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

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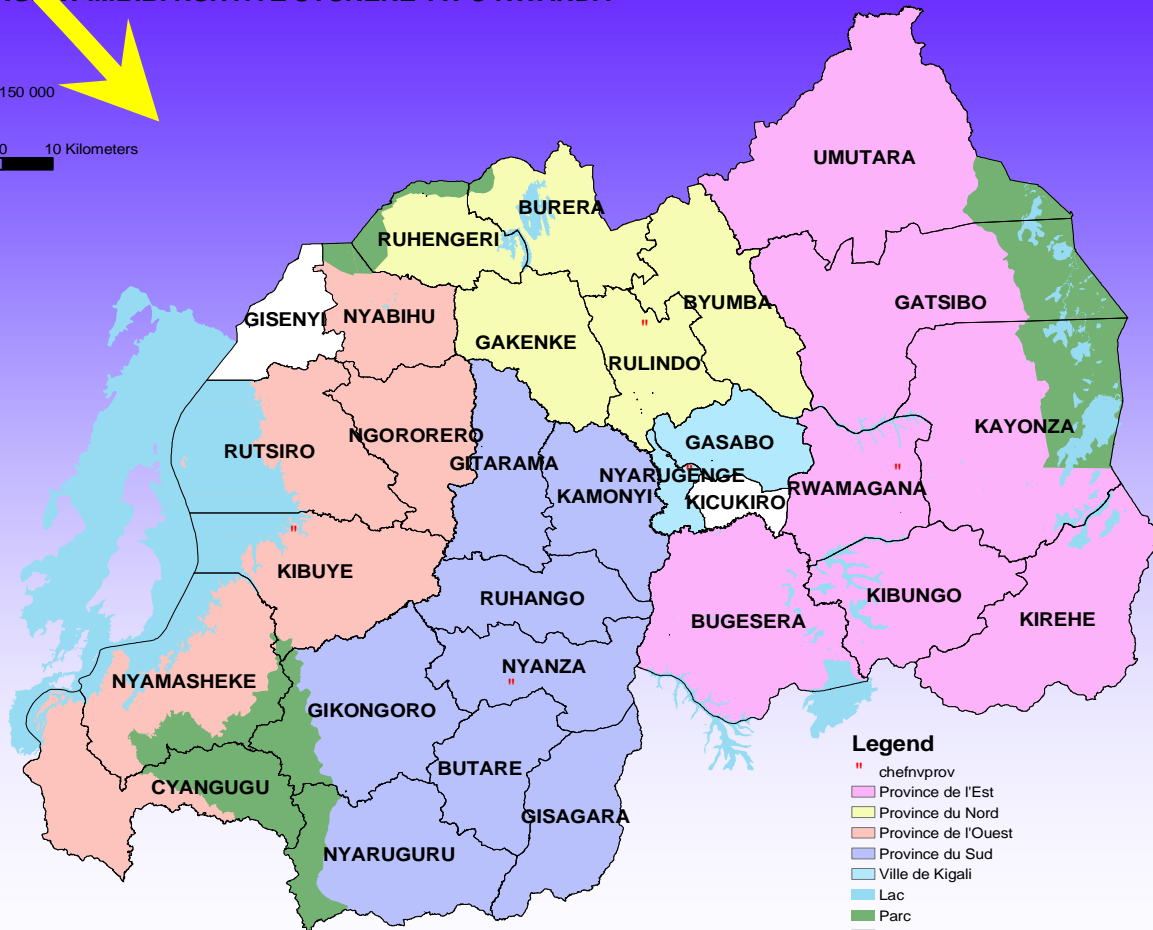
Introduction



SHINGIRO W'IMBIBI NSHYA Z'UTURERE TW'U RWANDA

1:1 150 000

10 5 0 10 Kilometers



Legend

- chefnvprov
- Province de l'Est
- Province du Nord
- Province de l'Ouest
- Province du Sud
- Ville de Kigali
- Lac
- Parc
- Limite de district




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 17 10⁹ 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*

