



Egyptian Experience using Global PPS tools

**Rational Drug Use Department
Hospital Pharmacy Administration
Central Administration for pharmaceutical Affairs**



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Egyptian Experience using Global PPS tools - Aalaa Afdal

10-07-2018



Outline



1- Egyptian Drug Authority

2- National Antimicrobial Stewardship Program

3- Global-PPS experience

I. Methods

II. Results

III. Actions

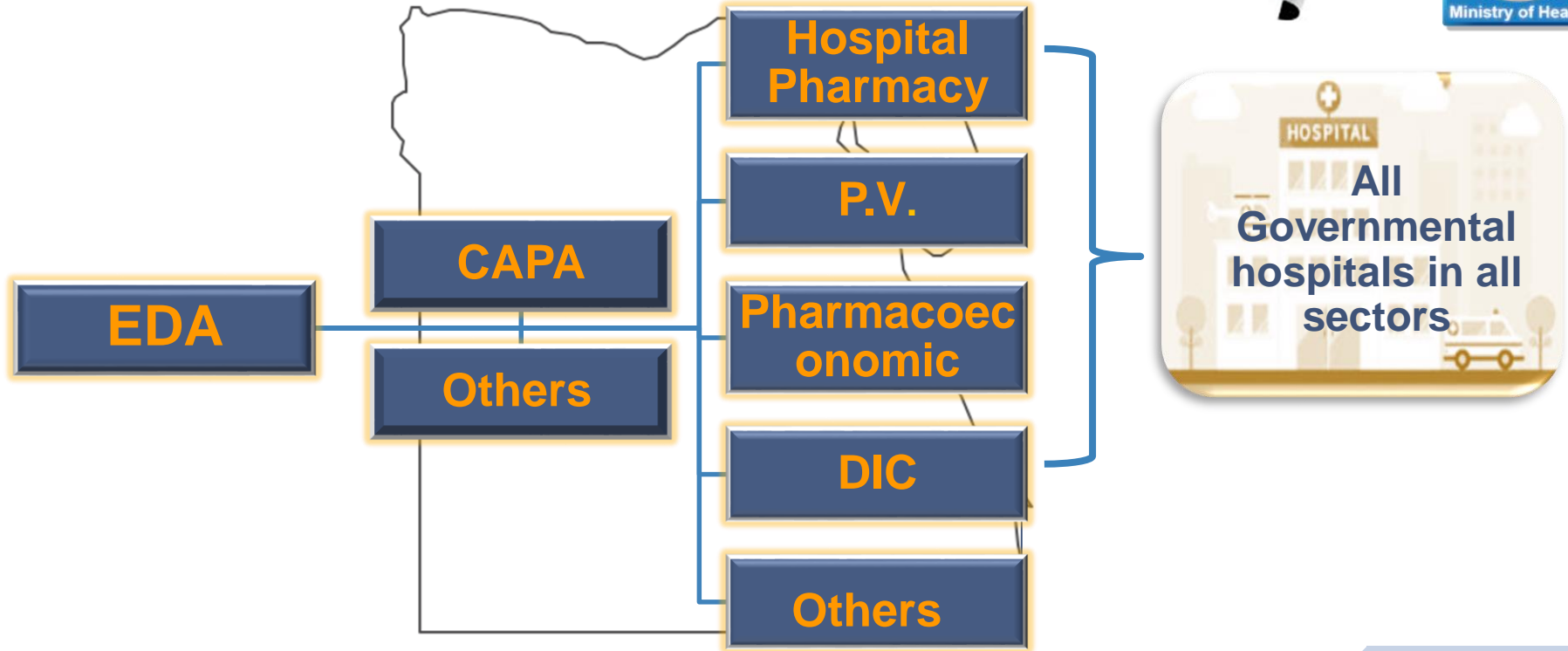
IV. Conclusions

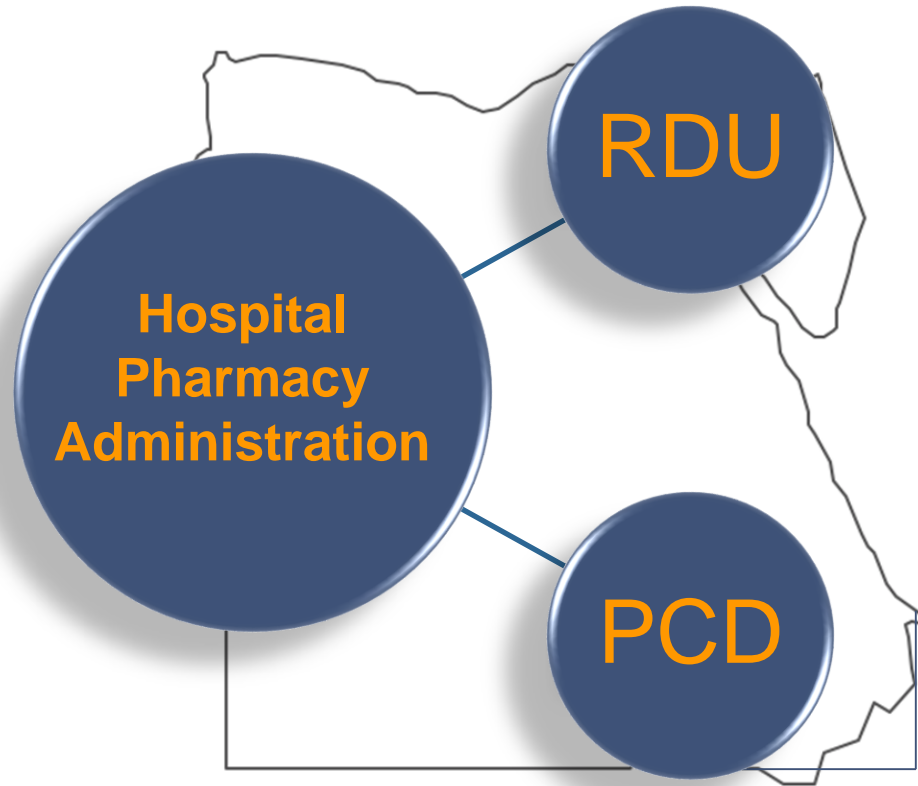


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Egyptian Drug Authority



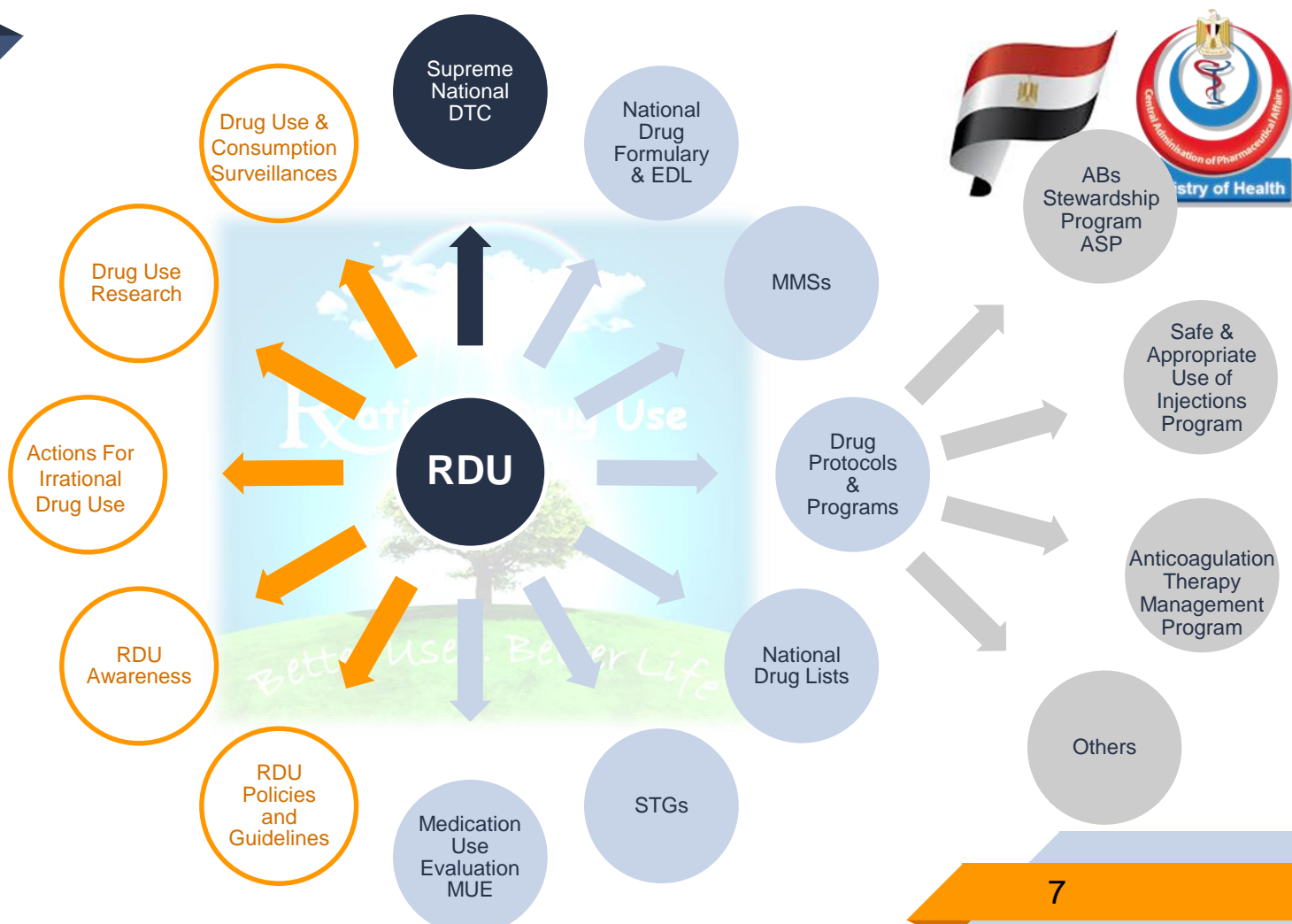




U
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e necessary actions
non-optimal use of



