

ENCOURAGE APPROPRIATE USE OF PEDIATRIC ANTIRETROVIRALS WITH A DEMONSTRATION KIT IN PHARMACIES RESULTS 18 MONTHS AFTER KIT WAS MADE AVAILABLE IN 2 HIV/AIDS PEDIATRIC TREATMENT CENTERS IN NIAMEY, NIGER

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ABSTRACT

PROBLEM STATEMENT:
For correct use of pediatric drugs and regular adaptation of doses to the child's weight, one of the parents must fully understand the situation, particularly in ART management because of the risk of developing resistances if dosage is not respected. Moreover in Resource Limited Setting countries where school enrollment rate is low, comprehension aids are necessary. Therefore, Solthis provided pediatric demonstration kits to healthcare centers that it supports in Niger.

AIMS:
Evaluate the availability and use of these pediatric demonstration kits in 2 pediatric care hospitals after 18 months and identify possible improvements that could be made.

DESIGN:
Intervention descriptive study

SETTING:
This study took place in pharmacies of 2 healthcare centers from the Public Sector which manage children: one national & one provincial - Niamey National Hospital (HNN), regional hospital Center Poudrière.

INTERVENTION(S):
The demonstration kits included empty bottles of several common ARV and a chart of pediatric dosages. These were made available to pharmacies in April 2009. Dispensers were trained to use them. During ARV dispensation, kit use was targeted for parents or tutors with comprehension difficulties in two steps; first, the pharmacist showed the mother how to use the kit. Then, the mother used it herself to make sure that she had understood.

OUTCOME MEASURE(S):
Survey questionnaire: evaluation of kit availability, understanding of kit by concerned healthcare providers, actual use and analysis of the problems encountered during use.

RESULTS:
Both of the centers had a demonstration kit, and most of the dispensing pharmacists in these centers knew that it existed. However, although dispensing pharmacists provided some explanation about correct treatment use to the tutor/parent present, the kits were very rarely used. Analysis of why the kit was not used showed that lack of time by users was the primary cause. Moreover certain people felt that a demonstration was not useful and that providing an explanation was enough. For others, the kit would have been more appropriate in the pediatric unit than in the pharmacy. Finally, the kit was not used to let the parent practice and learn.

CONCLUSIONS:

- This study shows that the actors in the centers we evaluated were sensitive to the question of correct use of pediatric treatment but don't used the kit. Therefore, like any learning situation, practice is necessary ensuring correct use implies that dispensing pharmacists must take the time necessary to make sure that the person accompanying the child has acquired the necessary know-how.
- Besides demonstrating the use of medicine this kit should be part of an integrated therapeutic education approach, by adding for example some pictures.
- The use of this kit could be extended to nurses, doctors, educators.
- Finally these problems are changing as pills become available for pediatric use. Nevertheless correct use of these forms of treatment is also essential and attention should be paid to this.

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KEY WORDS
HIV/AIDS, pediatric medicines, adherence, appropriate use, pharmacy

