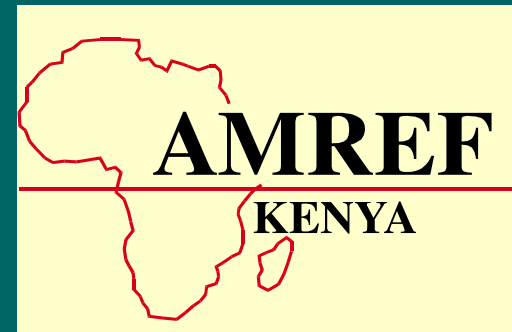


Using Job Aids to Improve Malaria Treatment in Kenya's Private Drug Outlets

Job Aids Symposium

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Kenya research team and site

Bungoma District

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Why are we concerned about the private sector?

- **Private sector is main source of drugs and treatment information for about 2/3 of malaria clients**
- **But lack of knowledge and profit motive among private outlets can cause malaria clients to receive:**
 - inefficacious or unapproved drugs
 - expired drugs
 - incorrect doses of drugs
 - incorrect or no information

How the private sector performed in Bungoma district

- **More than 70 different anti-malarial brands being sold in the district**
- **Wide range in cost for a child's malaria treatment: \$.03 to \$2.25**
- **Less than one-third of customers at private outlets receive correct information on drug dosages**
- **About 1 in 12 customers purchase drugs with no active anti-malarial ingredients (e.g., anti-biotics)**



Vendor-to-vendor intervention introduced in the district

DHMT:
develop job aids
and conduct
training

Objective: To improve anti-malaria dispensing practices of private drug outlets through **job aids** disseminated by wholesale vendors in the district

Mobile vendors
& wholesale
attendants:
communicate
guidelines

Retail shops,
pharmacies,
private clinics:
sell drugs and
give information

Malaria
clients:
comply with
treatment



Vendor-to-vendor intervention: main components

- 3-hour **orientation** for wholesale owners
- 1-day **training** for 40 mobile vendors and 33 attendants who work in wholesale pharmacies and shops
- Custom-designed **job aids** (posters) for wholesale vendors to distribute to retail private outlets and clinics
- Collection of **receipts** from outlets
- Evaluation using **mystery shoppers** six months after wholesale vendor training

Shopkeeper job aid

UUZAJI WA DAWA ZA MALARIA ZINAZOPENDEKEZWA

DALILI ZA MALARIA:



- Joto mwilini
- Kutapika (haina watoto)
- Kusimwa na kichwa
- Maumivu ya viungo

Hivi ndivyo vipimo kamili vya tiba ya malaria kumezwa mara moja:

UMRI	FANSIDAR ama Falcidin, Crodar, Laridax	+	PANADOL ama Elymol, Dawanol, Cosmol
Mkazi 2-11	⊖	(1)	⊖
Miaka 1-4	⊖	(1)	⊖
Miaka 5-8	⊖ ⊖	(1)	⊖
Miaka 9-14	⊖ ⊖	(2)	⊖
Miaka zaidi ya 15	⊖ ⊖ ⊖	(2)	⊖ ⊖

Joto mwilini likiendelea, tumia Panadol kwa kipimo hicho kila baada ya masaa sita kwa siku tatu.

MASHAURI KUHUSU TIBA MPYA YA MALARIA:

1. Madawa haya yanapendekezwa kama tiba ya kwanza ya malaria.
2. Madawa haya ni bora sana kwa watu wote, hata kwa watoto wachanga (chini ya mwaka mmoja).
3. Mgonjwa asinudie kutumia madawa haya hadi baada ya wiki tatu.
4. Endelea kumtaka mgonjwa na umuongozaji vyakula vya maji maji.

Mtaji akifika viza ya dawa ambazo hazipendekezwa (haina dawawazi, marawazi na homajuni)...



Shauri:

Pendekeza Fansidar ama Falcidin, Crodar, Laridax na Panadol kwa sababu:

1. Inafika dawa
2. Biya chumvi
3. Inomezwa mara moja tu
4. Ni bora kwa dhambiwa

Mtaji akisema mtoto ana joto mwilini na anataka dawa...



Shauri:

1. Utize ureji wa mita.
2. Angalia vipimo vya madawa hayo juu.
3. Wasia kipimo sana.

Kama mtaji hana pesa za kubeta kumrua kipimo kamili cha madawa haya...



Shauri:

1. Inawezekana, mgonjwa kipimo kamili.
2. Inawezekana, mtoto mtaji angalika mtoto kwa kifuu cha mfy.
3. Kama, usitaz kipimo kamili kamili.

Mtaji akisema mtoto hupata nafuu ama ni mgonjwa sana...



Shauri:

Eleza mtaji angalika mtoto kwa kifuu cha mfy mara moja.

