

Does IMCI Training Improve Health Worker Performance?

Findings from Health Facility Surveys

The Uganda IMCI Impact Study Team

Makerere University/Johns Hopkins University

(In Collaboration with WHO Multi-Country Evaluation of
IMCI Effectiveness, Impact and Cost)

Funded By USAID

Outline

- Background to the Multi-country evaluation of IMCI
- Objectives of health facility surveys
- Priority indicators (assessment, classification, treatment, counseling)
- Differences in performance
- General observations

Study Partners

- USAID grant to Johns Hopkins University
- Objectives and methods intended to be congruent with the WHO MCE of IMCI
- Principal partners in Uganda
 - Makerere University Institute of Public Health (MUIPH)
(Overall management and implementation in Uganda)
 - Makerere University, ISAE - Department of Populations Studies (ISAE-DPS)
(Conduct the baseline and final demographic/household surveys)

Why Evaluate IMCI?

- **Heavy expenditure on IMCI by countries and donors**
 - For all these resources, what is really being achieved?

- **What are the results?**
 - Do health workers really improve their performance?
 - Do households change health seeking behaviour?
 - Is IMCI too complex for developing country health systems?
 - Is IMCI a valid use of funds, given so many priorities?
 - or could we get more results investing in other things?

IMCI Multicountry Evaluation

- **Multi-Country Evaluation (MCE) studies—WHO coordination**
 - Tanzania, Bangladesh, Peru, Brazil (WHO funding)
 - Uganda (USAID with additional WHO support)
 - Mainly implementation and behaviour change studies
 - Each country looking at different aspects
- Uganda study has the power (size) to measure mortality changes
 - Changes in mortality are the ultimate test of effectiveness of a child health activity
 - This is the 'Bottom Line' or the 'Gold Standard'

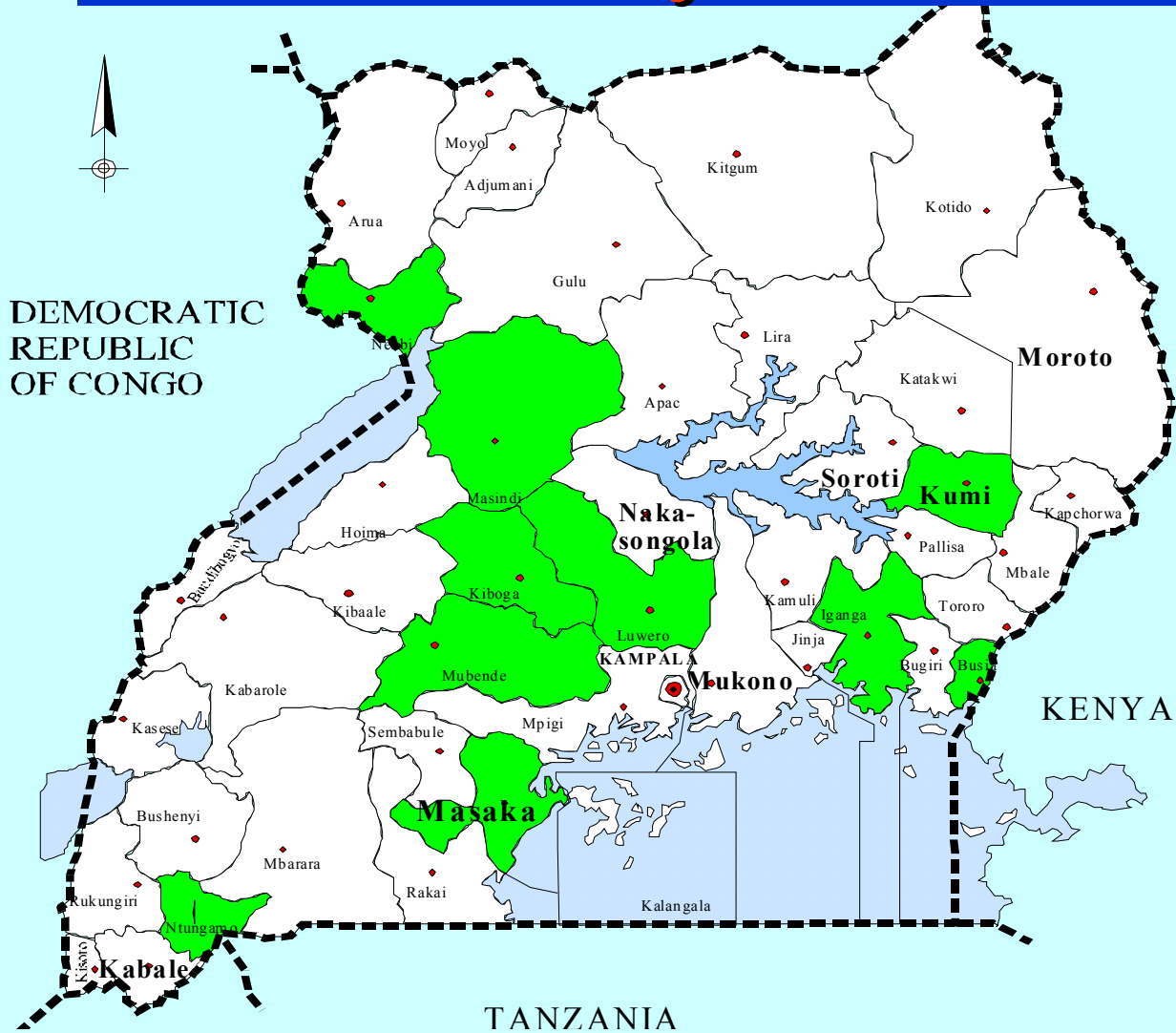
Uganda IMCI Impact Study

Objectives

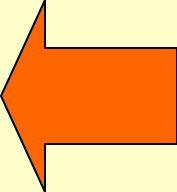
- Document impact of IMCI introduction on child mortality in focus districts
- Document change in process and outcome indicators in health facilities (NGO + public), communities and households as a result of IMCI
- Determine opportunity costs (next best uses) of human resources equipment and finances needed for IMCI and determine if greater good could be achieved if resources had been used differently.

Implemented by a partnership between Johns Hopkins Univ. and Makerere University, in collaboration with the Ministry of Health

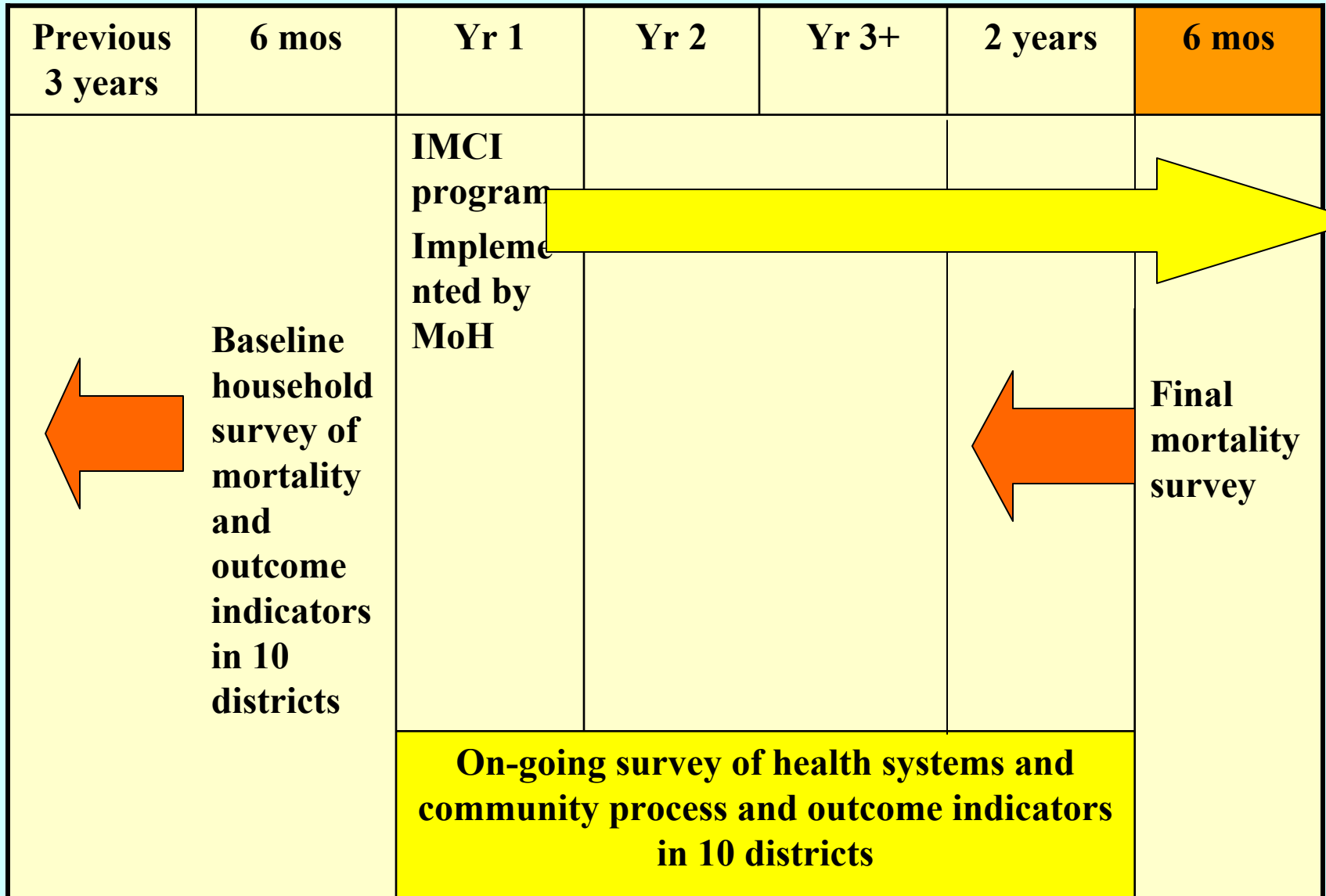
IMCI study districts



Uganda IMCI Impact study design

Previous 3 years	6 mos	Yr 1	Yr 2	Yr 3+	2 years	6 mos	
 <p>Baseline household survey of mortality and outcome indicators in 10 districts</p>		<p>IMCI program Implemented by MoH</p>					<p>Final mortality survey</p>
		<p>On-going survey of health systems and community process and outcome indicators in 10 districts</p>					

Uganda IMCI Impact study design



HEALTH FACILITY RESULTS

PRIORITY INDICATORS

SUPPLEMENTAL INDICATORS

ADEQUACY INDICES

Objectives of HFS

- To assess the quality of case management of sick children in accordance with IMCI guidelines
- To assess caretaker satisfaction
- To assess health system support for IMCI
- To measure levels of utilisation of health facilities by children under 5 years

Methodology of HFS

- Cross-sectional survey of health units in 10 districts
- Facilities stratified by type & 8 randomly selected/district (HC IV-2: HC III-3: HC II-3)
- Data collection:
 - adopted WHO generic HFS tools;
 - Observation checklist
 - Exit interview
 - Re-examination of sick child
 - Facility, equipment & supplies checklist
 - Case scenarios