RDU Mission



2

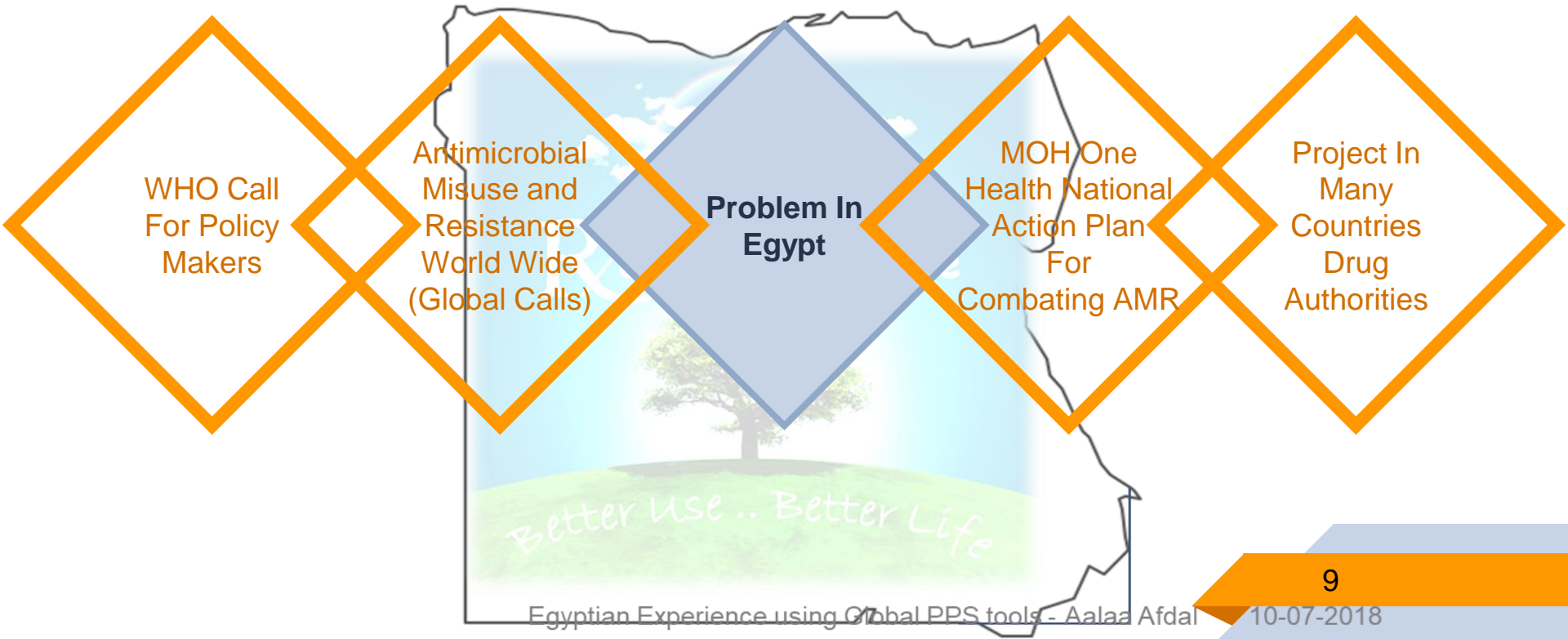


National Antimicrobial Stewardship Program



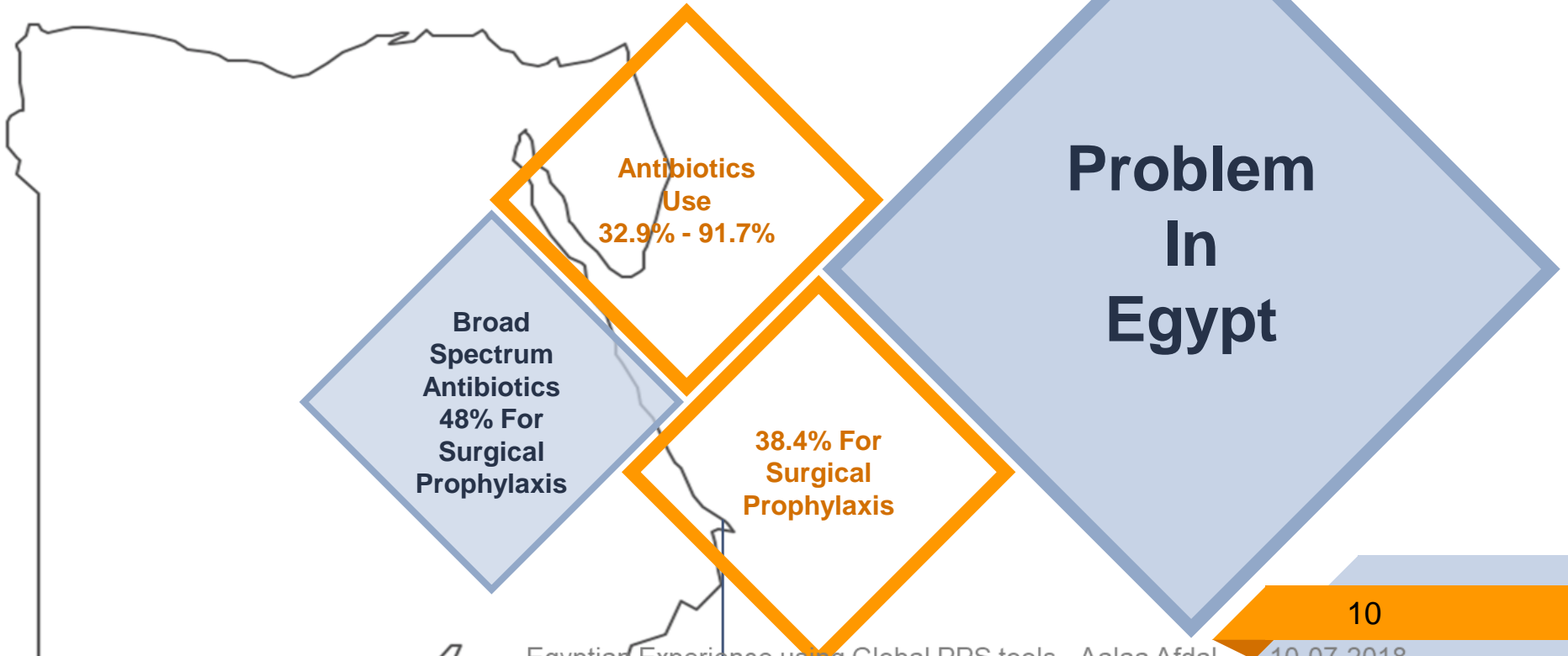


National Antimicrobial Stewardship Program (NASP)