Contents:

- Signs of malaria
- Dosage chart of approved drugs
- Treatment advice
- Common situations faced by shopkeepers and advice on them

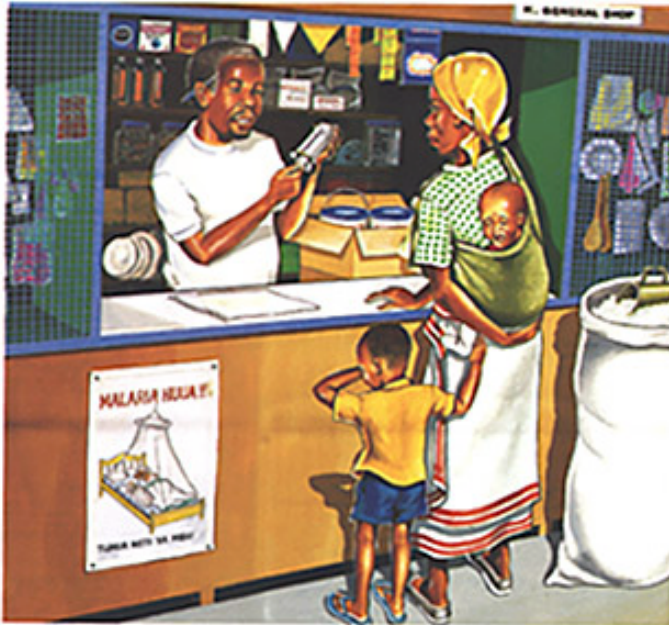
(in Kiswahili)



Client job aid

TIBU MALARIA SAWA SAWA!

Mwenye duka anaweza kukushauri.



TUMIA MOJAYAPO YA MADAWA HAYA:



Maumivu yakizidi muone daktari

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Contents:

- Reminds people to treat malaria properly
- Depicts the five approved drugs
- Advises people that these drugs can be obtained from shops

(in Kiswahili)



Evaluation using mystery shoppers

- In Oct. 2000, four teams (each consisting of 2 mystery shoppers and 1 supervisor) visited 251 private drug outlets
 - **Mystery shoppers** first sought to purchase drugs for their “child”
 - *Scenario 1: mother of 9-month-old child, suspects malaria, asks for recommendation*
 - *Scenario 2: father of 2-year-old child, asks for malarquin (an ineffective drug)*
 - **Supervisors** then inquired about stocks and prices, looked for job aids, and assessed knowledge

