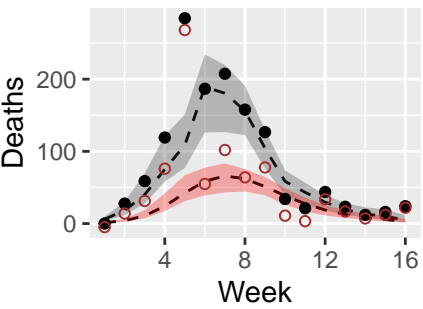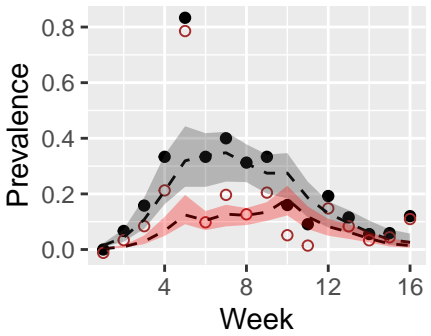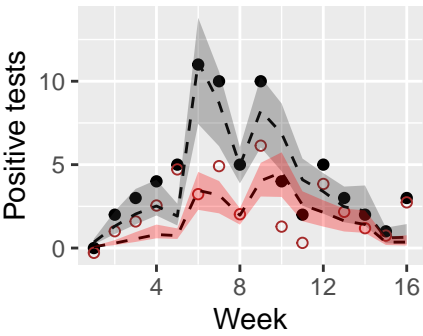# IFR x 0.2, Slope x 0.2

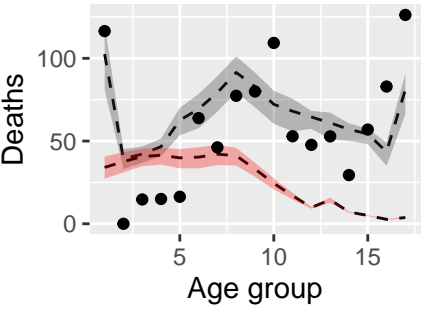COVID−19 weekly deaths (Lusaka) nbin ll = −32 1

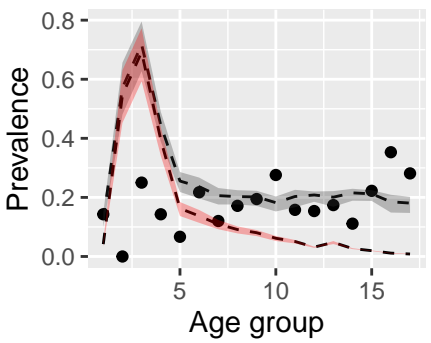COVID−19 weekly prevalence (UTH mortuary)

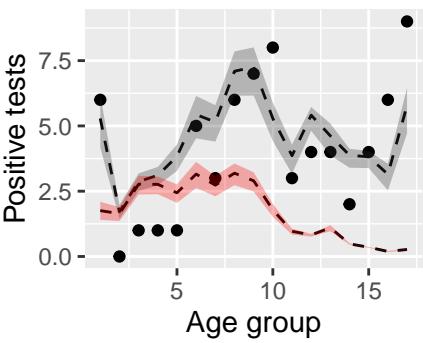COVID−19 weekly positive tests (UTH mortuary)

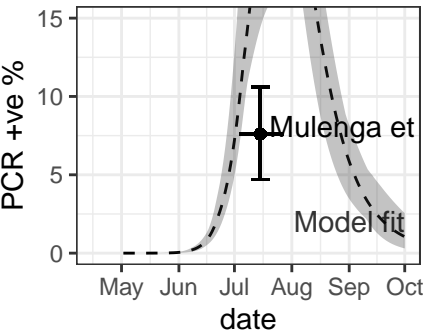COVID−19 deaths by age (Lusaka) multinom ll = −30.9
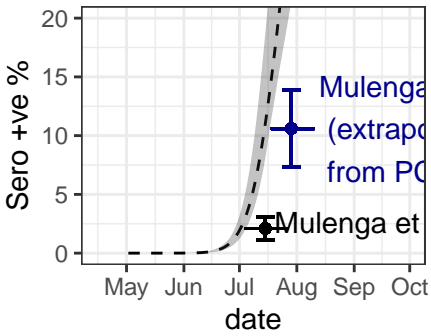
COVID−19 prevalence by age (UTH mortuary)
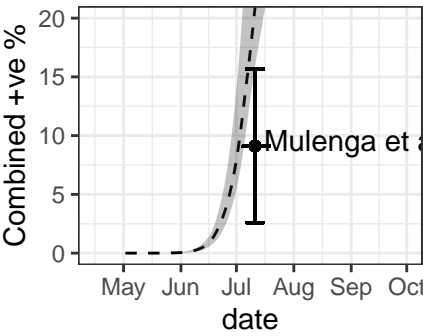
COVID−19 positive tests by age (UTH mortuary)

PCR prevalence binom ll = −218.1

Seroprevalence binom ll = −164.9
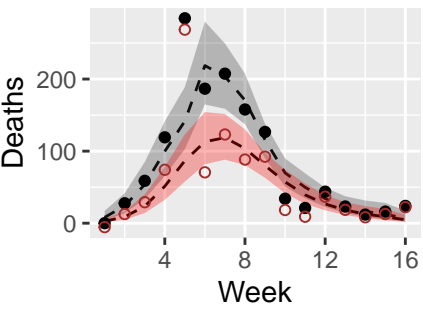
Combined prevalence binom ll = −27
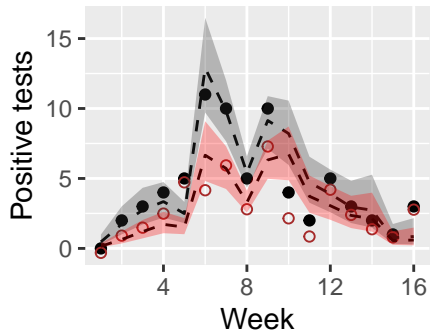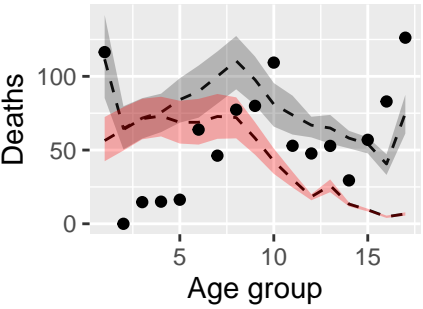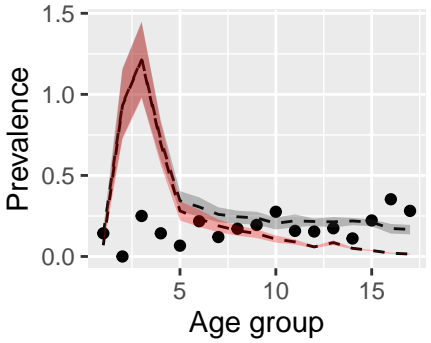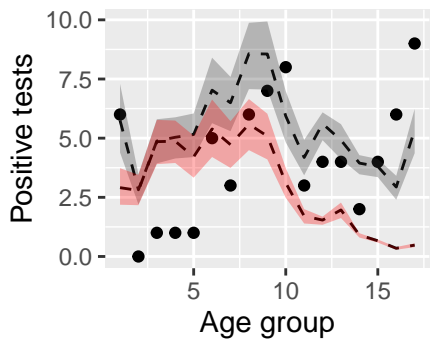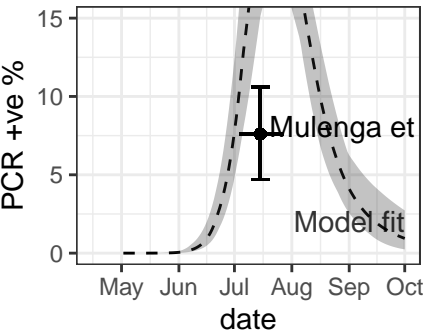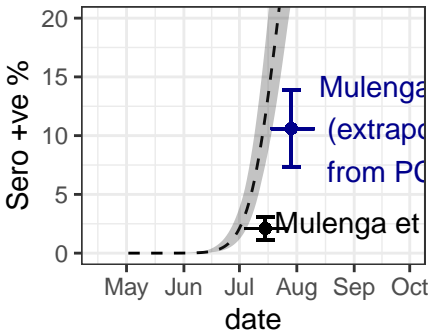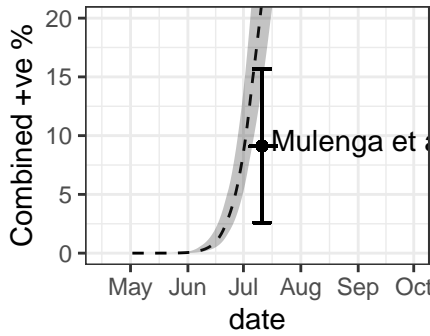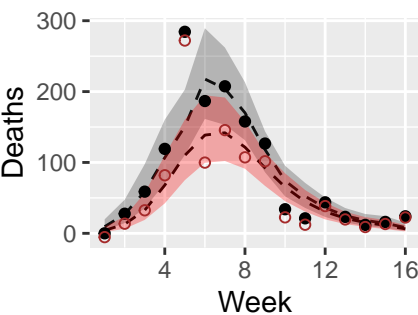
Mulehga et

Model fit

Mulenga (extrapolated from PCR)

Mulenga et
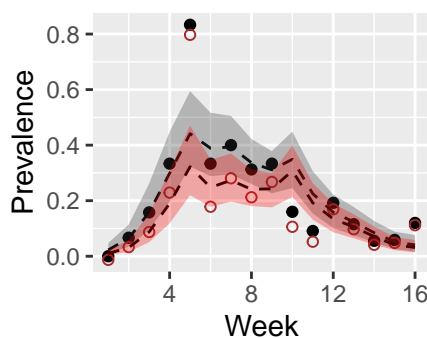
Mulenga et

IFR x 0.4, Slope x 0.2
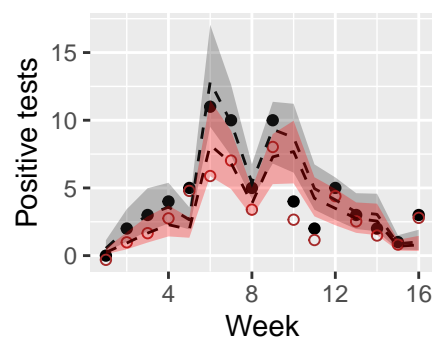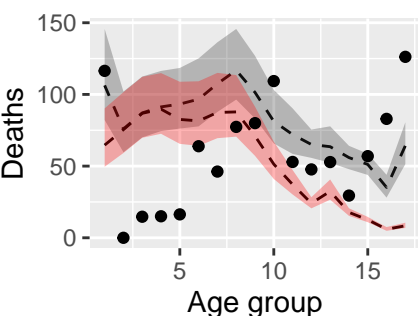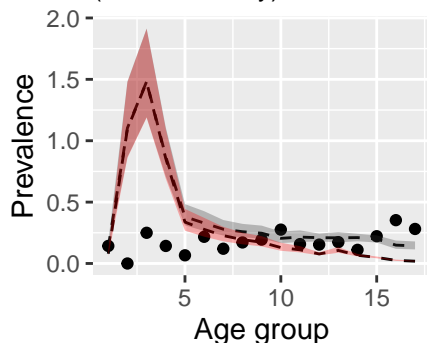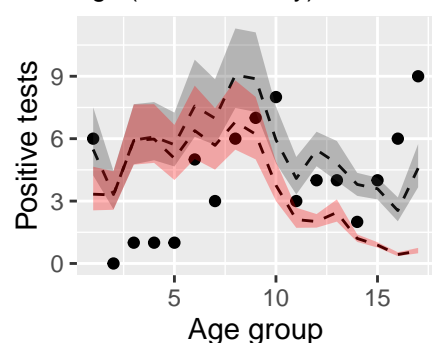
IFR x 0.6, Slope x 0.2

COVID−19 weekly deaths (Lusaka) nbin ll = −31 1

COVID−19 weekly prevalence (UTH mortuary)

COVID−19 weekly positive tests (UTH mortuary)

COVID−19 deaths by age (Lusaka) multinom ll = −39.1

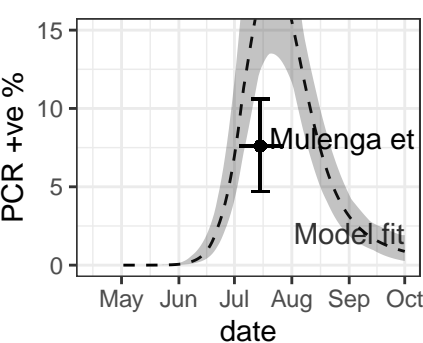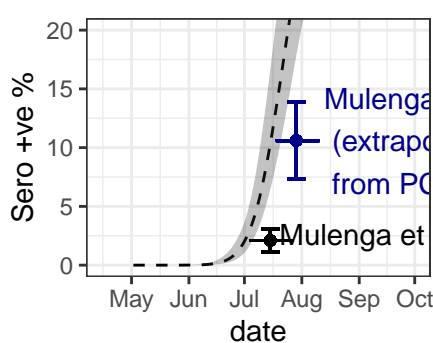COVID−19 prevalence by age (UTH mortuary)
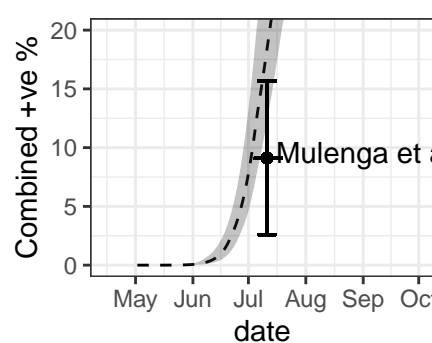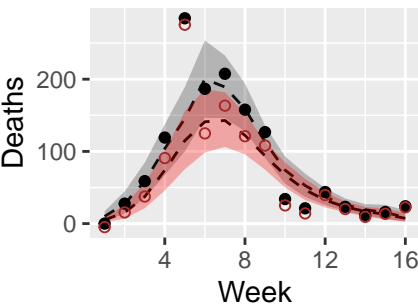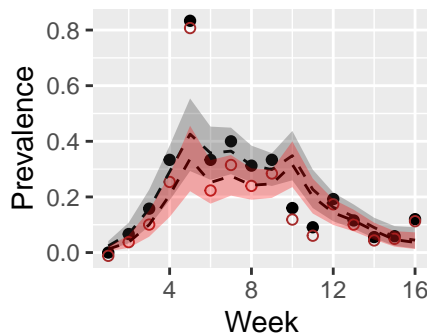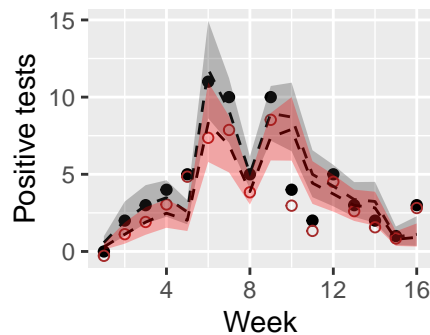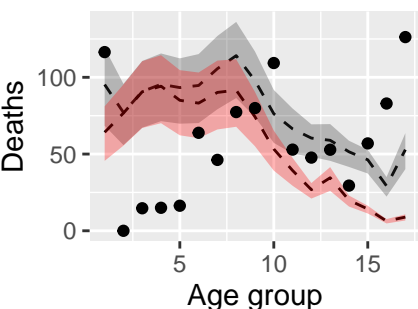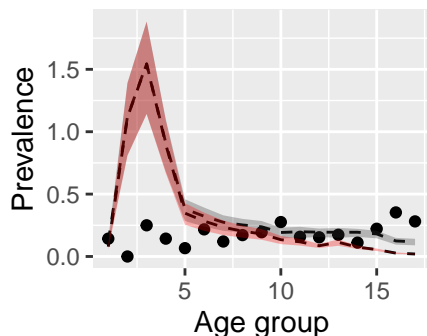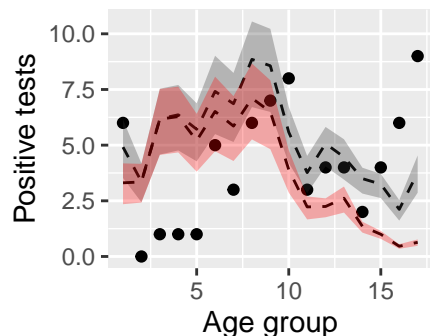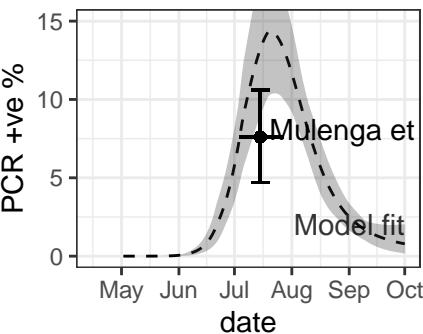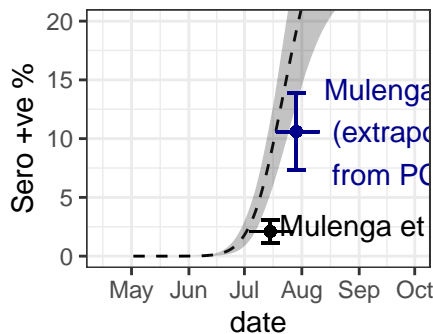
COVID−19 positive tests by age (UTH mortuary)

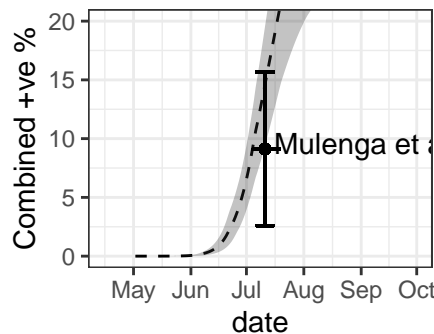PCR prevalence binom ll = −127

Seroprevalence binom ll = −148.5
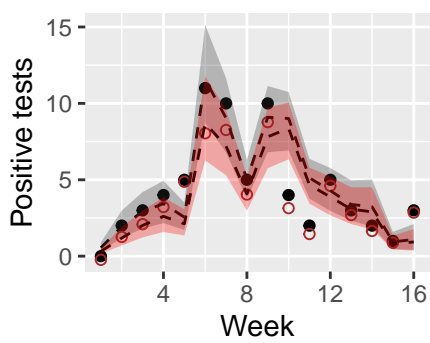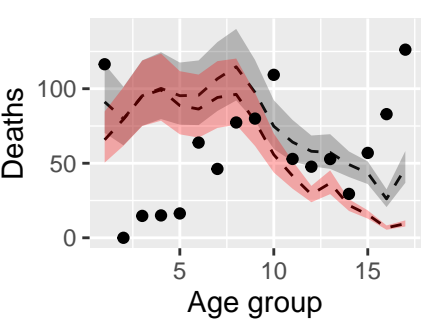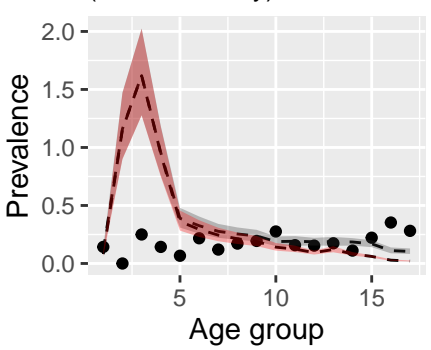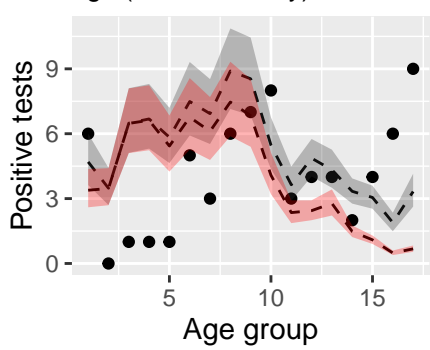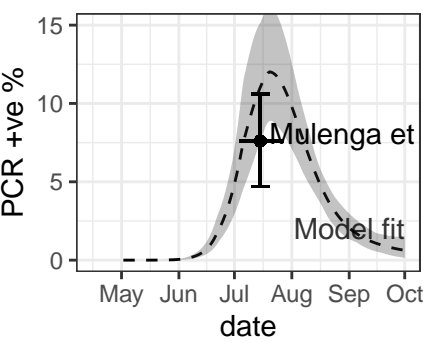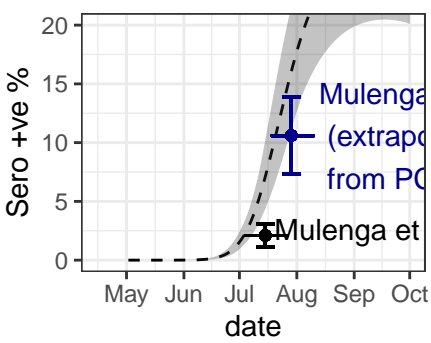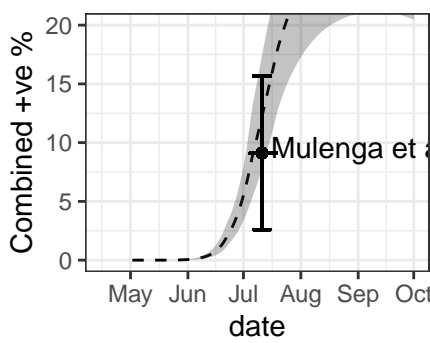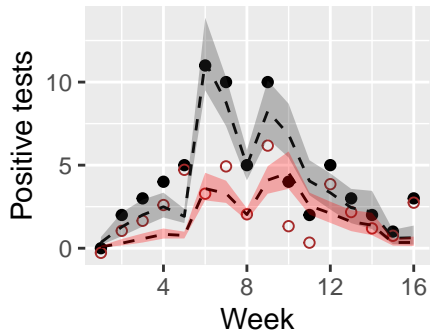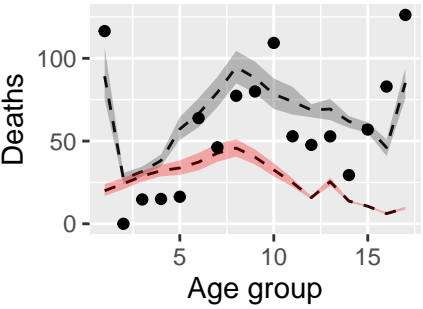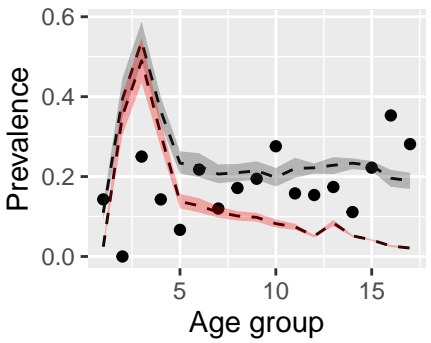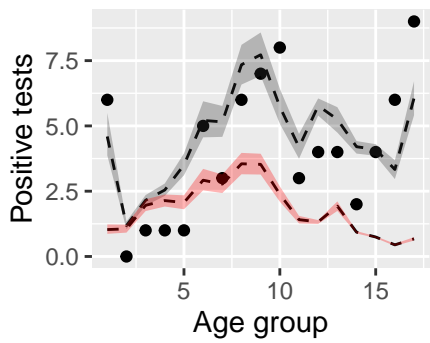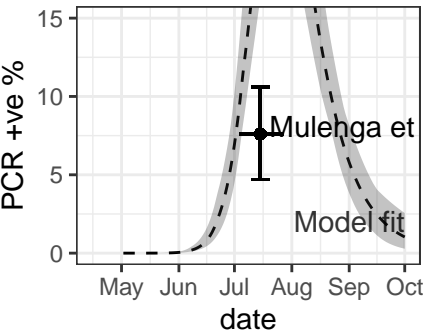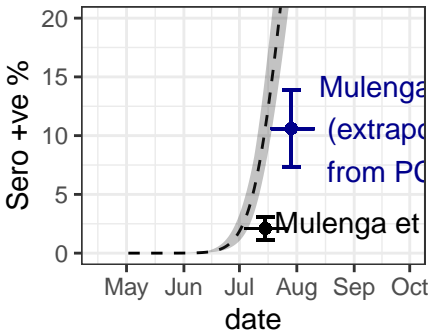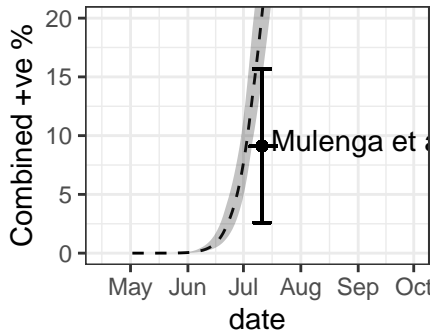
Combined prevalence binom ll = −18.6

IFR x 0.8, Slope x 0.2

IFR x 1, Slope x 0.2

IFR x 0.2, Slope x 0.4

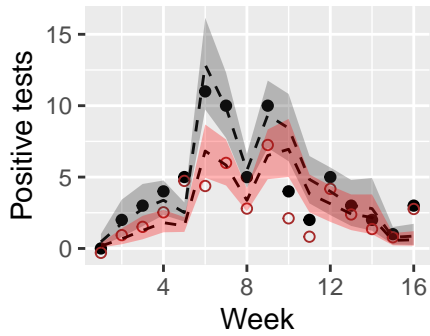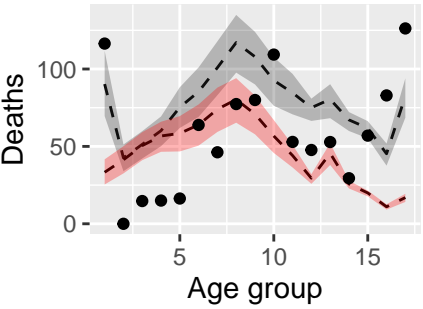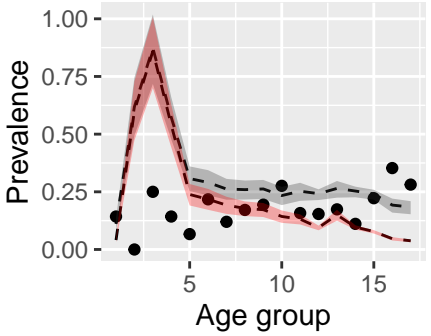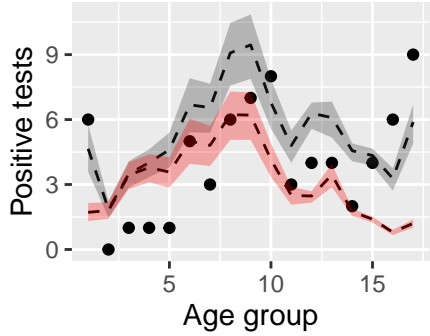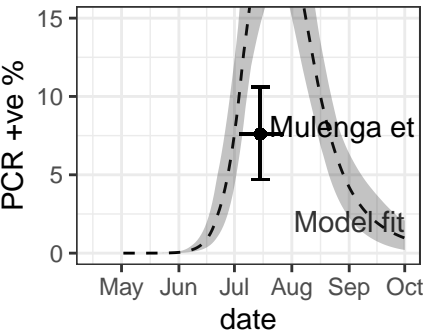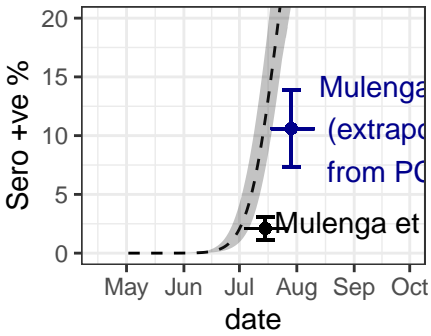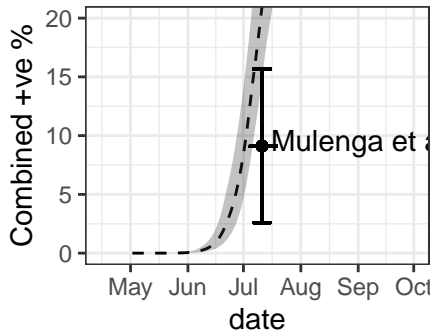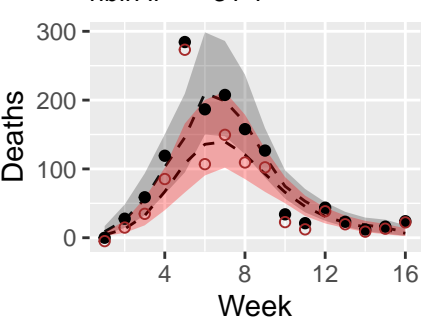IFR x 0.4, Slope x 0.4
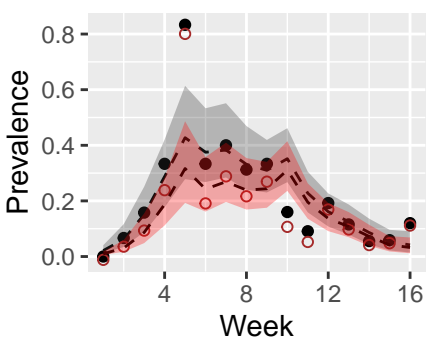
IFR x 0.6, Slope x 0.4

IFR x 0.8, Slope x 0.4
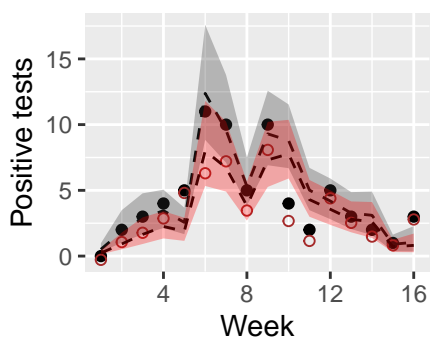
IFR x 1, Slope x 0.4
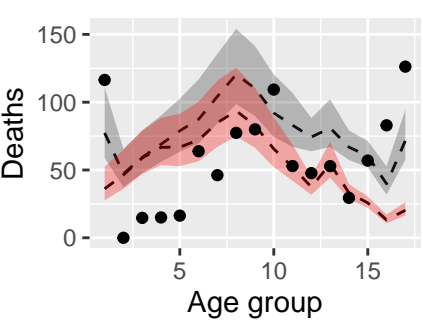

COVID−19 weekly deaths (Lusaka) nbin ll = −31 1

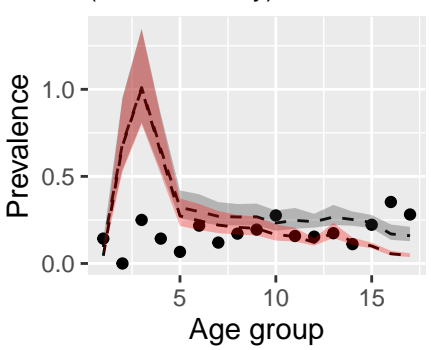COVID−19 weekly prevalence (UTH mortuary)
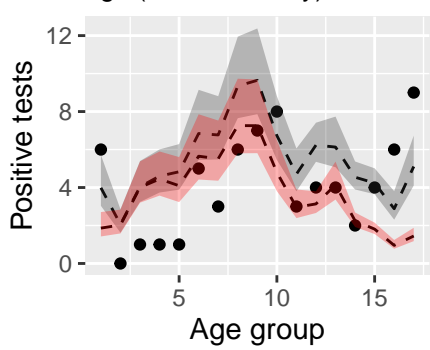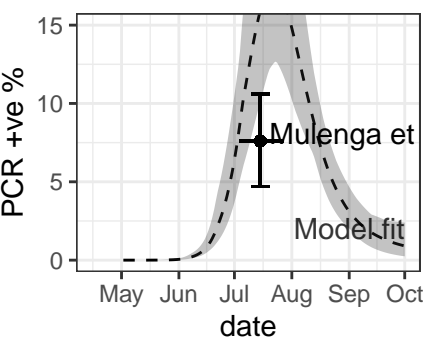
COVID−19 weekly positive tests (UTH mortuary)

COVID−19 deaths by age (Lusaka) multinom ll = −38.5
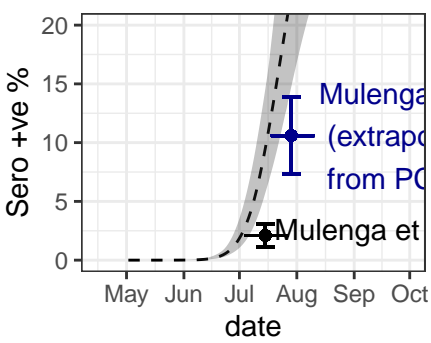
COVID−19 prevalence by age (UTH mortuary)
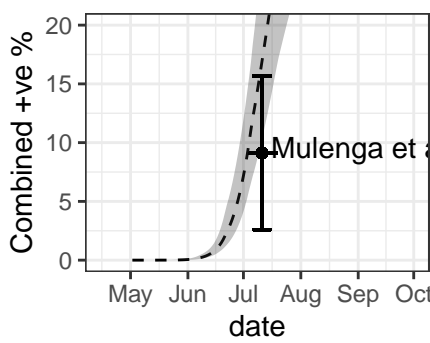
COVID−19 positive tests by age (UTH mortuary)

