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Vedanta Medical Research Foundation
BALCO Medical Centre

IMPLEMENTATION OF ANTIMICROBIAL, INFECTION CONTROL AND DIAGNOSTIC (AID) STEWARDSHIP MODEL: OUR JOURNEY SO FAR

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In supporting role: Clinicians, Nursing, Pharmacy and higher management

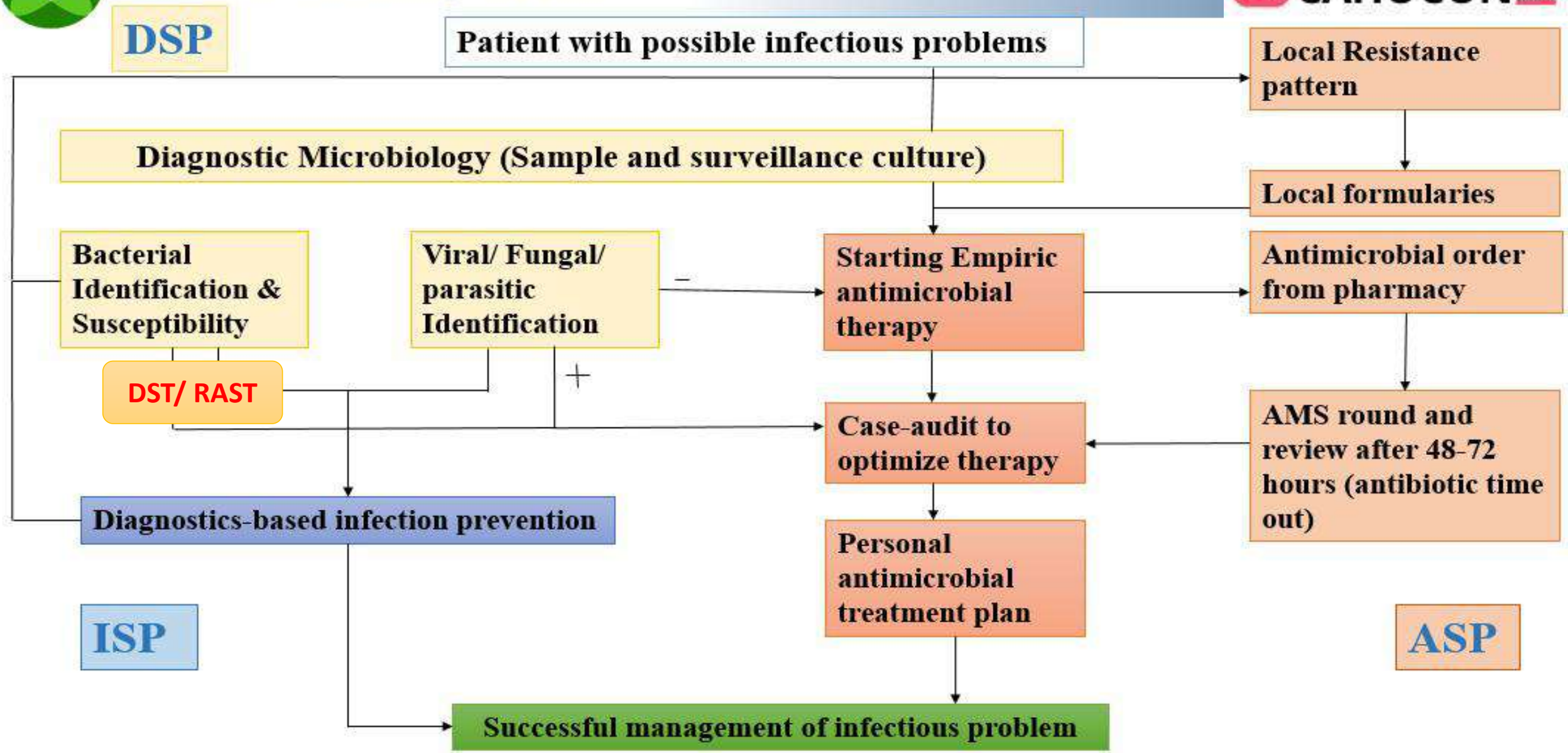
AIM of the Study

- Implementation of an integrated antimicrobial, infection prevention and diagnostic [AID] stewardship program.

Objectives

- Reduction in Unnecessary antibiotic
- Reduction in HAI rates
- Prevention of MDRO infection transmission

AID stewardship model



Dik JH, Integrated stewardship model comprising antimicrobial, infection prevention, and diagnostic stewardship (AID stewardship). J Clin Microbiol 2017; 55:3306–3307.

Pre-implementation… (April- June 2018)

- Quantitative method: Prescription audits

- Questionnaire survey of clinicians

- Jotting down the 

customized to our set up

Implementation of integrated (AID stewardship) – July 2018 onwards

- **Daily AMS rounds** and review of antibiotics with culture reports along with Clinical team
- Routine **MDRO surveillance** and empiric treatment/ surgical prophylaxis modified as per culture reports, if indicated
- Daily MDRO list circulation and **transmission based precaution** adapted as appropriate asap.

Post implementation evaluation: Audits & feedback

SUCCESSES MET SO Far…..

Judicious use of antibiotics: Prescription audits

	Pre-Implementation Phase	Post-Implementation Phase
Microbiology Cultures 	**36 % (before/ after antibiotics)**	**75% (before empiric antibiotic initiation)**
Double anaerobic Coverage*	**81%**	**3%**
Average cost of surgical prophylaxis	**1716- 1988 (INR)**	**248-683 (INR)**
Mention of a review date/ Stop date for empiric antibiotics	**11%**	**87%**

Adherence to Surgical prophylaxis policy is ~95%

Use of restricted/ High end antibiotics

	DOT Month / 100 patient days	
	Pre-implementation	**Post-implementation**
Colistin	2.9	2.7
Meropenem	7.9	1.5
Teicoplanin	2.4	0

	DDD Index / 1000 patient days	
Colistin	63.3	26.2
Meropenem	270.3	77.7
Teicoplanin	29.1	0

Imipenem, Tigecycline, Polymyxin B, Vancomycin, linezolid etc.

HAI Rates

	Pre-Implementation Phase	Post-Implementation Phase
SSI rates	**21.7/ 100 surgical procedures**	**4.1/ 100 surgical procedures**
CLABSI rates (PICC related)	**12.5**	**0**
Overall bundle compliance	**54%**	**90%**
Antibiotic prophylaxis	Teicoplanin in 20% cases	No antibiotic prophylaxis
Dressing Protocol	Gauze topped by transparent	Transparent in all cases
Hub cleaning and Flushing	Not done or inappropriately done	Done as recommended for all cases

No outbreaks of MDRO bacterias, however 2 impending outbreaks with *Candida* species (one with *Candida albicans* and other *Candida auris*) successfully contained with strict and timely interventions

Hurdles on the way…

The Convention

Practice and Knowledge gap

- Bridged with evidences, data and the success thereafter. One of the strongest reasons for success of the AID model was the management support.

We conclude……

A structured and integrated multidisciplinary approach of AID model has led to prompt recognition of outbreaks and assists in guiding patient isolation protocols as well as improving the use of microbiology laboratory tests and antimicrobial therapy. Thus has a positive impact leading to a more personalized infection management plan, better patient outcome and contributing to an optimized use of antimicrobials.


THANK
YOU