A mystery shopper getting around Bungoma town



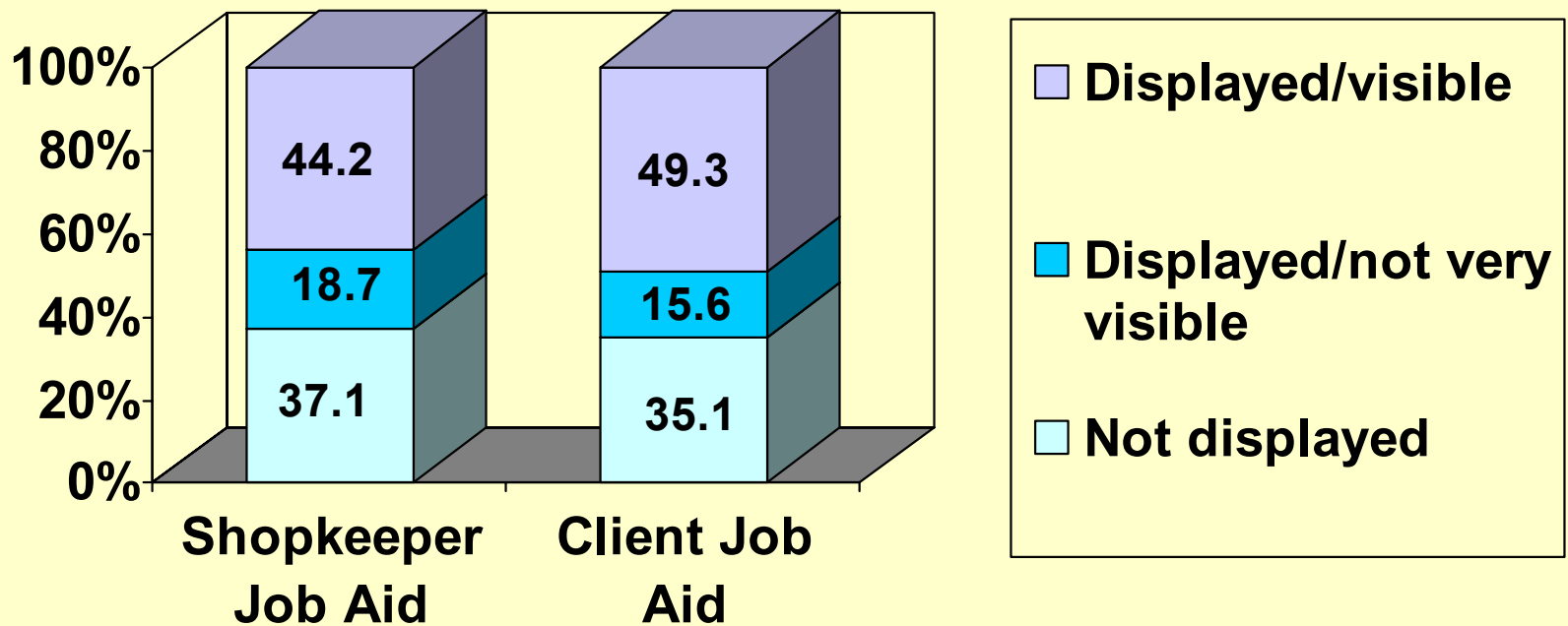
Profile of drug outlets visited

	Intervention outlets (n=101)	Control outlets (n=151)	TOTAL (n=252)
% Rural	58.4	57.6	57.9
% Shops*	67.3	78.8	74.2
% Pharmacies*	26.7	12.6	18.3
% Clinics*	5.9	8.6	7.5
Average # of malaria clients per day	10	8	9

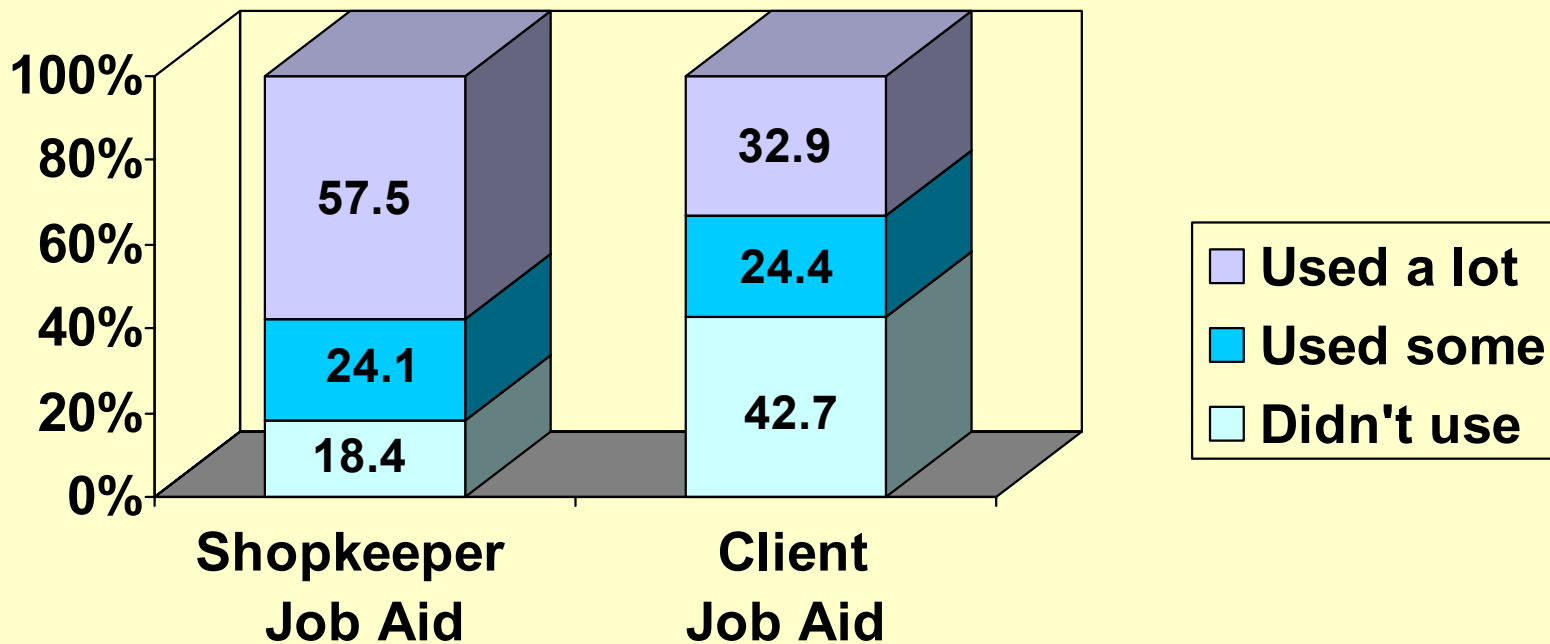
NB: Outlets were defined as “intervention” if they reported having received the job aids. *Significant difference at $p < .016$.



