

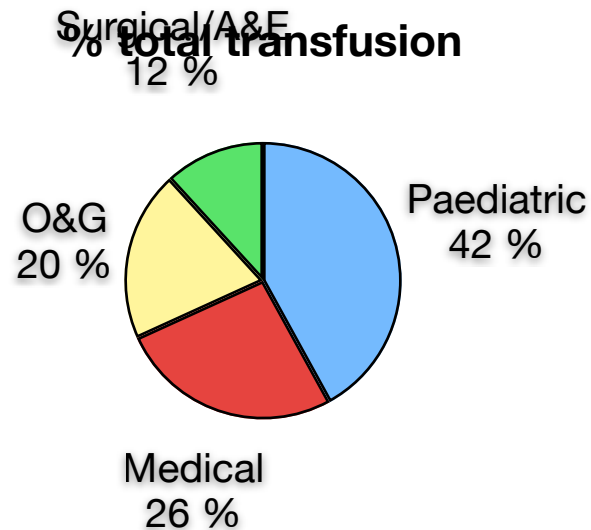
Clinical use of blood in Sub-Saharan Africa

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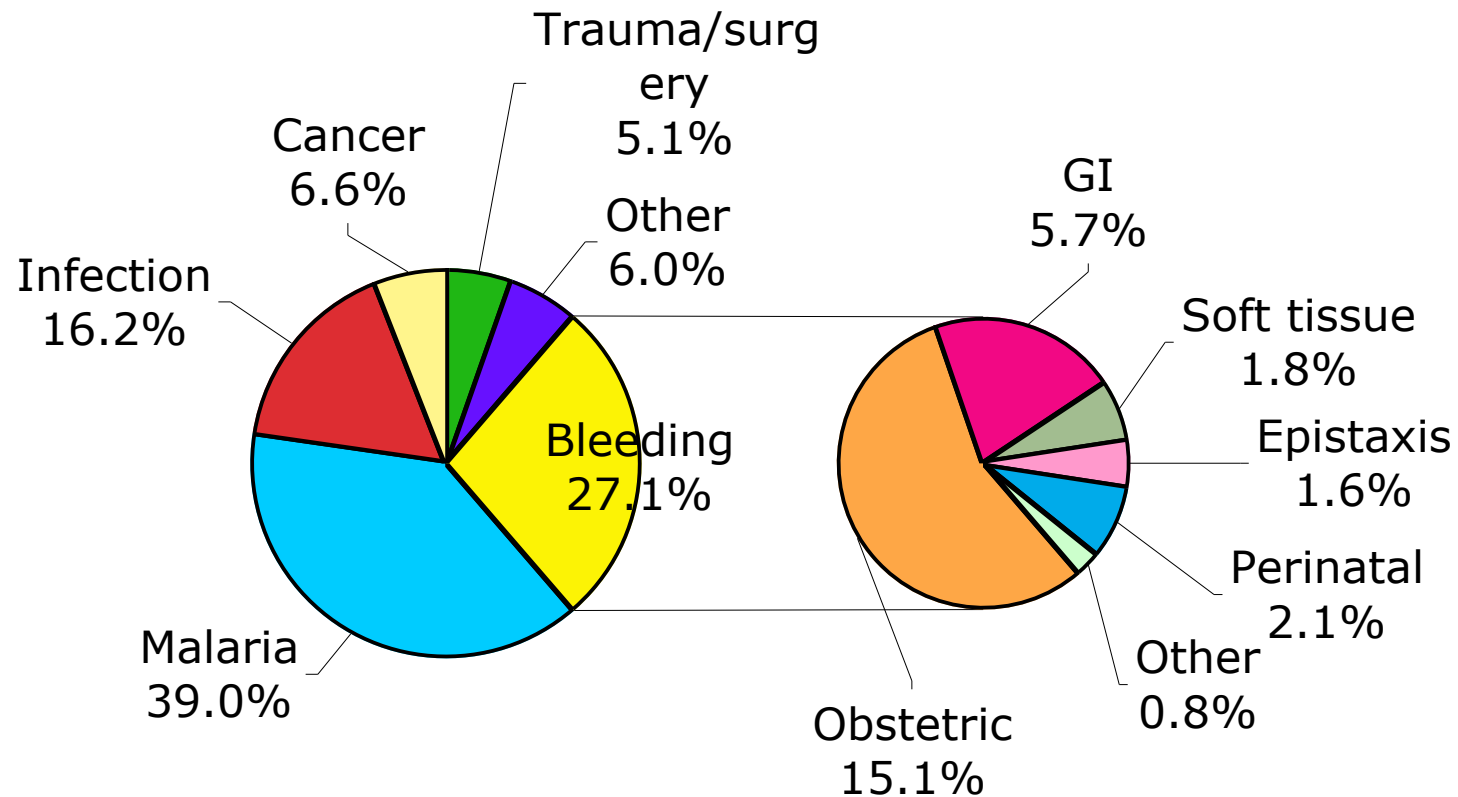


