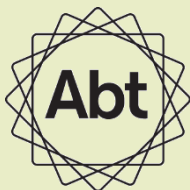


Marketing Zinc for Childhood Diarrhea Treatment: Results from household and provider surveys in Benin and Uganda

Vicki MacDonald, MPH and Emily Sanders, MSc
Abt Associates Inc

June 27, 2012



SHOPS is funded by the U.S. Agency for International Development.
Abt Associates leads the project in collaboration with
Banyan Global
Jhpiego
Marie Stopes International
Monitor Group
O'Hanlon Health Consulting

Background

- In 2007 the POUZN project, implemented by Abt Associates Inc. and PSI, collaborated with the government of Benin to introduce OraselZinc into the marketplace through private sector channels. Orasel Zinc is a diarrhea treatment kit containing ten 20 mg tablets of zinc sulfate and two sachets of orange flavored low osmolarity ORS. It is the only zinc product for diarrhea treatment available in Benin.
- In Uganda, the AFFORD project, implemented by Johns Hopkins Center for Communication Programs in partnership with the Uganda Health Marketing Group (UHMG), launched the Zinkid (zinc tablets) and Restors (ORS sachets) products for diarrhea treatment in 45 AFFORD project districts. The government of Uganda offers a separate zinc product supplied by UNICEF for public facilities.