Introduction

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

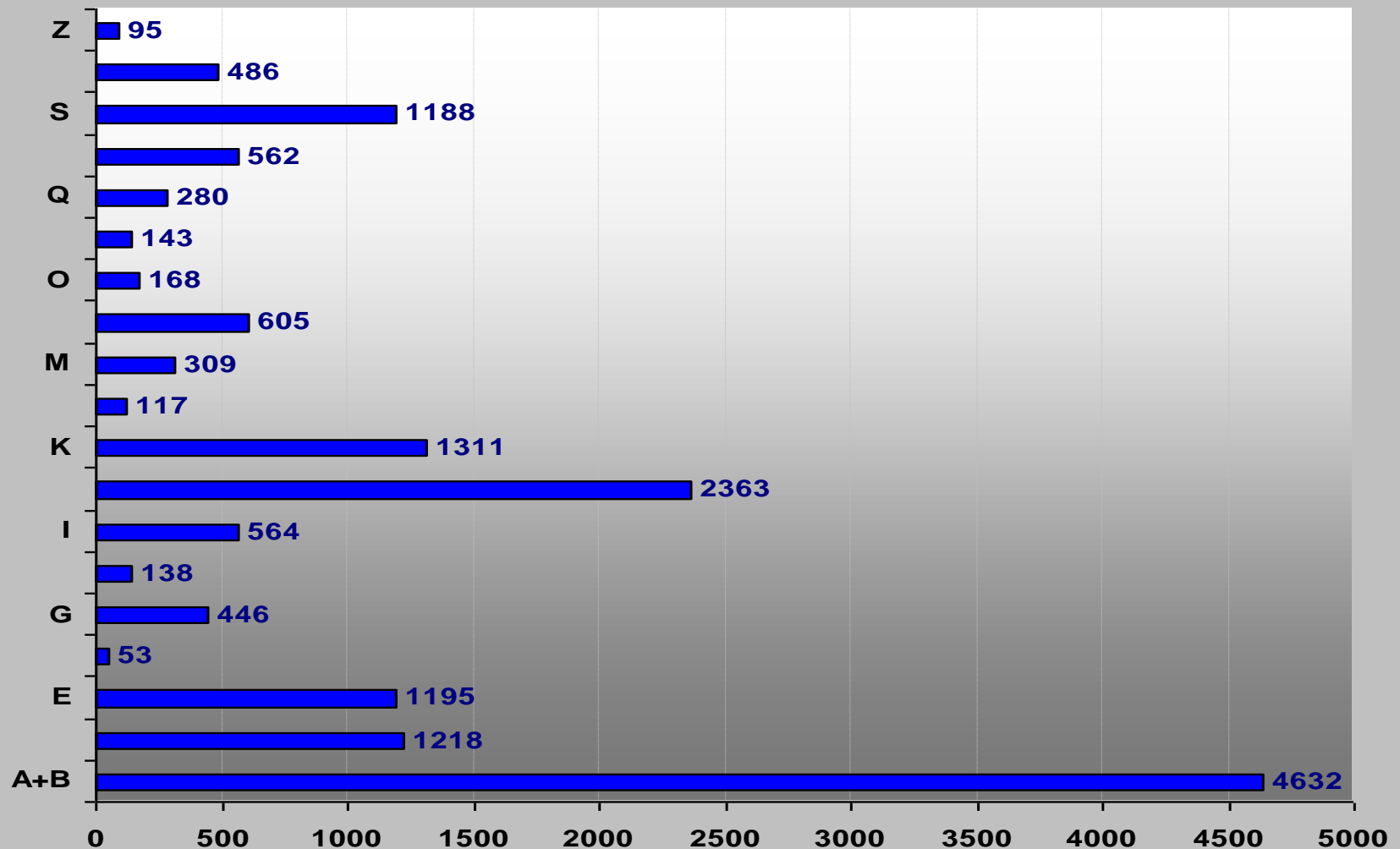
[1] to analyse major causes of hospitalisation in a 400-bed tertiary hospital in Central Africa and

