Global Point Prevalence Survey of Antimicrobial Consumption and Resistance in hospitals worldwide

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Dedicated to the entire Global-PPS network!

Call to Action on Antimicrobial Resistance 2018
Accra, Ghana

In partnership with the IACG - Interagency Coordination Group on Antimicrobial Resistance
What is Surveillance

World Health Organization:

Systematic ongoing collection, collation, and analysis of data and the timely dissemination of information to those who need to know so that action can be taken.

U.S. Centers for Disease Control and Prevention:

The ongoing systematic collection, analysis, and interpretation of health data, essential to the planning, implementation, and evaluation of public health practice, closely integrated with the timely dissemination of these data to those who need to know.
Antibiotic prescribing in hospitals - What does the literature offer?

Wide range of methods, with different numerators and denominators, which makes comparison difficult.
An innovative worldwide accessible web-based Global-PPS TOOL

- Standardized approach
  - Collect and report consistent, valid and comparable antimicrobial prescribing & resistance data amongst hospitalized adults, children and neonates
  - Compare and analyze trends over time in a uniform way
- Above all: a simple method
  - Feasible, achievable surveillance
Aims Global-PPS and impact on AMR

- Evaluate the situation in your hospital: determine quantity and quality of antimicrobial prescribing in hospitals
- Identify targets to improve quality of antimicrobial prescribing
- Assess effectiveness of interventions through repeated PPS.
- Increase public health capacity.
- Combat antimicrobial resistance.
What we freely offer:

- **Protocol**, different languages
- **Data collection templates**: ward and patient form (paper)
- **Web-based data-entry and verification** through the Global-PPS programme, including validation (**quality assurance**) and reporting (**real-time feedback with benchmarking national and worldwide**) ([http://www.global-pps.com/documents/](http://www.global-pps.com/documents/))
  - One-point feedback report
  - Longitudinal feedback report
  - Raw data in excel

- **Full support to the hospitals**: all materials, PPT slides on the method used (EN, FR), FAQ list, IT manual, posters, leaflets to promote the study, ..., and help desk!
Degree of participation or enrollment as of today

N = 96 countries
N ≈ 1000 hospitals
N ≈ 220,000 admitted patients
Antimicrobial use prevalence (%) by UN-region, 2015 and 2017 (country-ranges)
Continuous work towards sustainability and scale up through COMMUNICATION and NETWORKING
Support towards analyses and communication of own results

Global-PPS in Ghana presented as **poster** at the 10th European Congress on Tropical Medicine and International Health

See: www.global-pps.com/dissemination/
Global PPS 2015 and 2017

- Final results presented during ECCMID 2016 and ECCMID 2018
- Brochure including each 22 communications

- Global and local publications and communications on-going
A Point Prevalence Survey of Antimicrobial Prescribing in Four Nigerian Tertiary Hospitals

Antimicrobial consumption and resistance in adult hospital inpatients in 53 countries: results of an internet-based global point prevalence survey

Summary
Background The Global Point Prevalence Survey (Global-PPS) established an international network of hospitals to measure antimicrobial prescribing and resistance worldwide. We aimed to assess antimicrobial prescribing and resistance in hospital inpatients.

Methods We used a standardised surveillance method to collect detailed data about antimicrobial prescribing and resistance from hospitals worldwide, which were grouped by UN region. The internet-based survey included all inpatients (adults, children, and neonates) receiving an antimicrobial who were on the ward at 0800 h on one specific day between January and September, 2015. Hospitals were classified as primary, secondary, tertiary (including infectious diseases hospitals), and paediatric hospitals. Five main ward types were defined: medical wards, surgical wards, intensive-care units, haematology oncology wards, and medical transplantation (bone marrow or solid organ) wards. Data recorded included patient characteristics, antimicrobials received, diagnosis, therapeutic indication according to predefined lists, and markers of prescribing quality (eg, whether a stop or review date were recorded, and whether local prescribing guidelines existed and were adhered to). We report findings for adult inpatients.
Networking : Global-PPS as intermediary