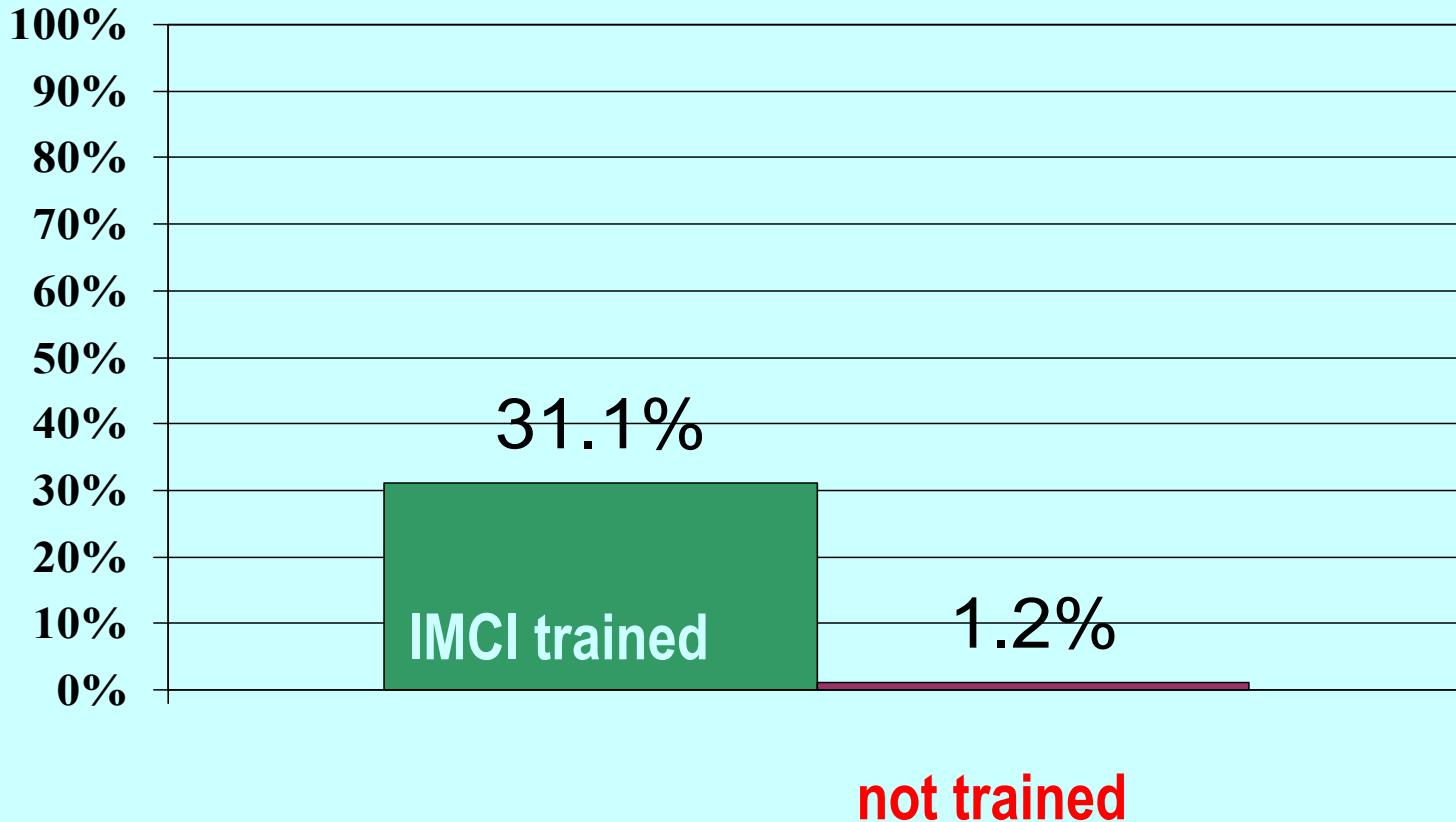
Effect of IMCI Training

Assessment

3rd
survey
round
data

Priority Indicators

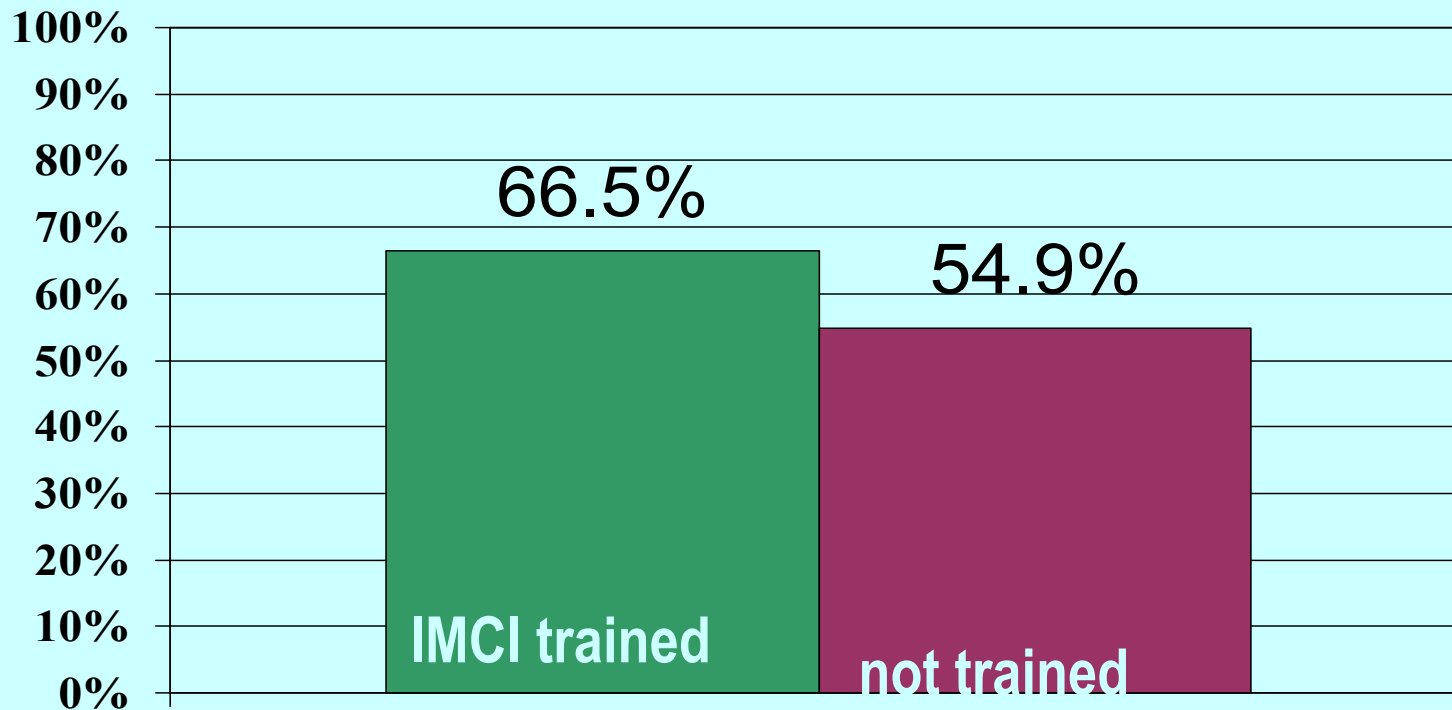
HW checks for 3 danger signs



P – 0.001

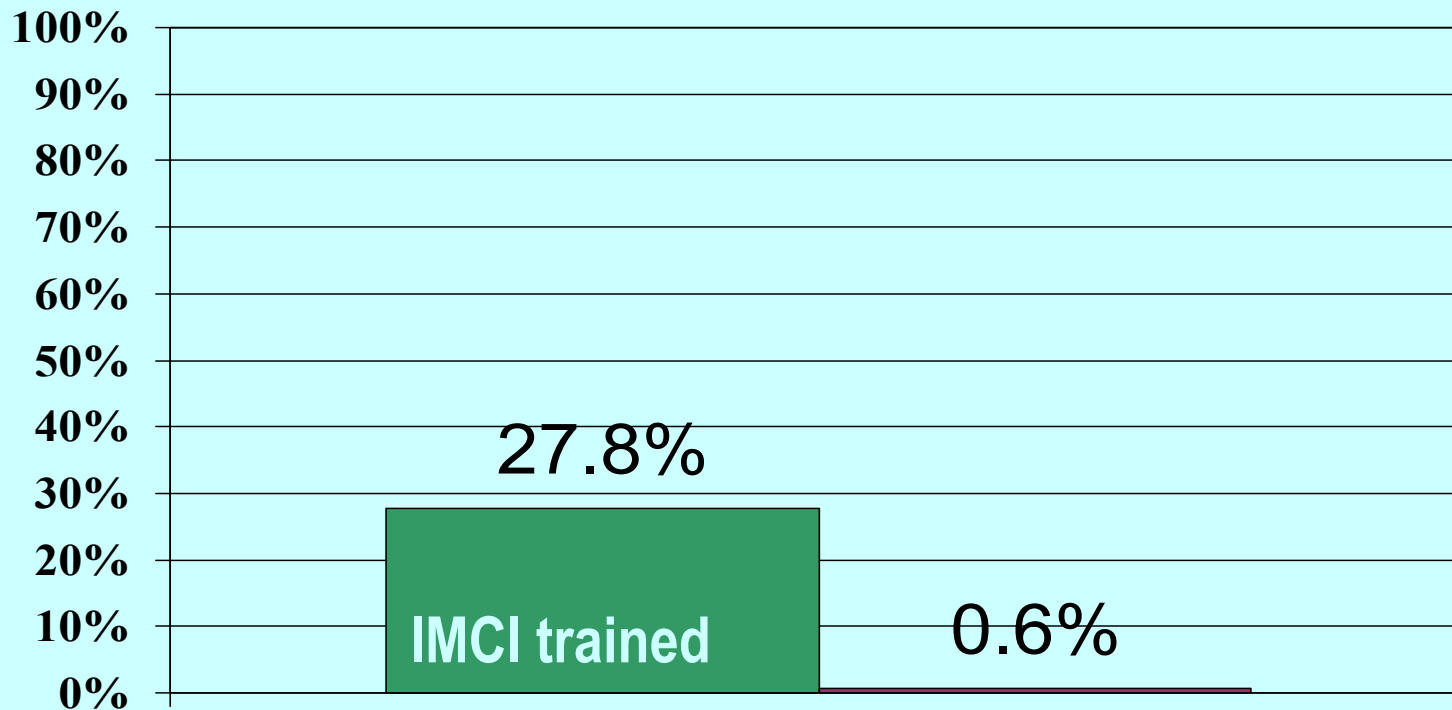
Priority Indicators

Cough, diarrhea, fever asked by HW



Priority Indicators

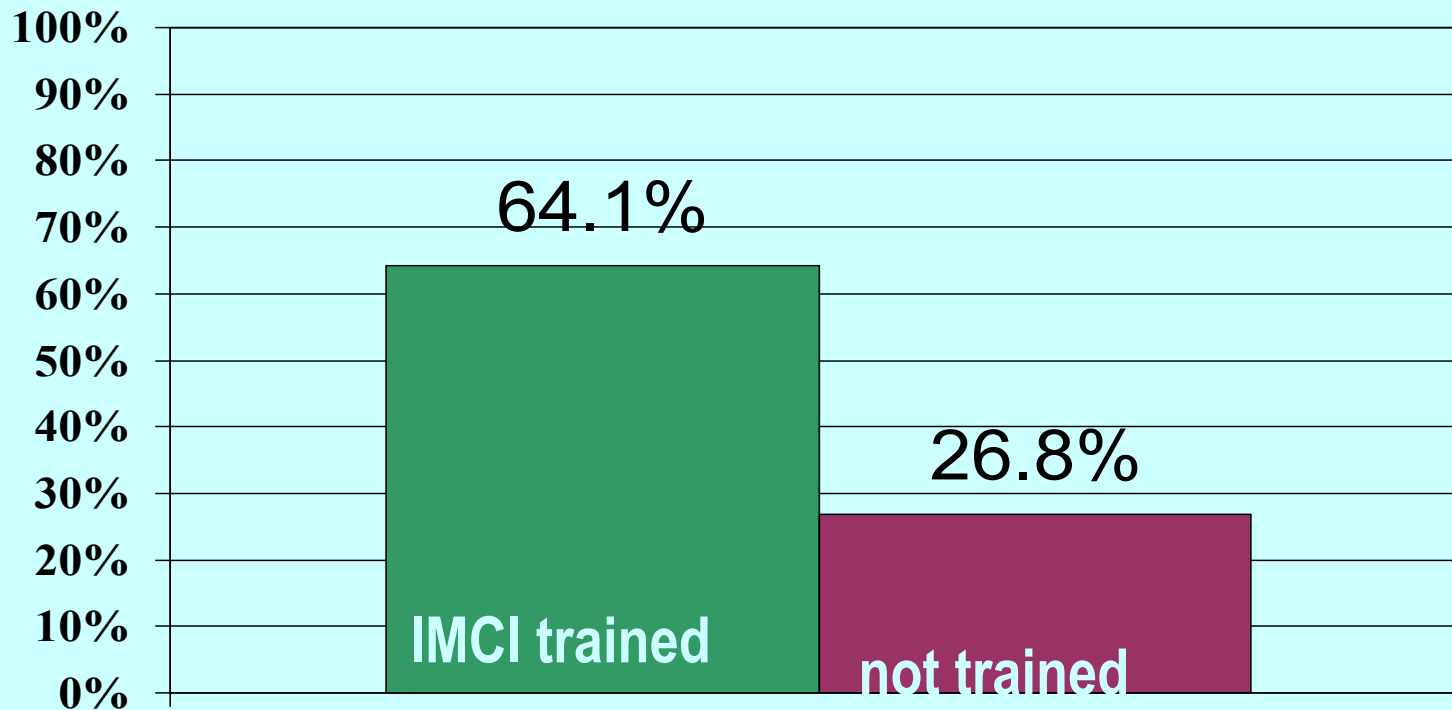
Weight checked against growth chart



$P < 0.001$

Priority Indicators

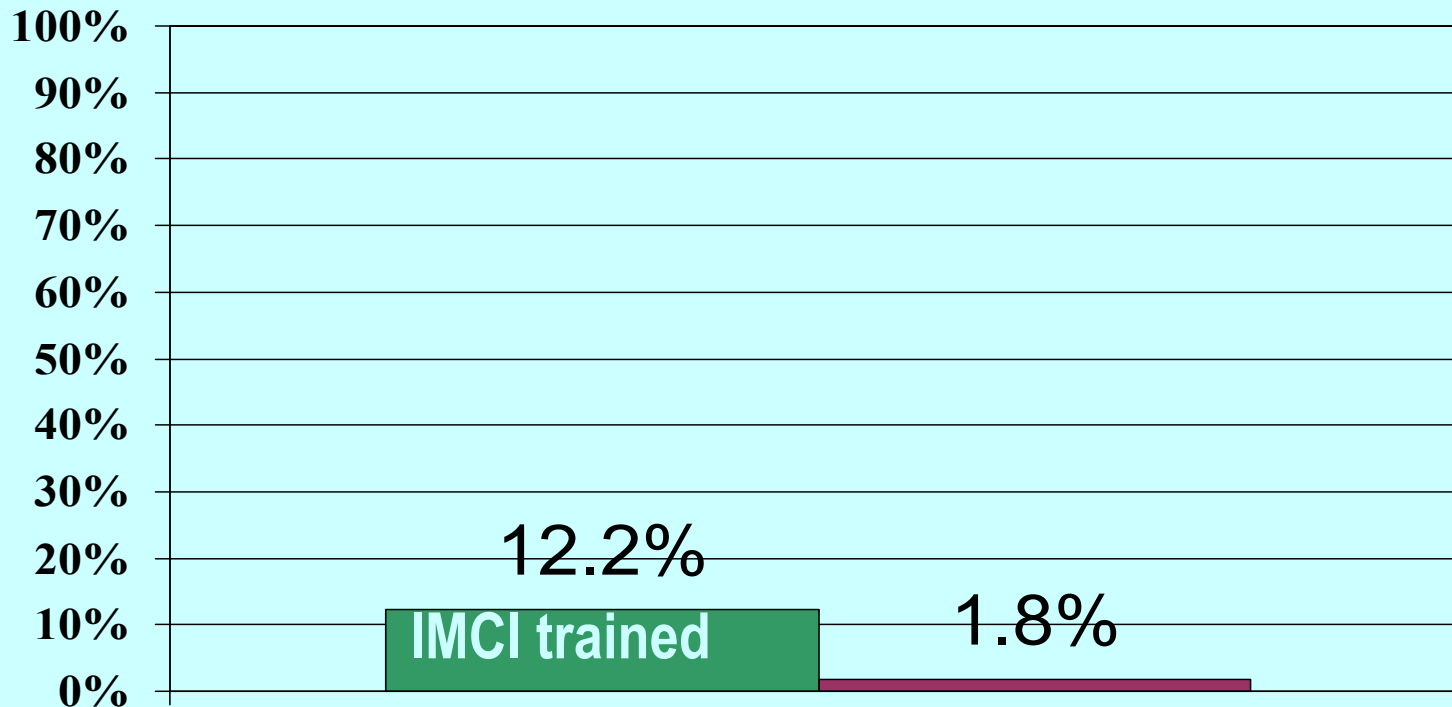
HW checks vaccination status



