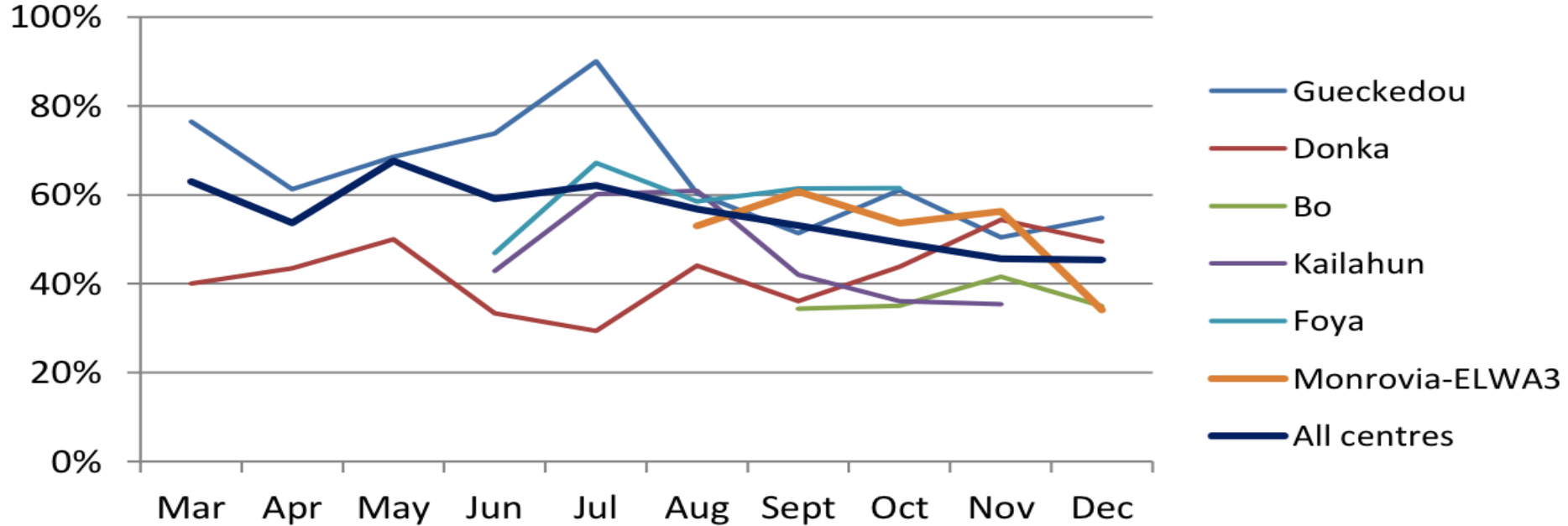


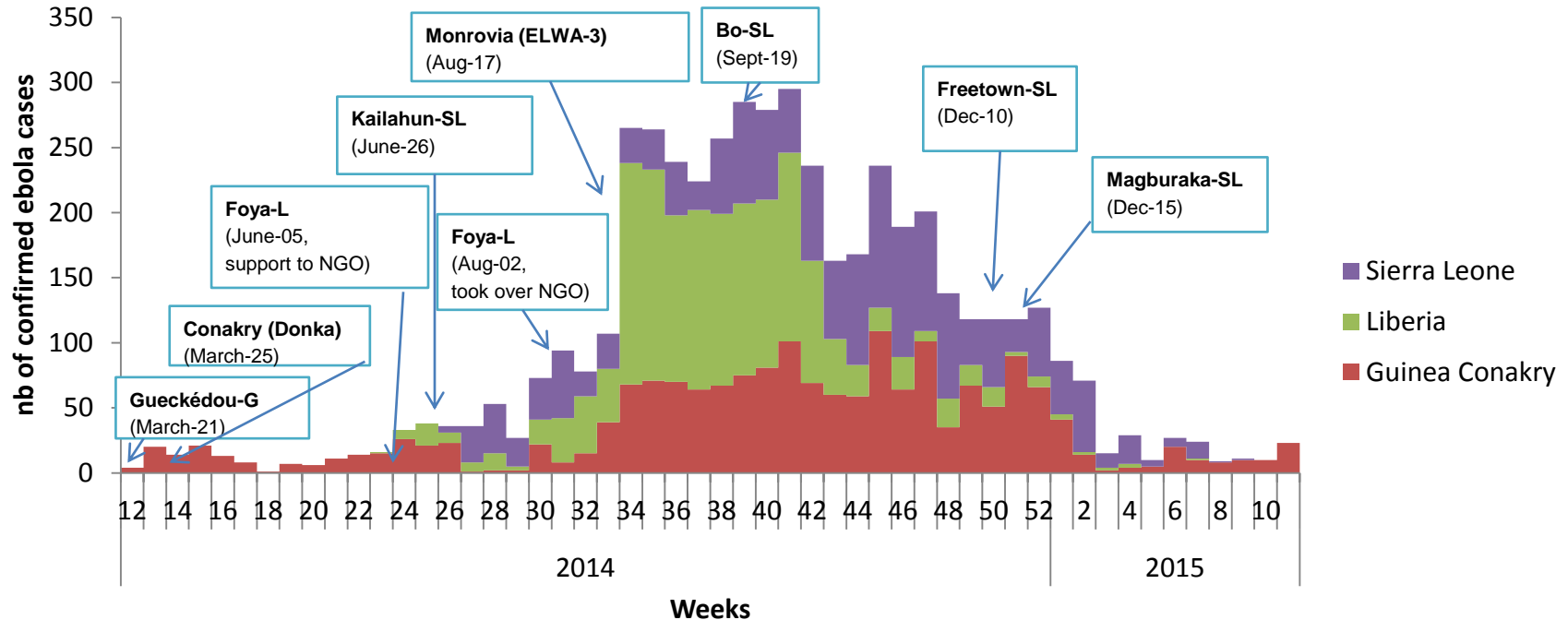
# Ebola: Outcomes & Observations

Armand Sprecher  
Medical Department  
Médecins Sans Frontières - OCB

# Case Fatality by Month



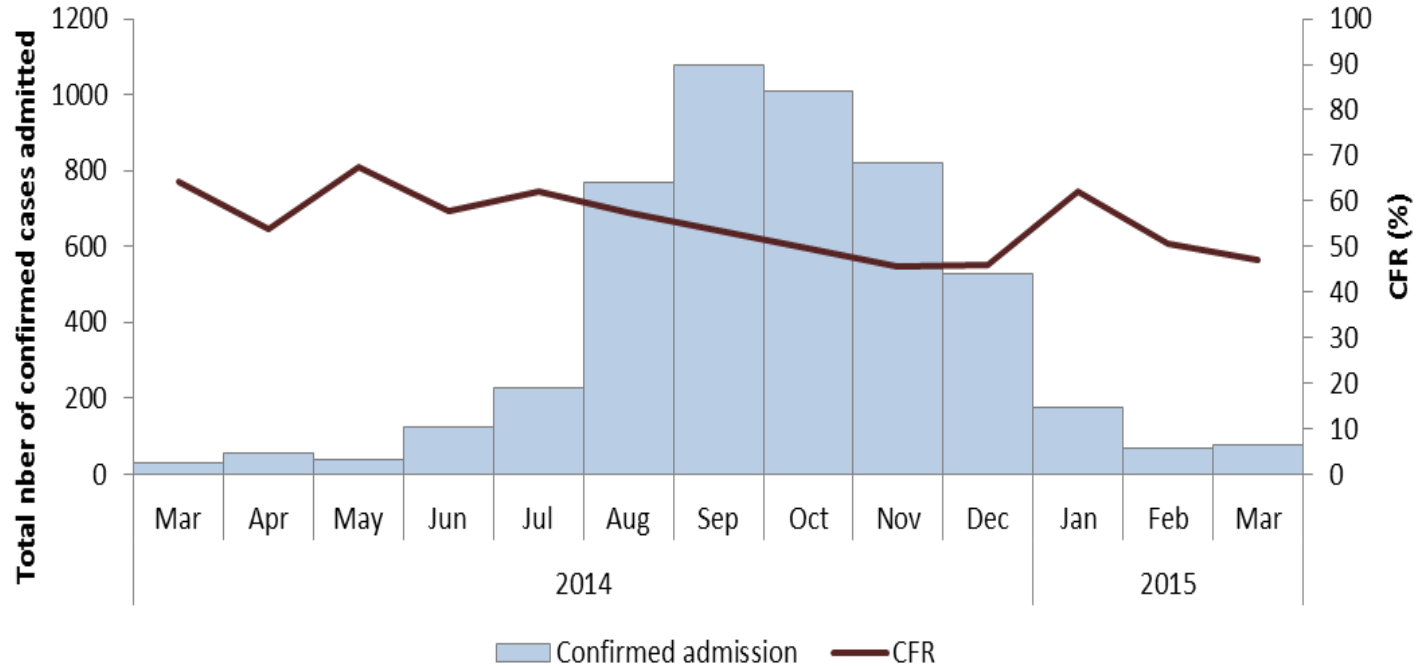
# Confirmed Admissions to MSF Units



*The arrows correspond to the date when the isolation unit was opened*