Use of blood in Uganda (Natukunda et al, Transf Med 2010;20:134)



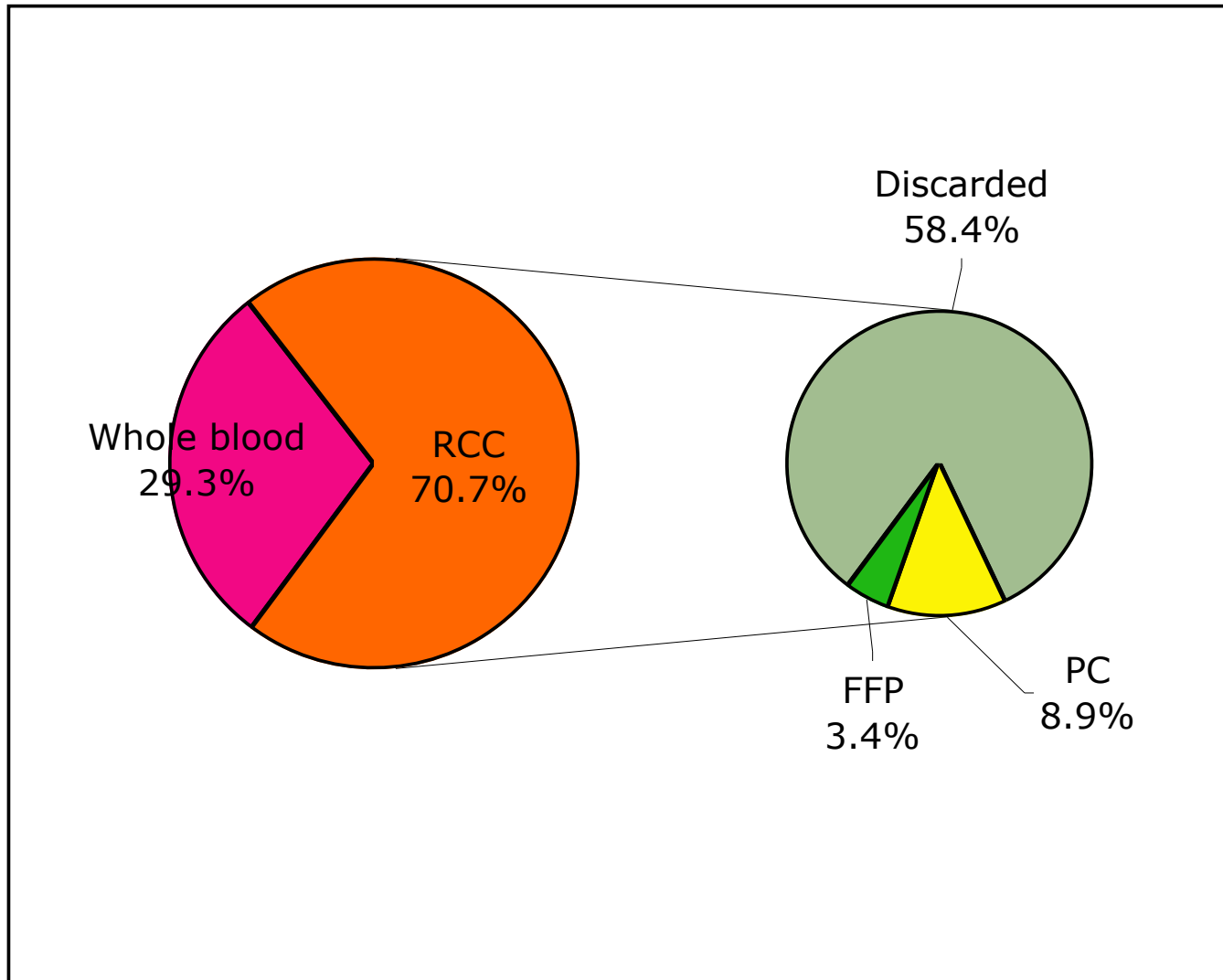
Clinical indication of transfusion in Uganda

