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Rational Prescription of the Essential Drugs in the Communautary Academic Health Center of Banconi in 2017

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Abstract

Summary: Inappropriate and abusive use of medicines results in considerable harm to the patient.

Objective: To improve the quality of essential drug prescribing at the Banconi community health center.

Methods and Materials: It consisted of tapping prescription stubs from the months of January and February 2017. This was an action research type study.

Results: The average number of medications prescribed per prescription was four. The average cost of a prescription was 3455 FCFA (5.3 Euros) and ninety percent of the prescriptions checked contained generic drugs.

Conclusion: The upgrading of prescribers allowed for the development of rational drug prescribing indicators at the Banconi University Community Health Center.

Keywords: rational prescribing/essential drugs.

Introduction

According to World Health Organization (WHO), rational use of medicines is to prescribe the most appropriate product, obtained in time and at an affordable price for all, delivered correctly and administered in the appropriate dosage and for an appropriate period of time. (WHO, 1985)[1]. A major step towards rational use of medicines was taken in 1977 with the creation by WHO of the first model list of essential medicines to help countries formulate their own national

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lists. In 1985, the current definition of rational use was agreed upon at an international conference in Kenya. In 1989, the International Network for the Rational Use of Drugs (INRUD) was founded to carry out multidisciplinary intervention research projects to promote more rational use of medicines. A review of all published intervention studies, with appropriate study design, was presented at the 1st International Conference on the Rational Use of Medicines (ICIUM) in Thailand in 1997[1]. Rational use of medicines implies that patients receive medicines that are appropriate to their clinical condition, in doses that are appropriate to their individual needs, for an adequate period of time and at the lowest cost to themselves and their community [1].

The successive Steps to Rational Prescribing are:

- Identify the patient's problem
- Specify the therapeutic objective
- Ensure the suitability of the drug of choice
- Initiate treatment
- Provide information, instructions and warnings
- Monitor and eventually discontinue treatment [2].

The WHO estimates that more than half of all medicines are prescribed, distributed or sold inappropriately. At the same time, about one-third of the world's population lacks access to essential medicines. Common types of irrational drug use are:

- The use of too many medicines per patient (polypharmacy);
- Inappropriate use of antimicrobials, often in inappropriate dosages for the treatment of non-microbial infections;

- Inappropriate use of inject table products when oral formulations would be more appropriate;
- Non-compliance of prescribing practices with therapeutic guidelines;

- Inappropriate and frequent self-medication of drugs available only on prescription [3].

Since 1998, Mali has developed and adopted its National Pharmaceutical Policy (NPP), which covers all aspects of the sector and whose objective was to make quality essential medicines geographically, physically and financially accessible to the population. The revision of this pharmaceutical policy document was conducted in 2009 to adapt it to the current challenges in terms of access and rational use of medicines and other quality products. Medicines have a strategic place in health services for at least two reasons. On the one hand, they are used as a catalyst for the use of health facilities in a country where the population does not have the first option of going to a health center in case of illness. On the other hand, they are often the support for the financing of primary health care with the cost recovery system [4]. Also the master plan for the implementation of this revised NPP was developed in 2010. The revised NPP document and its master plan were adopted in 2012. Its overall objective is to ensure equitable access to quality essential medicines for the population and to promote their rational use. The improvement of prescribing and dispensing practices through the training of prescribers and distributors of Essential Generic Medicines (EGMs) and the development of an information

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system for prescribers, distributors and the public on the use of medicines for better use are essential links in this NPP. Lack of access to medicines and/or inappropriate dosages lead to serious morbidity and mortality problems, particularly in relation to childhood infections and chronic diseases such as hypertension, diabetes, epilepsy and mental disorders. Finally, irrational misuse of drugs can stimulate inappropriate patient demand. This can lead to reduced access to medicines due to lack of supply and loss of patient confidence in the health care system.

Irrational use of medicines is a major global problem especially in our low income country. In addition, overuse of antimicrobials leads to increased microbial resistance. Non-sterile injections increase the transmission of hepatitis, HIV/AIDS and other blood-borne diseases.

The quality of drug prescribing at the front line of health care suffers from many shortcomings due to the fact that prescribers are not always qualified agents or, even if they are, do not often apply the rules of drug prescribing. During a supervision carried out at the Banconi community health center by lecturers from the Department of Family Medicine at the Faculty of Medicine of Mali, it was noted that the rules of rational prescription of essential medicines are insufficiently respected by some prescribers. This is the reason for this study.

Objective

To improve the quality of essential drug prescriptions at the Banconi community health center.

Material and Method

This was a prospective action research study to promote the quality of essential drug prescribing at the Banconi community and university health center.

