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A theoretical exploration of the implementation of antimicrobial stewardship programmes: perspectives of key stakeholders, underpinned by the Consolidated Framework for Implementation Research

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Background & Aim

Despite numerous published studies about antimicrobial stewardship programme (ASP) implementation, a lack of theoretical underpinning within this research emerges.¹ This leads to incomplete knowledge of contextual determinants impacting ASP implementation. The aim of this study was to use Consolidated framework for Implementation research (CFIR)² to explore key stakeholders' perspective regarding ASP implementation in United Arab Emirates (UAE) hospitals with a focus on facilitators and barriers.

Methodology	Results	
Research tool Semi-structured online interviews, Conducted through Zoom, Microsoft teams, Blackboard collaborate ultra. July 2020 – December 2020. Approximately 45 – 60 minutes	A. Population (Figure 1)	
Interview schedule informed by CFIR and literature review.	 6 Clinical pharmacist 4 pharmacist 4 surgeons 3 ID physicians 	



Participants

ASP team members and other healthcare practitioners dealing with antimicrobials in UAE hospitals

Recruitment



Purposeful followed by snowball sampling. Maximum variation of participants representing different governing health authorities, bed size, background training and specialities.

Data management

Audio recorded, transcribed verbatim and anonymised. Transferred to NVIVO software – facilitate data management and visualisation.

Data analysis Independently analysed by two researchers based on CFIR

3 ICU consultants3 Nurses2 Quality officers1 internist

2 Nephrologist1 GP physician2 Microbiologist

B. Hospitals' demographics (Figure 2)



C. Overall summary of CFIR constructs identified as perceived facilitators or barriers for ASP implementation with supporting quotes (Table 1)

CFIR domain	CFIR construct	Identified themes	Supporting quotes	Perceived facilitator/barrier
Domain I	Complexity	Perceived complexity of ASP implementation.	"You say start simple but [ASP] gradually becomes complex because the more and more areas you involve to bring under your stewardship programme, the more difficult it becomes and the more challenging it becomes, because of the data gathering and number of people involved." [Microbiologist 1]	Perceived barrier
Domain II	External policy and incentives	ASP mandates by UAE health authorities and international accreditation bodies.	"We started in the summer of 2017. That was after the Department of Health in Abu Dhabi issued a circular requiring that all the hospitals operating in the Emirate of Abu Dhabi have such a programme." [Clinical pharmacist 4]	Perceived facilitator
	Implementation climate (Tension for change)	Inconsistent prescribing practices creating a tension for change and a need to implement ASP.	"People are not using a standard protocol, each one is using his own protocol. Because we have the physicians which are trained in different countries. So, when we see the antibiotic usage, there are many things which were not consistent and standardised, so we wanted to standardise for our hospital also." [Surgeon 1]	Perceived facilitator
Domain III	Culture	Influence of blame culture on initial resistance to change antimicrobial prescribing behaviour.	"Most of the physicians, especially the surgeons, are afraid to be blamed of postoperative infection, complications of surgery [due to]inadequate coverage of antibiotic or inadequate duration of antibiotic." [Nephrologist 1]	Perceived barrier
		Collaborative culture to enhance acceptance of changing antimicrobial prescribing habits.	"Really, they're [prescribing physicians] accepting the changes. This [collaborative] culture helped to ease implementation of the programme, otherwise we cannot implement any programme if there is so much resistance and nobody is taking initiatives." [Nurse 3]	Perceived facilitator
	Available resources	A Lack of sufficient human resources.	"Our hospital didn't recruit an ID [Infectious diseases] consultant, but it consulted with the ID [consultant] at hospital X as needed." [Clinical pharmacist 4]	Perceived barrier
	Leadership engagement	Importance of engaging leadership using cost savings data.	"They [leadership] actually hired an infectious disease physician to be responsible for ASP." [Clinical pharmacist 5]	Perceived facilitator
	Network and communication	Establishment of effective formal and informal communication routes among ASP team members and healthcare providers.	"You don't come up as a policeman to police on them [physicians]. If you convey this message that we are not challenging your clinical decisions and you do in a timely way the face to face communication, that is much better than sending an email." [Clinical pharmacist 3]	Perceived facilitator
Domain V	Planning	Effective future planning for ASP implementation through selection of suitable interventions tailored to the specific organisation.	"We collected baseline data for one year to help us to decide where to start. Based on our baseline data, we decided that critical care area is the highest priority to improve the prescribing practice of antibiotics to decrease the incidence of the development of multi-drug resistant organism" [Clinical pharmacist 6]	Perceived facilitator
	Engaging key individuals	Engagement of healthcare providers through multiple engagement techniques.	"So, we will do training, an ongoing process to create more [ASP] members in an indirect way, they are not ASP members but by training them, when they know how to do that, they will do it in a stewardship mind-set." [Clinical pharmacist 1]	Perceived facilitator

Conclusion

The use of CFIR enabled comprehensive evaluation of current ASP implementation of several solutions to address barriers. There is a need to seek early

leadership engagement to support availing required resources, as well as effective planning and establishment of communication with healthcare providers.



References