(Natukunda 2010)



Use of blood and components in Uganda

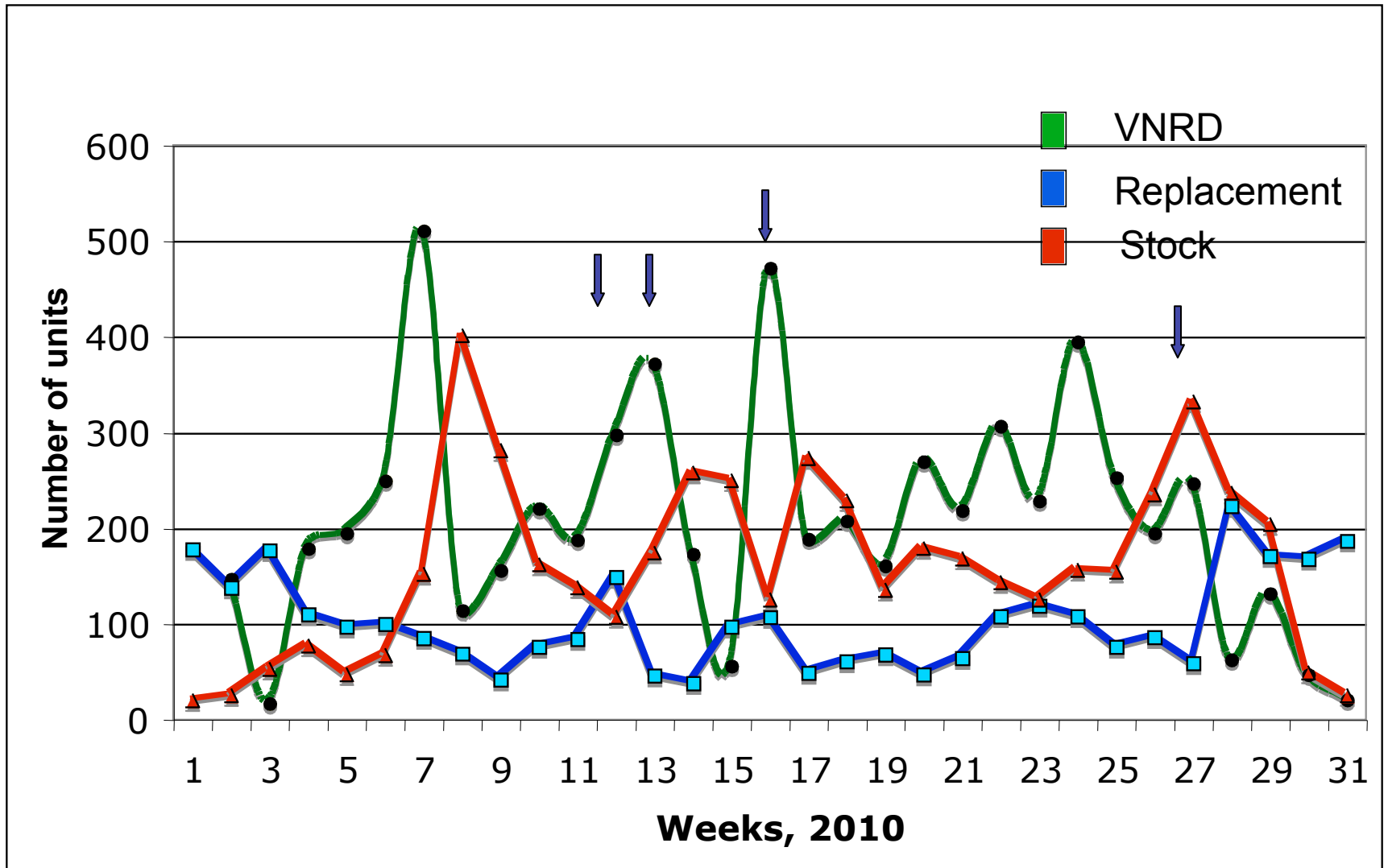
(Kajja et al. Vox Sang 2010)



