation of antimicrobial stewardship programs in hospitals in the United Arab Emirates: a qualitative study of the perspectives of key stakeholders and health professionals.

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Introduction

Antimicrobial Resistance (AMR) has been declared as a public health emergency and has led to the establishment of Antimicrobial Stewardship Programmes (ASP) to enhance prudent use of antimicrobials [1]. In the United Arab Emirates (UAE), ASP has been mandated by some health authorities; yet few studies report ASP implementation in UAE [2].

Aim

The aim of this study is to explore ASP development and implementation in hospitals in UAE and to enable characterization of key facilitators, barriers and solutions at the level of both healthcare providers and key stakeholders.

Method

- A phenomenological qualitative approach was adopted
- Participant recruitment was via purposeful and snowball sampling. Local health authority representatives, and ASP members and practitioners in hospitals, participated via semi-structured interviews.
- Interview schedule was developed and piloted based on available literature and grounded in the Consolidated Framework for Implementation Research (CFIR) (Figure 1) [3].
- Interviews were conducted remotely, audio recorded, transcribed and independently analyzed by two researchers based on CFIR framework.



INTERVENTION CHARACTERISTICS	OUTER SETTING	INNER SETTING	CHARACTERISTICS OF INDIVIDUALS	PROCESS
A. Intervention Source	A. Patient Needs & Resources	A. Structural Characteristics	A. Knowledge & Beliefs about the	A. Planning
B. Evidence Strength & Quality	B. Cosmopolitanism	B. Networks & Communications	B. Self-efficacy	B. Engaging Change Agents
C. Relative Advantage	C. Peer Pressure	C. Culture	C. Individual Stage of Change	C. External Change Agents
D. Adaptability	D. External Policy & Incentives	D. Implementation Climate	D. Identification with Organization	D. Executing & Evaluating
E. Trialability	E. Readiness for Implementation	E. Other Personal Attributes	E. Other Personal Attributes	
F. Complexity				
G. Design Quality & Packaging				
H. Cost				

Figure 1: Consolidated framework for implementation research domains and constructs [2]

