



UNITED ARAB EMIRATES
MINISTRY OF HEALTH & PREVENTION

Improving the Use of Antibiotics in Dubai Primary Healthcare Centers

PRESENTED BY: Pharmacy & Therapeutic Committee

Team Leader: Dr. Marwa Ezz El Din



ACKNOWLEDGMENTS

1. Pharmaceutical and Therapeutic Committee (Dubai PHCCs)
2. Dubai PHCCs Physicians and Pharmacists
3. Mrs. Israa Bastaki (Quality and Patient Safety Department, MOHAP)



WHY WAS THIS PROJECT SELECTED?

- Patient safety is compromised when antibiotics are prescribed without evidence based indication. - *High Risk*
- Patients might develop resistance to antibiotics when they are unnecessarily prescribed to them. – *Problem Prone*



INITIAL AUDITING

5.13% of antibiotic orders in Dubai
PHCC Network match with the
evidence based practices.

(Oct 2017 till Jan 2018)





WHY?

- There is no evidence based approved guideline available for physicians to follow in relation to appropriate use of antibiotics in Dubai PHCC Network.
- Pharmacy staff were not trained to access diagnostic tests which are ordered prior to dispensing antibiotics.
- There was no clear channel in place between the pharmacist and the physician. (Pharmacy staff would call the physician and the physician would verbally justify the order).



WHY?

- No awareness materials available for patients to educate them about proper use of antibiotics.
- No process in place to track the use of antibiotics in the centers, monitor it and set action plans accordingly.
- No process to refer patients to operating laboratory / radiology services when the service is closed in specific centers.



SELECT AN IMPROVEMENT

- Restructure the process of antibiotic use through implementing an approved process for:

“Improving the Use of Antibiotics in Dubai Primary Healthcare Centers (PHCC) Network by 20% in each quarter”



HOW?

- We implemented an approved guideline for the appropriate use of antibiotics in Dubai PHCC Network, included in a **policy**.

Attachment (1):

Guidelines for Prescribing Antibiotics

Pharmacists will not dispense antibiotics until the following is confirmed:

1. Investigations have been done depending on the case:

- Throat swab for culture
- CBC
- CRP
- Chest X-ray
- Urine Routine / Culture
- Stool Routine / Culture

2. Acute pharyngitis with Exudate or palatal Petechiae: Throat swab is a must before starting the antibiotic if the follicles are not evident (this should be indicated in the diagnosis).

3. Cystitis:

- Urine routine shows WBC high count
- Culture taken, before results are out, antibiotic could be started

❖ **Dysuria is not an indication for starting antibiotics unless urine routine shows WBC**



CRITERIA FOR PRESCRIBING ANTIBIOTICS

- Pharmacists will not dispense antibiotics until the following is confirmed:
- Investigations have been done depending on the case:
 - Throat swab for culture
 - CBC
 - CRP
 - Chest X-ray
 - Urine Routine / Culture
 - Stool Routine / Culture
 - Acute pharyngitis with Exudate or palatal Petechiae: throat swab is a must before starting the antibiotic if the follicles are not evident (this should be indicated in the diagnosis).
 - Cystitis:
 - Urine routine shows WBC high count
 - Culture taken, before results are out, antibiotic could be started
 - Dysuria is not an indication for starting antibiotics unless urine routine shows WBC high count.
- Immediate start of antibiotic without doing investigation would be indicated in-case of:
- A patient is over 80 years and has one of the following: a history of hospitalization in past year, oral steroids, diabetes or congestive heart failure or if the patient is 65 years with 2 of these conditions, indicated in the diagnosis.
- Suppurative Otitis media / Otitis Media with effusion indicated in the diagnosis.
- Common cold is not an indication for antibiotic use
- Sinusitis in the first week is not an indication for antibiotic use.
- **References:**
 - (AFP: American Family Physician)
 - (CDC: Centers of Disease Control)
 - (WHO: World Health Organization)
 - (NICE Guidelines)



HOW?

- There are educational materials available for patients on the importance of taking antibiotics only when it is indicated.





HOW?

- Pharmacy staff has an approved process to deal with antibiotic orders which are not ordered as per the approved guidelines.
- There is a system in place for patients to access diagnostic services when required (When the service is not available).