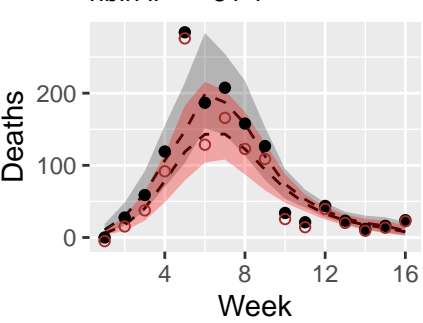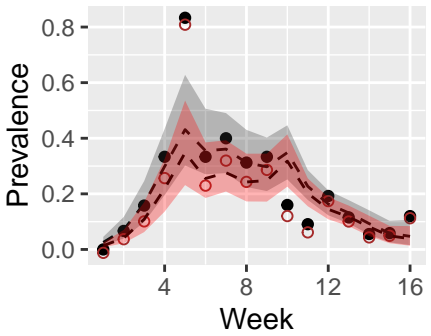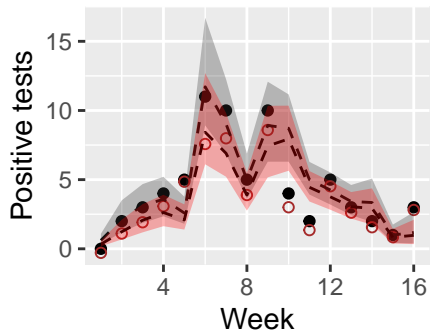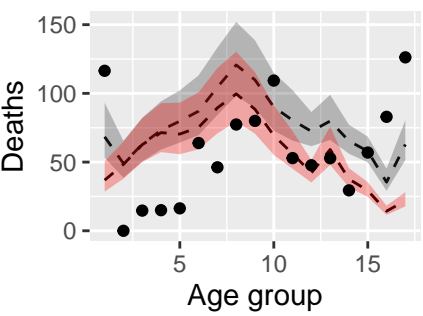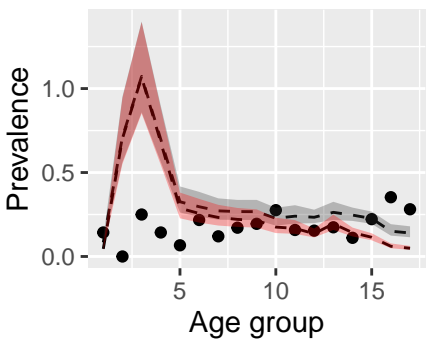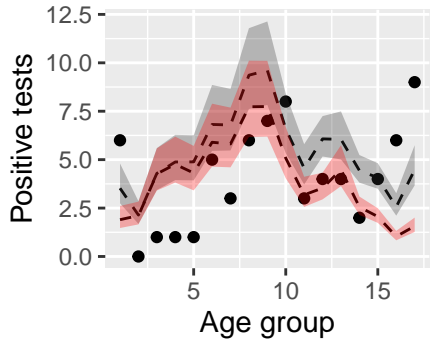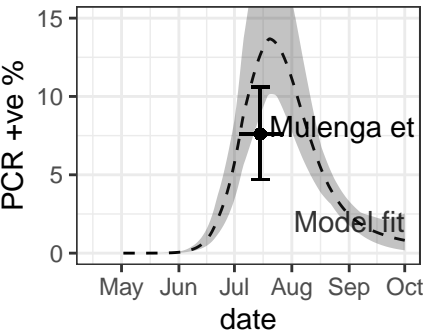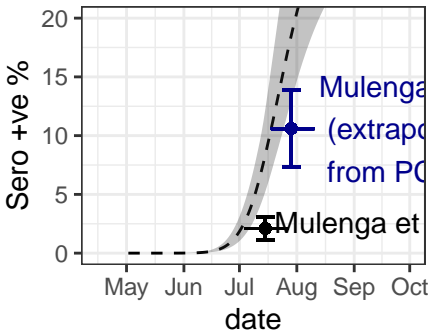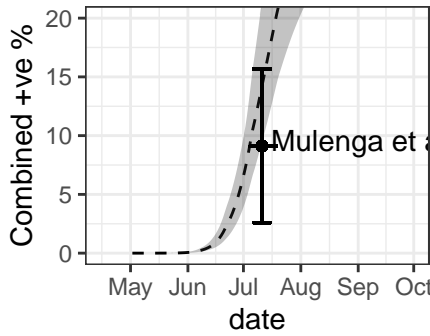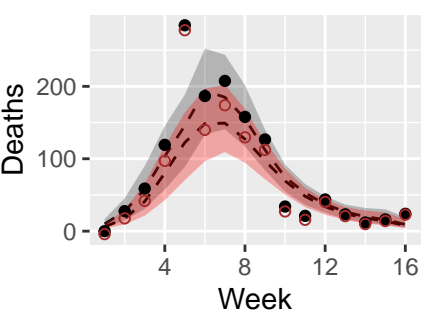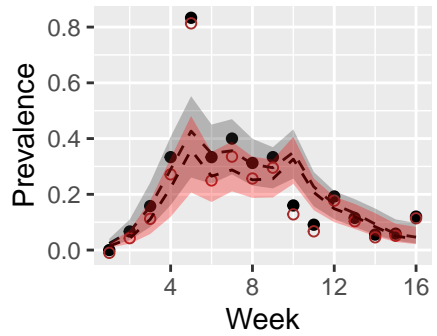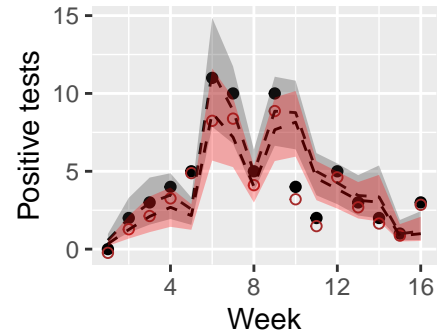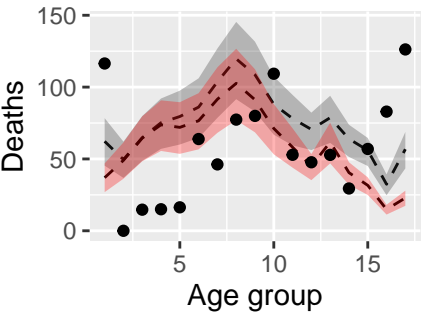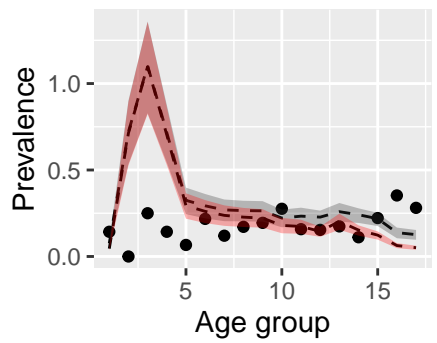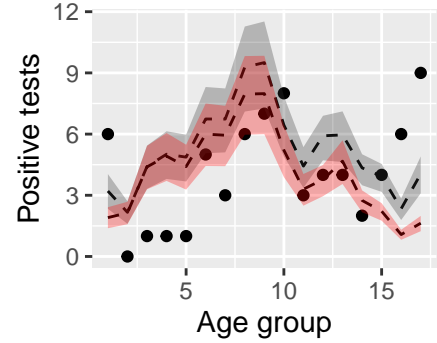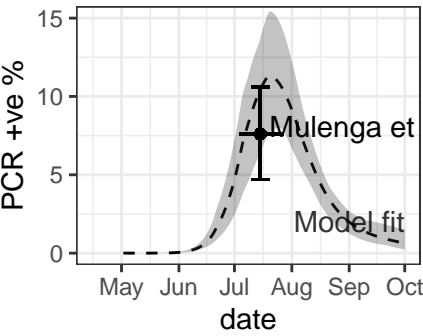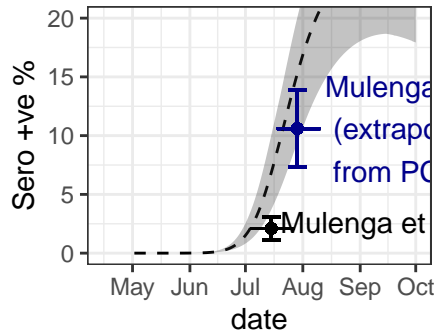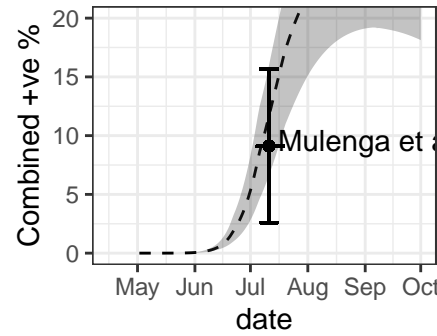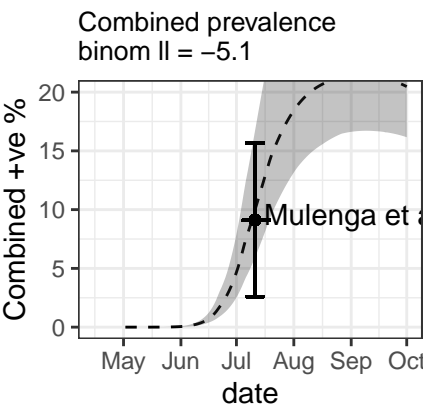PCR prevalence binom ll = −20.6

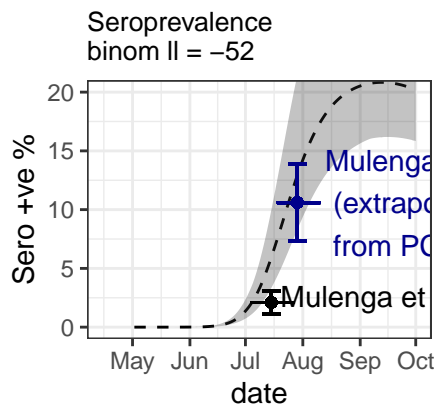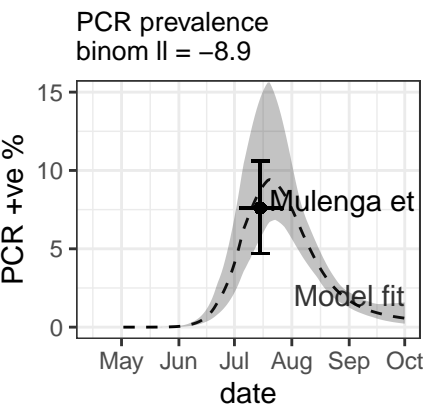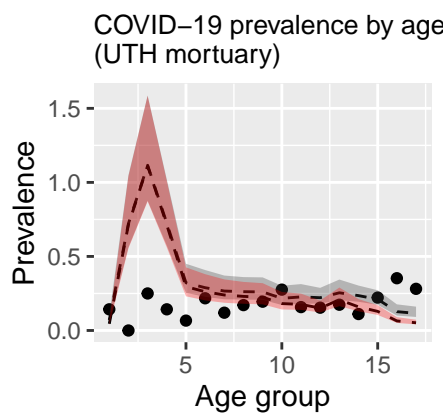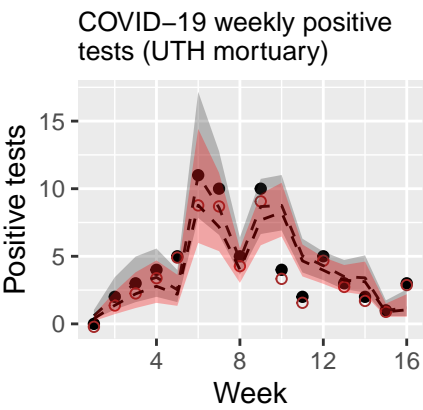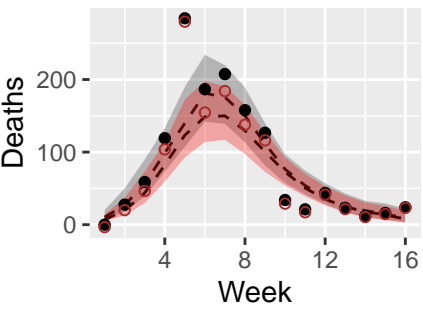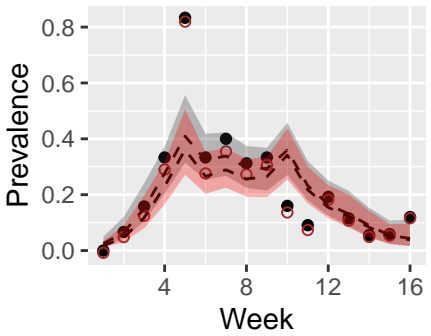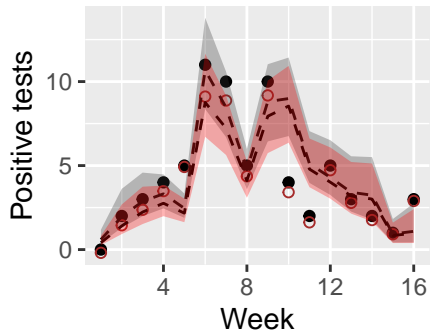Seroprevalence binom ll = −69.8

Combined prevalence binom ll = −6.5

Mulenga et

Mulenga (extrapo from PC

Mulenga et

Mulenga et

Model fit

IFR x 1.2, Slope x 0.4

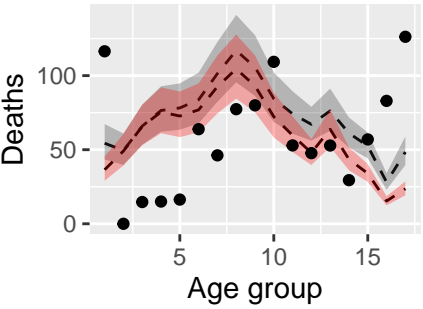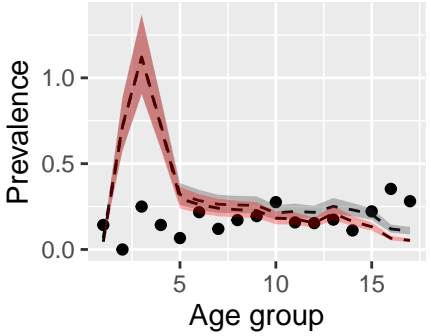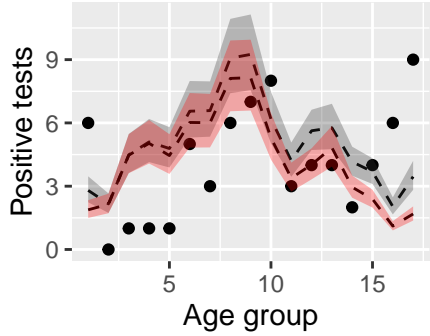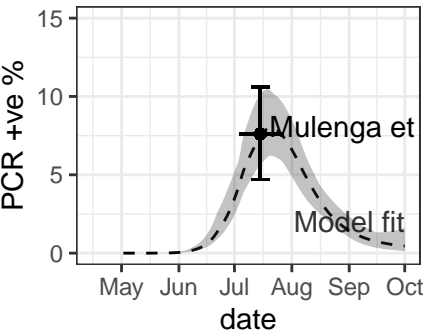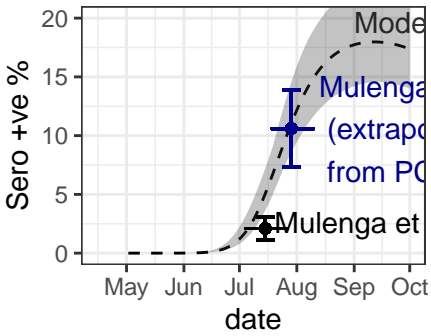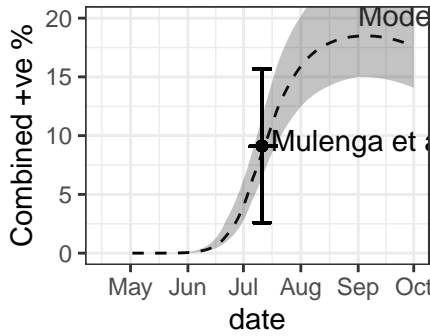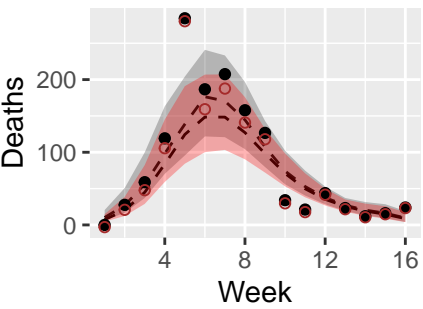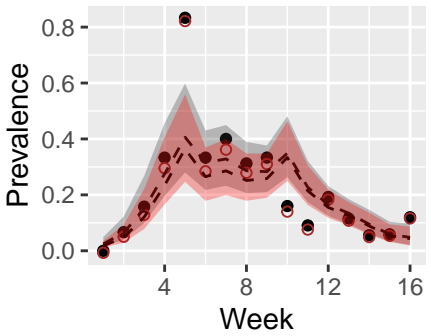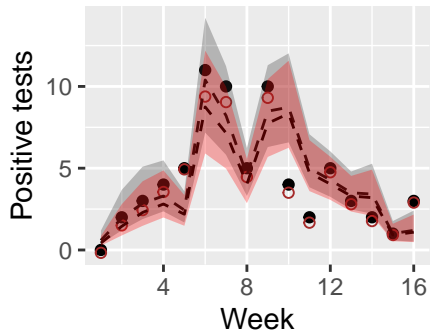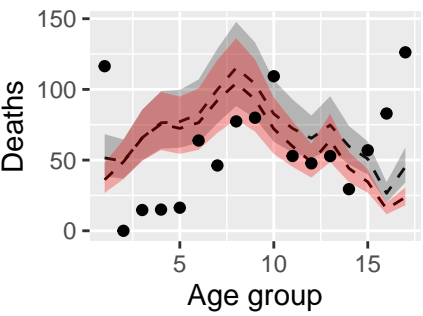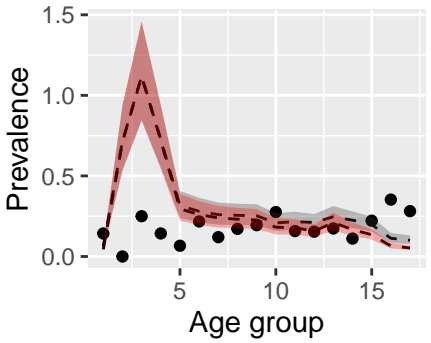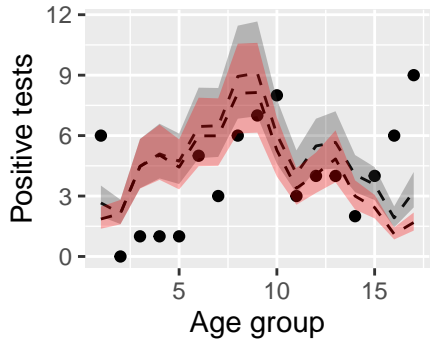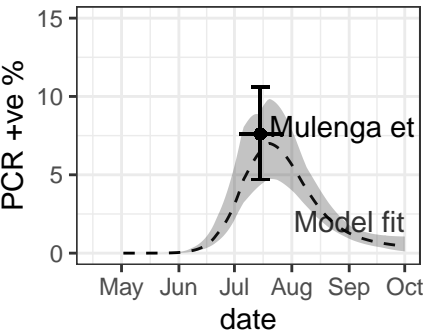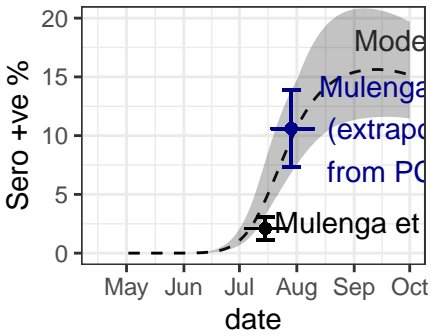**COVID−19 weekly deaths (Lusaka)** nbin ll = −31 1

COVID−19 weekly prevalence (UTH mortuary)

COVID−19 weekly positive tests (UTH mortuary)

COVID−19 deaths by age (Lusaka) multinom ll = −39.7

COVID−19 prevalence by age (UTH mortuary)
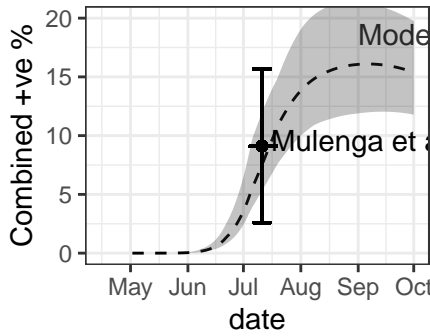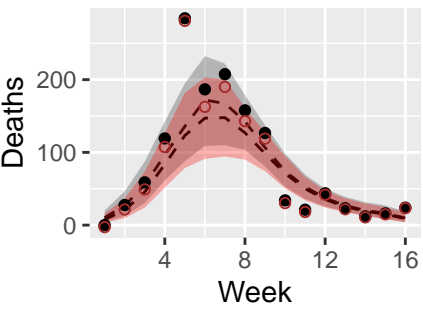
COVID−19 positive tests by age (UTH mortuary)

PCR prevalence binom ll = −8.9

Mulenga et

Model fit

Seroprevalence binom ll = −52

Mulenga (extrapo from PC

Mulenga et

Combined prevalence binom ll = −5.1

Mulenga et

IFR x 1.4, Slope x 0.4
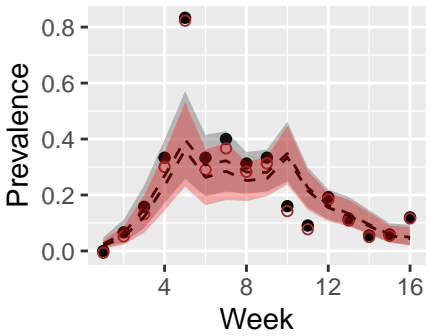
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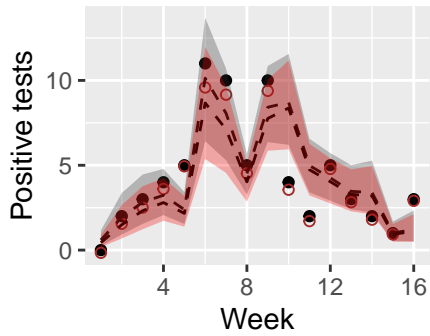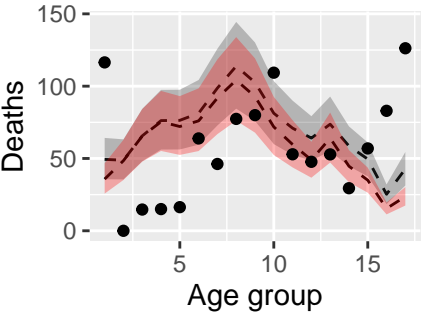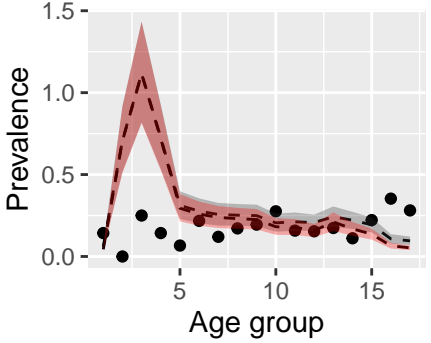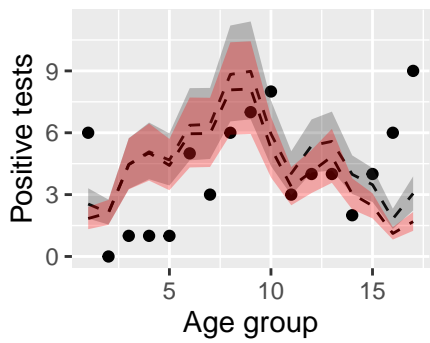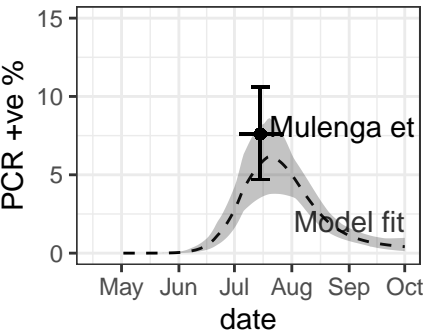
IFR x 1.8, Slope x 0.4

COVID−19 weekly deaths (Lusaka) nbin ll = −31 1

COVID−19 weekly prevalence (UTH mortuary)

COVID−19 weekly positive tests (UTH mortuary)

COVID−19 deaths by age (Lusaka) multinom ll = −42
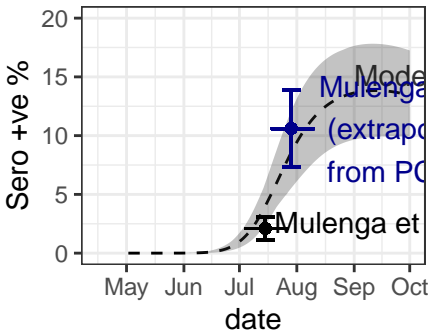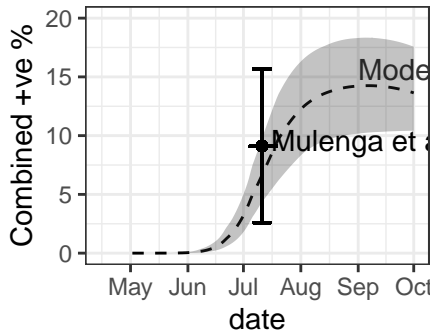
COVID−19 prevalence by age (UTH mortuary)

COVID−19 positive tests by age (UTH mortuary)