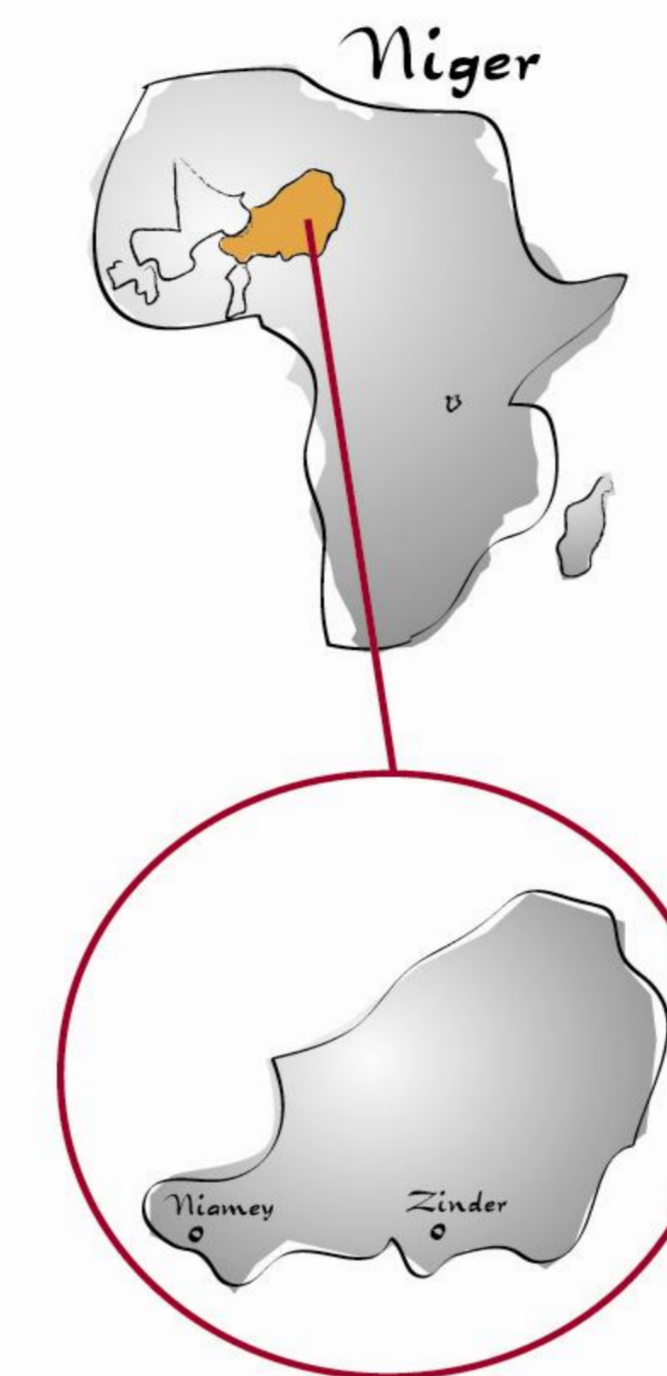
INTRODUCTION / BACKGROUND

For correct use of pediatric drugs and regular adaptation of doses to the child's weight, one of the parents must fully understand the situation, particularly in ART management because of the risk of developing resistances if dosage is not respected. Moreover in Resource Limited Setting countries where school enrollment rate is low, comprehension aids are necessary.

- Therefore, Solthis provided pediatric demonstration kits to healthcare centers that it supports in Niger.
- The demonstration kits included empty bottles of several common ARV and a chart of pediatric dosages.
- These were made available to pharmacies in April 2009 and dispensers were trained to use them.
- During ARV dispensation, kit use was targeted for parents or tutors with comprehension difficulties in two steps;
 - ✓ first, the pharmacist showed the mother how to use the kit
 - ✓ then, the mother used it herself to make sure that she had understood.

OBJECTIVES

Evaluate the availability and use of these pediatric demonstration kits in 2 pediatric care hospitals after 18 months and identify possible improvements that could be made



METHODS

- Intervention descriptive study
- This study took place in pharmacies of 2 healthcare centers from the Public Sector in Niamey which manage children:
 - one national: Niamey National Hospital (HNN)
 - one provincial: Poudrière Regional Hospital
- Author interviewed dispensers who tried to answer a list of questions prepared in advance and focused on:
 - valuation of kit availability
 - understanding of kit by concerned healthcare providers
 - analysis of contexts of use
 - analysis of the problems encountered during use
 - potential reasons for not using
 - elements and enhancements that will facilitate the use in the future
 - opportunities and new contexts of use

RESULTS

- Both of the centers had a demonstration kit, and most of the dispensing pharmacists in these centers knew that it existed
- However, although dispensing pharmacists provided some explanation about correct treatment use to the tutor/parent present, the kits were very rarely used. The main reasons were:
 - Lack of time by users was the primary cause
 - Sometimes, dispensers did not remember the possibility to use this kit to facilitate their explanation
 - Certain people felt that a demonstration was not useful and that providing an explanation was enough
 - For others, the kit would have been more appropriate in the pediatric unit than in the pharmacy
 - The kit was not used to let the parent practice and learn
- Nevertheless, we noted that dispensers have chosen another way to explain how to take the correct dosage using the product that will be dispensed. In fact, in the most of cases:
 - They added the dosage on the packaging
 - They drew a line marker on the graduation scale on the bottle's measuring cap
 - They sometimes tried to validate the parent comprehension by the reformulation of their understanding.
- Despite of these interventions, and in regards with the quantity of delivered information, it seems to be difficult to evaluate parent's appropriation particularly in a context of illiteracy.

IMPLICATION AND CONCLUSIONS

- This study shows that the actors in the centers we evaluated were sensitive to the question of correct use of pediatric treatment but don't used the kit. Dispensers highlighted the limit in their actual practice:
 - the parent's difficulty to express misunderstanding
 - they encounter problems in daily context particularly because of a severe lack of time
- Therefore, like any learning situation, practice is necessary:
 - Ensuring correct use implies that dispensing pharmacists must take the time necessary to make sure that the person accompanying the child has acquired the necessary know-how.
 - Besides demonstrating the use of medicine this kit should be part of an integrated therapeutic education approach, by adding for example some pictures and defining educational objectives
- Dispensers agreed that the kit could be useful particularly during initiation of treatment to bolster delivered key messages and confirm parent's understanding; demonstration could be done at two levels: in the pediatric unit and after in the pharmacy. More widely, the use of this kit could be also extended to nurses, doctors, educators and to over drugs beyond ARV's
- Finally these problems of use of oral solutions are changing as pills become available for pediatric use. Nevertheless, despite this breathtaking advance, correct use of these forms of treatment is also essential and attention should be paid to this.