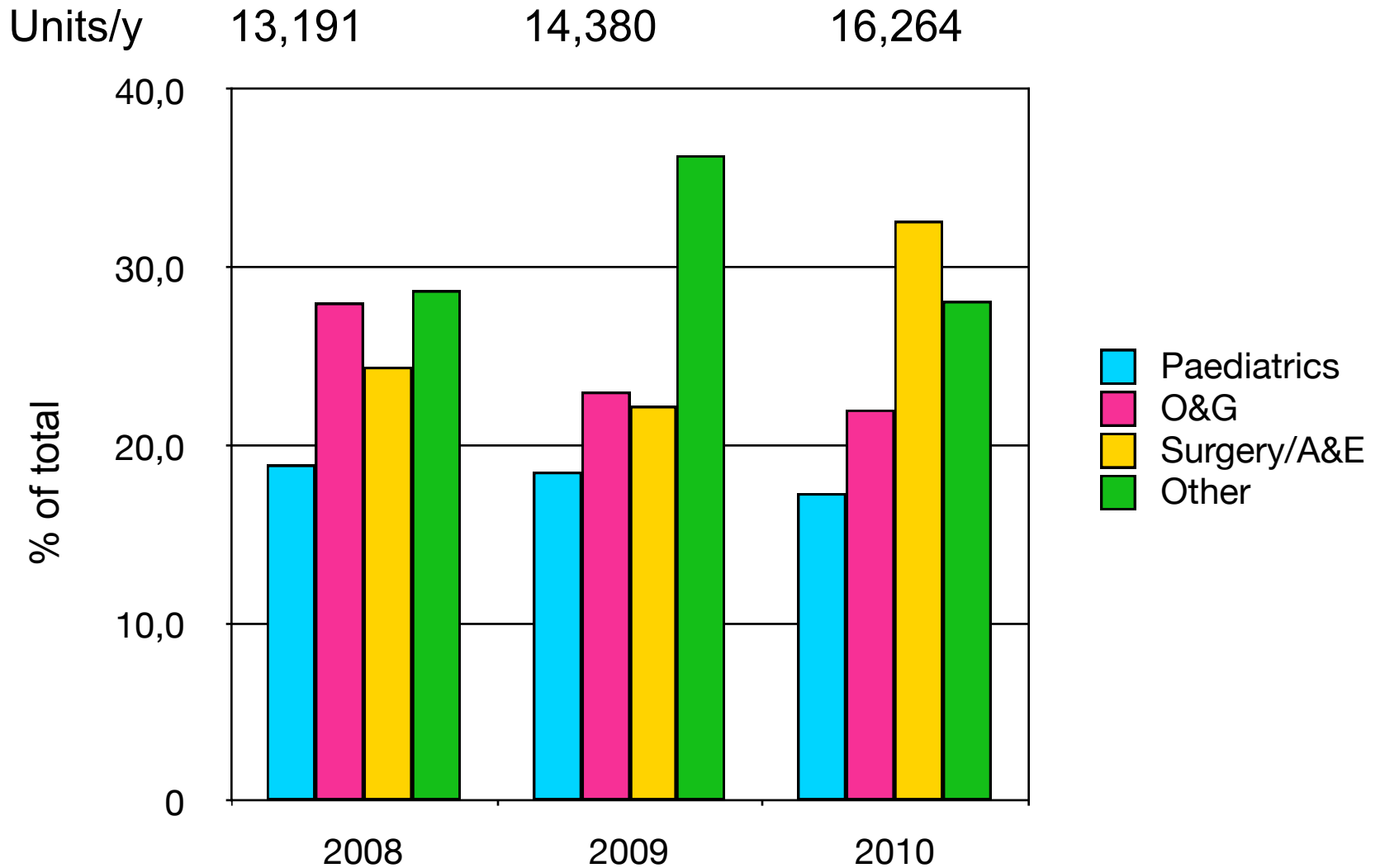
Infectious agents in blood & components in Ghana