PCR prevalence binom ll = −15.1
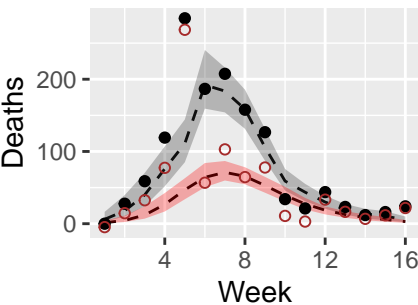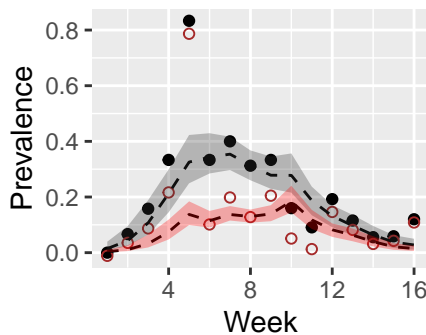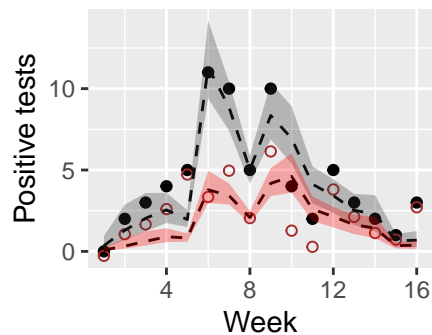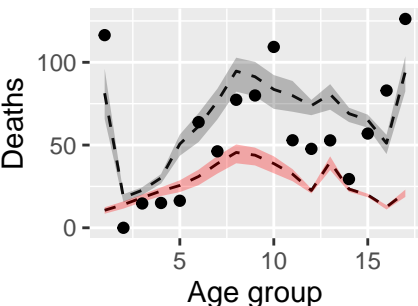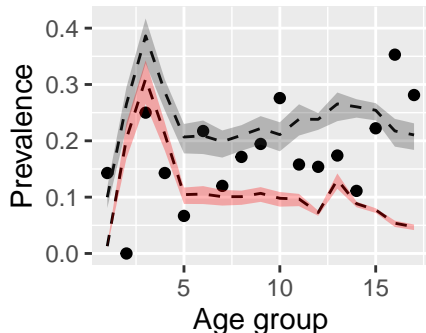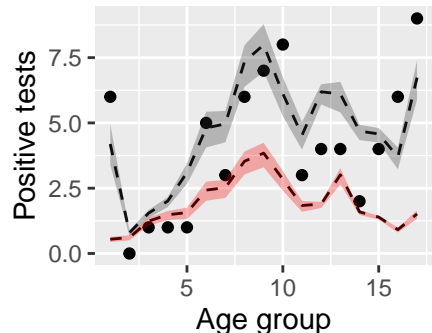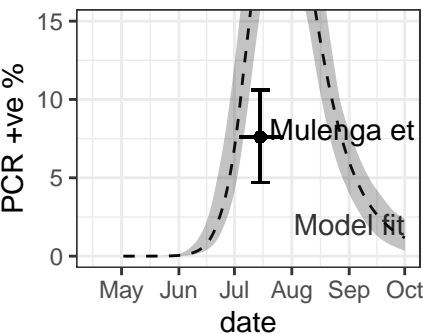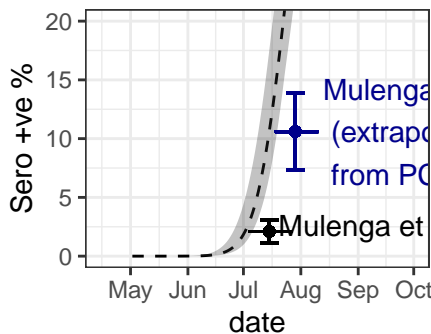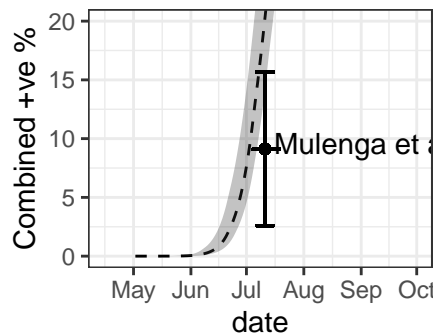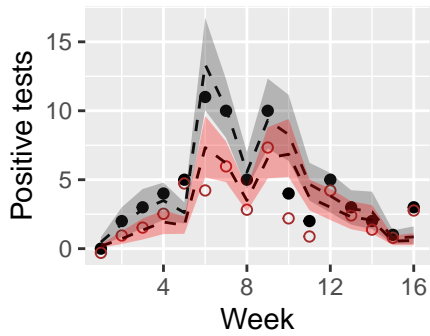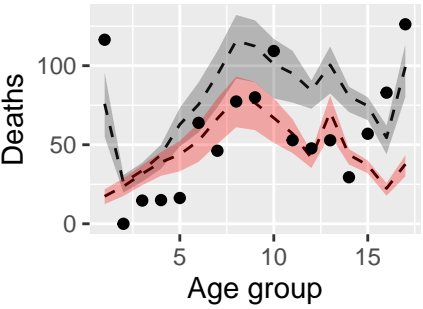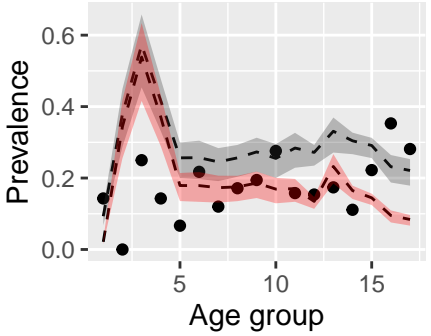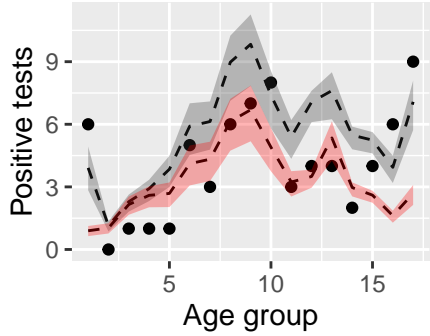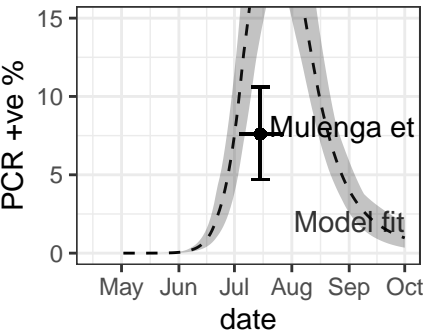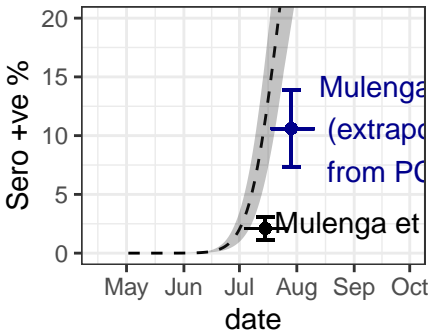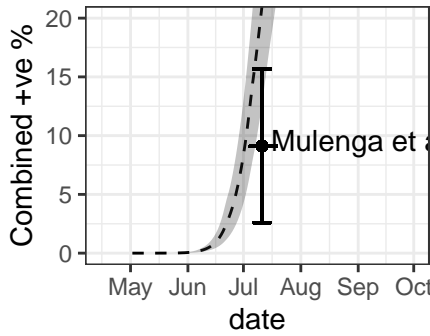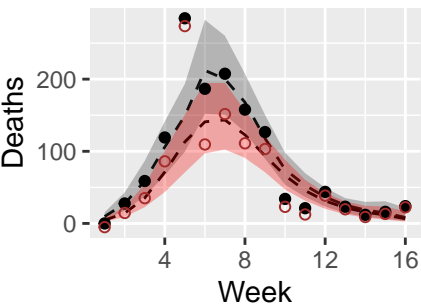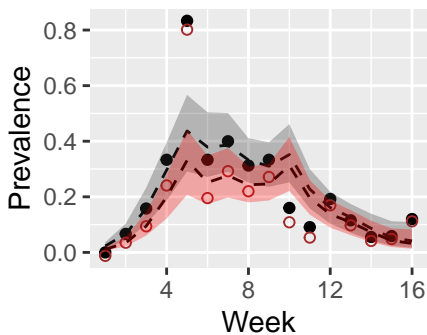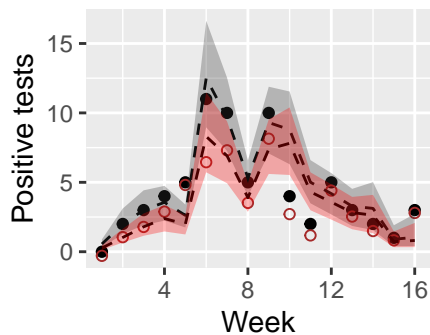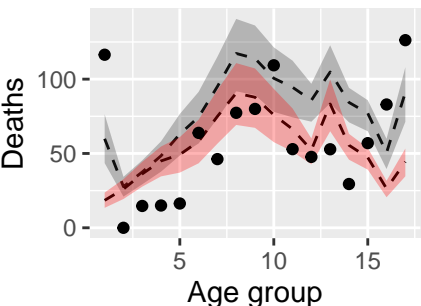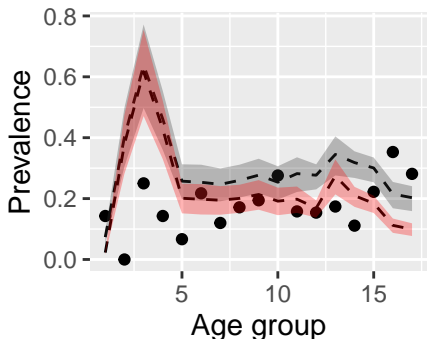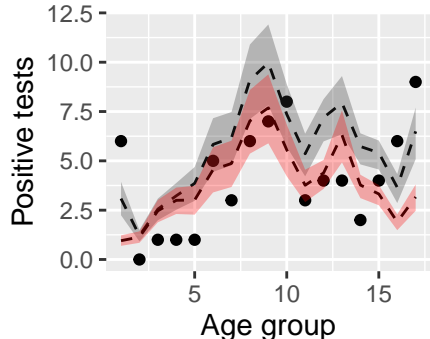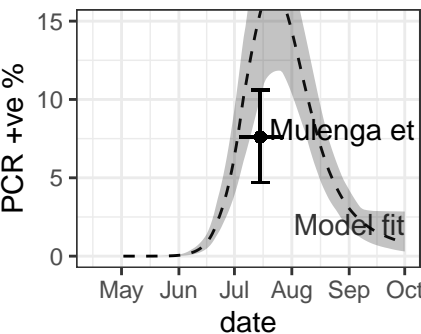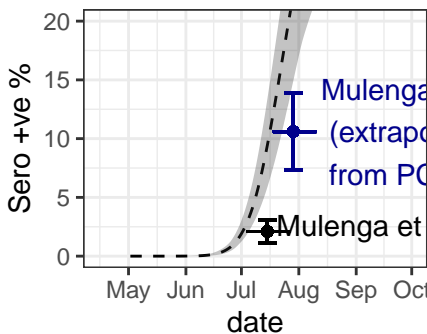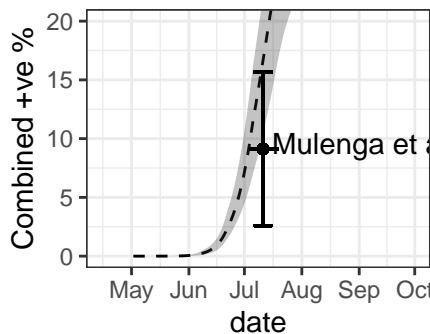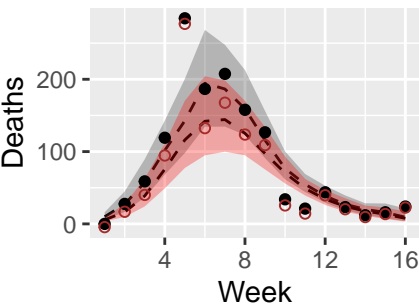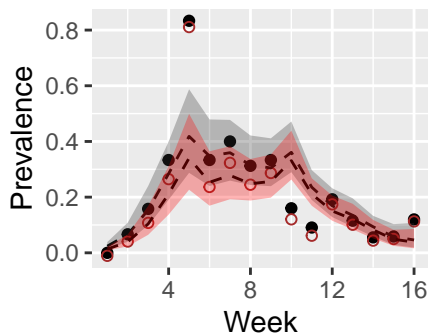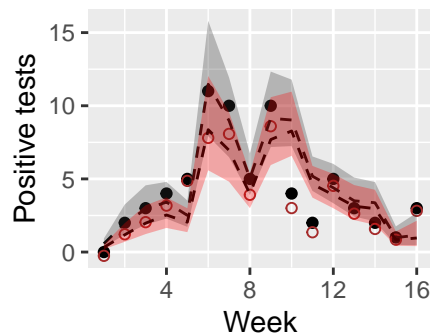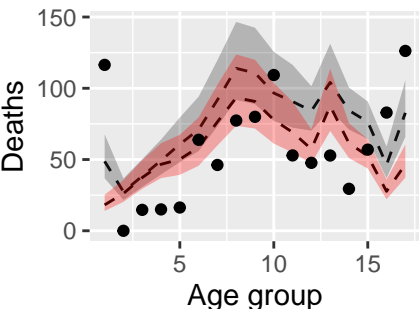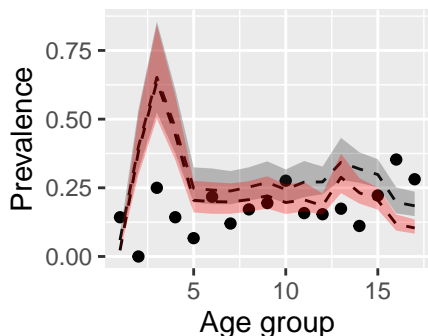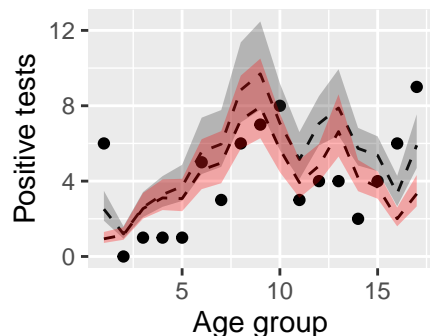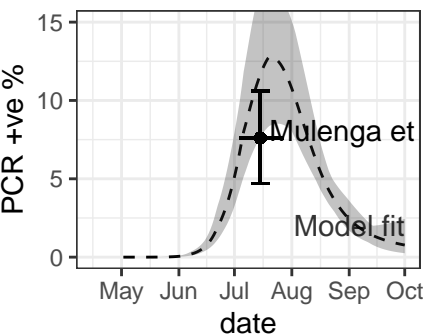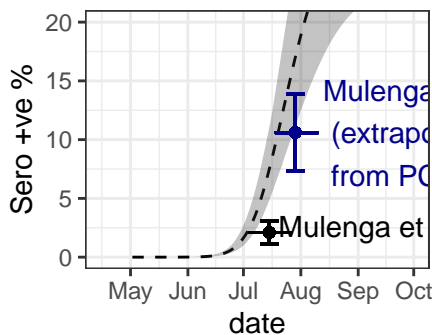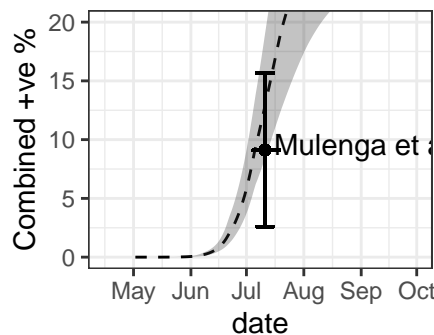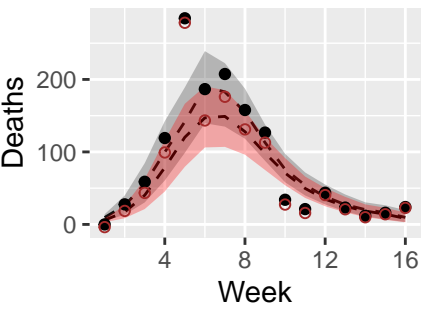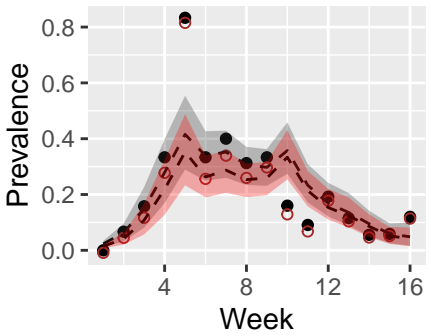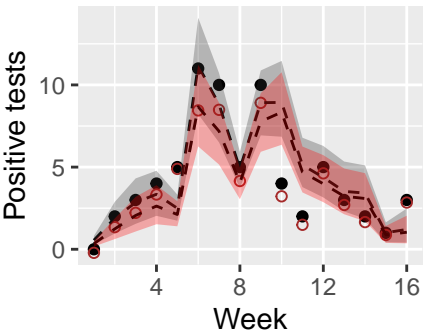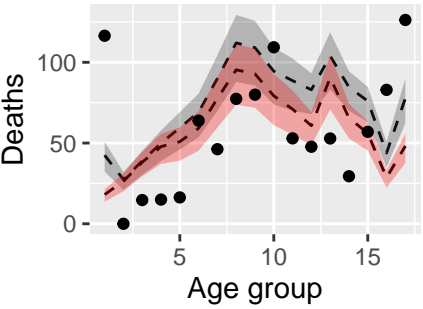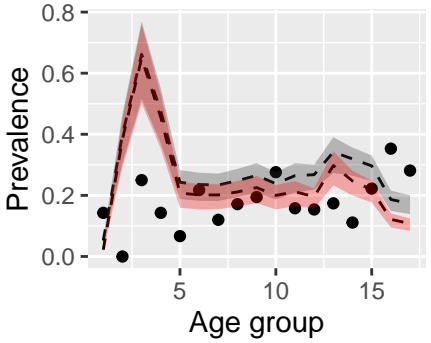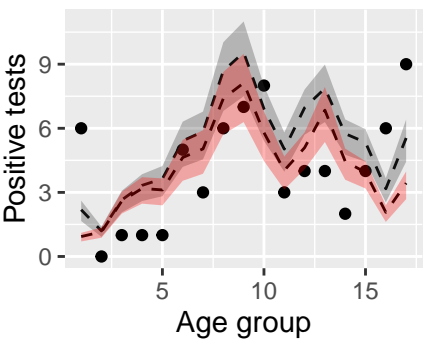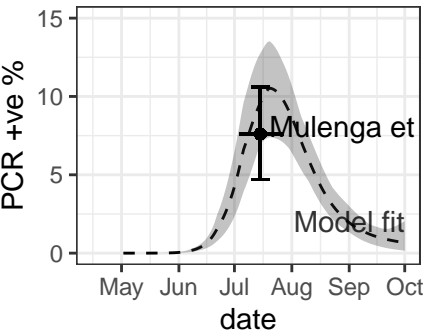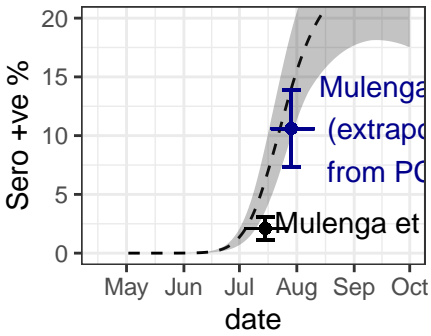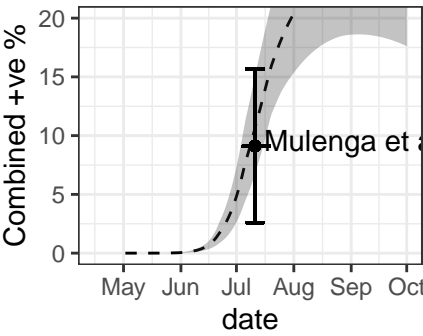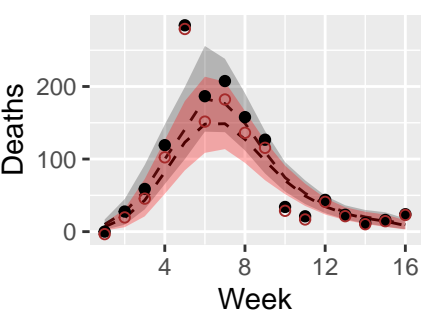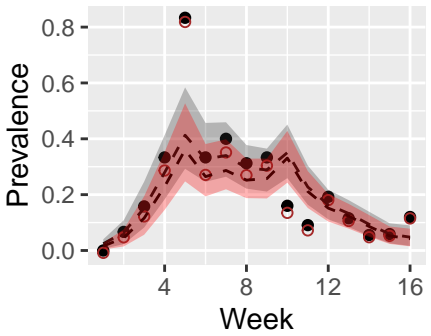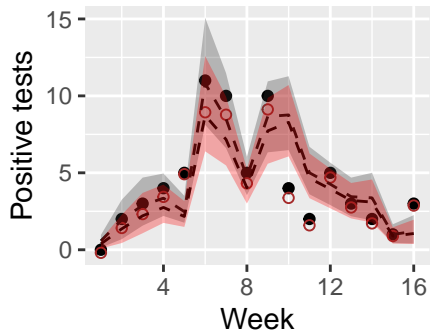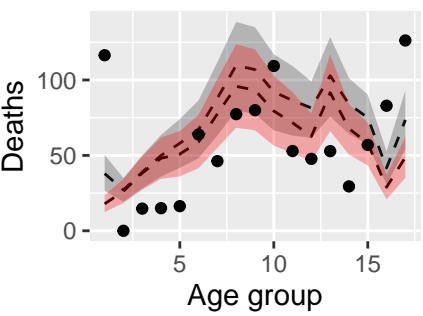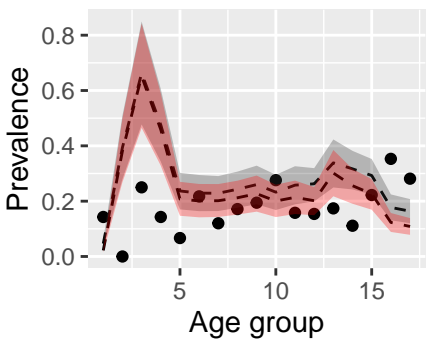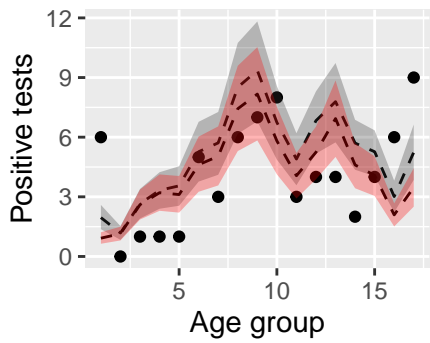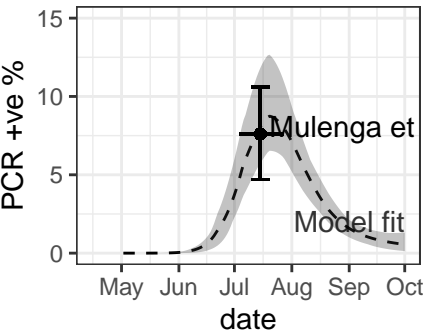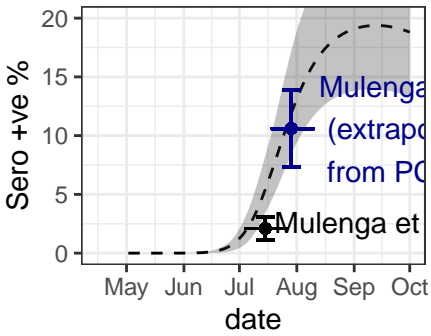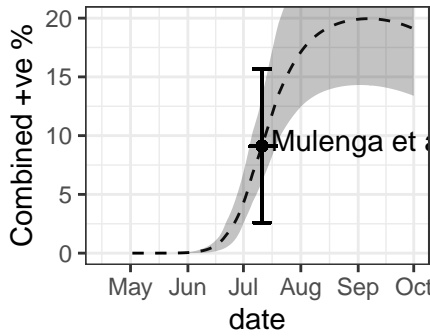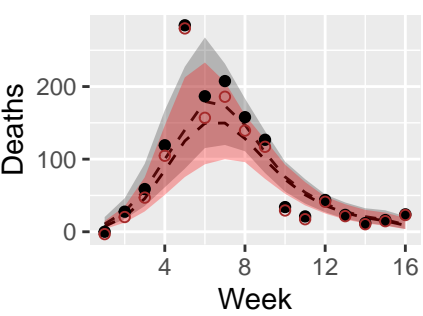
Seroprevalence binom ll = −20.1

Combined prevalence binom ll = −5.9

IFR x 0.2, Slope x 0.6

IFR x 0.4, Slope x 0.6

IFR x 0.6, Slope x 0.6

IFR x 0.8, Slope x 0.6

IFR x 1, Slope x 0.6
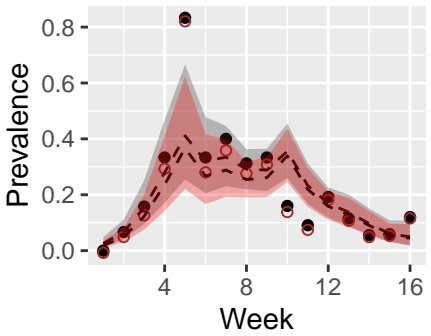
IFR x 1.2, Slope x 0.6

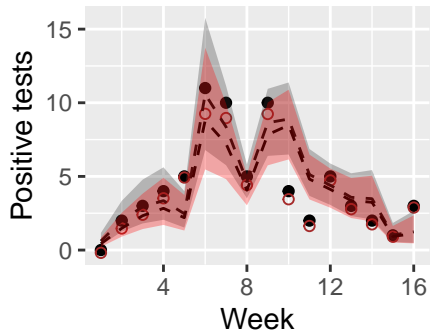# IFR x 1.4, Slope x 0.6

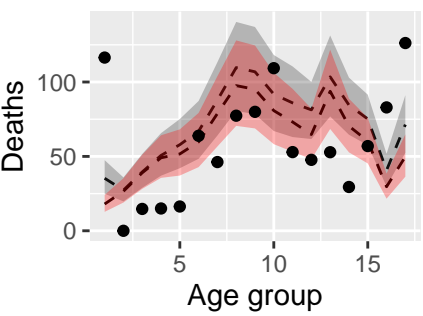COVID−19 weekly deaths (Lusaka)
nbin ll = −31 1

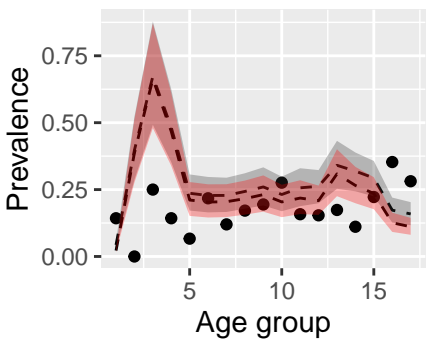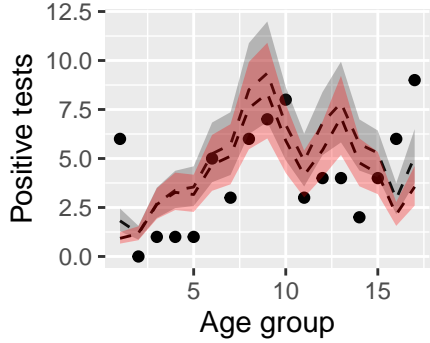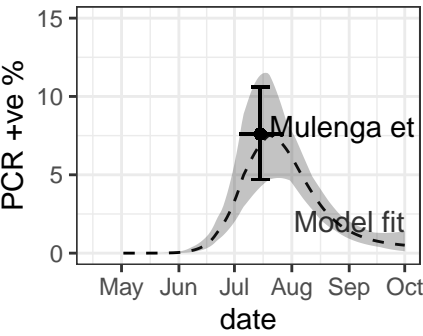COVID−19 weekly prevalence (UTH mortuary)

COVID−19 weekly positive tests (UTH mortuary)

COVID−19 deaths by age (Lusaka)
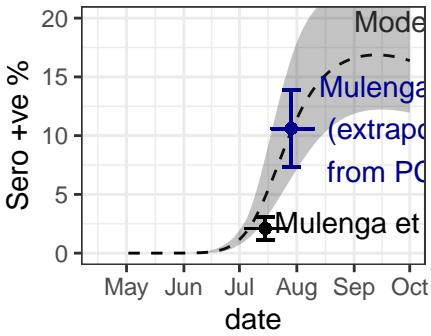multinom ll = −36

COVID−19 prevalence by age (UTH mortuary)
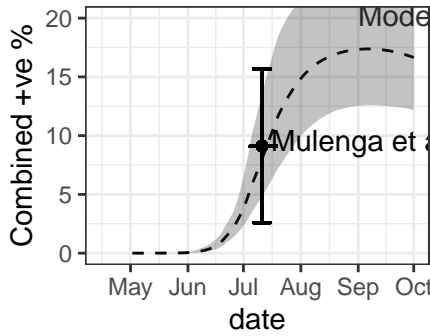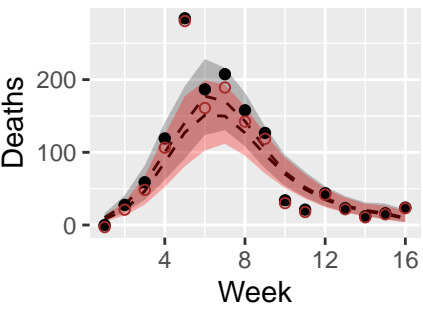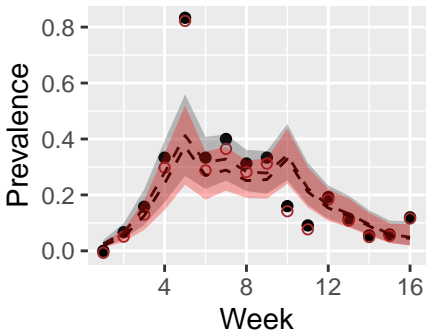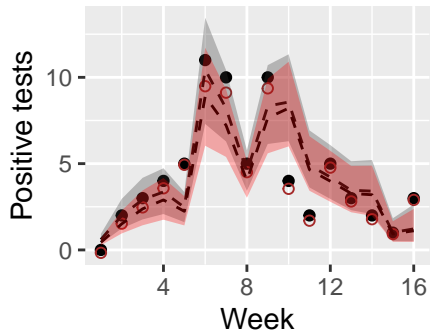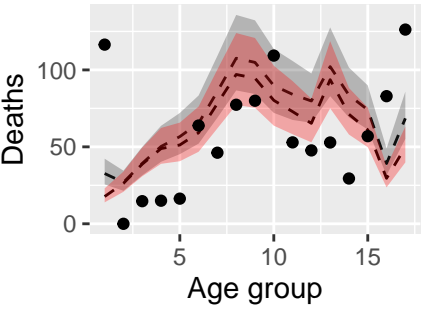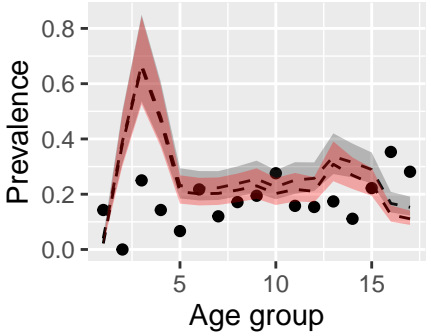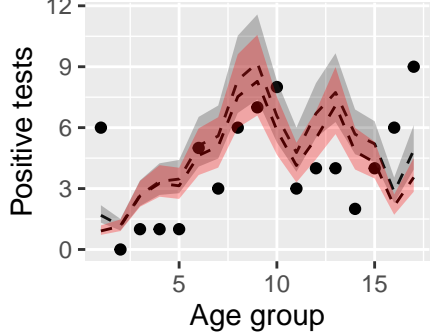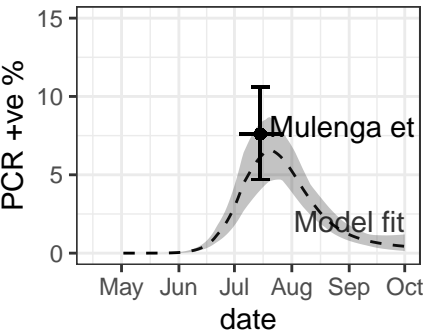
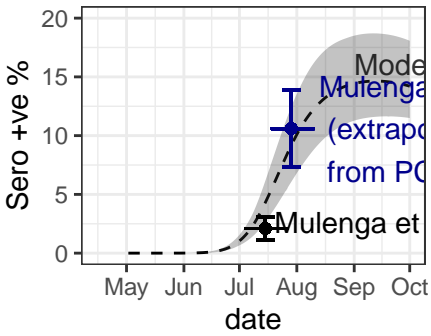COVID−19 positive tests by age (UTH mortuary)

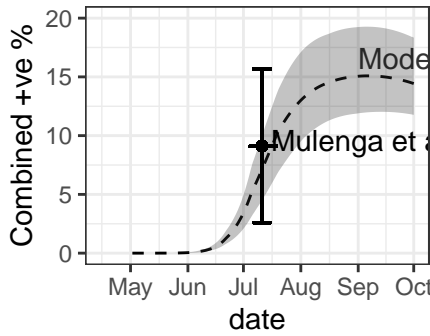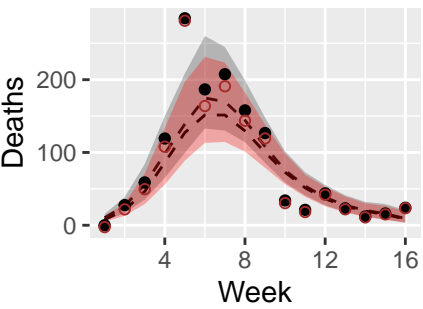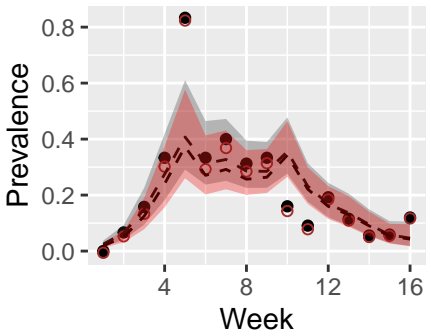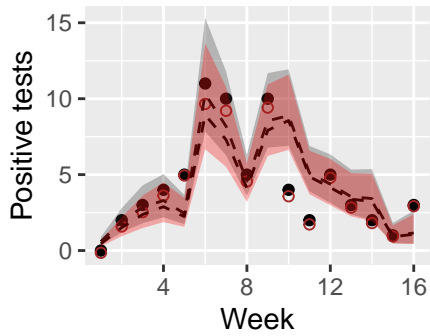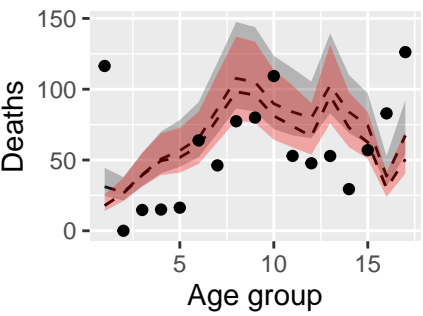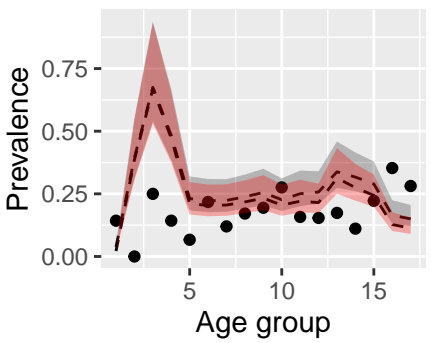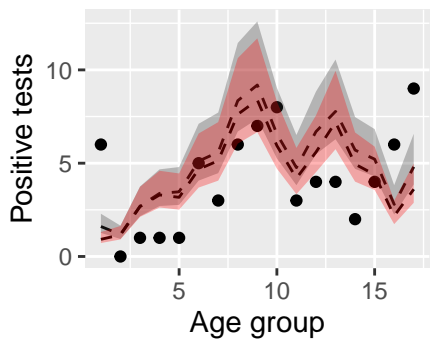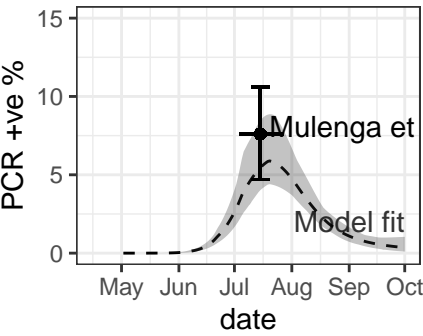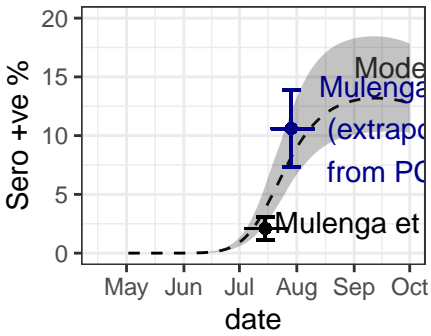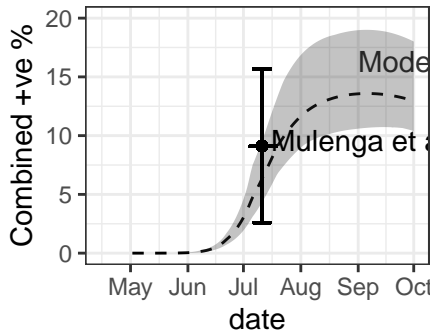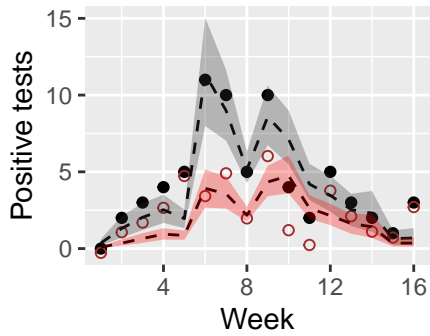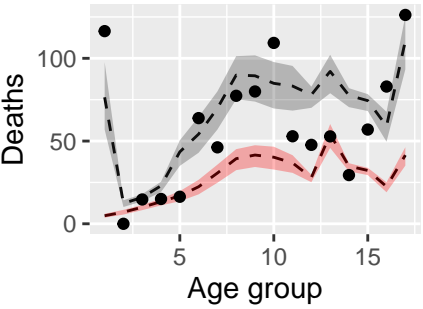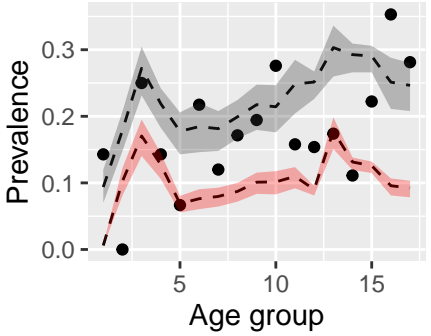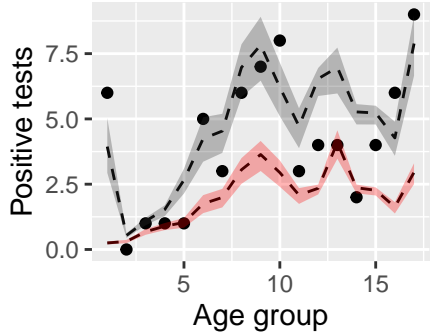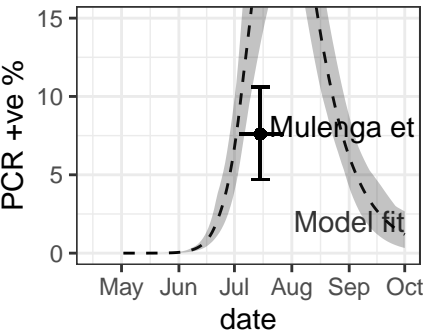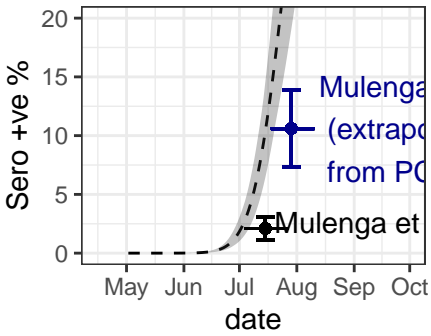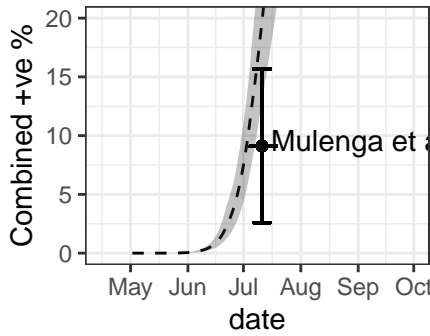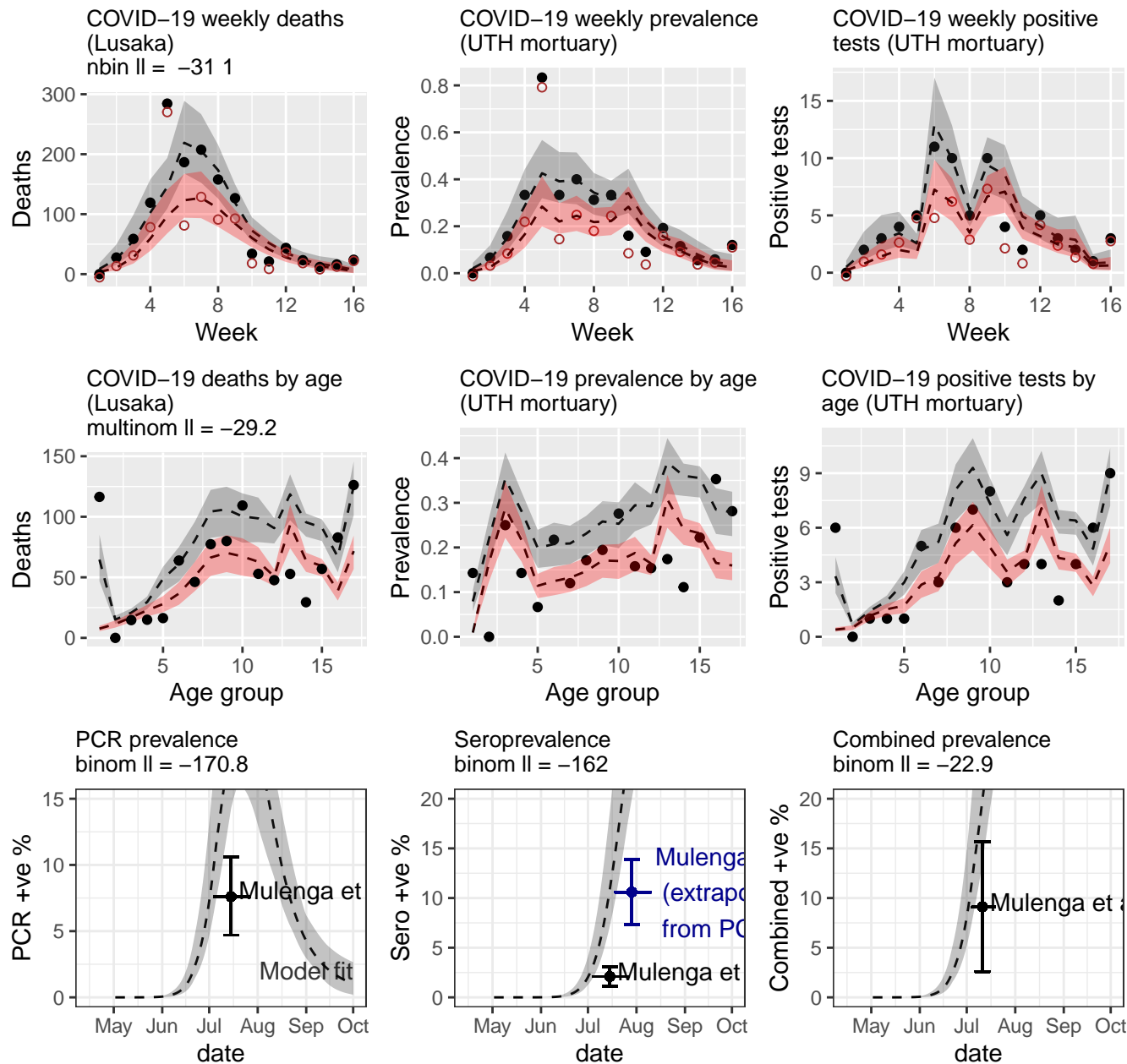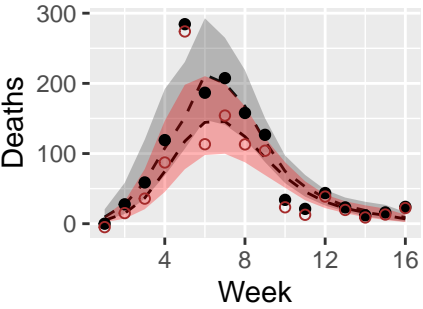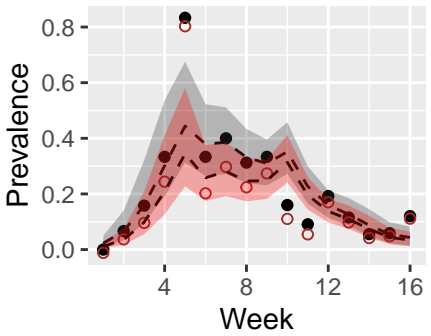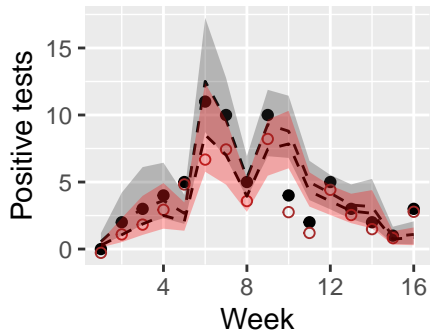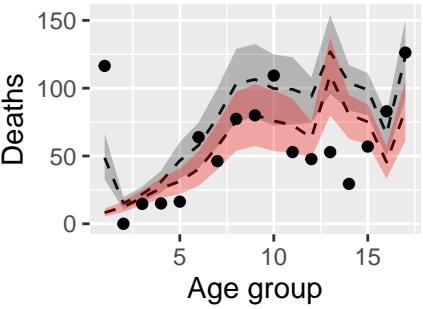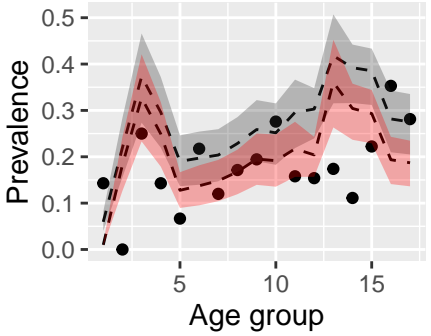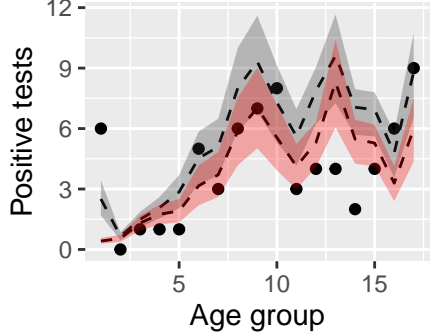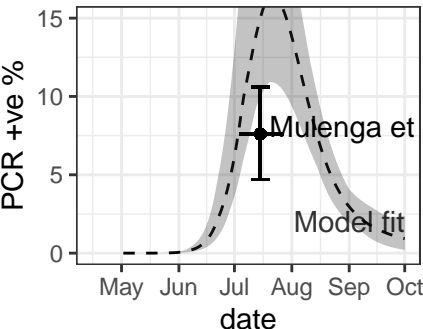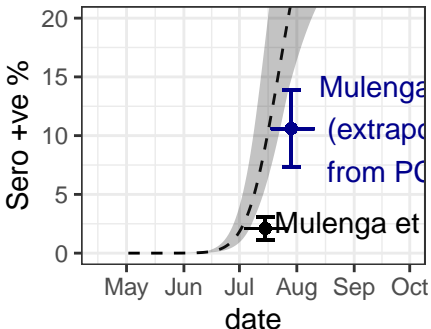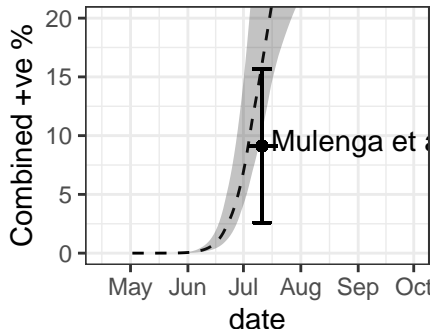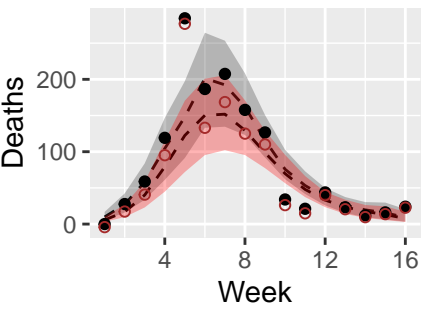PCR prevalence
binom ll = −6.7