• Regional coordinators!
  ➢ Connect new partners/participants
    • E.g. Global-PPS expert from Singapore went to the Philippines and Myanmar to train a hospital network under lead of MoH

www.global-pps.com/supporting-organizations/

• Contract signed with
Lessons learned

✓ Global-PPS offers a tool to measure AMU, a first step in the fight against antimicrobial resistance
✓ This simple method provides a feasible & achievable surveillance
✓ Enormous opportunity to stimulate local networking and collaboration
✓ Mutual cooperation and feedback is highly motivating.
✓ Communications to stakeholders, politicians
Challenges

For the participants:

• Workload and time constraints, manpower, resources (Evaluation of the Global-PPS through Survey Monkey questionnaire)

• Knowledge on interpretation of the feedback report and raw data in excel.

• What next ?? How to enhance practice changes?

For Global-PPS team:

• Global-PPS continuously grows !

Manpower to deal with requested help from participants !!
Solutions

What we continuously do

• Help making meaningfull presentations
• Help searching for feasible targets to work on
• Help writing up research (abstract, paper, any other communication)
• Help networking: link up professionals
• Help making participants to shine, to show their work, get appreciated for efforts
Solutions

Under development, foreseen for 2019:

• Health Care Associated Infection (HAI) module

• Aid towards setting up sustainable antimicrobial stewardship activities adapted to local needs
  
  ➢ Development of survey to assess impact of Global-PPS on stewardship activities, the needs and barriers with specific focus on LMIC
  
  ➢ Practical E-learning module (hands-on cases)
  
  ➢ Sharing of experiences, networking, capacity building!
Any hospital is welcome to join the Global-PPS network

CLICK HERE TO SIGN UP FOR THE GLOBAL-PPS.

www.global-pps.com

Contact global-PPS@uantwerpen.be
Results are the product of action, not by thoughts of taking action.

Andy Wooten
The Nigerian Global-PPS experience

Global-PPS and Antimicrobial Stewardship (AMS) in NIGERIA

Supporting healthcare professionals in the fight against resistance
What global PPS means to Nigeria

• Tool for a realistic and sustainable AMS
• Entry point and monitoring tool for AMS in Nigeria
• The Nigerian working group on AMS
  – Hospitals participating in Global-PPS
  – Came into being in August 2018
  – Published a communiqué
  – Another meeting in November 2018
  – AMS still young in Nigeria
How it all began

LAGOS UNIVERSITY TEACHING HOSPITAL

LUTH story till 2015 Global PPS
Plan of our hospital antimicrobial stewardship committee

- 2012: Set up of antimicrobial stewardship program
- Subcommittee to develop a proposal to obtain baseline information for our stewardship program.
- Barrier: There was no funding for the project
  - Situation till the advent of the global point prevalence survey of antimicrobial consumption and resistance (GLOBAL -PPS) in 2015.
- LUTH participated to the 2015 Global-PPS and were able to obtain data we considered enough to start the hospital stewardship program

• We identified issues
  – Very high rates of antimicrobial prescribing
  – Under-utilisation of the clinical microbiology labs
  – No information on MDROs
  – No antibiotic guidelines
  – Negative prescribing habits

Hospital antibiotic policy written based on Global-PPS data
Similar issues identified in all Global-PPS participating NIGERIAN hospitals!

Awareness has been created in the country about global-PPS making AMS feasible
EDUCATION AND AWARENESS MADE SOME DIFFERENCE IN OUR HOSPITAL
## Overview of the quantity and quality of antimicrobial prescribing in two Global-PPS participating Nigerian hospitals