Agents	% donations	Tested
Plasmodiae	55	No
Bacterias	15	No
HBsAg	11	Yes
HIV-1/2	2	Yes
HCV	0.3	Yes

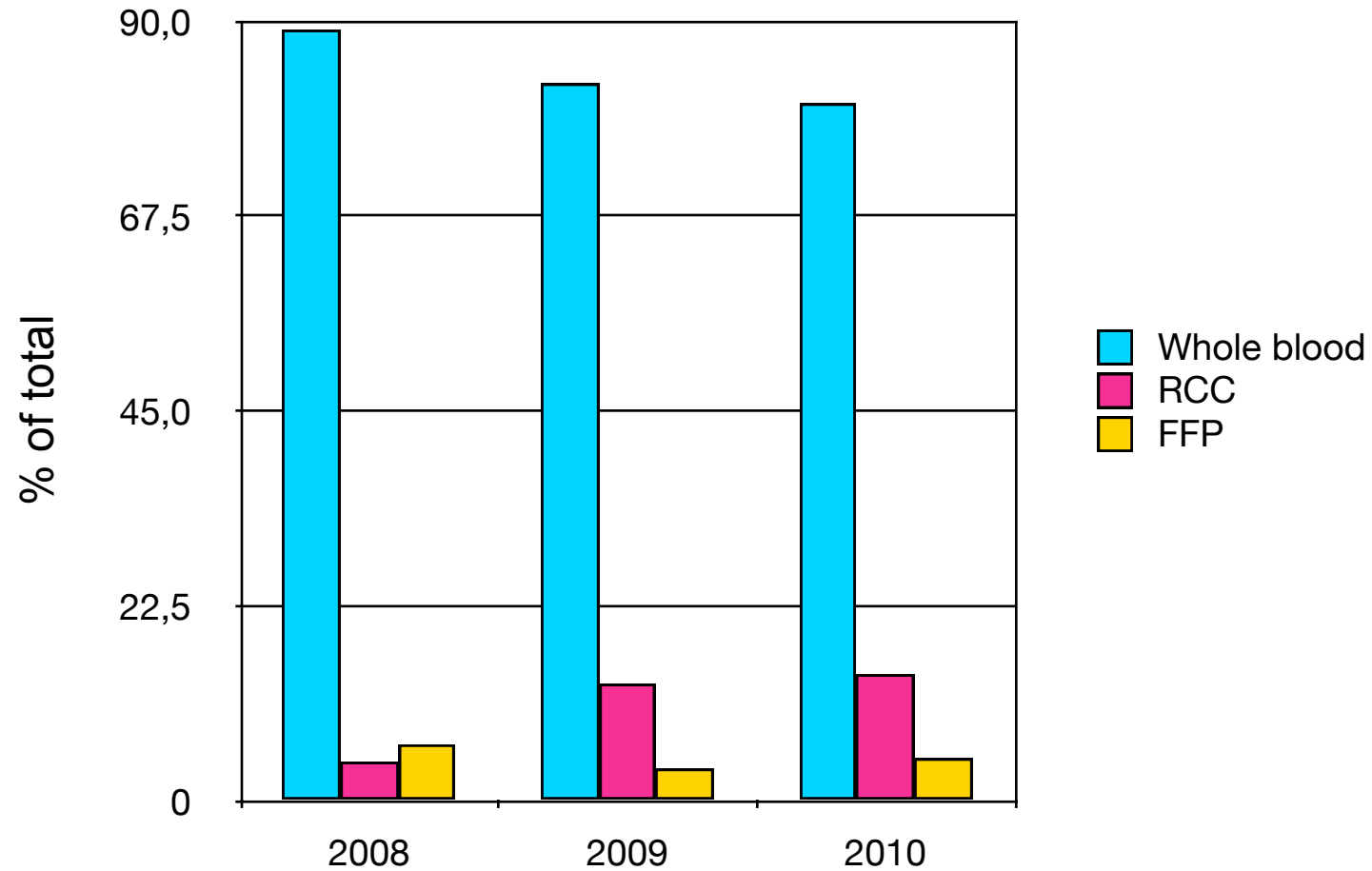
