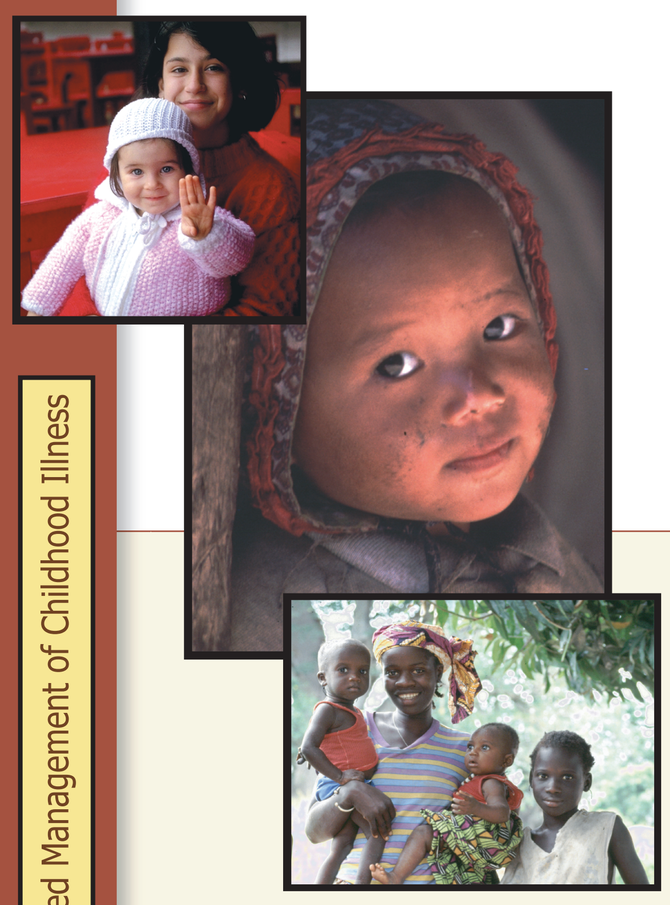

World Health Organization

Countdown to 2015
Child Survival

Capacity constraints to the adoption of new interventions: consultation time and Integrated Management of Childhood Illness (IMCI) in Brazil

Background

- IMCI strategy introduced in developing countries to reduce mortality in children under-five, caused by 5 conditions: diarrhoea, pneumonia, malaria, measles, and malnutrition.
- Focuses on improving 3 main areas: skills of health workers, health systems and family and community practices.
- Implemented in parts of Brazil since 1996 with a primary health care orientation.
- Although IMCI has been shown to improve quality of care, it is not known if the activities required by the strategy increases consultation time or leads to constraints on overall provider time which has important policy and economic implications.

Objectives

- Determine average time spent in consultation with under-fives using IMCI-based care compared with routine care in three states.
- Determine difference in time spent in consultation with over-fives between IMCI and non-IMCI trained providers.
- Explore determinants of variations in time across these groups.

Methods

- Time and motion study in which surveyors measured consultation time with patients under-five and over-five years of age during routine working days at a sample of primary health facilities.
- Data collected for 34 providers in 32 facilities (16 IMCI, 16 controls), randomly selected in three states in the Northeast of Brazil: Ceará, Paraíba and Pernambuco.
- Consultation time was estimated by (1) computing the crude average consultation time for IMCI and non-IMCI providers and (2) using regression analysis to explore and control for other possible determinants of consultation time.

Summary of results

Univariate analysis

IMCI providers spent on **average 4 more minutes** per consultation with under-fives compared to routine care providers.

Multivariate Regression analysis

Controlling for confounders, IMCI providers spent **1.26 more minutes** per consultation compared to routine care providers.