$P < 0.001$

Priority Indicators

Feeding practices assessed for child < 2 years

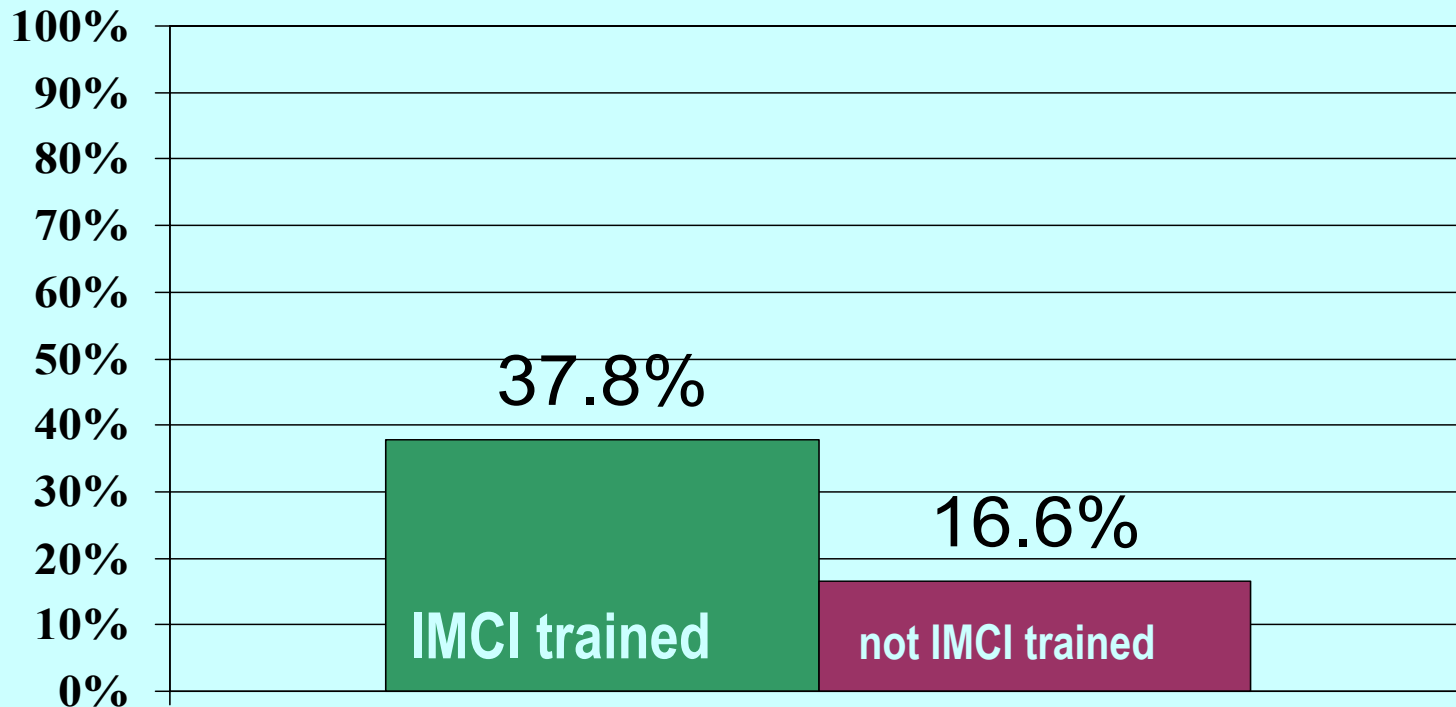


$P < 0.05$

Classification

Priority Indicators

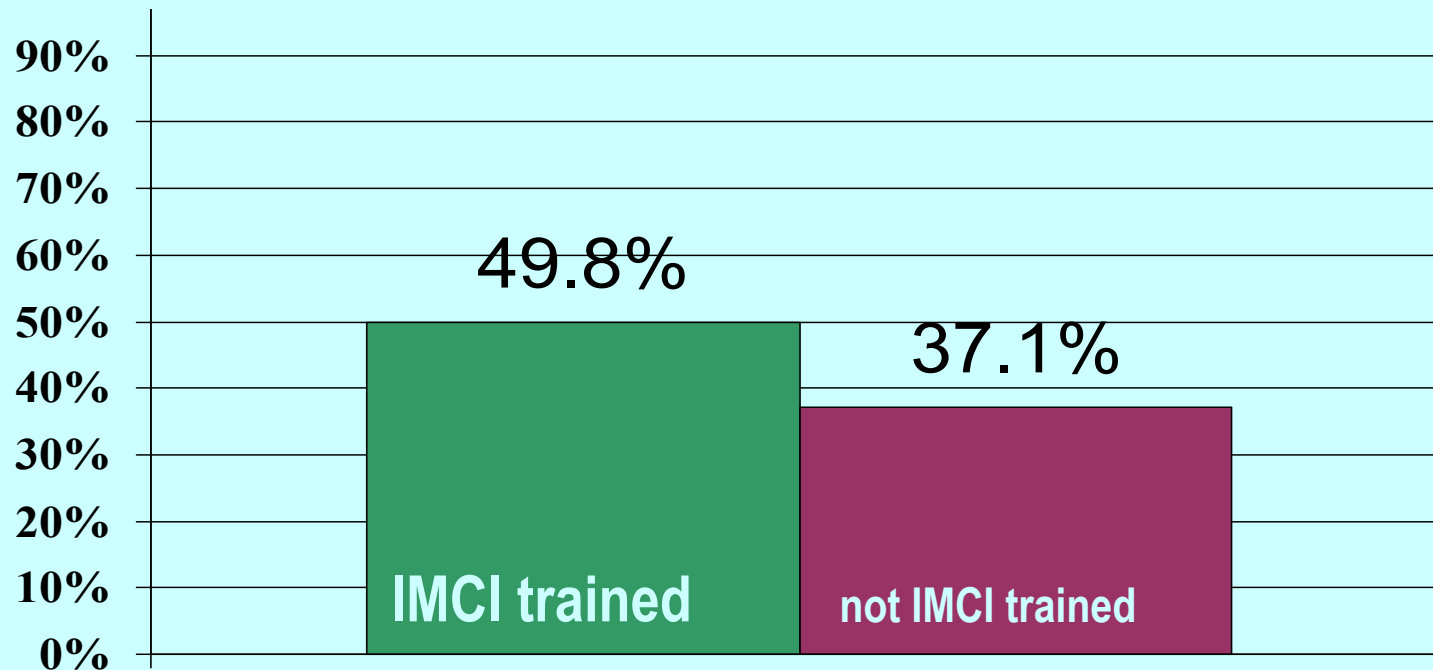
Child correctly classified



P < 0.001

Priority Indicators

Child correctly classified omitting coughs and colds and no dehydration

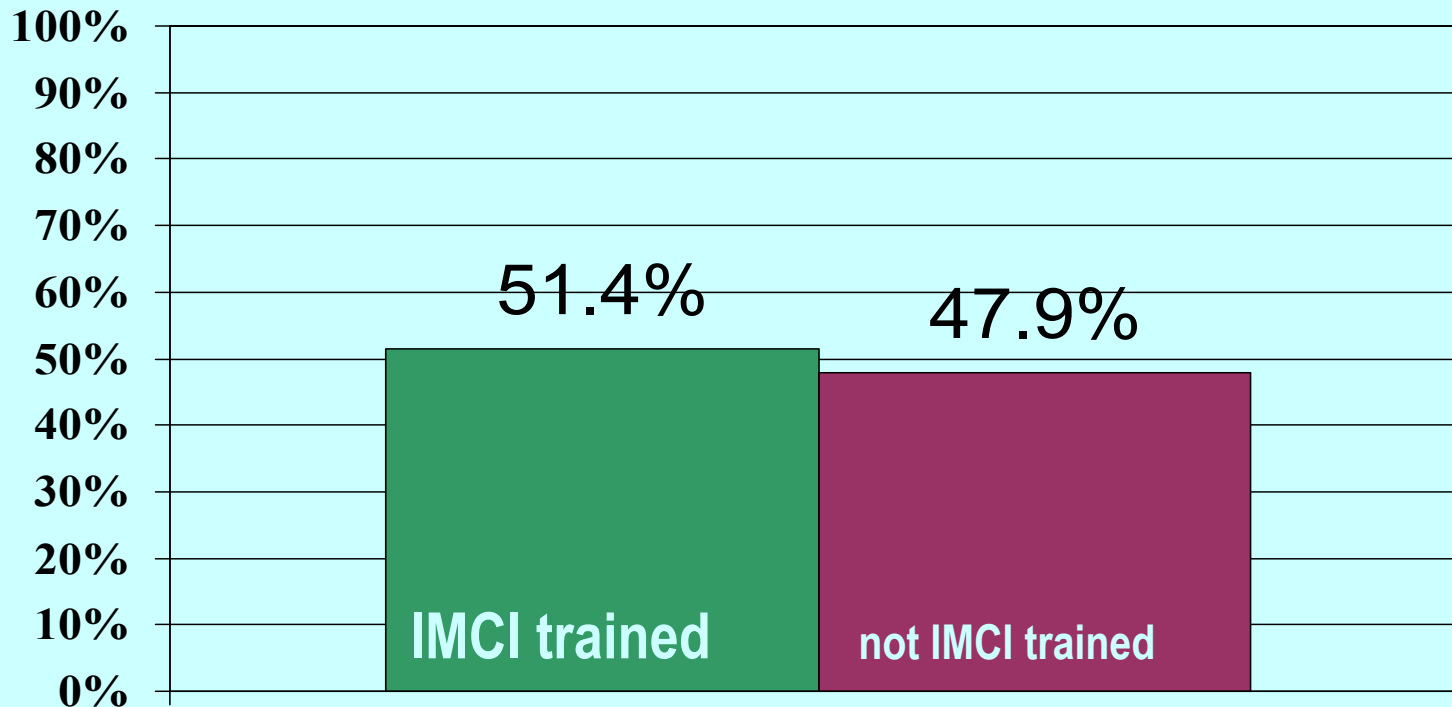


P < 0.01

Treatment

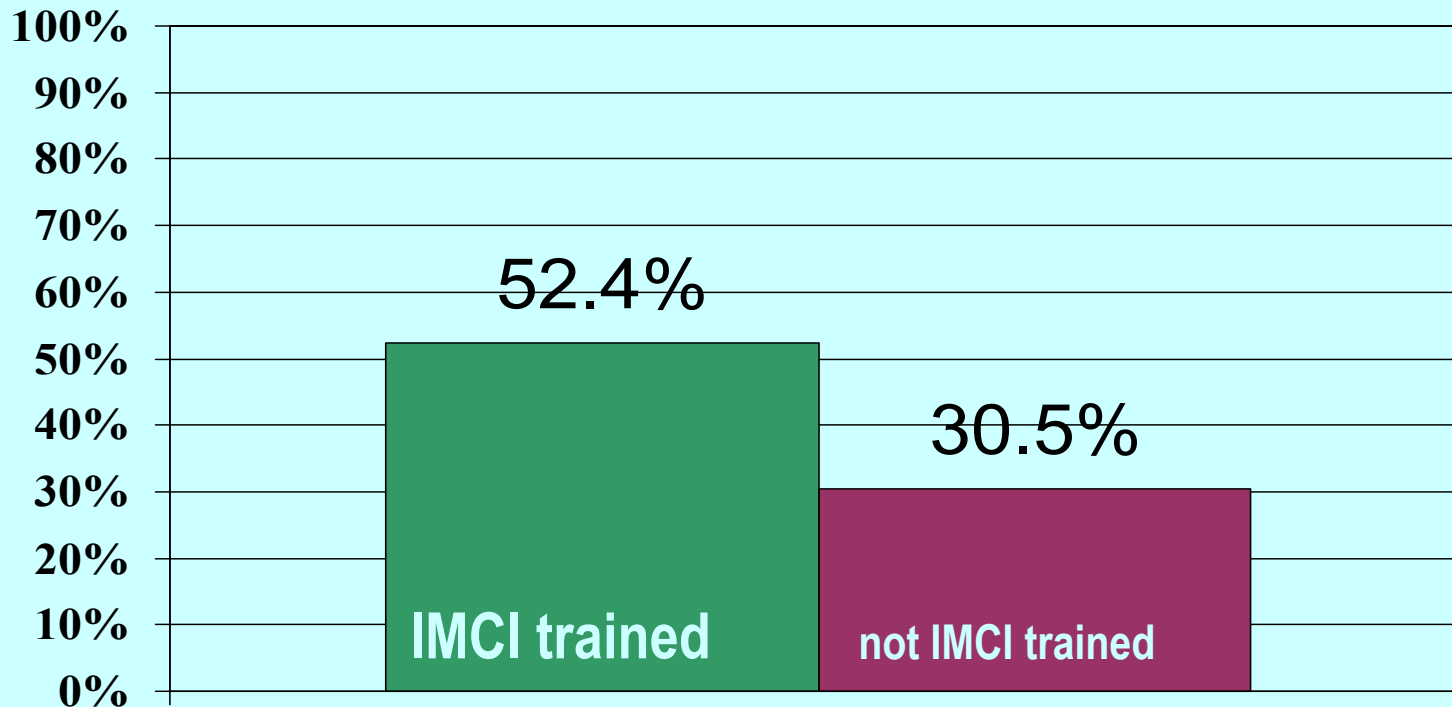
Priority Indicators

Pneumonia treated correctly