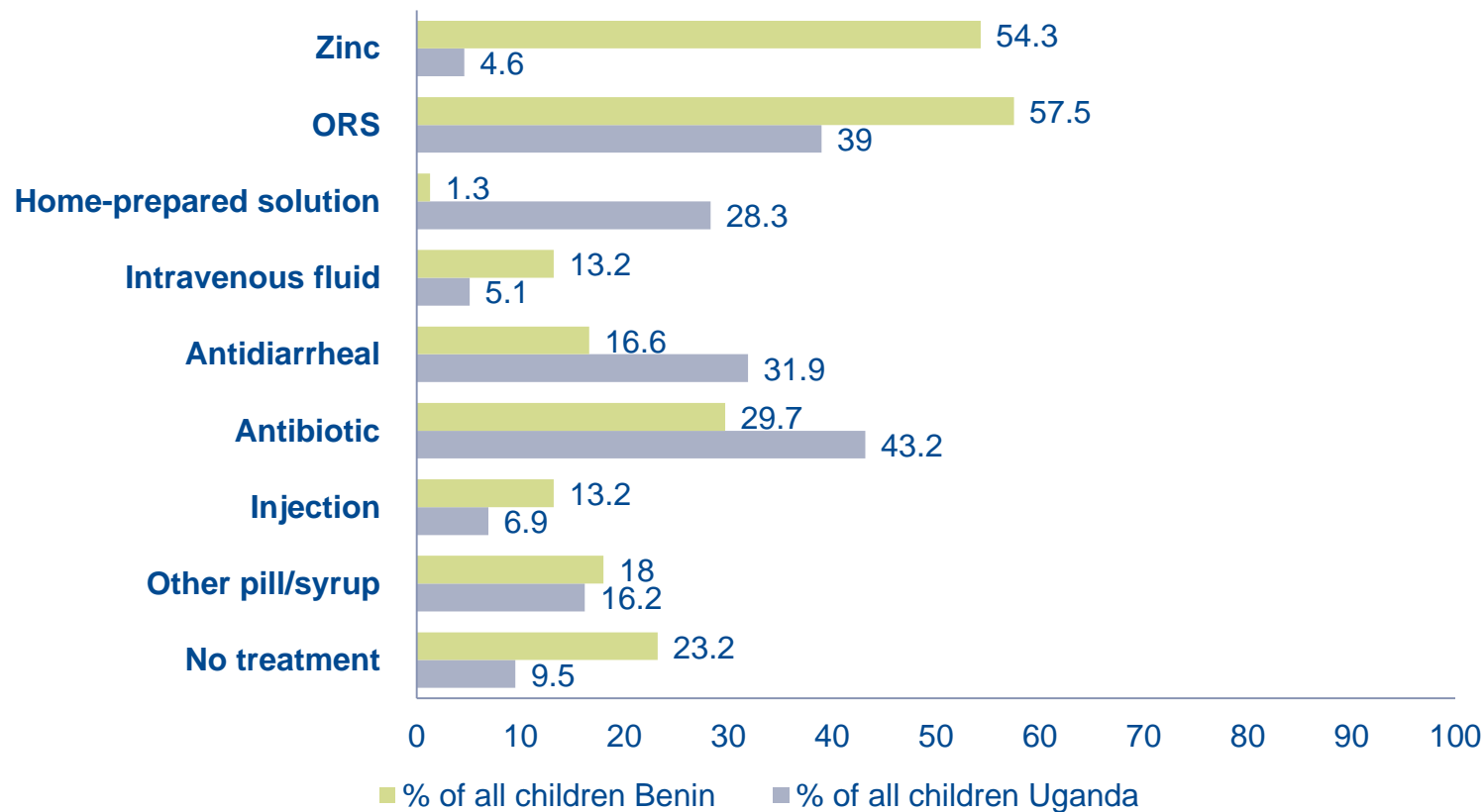
Methodology

- Caregiver survey – multi-stage sampling approach
 - In Benin, survey carried out in 8 communes, distributed among the 7 project departments while in Uganda, survey was carried out in a sample of 20 districts randomly selected from the 45 UHMG project districts.
 - 392 caregivers were selected from 3,196 sampled households in Benin and 803 out of 3,425 caregivers sampled were selected in Uganda. Participants were selected through door-to-door screening, data were collected on one child under five (aged 0-59 months in Benin and 6-59 months in Uganda) with diarrhea in the 2 weeks preceding the survey.
- Provider survey
 - Conducted in same areas as household surveys.
 - Convenience samples of providers were selected. In Benin, a total of 60 public and private sector providers were interviewed (30 pharmacy agents and 30 nurses/midwives). In Uganda, 71 public and private sector providers were interviewed (44 doctors/clinical officers/nurses and 27 chemists/pharmacists).

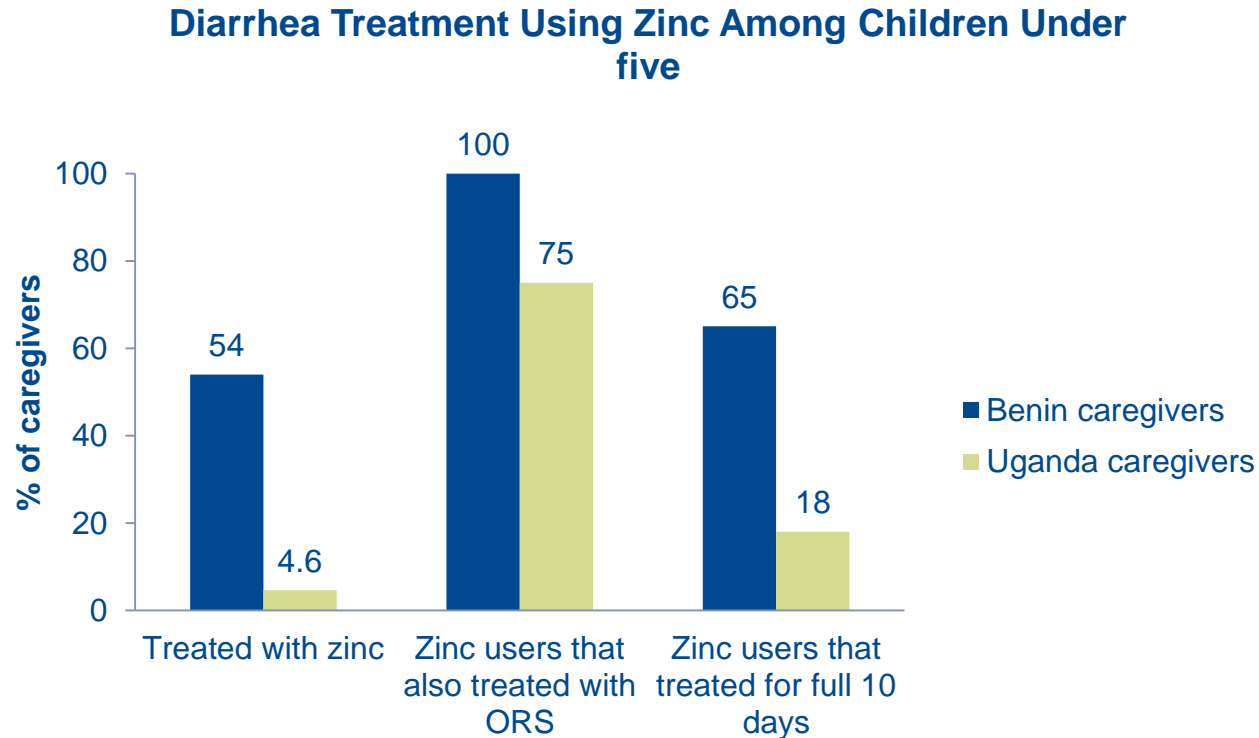
Caregiver Knowledge, Attitudes and Practices



Zinc use rates were substantially different in Benin and Uganda.