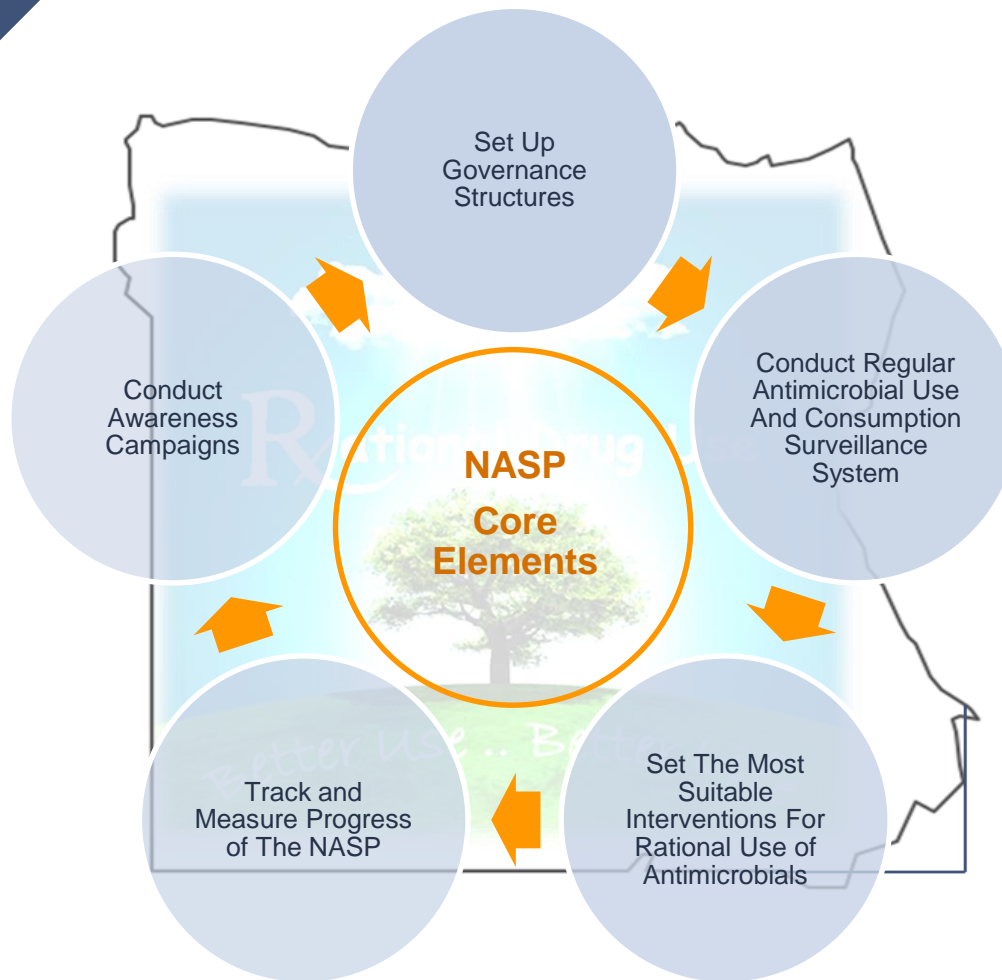




National Antimicrobial Stewardship Program (NASP)



Problem In Egypt





National level

Hospital level

National Action Plan for Combating AMR

Successive meetings

(first :April 2017, second : Nov 2017 third: March 2018)



Ministry of Health
Central Administration for Pharmaceutical Affairs
Hospital Pharmacy Administration
Rational Drug Use Department
FM-HPA-02

وزارة الصحة والسكان
الإدارة المركزية للشئون الصيدلانية
إدارة صيدلة المستشفيات
قسم الاستخدام الرشيد للدواء

تمشور الاستخدام الرشيد للدواء رقم (4) لسنة ٢٠١٧

الخاص بورقة عمل برنامج الاستخدام الرشيد لمضادات الميكروبات بالمستشفيات
السيد الأستاذ الدكتور /

(عناية إدارة الصيدلة)
تحية طبية وبعد ...

في إطار تفعيل دور الإدارة المركزية للشئون الصيدلانية في إحكام الرقابة على النواء في جميع مراحله متضمنة استخدامه الرشيد والأمن للأمن وللنواء واقتراح الإجراءات اللازمة في حالات الاستخدام غير الأمن وغير الأمل للنواء بما يعكس إيجابياً على صحة المريض المصري أولاً، ويحد من الهدر في الموارد المالية المتاحة للأدوية. وتلبية للتوجه العالمي نحو الحد من مقاومة مضادات الميكروبات (Antimicrobial Resistance) وترشيد استخدامها، ومن أجل تعزيز وضع مصر على الخريطة العالمية للصحة من خلال رصد معدلات استهلاك مضادات الميكروبات وتحديد أنماط الاستخدام.

وإطلاقاً للبرنامج الوطني لترشيد استهلاك مضادات الميكروبات تحت إشراف قسم الاستخدام الرشيد للدواء بإدارة صيدلة المستشفيات وبالتعاون مع كل الجهات المعنية بوزارة الصحة، نرجو من سيادتك الاتي:

- 1- تشكيل اللجنة ترشيد استخدام مضادات الميكروبات* كلجنة منبثقة من لجنة الدواء والعلاجات
- 2- تفعيل برنامج الاستخدام الرشيد لمضادات الميكروبات بالمستشفيات التابعة لسيادتك.

على أن يتم ذلك بالاستعانة بورقة العمل المرفقة والتي تشرح تفصيلاً أهمية البرنامج والغرض منه وأعضاء ومهام ومعدل انعقاد اللجنة (مرفق ١).

وتفضلوا بقبول وافر الاحترام ...

تحريراً في ٢٠١٧/١٠/١٢

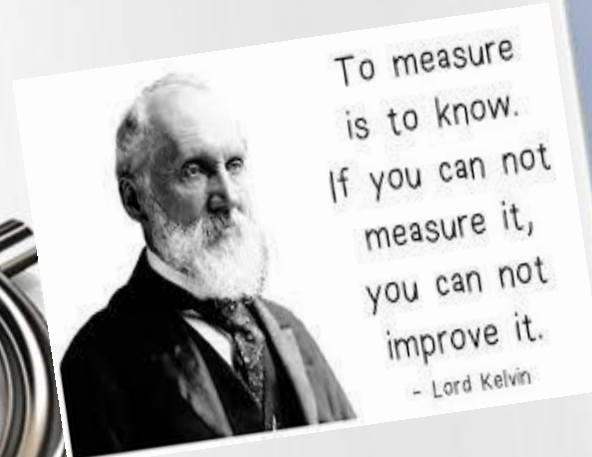
مدير إدارة صيدلة المستشفيات
د. سعد عبد العظيم علي