Weekly Blood collection and blood stock



Use of blood at KATH, Kumasi, Ghana



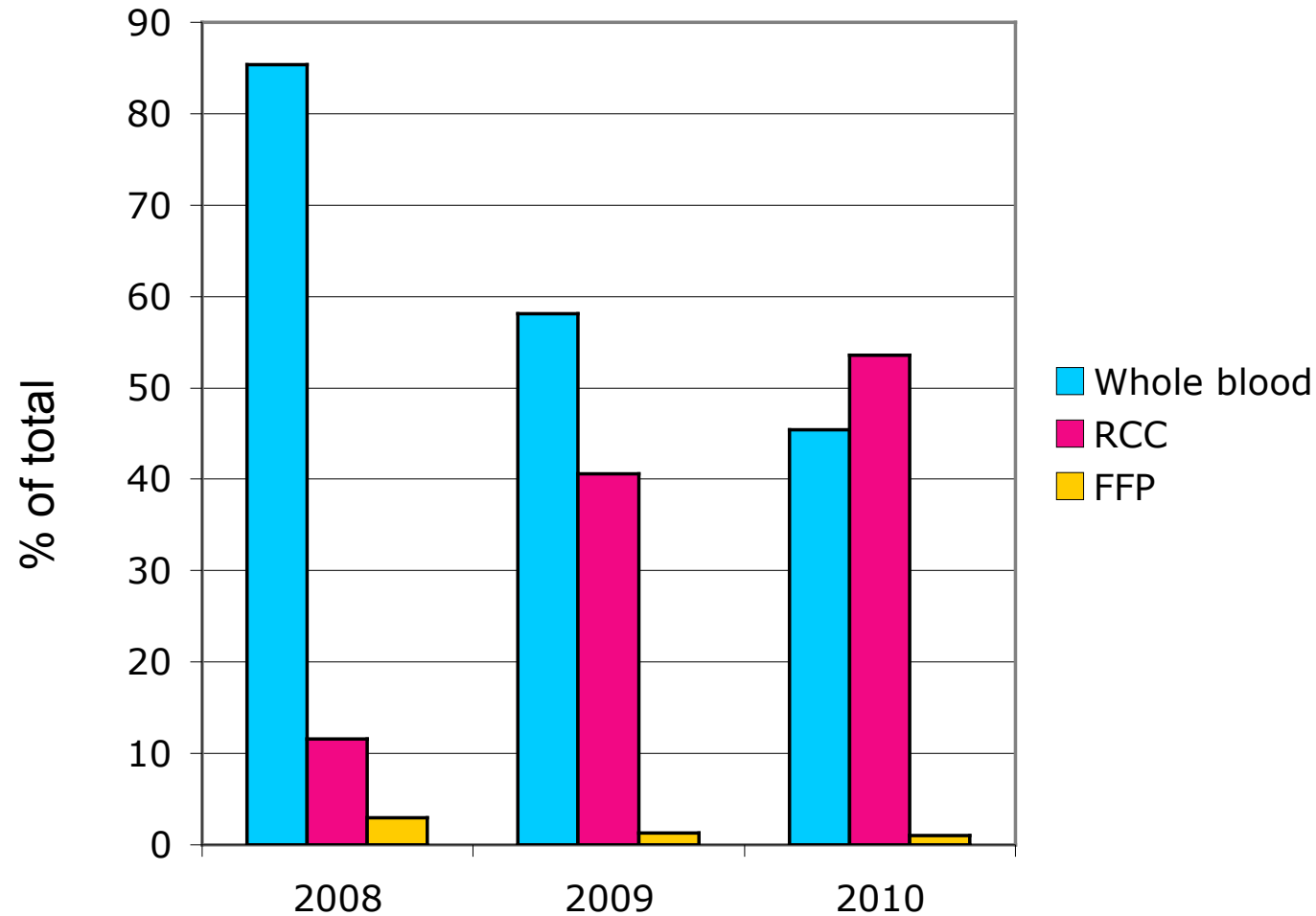
Distribution of blood and components in Kumasi, Ghana