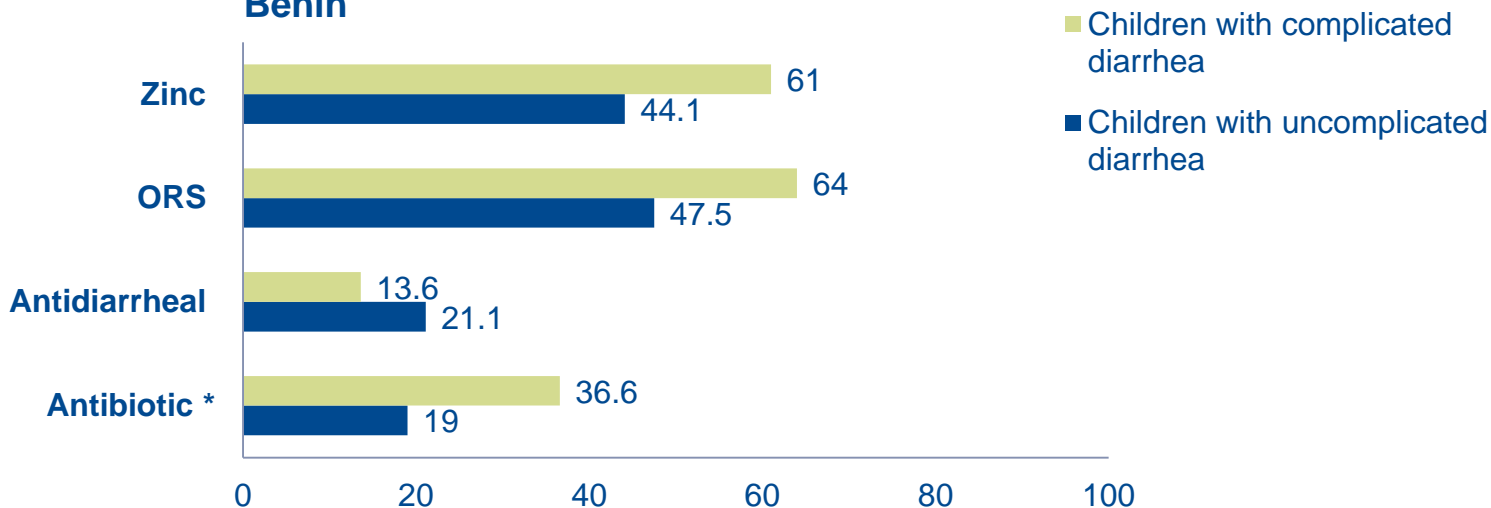


Correct use of zinc with ORS was high in both countries

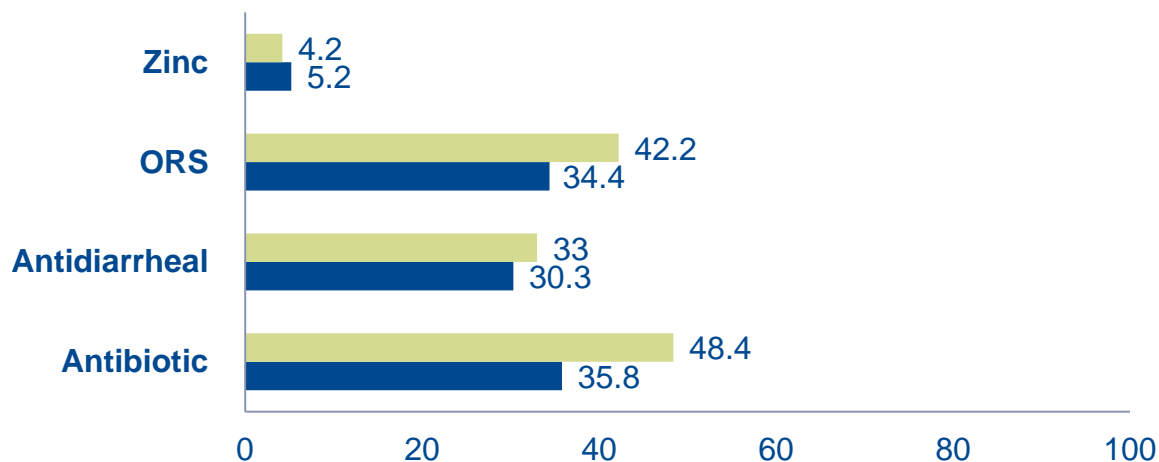


Inappropriate treatments were widely used, and many times given in conjunction with zinc

Benin



Uganda



Respondents may report multiple choices so the sum may exceed 100%; Complicated diarrhea is defined as diarrhea with fever, a bloody stool, or both.

*Statistically significant at $p < 0.05$

Health providers in both the public and private sectors are main sources of zinc and play an important role in encouraging initial use of zinc.