رئيس الإدارة المركزية للشئون الصيدلانية
د. رشا محمد زيادة

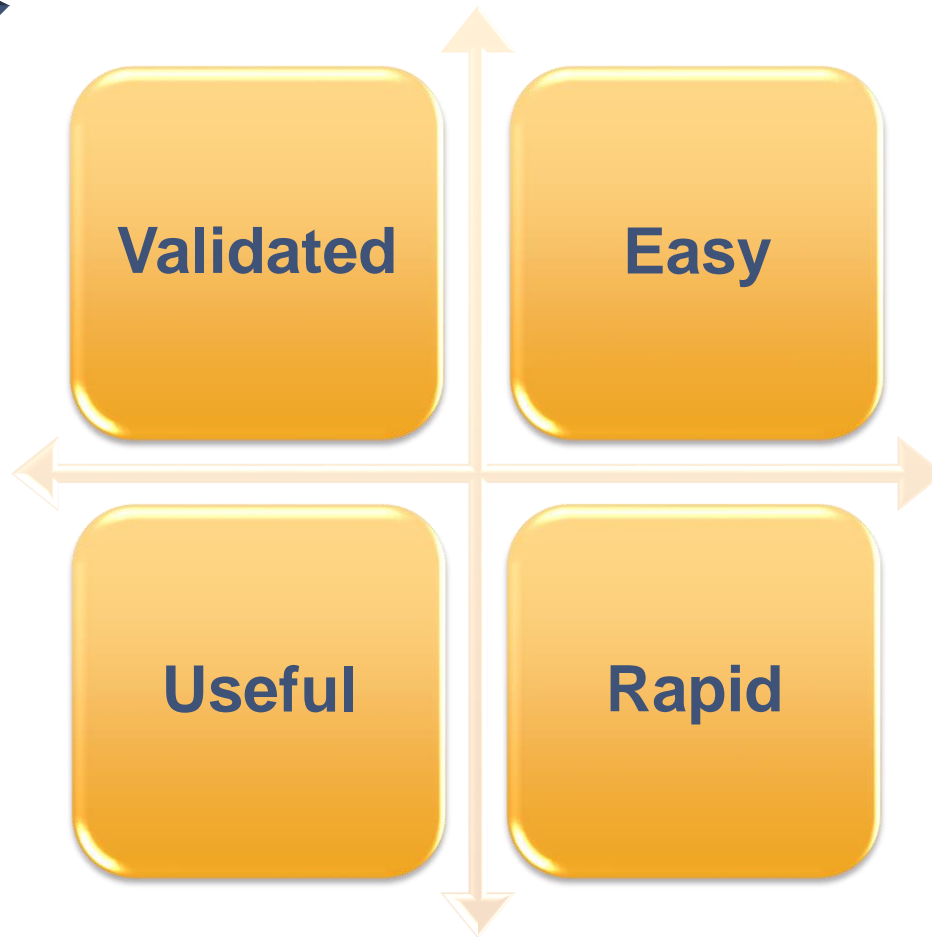


POINT PREVALENCE SURVEY

“If you can't measure it
you can't improve it”



To measure
is to know.
If you can not
measure it,
you can not
improve it.
- Lord Kelvin



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Egyptian Experience using G-PPS tools



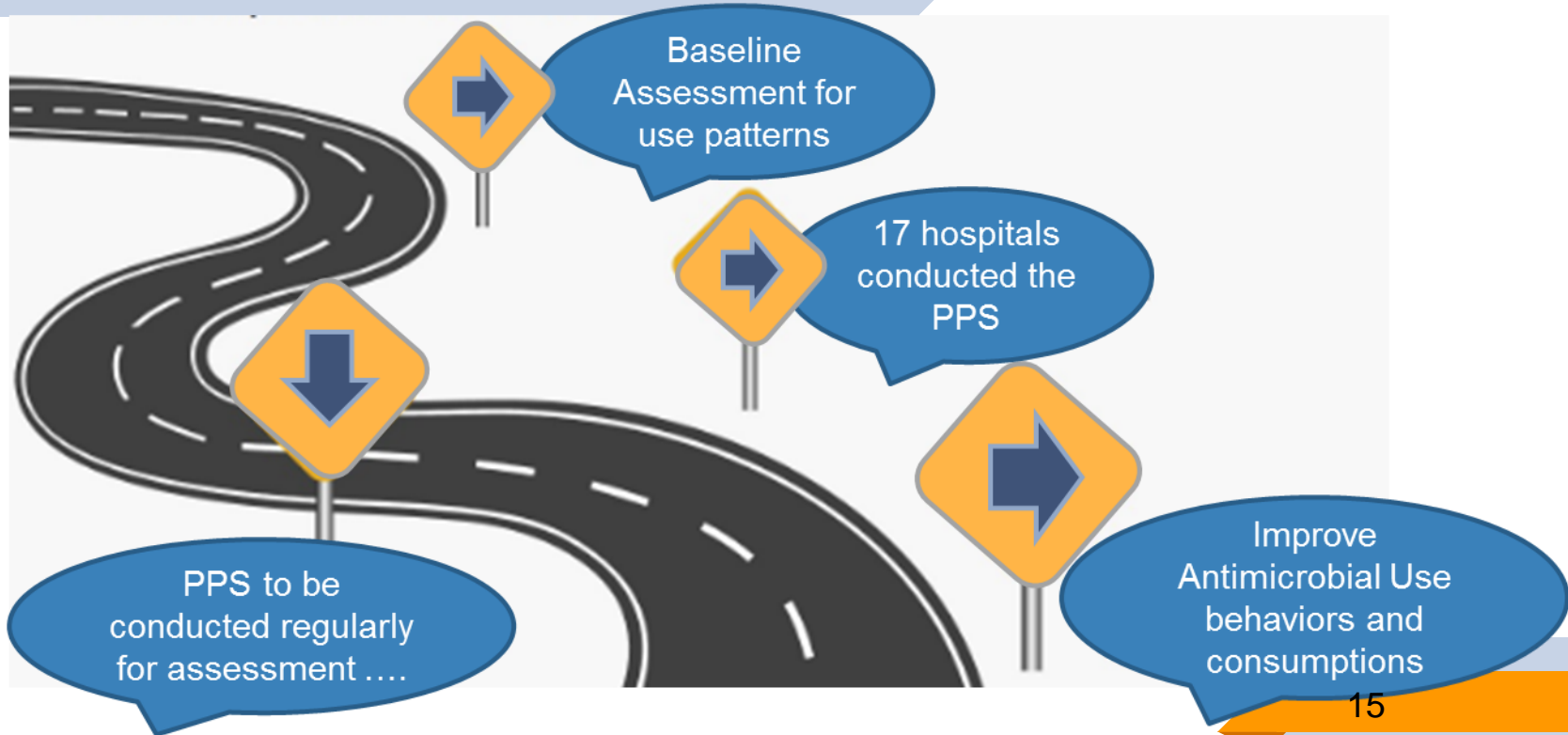


Egyptian PPS aims to :

1. **Monitor rates of antimicrobial prescribing** in hospitalized adults, Pediatrics and Neonates.
2. **Identifies targets for quality improvement** (e.g. duration of peri-operative prophylaxis; compliance with local hospital guidelines; documentation of indication for prescription of antibiotic therapy).
3. **Helps in designing hospital interventions** that aim at promoting prudent use of antimicrobials.
4. **Allows to assess the effectiveness** of such interventions, through repeat PPS.