Graph credit: Sophie Masson

# Changes in Case Fatality Over Time



Graph credit: Sophie Masson & Francesco Grandesso

# Foya ETU Admissions by IVF

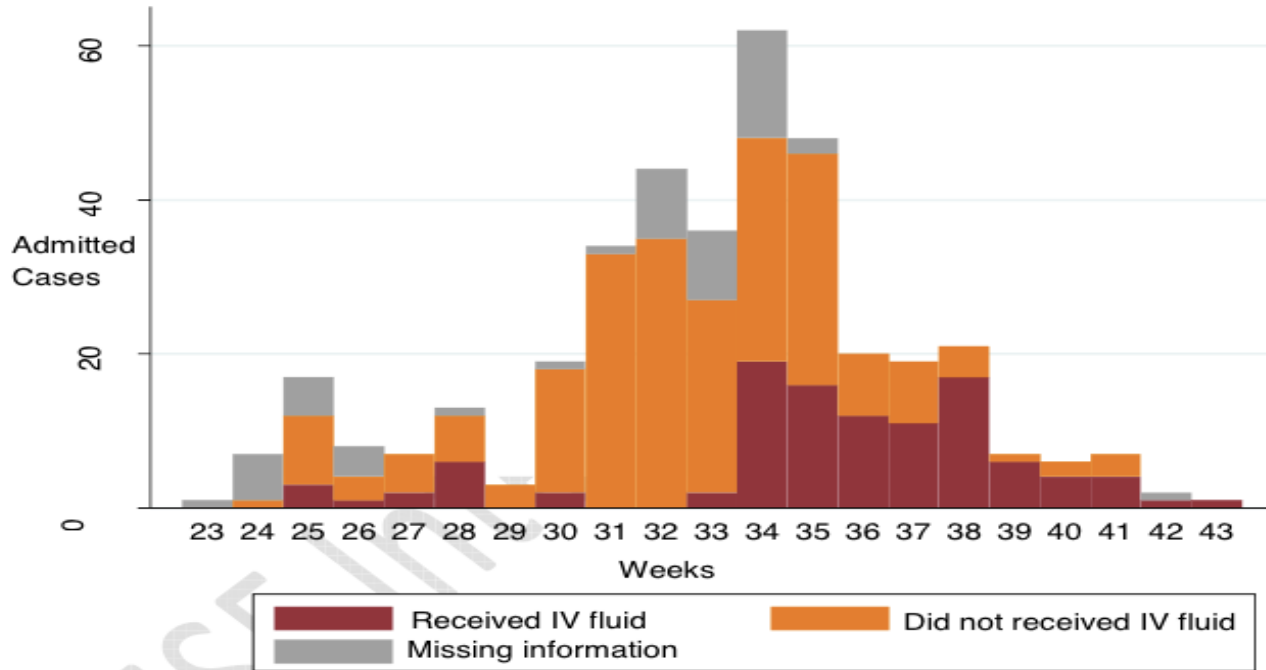


Figure 9. Admitted Ebola confirmed patient who received IV Fluid in Foya EMC, Liberia, 2014