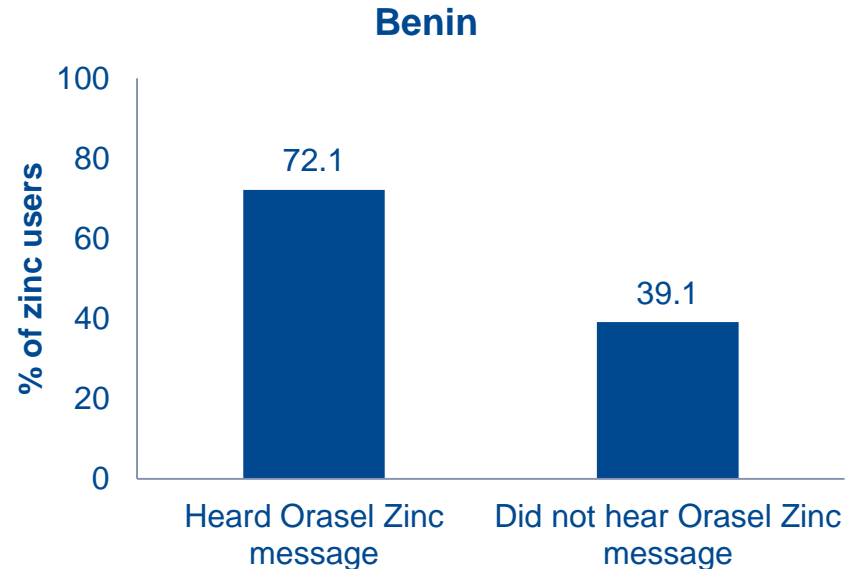
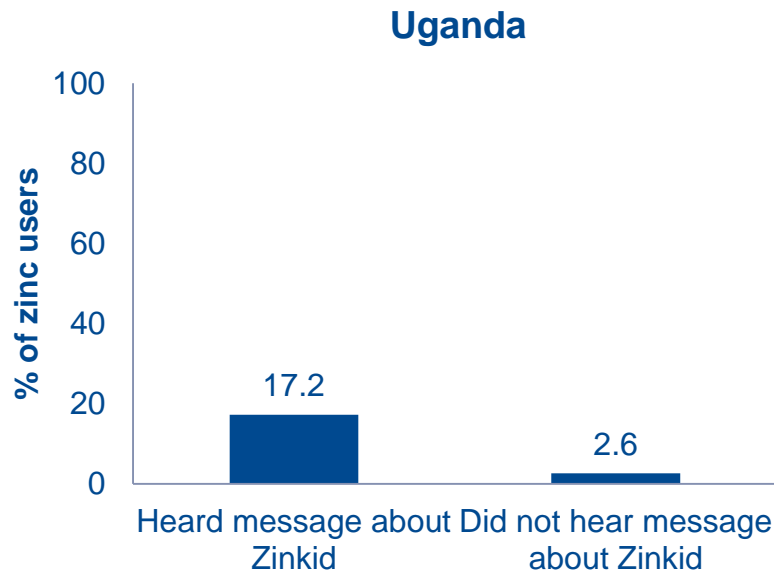
- Public health clinics were the primary source of zinc (43 percent in Uganda and 56 percent in Benin). The private sector was the second largest source: in Benin 37 percent of caregivers received zinc from pharmacies or private clinics/sellers, while in Uganda 35 percent of caregivers received zinc from private clinics/sellers.
- Many caregivers who treated with zinc were first time users (70 percent in Uganda and 42 percent in Benin). Most first-time zinc users in both countries said that they used zinc because it was recommended by a provider (85 percent in Uganda and 67 percent in Benin).

Zinc use was associated with better perceptions of price and access to products

% agreeing with statement	Uganda		Benin	
	% of zinc users	% of non-users of zinc	% of zinc users	% of non-users of zinc
Drug stores nearby always have zinc for sale	29.1	23.2	56.9*	22.8*
Zinc treatments are difficult to get around here	60.5*	77.6*	36.4	18.9
There is a place nearby where you can get zinc when your child needs it	49.9*	29.6*	76.6*	44.2*
Don't know where to get zinc	7.3*	49.9*	18.4*	36.4*
Zinc treatments are too expensive	37.2*	62.1*	21.5	18.5
Zinc treatment products are available within walking distance of your home	54.6*	28.5*	78.4*	43.6*
Total number of caregivers	22	151	59	23

*Statistically significant difference between users and non-users of zinc (p<0.005)
note: not all zinc users answered these questions

Caregivers hear zinc messages from a variety of sources, and recall of messages about zinc is strongly associated with zinc use.



Statistically significant different between zinc users and non-users in both countries ($p < 0.000$).

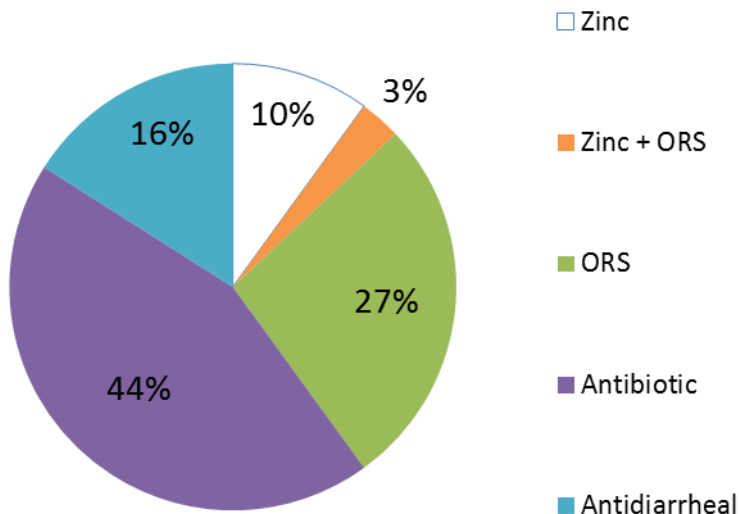
Provider Knowledge, Attitudes and Practices