Seroprevalence
binom ll = −32

Combined prevalence
binom ll = −4.8

Mulenga et

Model fit

Model

Mulenga
(extrapo
from PC

Mulenga et

Model

Mulenga et

IFR x 1.6, Slope x 0.6

IFR x 1.8, Slope x 0.6

IFR x 0.2, Slope x 0.8

IFR x 0.4, Slope x 0.8

IFR x 0.6, Slope x 0.8

IFR x 0.8, Slope x 0.8
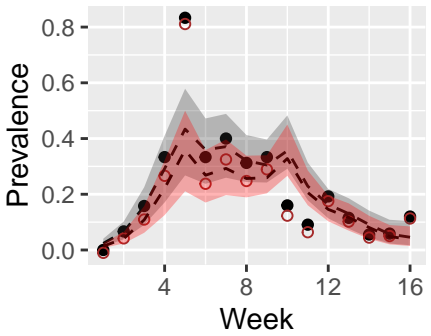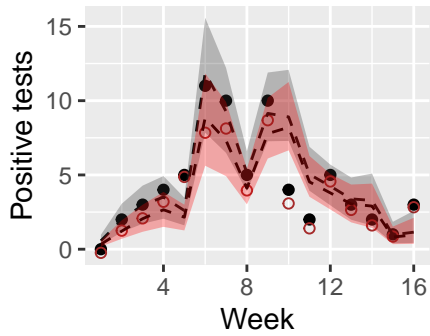
IFR x 1, Slope x 0.8

IFR x 1.2, Slope x 0.8

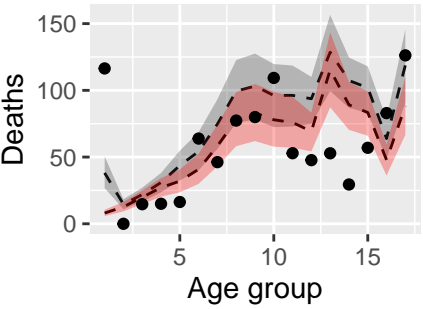COVID−19 weekly deaths (Lusaka) nbin ll = −31 1
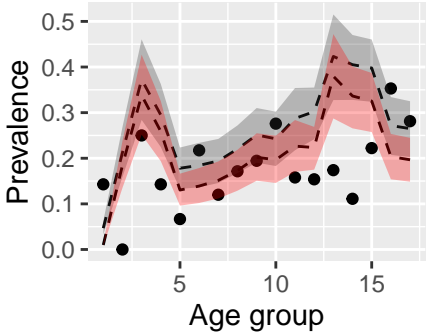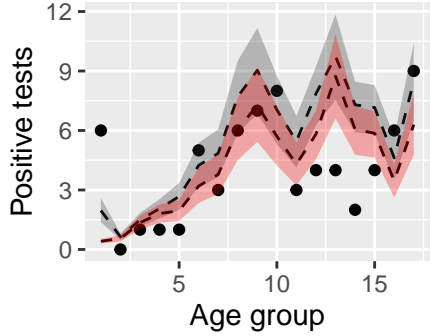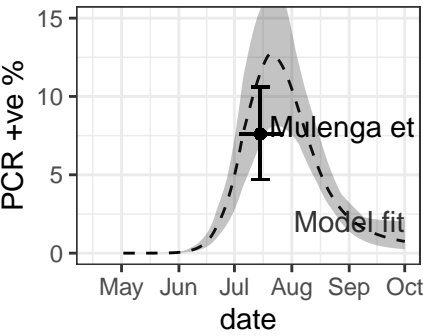
COVID−19 weekly prevalence (UTH mortuary)

COVID−19 weekly positive tests (UTH mortuary)

COVID−19 deaths by age (Lusaka) multinom ll = −34.5
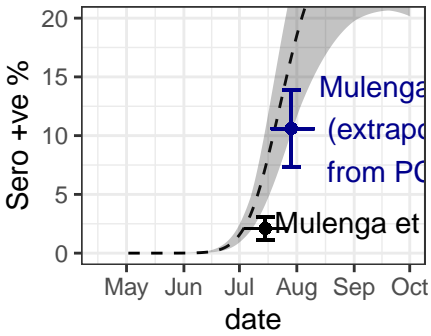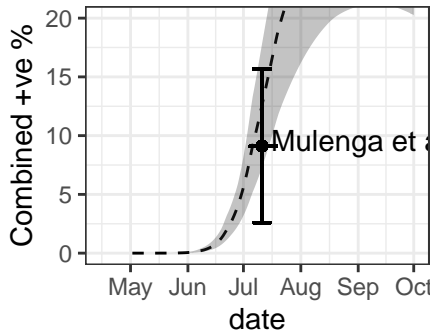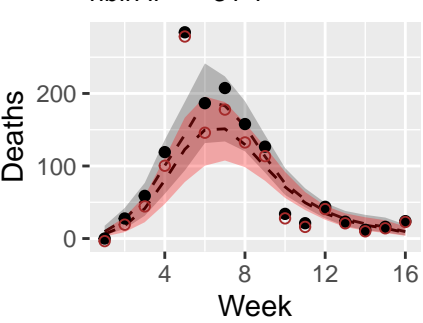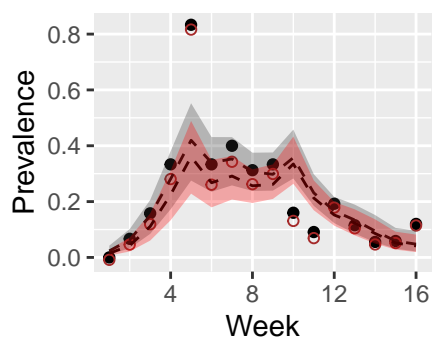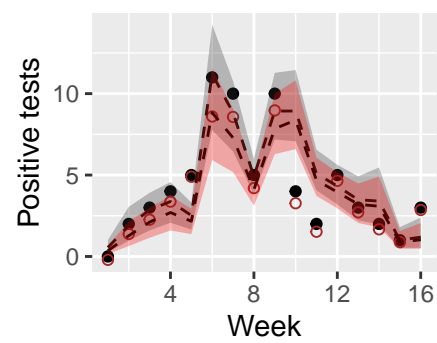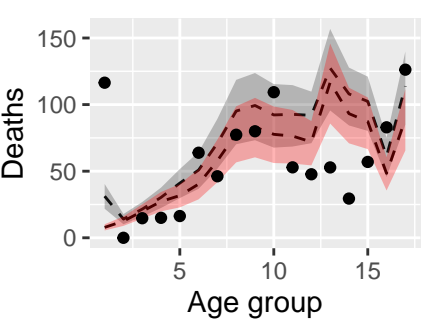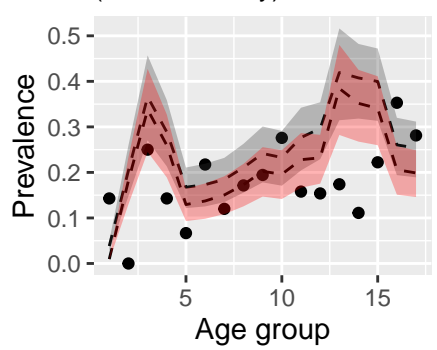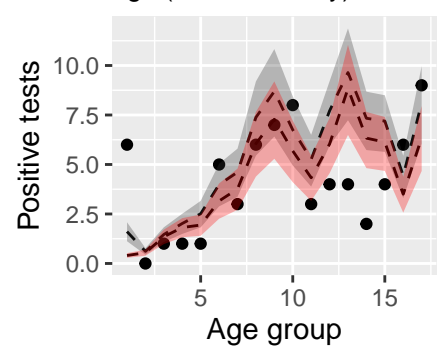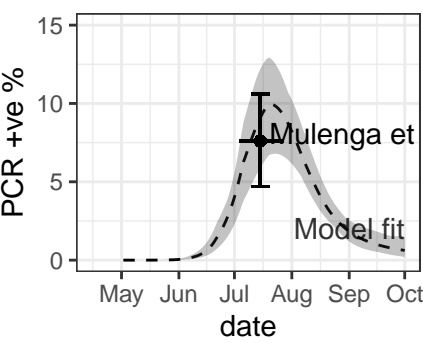
COVID−19 prevalence by age (UTH mortuary)

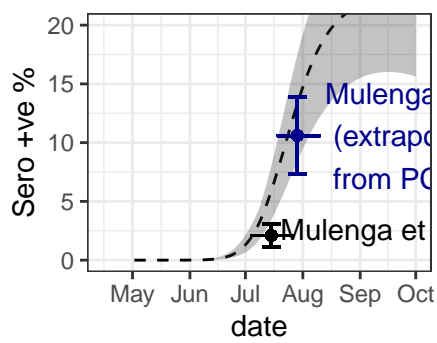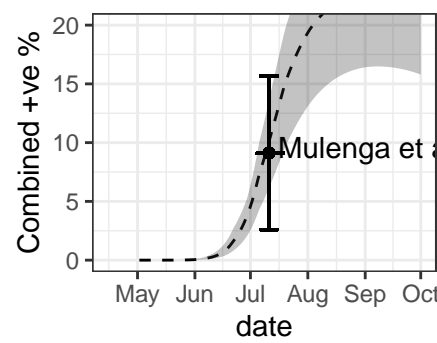COVID−19 positive tests by age (UTH mortuary)

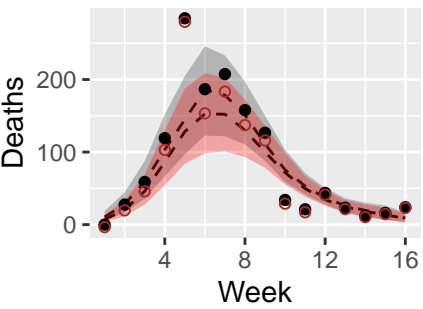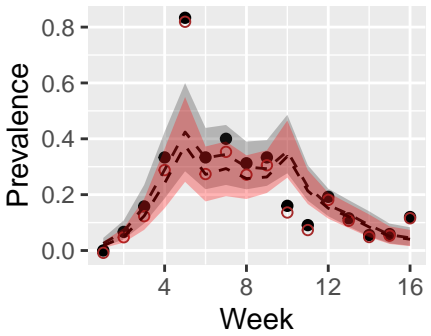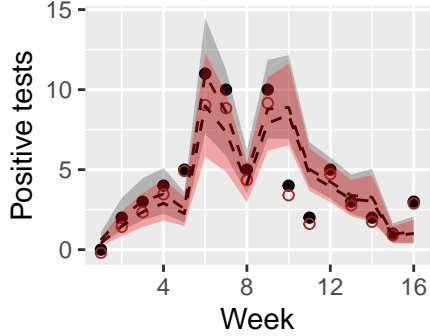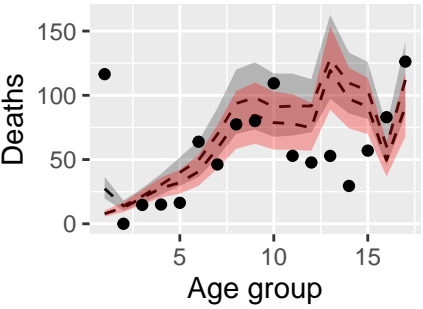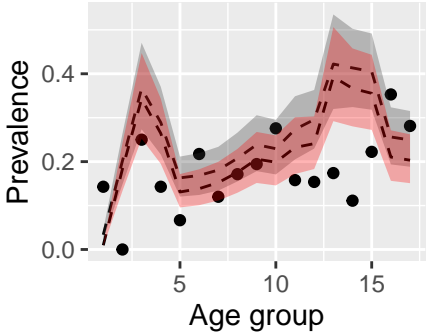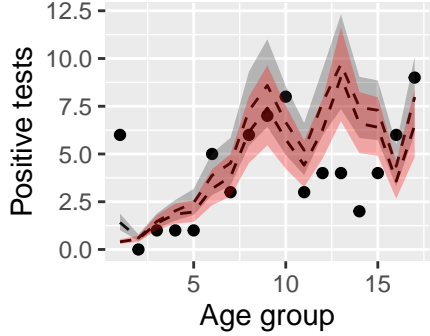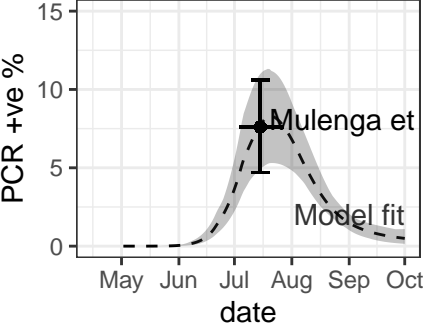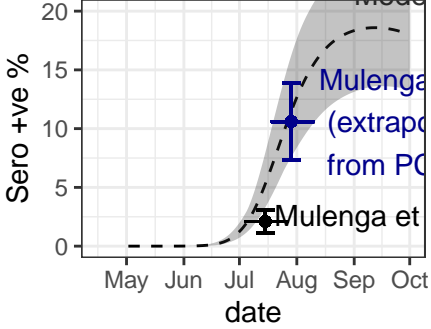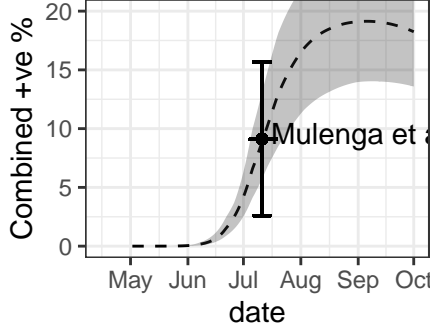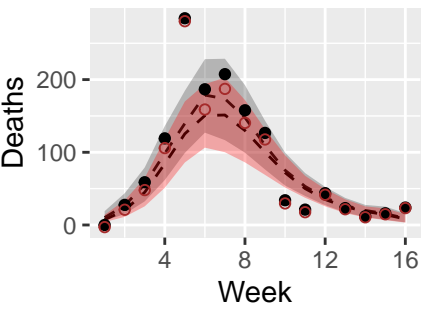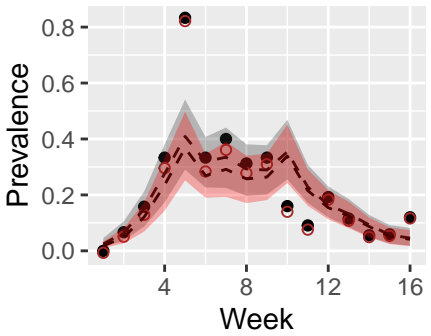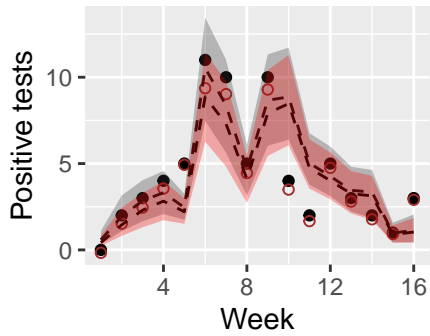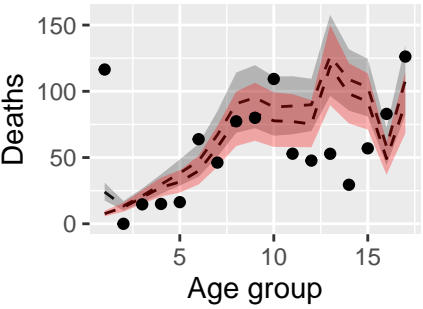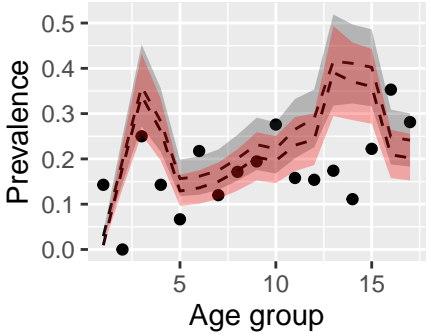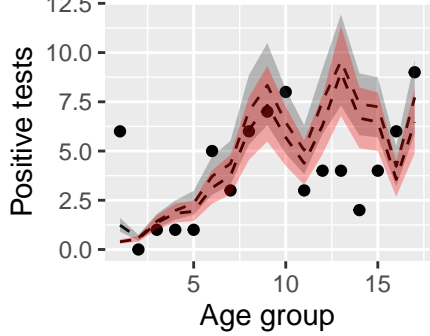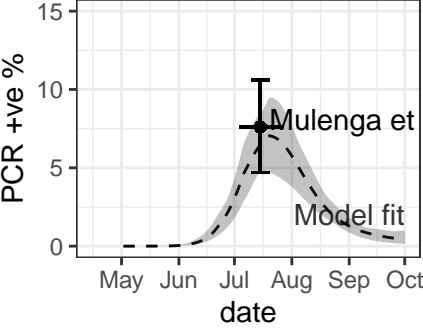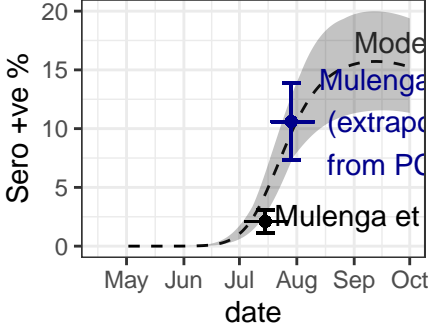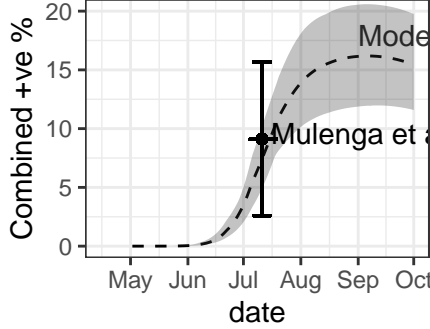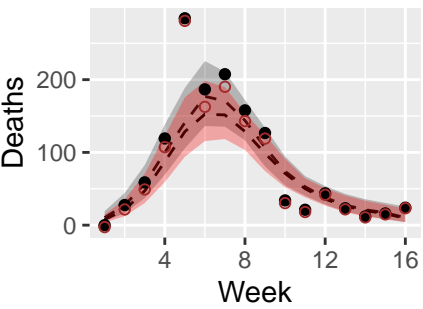PCR prevalence binom ll = −6.3

Seroprevalence binom ll = −40.1

Combined prevalence binom ll = −4.8
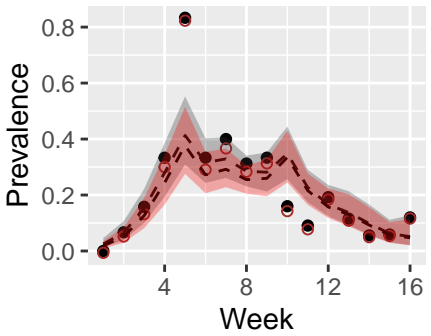
IFR x 1.4, Slope x 0.8

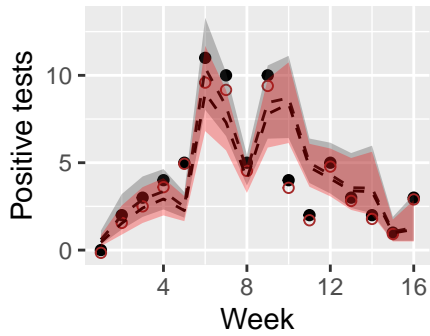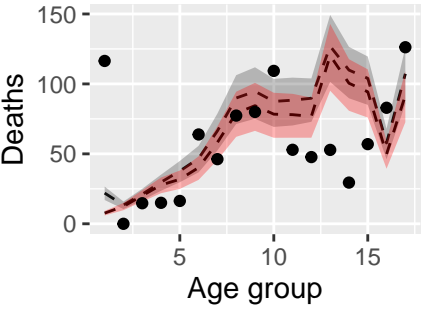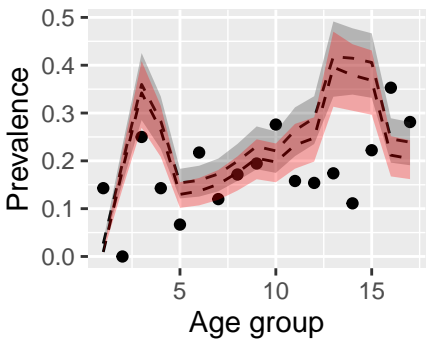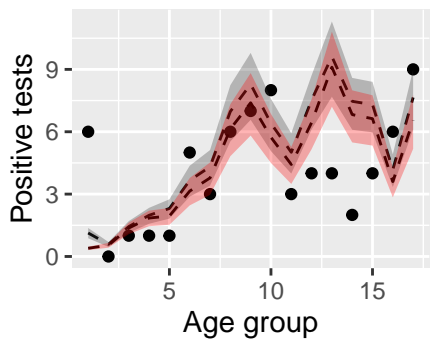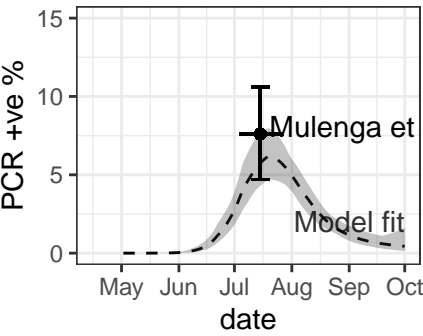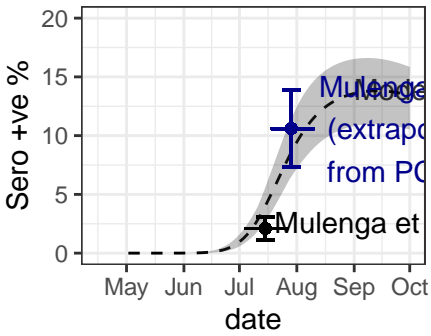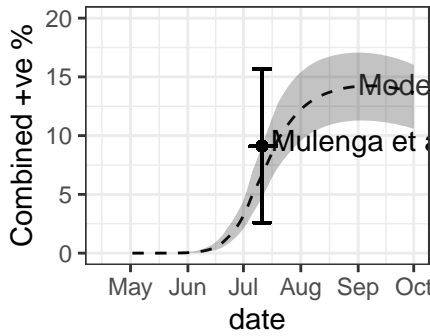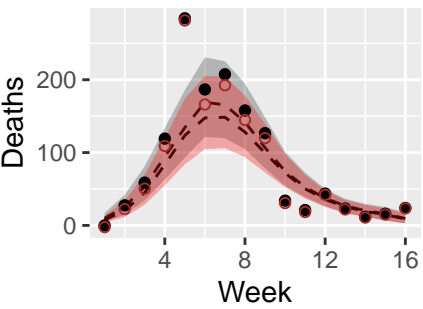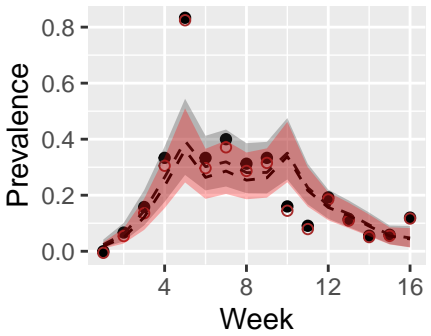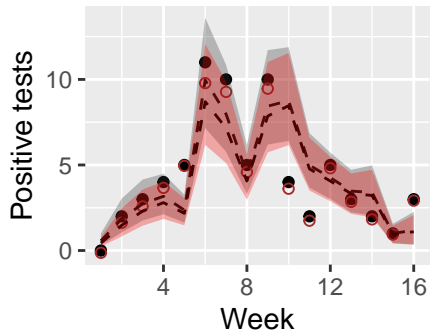# IFR x 1.6, Slope x 0.8

IFR x 1.8, Slope x 0.8

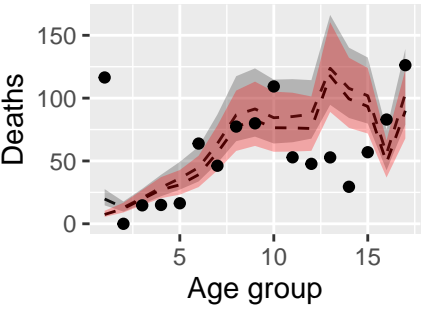COVID−19 weekly deaths (Lusaka) nbin ll = −32 1
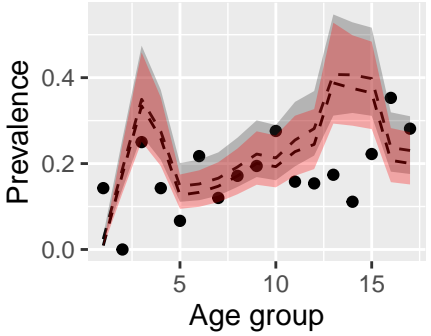
COVID−19 weekly prevalence (UTH mortuary)

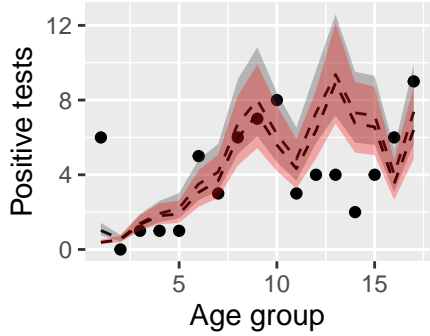COVID−19 weekly positive tests (UTH mortuary)

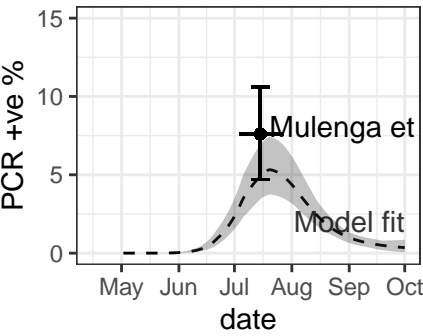COVID−19 deaths by age (Lusaka) multinom ll = −36.4
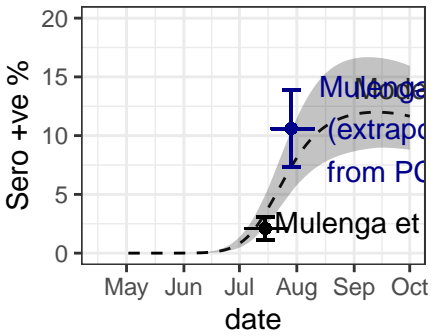
COVID−19 prevalence by age (UTH mortuary)

COVID−19 positive tests by age (UTH mortuary)

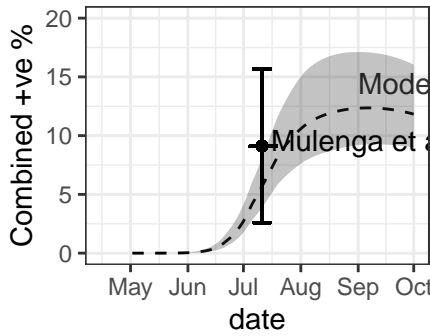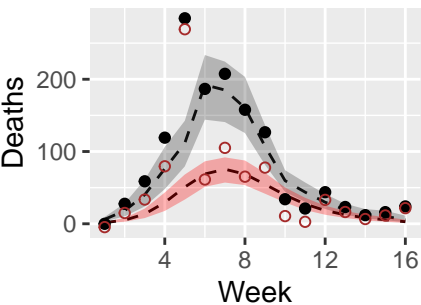PCR prevalence binom ll = −25.9

Seroprevalence binom ll = −12.6

Combined prevalence binom ll = −7.4
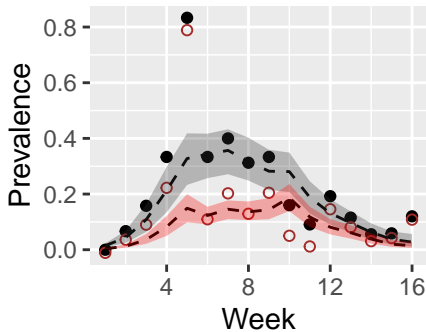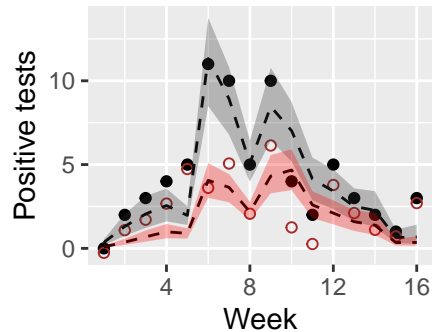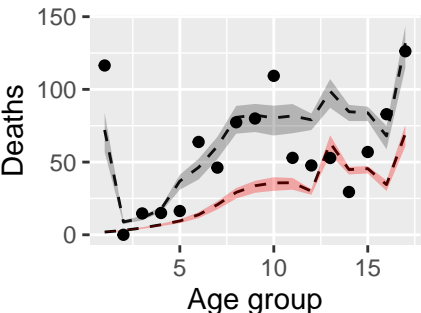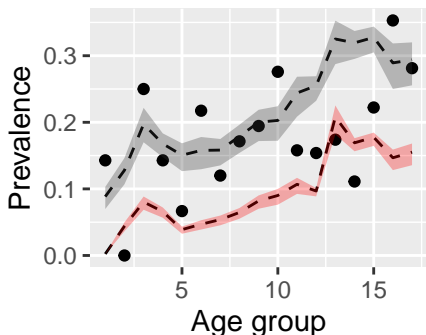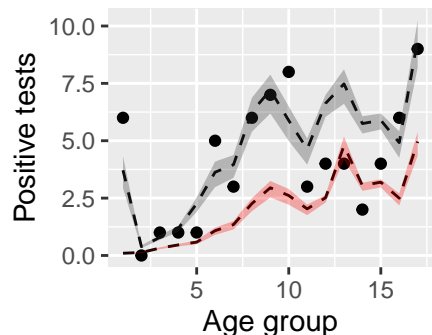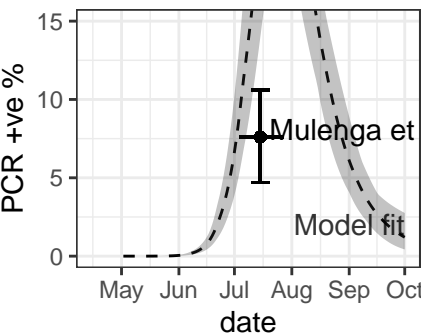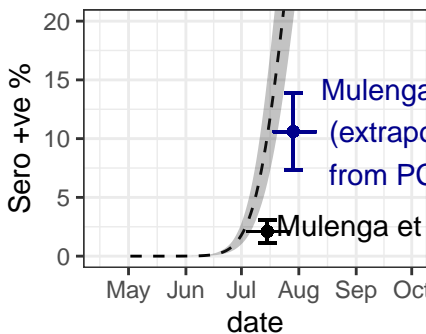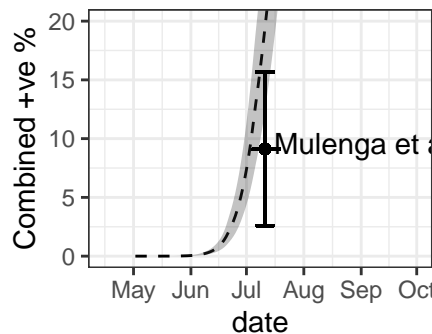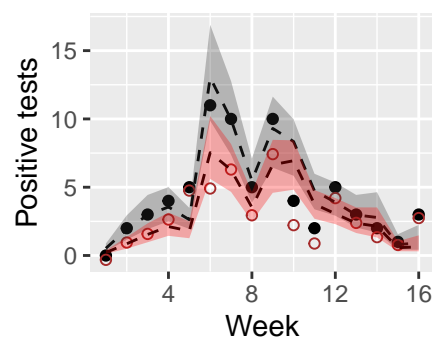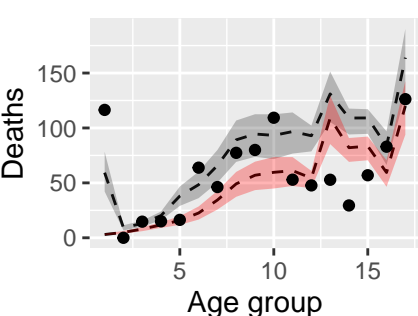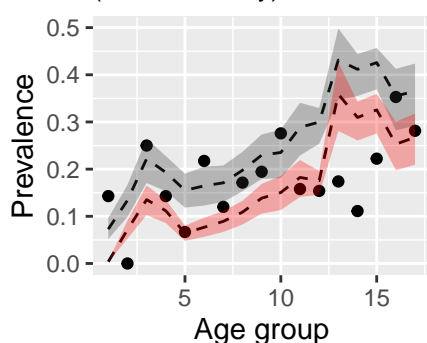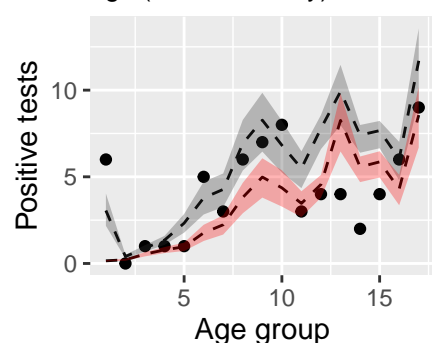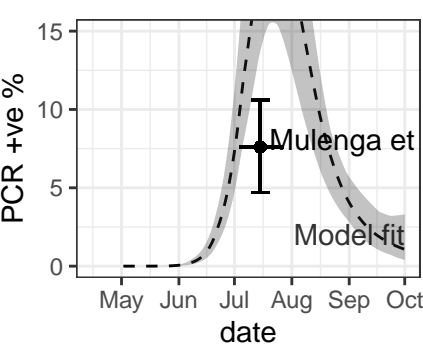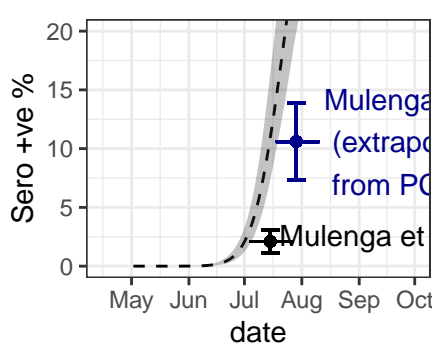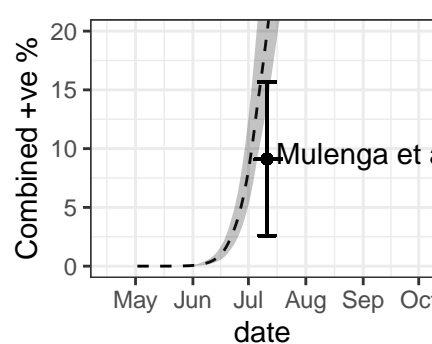
IFR x 0.2, Slope x 1