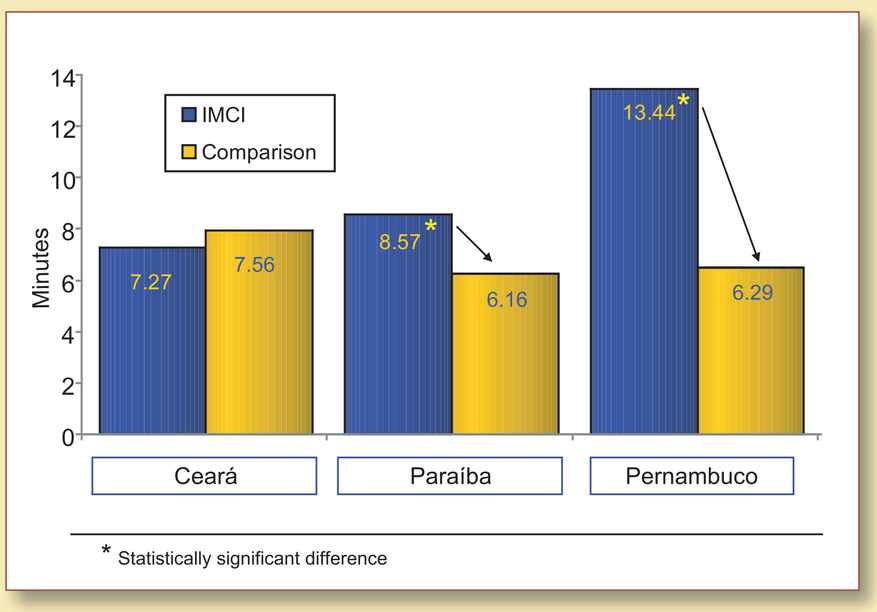

FIGURE 1. Univariate Analysis

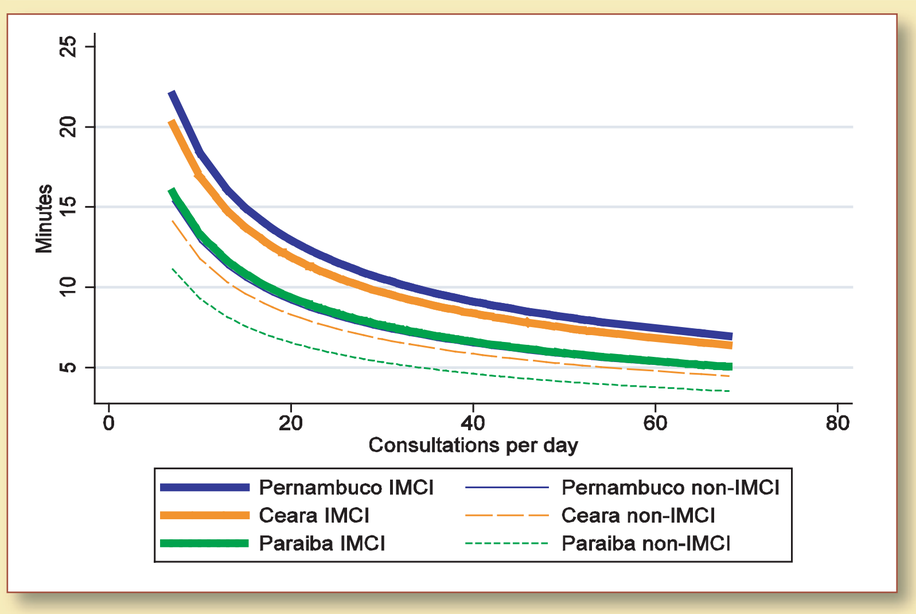

FIGURE 2. Effect of number of consultations per provider per day on consultation time with under-fives, estimated separately for each state and for IMCI-trained and non-trained providers.

Source: Adam T et al, Capacity constraints to the adoption of new interventions: consultation time and the Integrated Management of Childhood Illness in Brazil, submitted, HPP

TABLE 1. Multivariate Analysis

Variable	Definition	b coeff.	SE	t	P
IMCI	IMCI-trained =1, not = 0	0.36	0.04	9.11	<0.0001
Interruption	Whether the consultation was interrupted by another consultation or activity: interrupted=1, not = 0	0.14	0.08	1.74	0.081
Single Visit	Single or multiple persons presenting at the same visit: single visit =1, not = 0	-0.40	0.05	-8.65	<0.0001
Ln visits per provider per day	Natural log of consultations per provider per day	-0.50	0.05	-10.34	<0.0001
Ceará	Observation from Ceará state, Ceará=1, not = 0	-2.96	0.63	-4.69	<0.0001
Paraíba	Observation from Paraíba state, Paraíba=1, not = 0	-13.04	4.81	-2.71	0.007
Ceará_lnhours	Joint effect of Ceará with natural log of working hours per provider per day	1.32	0.28	4.69	<0.0001
Paraíba_lnhours	Joint effect of Paraíba with natural log of working hours per provider per day	5.84	2.18	2.68	0.008

Key messages

IMCI-trained providers spent approximately 20% more time on average per consultation with under-fives and no less time with over-fives than non-IMCI-trained providers. This time is well spent, as quality of care by IMCI trained providers is higher.

At relatively low patient load, adoption of IMCI can be delivered by available human resource capacity.

At high patient load, IMCI trained providers do not spend as much additional consultation time as providers with low patient load, which may have implications on quality of care.

Policy formulations should be based on the results of costing studies that report information on patient load and capacity utilization.

References

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T Adam, DG Amorim, SJ Edwards, J Amaral, and DB Evans

World Health Organization, Geneva, Switzerland and Federal University of Ceará, Fortaleza, Brazil