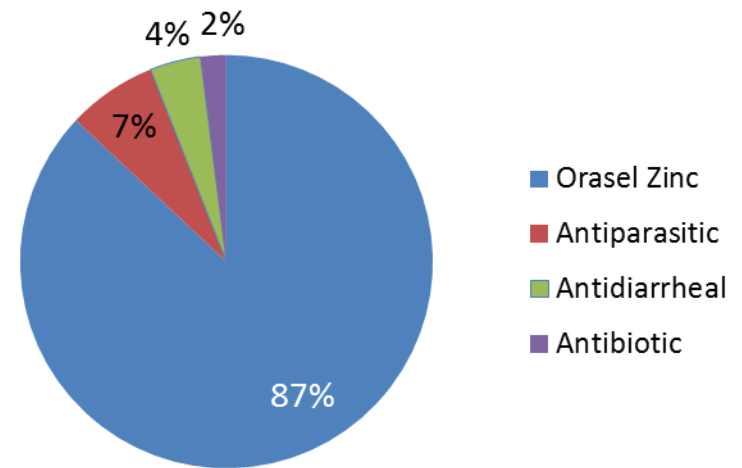
Inappropriate co-prescription of antibiotics with zinc/ORS was high in both countries.

Primary treatment recommended for childhood diarrhea (1st recommended)

Uganda Providers



Benin Providers



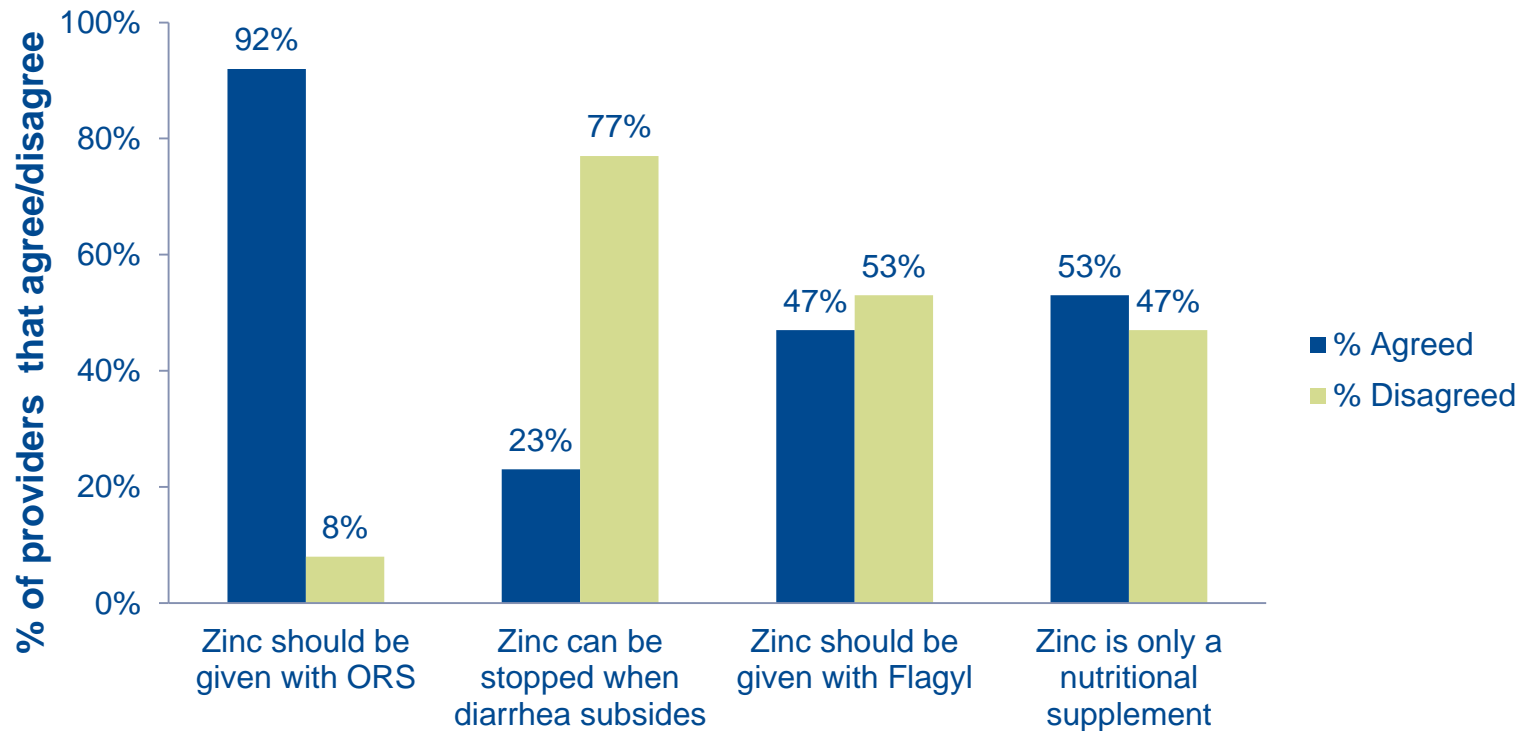
- In Benin, over half (58 percent) of providers that recommended Orasel Zinc as a primary treatment also recommended a second treatment with an antibiotic (Flagyl)
- In Uganda, of the few providers that primarily recommended zinc (or zinc plus ORS), half also recommended co-treatment with antibiotics.