Road Mapping





Egyptian Experience using G-PPS tools



Global-PPS Experience

- I. Method
- II. Results
- III. Actions
- IV. Conclusions



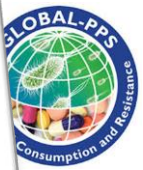


Egyptian Experience using G-PPS tools



Method

Design	Aim
SNAP SHOT Survey to measure Antimicrobial Use within hospitals using the standardized tool of GPPS	Identify base line situation of Antimicrobial use Patterns Identify priorities for quality improvement
First Wave	Then....
First wave (2017) conducted in 17 hospitals (1388 patients) from different governorates (Cairo-Giza-Qualyobia-Alex) within the directorates and SMCs.	Conducting workshops for setting interventions for antimicrobial prescribing quality improvements.



Egypt

- Home
- Our project
- Documents
- Dissemination
- Acknowledgements
- supporting organizations
- Contact



Global Point Prevalence Survey on Antimicrobial Consumption and Resistance



Data entry



Documents



Global Antimicrobial Stewardship

Latest news



Egyptian Experience using G-PPS tools



Method

Design

Cross-sectional study

Conducted annually

Observational/ experimental

Descriptive/ analytical

Setting

- The survey was conducted from May – July 2017 in 17 hospitals from different governorates (Cairo-Giza-Qualiohia-Alex) from different sectors MOH (Directorates and SMCs)
- Each ward within the hospital surveyed one day only for antimicrobial prescribing.



Egyptian Experience using G-PPS tools



- **For each patient receiving antimicrobial**
 - Age, Gender and Weight
- **For each antimicrobial prescription**
 - **Antimicrobial agent(s)** Generic Name, dose per administration, No.doses/day, Route of administration
 - **Reasons for treatment:** What the clinician tends to treat (Diagnosis)
 - **Indication for therapy** (CAI, HAI, Medical/surgical prophylaxis)
 - **Extra quality indicators:**
 - ✓ Reason of prescription written in notes
 - ✓ Stop/review date written in notes
 - ✓ Prescription compliant with local guidelines
 - **Treatment type** (Empirical or targeted)
 - **Treatment based on biomarker** and which one
 - **Microbiology data** (if targeted treatment)





Egyptian Experience using G-PPS tools



Results

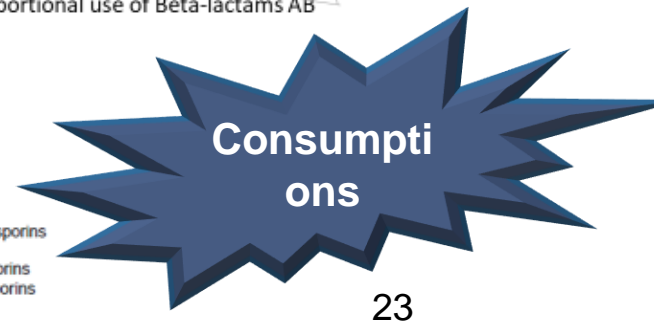
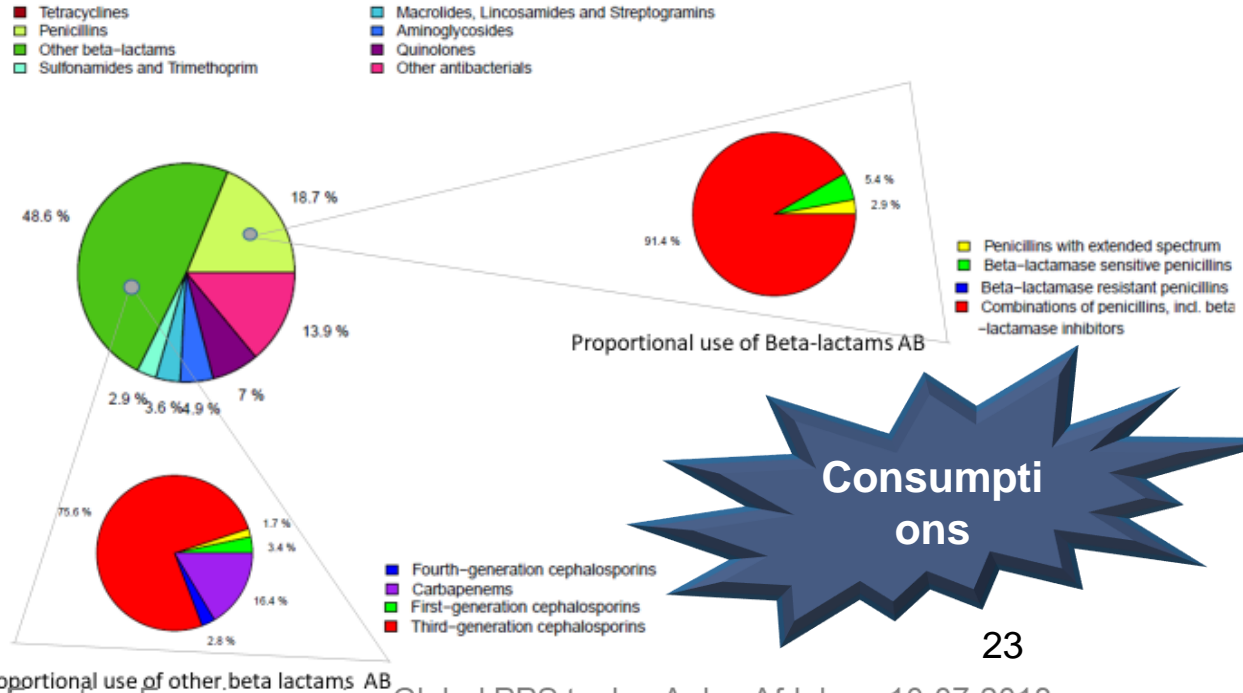
✓ Overall antimicrobial prevalence

1. 78% among adult wards
2. 76.5% among pediatric and neonatal wards.

✓ **Beta-lactams** antibacterials were the most prevalent antibiotics used and represented slightly more than 2/3 of total antibiotics used (**67%**).

✓ The most commonly used beta-lactams classes were **combinations of penicillins + beta lactamase inhibitors** and **third generation cephalosporins**.