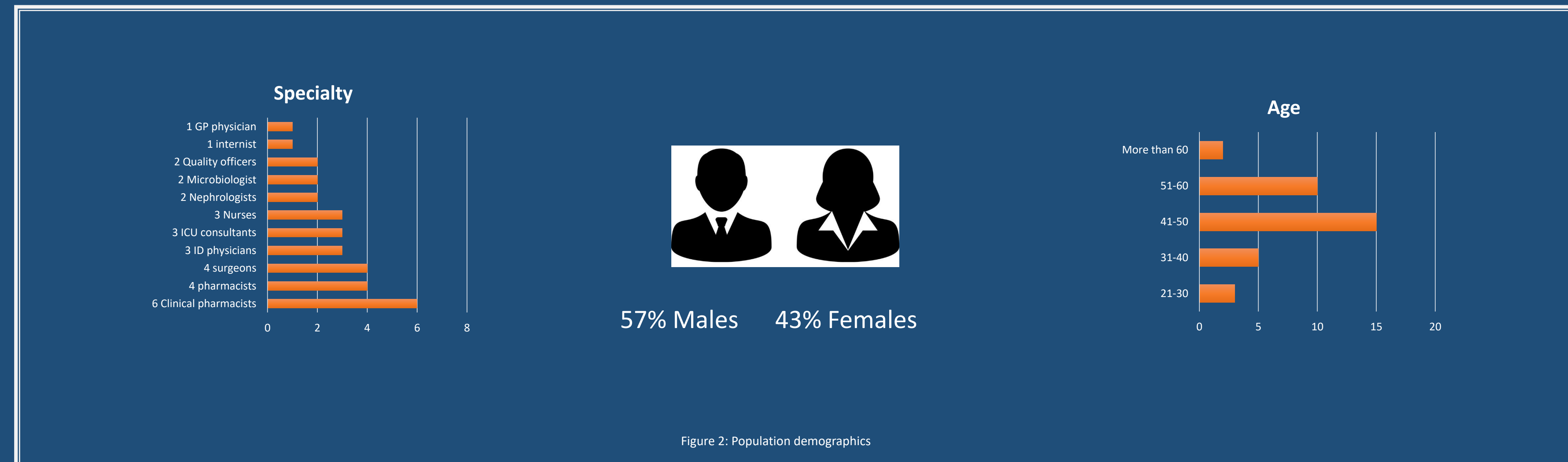


Figure 2: Population demographics

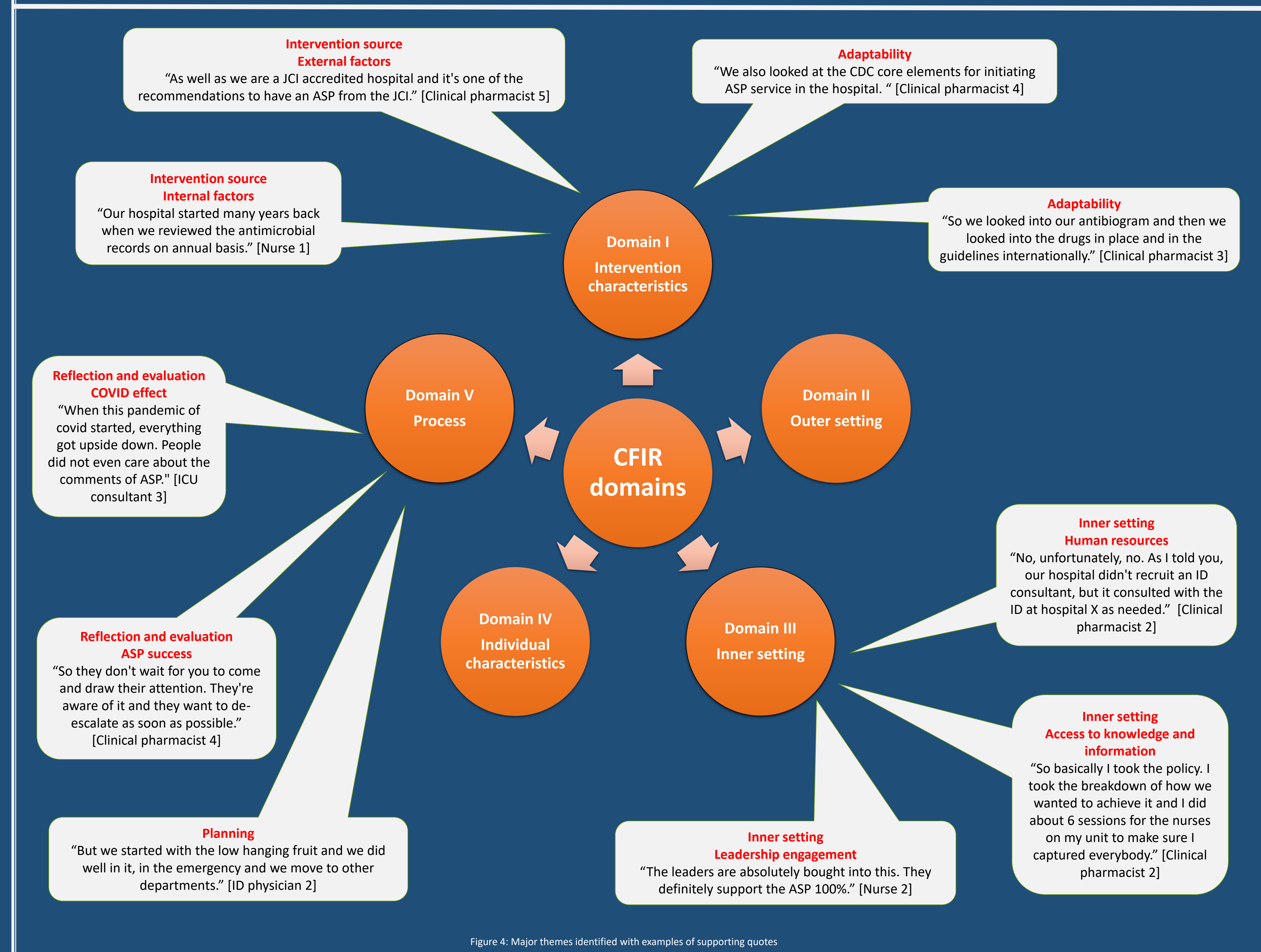


Figure 4: Major themes identified with examples of supporting quotes

Findings

- Thirty-five interviews (approximately 45 – 60 minutes) until data saturation was achieved (Figure 2 and 3).
- Authority representatives (n=4)
- ASP members (n= 23)
- Hospital practitioners (n=8)
- Table 1 shows that ASP development in UAE was driven by various internal and external factors such as international accreditation and AMR data.
- **Adaptations**
 - Adapted from international guidelines and influenced by local hospitals with experience in ASP implementation.
 - Varied depending on local available resources.
- **Facilitators:** leadership support, availability of continuous education and effective communication across the hospital.
- **Barriers:** lack of financial support, lack of human resource mainly infectious disease physicians, clinical pharmacists and microbiologists, and inadequate information technology.
- **COVID-19 pandemic:** considered a significant set-back for ASP activities.