MONITORING AND AUDITING

Key Performance Indicator (KPI) Profile		
What	Who	When
Measure category: <input checked="" type="checkbox"/> Clinical <input type="checkbox"/> Non-clinical	Data Owner Title: Pharmacy & Therapeutic Committee Department: Pharmacy	Frequency of Data Collection <input checked="" type="checkbox"/> Daily <input type="checkbox"/> Monthly <input type="checkbox"/> Weekly <input type="checkbox"/> Other Frequency of Reporting Data: <input type="checkbox"/> Daily <input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Weekly <input type="checkbox"/> Other
Measures	Prescribing and dispensing antibiotics as per the approved guideline in Dubai PHCC Network	
Performance Measure Definition:	To ensure that antibiotic use in Dubai PHCC is appropriate and as per evidence based practices.	
Rationale for measures selection:	<input checked="" type="checkbox"/> High-volume <input type="checkbox"/> High-risk <input checked="" type="checkbox"/> Problem-prone <input checked="" type="checkbox"/> High Cost <input type="checkbox"/> Others	
Type of Measure	<input type="checkbox"/> Structure <input type="checkbox"/> Process <input type="checkbox"/> Outcome <input checked="" type="checkbox"/> Process and Outcome	
Source of Data	<input type="checkbox"/> Interview <input checked="" type="checkbox"/> Medical record review <input type="checkbox"/> Special log/tool <input type="checkbox"/> Survey <input checked="" type="checkbox"/> Concurrent <input type="checkbox"/> Retrospective <input type="checkbox"/> Other	
Numerator	Total Number of prescribed Antibiotics as per the given criteria in a calendar month	
Denominator:	Total number of Prescribed antibiotic in the same calendar month	
Formula:	Total Number of prescribed Antibiotics as per the criteria in a calendar month / Total number of Prescribed antibiotic in the same calendar month X 100	
Result/ Findings	5.13% (Average result of all centers from Oct till Jan 2018)	
Target	To increase by 20% in each quarter	
Benchmark	20%	
Signature of Head of the Department:	Date:	Signature:



KEY PERFORMANCE INDICATORS

Equation:

Total Number of prescribed Antibiotics as per the criteria in a calendar month

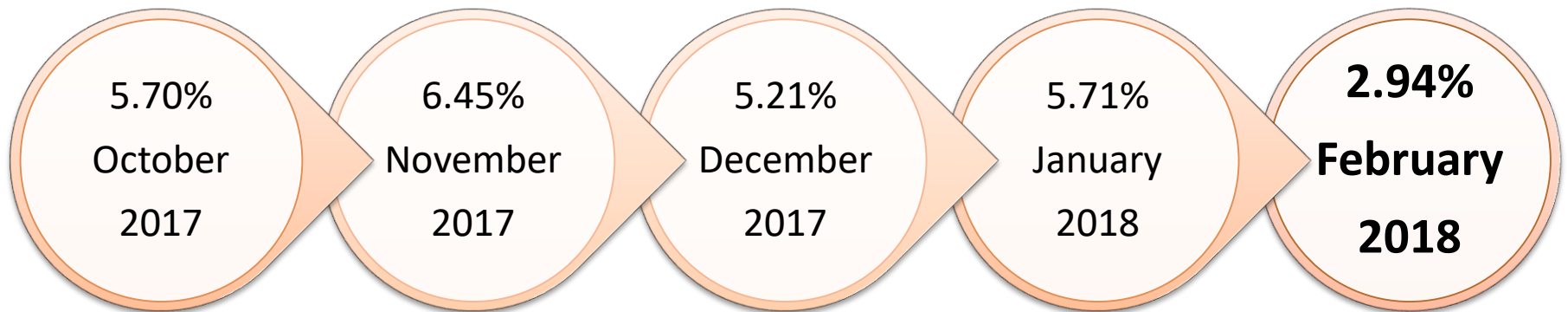
Total number of Prescribed antibiotic in the same calendar month

X

100



- The number of prescriptions with antibiotics has **dropped** indicating awareness of physicians about the guidelines.