Priority Indicators

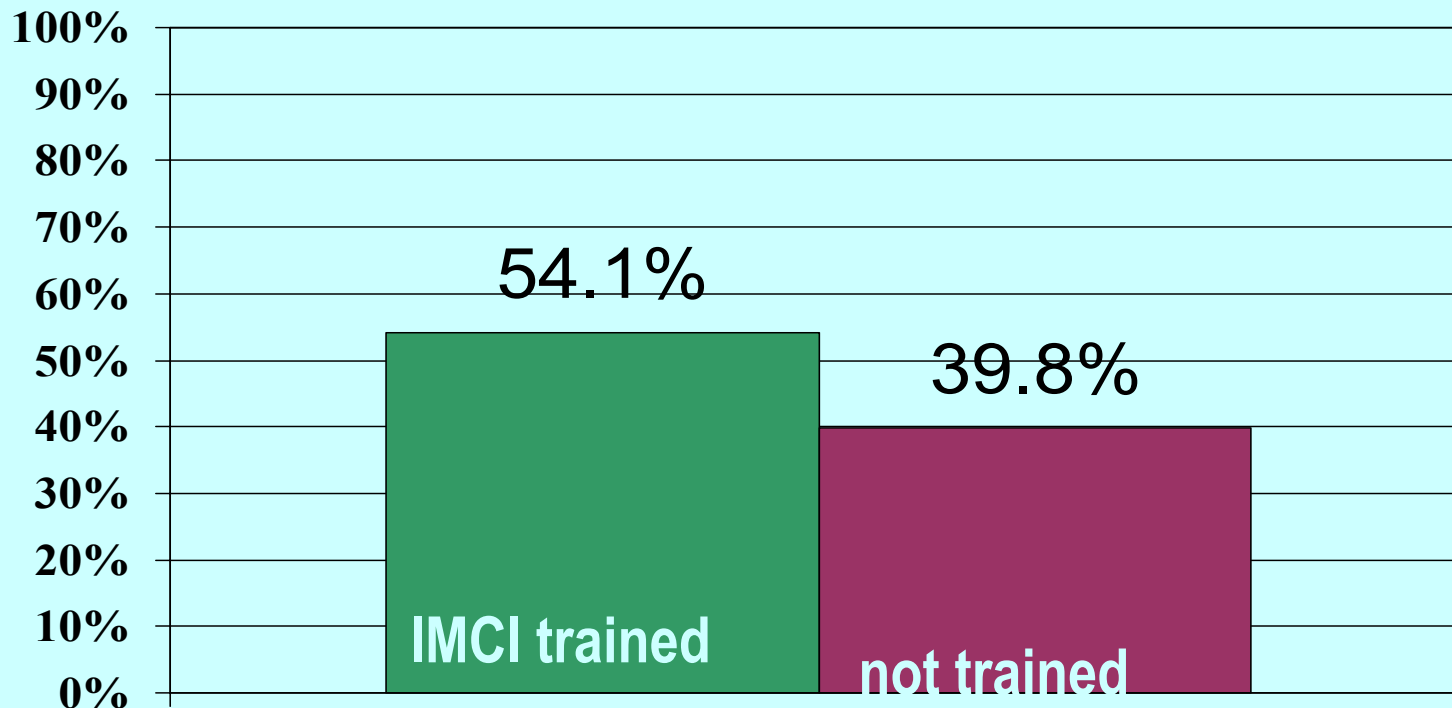
Malaria treated correctly



$P < 0.01$

Priority Indicators

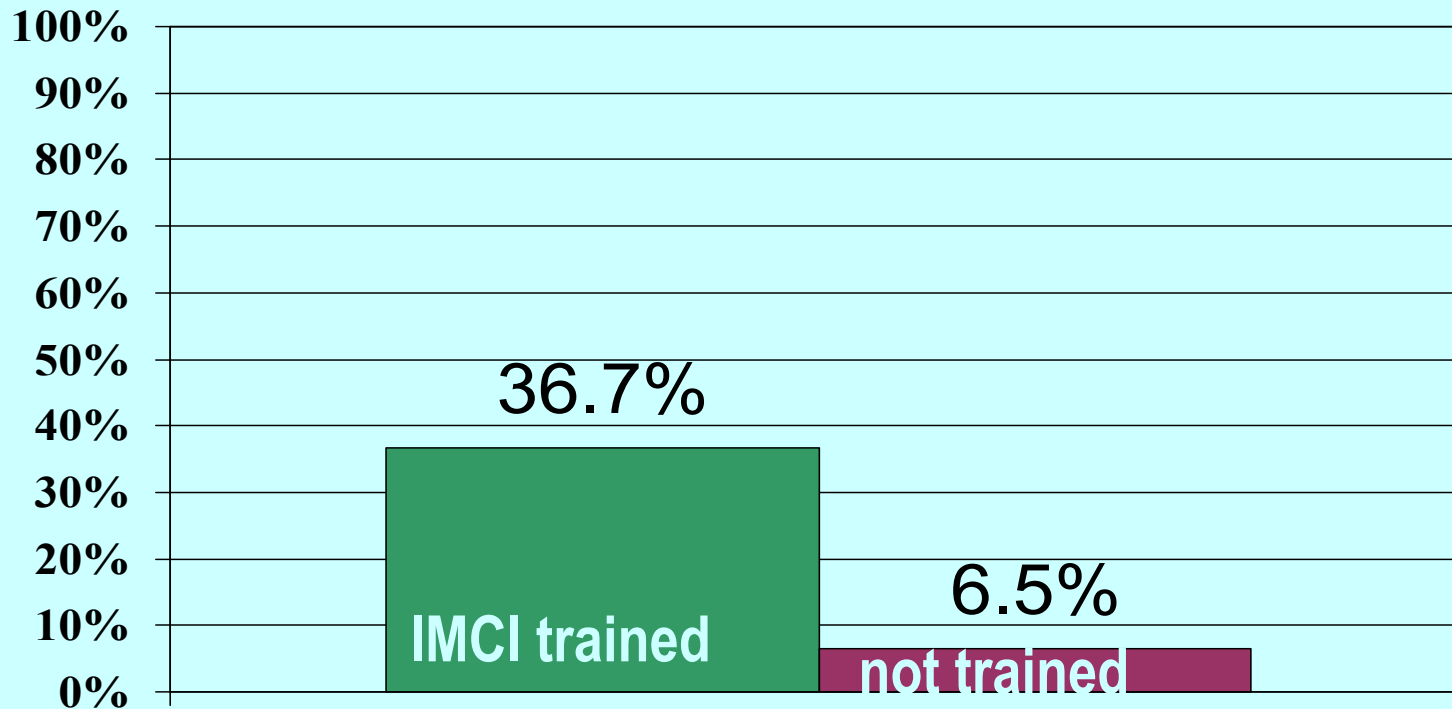
Child needing oral antibiotic and/or oral antimalarial is prescribed correctly



$P < 0.05$

Priority Indicators

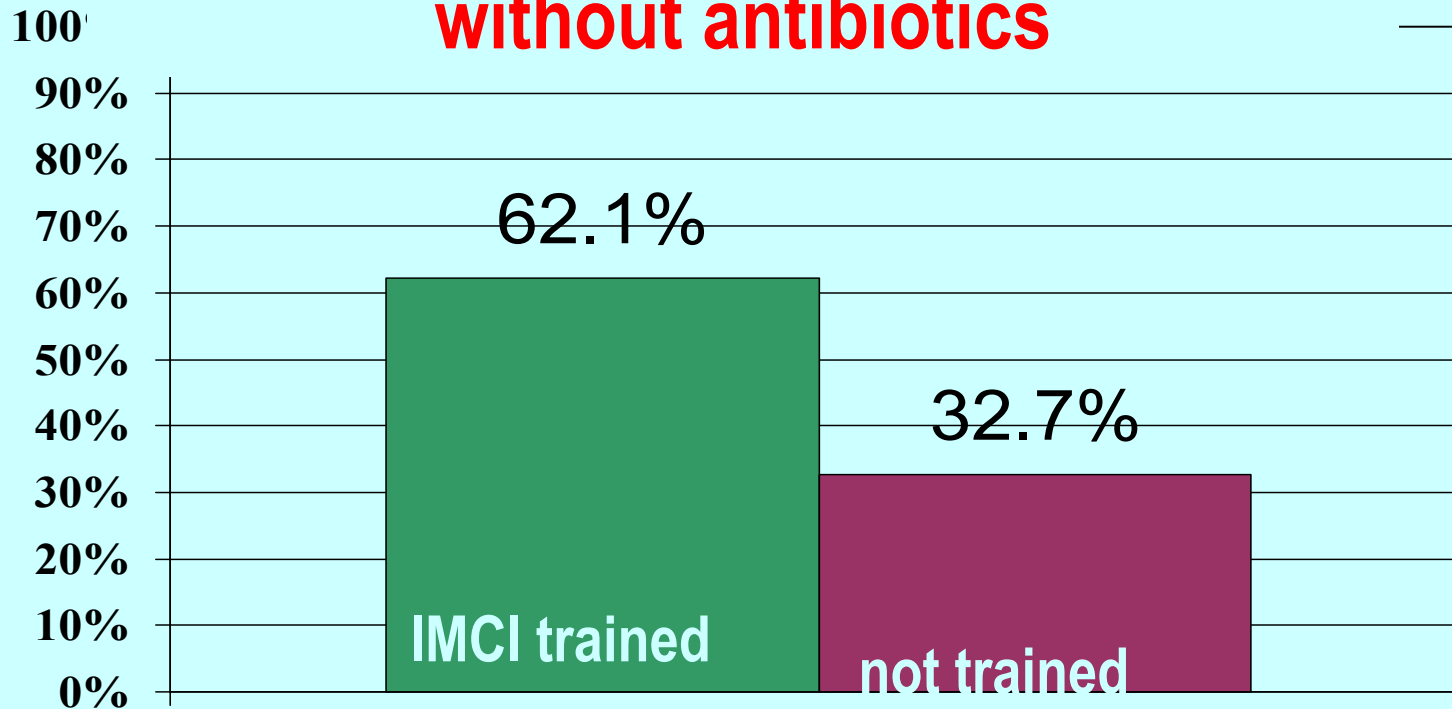
Child receives first dose of Rx at facility



P < 0.001

Priority Indicators

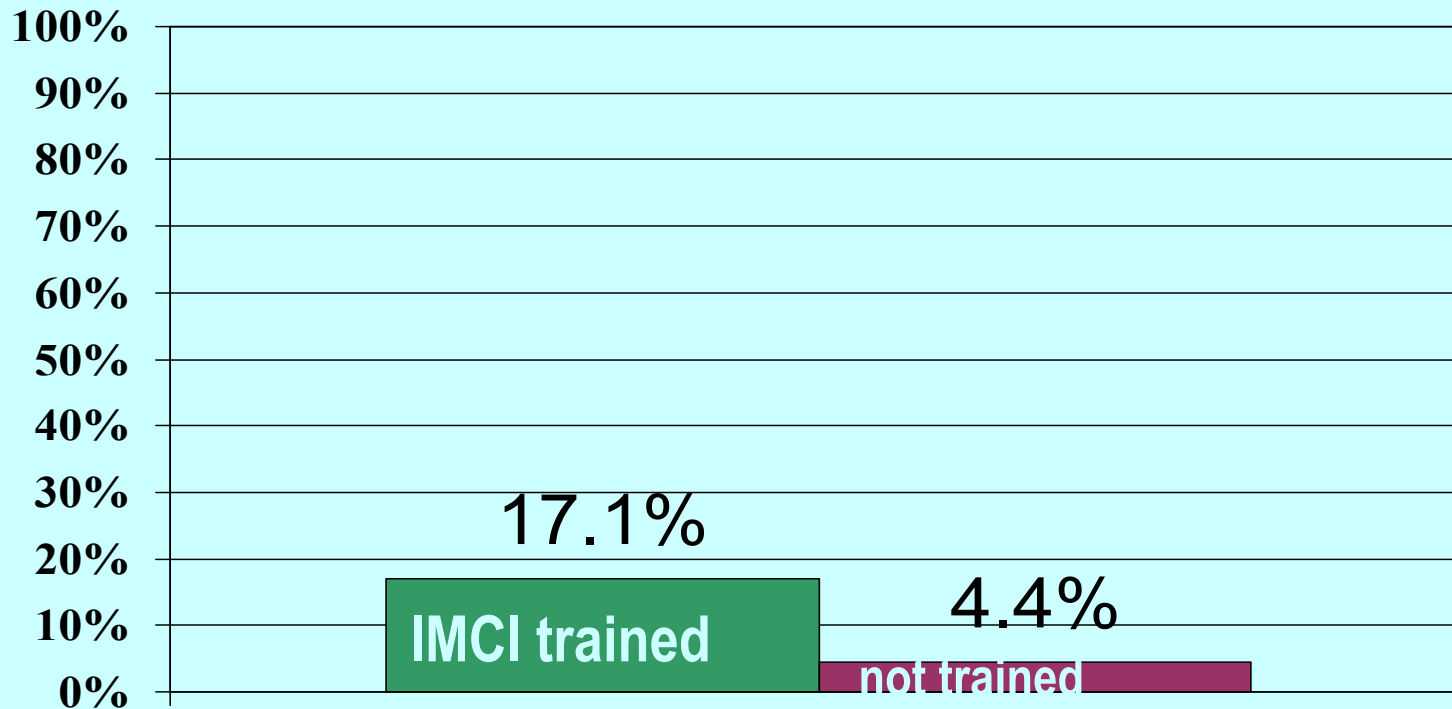
**Child not needing antibiotics leaves
without antibiotics**