A total of 11 hospitals across the seven Emirates; 8 governmental and 3 private

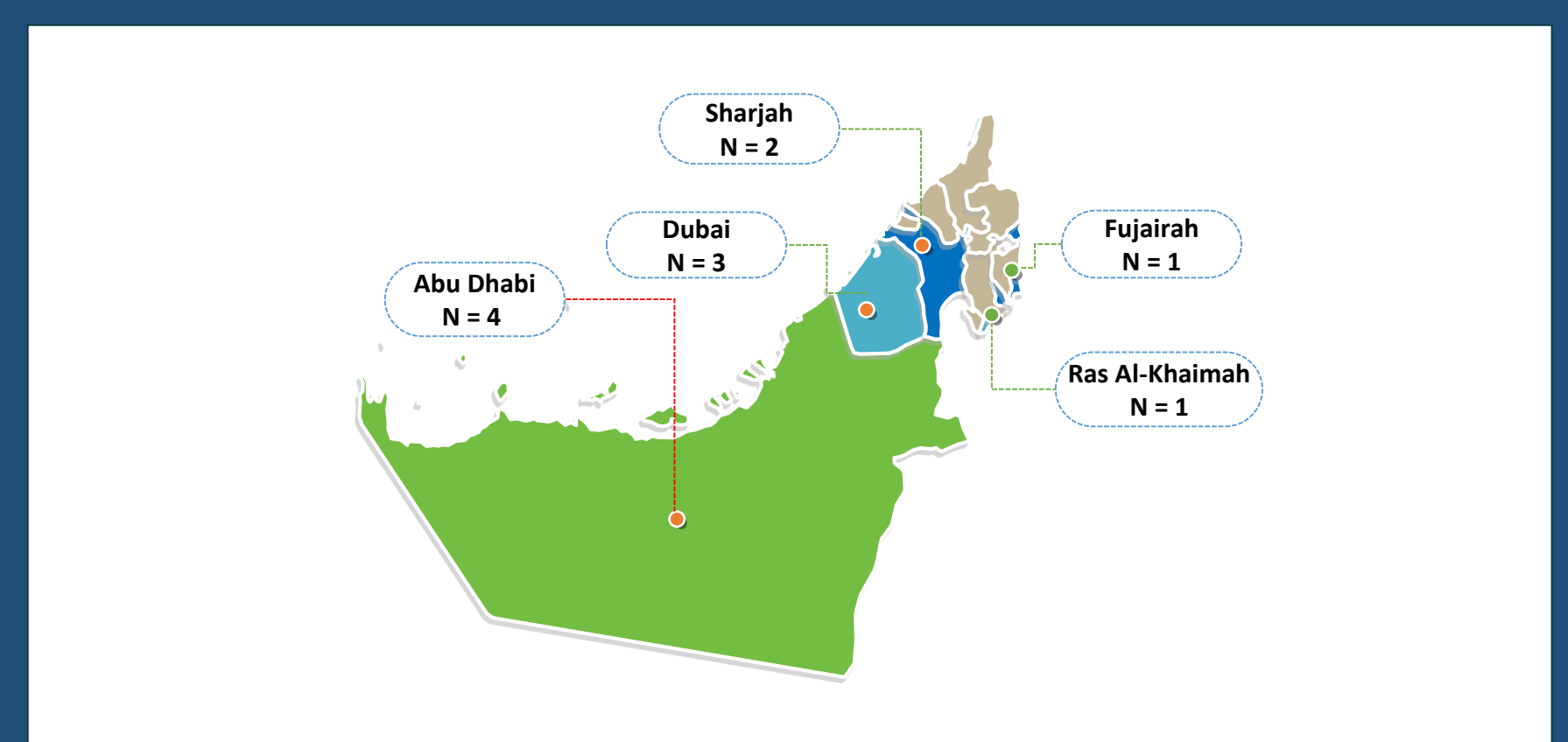


Figure 3: Participants distribution.

Conclusion

ASP implementation in UAE is progressing with potential for more streamlined and future expansion. There is a need to secure financial support, leadership commitment and human resources to accelerate the implementation process.

References:

- (1) World Health Organization. *Antimicrobial Resistance Global Report on Surveillance*. Switzerland: World Health Organization; 2014.
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- (3) 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.