Caregiver requests may influence provider diarrhea treatment behavior.

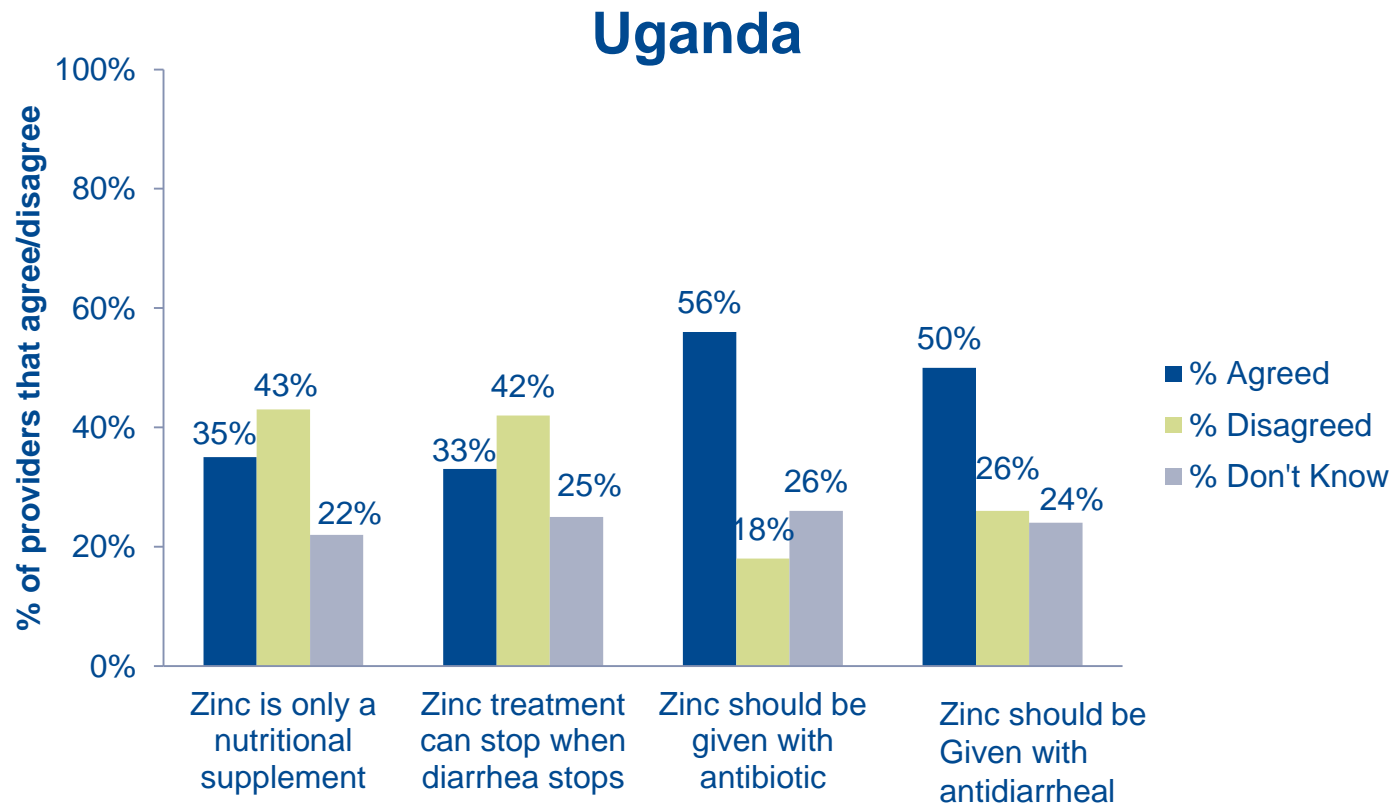
- Most providers report that caregivers request specific medications.
- In Benin, providers said the most common treatments requested by caregivers were ORS (84 percent), Orasel Zinc (50 percent), and antibiotics (36 percent).
- In Uganda antibiotics (58 percent) and antidiarrheals (40 percent) were the most requested treatments.
 - 65 percent of providers who recommended antibiotics/antiparasitics (including Flagyl/metronidazole) as their primary diarrhea treatment also stated that caregivers commonly requested antibiotics.
 - When asked their reasons for not recommending zinc, 21 percent said it was because “caregivers prefer antibiotics.”

