Is comprehensive more effective? Vaccination covering and health system performance in North Kivu province, DR Congo.

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Democratic republic of Congo:

- Low income developing country
- Eastern part: conflict settings since years (including North Kivu)
- North Kivu:
  - 5 millions inhabitants; area: 60,000 km²
  - Geographic hill setting
- Health system based on primary health care organisation
Health centre

Reference General hospital

Provincial inspection of health

Ministry of health

Health zones/ district
North Kivu Map

Democratic Republic of Congo

25 health zones
Methodology

• Purpose of the study:
  – To find out arguments to promote systemic approach for health development in North Kivu.

• Design: epidemiological ecological study
  – Transversal analysis of vaccination performance according to the health center score.
  – Health center = primary unit of analysis.
Methodology (2)

• Vaccination data obtained for 2004.
  – Sanitary health information (from GESIS program)
  – 399 health centres in North Kivu province dispatched into 25 health zones (total for the province =404 HC)
Methodology (3)

- Datas: score construction (compared to provincial average) (1/0)
  - Utilisation of curative care consultations (new case/inhabitant/year)
  - Antenatal care coverage (%)
  - Obstetrical coverage (%)
  + Quinine out of stock

SCORE BETWEEN 0 AND 4
FOR EACH HEALTH CENTER
Methodology (4)

Provincial average:

– Utilisation of curative care consultations (new case/inhabitant/year): 0.31 NC/yr
– Antenatal care coverage: 73 %
– Obstetrical coverage: 40 %

Quinine out-of-stock: only one rupture = 0
Results (1)

Number of health centres by score

- score = 0
- score = 1
- score = 2
- score = 3
- score = 4
Results (2)

vaccination covering regarding the score performance

- BCG
- OPV3
- DTC3
- Measles
- FIC

(score = 0, score = 1, score = 2, score = 3, score = 4)
Results (3)

Measles vaccination coverage and incidence rate according to performance scores in health centres (n=399), North Kivu (2004)
Results (4)

Measles vaccination coverage and incidence rate according to performance scores in health centres (n=399), North Kivu (2004)
Results (5)

Nb of measles cases in 2004/health centre (median)

- Nb of measles cases (/100,000 inhab)
- Score = 1
- Score = 4
Conclusion

• Health centres performance are quite low in this region.

• Routine sanitary information could be usefull for basic performance analysis

• Integration of strategies = improvement of health system.