P – 0.001

Priority Indicators

Child leaves facility with all needed vaccines

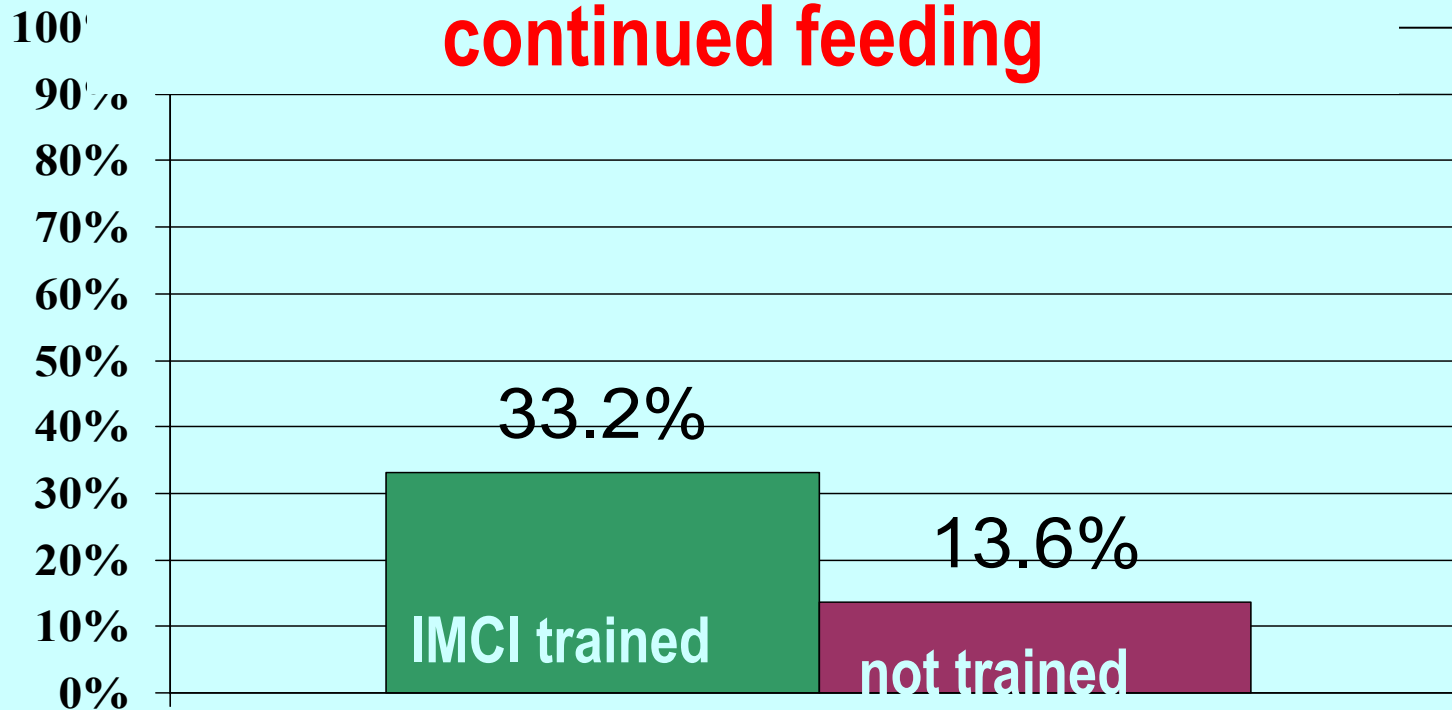


$P < 0.05$

Caretaker Counseling/Knowledge

Priority Indicators

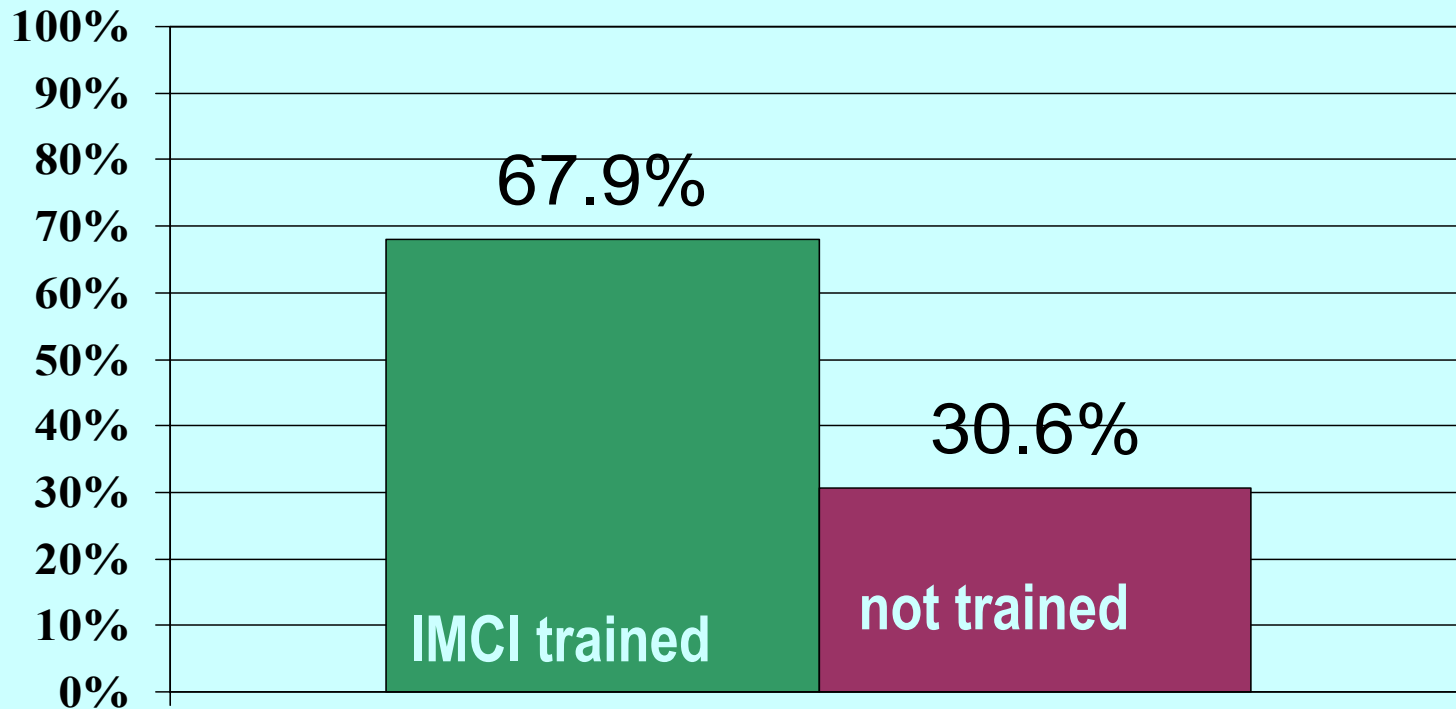
Caretaker advised on extra fluids and continued feeding



P < 0.01

Priority Indicators

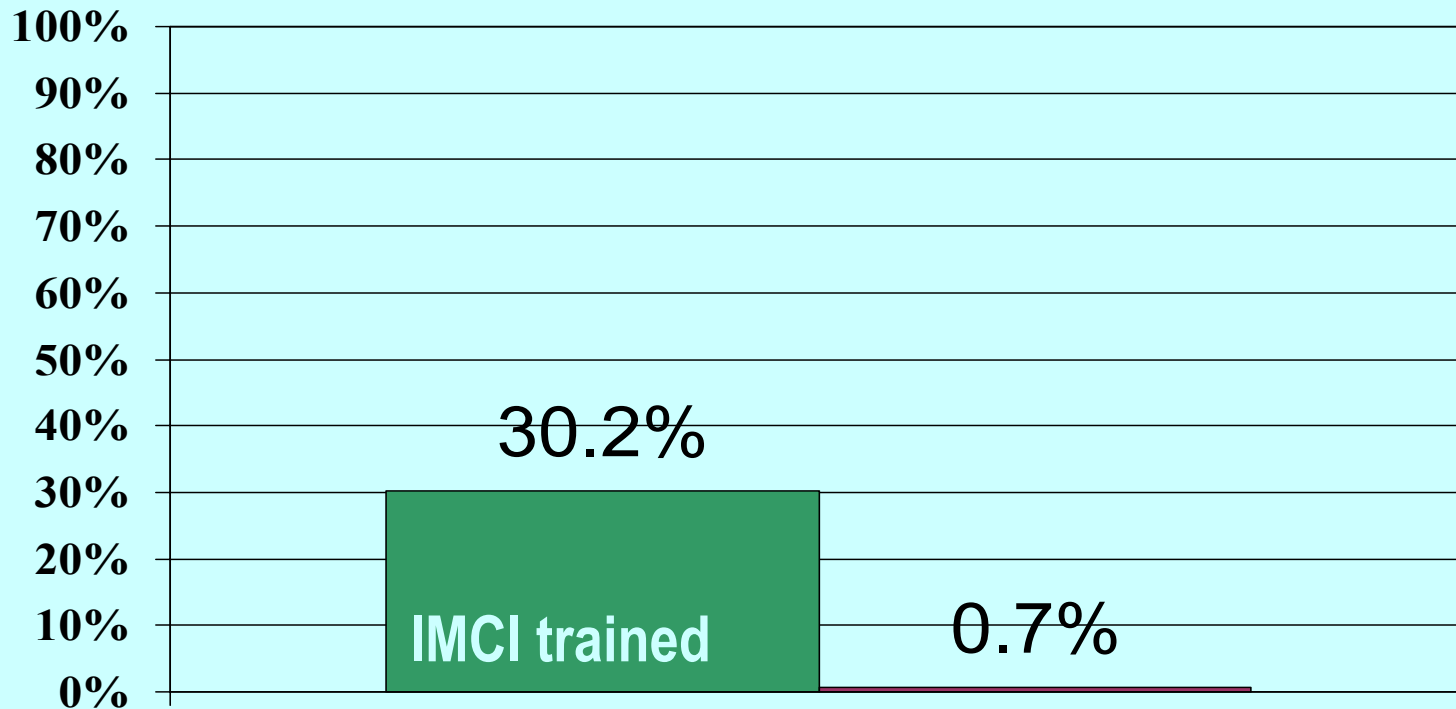
Caretaker of child prescribed oral medicine advised how to administer Rx



P < 0.001

Priority Indicators

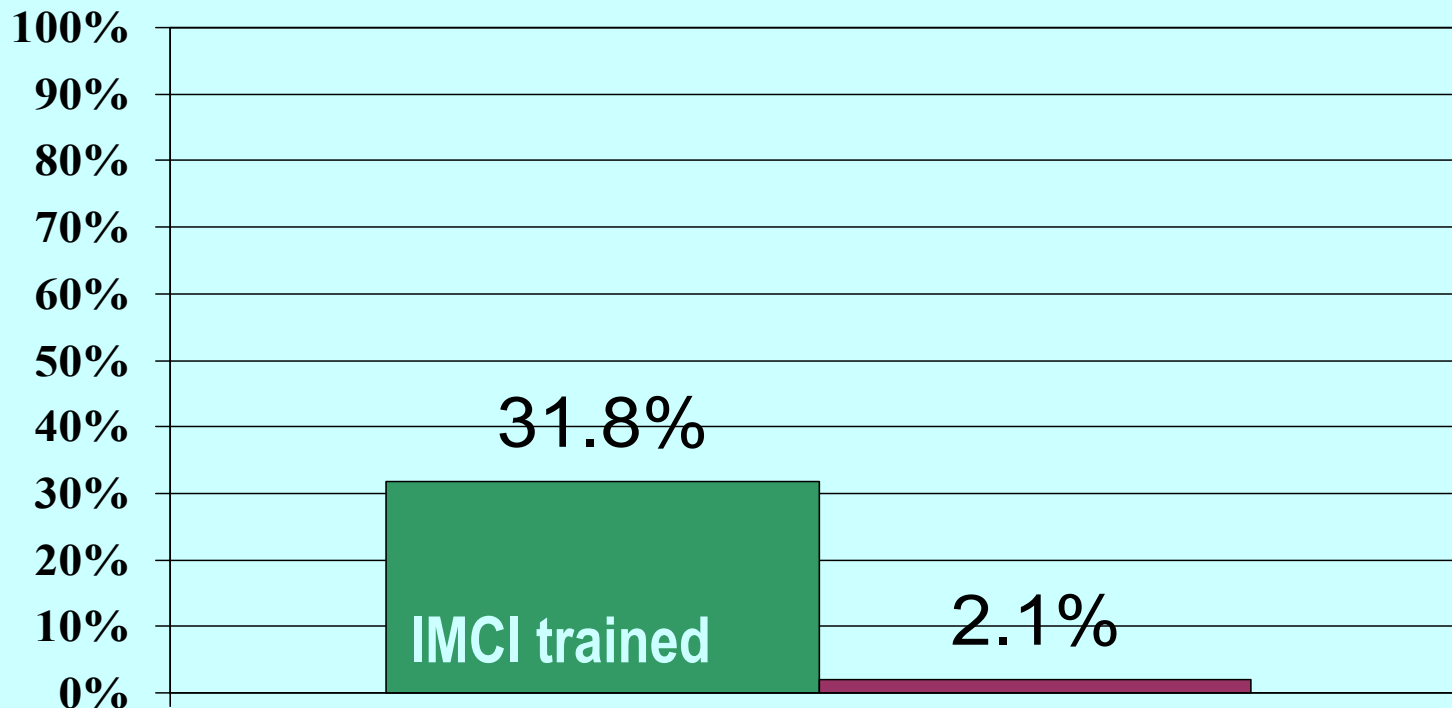
Sick child whose caretaker was advised on when to return immediately