Graph credit: Etienne Gignoux and Iza Ciglenecki

# Foya Survival Before/After wk. 34

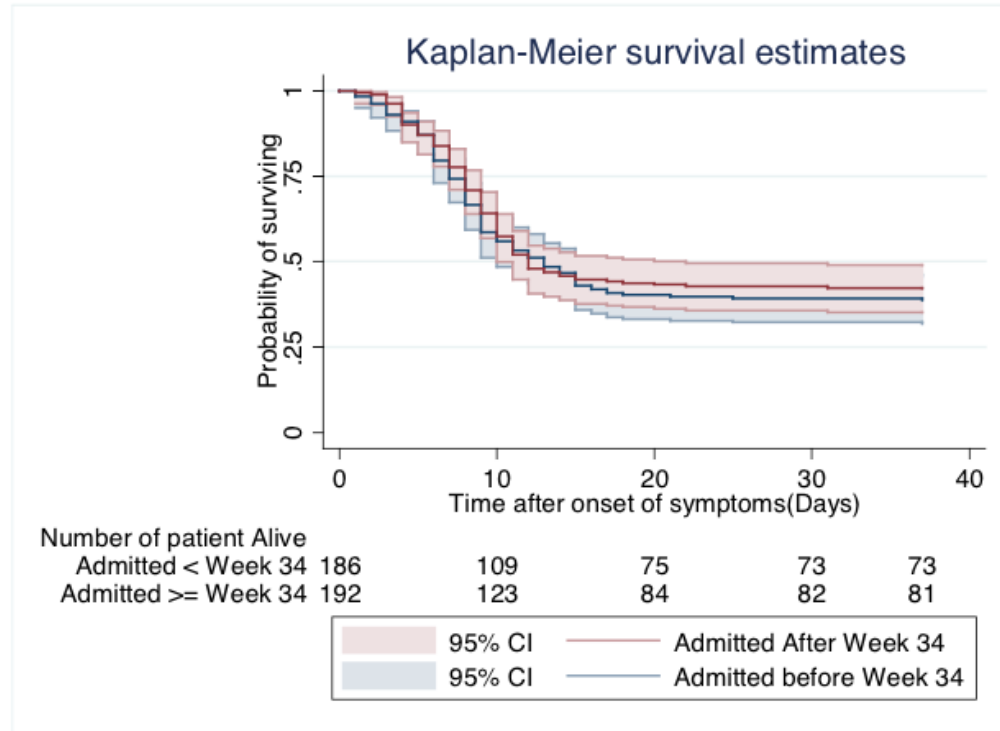
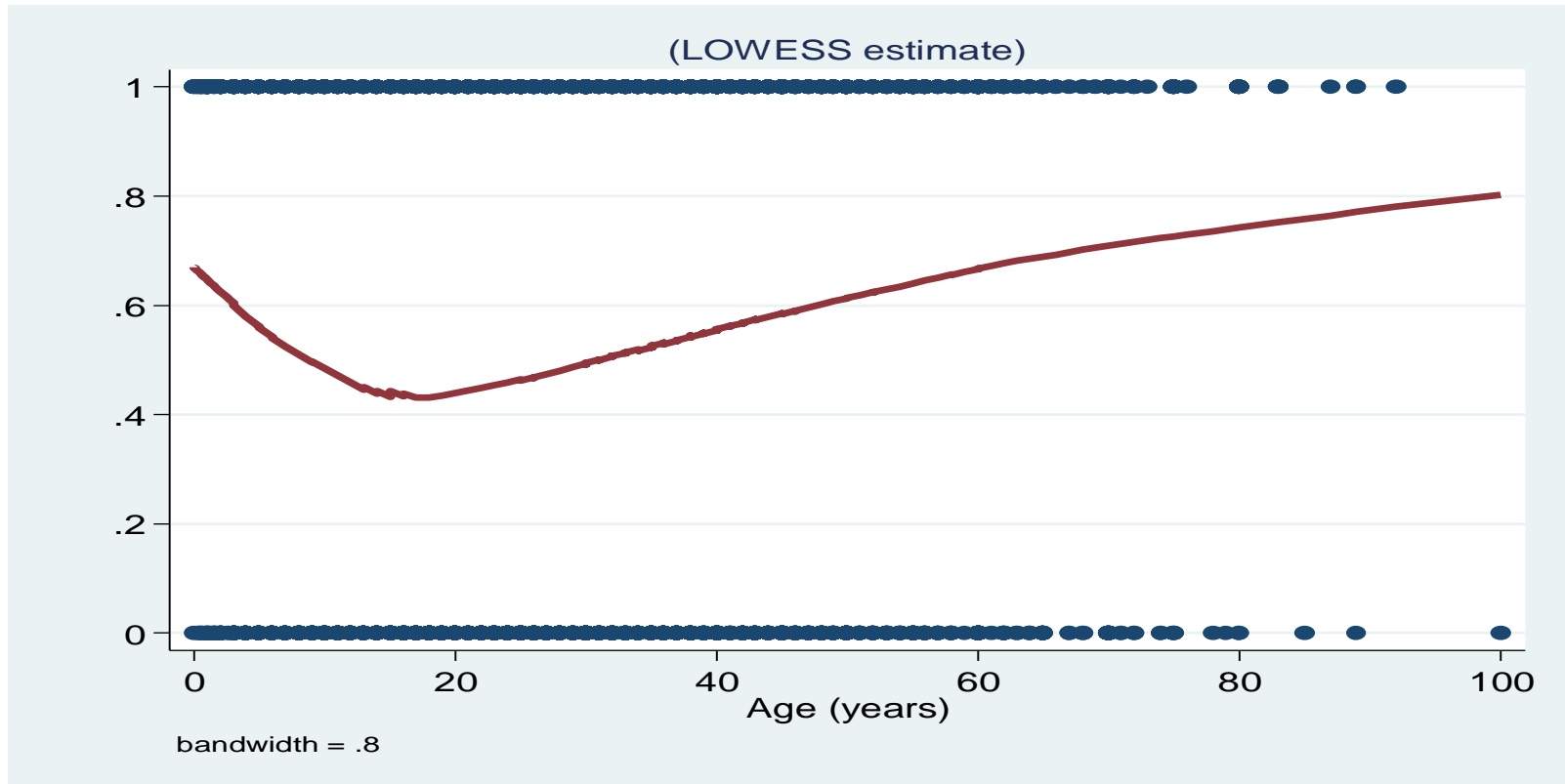