Visibility of job aids, among outlets that received them



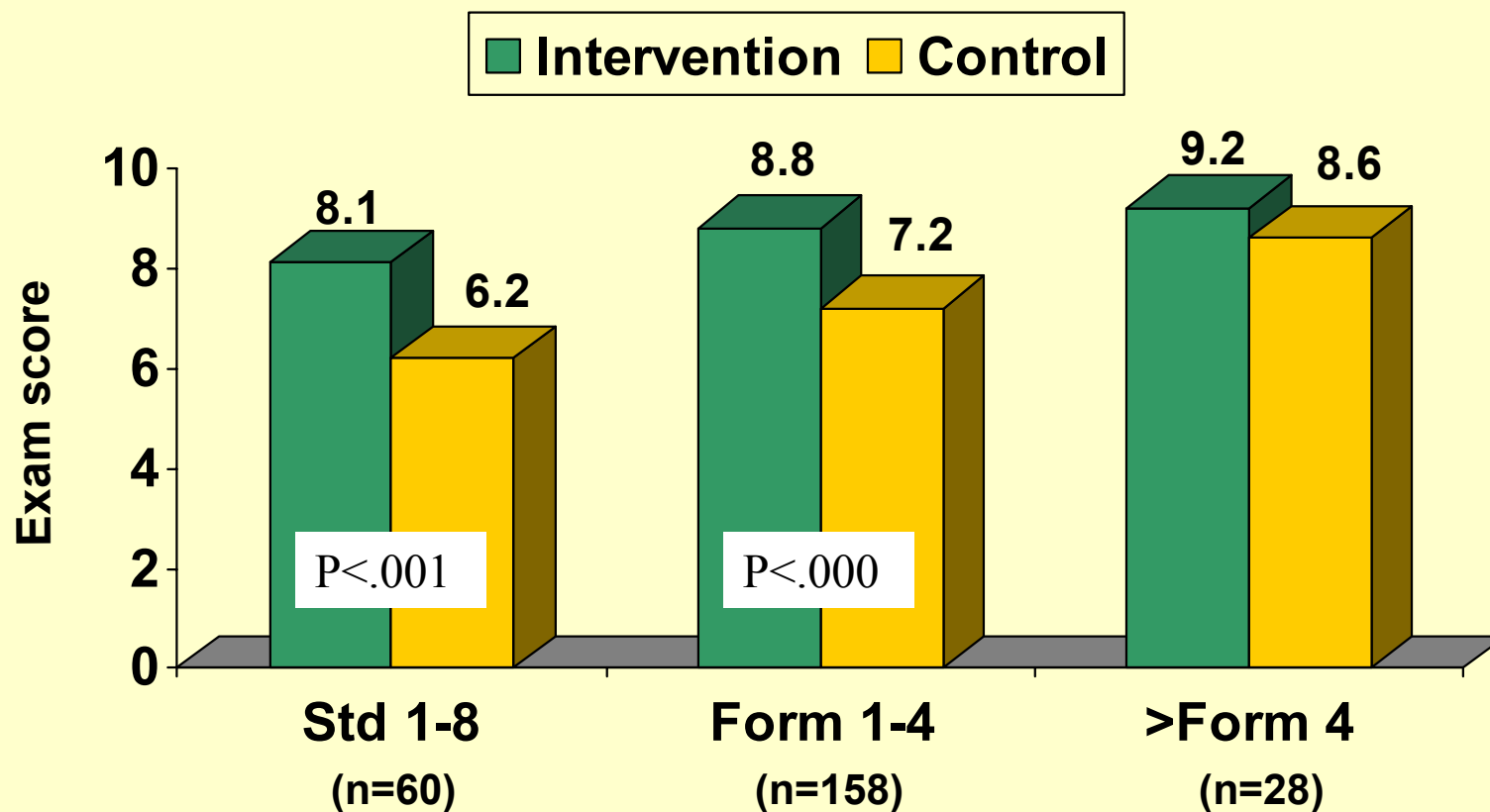
Reported usefulness of the job aids, among outlets that received them



Note: Of respondents who had received a shopkeeper job aid, 31% spontaneously used it when asked about drug dosages.