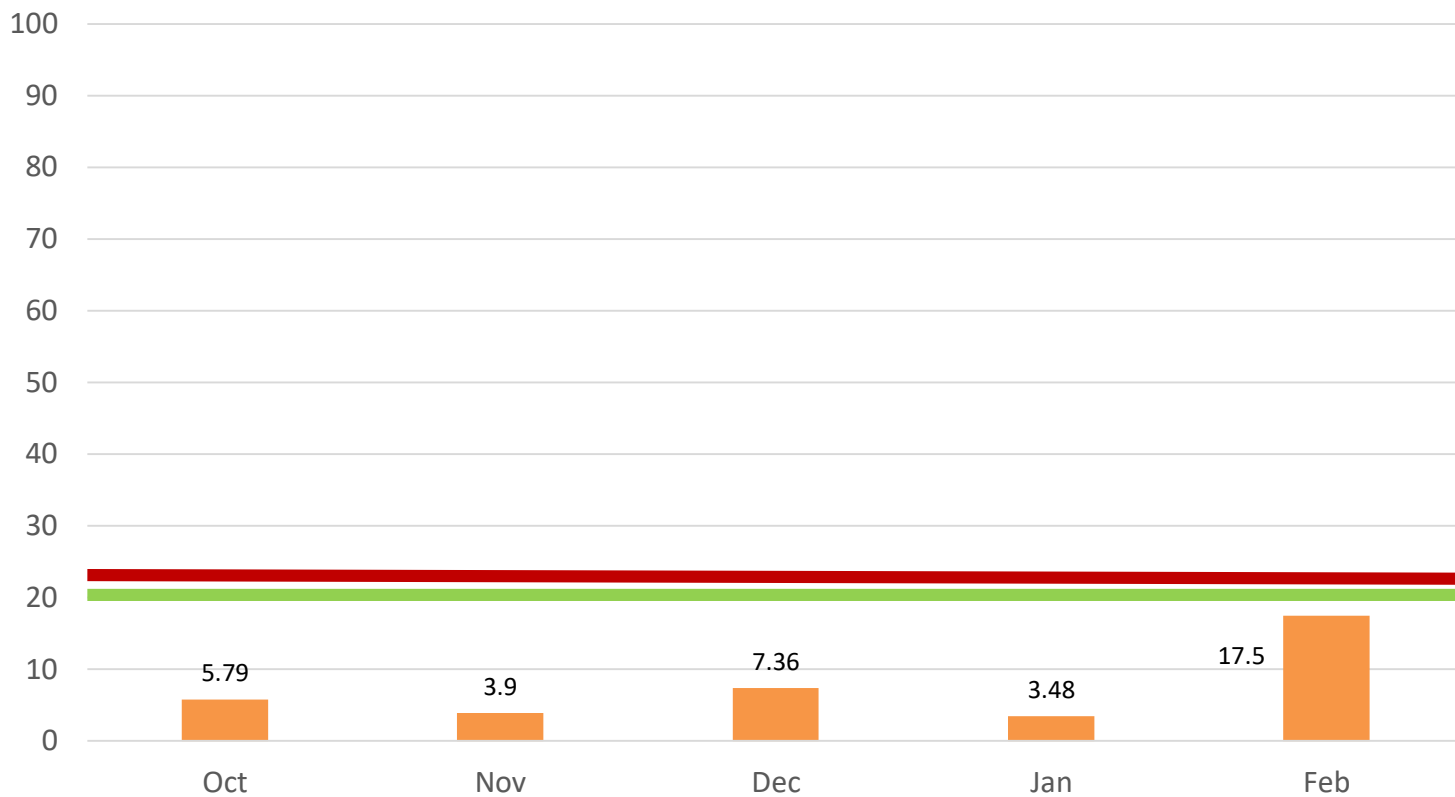


Percentage of antibiotics which are ordered as per the approved guideline in Dubai Primary Healthcare Centers Network (Oct 2017 till Feb 2018)

Target = 20%



Benchmark = 20%



	Oct	Nov	Dec	Jan	Feb
Dubai PHCC Network	8/138	8/205	12/163	6/172	16/91



CONTINUOUS MONITORING

- Monthly reporting of percentage of antibiotics prescribed as per the approved and evidence based guideline of Dubai PHCC Network and PTC analyze the data and set action plans accordingly.