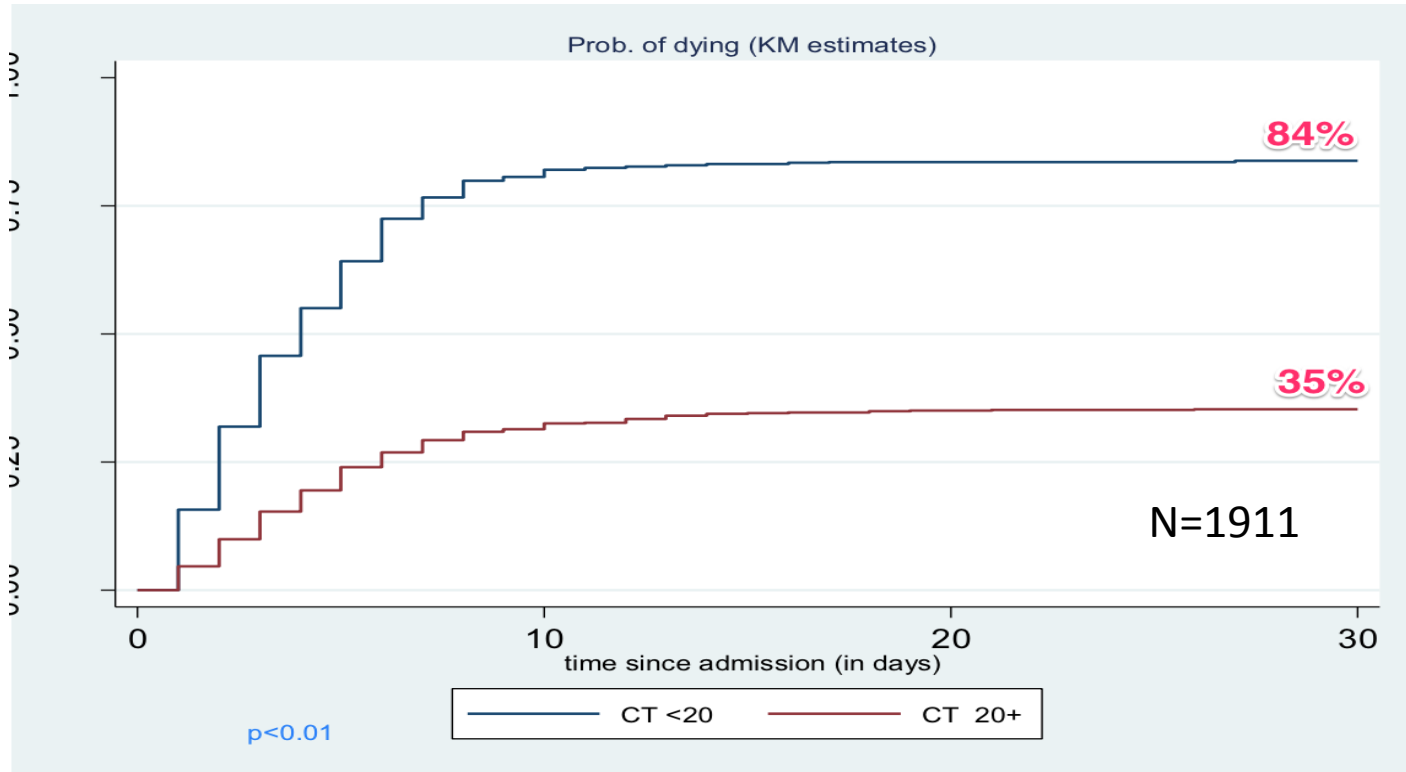
Figure 10. Survival estimates for patient admitted before and after week 34 in Foya EMC, Liberia, 2014