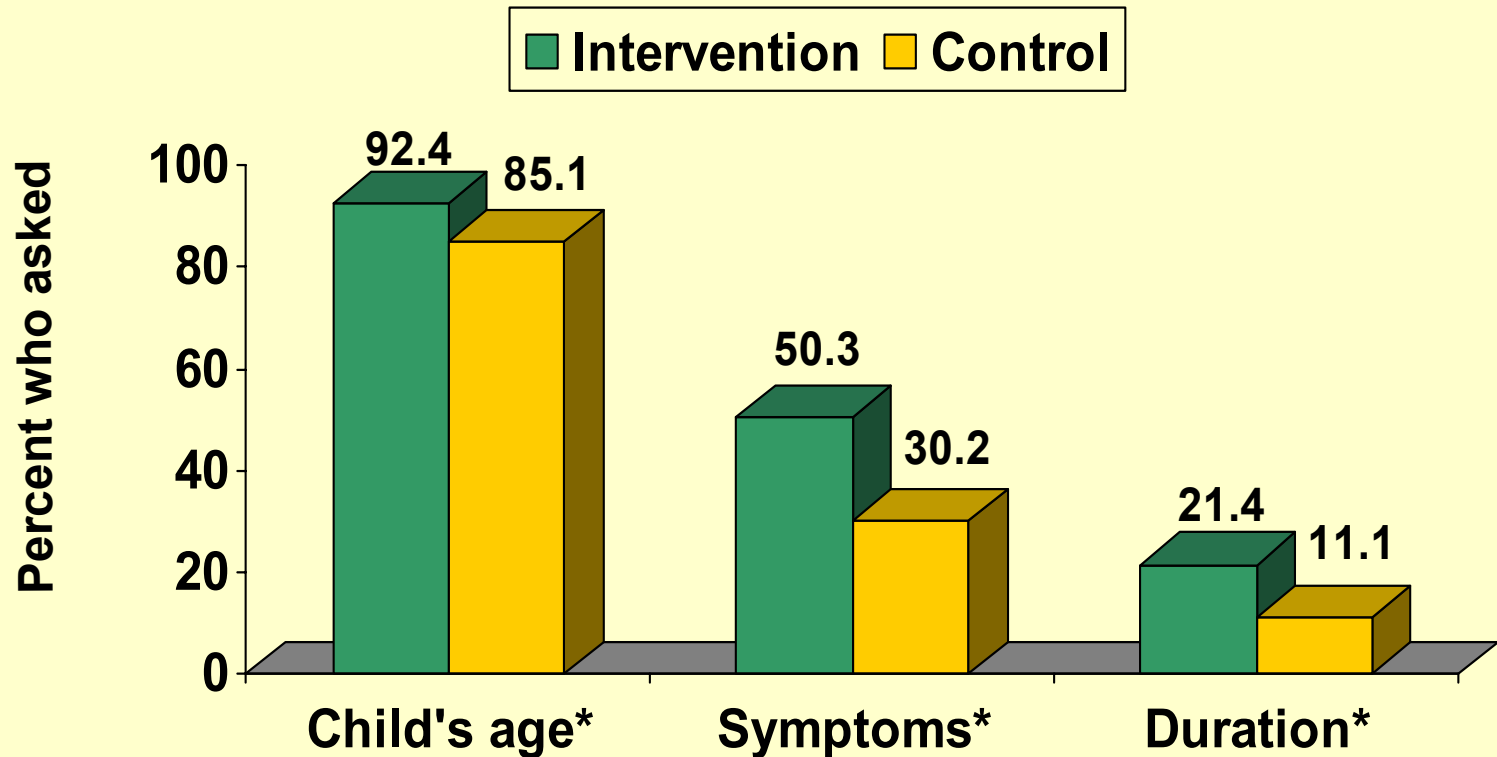
Effect of job aids on overall malaria knowledge, by education of outlet



