# Improving child health through informed policy decisions and targeted interventions to strengthen medicine management in the community: the example of Senegal

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# Background

To improve the management of medicines for child health, a situational analysis provides the evidence needed to guide sensible policy making and intervention development. In Senegal, results from a Community-Level Drug Management for Childhood Illness (C-DMCI) assessment influenced policy and programming.

# Assessment Methodology

The Rational Pharmaceutical Management (RPM) Plus Program surveyed 263 medicine providers and 600 caregivers in the Kaolack and Thiès districts in Senegal in 2002, using its indicator-based C-DMCI assessment tool. The assessment tool includes two complementary questionnaires; both evaluate—

- 1. Knowledge, services, and availability of products of medicine providers in the public and private sectors
- 2. Medicine use practices of household caregivers of recently sick children under five years of age

# **Assessment Findings**

Did caregivers recognize children's symptoms?

- Most caregivers (90 percent of the 76 cases), who had children with fast breathing considered it to be "very dangerous."
- All of the 10 caregivers whose children recently suffered convulsions considered it to be "very dangerous."

Percentage of Household Respondents Reporting Children with Symptoms in Two Districts (N = 600)





- promptly.

### Did caregivers obtain appropriate medicines? From where?

- percent).

### Percentage of Public and Private Sector Providers with Co-trimoxazole Tablets and Syrup Available (N = 263)









A mother is asked uestions about

Did caregivers seek timely care from an appropriate source? • Most caregivers took appropriate action, but not always

• Most caregivers (79 percent) appropriately sought care outside the home for fast breathing or convulsions.

• Caregivers sought care within 24 hours for convulsions, but delayed treatment for pneumonia—only 28 percent sought care on the same day.

• When fever was treated, it occurred in the recommended time frame (within 24–48 hours).

• Caregivers obtained medicines mainly from health facilities (34 percent) and private pharmacies (41

• Availability of chloroquine (first-line antimalarial at the time of the survey) and co-trimoxazole (first-line antibiotic for pneumonia) tablets was generally good in all outlets—including in the informal private sector. Syrup forms were less widely available.

• Availability of oral rehydration salts (ORS) was poor in the public sector and nonexistent in the private sector.

Were caregivers and providers aware of appropriate treatment practices?

- Awareness or recognition of ORS among caregivers was low.
- Awareness of appropriate practices by providers was low for key illnesses, especially in the private sector. When 60 pharmacy providers were asked what medicines they would recommend—
- 20 percent recommended the national standard treatment for acute respiratory illness (nonpneumonia), and 43 percent inappropriately recommended treatment with antibiotics.
- None recommended the first line-treatment for pneumonia, and only 17 percent recommended a treatment with any antibiotic, which is required for pneumonia.

### Percentage of Public and Private Sector Providers with ORS Available (N = 263)



Did the caregivers use the appropriate medicines correctly in the home?

- Overall, children were not given the appropriate medicine for their symptoms at home—
- **57 percent** received chloroquine (first-line antimalarial at the time of the survey) for fever
- **19 percent** received co-trimoxazole for pneumonia - **19 percent** received ORS for uncomplicated diarrhea - 22 percent with cough had been given unnecessary
- antibiotics
- 25 percent received unnecessary antibiotics for nonbloody diarrhea
- Few children were given the medicines correctly (correct dose, frequency, and duration) by the caregiver—
- **8 percent** were given chloroquine correctly
- **18 percent** were given co-trimoxazole correctly
- Health care providers and drug sellers often gave insufficient or incorrect information on medicine administration, if they gave any information at all

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### Providers Reporting They Label Medicines with Dose, Frequency, and Duration of Treatment (N = 253)



## **Policy Changes**

The C-DCMI assessment in Senegal identified problems in community-level management of medicines for childhood illnesses that shaped national policies and guided interventions targeting private pharmacies and community health providers.

**Identified Problem:** Antibiotics are widely available and used inappropriately in the community, especially for pneumonia.

**Change:** In 2004, the government introduced a policy permitting community health workers with special training and close supervision to treat cases of childhood pneumonia with co-trimoxazole.

- In operational research conducted in 2003 by various partners and the Ministry of Health (MoH) of Senegal, 113 community health workers from four districts received a threeday training in pneumonia case management, periodic one-day refreshers, ongoing supervision, and training in store management.
- Evaluation showed that under direct observation nearly 90 percent of workers correctly evaluated, classified, and treated acute respiratory illnesses.
- Post-training records showed that **95 percent** of pneumonia cases were classified correctly, 97 percent were treated correctly, and 69 percent of severe cases were appropriately referred.
- There were no stock-outs of co-trimoxazole.
- Nearly twice as many pneumonia cases were treated in intervention areas than in control districts.
- The MoH decided to extend the project nationwide.



Role-playing is part of the private sector pharmacy sales

**Identified Problem:** Caregivers frequently bought inappropriate treatment from private pharmacies.

**Change:** Private sector providers were included in child health interventions; the MoH and RPM Plus designed a training and supervision package for sales assistants in private pharmacies to improve their management of childhood illnesses.

- The association of private pharmacists is collaborating with the government's directorate of pharmacy in the trainings and in creating a mechanism for continued supervision.
- Private pharmacists conducted trainings in 5 districts outside the capital; **91 percent** of the 320 targeted sales assistants completed training.
- Initial evaluation indicates that sales assistants' knowledge of good dispensing practices increased by **30 percent** post-training.

Result; Importation restrictions kept private pharmacies from obtaining ORS.

Change: In 2003, a newly instituted policy permitted private wholesalers to purchase ORS and other generic medicines from the public sector source (the central medical stores), thereby allowing private pharmacies to stock the medicines.

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