DEVELOPMENT OF A TOOL FOR SIMPLE VISUALIZATION OF PERIODS OF ARV THERAPY AVAILABILITY IN A CONTEXT OF EXPANDING TREATMENT COVERAGE

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**ABSTRACT**

The increase in the number of patients on ART results in an increase in the supplies of ARV needed as well as in the complexity of evaluating coverage of needs. This lack of visibility makes it difficult to anticipate shortages and compromises:
- the quality of care and adherence to treatment by the patients
- the implementation of emergency procurement mechanisms

**OBJECTIVES**

Develop a simple tool to measure the period of availability of ARV supplies in a structure, a region, or a country, taking into account the increase in ARV needs associated with expanding treatment coverage, and to test it in Guinea and Niger.

**RESULTS**

- The use of this tool in Niger and Guinea allowed national partners to visualize the periods of ARV availability, to share this information easily, and to speed up ongoing procurement orders.
- Although this model is simple to use, a minimum of quality data are necessary.

**IMPLICATION AND CONCLUSIONS**

- By its graphic representation, this tool makes it possible to have a rapid clear image of periods of ARV coverage and of the number of patients concerned by each drug, within the context of extending treatment. It also makes it possible to notify all the actors involved in case of impending shortages, or oversupply, which was possible in Niger and Guinea.
- Nevertheless:
  - precision of the results is correlated to the quality of data
  - to act effectively on stock-outs or overstocks, it is essential:
    - to regularly update this tool
    - to act at different stages of the procurement and supply management cycle (accelerate ongoing procurement orders, emergency procurement)
    - to anticipate and to be proactive
  - To optimize supply management of HIV medical products: opportunistic infections drugs, reagents and diagnostics, similar tools have been developed by Solthis.

**METHODS**

- Intervention descriptive study
  - This intervention was conducted in collaboration with National HIV/AIDS Control Program from Niger and Guinea
  - For each molecule the period of availability \( n \) can be determined from 3 parameters:
    - monthly needs for treatment initiation \( a \)
    - needs for patients already receiving treatment, determined with either morbidity or AMC data \( b \)
    - available stock \( AS \)
  - The resulting equation is
    \[
    n = \left[ -\frac{a+b+n}{2AS} \right] \frac{1}{2a} \]
  - Tests were performed to validate the results

**Introduction**

The availability of ARV supplies is critical to guarantee access to ART and thus reduce mortality associated with HIV/AIDS. Two examples of visual tools have been developed by the Partnership for Supply Chain Management (PSCM) project to help forecast availability (Solthis).

**Method**

A new tool has been developed to forecast the period of availability of ARV supplies in a structure, a region, or a country, extending the context of the emergency procurement approach. It is a simple tool that can be used at a national level in Guinea and Niger.

**Results**

The use of this tool in Niger and Guinea allowed national partners to visualize the periods of ARV availability, to share this information easily, and to speed up ongoing procurement orders.

Although this model is simple to use, a minimum of quality data are necessary to optimize the precision of the results. The precision of the results is correlated to the quality of data, which explains why the tool is most effective when used at a national level in Guinea and Niger.

**Conclusion**

This tool has been used at a national level in Guinea and Niger with National HIV AIDS Control Program to help decision:
- Number of patients concerned
- Stock-out beginning estimated date
- Estimated delivery date for the ordered quantity

This tool has been use at a national level in Guinea and Niger with National HIV AIDS Control Program

**Fig. 1: example of visualization of availabilities of central & regional stocks of solid forms**

**Fig. 2: example of visualization of availabilities of central & regional stocks of oral solutions**

**Fig. 3: example of visualization of availabilities of central & regional stocks & ordered quantities of solid forms**