

## **DRC analysis**

### Main Results:

The analysis of the 2007 and 2013/14 DRC DHS showed overall health provider care seeking significant increase over time only for diarrhoea with a 6.4% difference in 6 years (95% CI 1.3%-12.8%).

When splitting by public and private sector, significant improvement held for the second one with 5.7% (95% CI 3.8%-8.4%) in 2007 and 10.1% (95% CI 8.5%-12.1%) in 2013/14.

Lower trend in private sector care seeking for a) ARI and b) fever/diarrhoea/ARI was detected in the 2013/14 DHS when compared with the previous DHS: - 8.3% (95% CI -3.7% - -12.9%) for ARI private sector and - 6.8% (95% CI -3.0% - -10.5%) for combined syndromes private sector.

### Interpretation

Rates of care-seeking for childhood illness generally remain quite low in DRC, meaning that the potential population effectiveness of IMCI remains limited.

IMCI training in DRC started in 2001 and is currently being implemented in around 85% of the country districts. Unfortunately the 2007 DHS does not represent a valid baseline since major changes may have occurred in care seeking behaviour in six years (from 2001 up to 2007), which could explain the lack of improvement for ARI and combined syndromes (ARI, fever and diarrhoea) between the 2007 and the 2013/14 DHS.

On the other hand, results on diarrhoea health provider care seeking is likely to mirror the benefit of IMCI over the latest years.

The decreased private sector care seeking for ARI and fever/ARI/diarrhoea, not explained by changes in surveyed populations, is probably due to modifications in the presence of public/private human resources and infrastructures.

IMCI is primarily a public sector initiative, targeting first level facilities and training public sector health workers. While it is possible that public sector employees often work in private practice - and apply IMCI standards - it is very possible that they do not.

No significant public sector change is seen in DRC, and this raises issues of limited population coverage and equity.

Quality of care remains an unanswered question, since we have no data on care provided to children reaching public or private providers. Relatively low careseeking rates in most settings raises the question of whether IMCI implementation has resulted in significant improvements in quality of care.

## Ethiopia analysis

### Main Results:

All care seeking indicators for under five children showed a significant upward change from the 2000 to the 2011 Ethiopia DHS.

Health provider care sought for ARI increased from 15.8% (95% CI 13.2%-18.8%) to 27% (95% CI 22.2%-32.3%); 6.5% (P=0.01) and 4.8% (P<0.001) increase was registered for public and private sector respectively.

All these significant changes were not caused by modifications in survey population characteristics such as wealth, age and/or education.

Health provider care sought for diarrhoea increased from 13.3% (95% CI 11.3%-15.6%) to 31.8% (95% CI 27.8%-36.1%); 13.7% (P<0.001) and 5.7% (P<0.001) increase was registered for public and private sector respectively.

As for ARI indicators, improvements in care seeking behaviour for diarrhoea cannot be explained by change in composition of surveyed population.

When combining diarrhoea, fever and ARI together, health provider seeking care increased from 15.9% (95% CI 13.8%-18.4%) to 29.3% (95% CI 26.4%-32.5%); 8.9% (P<0.001) and 5.2% (P<0.001) increase was registered for public and private sector respectively.

Only 5% of such improvement can be explained by better education over time while the role of public health affects more than 90% of changes.

### Interpretation

Ethiopia showed significant improvements in careseeking for all diseases , however rates of careseeking do not rise above about 30% in public and private facilities combined. This means that the potential population effectiveness of IMCI remains limited.

Considering that the first IMCI training took place in Ethiopia in 1997 we could consider that the 2000 DHS may represent a valid baseline since important changes happen over the long period.

At the same time, results from the 2011 DHS give a good picture of the current situation in the country.

The ten years' time span between the two surveys, the fact that IMCI is currently being implemented in 100% of the country districts and the decomposition analysis allow us to conclude that IMCI may have played an important role in changing care seeking attitudes. We assume because of their system of community mobilizers (c-IMCI). This raises the question of whether it is c-IMCI rather than facility-IMCI that is most effective at reaching the population

Additional impact on this could have stemmed by other strategies such as the iCCM/CBNC and the free of charge consultations for under five.

IMCI is primarily a public sector initiative, targeting first level facilities and training public sector health workers. Ethiopia is the only country to show more substantial careseeking improvements in the public sector.

Quality of care remains an unanswered question, since we have no data on care provided to children reaching public or private providers.