# Case Fatality According to Patients' Age



Graph credit: Sophie Masson & Francesco Grandesso

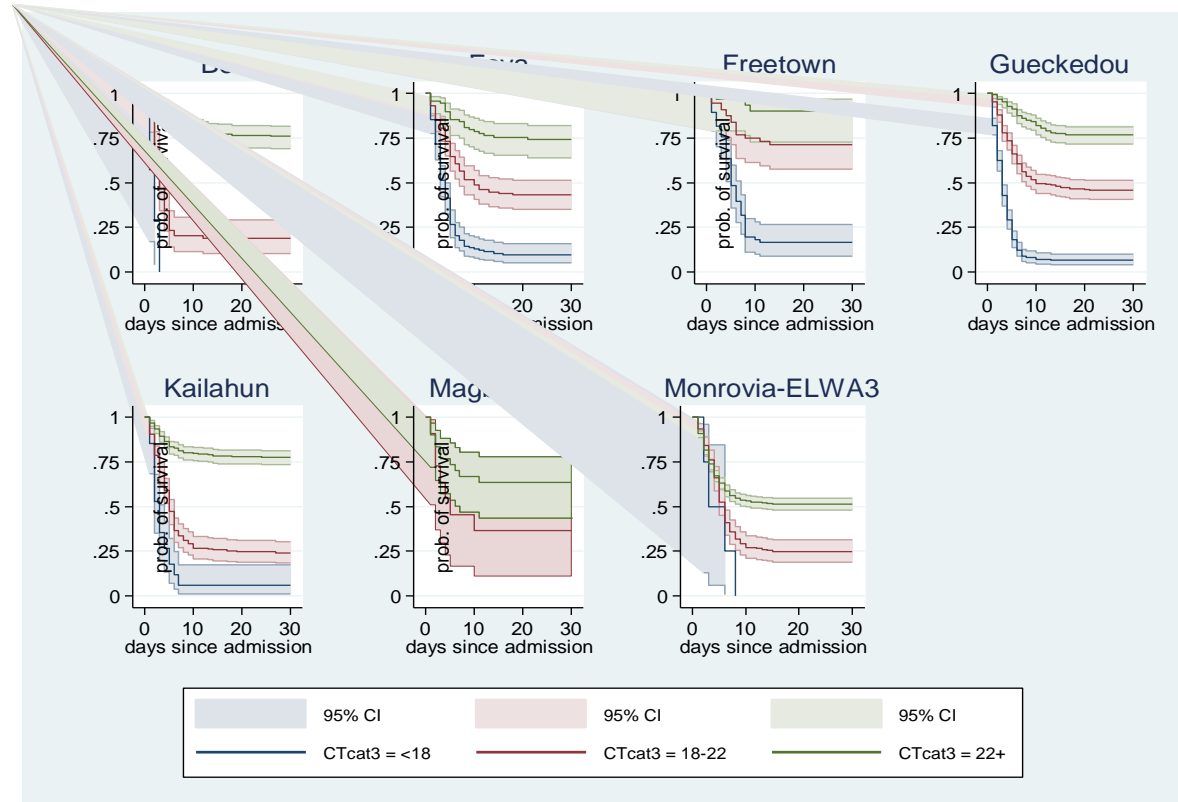
# Viral Load Associated with Death



Graph credit: credit: Sophie Masson



# Viral Load Associated with Death



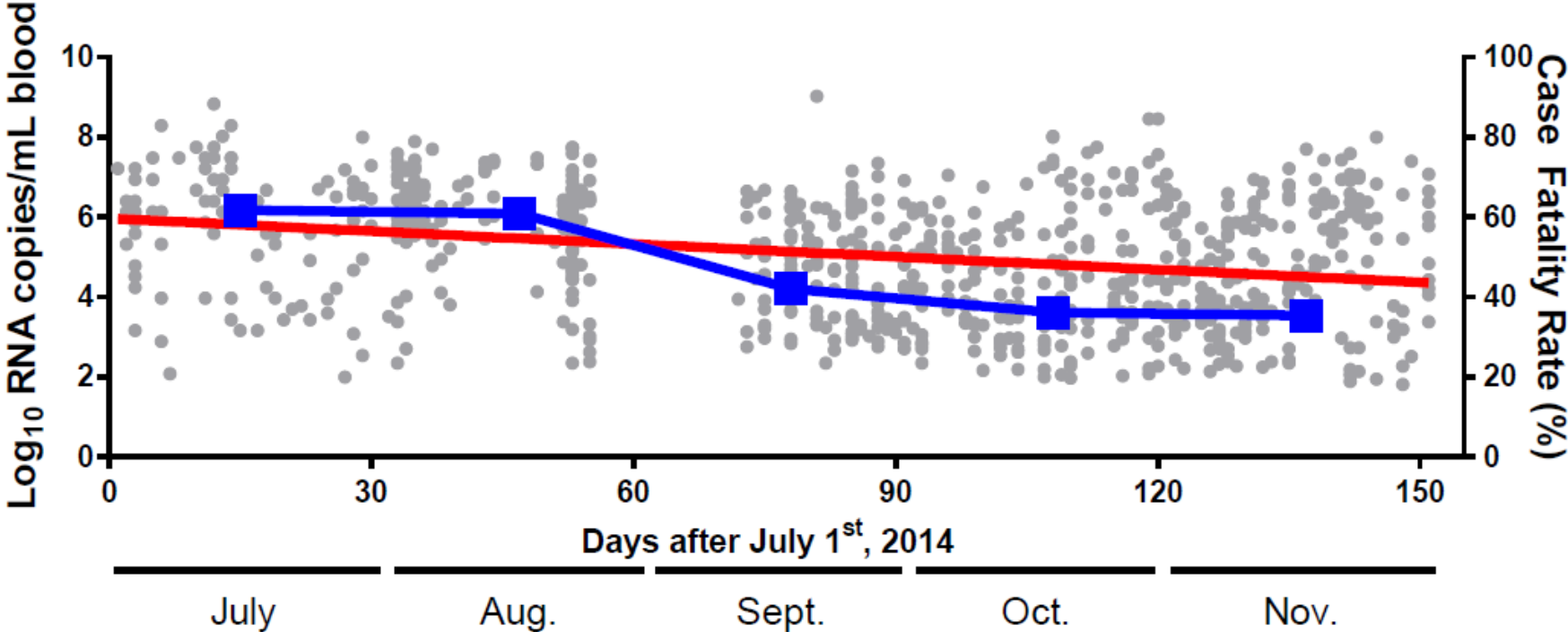
Graph credit: Sophie Masson & Francesco Grandesso

# Factors Associated with Death

	Admitted	Died	%	Univariate analysis	Multivariate analysis
				IRR [95% CI]	IRR [95% CI]
<b>Month of admission</b>	–	–	–	0.93 [0.90–0.96]	0.93 [0.90–0.96]
<b>Age (years)</b>					
<5	176	120	68.2	1.96 [1.57–2.45]	1.82 [1.43–2.30]
5-14	520	215	41.3	1.00 –	1.00 –
15-54	2471	1259	51.0	1.37 [1.19–1.59]	1.37 [1.18–1.59]
55+	287	204	71.1	2.30 [1.89–2.78]	2.06 [1.69–2.51]
<b>Time to admission (days)</b>					
0-3	1131	634	56.1	1.00 –	1.00 –
4-7	1557	803	51.6	0.98 [0.89–1.09]	1.04 [0.94–1.16]
8-13	473	225	47.6	0.96 [0.83–1.13]	1.14 [0.97–1.33]
14+	152	66	43.4	0.96 [0.74–1.24]	1.20 [0.93–1.55]
<b>Cycle threshold</b>					
<18	517	474	91.7	7.29 [6.28–8.46]	7.28 [6.24–8.50]
18-22	1009	642	63.6	2.40 [2.14–2.69]	2.47 [2.19–2.79]
22+	1969	711	36.1	1.00 –	1.00 –
<b>Sex</b>					
Female	1789	918	51.3	1.00 –	1.00 –
Male	1703	906	53.2	1.05 [0.96–1.15]	1.06 [0.96–1.17]