IFR x 0.4, Slope x 1

IFR x 0.6, Slope x 1
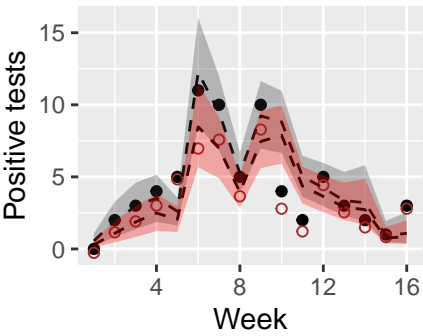

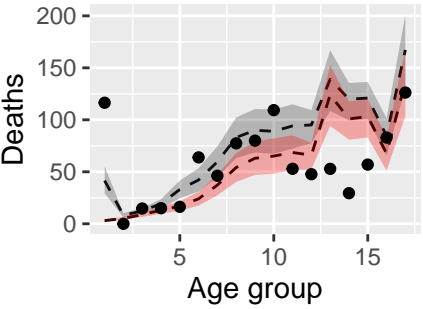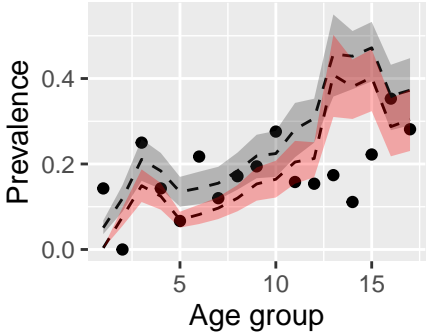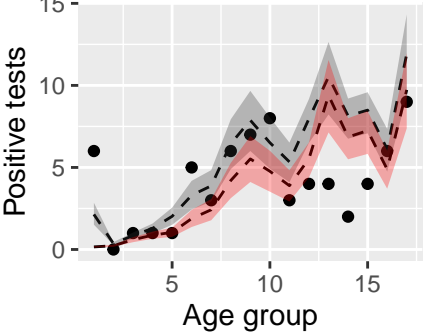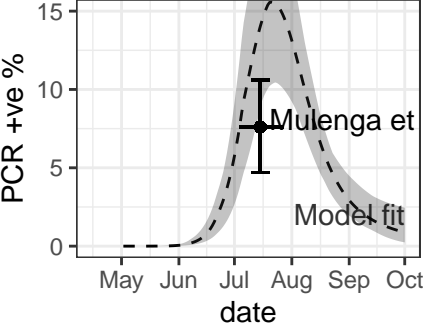COVID−19 weekly deaths (Lusaka) nbin ll = −31 1

COVID−19 weekly prevalence (UTH mortuary)

COVID−19 weekly positive tests (UTH mortuary)

COVID−19 deaths by age (Lusaka) multinom ll = −32.6

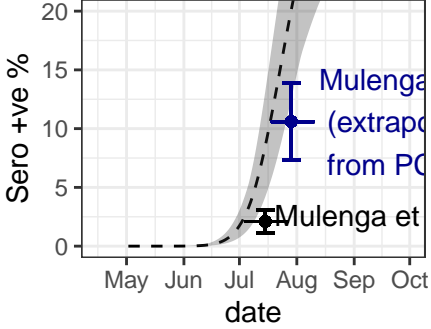COVID−19 prevalence by age (UTH mortuary)
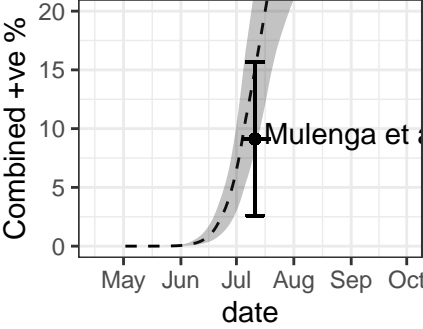
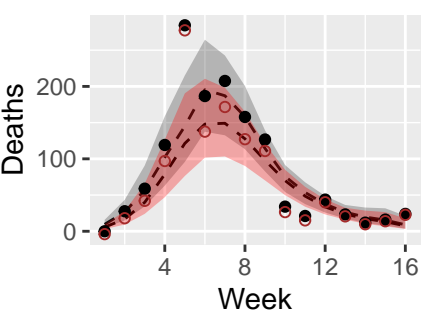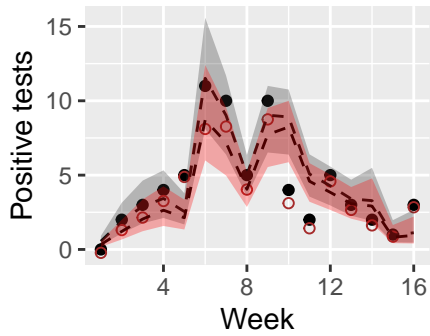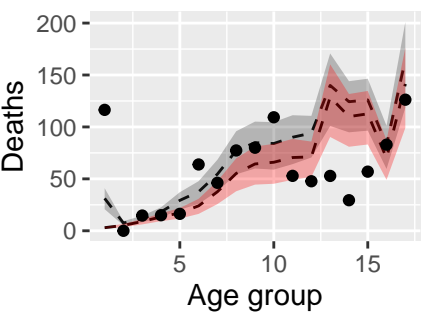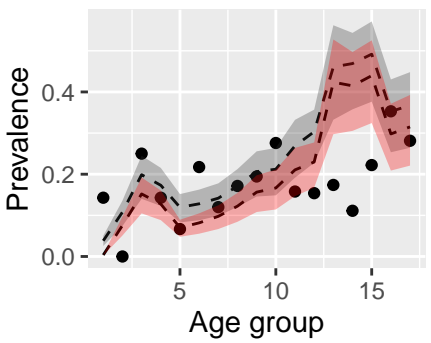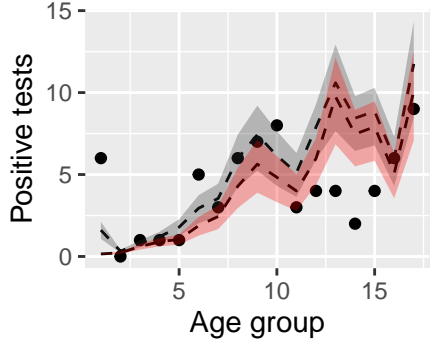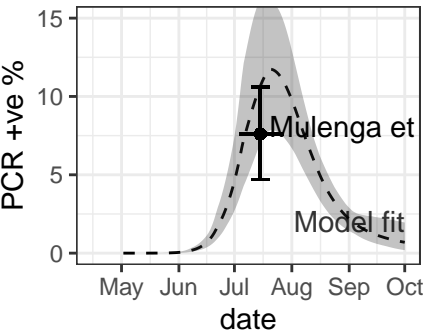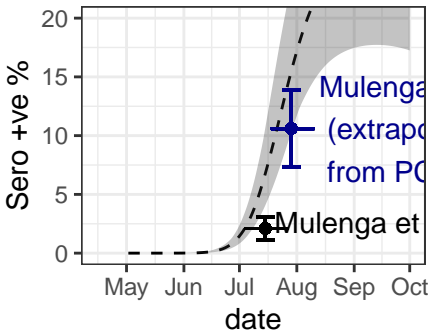COVID−19 positive tests by age (UTH mortuary)

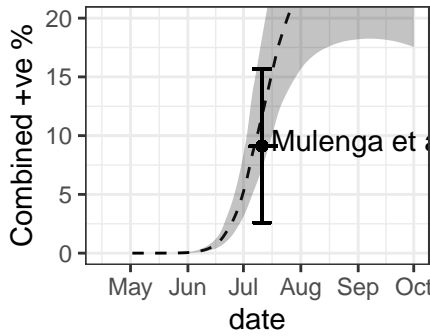PCR prevalence binom ll = −68.8

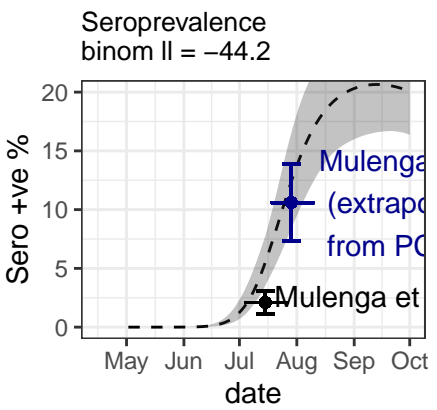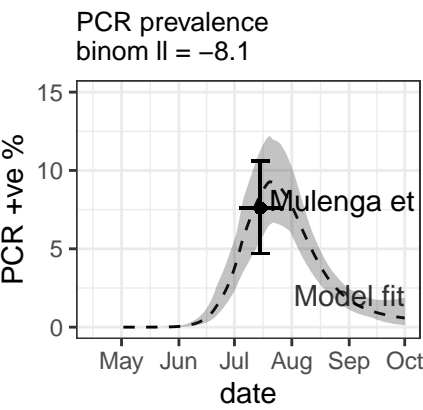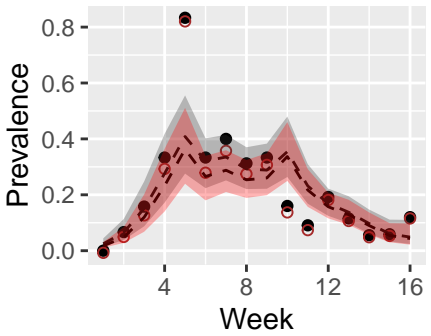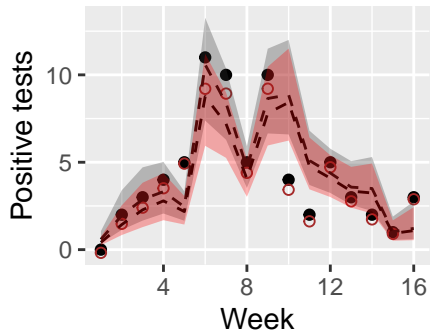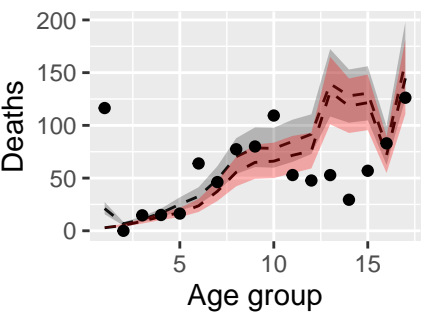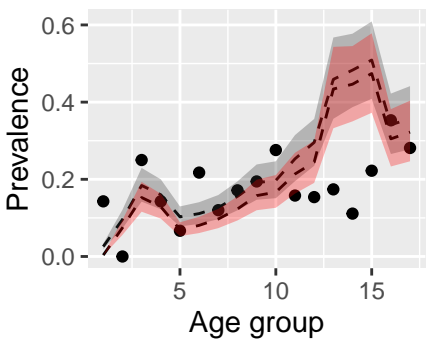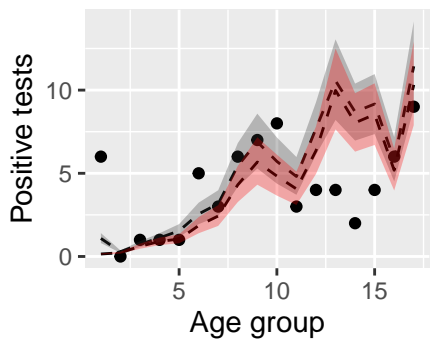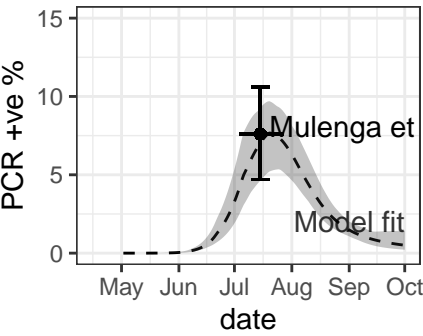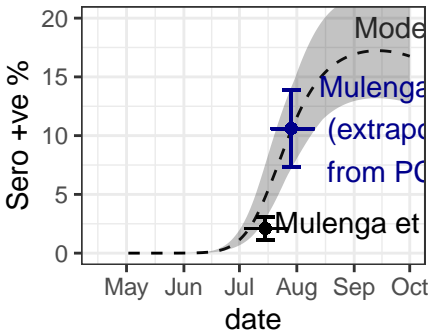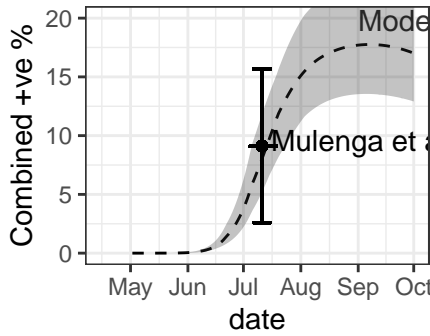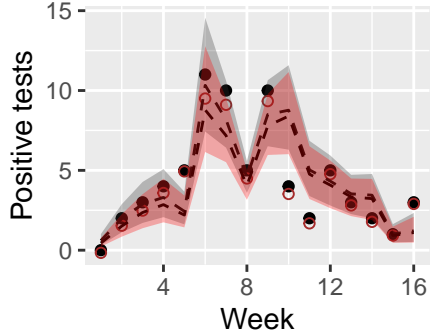Seroprevalence binom ll = −106.5

Combined prevalence binom ll = −11.9

IFR x 0.8, Slope x 1

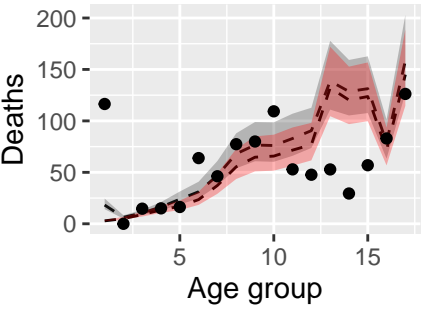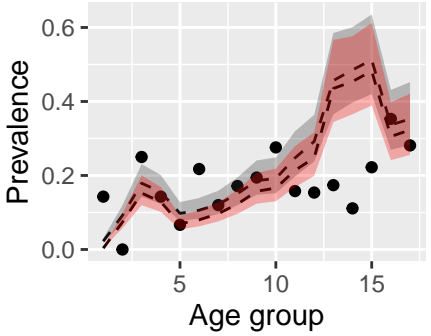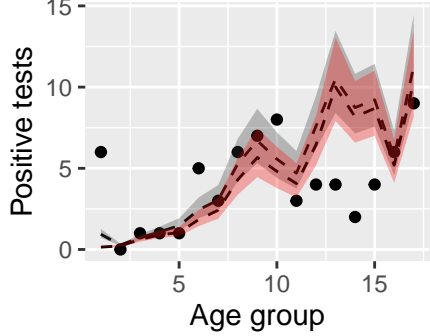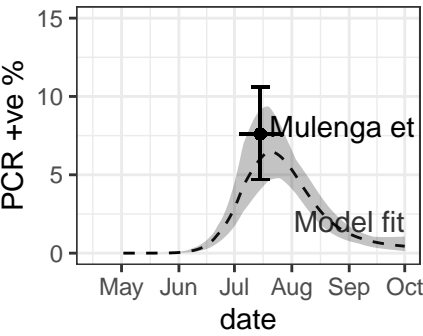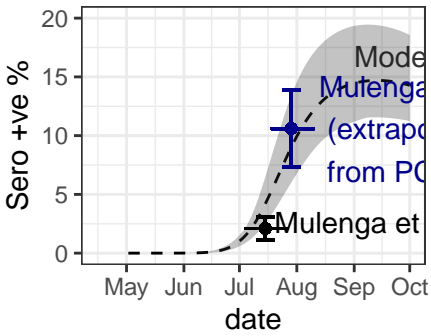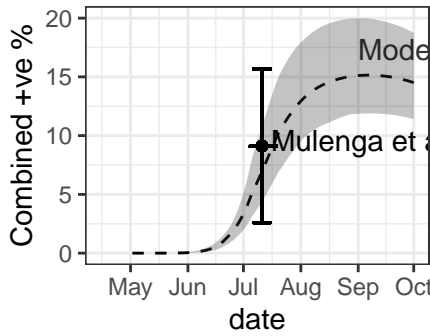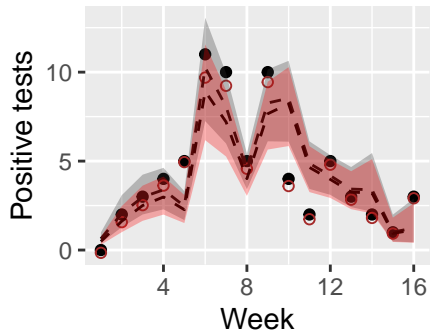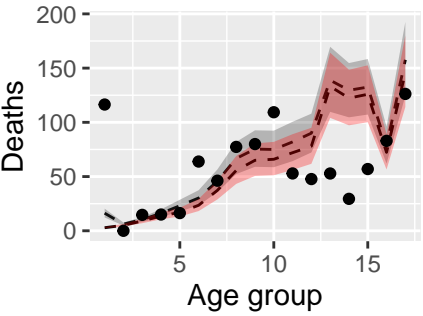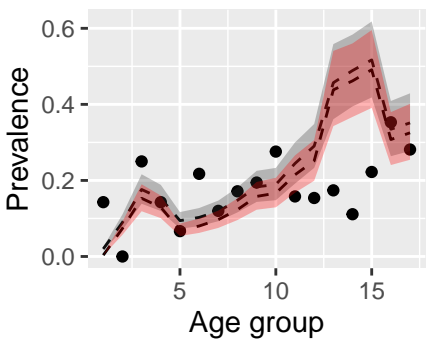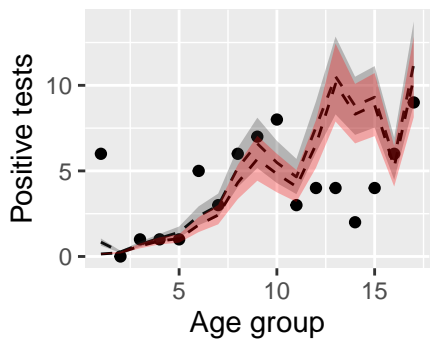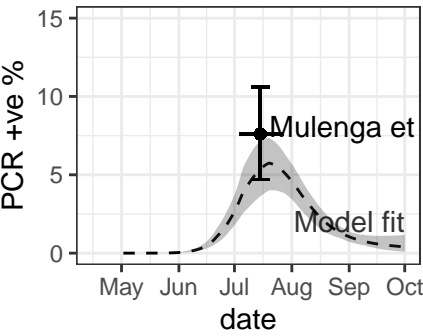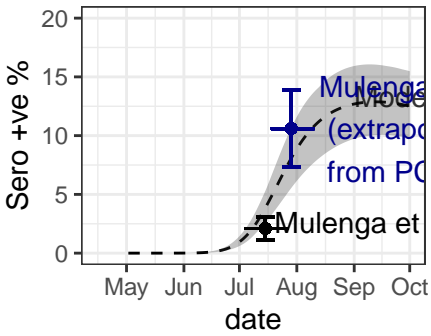**COVID−19 weekly deaths (Lusaka)**
nbin ll = −31 1

COVID−19 weekly prevalence (UTH mortuary)
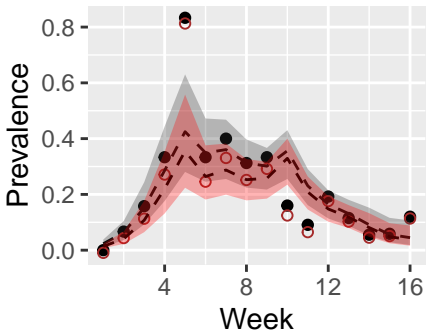
COVID−19 weekly positive tests (UTH mortuary)

COVID−19 deaths by age (Lusaka)
multinom ll = −34.8

COVID−19 prevalence by age (UTH mortuary)
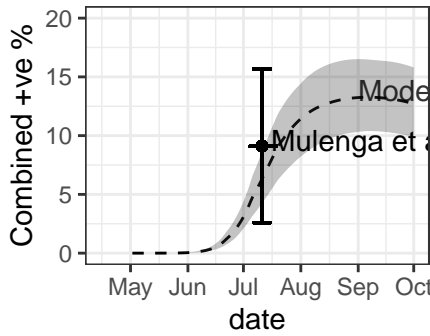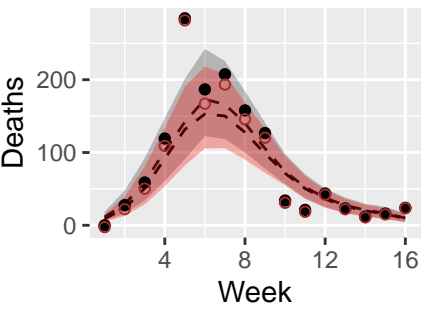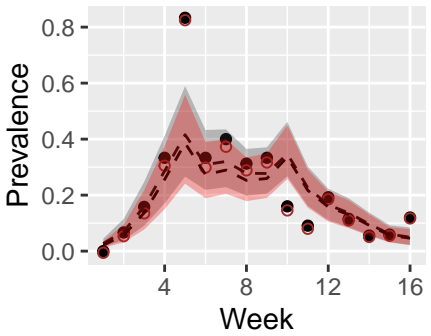
COVID−19 positive tests by age (UTH mortuary)

PCR prevalence
binom ll = −23.8

Seroprevalence
binom ll = −68.4

Combined prevalence
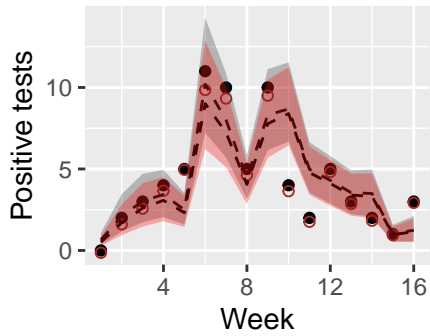binom ll = −6.8

IFR x 1, Slope x 1
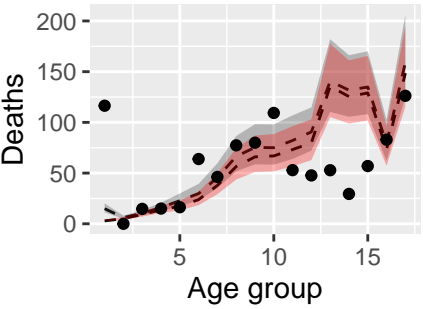

COVID−19 weekly deaths (Lusaka) nbin ll = −31 1

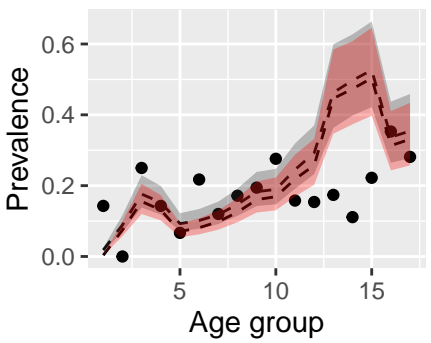COVID−19 weekly prevalence (UTH mortuary)

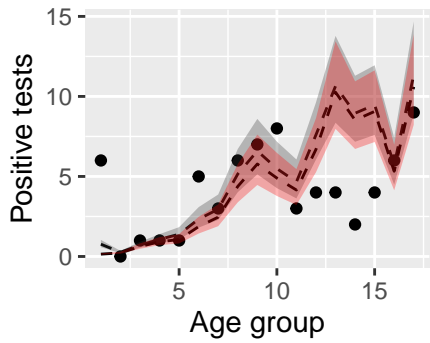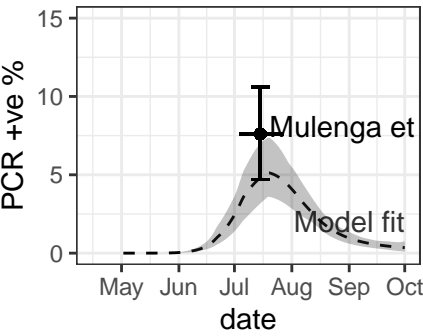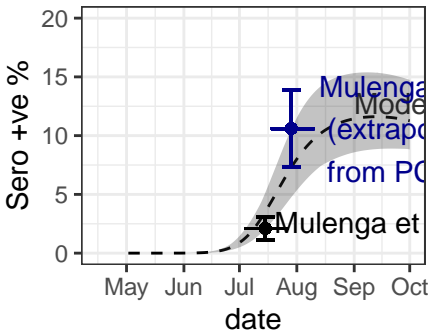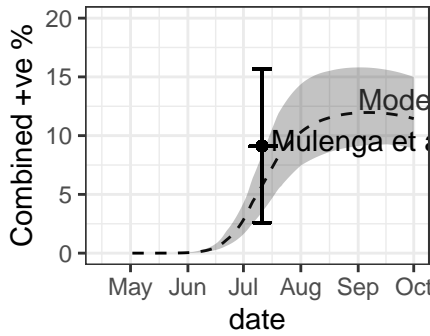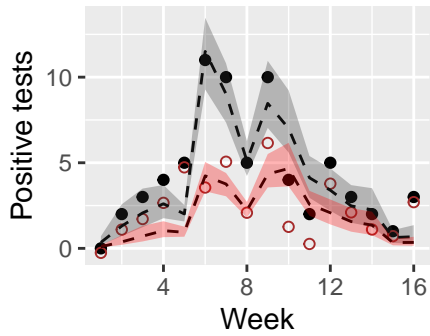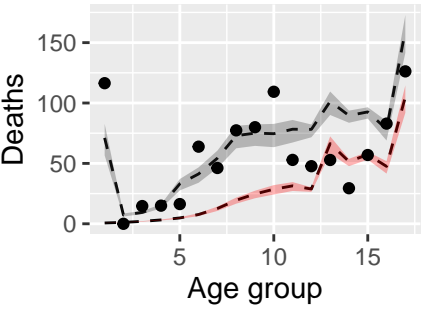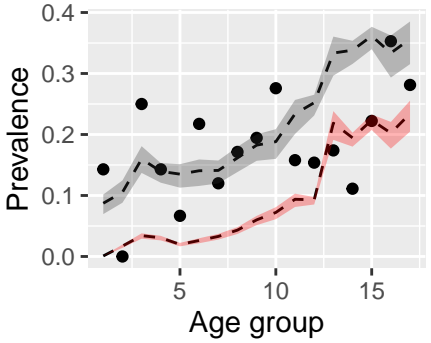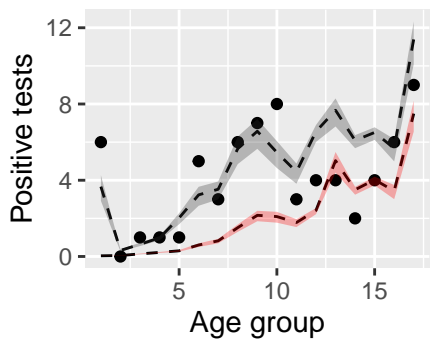COVID−19 weekly positive tests (UTH mortuary)
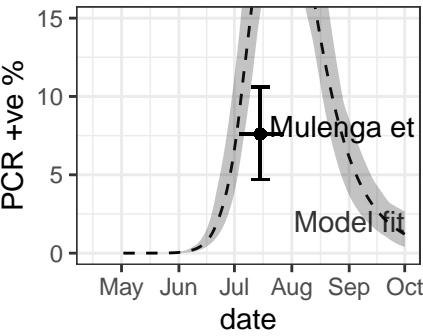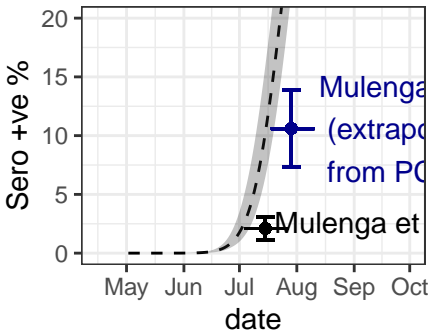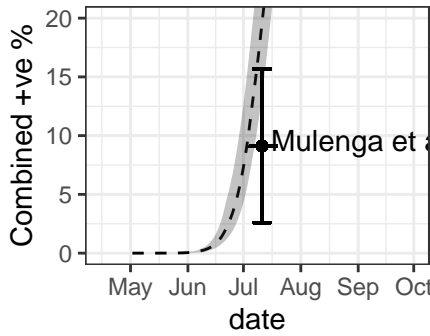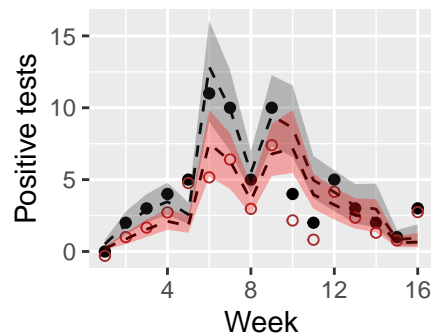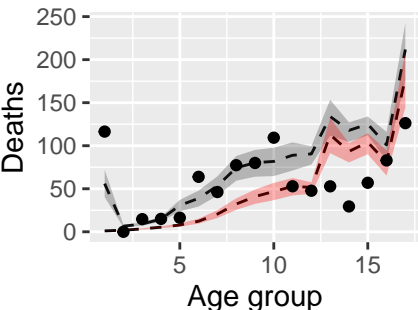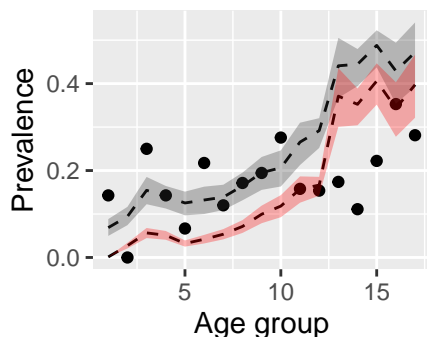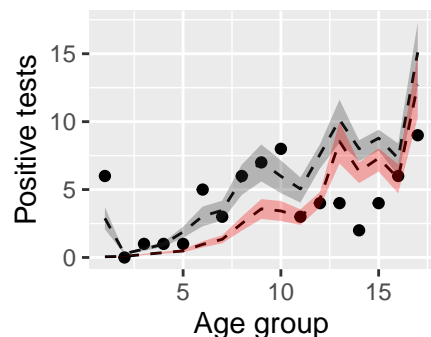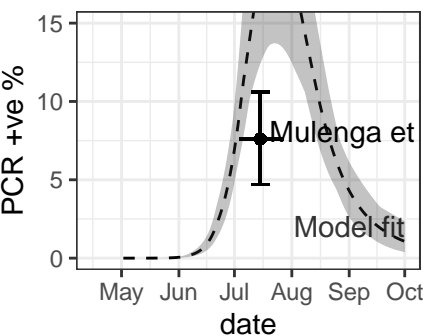
COVID−19 deaths by age (Lusaka) multinom ll = −36.5

COVID−19 prevalence by age (UTH mortuary)

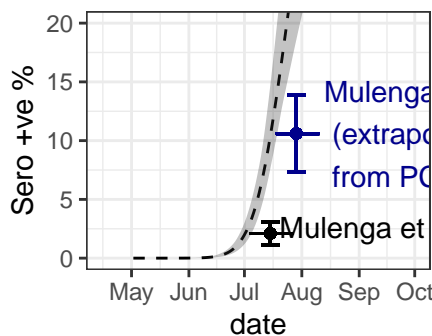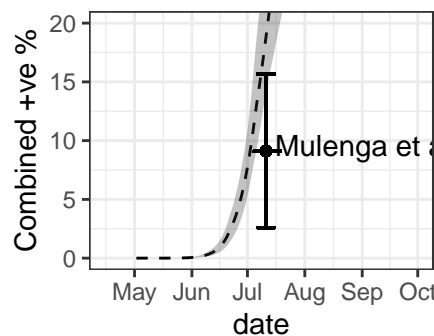COVID−19 positive tests by age (UTH mortuary)

PCR prevalence binom ll = −8.1

Seroprevalence binom ll = −44.2
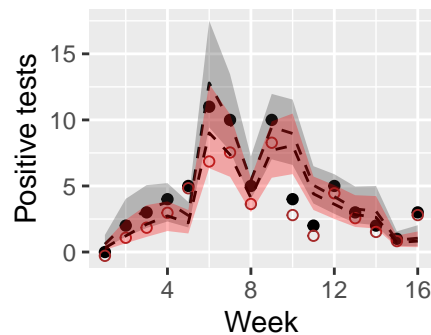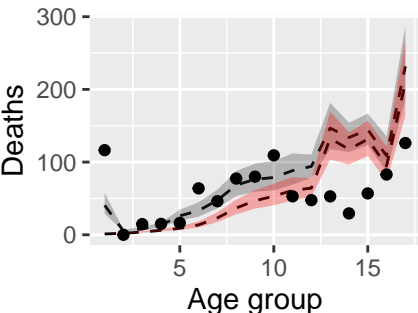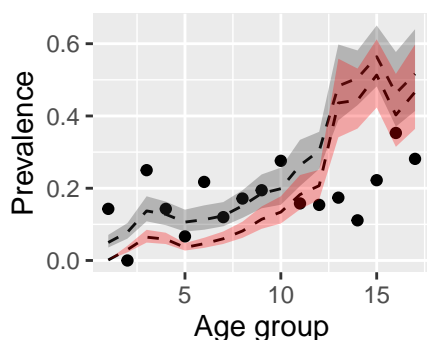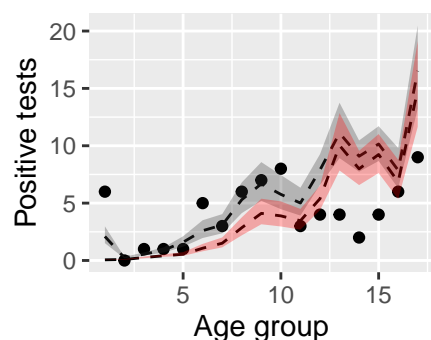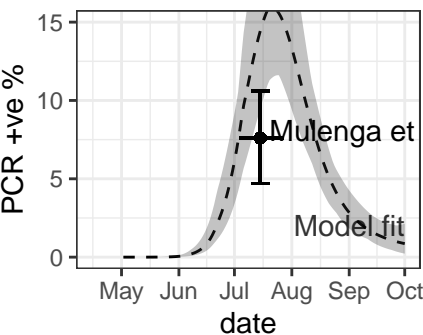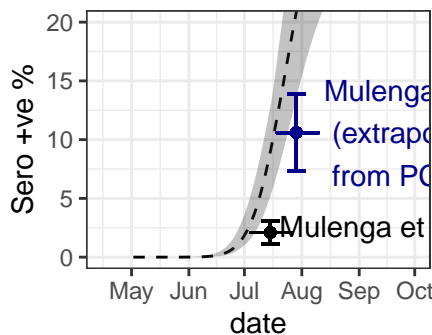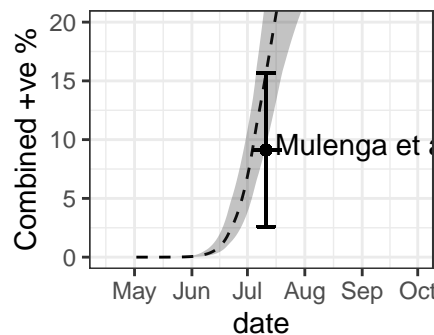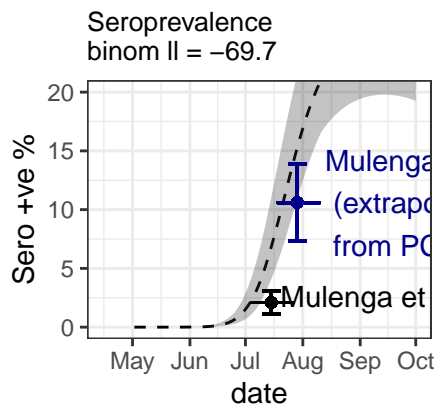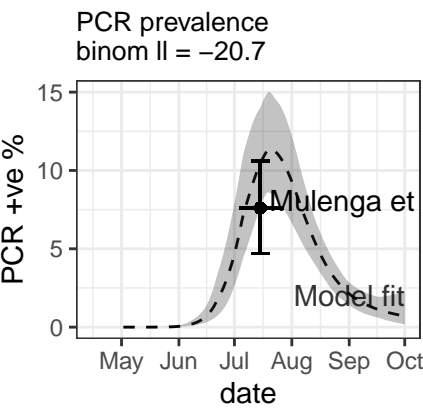
Combined prevalence binom ll = −5.1