P < 0.001

Priority Indicators

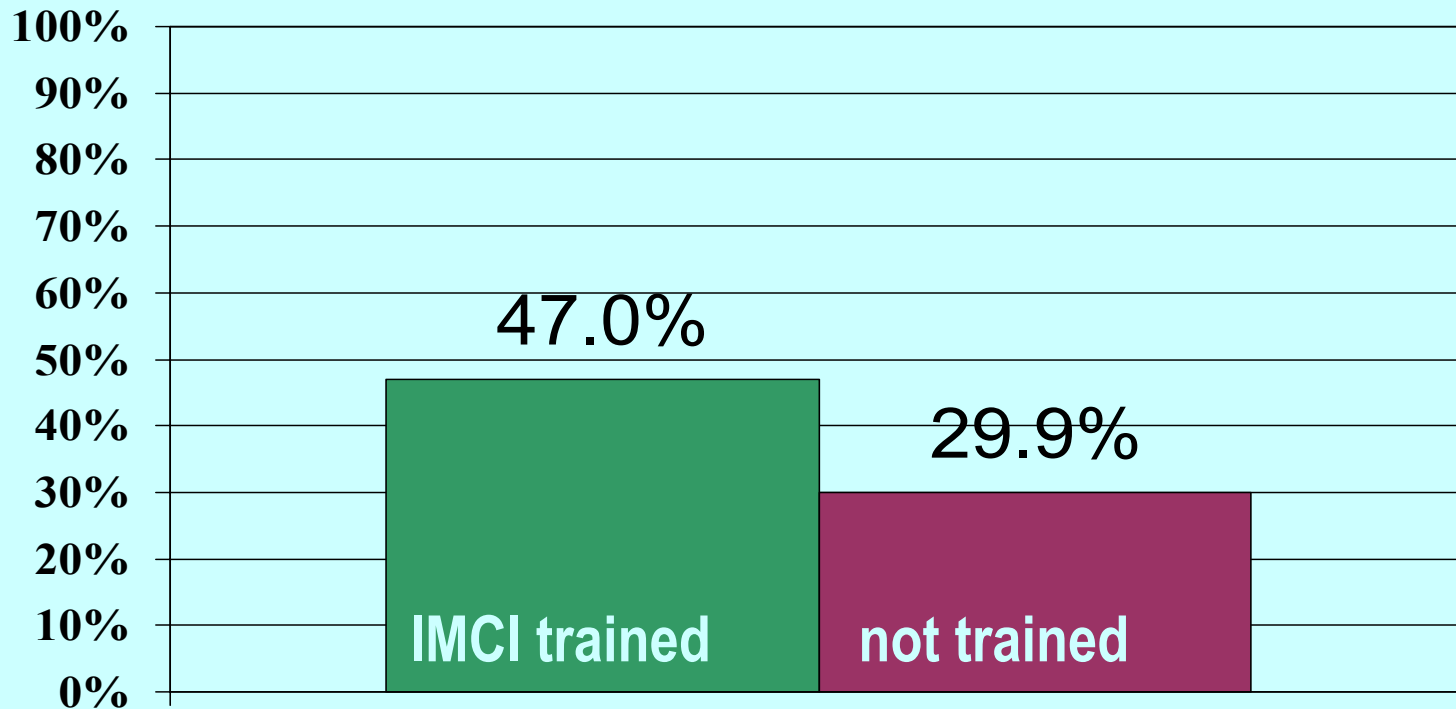
Sick child leaving facility whose caretaker was given/shown mother's card



P < 0.001

Priority Indicators

Caretaker of child prescribed ORS/oral antibiotic/antimalarial knows how to give Rx



$P < 0.001$

Differences between IMCI
trained qualified staff and IMCI
trained auxiliary staff

No statistically significant difference in the following priority indicators (all 3 rounds)

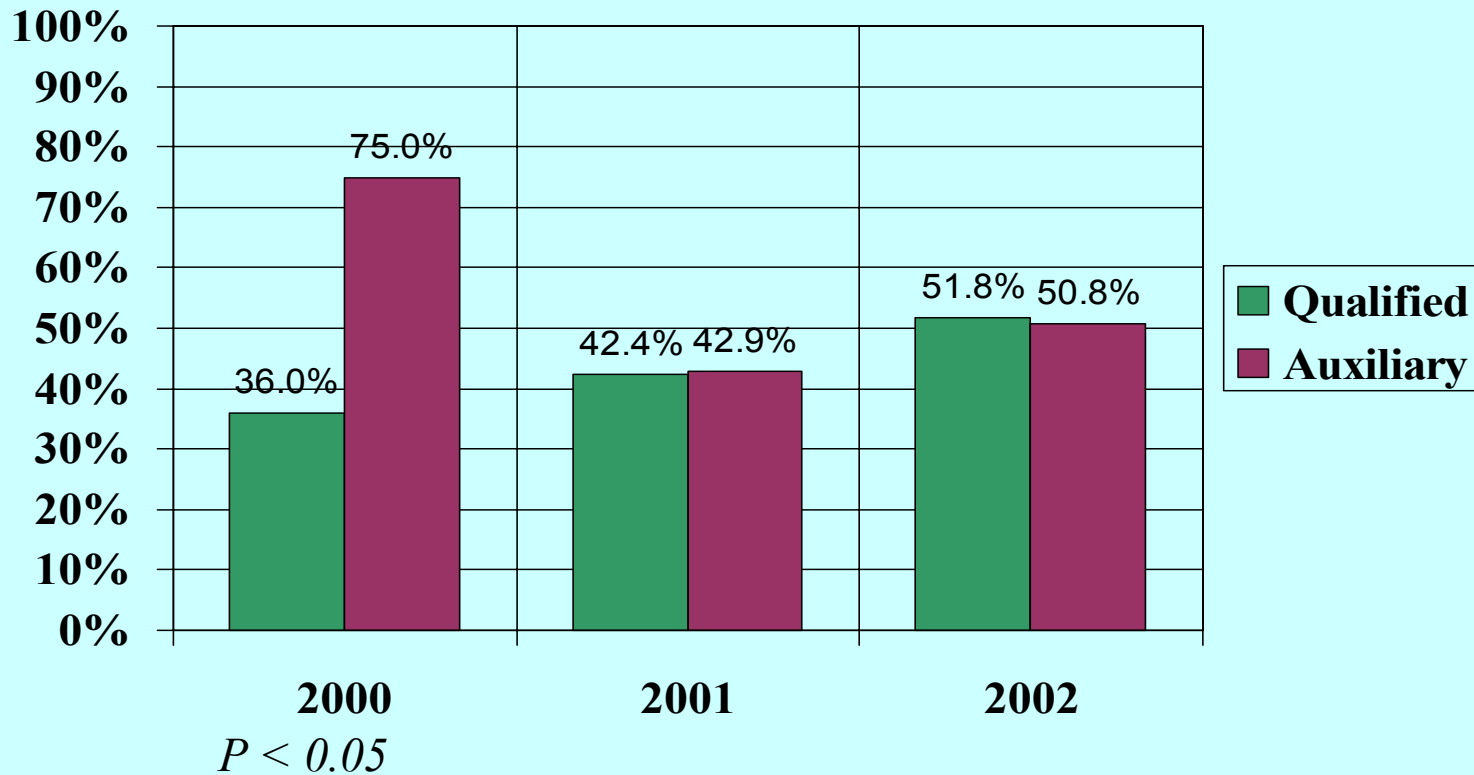
- Integrated assessment (14 routine tasks)
- Checking for 3 danger signs
- Checking weight vs growth chart
- Checking vaccination status
- Assessing feeding practices < 2 years
- Correct classification

No statistically significant difference in the following priority indicators (all 3 rounds)

- Correct Rx of malaria
- Child needing oral antibiotic/antimalarial prescribed correctly
- Child needing leaves with all vaccinations
- Caretaker of child prescribed ORS, and/or oral antibiotic and/or oral antimalarial knows how to give Rx