Most frequent indications for transfusion (whole blood) in SSA

- Acute malaria in children <3: massive haemolysis
 - 30% of blood use in Uganda
 - 12% in Ghana
- Massive bleeding peri-partum: blood loss
 - 15% of blood use in Uganda
 - 22% in Ghana

Use of blood and components in Paediatrics



WHO guidelines for malaria transfusion

- Indication
 - Hb \leq 4g/dl
 - Hb \leq 5g/dl with respiratory distress
- Product
 - Whole blood
- Dosage
 - 20ml/kg

Case 1: acute malaria in children <3y

Maitland et al BJH 2005; 128: 393

- Hb <5g/dl
- Coma or prostration (84%)
- Respiratory distress (80%)
- Parasitaemia $0.3-1.4 \times 10^2/\mu\text{l}$
- pH 7.2-7.3
- Acidosis (base excess) -18 ± 6.4
- Creatinine $68 \pm 22 \mu\text{mol/l}$

Treatment of acute paediatric malaria

Maitland et al BJH 2005; 128:393

- Whole blood 20ml/kg within 1h
- Anti-malarial drugs (sulphadoxine-pyrimethamine \pm amodiaquine)
- Face mask oxygen
- Potassium supplements if $<3.5\text{mmol}$

Outcome

- Death 12-15% if blood in $<1\text{h}$
25-35% if blood in 2-6h
- At 8h when transfused
Hb +2g/dl (5.9 ± 0.2)
pH 7.37 ± 0.01
Base excess -8.9 ± 0.8