1.The overall proportional of AB use in Egyptian hospitals



Proportional use of other beta lactams AB



Egyptian Experience using G-PPS tools

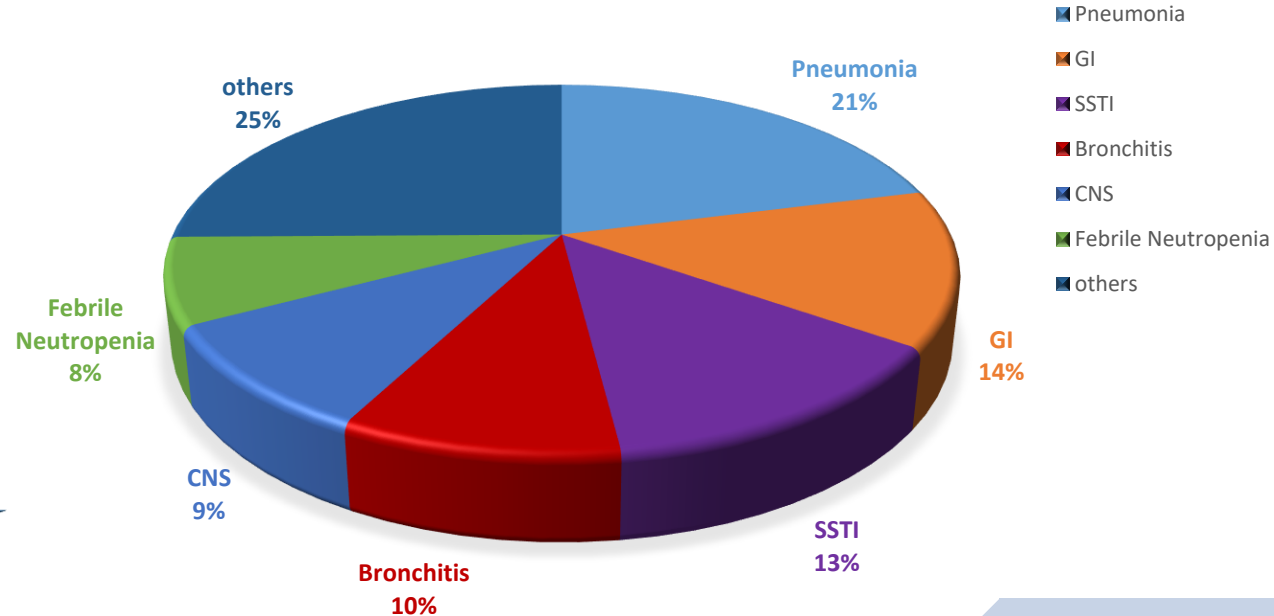


Results

- ✓ The pie chart demonstrates the most common infection diagnosis in some Egyptian hospitals (Mid-2017).
- ✓ The three most common diagnosis are **Pneumonia**, **Gastro-intestinal** and **Skin and soft tissue infections** by 21%, 13.7% and 13.3% respectively.



MOST COMMON DIAGNOSIS





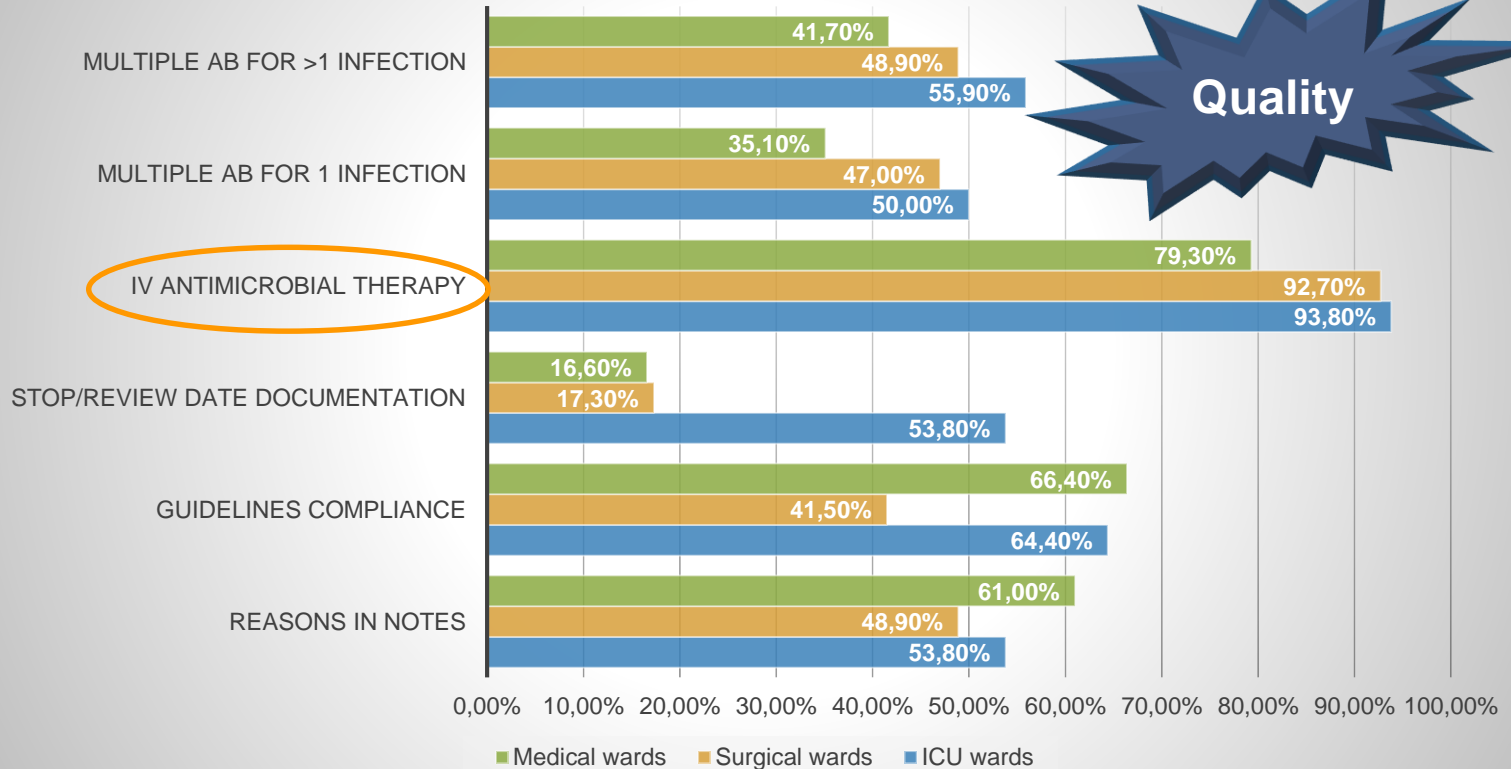
Egyptian Experience using G-PPS tools



Results

✓ The most striking feature is the **high percentage use of IV antimicrobial therapy**, which is highly prescribed in all wards ICU, surgical and medical (**93.8%**, **92.7%** & **73.9%** respectively).

