Using international disease classifications to characterise hospitalised patients and performance, CUH Kigali, Rwanda

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Introduction
Introduction

- Rwanda small country in Central Africa
- About 9 million inhabitants
- 2 tier district based health system
- 3 national referral hospitals
- In 2007, Government domestic budget is about 30 million US$
Introduction

- Raising difficulties in health system implementation:

  - in 2008, according to MTEF calculations, the budget of the MoH will reach about 13 usd/inh/yr [65 billion RwF], of which 3.4 will be the Govt share [17 billion RwF]
  - out of 17 \(10^9\) RwF, 20-25 % will be allocated to national referral hospitals
  - an other significant share of the global health budget will be focused on HIV/AIDS

  - allocation inequality in terms of health problems
  - lack of ownership
Central University Hospital in Kigali (CUHK)

- 403 beds
- About 12,000 hospitalisations in 2006
- About 150,000 outpatients clinics in 2006
- 11 clinical services and 7 wards
- 65 medical doctors
- 350 paramedics
- 120 non medical staff
Methods

- In-depth management reform including finance, procurement, human resources and health information at the CUH of Kigali
- Implementation of an integrated computerised data management system
- Use of international classifications (ICD-10 and ICPC-2)
- Use of a "thesaurus" which allows to "translate" diagnoses into internationally comparable codification
Methods

- This presentation reports on the pattern of 15,700 diagnoses in patients hospitalised in the CUHK between January 2006 and June 2007

- Basic descriptive analysis of events
Methods

The objectives of the study are

[1] to analyse major causes of hospitalisation in a 400-bed tertiary hospital in Central Africa and

[2] to link this profile with quantitative and qualitative performance criteria
Main findings: ICD-10

ICD - 10 (n = 15 873)
Main findings: ICPC-2

Overall proportion of infectious diseases is 44%
Main findings: infectious diseases [ICPC-2]

n = 6913

- A: 2858
- B: 1574
- D: 1574
- N: 297
- R: 1649
- Y: 9
- X: 17
- W: 108
- U: 150
- T: 1
- S: 57
- L: 73
- K: 35
- H: 69
- F: 12
- B: 4
Main findings: infectious diseases

- Malaria: 1682
- Tuberculosis: 891
- Infections: 2858
Main findings: average length of stay

Global distribution of pathologies

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<th>Code type</th>
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<th>Detail</th>
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<th>until</th>
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<td>01/01/2006</td>
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Service

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<table>
<thead>
<tr>
<th>Name</th>
<th>Date of admission</th>
<th>Date of discharge</th>
<th>Code</th>
<th>Fracture Location</th>
<th>Patient's Name</th>
<th>Days</th>
<th>Average Length of Stay</th>
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Escaped (1,61%) 1

36,00 days 36,00 days 0,00 days 36,00 days 36,00 days 2,00 18,00 18,00 (±0,00) days 18,00 days
Main findings: comorbidity
Main findings: epidemiological surveillance

New weekly tuberculosis cases (ICPC-2 A70) during the past 365 days for: CHUK
Policy implications

- Usefulness of routine management information system
- Clear potential for health system analysis in a view to improving appropriate use of tertiary hospital in Rwanda
- Relevant tool for quality improvement / accreditation process
- Prioritisation of intervention for critical diseases (ALOS and top 5 killers)
- Comparisons with international standards
- Adequation for other hospitals (health districts)
Conclusion

- Potential improvement of management and cost analysis
- Major constraint in terms of changing health professionals' behaviour
- Scaling up to other referral hospitals in the country
- Opportunities to rationalise resource allocation on the MoH side