Provider knowledge and attitudes about zinc are inconsistent.

Benin



Provider knowledge and attitudes about zinc are inconsistent.



What would motivate a provider to recommend zinc?

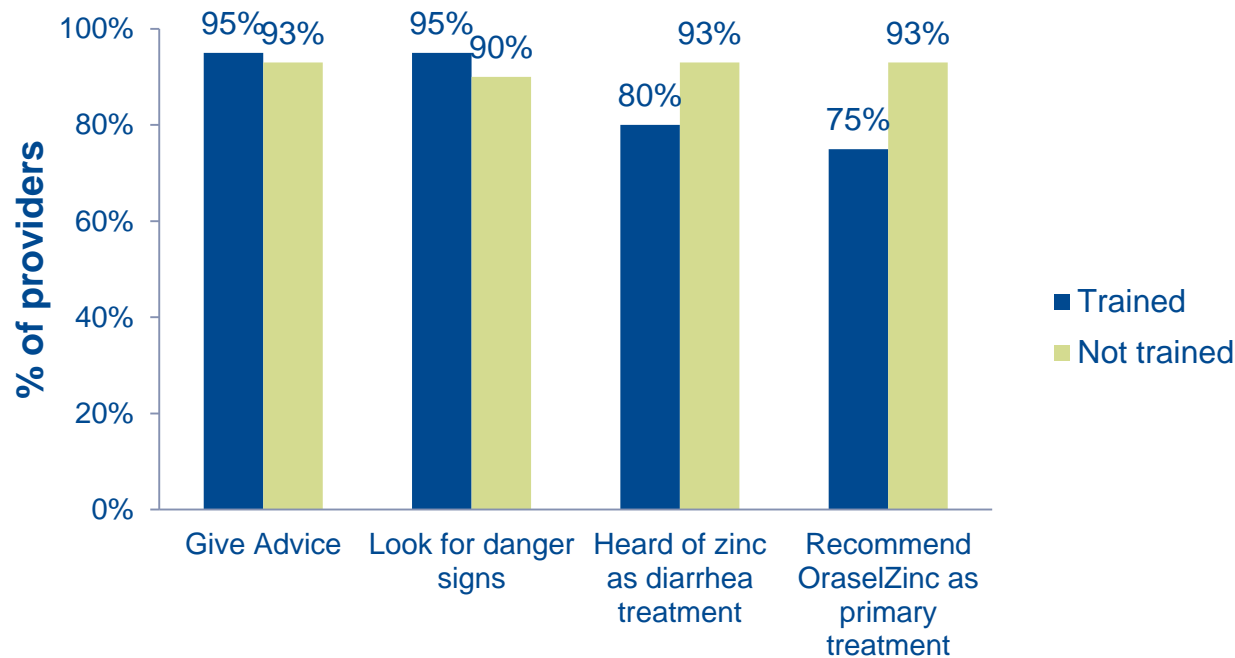
- Providers who had ever recommended zinc said it was because “it is the most effective treatment for childhood diarrhea” (75 percent in Benin and 77 percent in Uganda).
- When asked what it would take for them to recommend zinc plus ORS as the primary treatment for diarrhea, most said: “knowing zinc is an effective treatment for diarrhea” (92% in Benin and 76% in Uganda).
- In Benin, 80 percent of providers also said that “knowing that zinc is a safe product” would be convincing, and in Uganda 45 percent said it would help to have “information about the merits of zinc over antibiotics/antidiarrheals”
- Data suggests that although providers recall this message they are still not entirely convinced of zinc’s effectiveness.

Providers are aware of zinc and learn about zinc through multiple channels

- In both countries, most providers (86-88 percent) said they had heard of zinc as a treatment for diarrhea.
- The largest percentage of providers (75 and 47 percent respectively) said they had learned about zinc via television or radio, followed by medical/drug representatives (53 and 25 percent) and continuing medical education sessions (49 and 36 percent).
- Most providers recalled a message that zinc was an “effective treatment for diarrhea” (69 and 78 percent) followed by it “reduces duration/severity of diarrhea” (62 and 33 percent).