Mulenga et

Mulenga (extrapolated from PCR)

Mulenga et

Mulenga et

Model fit

IFR x 1.2, Slope x 1

IFR x 1.4, Slope x 1

IFR x 1.6, Slope x 1

IFR x 1.8, Slope x 1

COVID−19 weekly deaths (Lusaka) nbin ll = −31 1

COVID−19 weekly prevalence (UTH mortuary)

COVID−19 weekly positive tests (UTH mortuary)

COVID−19 deaths by age (Lusaka) multinom ll = −40.4

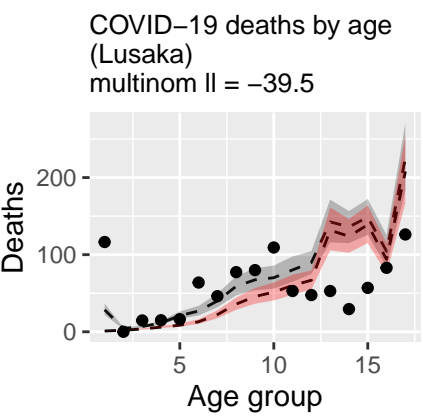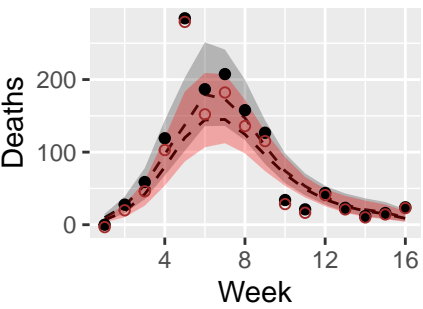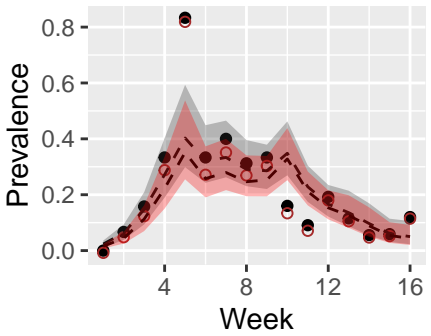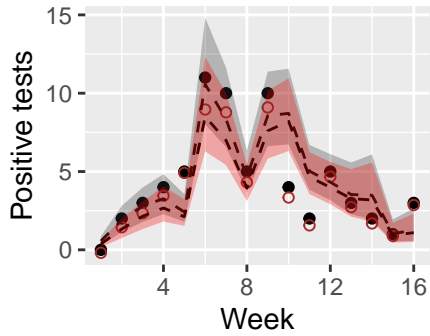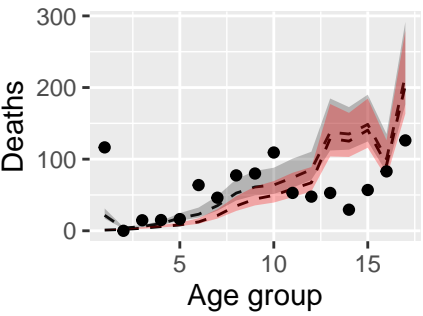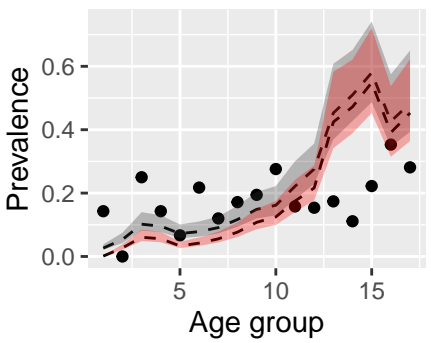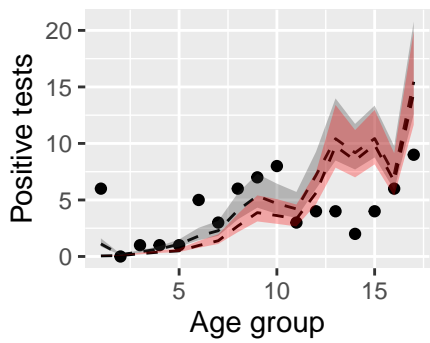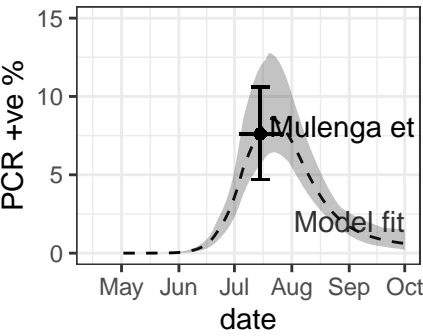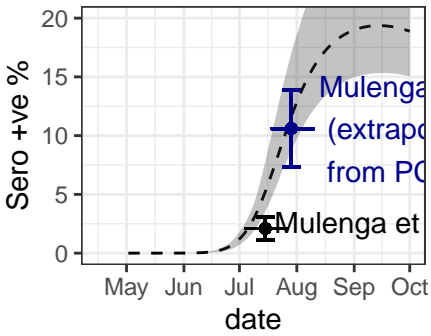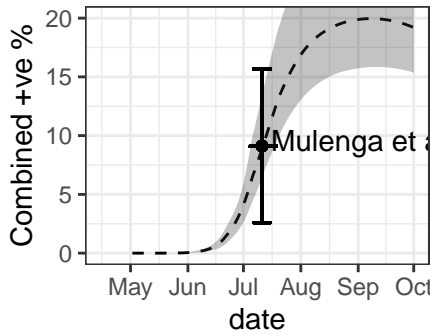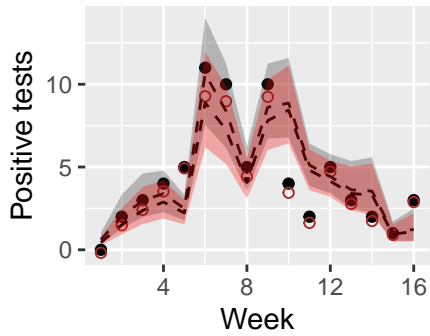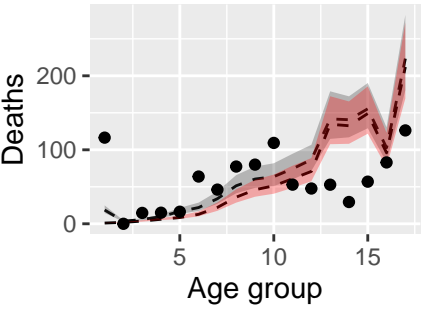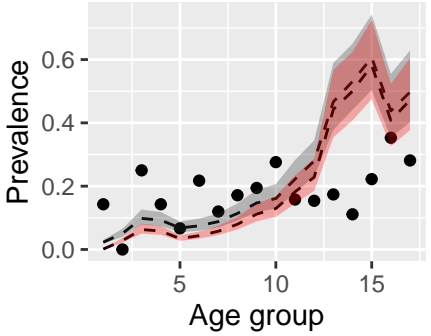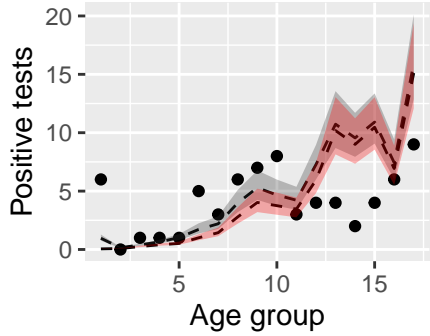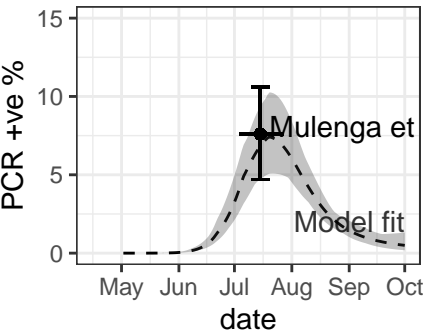COVID−19 prevalence by age (UTH mortuary)

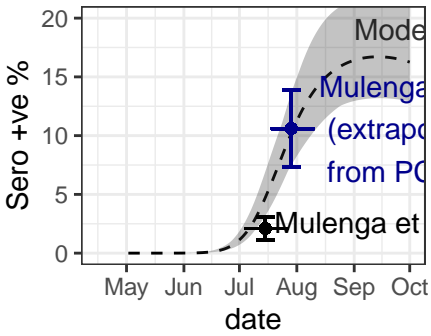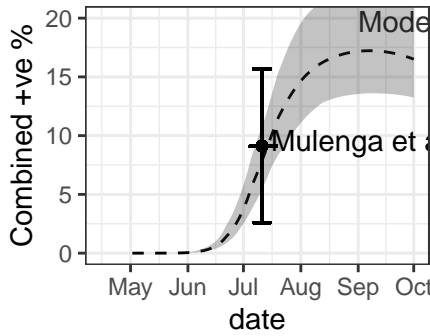COVID−19 positive tests by age (UTH mortuary)

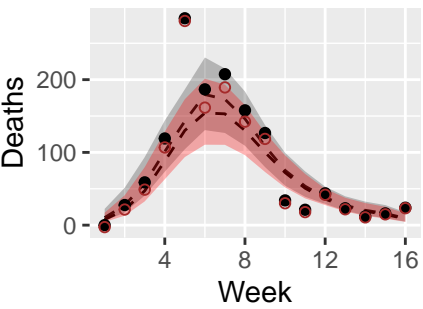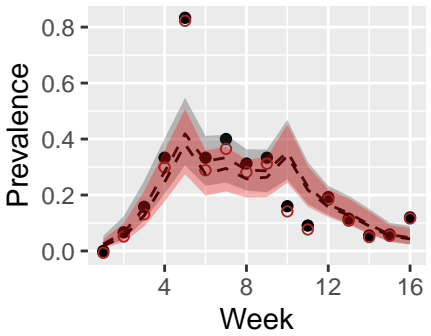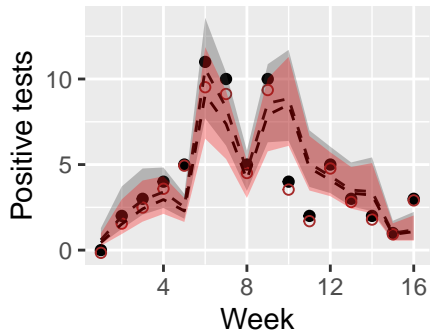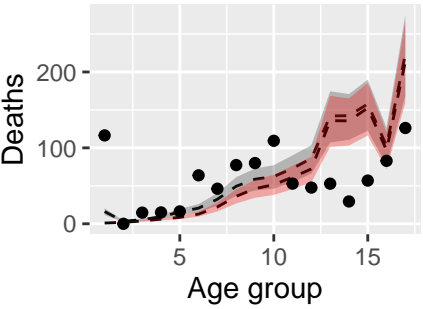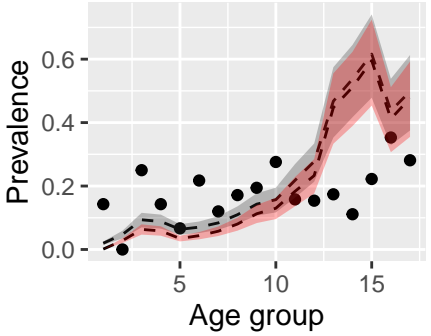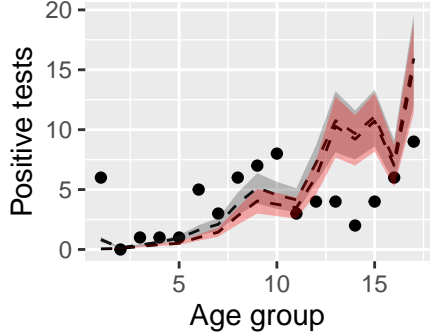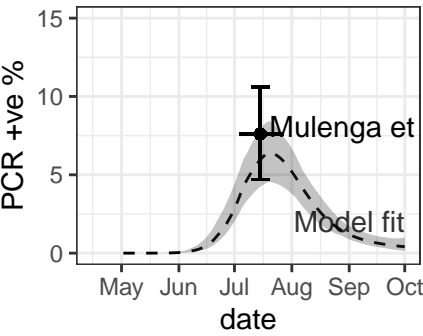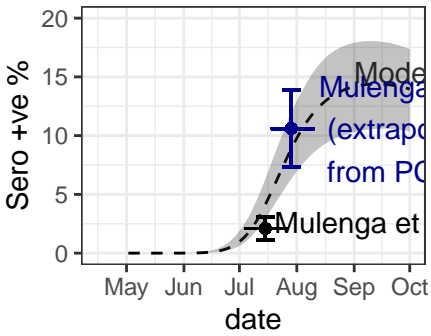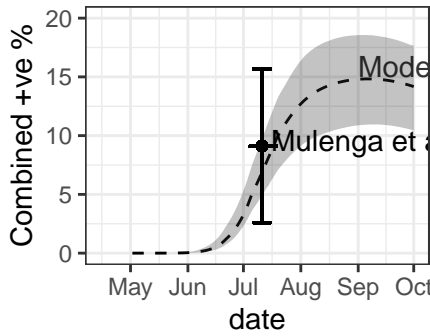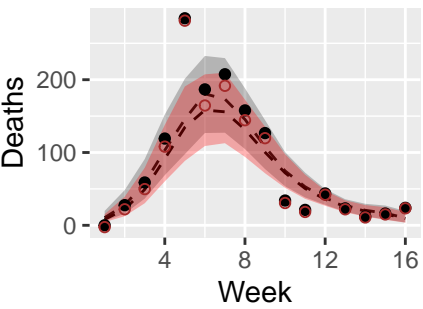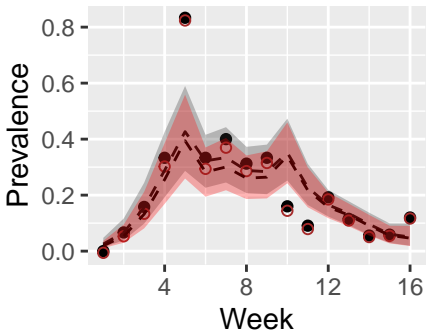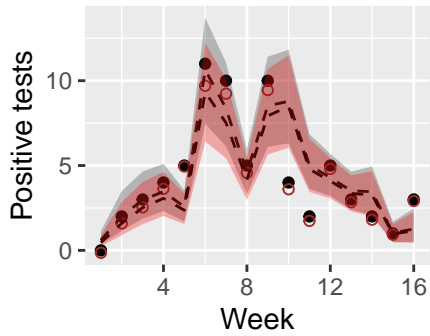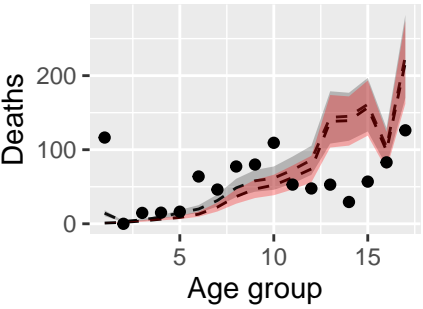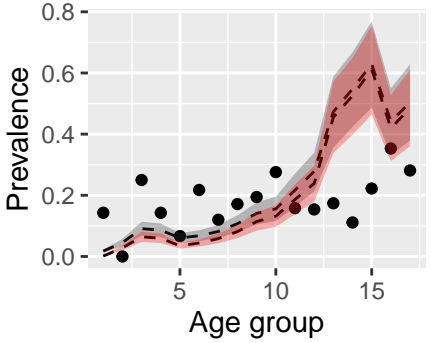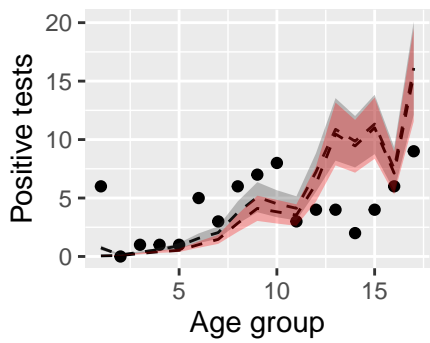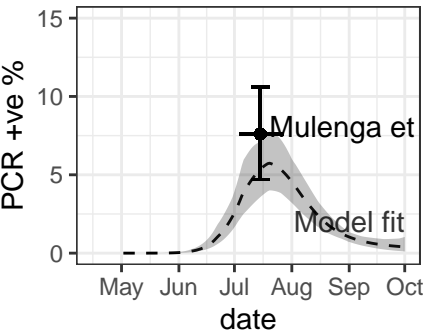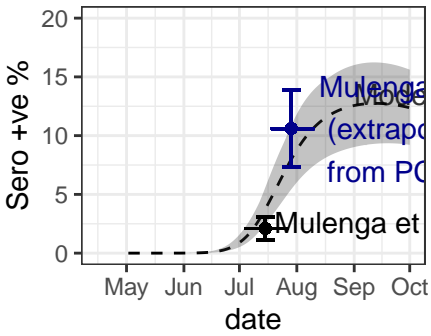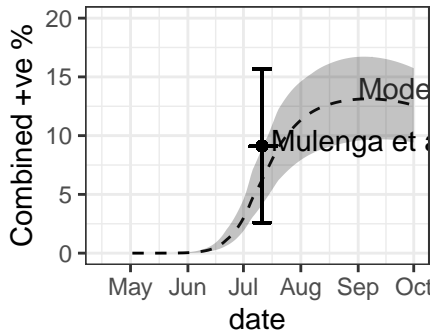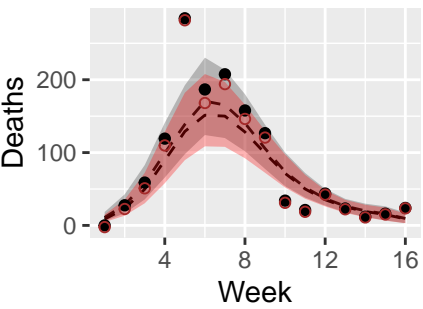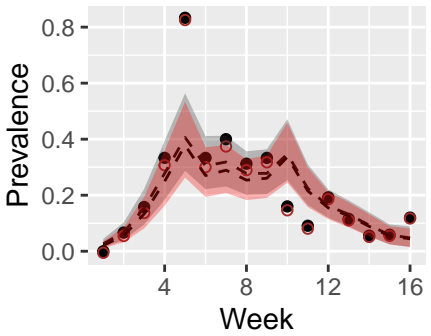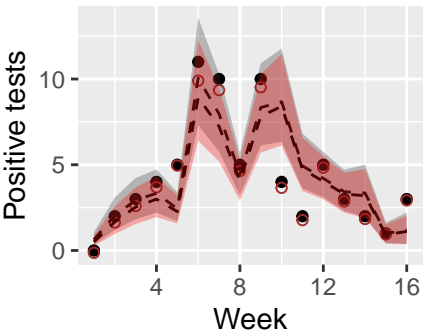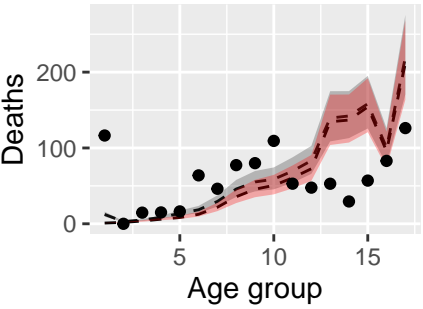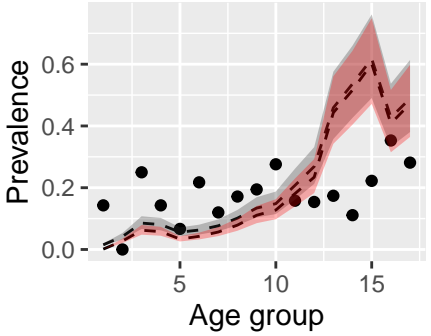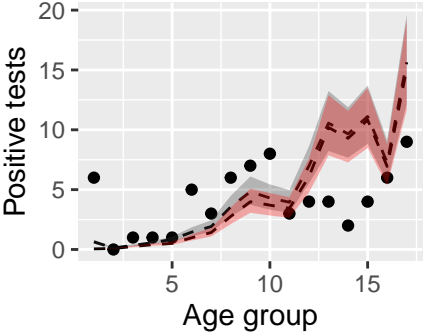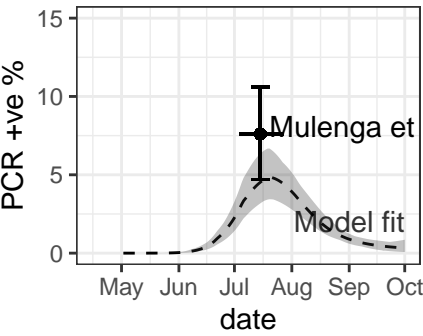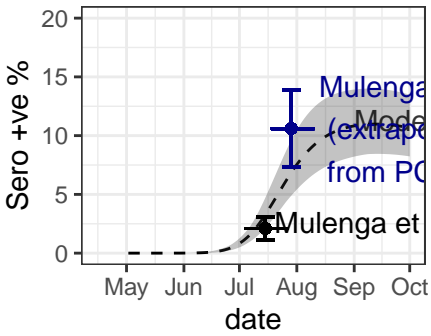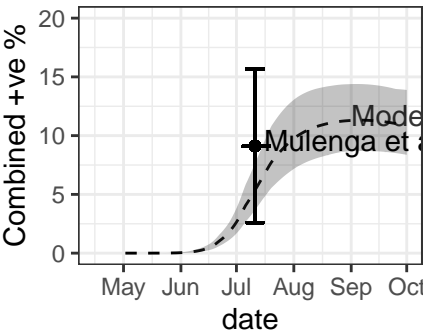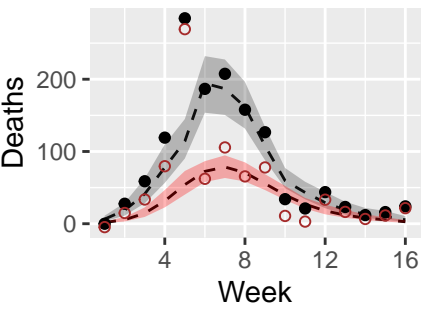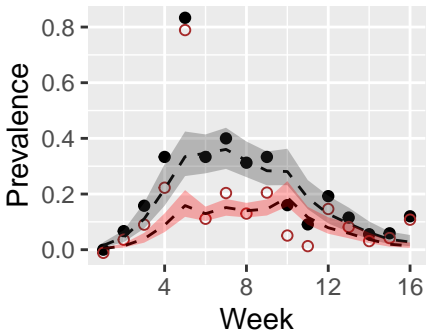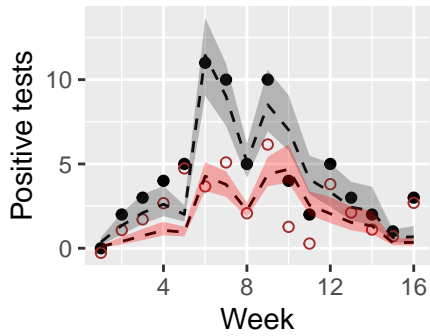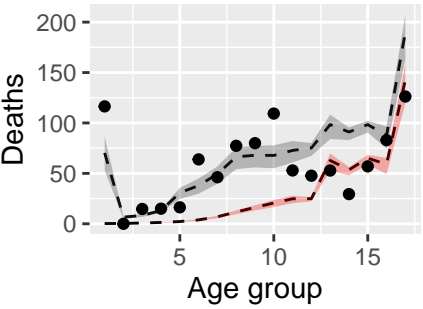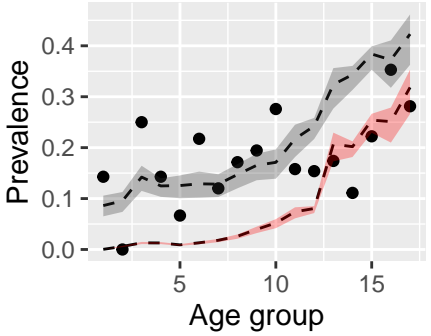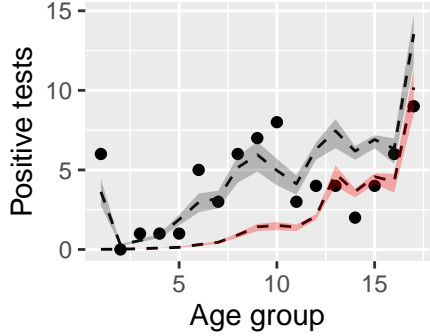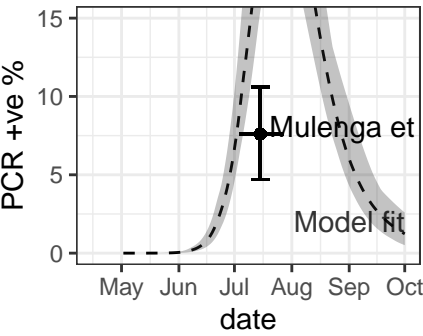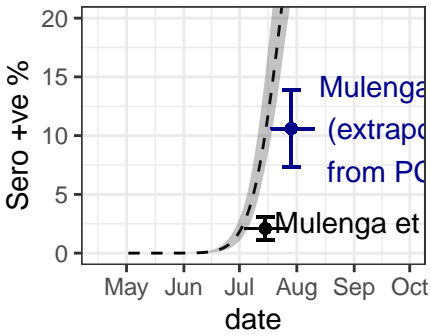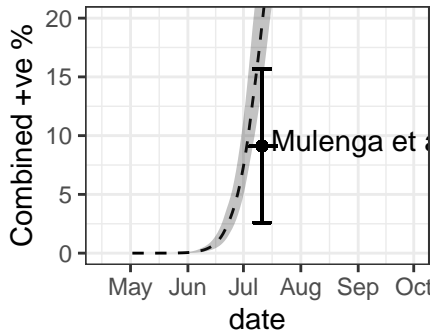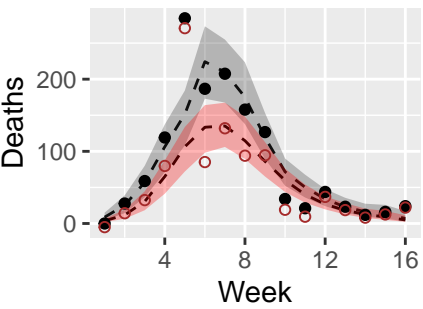PCR prevalence binom ll = −27.1

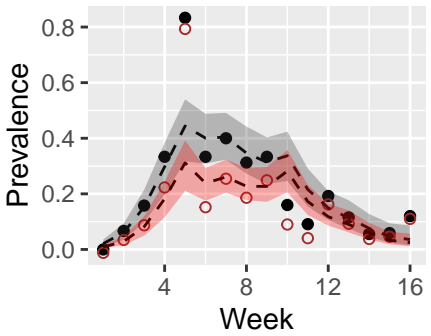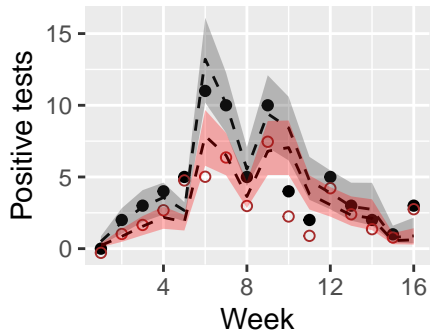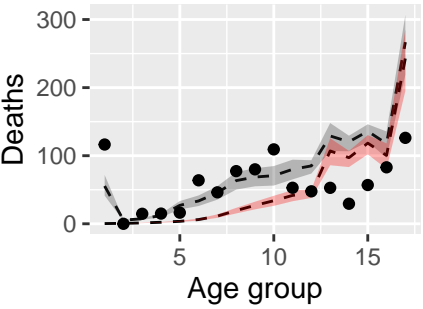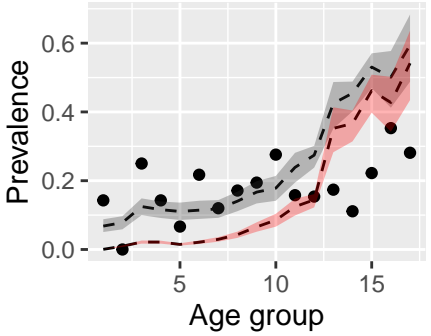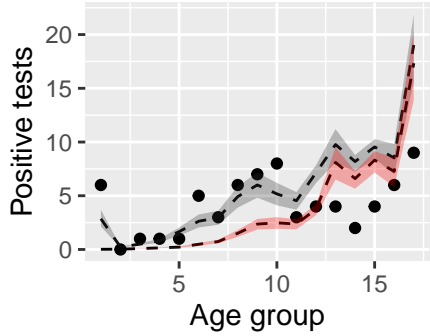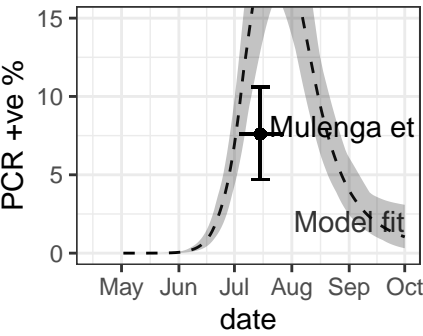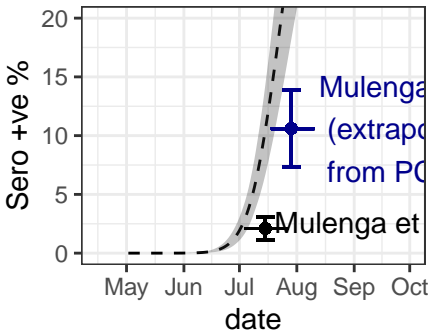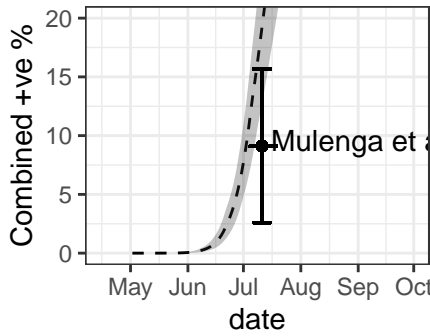Seroprevalence binom ll = −13.7
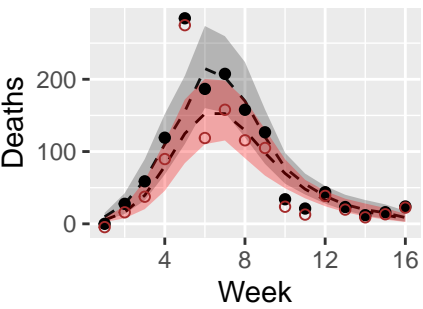
Combined prevalence binom ll = −7.1

IFR x 0.2, Slope x 1.2

IFR x 0.4, Slope x 1.2

IFR x 0.6, Slope x 1.2

IFR x 0.8, Slope x 1.2

IFR x 1, Slope x 1.2

IFR x 1.2, Slope x 1.2

IFR x 1.4, Slope x 1.2

IFR x 1.6, Slope x 1.2

IFR x 1.8, Slope x 1.2

IFR x 0.2, Slope x 1.4

IFR x 0.4, Slope x 1.4

IFR x 0.6, Slope x 1.4

IFR x 0.8, Slope x 1.4

IFR x 1, Slope x 1.4

IFR x 1.2, Slope x 1.4

IFR x 1.4, Slope x 1.4

IFR x 1.6, Slope x 1.4

IFR x 1.8, Slope x 1.4
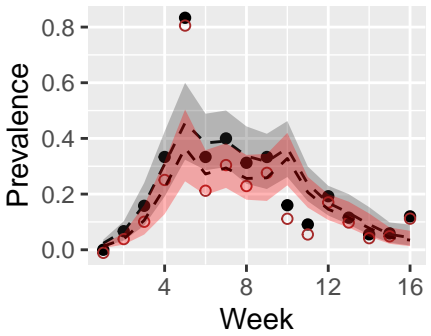
IFR x 0.2, Slope x 1.6
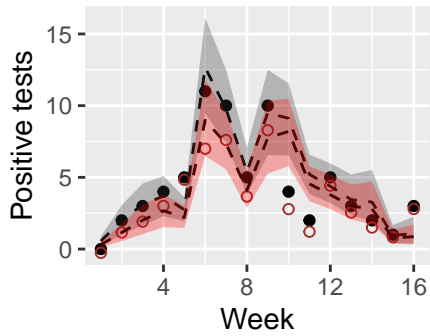
IFR x 0.4, Slope x 1.6