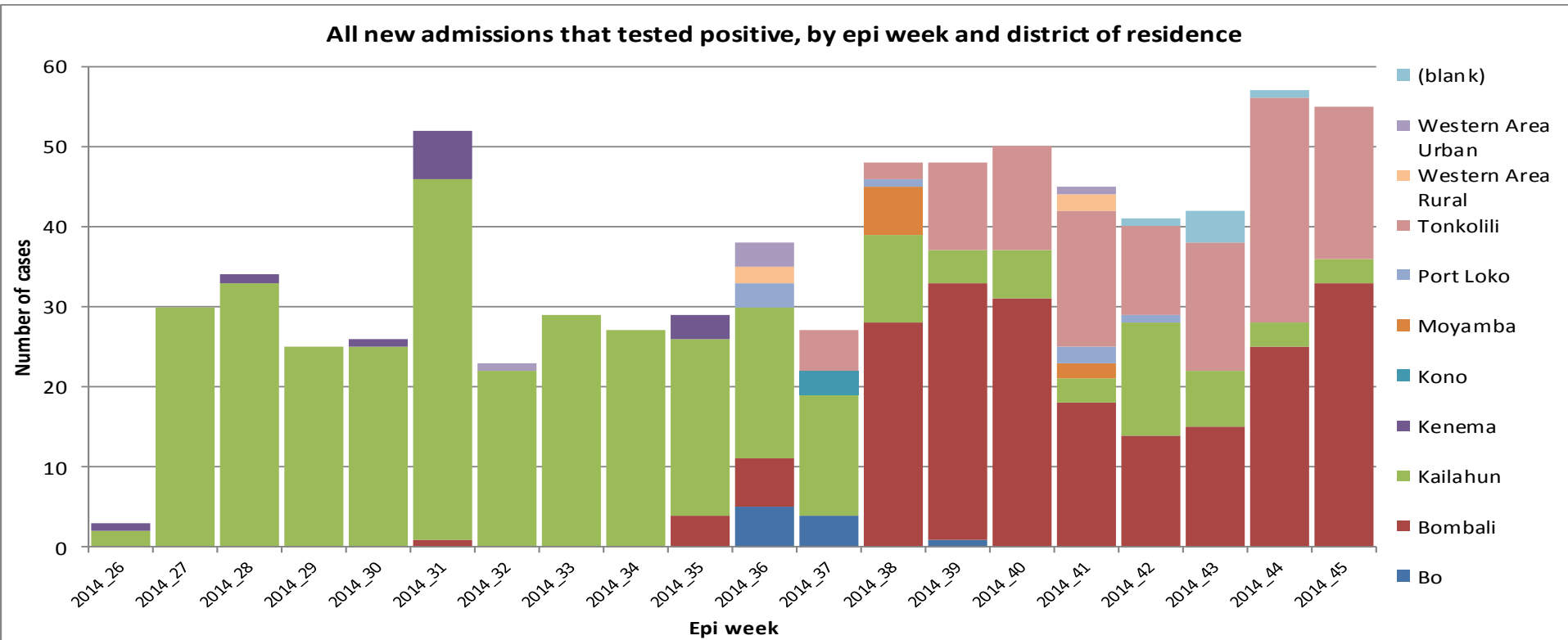
Table credit: Sophie Masson & Francesco Grandesso

# Kailahun Viral Loads on Admission



Graph credit: Marc-Antoine de la Vega

# Kailahun EMC Patient Origins



Graph credit: Grazia Caleao

# Kailahun Days of Illness on Admission

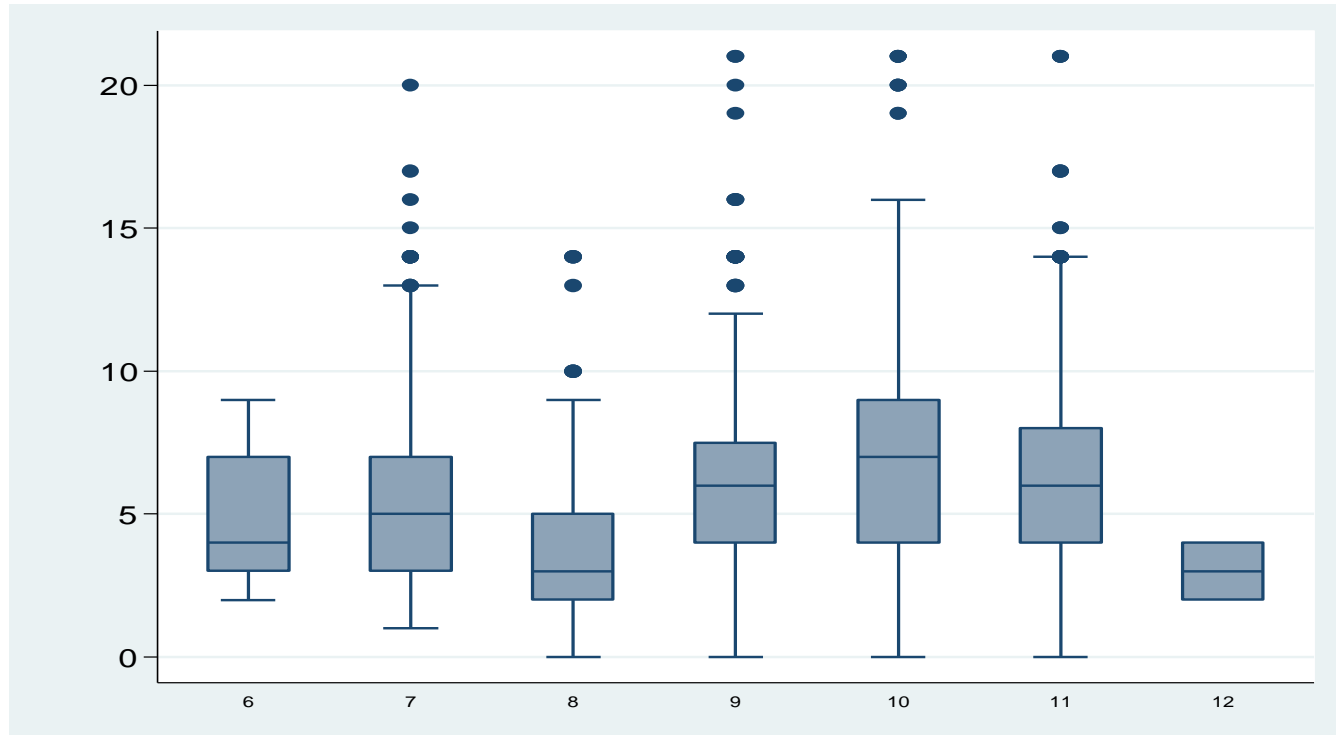


Chart credit: Sophie Masson

# Ebola in North America & Europe

- Case Fatality: 5/26 (19.2%)
- Age (N=23) Median = 37 years (26-75)
- Admission Ct (N=16) Median = 24.7 (16.6- 34.9)
- Days to admission (N=23) Median = 5 (2-15)
- Diarrhea max. vol./24 hrs (N=23) Median = 250 ml (100-10,000)