Preparation of Paedipacks for paediatric transfusion in Ghana



Paediatric transfusion for acute malaria in Ghana



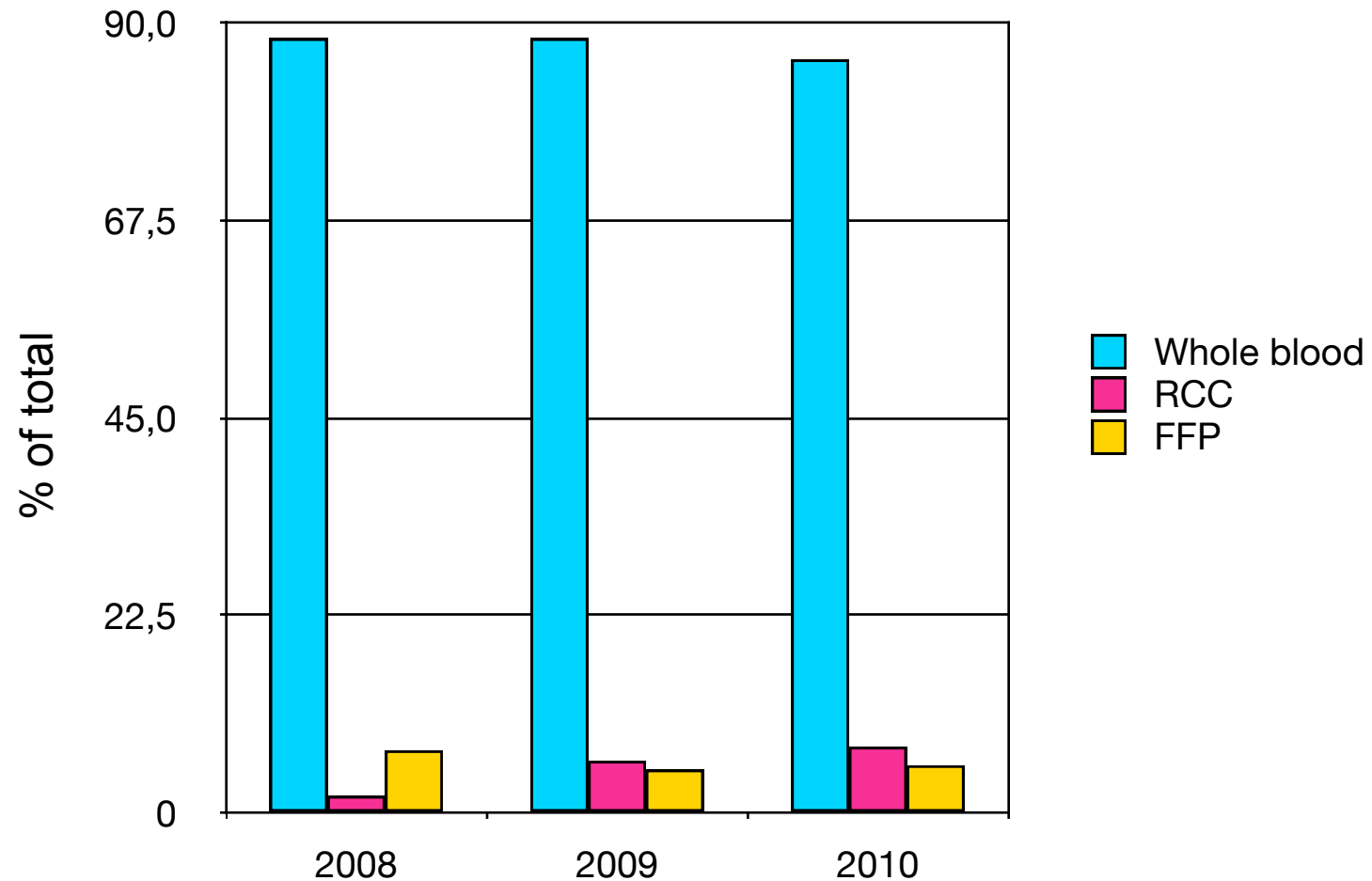
lørdag 11. august 2012

Transfusion for massive obstetric bleeding

Bates et al. Brit J Obs & Gyn 2008; 115: 1331

- In 37 studies of maternal mortality in SSA, 17.3% are due to haemorrhage
- In 5 studies 26% of maternal death by haemorrhage is due to failure of transfusion services
- Failure related to:
 - No blood in stock <1h
 - Collect from replacement donors >4h
 - Unaffordable cost of blood (\$16-90/unit)
- Product = Whole blood

Use of blood and components in O&G



Whole blood transfusion in O&G: the plasma on top is not transfused



Acknowledgements

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