## India analysis

### Main Results:

ARI health provider care seeking behaviour improved from 1998 DHS to 2005 DHS, from 63.8% (95% CI 62.2%-65.5%) to 68.7% (95% CI 66.2-71.1). The 5% difference was almost exclusively attributable to reasons not linked to change in survey population structure, meaning that public health interventions were the cause of it.

While public sector ARI seeking care significantly decreased of 3.6% (95% CI 1.3%-5.8%), it increased of 9.3% (95% CI 6.1-12.5) for private sector with the entire difference due to reason not associated to surveyed populations changes.

As far as diarrhoea indicators are concerned, significant decrease in overall health provider and public health provider seeking care was registered from 1998 to 2005 with respectively -4.1% (95% CI -1.4% / -6.8%) and -2.5% (95% CI -1.0% / -4.3%); no significant change was present for private sector.

Almost 9% improvement was detected in overall and private health provider seeking care for the three illnesses combined (ARI, fever and diarrhoea). These results were not explained by population change in wealth and/or education and/or age.

### Interpretation

IMCI in India was started in 2000, thus the 1998 DHS provides a valid baseline to evaluate change of health provider seeking behaviour over time. However, the 2005 DHS might be only partially useful since it requires time to see effect of new policies in the field.

Changes in overall ARI and overall combined syndromes care seeking is likely to reflect an important impact of IMCI although we do not have information on the coverage of its implementation at the time of the 2005 survey.

In spite of this, we cannot rule out the effect of other strategies such as the “home based newborn care for young infants” as well as the effect of unknown variables such as the increased availability of human resources and infrastructures.

The negative trend of diarrhoea seeking behaviour is difficult to explain since it is not associated to changes in the survey population structure between the two successive surveys.

Analysis of more updated data will be crucial to determine the effect of IMCI in the long term; for this reason, we tried to compare our results with the latest National Family Health Survey (2015/16), for which only disaggregated results by state are available.

There seems to be an upward trend for both ARI and diarrhoea care seeking behaviour in 8 out of 14 states (we cannot tell if significant since no confidence interval were provided in the report).

On the other hand two states (Haryana and Manipur) show lower percentages in seeking care for both ARI and diarrhoea.

IMCI is primarily a public sector initiative, targeting first level facilities and training public sector health workers. While it is possible that public sector employees often work in private practice, and apply IMCI standards, it is very possible that they do not. If we consider public facilities to be the primary target population (in most countries), improvements in careseeking practice are quite limited.

No significant public sector changes for combined syndromes and significant decreased careseeking for diarrhea are seen in India, raising issues of limited population coverage and equity.

## **Nigeria analysis**

### Main Results:

In Nigeria all care seeking indicators related to a)ARI alone and b) fever, ARI and diarrhoea combined remained unchanged from the 2003 to the 2013 DHS.

On the other hand health provider seeking care for diarrhoea alone increased from 21.5% (95% CI 16.2%-26.8%) in 2003 to 28.9% (95% CI 26.9-31.6%) in 2013.

Similarly, diarrhoea public health provider seeking care increased from 18.1% (95% CI 13.4%-23.1%) in 2003 to 24.1% (95% CI 23.2%-26.7%) in 2013.

This seeking care upward trend was exclusively explained by the effect of variables not linked to change in wealth, age and/or education of the populations under study.

### Interpretation

Rates of care-seeking for childhood illness generally remain quite low in Nigeria, and the fact that a decade of IMCI implementation resulted in 25% of districts beginning implementation, it raises the question of implementation feasibility.

IMCI training in Nigeria started in 1998 and the 2003 and 2013 DHS would provide useful information on baseline and recent situation of care seeking behaviour.

Considering that IMCI implementation is still on a small scale (less than 25% of district having initiated for first level health workers) and no change happened for ARI and the three illnesses combined (fever, ARI, diarrhoea), we find difficult to attribute the improvement in diarrhoea care seeking exclusively to the IMCI.

Other public health strategies may have intervened in changing the perception of diarrhoea at national scale.

IMCI is primarily a public sector initiative, targeting first level facilities and training public sector health workers. No significant public sector change for ARI and combined syndromes in Nigeria.

Quality of care remains an unanswered question, since we have no data on care provided to children reaching public or private providers. Relatively low careseeking rates in most settings raises the question of whether IMCI implementation has resulted in significant improvements in quality of care.