# An Element of Viral Myositis

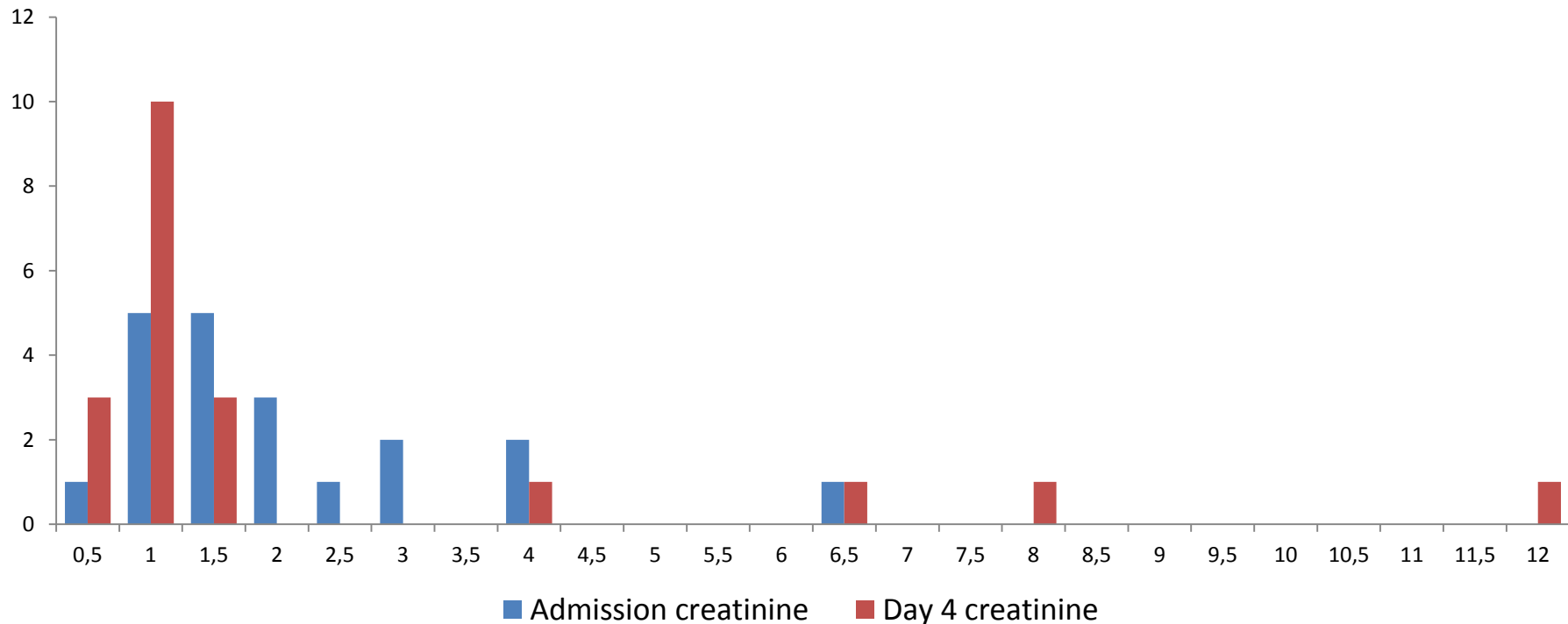
Aspartate aminotransferase (AST)		
$\mu\text{mol/L}$	Patients	CFR
$\geq 400$	22	54.5%
300-399	5	20.0%
200-299	3	0.0%
39-199	7	14.3%
11-38	1	0.0%

Creatine phosphokinase (CPK)		
$\mu\text{mol/L}$	Patients	CFR
$\geq 4000$	8	75%
1200-3999	20	50%
39-1199	19	36.8%