The procedure consisted of collecting data from prescriptions for the first two months of 2017, analyzing them to measure certain indicators of rational prescription of medicines. All the prescriptions for the first two months of 2017 deposited at the drug sales depot of the health center were analyzed, identified some insufficiency using the pre-established framework for this study, but in addition to that, all the prescribers, the members of the community health association, and the drug sellers were informed of the study before beginning to analyze the prescription samples. The results of the indicators measured were presented to the prescribers and the actors were upgraded to improve the quality of the prescription of essential medicines. Finally, an evaluation of the impact of the action plan adopted to improve the quality of prescribing was carried out.

Results

Results before the upgrade

- The average number of drugs prescribed per prescription was 4;
- The average cost of a prescription was 3455 FCFA or 5.3 Euros;
- The average number of antibiotics prescribed per prescription was 2;
- The average number of antibiotics prescribed per prescription was 2; All the prescription forms checked had the dosage of the drugs;

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- 83% of the prescriptions did not indicate the duration of use of the drugs;
- Graph I shows that 64% of the prescription stubs were marked with the prescriber's grade;
- Graph II identifies that 90% of the prescription stubs checked contained generic drugs.

Results after the upgrade

- The average cost of a prescription was 2565 CFA francs or 3.9 Euros;
- The average number of drugs prescribed per prescription was 4;
- The average number of drugs prescribed per prescription was 4; The prescription stubs checked showed that 92% of the prescriptions contained generics;
- The average number of antibiotics prescribed per prescription was 1;
- All (100%) of the prescription stubs checked had the duration of use of the medication;
- All (100%) of the prescription stubs checked had the prescriber's grade.

Discussion

The study improved the quality of essential drug prescribing at the Banconi Community and University Health Center. The average number of drugs prescribed per prescription was 4. This result is higher than that of the November 2003 report on the evaluation of the pharmaceutical sector in Senegal, which found 2.4 drugs prescribed per medical visit [5], and that of Dr. Yaya Coulibaly, which found an average of 3.0±1.3 and 2.4±1.2 drugs prescribed per prescription respectively in the public and private sectors [4]. Thus, a study in primary health centers in Iran found 3.4 drugs per prescription [6], in Mali in rural areas in the public sector in 2009, 3.4 drugs were prescribed per prescription [7] and in Niger 3 drugs [8].

Dr. Yaya Coulibaly [4] found that the average cost of a prescription was lower in the public sector (3415.3 CFA francs or 5.21 euros) than in the private sector (7111.2 CFA francs or 10.85 euros) and our study resulted in 3455 CFA francs or 5.3 euros. This shows that one of the basic criteria for a good prescription in a community setting has not been followed.

It was found that the average number of antibiotics per prescription was 2: one element of the criteria for good prescribing was not respected.

We found that 35% of the prescriptions had at least one injectable drug, contrary to the results of the report on the evaluation of the pharmaceutical sector in Senegal, which found 26% [5] and Dr. Yaya Coulibaly [4] found that the public sector prescribed 33.7% of injectables compared to 16.2% in the private sector. This result does not meet the standards of rational drug prescription.

All the prescriptions we checked, i.e. 100% of them, contained the dosage of the drugs prescribed; however, 83% of the prescriptions did not indicate the duration of use of the drugs and 64% contained the prescriber's grade. Dr. Yaya Coulibaly [4] found that generic drugs are commonly used in the public sector but much less so in the private sector. The survey report on the evaluation of the pharmaceutical sector in Senegal [5] showed that more than 75% of the drugs prescribed are INNs, but we found that 90% of the prescription forms checked contained generic drugs. The ideal value of the indicator is 100%. This indicator reflects compliance with national guidelines, as drugs are listed in INN on the flowcharts. In our study, before the

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upgrading of prescribers, the average cost of a prescription was 3455 FCFA (5.3 Euros), and 90% of the prescriptions checked were generic drugs. After upgrading, the average cost of the drugs was 2565 CFA francs (3.9 Euros) and 92% of the prescription forms checked contained generic drugs.

Conclusion

The rational prescription of essential drugs at the Banconi University Community Health Center suffered from certain difficulties and following the upgrading of prescribers, the quality of drug prescription was improved.

Conflict of interest declaration

There was no conflict of interest either directly or indirectly during the development of the protocol for this action research study and during its implementation.