Education Levels of Outlet Respondents



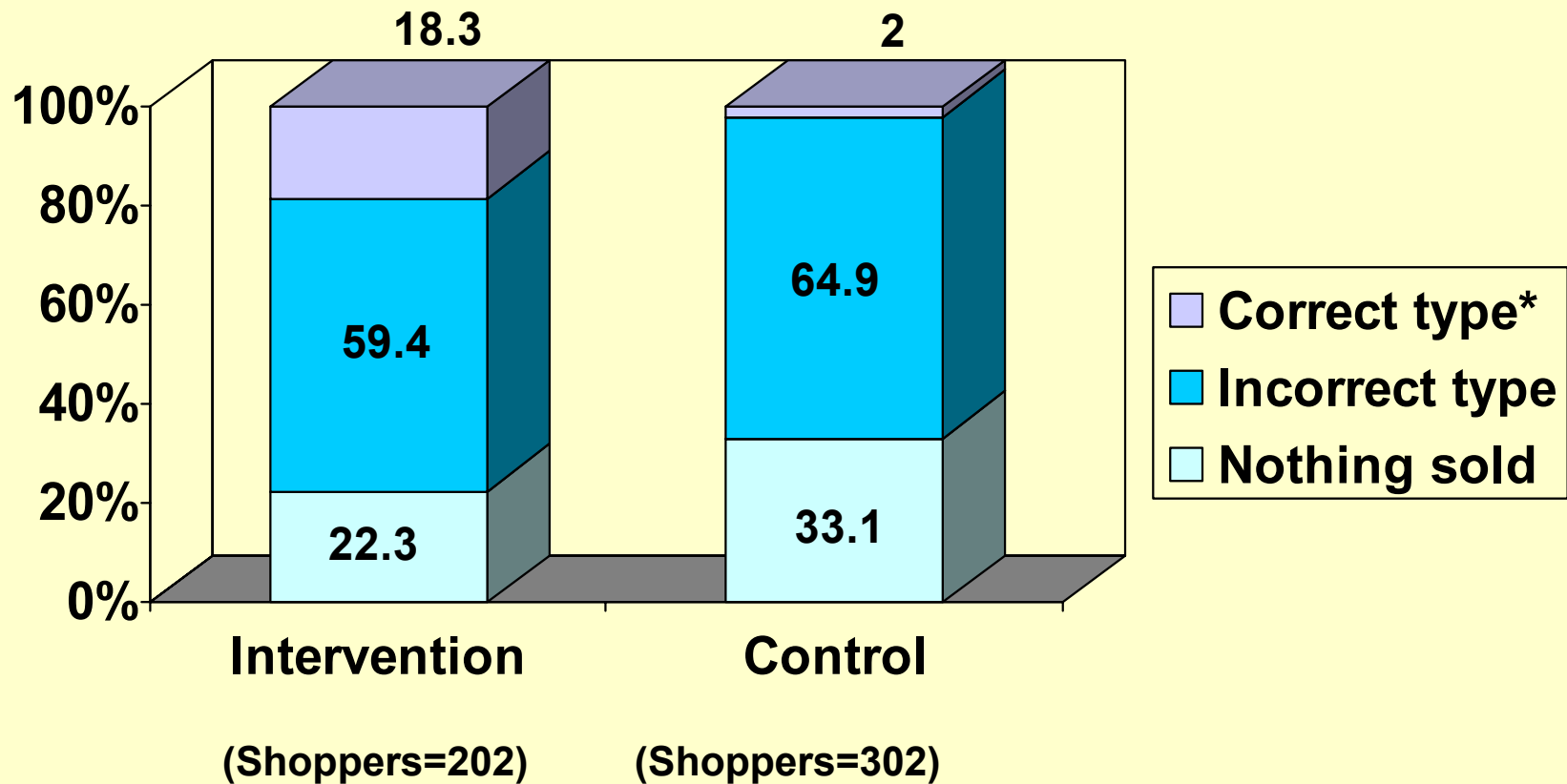
Effect of job aids on whether outlets asked about child's condition



*All are significant at $p < .01$.



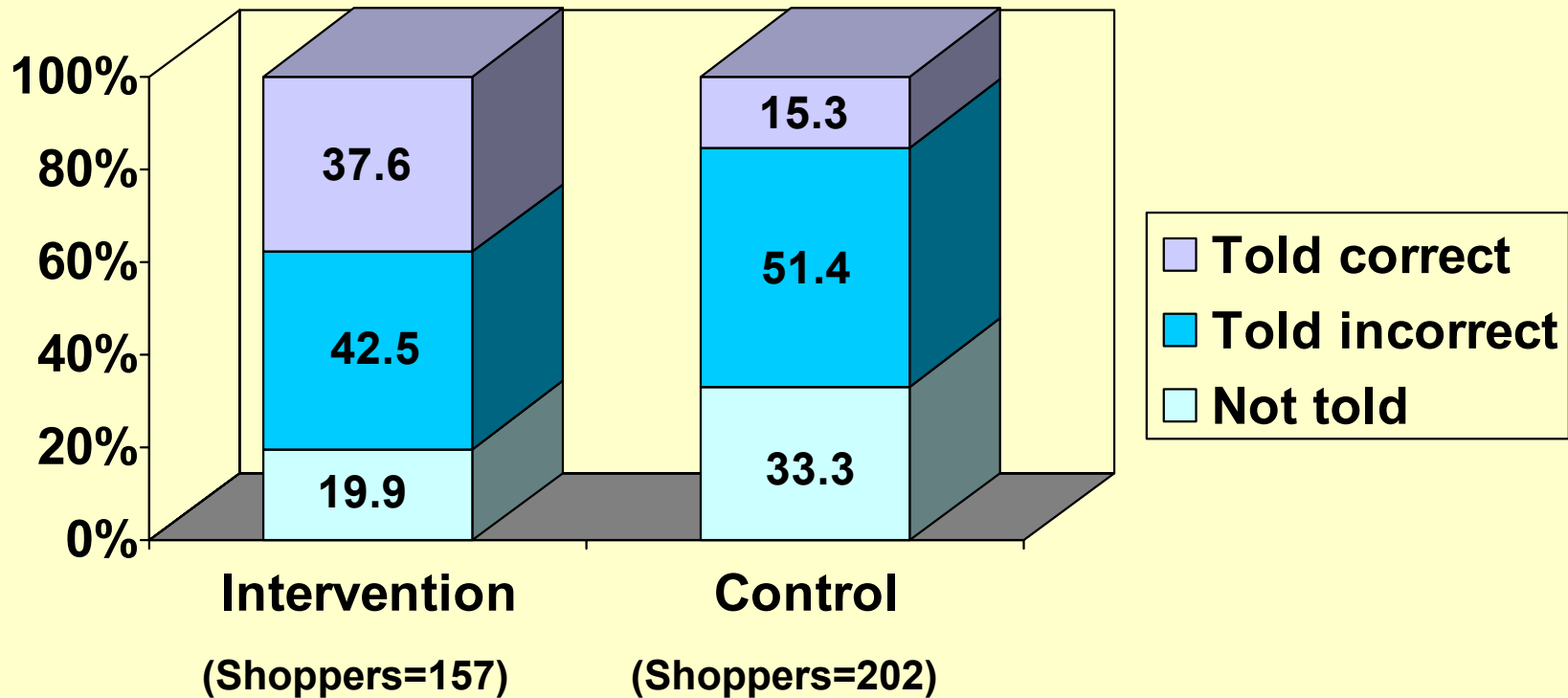
Effect of job aids on whether shoppers were sold correct drugs



