# ICPIC 2017 - Abstract Submission

*Topic area: 3. Antimicrobials*
*Topic: 3b. Antimicrobial use and stewardship*
Abstract N°: ICPIC17-ABS-1520
IMPLEMENTING EFFECTIVE ANTIBIOTIC STEWARDSHIP PROGRAMS THROUGHOUT A COLLABORATIVE PROCESS BETWEEN HEALTHCARE WORKERS AND RESEARCHERS

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**Preferred Presentation Method:** Oral or Poster Communication
**I want to apply for a travel fellowship:** No
**I am submitting my abstract for the ICPIC Clip award:** No

**Introduction:** Antibiotic Stewardship Programs (ASP) are designed to prevent and control antibiotic resistance. However, ASP implementation could be challenging, since, to be effective, it must be done in collaboration with healthcare workers to benefit from their involvement and inputs.

**Objectives:** To co-design and implement, with healthcare workers, an effective ASP.

**Methods:** The study was conducted in three Portuguese Hospitals using Design Science Research Methodology (DSRM) as a collaborative approach joining researchers from several healthcare areas such as medicine, pharmacy, microbiology, management and information systems, and healthcare workers in the same team.

**Results:** To help healthcare workers dealing with antimicrobial resistance, DSRM stages were followed: (i) problem identification – identification of antibiotic management processes already in place; (ii) solution definition – an integrated information system (HAITooL) to support ASP implementation; (iii) design - in collaboration with healthcare workers, HAITooL was designed to assist physicians and infection control teams to monitor/control antibiotic use and antibiotic resistance; (iv) HAITooL implementation; and (v) evaluation of HAITooL in ASP implementation. HAITool aggregates all patient related data (vital signs, microbiology and pharmacy data) in a single information system and enables integrated views of all information. HAITooL, has two big modules: (i) Monitoring, which enables real-time monitoring of patient's clinical situation, antibiotic consumption, and rates of infection by antibiotic resistant bacteria; and (ii) Antibiotic Prescription Decision Support System, which informs physicians about the accuracy of antibiotic prescription, providing timely and appropriate information on antibiotic use.

**Conclusion:** The collaborative process between healthcare workers and researchers enables the co-design and implementation in line with organizational processes, of an information system which facilitates local epidemiological surveillance, allows the implementation of interventions to improve antibiotics, improves a timely and adequate antibiotic prescription, and facilitates the assessment of situation, surveillance and reporting of results, establishing itself as an essential tool for ASP implementation.

**Disclosure of Interest**: None Declared