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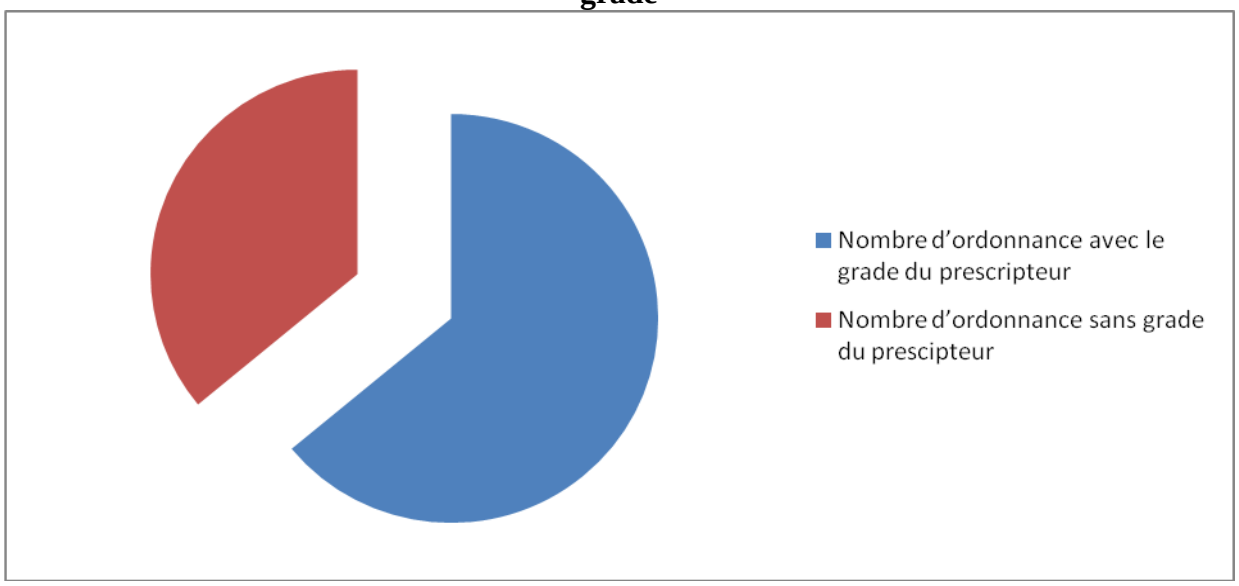
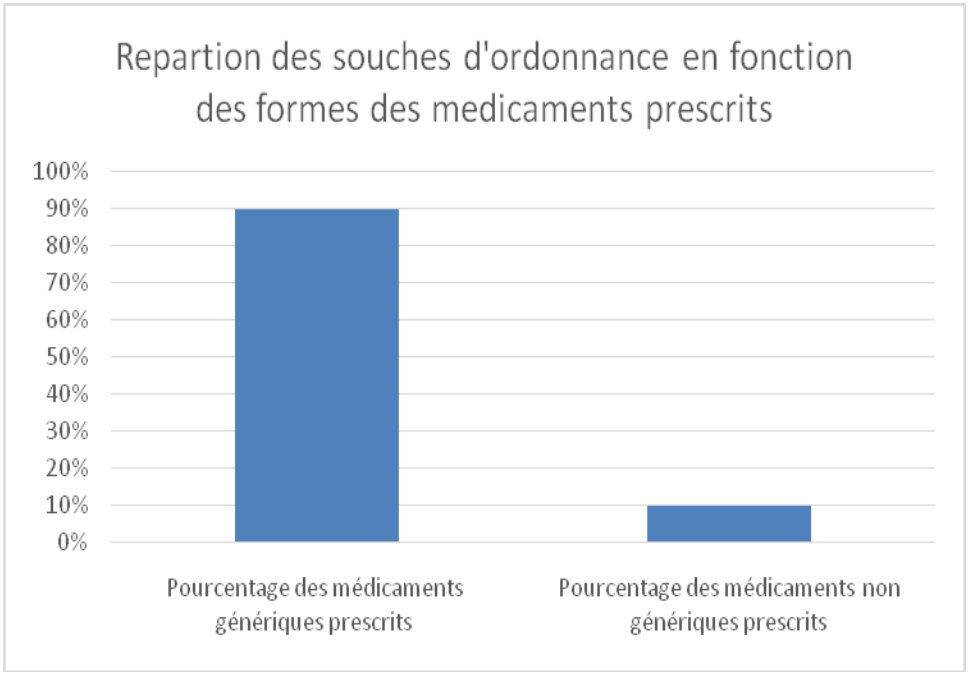
Graphic I: distribution of prescriptions according to the existence of the prescriber's grade



The prescriber's grade was written on 64% of the prescription stubs.

Graph II: Distribution of prescription strains according to drugs prescribed in generic names.



Generic drugs were prescribed on 90% of prescription stumps.