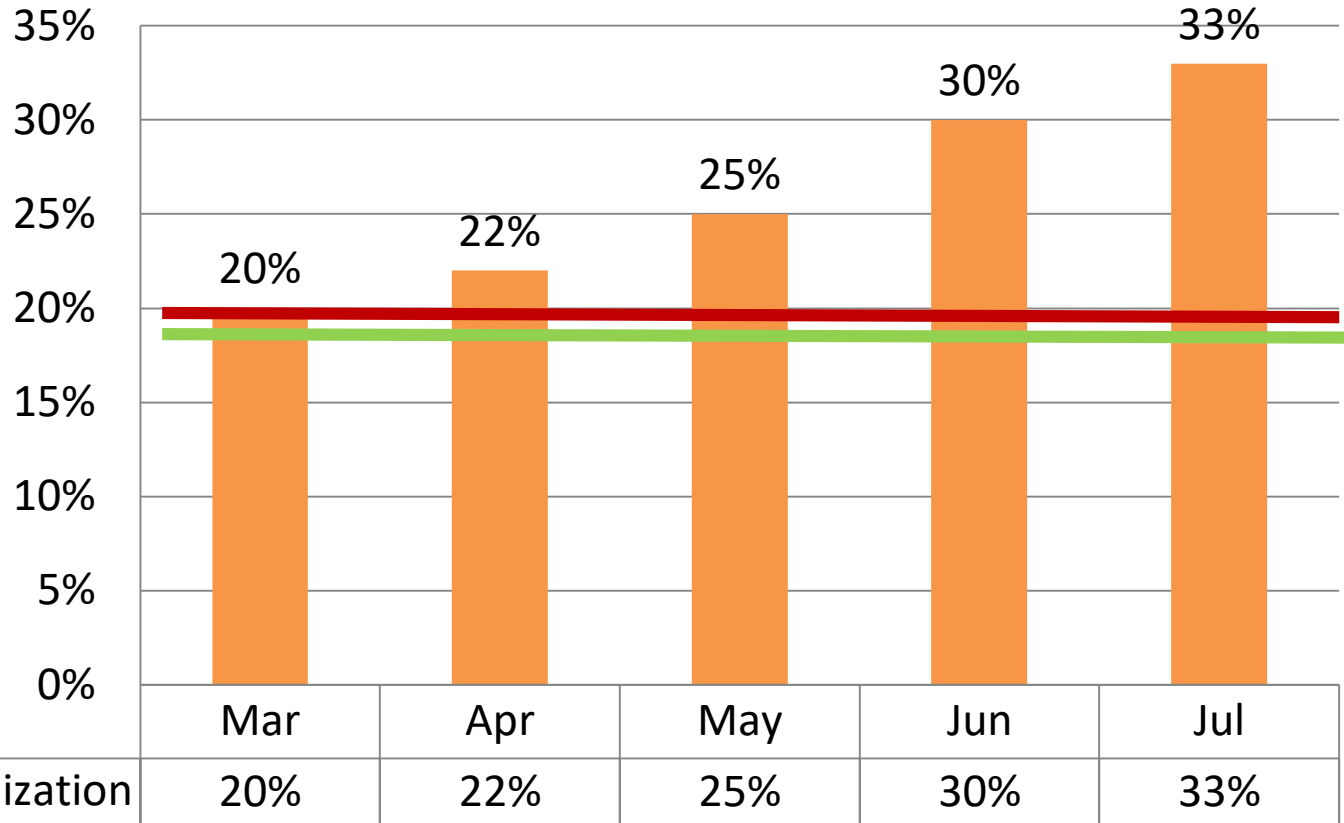
CONTINUOUS MONITORING

Antibiotic utilization as per the Guideline

Target = 20%

Benchmark = 20%

Percentage of Compliance



Antibiotic utilization



CONTINUOUS MONITORING

Antibiotic Utilization as per the Guideline

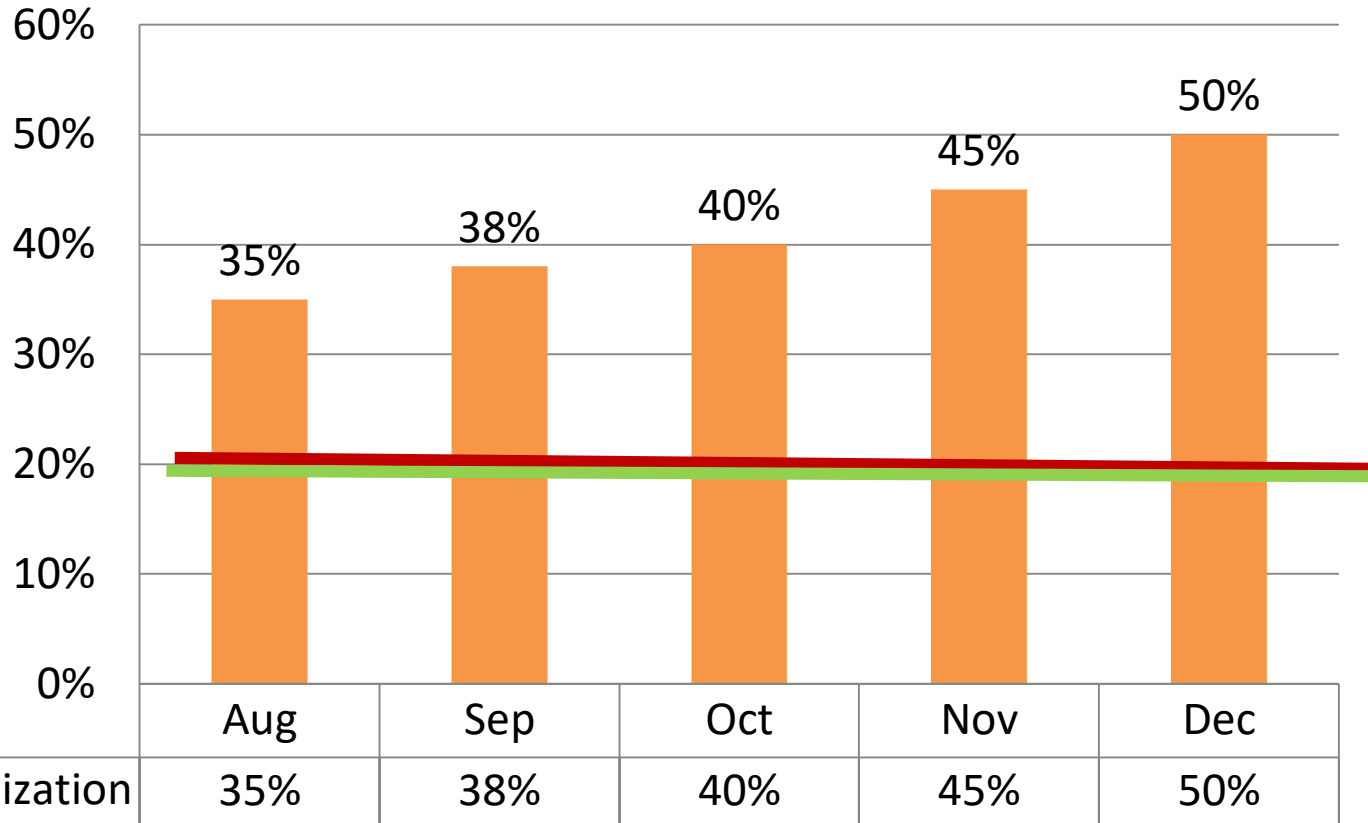
Target = 20%



Benchmark = 20%



Percentage of Compliance





FUTURE PLANS

- The monitoring process will be continued and new areas for improvements will be explored.
- Continue increasing staff awareness in relation to the appropriate use of antibiotic.
- We will reduce any unintended consequences by initiating medical record review for cases which required antibiotics and it was not ordered. (Unintended consequence: Doctors preferring not to prescribe antibiotics to minimize the hassle of ordering diagnostic tests)
- Continue to check international references such as NICE guidelines and CDC for updates in relation to antibiotic use.
- To study the effect of the project on the cost



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Thank You for being attentive!

Please share your thoughts and help us
improve.