[2] to link this profile with quantitative and qualitative performance criteria



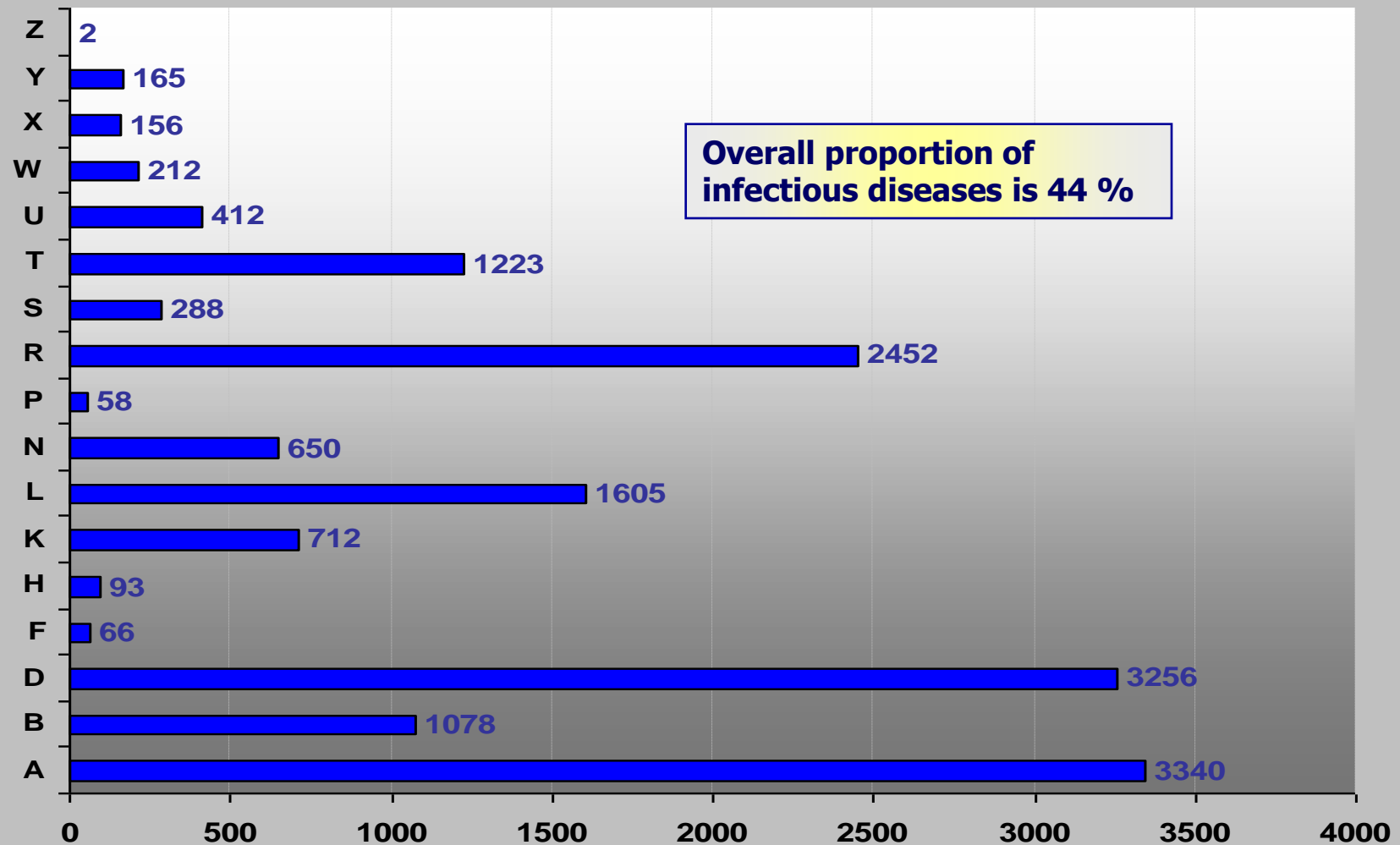
Main findings: ICD-10

ICD - 10 (n = 15 873)

