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Antibiotic Self-Medication: prevalence and behavior description

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Background: Antibiotics are highly prescribed drugs as treatment of usual diseases such as respiratory or urinary tract infections.

Excessive use of antibiotics fastens the emergence of antibiotic resistance, increasing morbidity, mortality, hospitalizations, and costs, due difficulties in infections treatments.

Unappropriated prescriptions and self-medication are especially high in South America.

This study aims to estimate the prevalence of self-medication with antibiotics and describe behavioral aspects in the population.

Methods & Materials: Observational study. Closed-answer surveys was preformed to randomly selected people in La Plata city (Buenos Aires) on September 2017.

Personal, behavioral, source of information and supply, side effects and risks of self-medication questions was asked.

A database was created. Statistical analysis was made

Results: 421 surveys were preformed. 230 (55%) were women. Mean age: 36.1. Social security: 73% (308). Education: highschool or higher 88% (370).

Self-medication with antibiotics prevalence was 66% (277), being higher in under 35 years (RR 2.56 CI= 1.69-3.87 p < 0.001). 18% admitted to do it at least once a year.

Pharyngeal infections was the main reason 68% (189), urinary tract infections 15% (42) and odontological infections 10% (29).

Knowing the disease and its treatment justified the use in 51% (142), medical assesment considered unnecessary 24% (66), no time to consult 20% (55)

Antibiotics acquired in pharmacies: 76% (210).

Information Provider: Relatives and friends 48% (133), pharmacist 25% (68), nurses 10% (28).

Therapeutic discontinuation: after clinical improvement 39% (109), as set in leaflet 25% (68), when advised 22% (61), after finishing the tablets 14% (39).

If symptoms persist, 88% (243) attends medical visit.

95% (264) reported desired effect after treatment.

91% (251) never suffered adverse effects.

66% (279) considered antibiotics as special drugs

78% (330) considered self-medication dangerous.

65% (274) never received information about antimicrobial resistance.

Conclusion: High rate of self-medication with antibiotics is observed, mainly in under 35 years.

Unreliable sources of information, and an acquisition without medical prescription are asociated.

Reasons for self-consumption and length of treatments are based on cultural beliefs, not considering the medical prescription as necessary, despite awareness about risks.

Behavioral information allows to promote actions aimed to rational use of antibiotics. in the community

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GIS based software technology assistance for effective control of malaria in Mangaluru, India

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Background: Mangaluru is malaria endemic costal city with Annual Parasitic incidence (API) ranging between 32/1000 population (2006) to 18 (2014). In spite of implementation of control programme and efforts, the disease is far from controlled. Breaking transmission cycle is crucial in controlling malarial disease. A web based android software for surveillance/program implementation was designed and implemented for aiding control of malaria in Mangaluru.

An inter professional project of medical and technology architects, Malaria Control System (MCS) is a specialized GIS based software platform for implementation, monitoring and evaluation of malaria control activities. MCS instantaneously connects people in malaria control with transfer of information towards treatment compliance, surveillance, anti-mosquito measures and evaluation. Web-based application is for hospitals and laboratories to log on and report incidences soon after diagnosis. GIS based data is captured transferred to multipurpose workers (MPW) for house visits within 48 hrs for actions within defined time frame.

Methods & Materials: MCS Software was introduced in existing health system in October 2015 and is operational for past 24 months. Real-time digital data was analyzed to study impact during 1st and 2nd year after implementation and compared with that of previous year (PY). Reporting of cases, number of house visits, and closure of cases after confirming parasite clearance, numbers of sources identified/sources closed or eliminated were analyzed to assess implementation of control measures. API, annual blood examination rate (ABER) & slide positivity rates (SPR) were analyzed and compared to assess disease control.

Results: Reporting of cases within 72 hrs from point of diagnosis was 80%. House visits were incidence centric (as against random visits previously) and complete treatment with evidence of parasite clearance was documented in 89% and 93% (1st & 2nd yr). Breeding was identified in 11,337 visits out of 1,95,009 visits by MPW (1st year); 10545 visits out of 1,76,398 visits (2nd year) with photo-evidences, followed by elimination in over 92% in both years. Number of cases reported decreased from 12614 (1st yr) to 7181 (2nd yr). Progressive reduction in API (16/18/8 in previous year/1st/2nd yr); SPR (10.3/8.2/3.7 in PY/1st/2nd yr) was documented.

Conclusion: By using software technology, instantaneous transfer of information, and networking ensure's effective implementation of malaria control program to break local transmission cycle.

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