<table>
<thead>
<tr>
<th>Category</th>
<th>Tertiary care hospital Lagos</th>
<th>Tertiary care hospital Abuja</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intervention in 2016</td>
<td>No Intervention</td>
</tr>
<tr>
<td></td>
<td>2015</td>
<td>2017</td>
</tr>
<tr>
<td>Antibiotic prevalence adult wards</td>
<td>80.6%</td>
<td>67.0%</td>
</tr>
<tr>
<td>Antibiotic prevalence in pediatric wards</td>
<td>89.7%</td>
<td>59.2%</td>
</tr>
<tr>
<td>Surgical prophylaxis ≥24h</td>
<td>93.0%</td>
<td>100%</td>
</tr>
<tr>
<td>Targeted prescribing</td>
<td>8%</td>
<td>1%</td>
</tr>
<tr>
<td>Guidelines missing: medical adult wards</td>
<td>96.7%</td>
<td>100%</td>
</tr>
<tr>
<td>surgical adult wards</td>
<td>97.9%</td>
<td>99.2%</td>
</tr>
<tr>
<td>medical pediatric wards</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Reason for prescribing written in notes</td>
<td>42.2%</td>
<td>42.0%</td>
</tr>
<tr>
<td>Stop review date documented</td>
<td>16.2%</td>
<td>16.7%</td>
</tr>
</tbody>
</table>
Following dissemination of Global-PPS data

- Interventions planned separately for each department because of the large hospital size (761 beds)
- Started with Paediatrics department in 2016
Paediatrics

• Disseminated data at clinical meeting
  – Wrote antibiotic guidelines
    ➢ Took one year to write
  – Chose an antibiotic team
  – Chose a strategy
    ➢ Prospective audit with intervention and feedback

• Challenge: manpower (seen as extra work)
  – Feasibility of prospective audit with intervention and feedback with medical students confirmed
Prospective audit with intervention and feedback in LUTH Paediatrics

• Every prescription is audited with a checklist
• Checklist is based on hospital antibiotic policy and dept antibiotic guideline
• Checklist completed by
  – Medical students
  – Clinical pharmacologists from the university college
    • decide appropriateness based on checklist
  – Consultants in the ID unit/Stewardship team
    • do the feedback to prescribers
• Monitoring and evaluation by Hospital stewardship committee
AMS in NIGERIA today

• Participating to global-PPS
  – 4 hospitals in 2015
  – 10 hospitals in 2017
  – 13 hospitals have registered in 2018

• 3 hospitals have started formal stewardship program

• Hospitals doing PPS came together to form the National working group for AMS in Nigeria
  – Communique
  – Working on a plan of action

A Point Prevalence Survey of Antimicrobial Prescribing in Four Nigerian Tertiary Hospitals

Abstract

Introduction: Antimicrobial resistance has become a global challenge in health care. Its emergence in previously sensitive bacteria is usually associated with poor antibiotic-prescribing patterns. Methodology: A point prevalence survey was carried out in four tertiary hospitals in Nigeria in 2015 to determine the rate and characteristics of antibiotic prescription. Results: Of 828 patients eligible for the study, 69.7% received antibiotics, with highest rates in the adult intensive care unit. There were therapeutic indications in 51.2% of the prescriptions, of which 89.3% were for community-acquired infections. Third-generation cephalosporins were the most prescribed antibiotics. On the evaluation of surgical prophylaxis, only 4.1% were compliant with institutional guidelines and 39.2% gave a reason for prescribing in patient case notes. Less than 1% of the prescriptions were based on the use of biomarkers. Conclusion: The prevalence of antibiotic prescription in Nigerian hospitals is high with only about 50% of prescriptions based on clear therapeutic indications. We provide evidence that the country needs to institute a cohesive antimicrobial stewardship intervention program.

Keywords: Antimicrobial stewardship, Nigeria, point prevalence, surveillance
Benefit of conducting Global-PPS in LMIC

• AMS strategies may be cumbersome for resource poor countries especially those without good laboratories – hence no AMS
• It is a good tool for beginners of AMS
• It allows you to identify prescribing problems and identify solutions tailored for your peculiar issues
• It also makes AMS monitoring possible
LUTH ANTIMICROBIAL STEWARDSHIP COMMITTEE APPRECIATES GLOBAL-PPS
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The funder has no role in study design, data collection, data analysis, data interpretation, or writing the report.

Data are strictly confidential and stored anonymously at the coordinating centre of the University of Antwerp.”