Quality indicators and prescription patterns for AB use





Results

- ✓ The bar graph illustrates the percentage of different durations of antibiotics used for surgical prophylaxis in some Egyptian hospitals (Mid-2017).
- ✓ **Slightly more than four-fifths of surgical prophylaxis (81%)** were using antibiotics **inappropriately** for more than one day duration.
- ✓ While single dose of antibiotic prophylaxis were indicated only for 6%.

4. Duration of surgical prophylaxis in adults and children (2017)



- single dose
- One day
- More than one day



Results interpretation reports

Received Hospitals feedback

Ministry of Health
Central Administration for Pharmaceutical Affairs
Hospital Pharmacy Administration
Rational Drug Use Department

الإدارة المركزية للشؤون الصيدلانية
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Antimicrobial Use PPS Results of Al-Abbassiva Fever Hospital

Antimicrobial prevalence in adult wards 2017

	Total	AMW	HO-AMW	T-AMW	P-AMW	ASW	AICU
Our hospital							
patients (N)	68	65	0	0	0	0	3
treated patients (%)	98.2	97.7	0	0	0	0	100
Country							
patients (N)	956	420	69	14	0	307	177
treated patients (%)	78.4	77.5	89.9	85.7	0	72.3	85.3

*Patients (N) = number of admitted adults in the hospital.
Treated patients (%) = 100(number of adults treated with at least one antimicrobial/number of admitted adults).
*AMW=Adult Medical Ward; HO-AMW=Haematology/Oncology AMW; T-AMW=Transplant AMW; P-AMW=Pneumology AMW; ASW=Adult Surgical Ward; AICU=Adult Intensive Care Unit.
The table above demonstrates the antimicrobial prevalence in adult wards in our hospital and our country concurrently.

(1) The antimicrobial prevalence in adult wards is noticeably higher than other hospitals in the country and all ICU patients had received at least 1 antimicrobial.

Antimicrobial prevalence in paediatric wards 2017

	Total	PMW	HO-PMW	T-PMW	PSW	PICU
Our hospital						
patients (N)	37	30	0	0	0	7
treated patients (%)	97.3	96.7	0	0	0	100
Country						
patients (N)	275	170	27	5	35	38
treated patients (%)	77.5	77.6	59.3	100	74.3	89.7

*Patients (N) = Number of admitted children in the hospital.
Treated patients (%) = 100(number of children treated with at least one antimicrobial/number of admitted children).
*PMW=Paediatric Medical Ward; HO-PMW=Haematology-Oncology PMW; T-PMW=Transplant (BMT) solid PMW; PSW=Paediatric Surgical Ward; PICU=Paediatric Intensive Care Unit.
The table above demonstrates the antimicrobial prevalence in paediatric wards in our hospital and our country concurrently.

(2) The antimicrobial prevalence in paediatric wards in your hospital is significantly higher than other hospitals in the country (97.3% & 77.5 respectively). All PICU patients had received at least 1 antimicrobial.

Om Elmasreyen General Hospital
Clinical Pharmacy Department

Om Elmasreyen responses on data analysis recommendation

- Antimicrobial use in all adult wards should be considered especially 3rd generation cephalosporins prescribing as they showed the highest prevalence in antimicrobial use compared to other departments
↓
Because third generation (ceftriaxone) **preferred by doctors as empirical treatment** as it is broad spectrum AB, **available in our hospital**, once daily dose so cost saving.
- 3 rd generation cephalosporins and penicillins-enzyme inhibitors prescribing should be handled in all wards of the hospital
↓
These AB (ceftriaxone and augmentin)were handled already **on icu** department by applying empirical AB policy for most common infectious diseases on icu .
- Prophylactic antimicrobials are recommended to be chosen based on the type of surgical procedures and antibiotic durations should also be defined especially for GI surgery.
↓
Surgery department and NICU need more clinical pharmacists to cover them and make AB policy there.
- Documentation of stop/review date of antimicrobial use should be considered in all surgical and adult medical wards. In addition all antimicrobial prescribing in pediatric wards should be revised according to guidelines.
↓
Stopping AB and revising dose regimen already done by clinical pharmacist on **icu** with help by quality control team.



Hospitals recommendations and Action Plan

Workshops for interventions

Ministry of Health
 Central Administration for Pharmaceutical Affairs

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 إدارة صيدلة المستشفيات
 قسم الاستخدام الرشيد للأدوية

FM-HPA-02

Action plan for setting an Intervention

No.	Intervention	Time frame	Tool	Measure	Key personnel
Ex.	IV to Oral shift policy	3 months	IV rational checklist	% compliance to the policy *	-Physician -Cl. Ph.
1					
2					
3					

*% compliance to the policy = total number of prescriptions complied with policy / total number of prescriptions.

documentation in notes.



NOW !!!



First Wave

Most of the first wave hospitals are applying the **planned interventions** according to the **action plan** prepared.

Second wave

Expanding our hospital participating to include **9** governorates and more **MoHP sectors** like medical insurance and **non-MoHP** like **Educational Hospitals** and **others....**



Egyptian Experience using G-PPS tools



The Egyptian`s **Global-PPS Experience** allowed us to assess different areas where Irrational antimicrobial use was being adopted.

- The Global-PPS tool was very **beneficial** to set targets and we recommend to conduct it **periodically** in order to follow up interventions that have been taken.





Disclosure

“**BioMérieux** is the sole private sponsor of the GLOBAL Point Prevalence Survey. The Global-PPS is also funded by a personal Methusalem grant to Herman Goossens of the Flemish government. The funder has no role in study design, data collection, data analysis, data interpretation, or writing the report. Data are strictly confidential and stored anonymous at the coordinating center of the University of Antwerp.”



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Any Questions!!!





THANKS!