IFR x 0.6, Slope x 1.6

COVID−19 weekly deaths (Lusaka) nbin ll = −31 1

COVID−19 weekly prevalence (UTH mortuary)
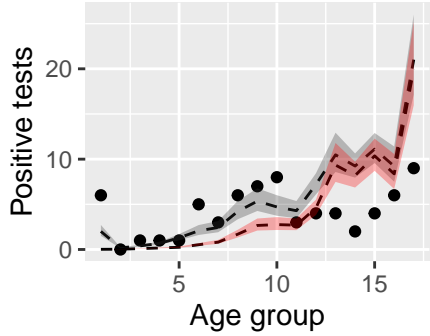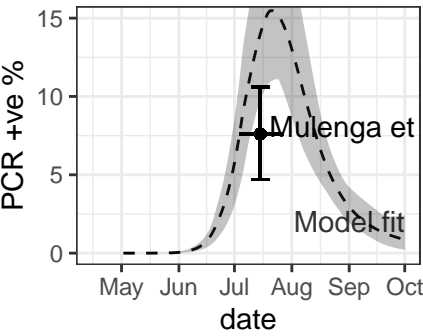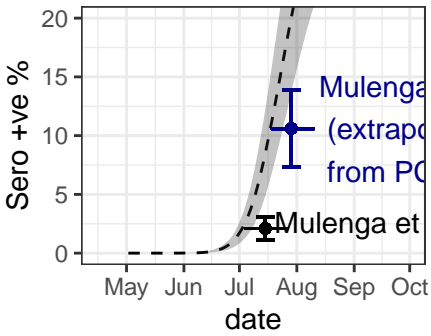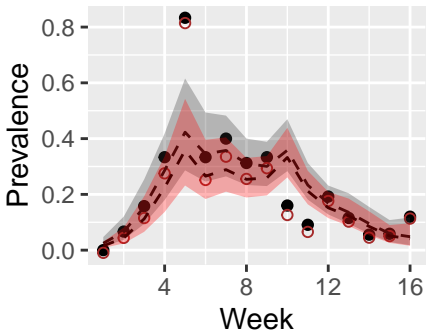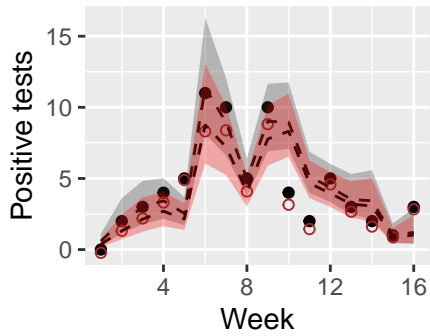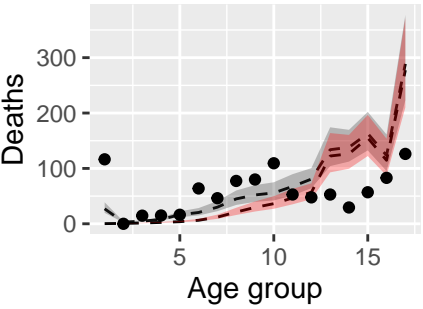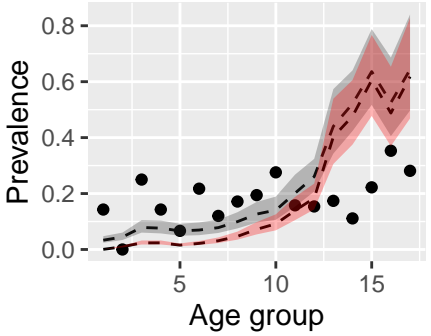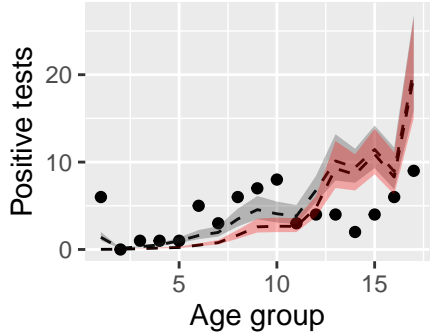
COVID−19 weekly positive tests (UTH mortuary)

COVID−19 deaths by age (Lusaka) multinom ll = −45.4

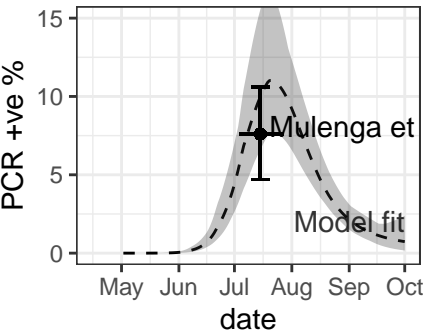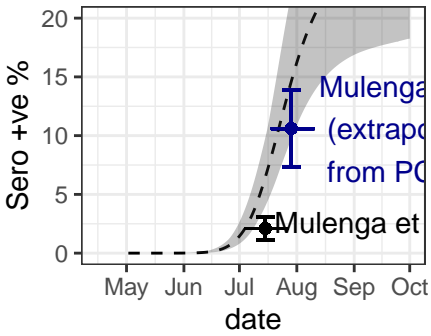COVID−19 prevalence by age (UTH mortuary)
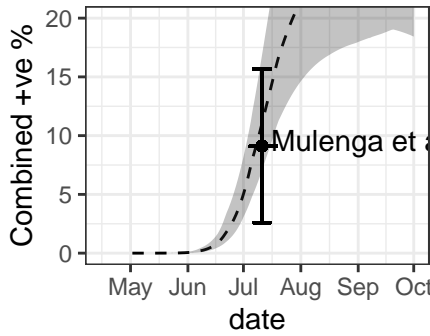
COVID−19 positive tests by age (UTH mortuary)
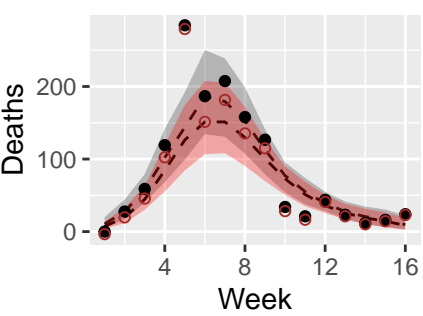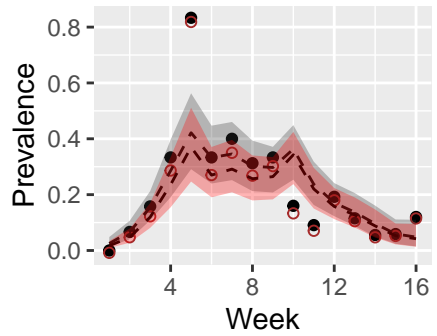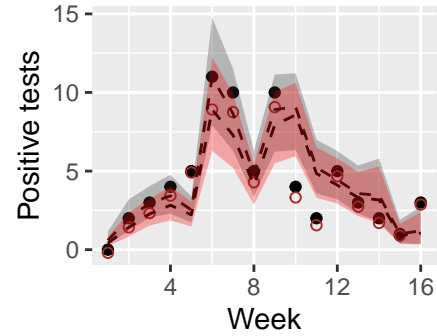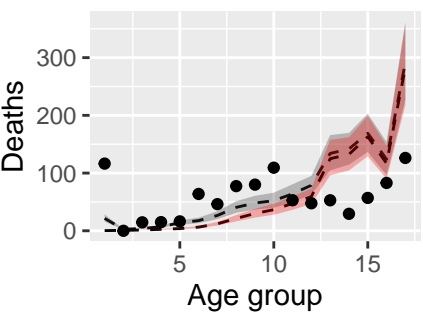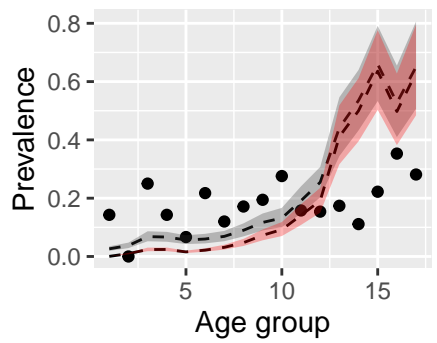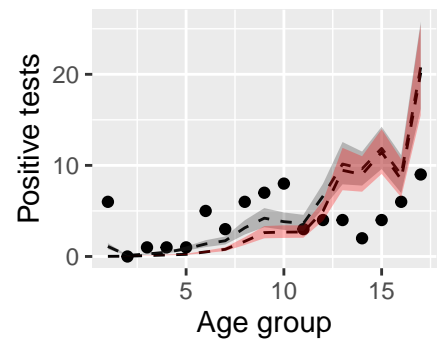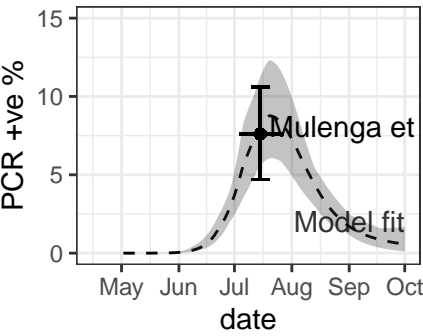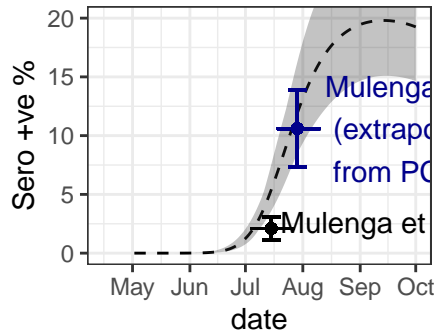
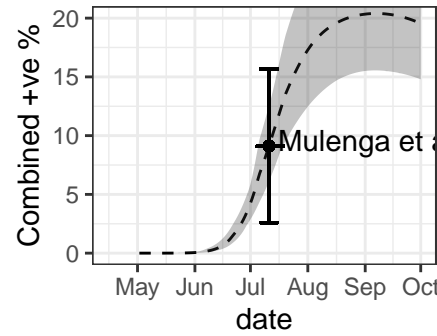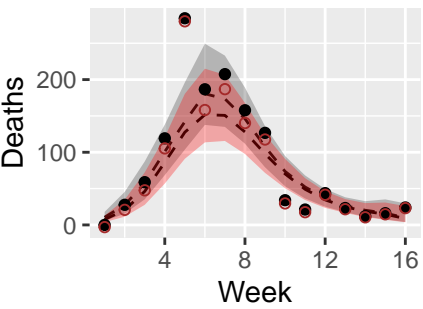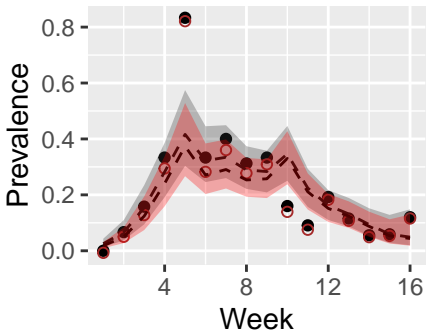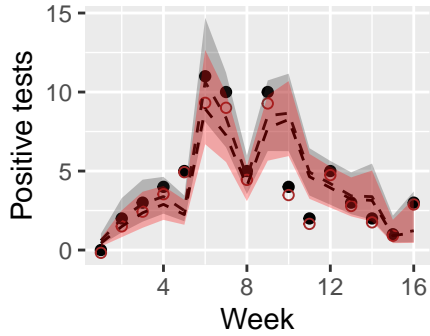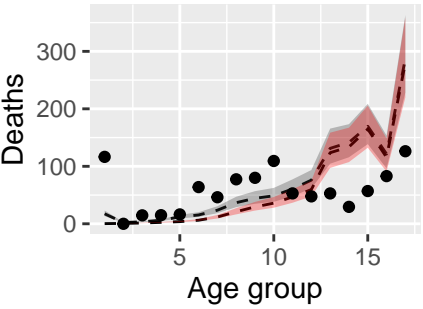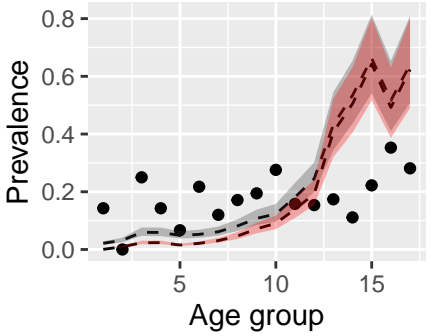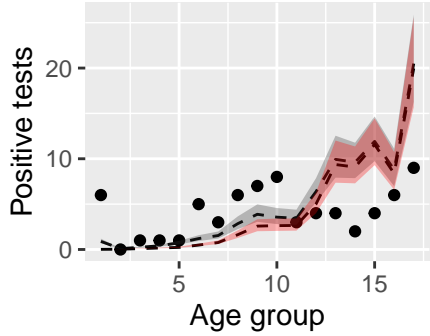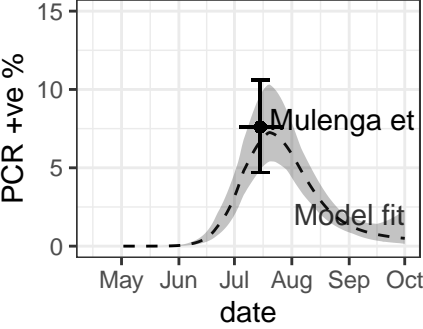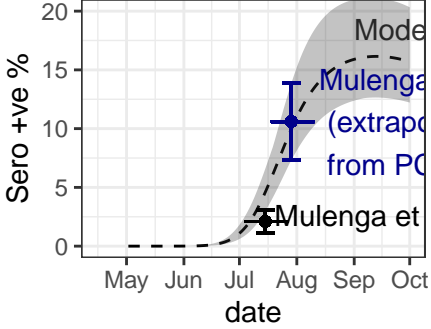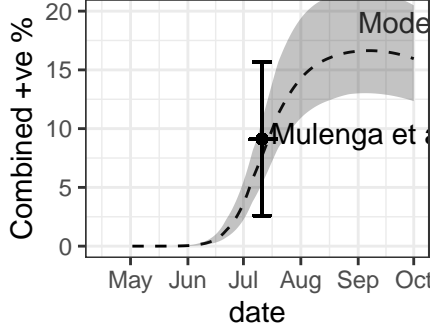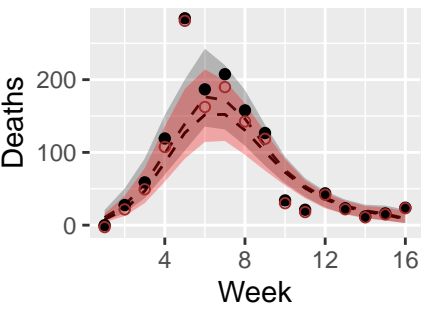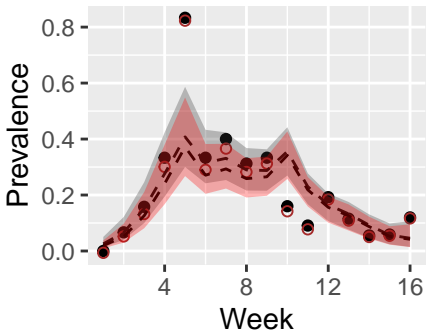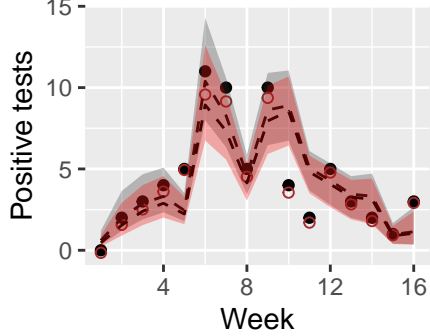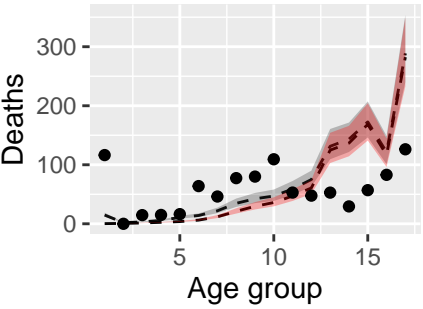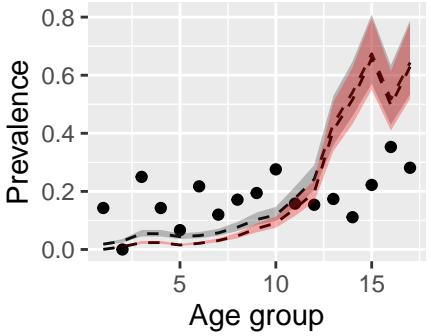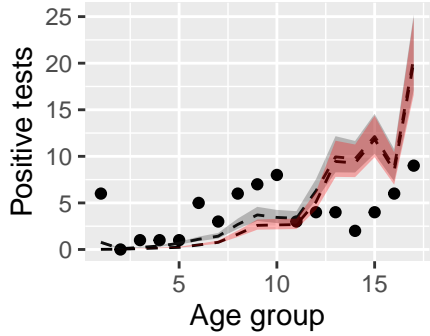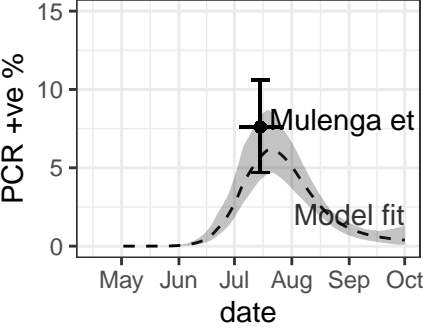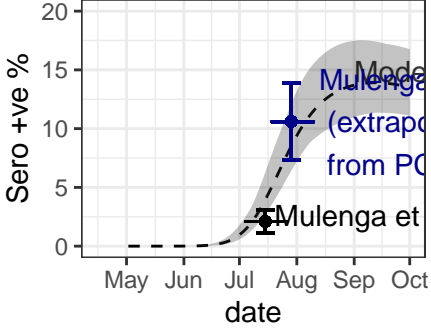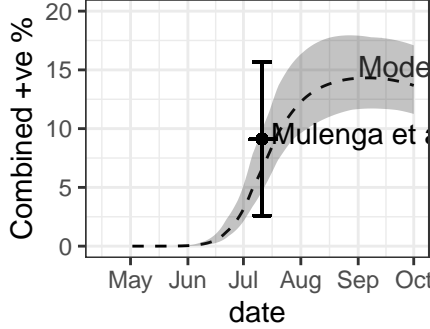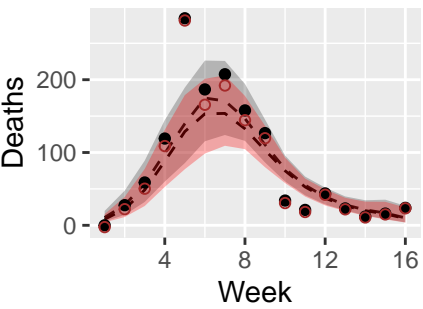PCR prevalence binom ll = −56.2

Seroprevalence binom ll = −99.1

Combined prevalence binom ll = −10.5

Mulenga et

Model fit

Mulenga (extrapolated from PC...
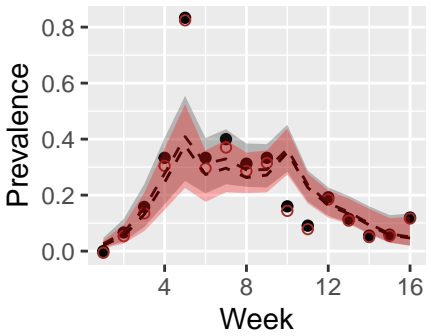
Mulenga et

Mulenga et

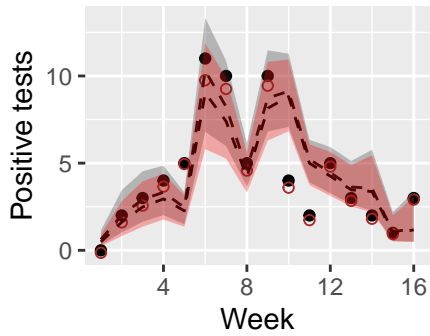IFR x 0.8, Slope x 1.6
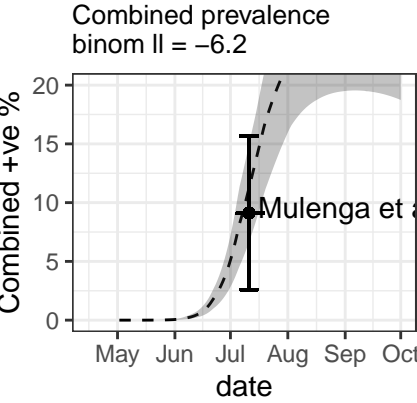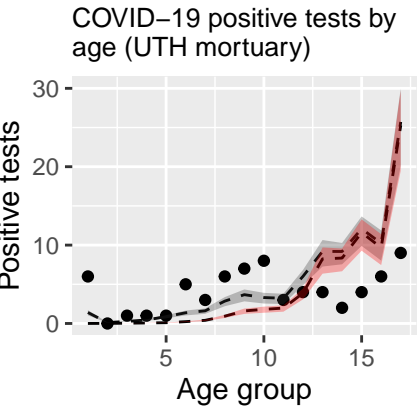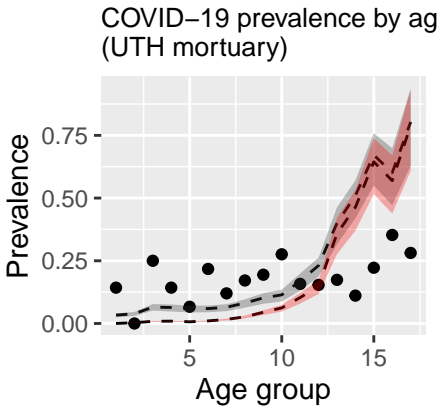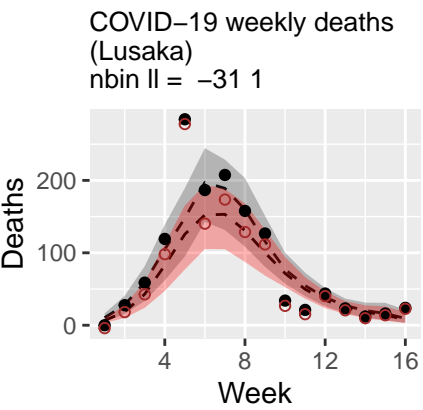
IFR x 1, Slope x 1.6

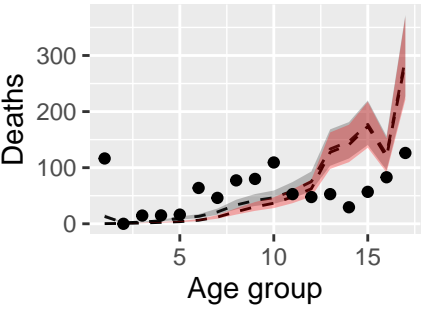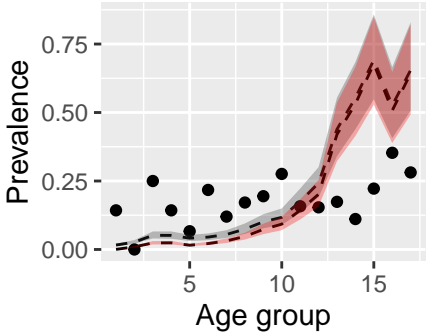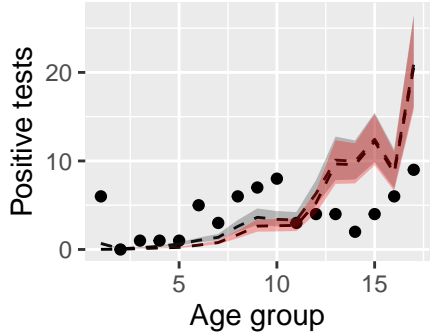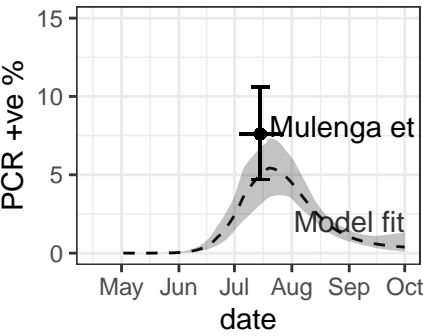COVID−19 weekly deaths (Lusaka) nbin ll = −31 1

COVID−19 weekly prevalence (UTH mortuary)

COVID−19 weekly positive tests (UTH mortuary)

COVID−19 deaths by age (Lusaka) multinom ll = −56
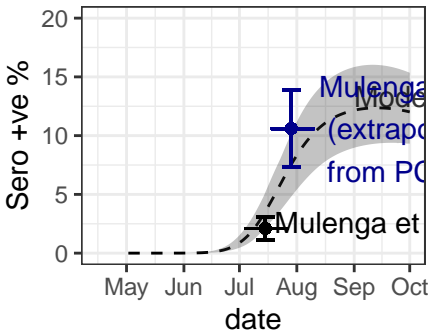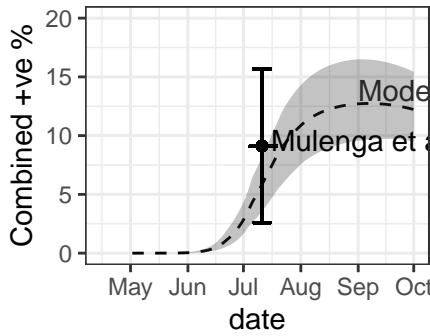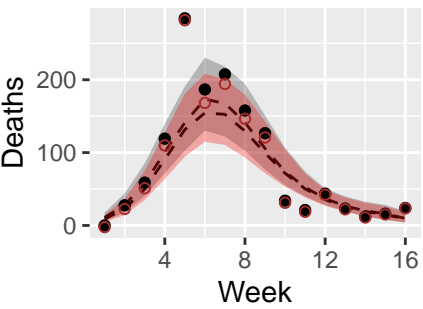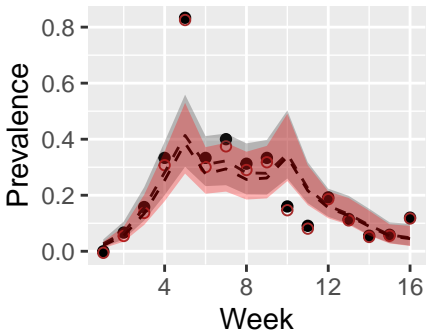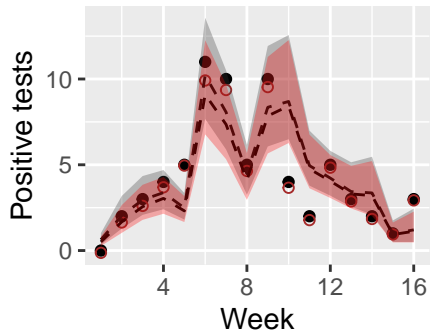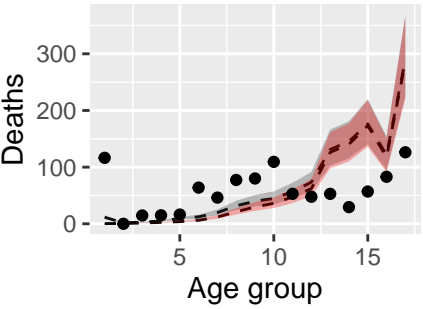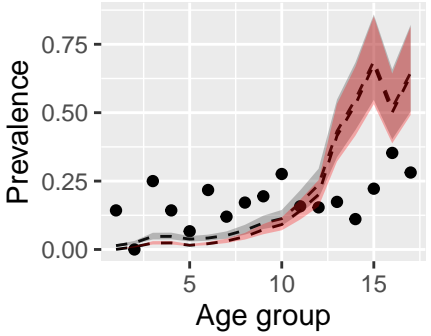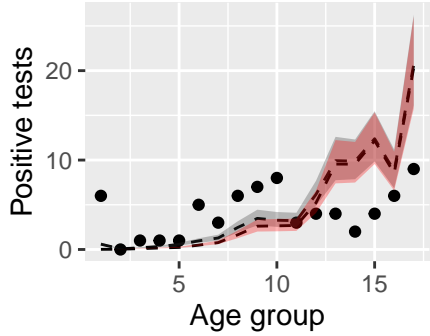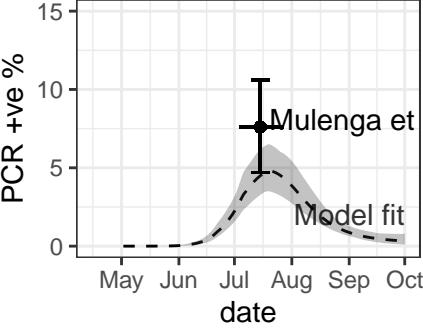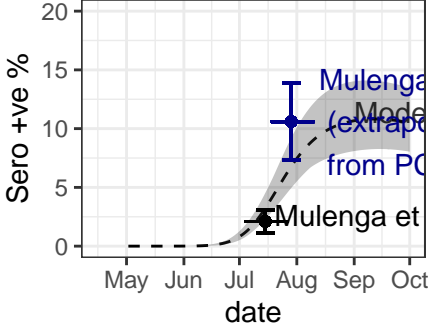
COVID−19 prevalence by age (UTH mortuary)

COVID−19 positive tests by age (UTH mortuary)

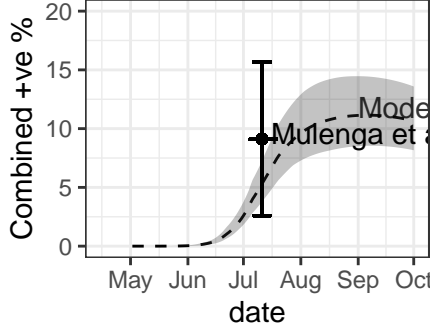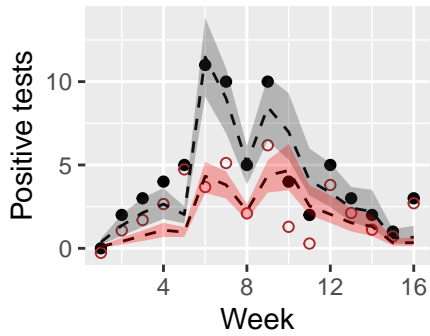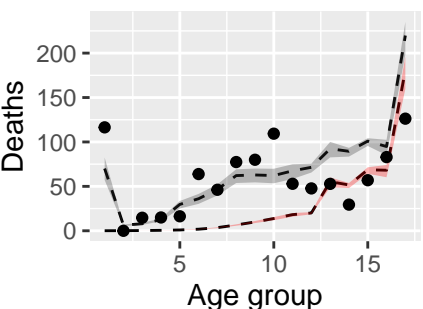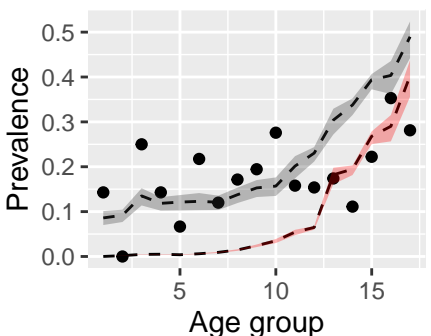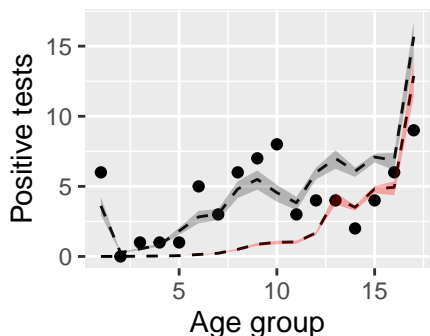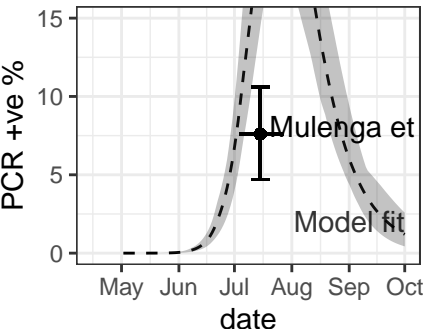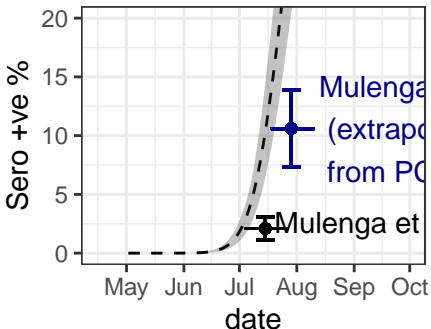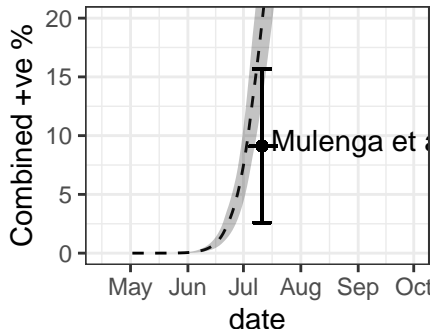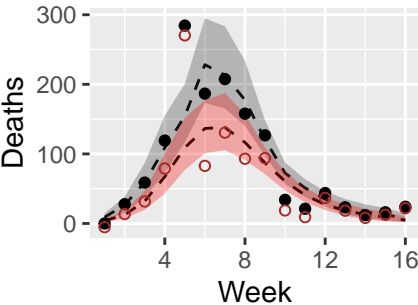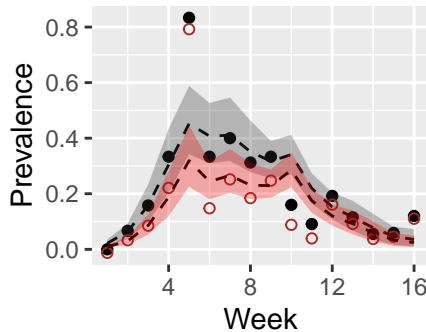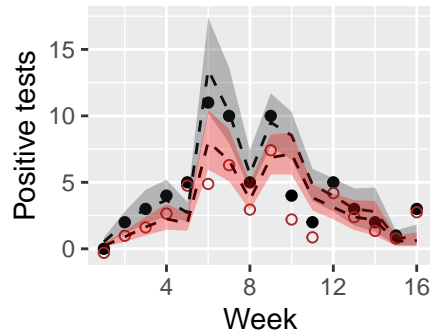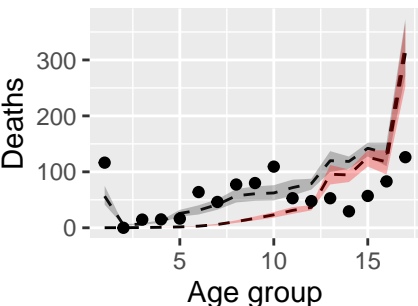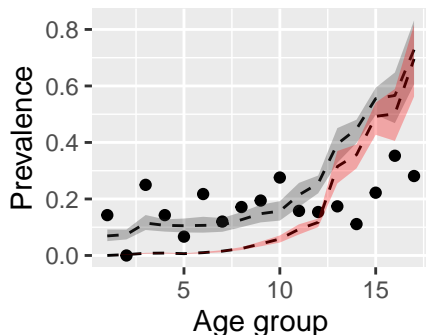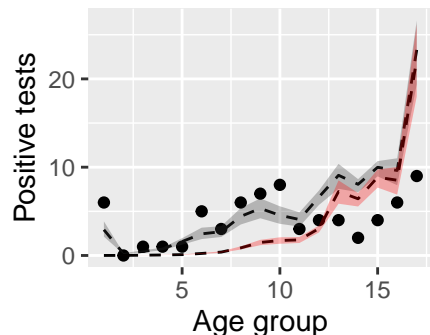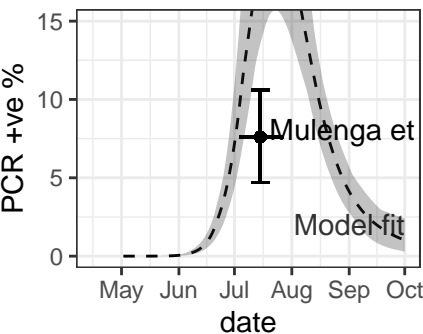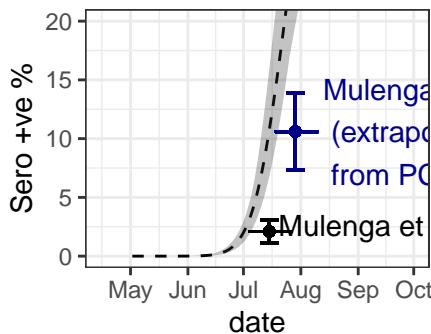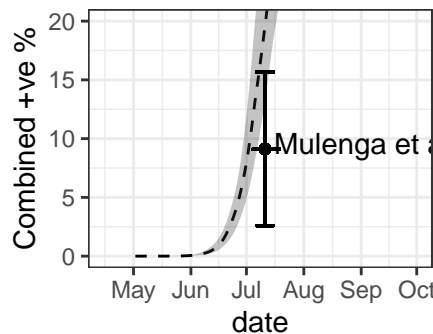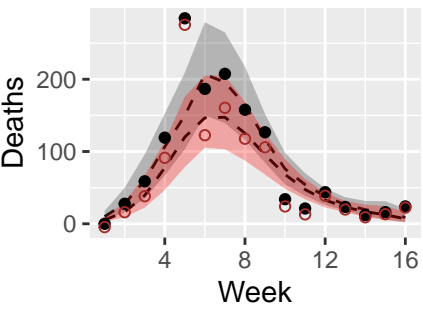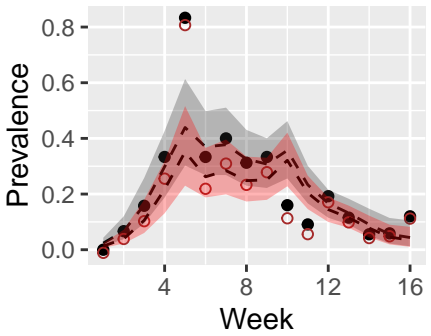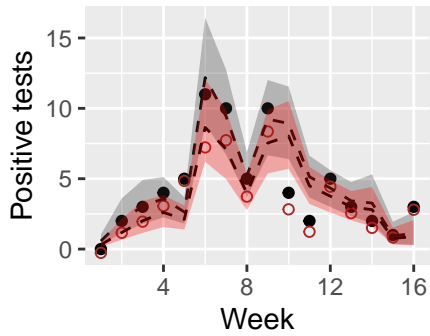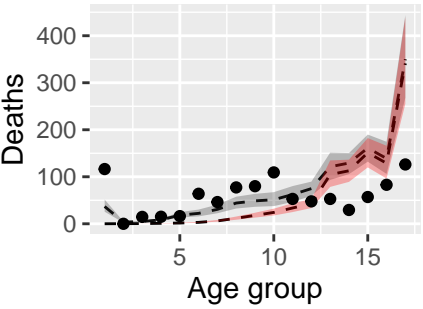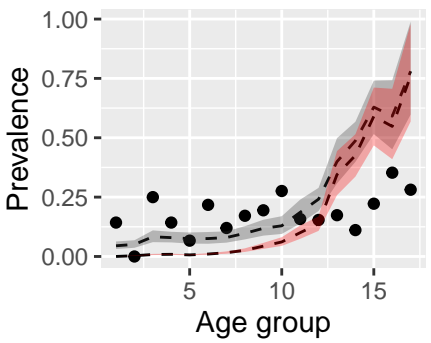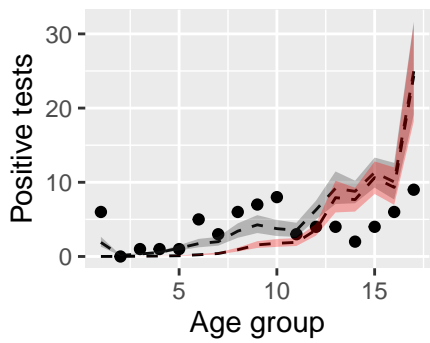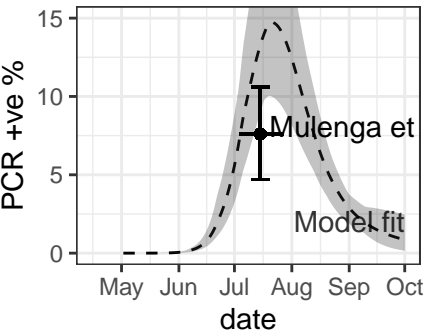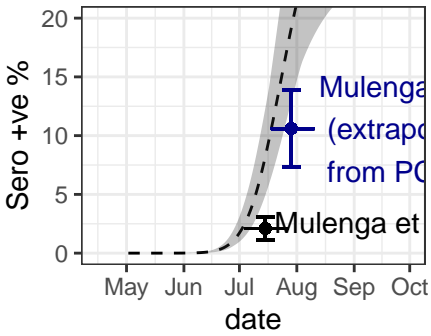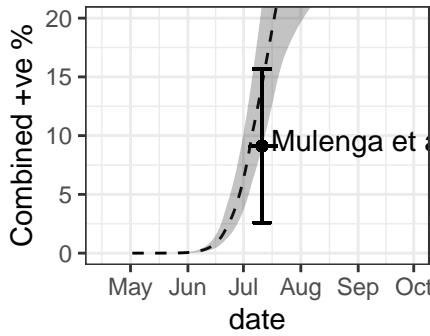PCR prevalence binom ll = −5.9