Table data: Michel Van Herp

Data from MSF patients in Gueckedou enrolled in Jiki trial 12/14-1/15

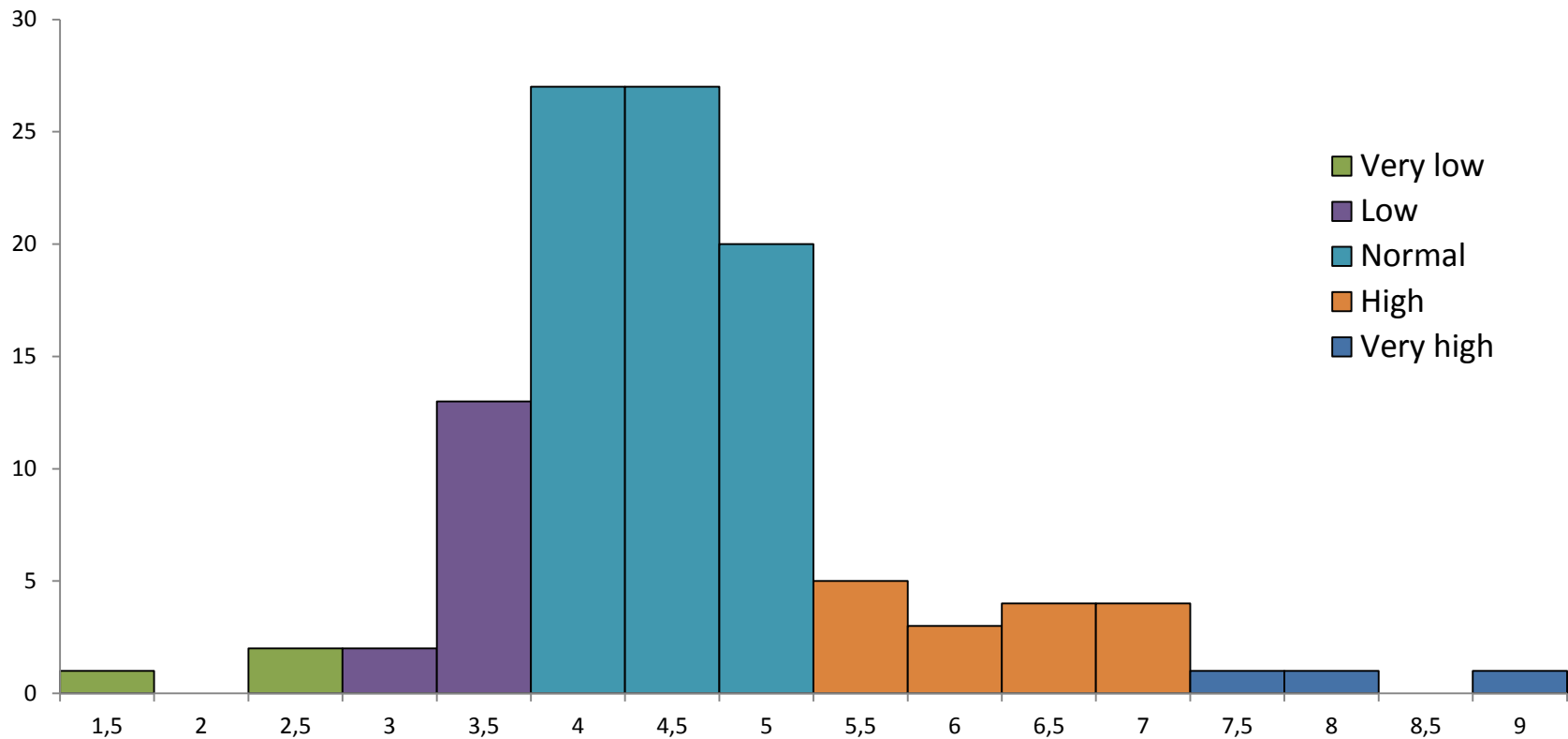
# Creatinine (mg/dL N=20)



Data from MSF patients in Gueckedou enrolled in Jiki trial 12/14-1/15

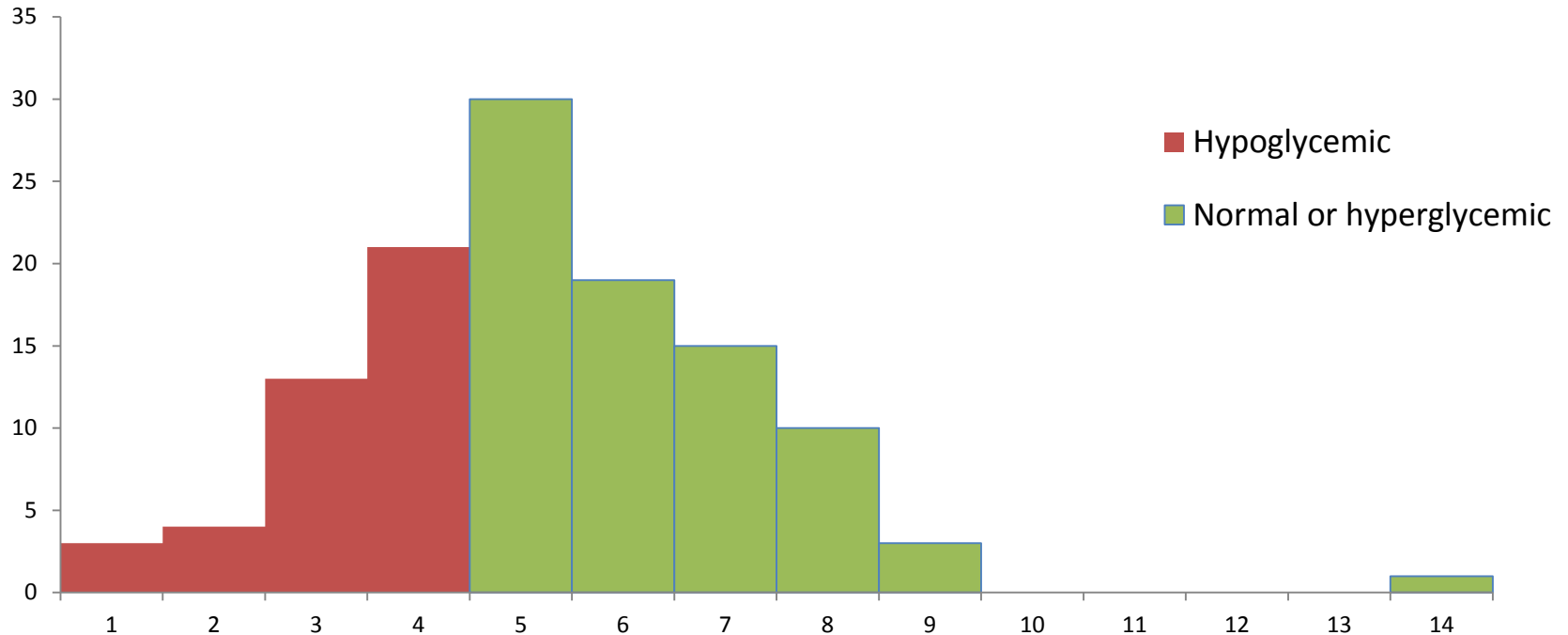


# Potassium Levels (mmol/L N=127)



Data from MSF patients in Gueckedou enrolled in Jiki trial 12/14-1/15

# Glucose Levels (mmol/L N=133)



Data from MSF patients in Gueckedou enrolled in Jiki trial 12/14-1/15

# Conclusions

- Outcome very dependent on age and viral load
- Case fatality rates very dependent on patients
- Fluid replacement may have limited impact
- Improvement with electrolyte management?

# Acknowledgments

- All MSF volunteers and local staff who work and have been working in the field
- All epidemiologists and medical referents in the field and in MSF headquarters