*Correct type was defined as an effective sulphadoxine-pyrimethamine (SP) plus an antipyretic. Significant difference at $p < .000$.



Effect of job aids on whether shoppers were told correct dose*



* Among shoppers who purchased a drug.
Significant difference at $p < .000$.



Cost-effectiveness of this intervention for the first 6 months

Estimated number of drug outlets reached in first 6 months	500
Estimated number of malaria cases treated by these outlets	506,000
Estimated number of cases treated properly due to this intervention	82,000
Local cost of the activity (not including shopper evaluation)	US\$ 8,300
Estimated cost per malaria case treated properly in first 6 months	US\$ 0.10



Conclusions

- 4 in 5 outlets that received the shopkeeper job aids reported that it was **useful** to them, and one-third used it spontaneously
- Nearly half of outlets that received job aids **displayed** them prominently
- Outlets receiving job aids were significantly more likely to provide **correct** anti-malarial treatment and information
- Job aids had the **most** impact on malaria knowledge of outlets with **less** education

Impact of Improved Job Aids on Malaria Diagnosis in Malawi



Malawi research team and site

Malawi

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QAP

- Lynne Cogswell
(consultant)
- Paula Tavrow

Machinga District



The problem

- **Malaria rapid diagnostic tests (MRDTs) could improve diagnosis of malaria because:**
 - Do not require specialized training
 - Have high sensitivity and specificity
 - Give results in 10 minutes
- **But, to be cost-effective, all who use MRDTs must follow steps and interpret results correctly, with little or no previous training**

Objective of study

To investigate whether improvements made to **job aids** (instructional inserts) accompanying the MRDTs would **significantly improve** performance

Methodology

- Structured observation of providers using MRDTs with **original** job aids, followed by interviews with providers
- **First revision** of job aids
- Structured observation of providers using MRDTs with **revised** job aids, followed by interviews
- **Second revision** of job aids
- Structured observ'n of new providers with **second revised** job aids



How to start using the kit

(original vs revised job aid)

ORIGINAL

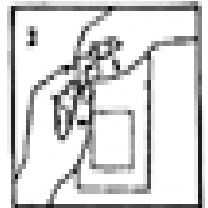
1. Remove the falciparum malaria IC strip test from the airtight package.
2. Label the test strip with patient identification number.

3. Place the reaction tube in the reaction stand and add four drops of sample buffer.



REVISED

1. Wear gloves to perform this test.
2. Open the foil pouch and take out the necessary number of falciparum malaria TEST STRIPS from the foil pouch. Use only one test strip per patient.



3. Close the pouch of remaining test strips. Moisture will destroy the test strips. Close the pouch tightly with the provided clip.




4. Write, in pen, the patient name or identification number on each test strip.




How to interpret results (original vs. revised job aid)

ORIGINAL


Interpretation of Results



NO LINE: INDETERMINATE. Neither the test line nor procedural control line appears on the membrane indicating an improper test procedure was performed or reagent deteriorated.



ONE LINE: NEGATIVE. *P. falciparum* antigen is absent. Only the procedural control line appears.




TWO LINES: POSITIVE. *P. falciparum* antigen is present. In addition to the procedural control line, a test line is also observed.