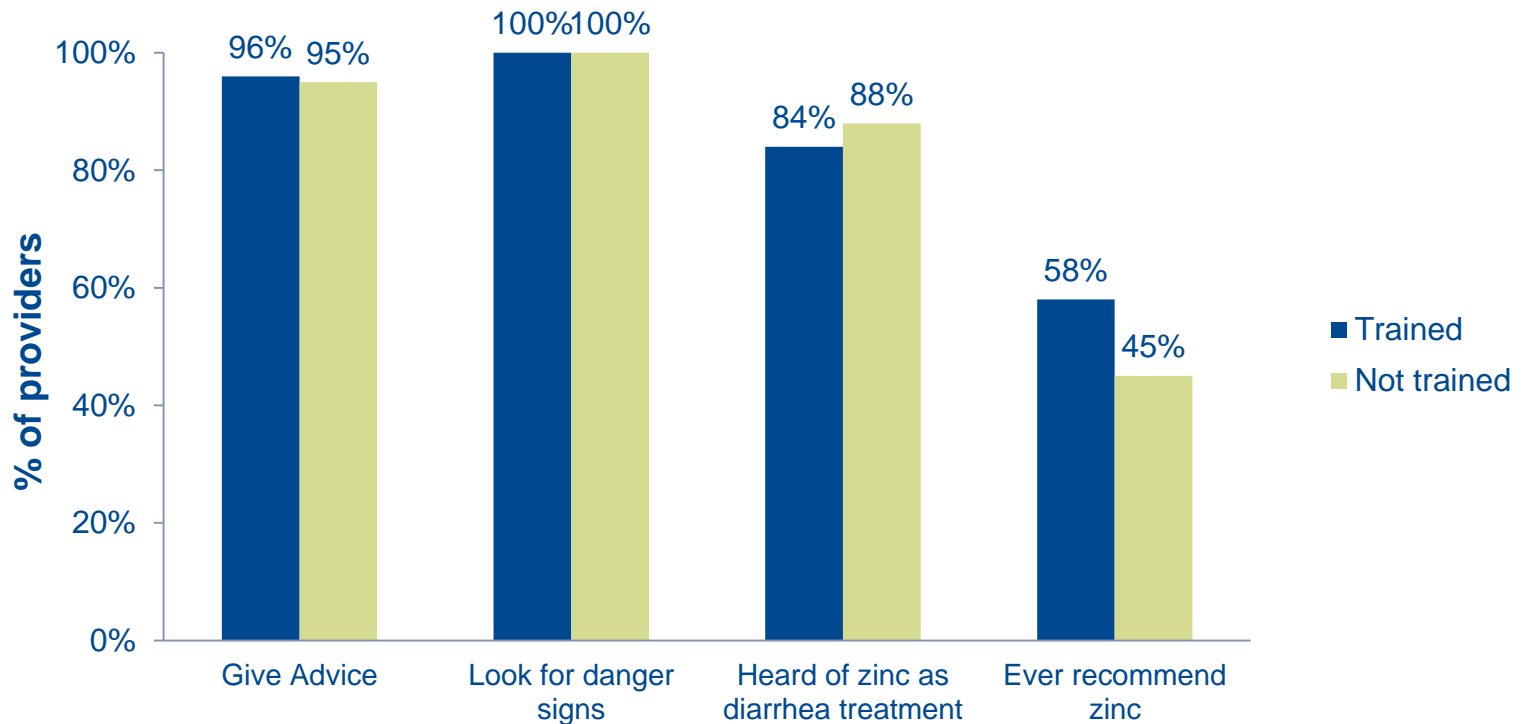
Training in diarrhea management did not appear to influence diarrhea management knowledge and practices.

Benin Providers



Training in diarrhea management did not appear to influence diarrhea management knowledge and practices.

Uganda Providers



Perception of price and availability of zinc products in stock are associated with prescribing behavior

- Nearly all providers in Benin and Uganda (96-97 percent) carry products for childhood diarrhea treatment. Far fewer (68 and 41 percent respectively) stock/sell diarrhea treatment products containing zinc.
- No providers in Benin were concerned about price of zinc. However, half (50 percent) of providers in Uganda who sold zinc products were concerned about the pricing. Most (75 percent) were concerned that the retail price was too high. Providers reported the retail price of zinc as between UGX 2,000 and 3,000 (USD \$0.82 - 1.23) per 10 tablets.
 - Full course of treatment with Flagyl is 1,500 UGX (USD\$0.60) for 3 tablets x 5 days.

Conclusions and Lessons Learned

1. Co-packaging of zinc and ORS may increase correct use of zinc with ORS, but only in certain environments.
2. Widespread message dissemination is key to increasing use of zinc; however, more precise messaging is needed around the correct use of diarrhea treatment products.
3. Providers may play a critical role in driving use of the right (as well as the wrong) treatments for childhood diarrhea.
4. Efforts to address supply side drivers of zinc use including appropriate pricing and widespread availability of zinc products must accompany demand generation efforts.



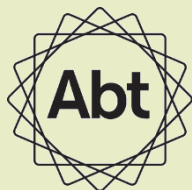
USAID
FROM THE AMERICAN PEOPLE



Strengthening Health Outcomes
through the Private Sector

Vicki_macdonald@abtassoc.com
emily_sanders@abstassoc.com

www.shopsproject.org



SHOPS is funded by the U.S. Agency for International Development.

Abt Associates leads the project in collaboration with

Banyan Global

Jhpiego

Marie Stopes International

Monitor Group

O'Hanlon Health Consulting