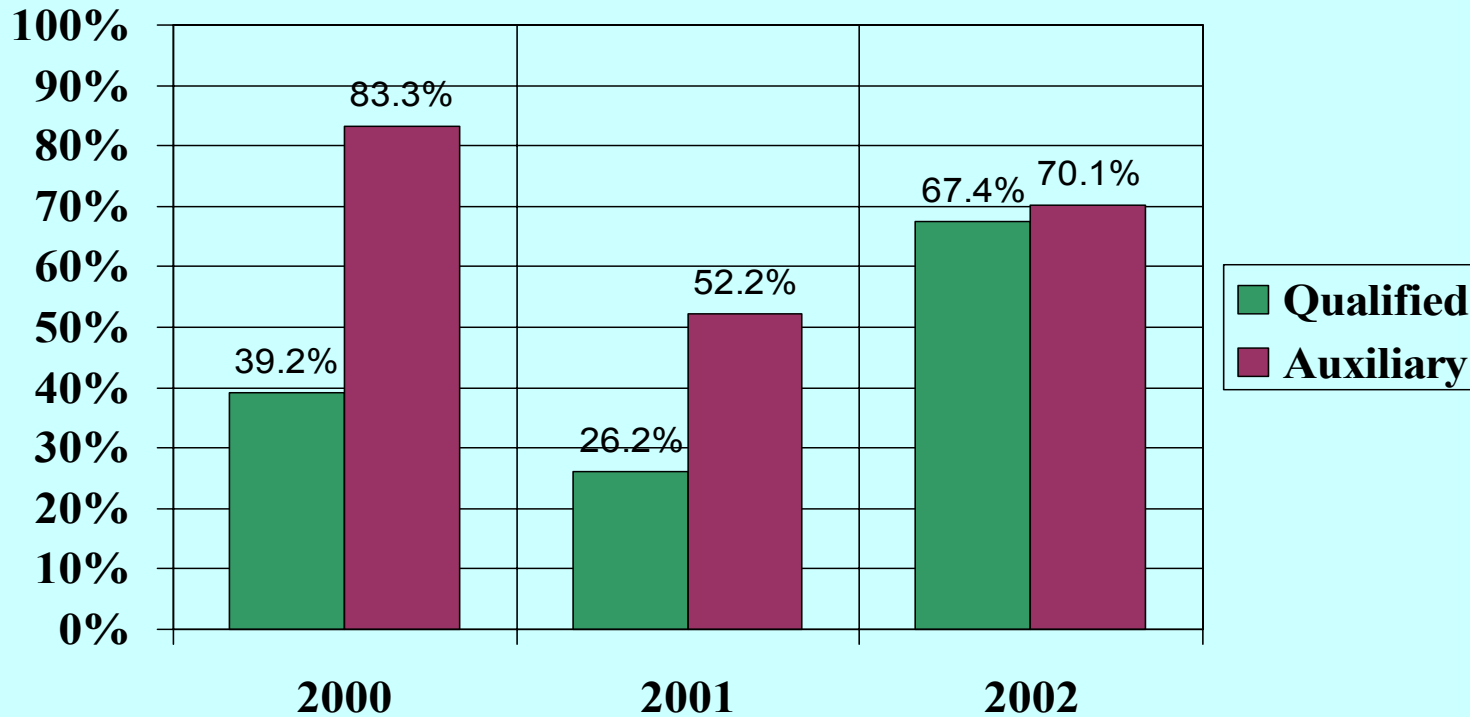
Priority Indicators

Child with pneumonia correctly treated



Priority Indicators

Child prescribed oral medication whose caretaker is advised how to administer Rx

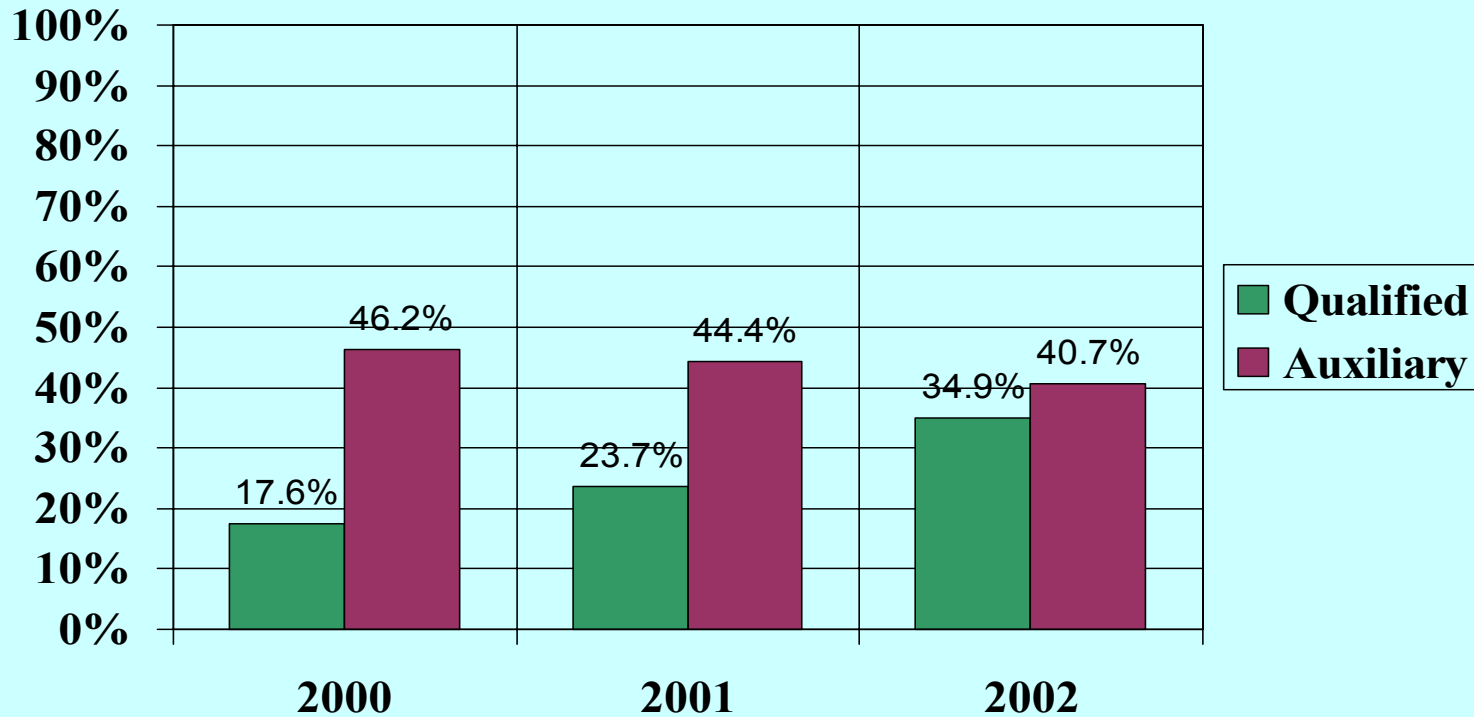


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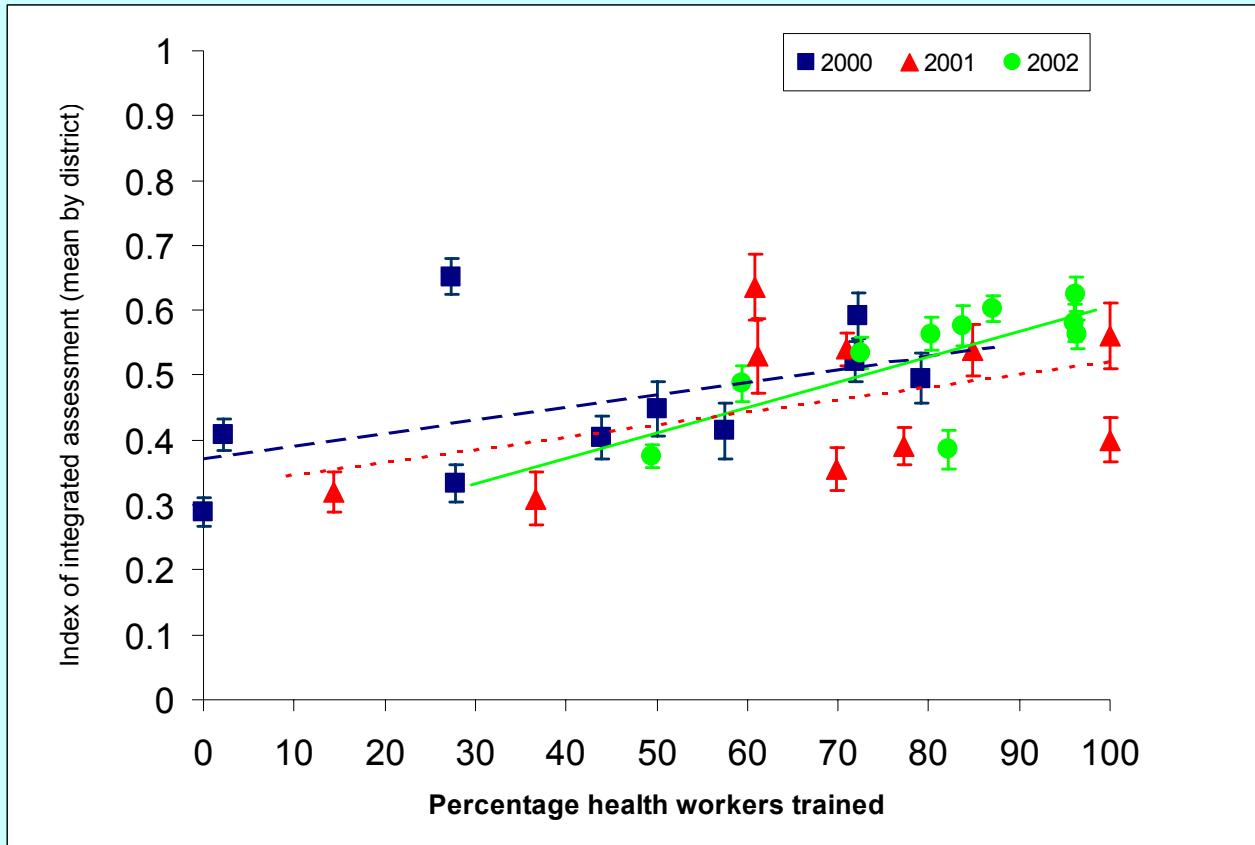
Priority Indicators

Child receives first dose of treatment at facility

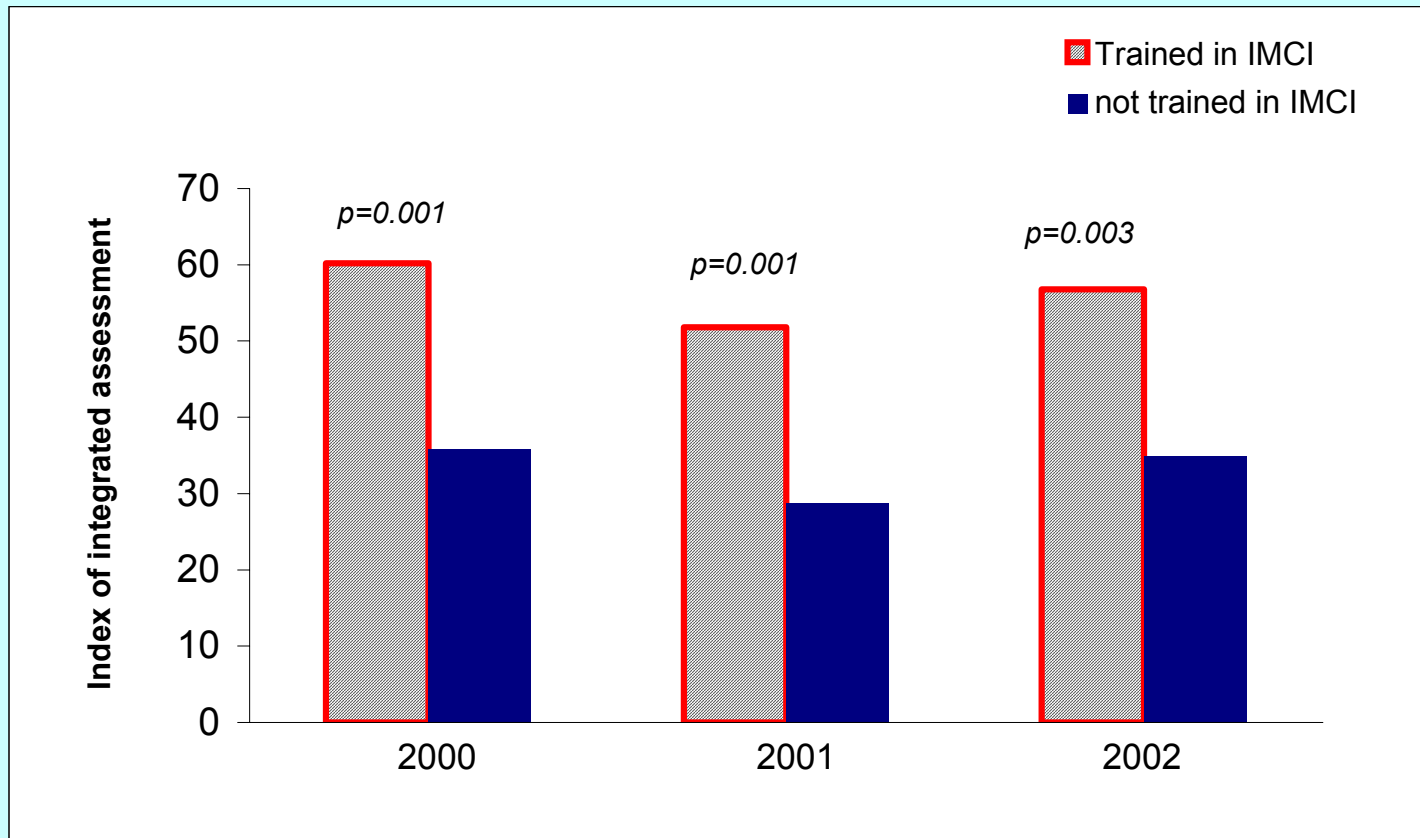


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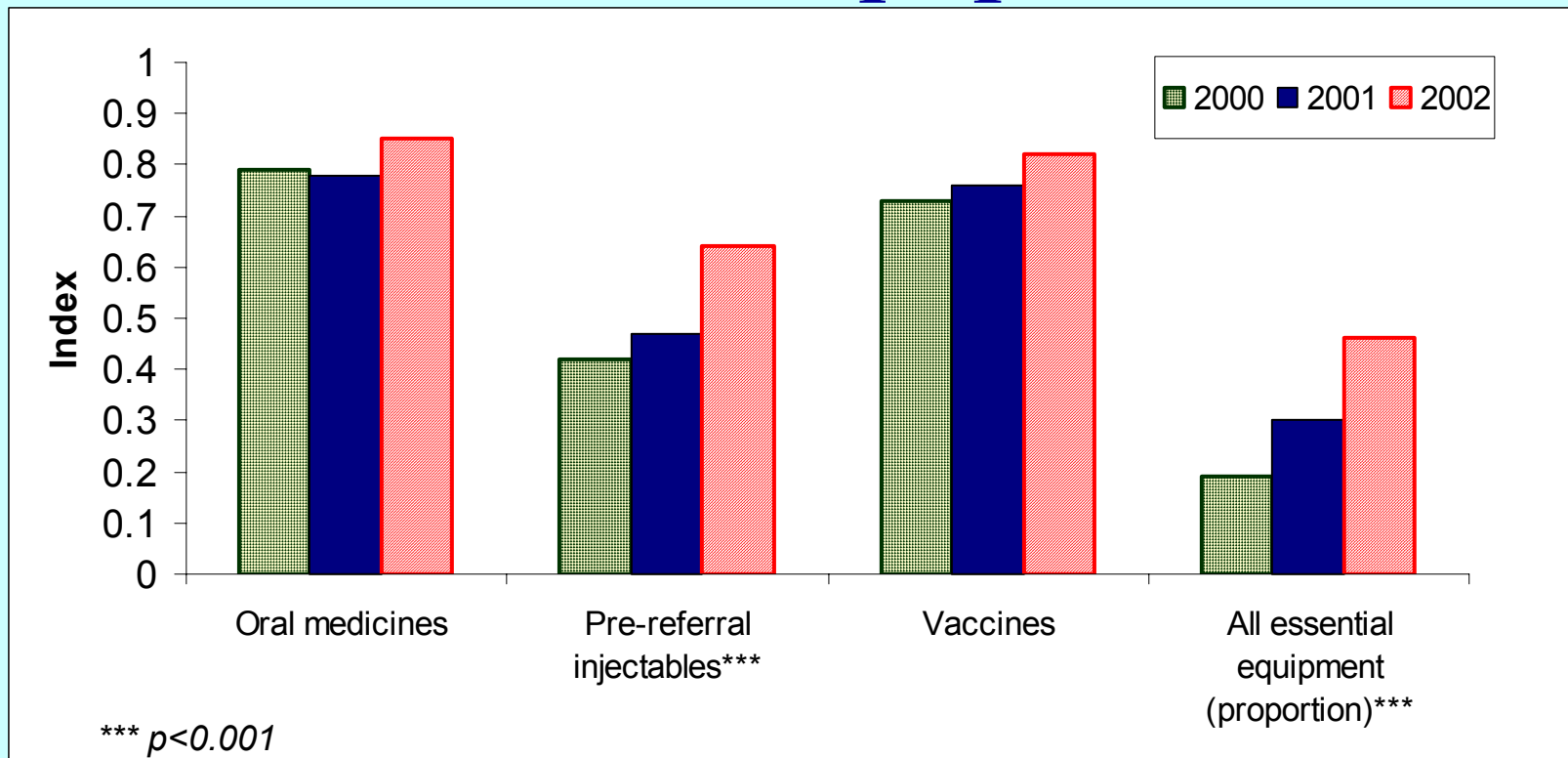
Trends in Quality of Care (Index 1: Integrated Assessment)