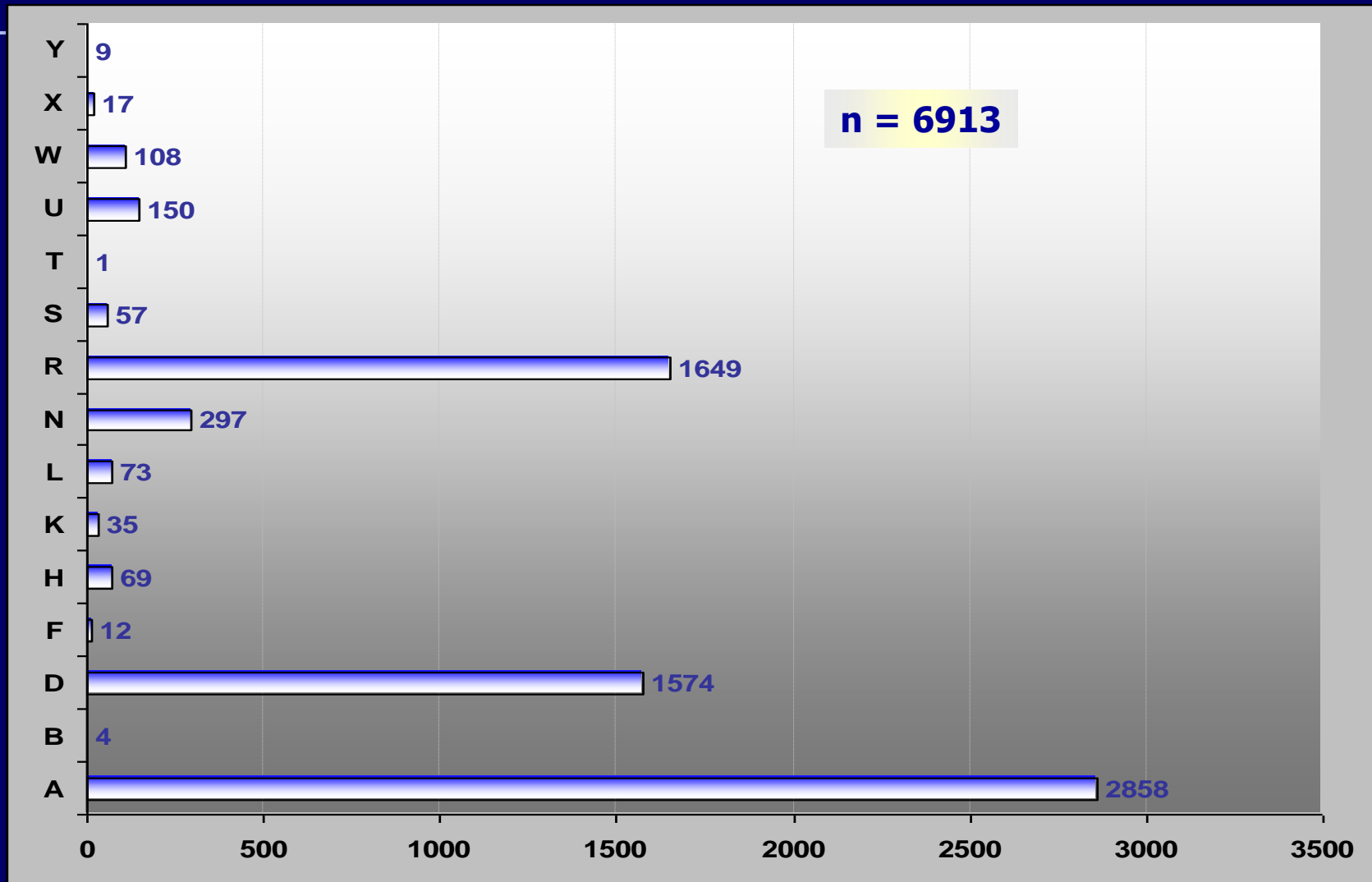


Main findings: ICPC-2

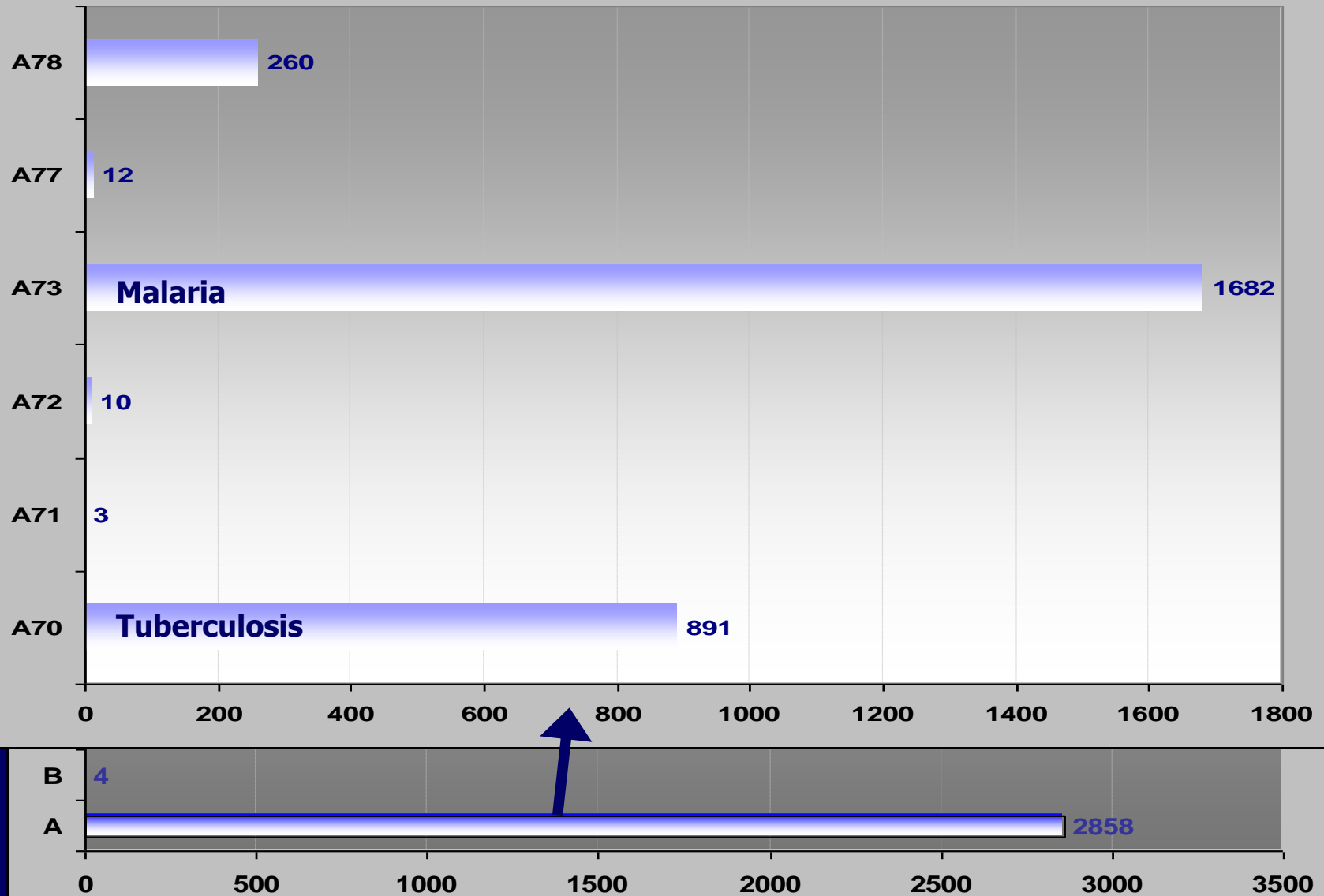
ICPC-2 (n = 15 768)



Main findings: infectious diseases [ICPC-2]



Main findings: infectious diseases



Main findings: average length of stay

Global distribution of pathologies

Code type: icpc Code: L72 Detail

from: 01/01/2006 until: 01/07/2007

Service:

Analyse Back

MUGERASONT ROSE	16/08/2006	16/08/2006	L7200: FRACTURE: RADIUS/ULNA	(VERBEKE FRANK) 0/0	55.0					
NTAKIRITIMANA DANAGENE	19/08/2006	19/08/2006	L7200: FRACTURE: RADIUS/ULNA	(VERBEKE FRANK) 0/0	220.0					
TWAGIRIMANIYA BEATRICE	29/08/2006	29/08/2006	L7200: FRACTURE: RADIUS/ULNA	(VERBEKE FRANK) 0/0	7.0					
Escaped (1,61%) ₁	36,00 days	36,00 days	36,00 days	0,00 days	36,00 days	36,00 days	<u>2,00</u>	18,00	18,00 (+-0,00) days	18,00 days

Main findings: comorbidity

Global distribution of pa
Code type

MXS - Openclinic CHUK - Windows Internet Expl...
http://localhost/openclinic/popup.jsp?Page=statistics/showCor

Comorbidity for FRACTURE: RADIUS/ULNA (n=60.0)

#	Diagnosis code
11 (18,33%)	<u>L76 FRACTURE: OTHER</u>
7 (11,67%)	<u>L75 FRACTURE: FEMUR</u>
2 (3,33%)	<u>N80 HEAD INJURY OTHER</u>
2 (3,33%)	<u>L80 DISLOCATION/SUBLUXATION</u>
1 (1,67%)	<u>Y82 HYPOSPADIAS</u>
1 (1,67%)	<u>B99 BLOOD/LYMPH/SPLEEN DISEASE OTHER</u>
1 (1,67%)	<u>L74 FRACTURE: HAND/FOOT BONE</u>
Detail	
	<u>1 2 3</u>
	<u>1 2 3</u>