Test Line Procedural Control Line

REVISED

Interpretation of Test Results




NO Lines = INVALID
If neither the test line nor the procedural control line appears on the test strip, it indicates that the test procedure was performed improperly or the kit contents have gone bad. You must **RETEST** this patient.



ONE Line = NEGATIVE
P. falciparum antigen is absent. Only the procedural control line appears. This patient **DOES NOT HAVE** *P. falciparum* malaria.

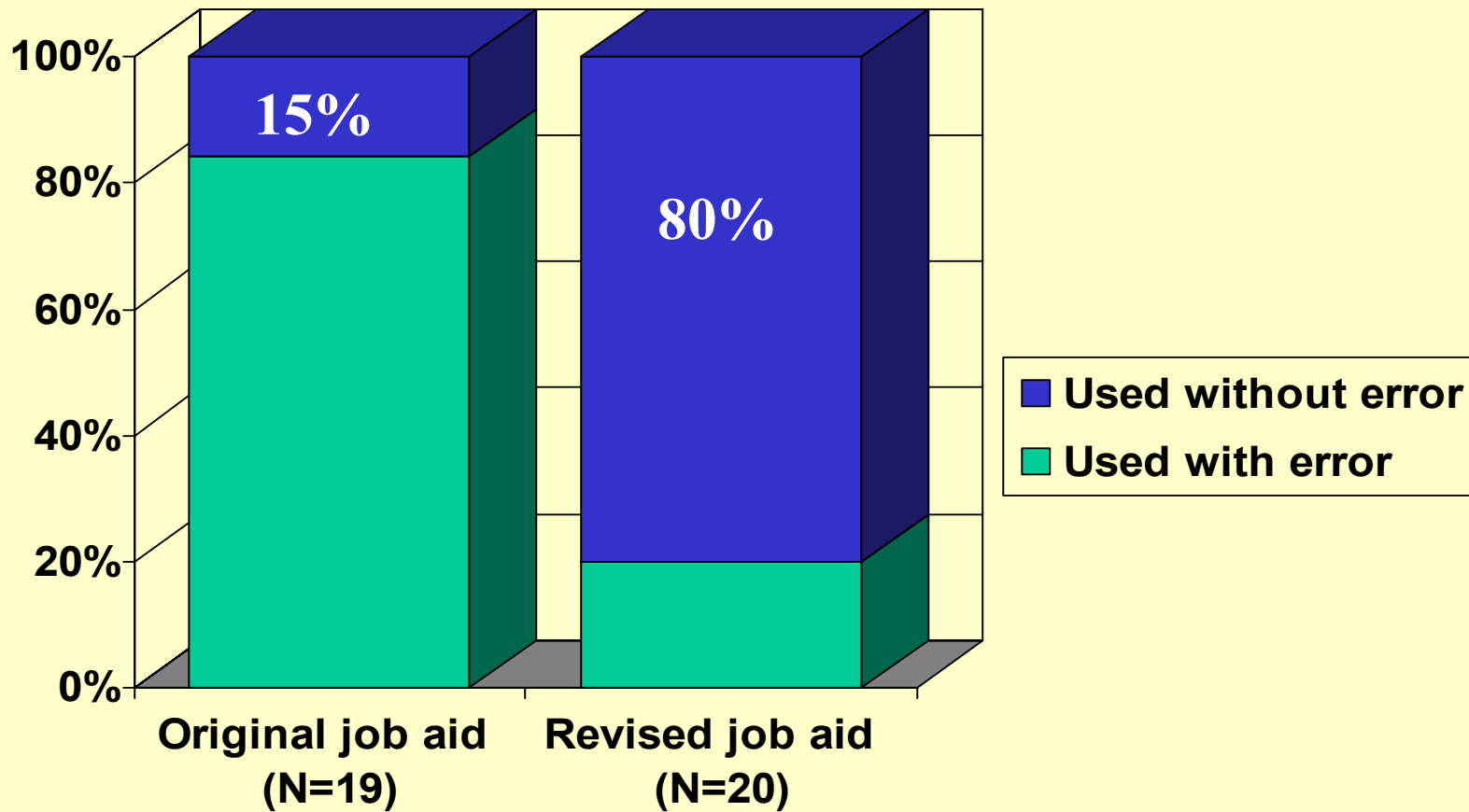
↑
Procedural Control Line
↓



TWO Lines = POSITIVE
P. falciparum antigen is present. Both the procedural control line and the test line appear. This patient **HAS** *P. falciparum* malaria.

↑
Test Line

Effect of revised job aid on providers' use of MRDTs



Conclusions

- Improved job aids (instructional inserts) that accompany new medical products can **dramatically increase** the likelihood that the products will be used properly without training
- Several **iterations** of revisions are necessary to achieve the optimum job aid
- Inserting **well-marked pictures** at key steps of the process reduces errors