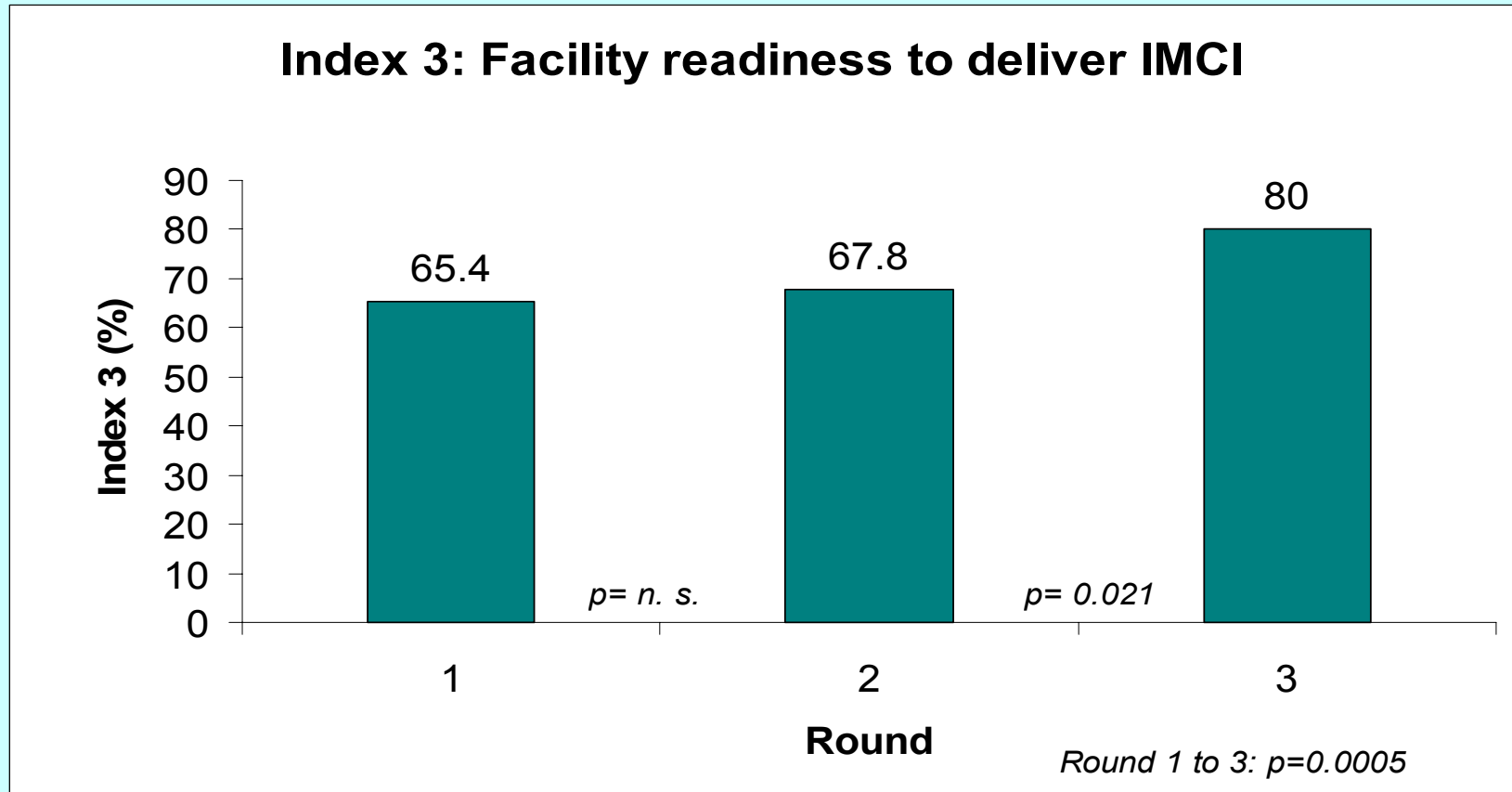
Health worker performance as measured by index of correct assessment among IMCI-trained and untrained staff in 2000, 2001 and 2002



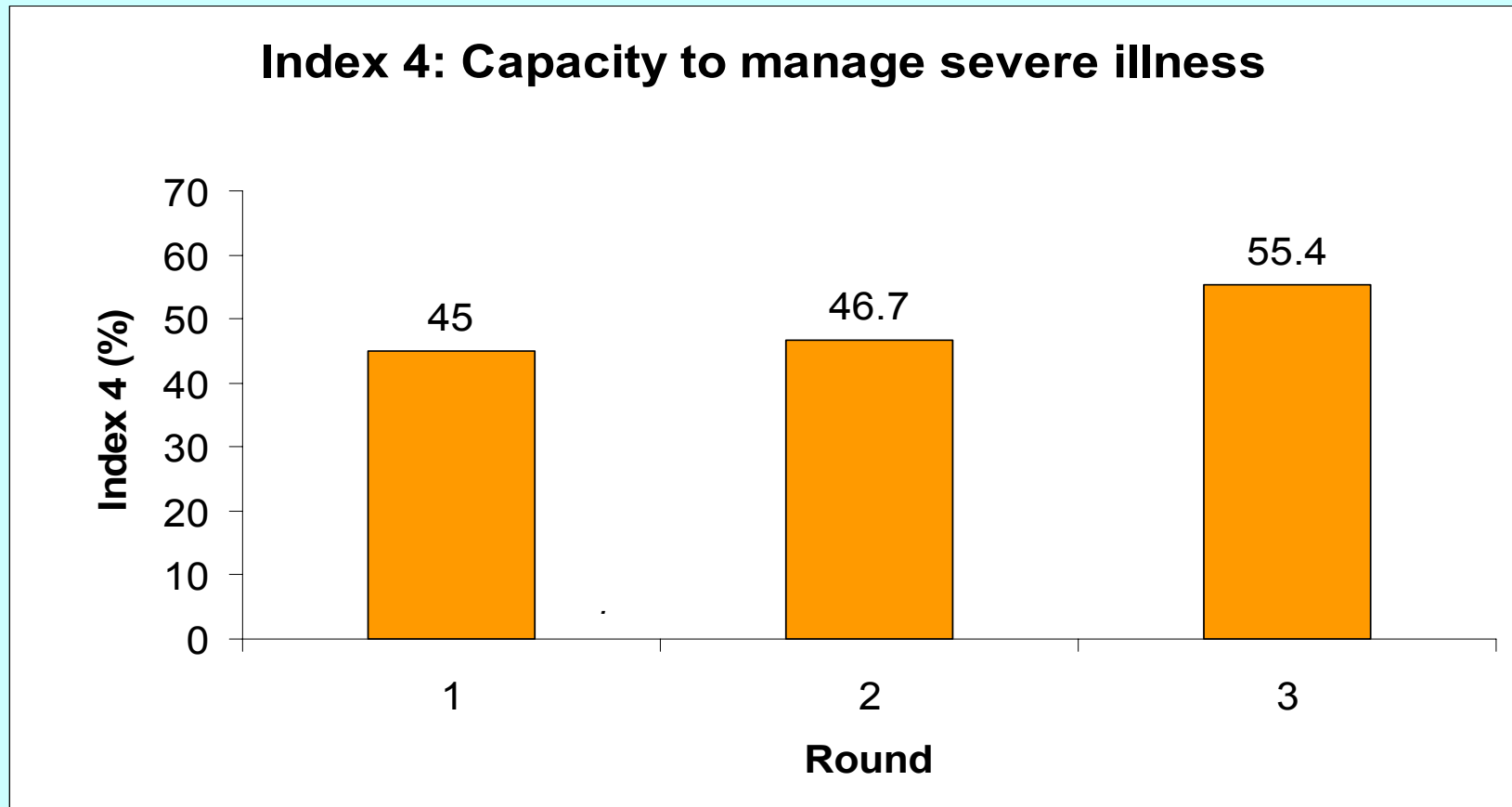
Changes over time in facility availability of drugs, vaccines and essential equipment



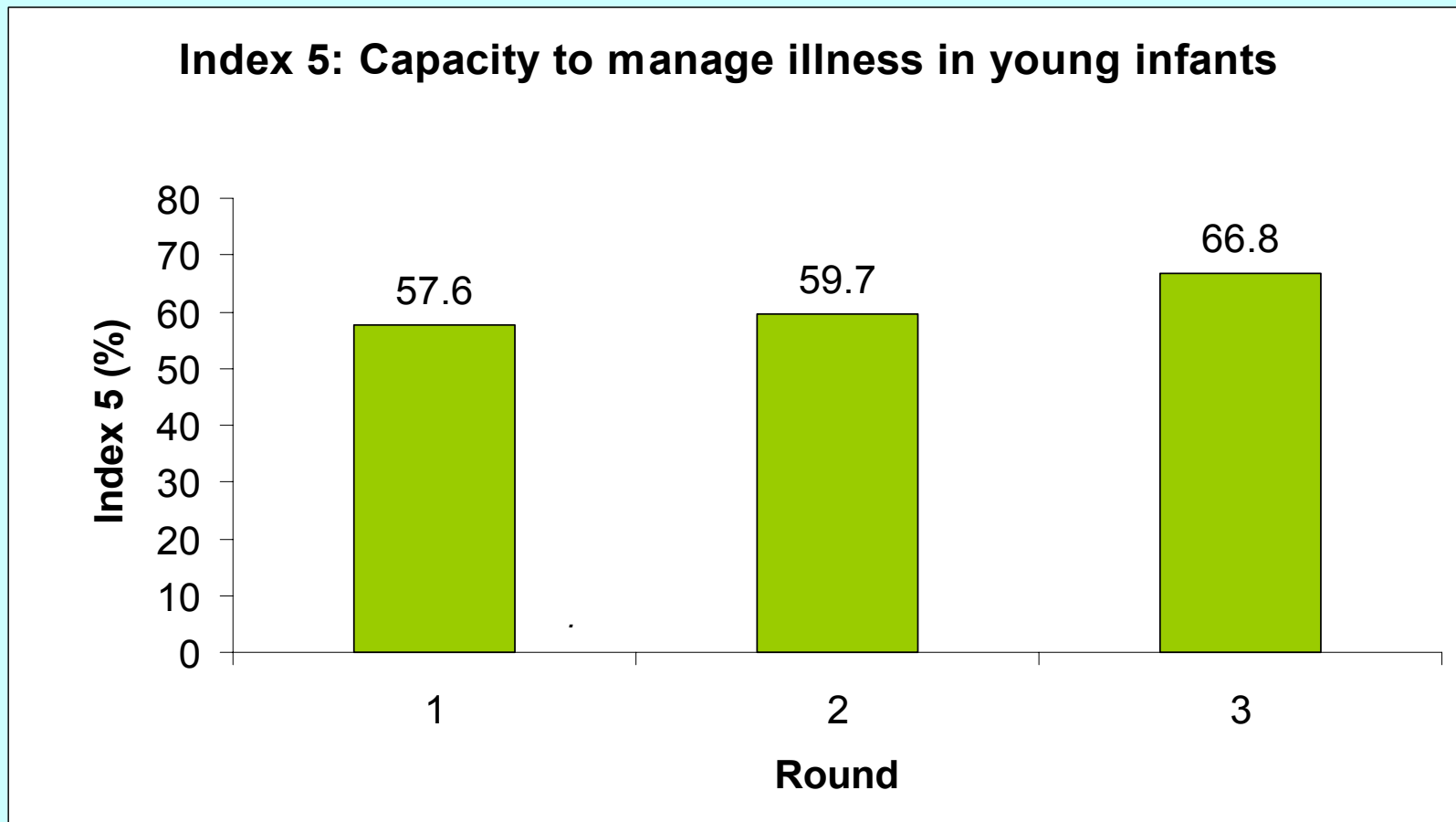
Health System Support (Index 3: Facility Readiness to Deliver IMCI)



Health System Support (Index 4: Facility Capacity to Manage Severe Illness)



Health System Support (Index 5: Facility Capacity to Manage Illness in Young Infants)



General Observations (1)

- Improving Situation of;
 - Drug/Vaccine Availability
 - Equipment/supplies
- Increasing coverage by IMCI trained HWs
- IMCI trained HWs perform key tasks better but performance levels are still relatively low
- Low level of post-training supervision

General Observations (2)

Quality of child health care

- IMCI trained health care workers' performance was clearly superior to non-trained health workers
- Coverage of IMCI-trained personnel now $>75\%$ in the 10 study districts
- Quality of care provided was still lower than expected
- Errors in classification and treatment were still common

Key areas for improvement of quality in IMCI training

- Classification and correct treatment of malaria
- Classification and correct treatment of pneumonia (no difference in all rounds between IMCI trained and non-trained)
- Checking vaccination status
- Assessing children with very low weight for feeding problems
- Correct treatment of child with dehydration
- Correct treatment of child with anaemia
- Giving first dose at facility
- Counselling and communication

Way Forward

Key Issues

- Quality of training
- Understand why HWs not performing well
- Train more health workers

Key Issues

- Maintain supply of drugs
- Address workload on existing HWs
- Guidelines to be in line with existing policies

Key Issues

- Refresher courses for trained HWs
- Flow of funds
- Make training appropriate to level of trainees e.g., Nursing Assistants
- Post-training follow up
- Supervision

Acknowledgements

- Communities and district officials for granting permission to collect data
- MOH and partners supporting implementation of IMCI
- USAID for funding
- WHO Multi-Country Evaluation Investigators
- Scientific committee
- Steering committee

Uganda Team Members

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- Fred Wabwire-Mangen
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- Robert Ntalo
- Sam Ibanda