Escaped (1,61%) 1 36,00 days 36,00 days 0,00 days 36,00 days 36,00 days 2,00 18,00 5,00 (+-0,00) days 18,00 (+-0,00) days 18,00 (+-0,00) days



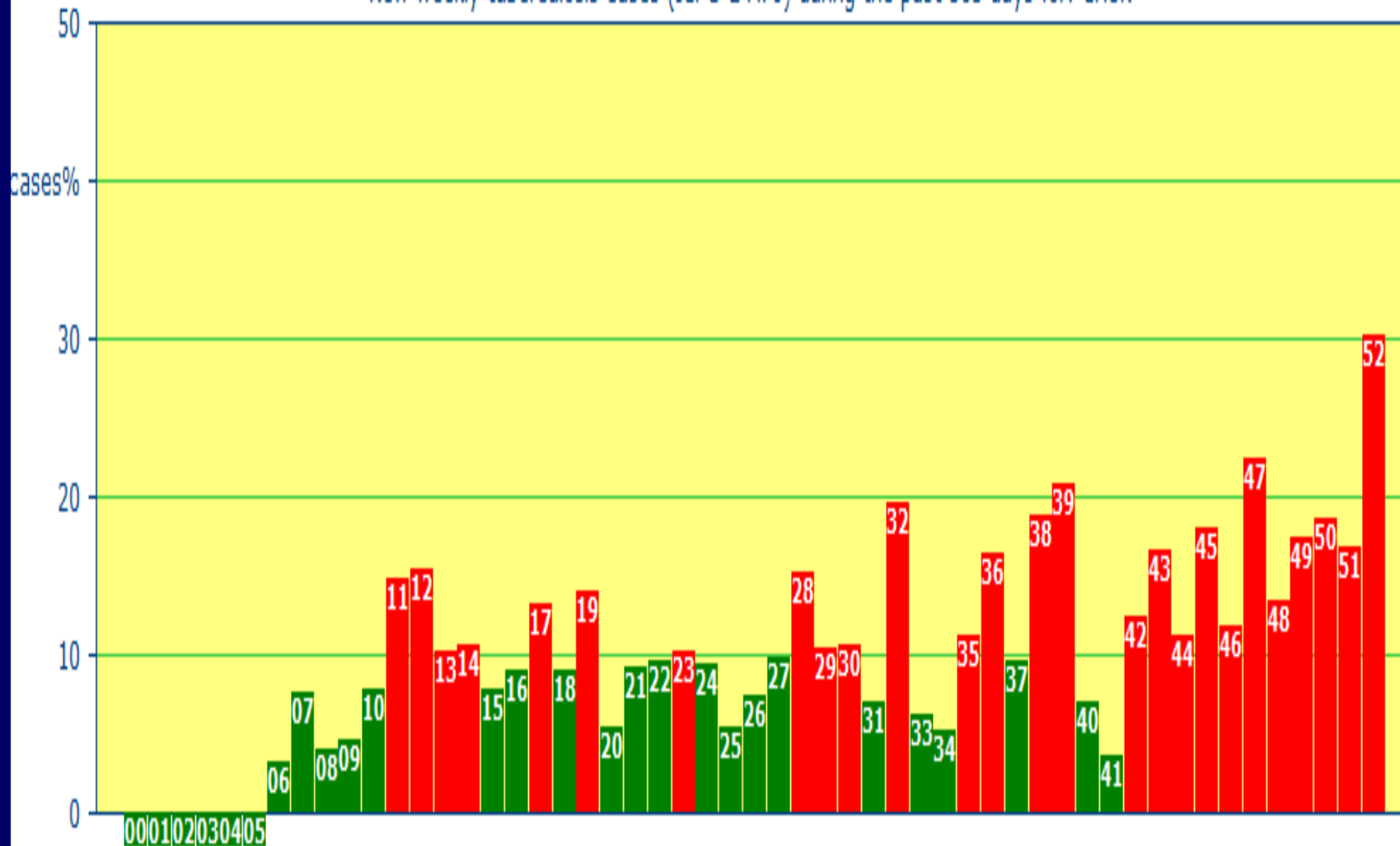
BTC
CTB

ULB



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