Seroprevalence binom ll = −38.5
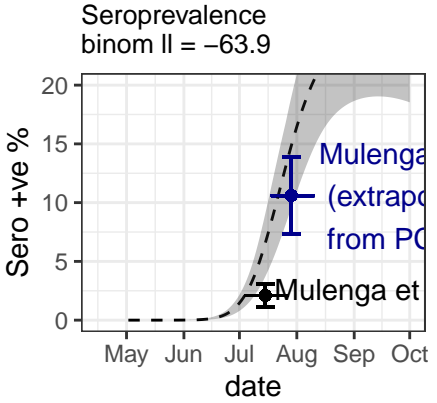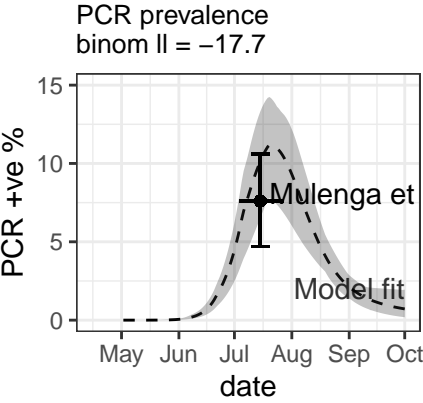
Combined prevalence binom ll = −4.8
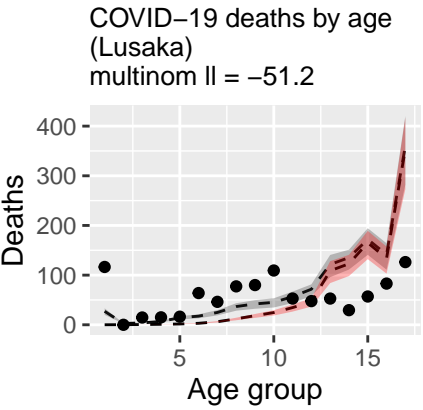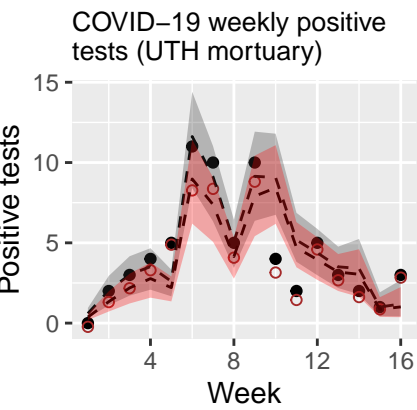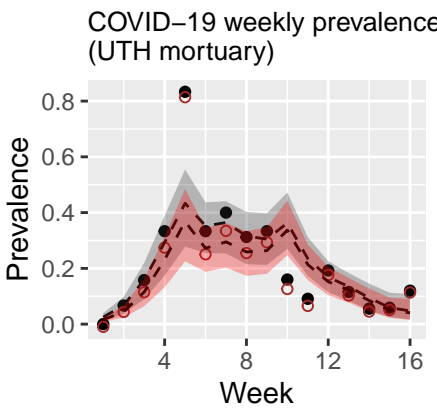
Mulenga et

Model fit

Mulenga (extrapolated from PCR)

Mulenga et

Mulenga et

IFR x 1.2, Slope x 1.6
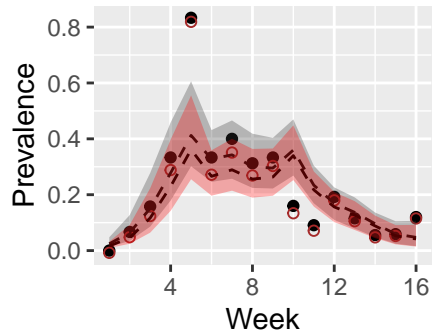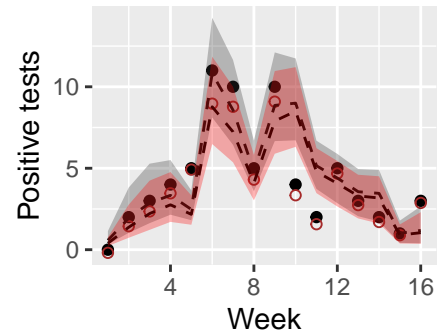
IFR x 1.4, Slope x 1.6

IFR x 0.2, Slope x 1.8

IFR x 0.4, Slope x 1.8

IFR x 0.6, Slope x 1.8

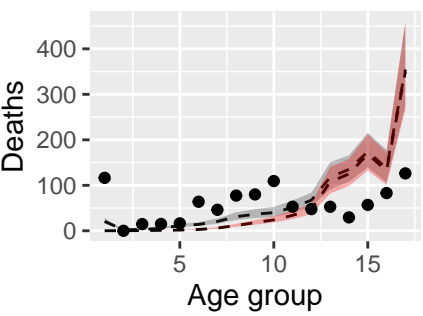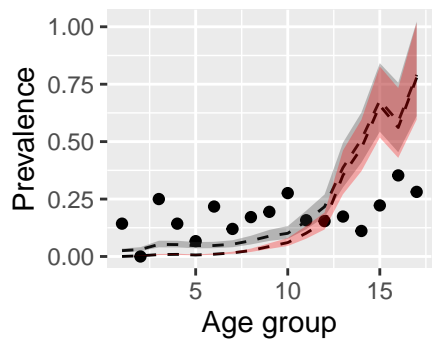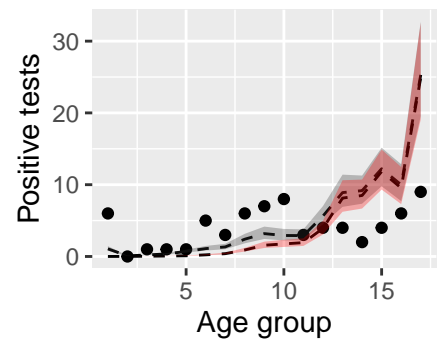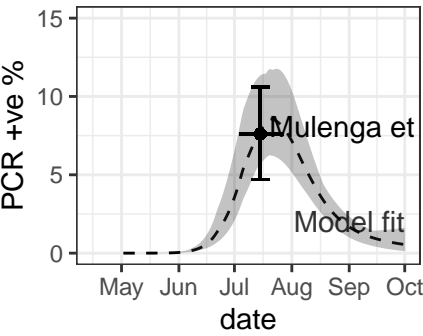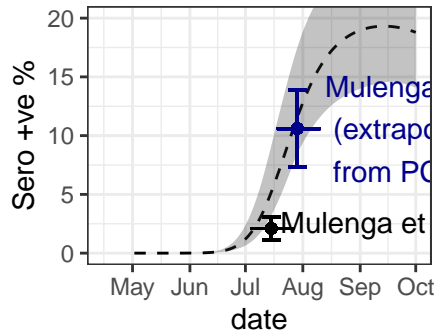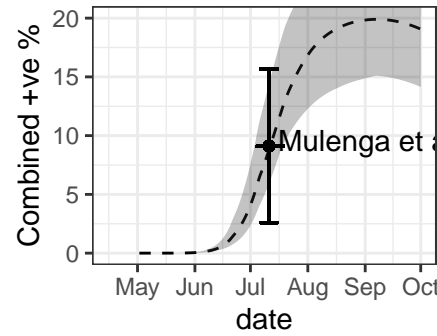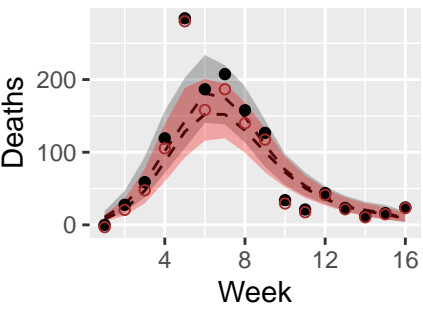**COVID−19 weekly deaths (Lusaka)**
nbin ll = −31 1

COVID−19 weekly prevalence (UTH mortuary)

COVID−19 weekly positive tests (UTH mortuary)

COVID−19 deaths by age (Lusaka)
multinom ll = −49.2

COVID−19 prevalence by age (UTH mortuary)

COVID−19 positive tests by age (UTH mortuary)

PCR prevalence
binom ll = −57.9

Mulenga et

Model fit

Seroprevalence
binom ll = −96.2

Mulenga (extrapo from PC

Mulenga et

Combined prevalence
binom ll = −10.6

Mulenga et

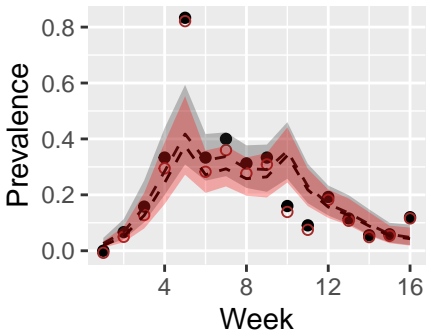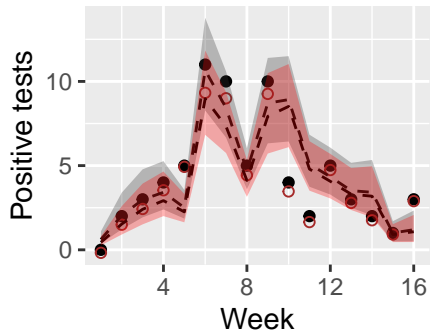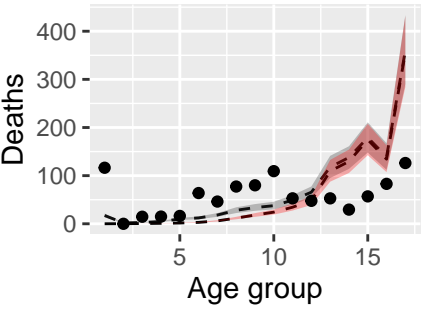# IFR x 0.8, Slope x 1.8

IFR x 1, Slope x 1.8

COVID−19 weekly deaths (Lusaka) nbin ll = −31 1
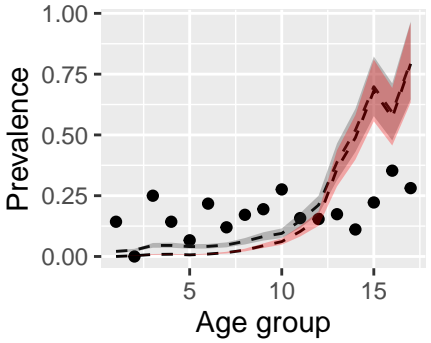
COVID−19 weekly prevalence (UTH mortuary)

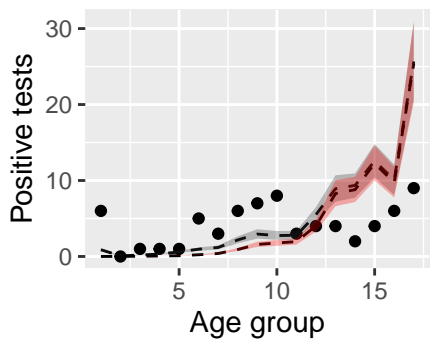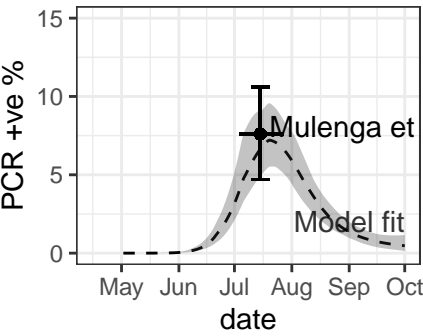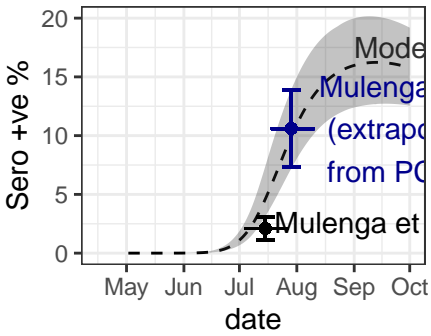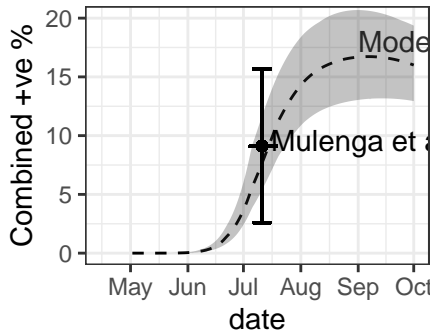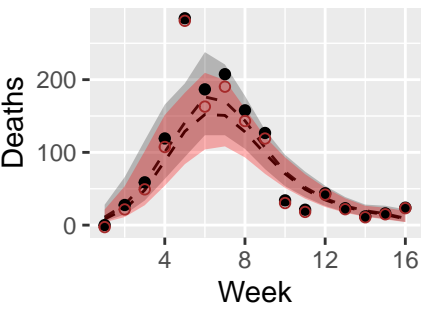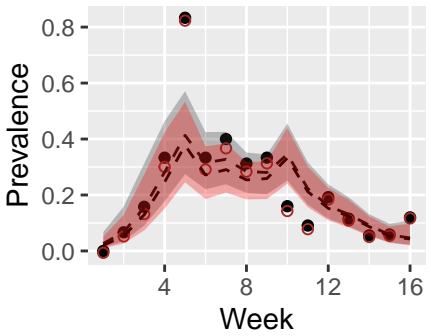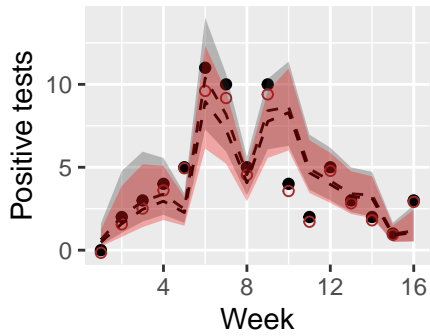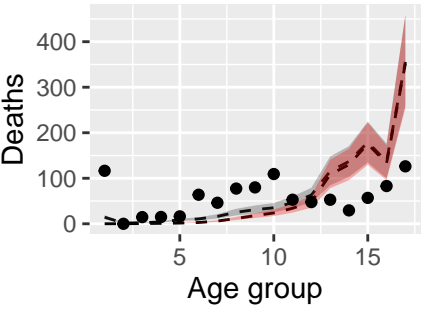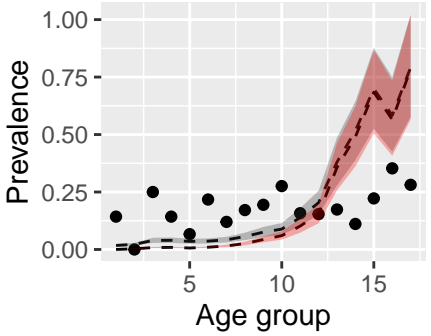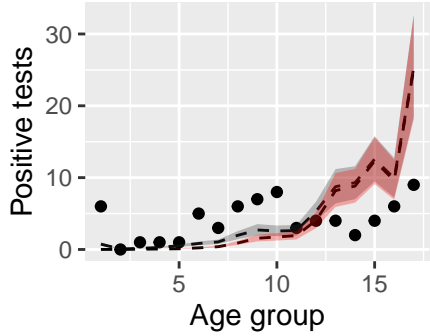COVID−19 weekly positive tests (UTH mortuary)
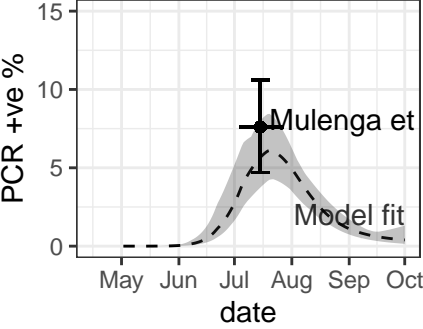
COVID−19 deaths by age (Lusaka) multinom ll = −61.8
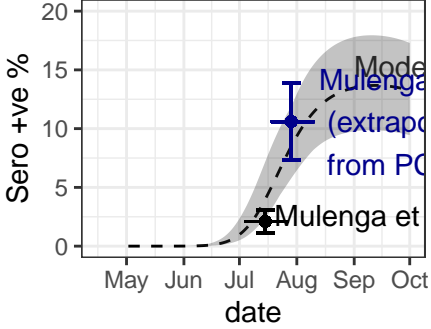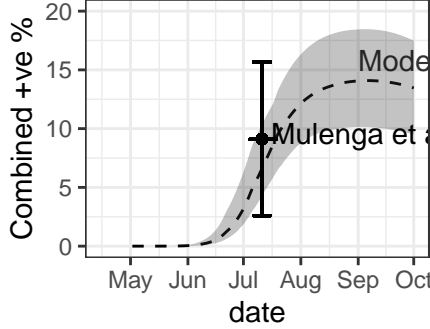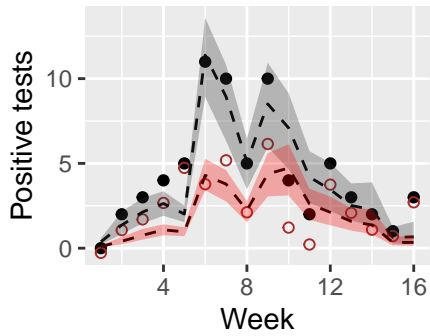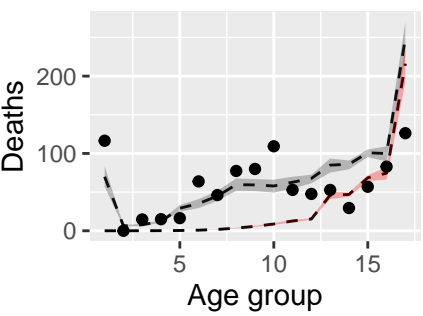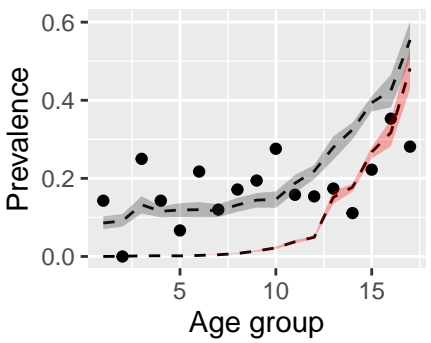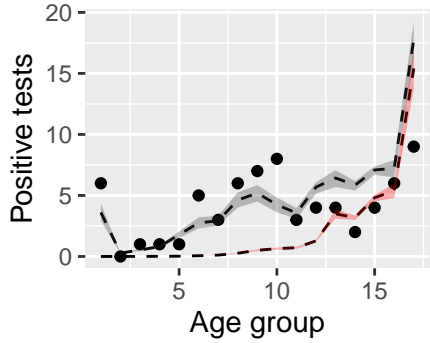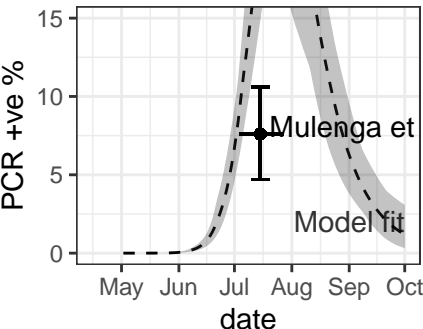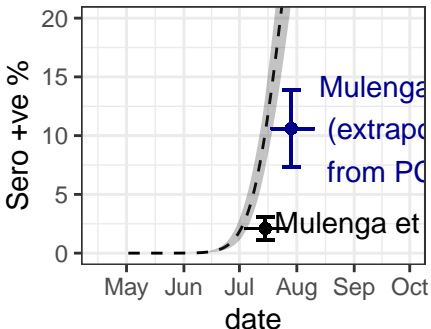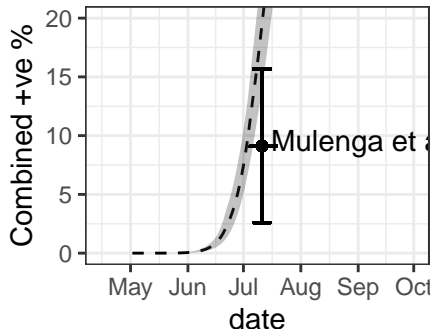
COVID−19 prevalence by age (UTH mortuary)

COVID−19 positive tests by age (UTH mortuary)

PCR prevalence binom ll = −6.4

Seroprevalence binom ll = −39.7
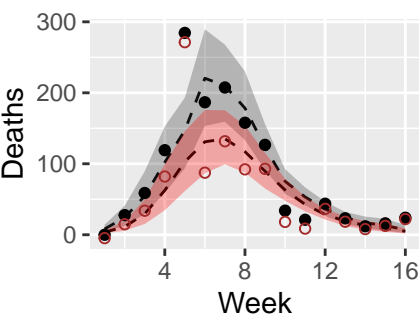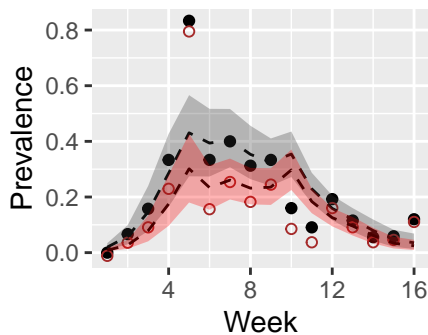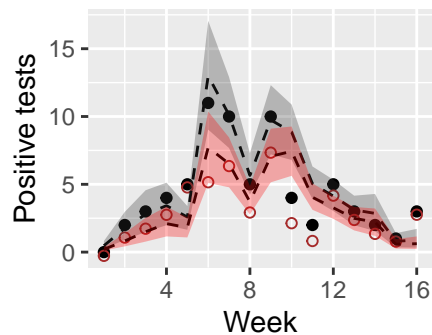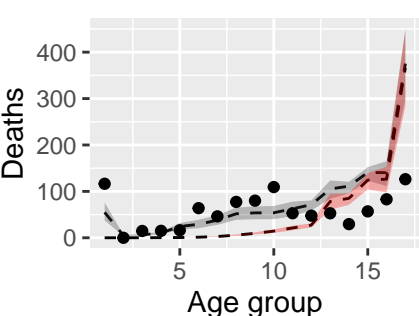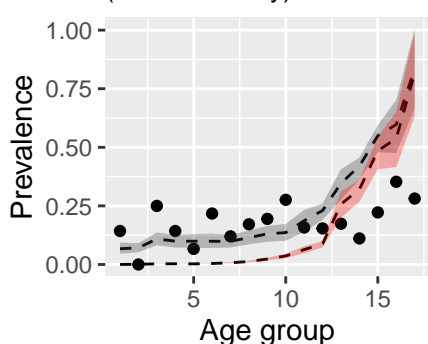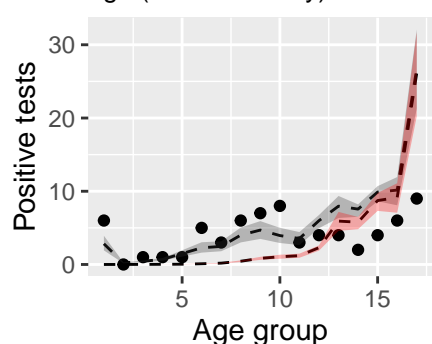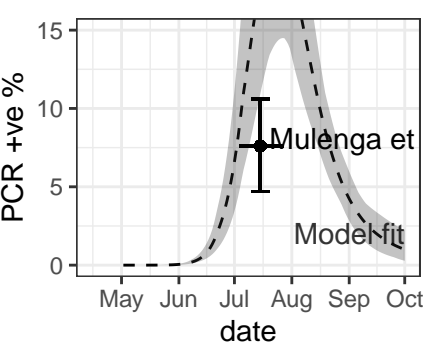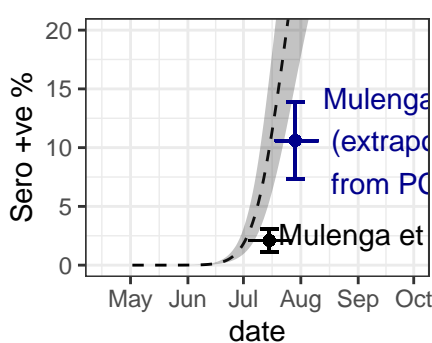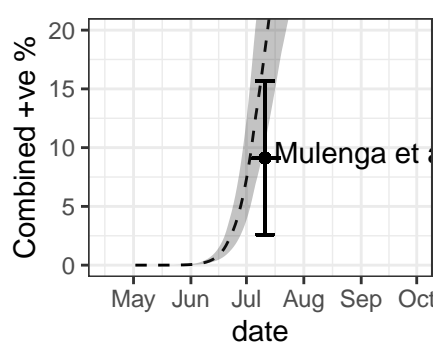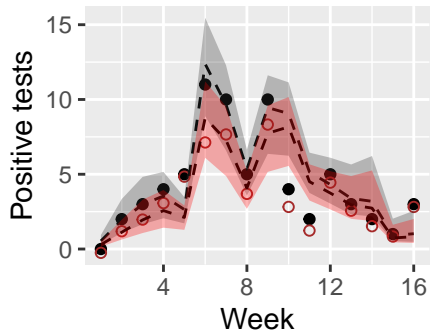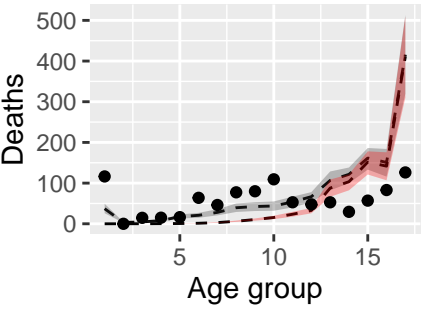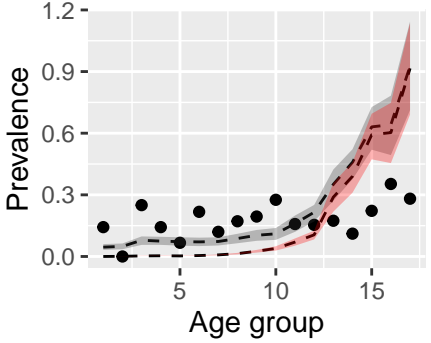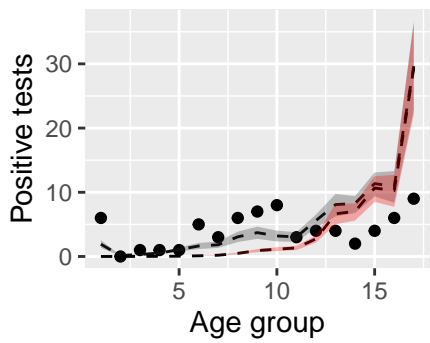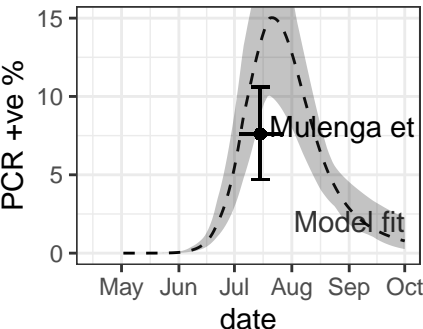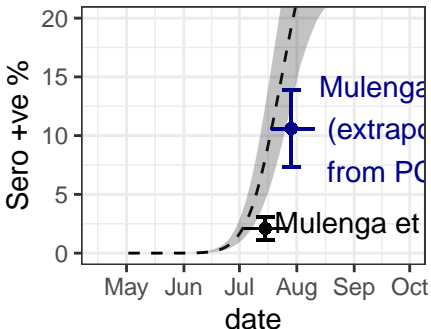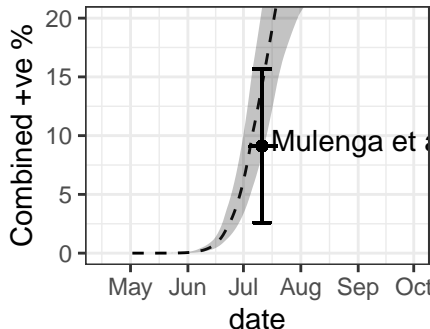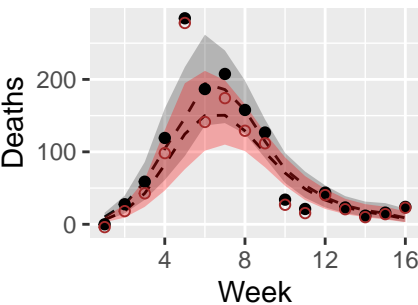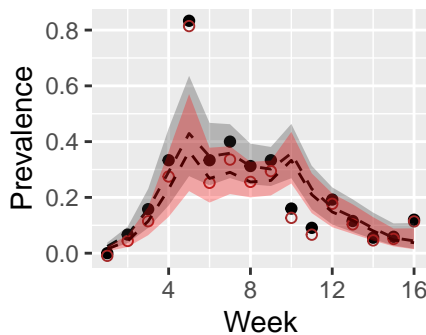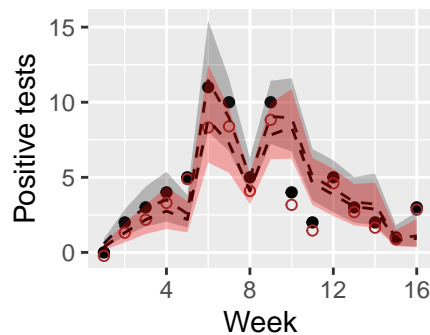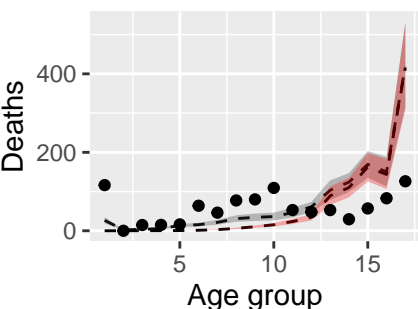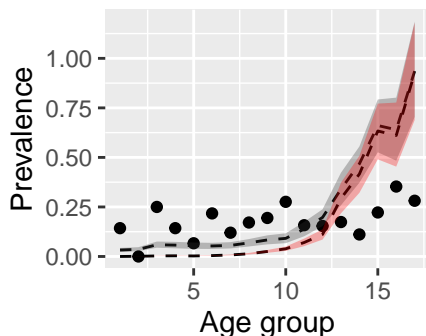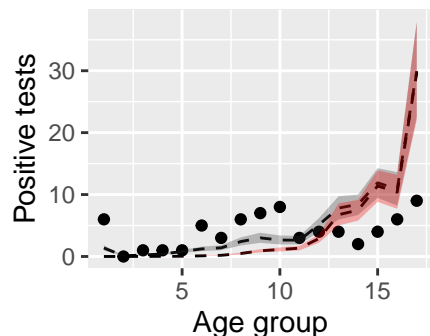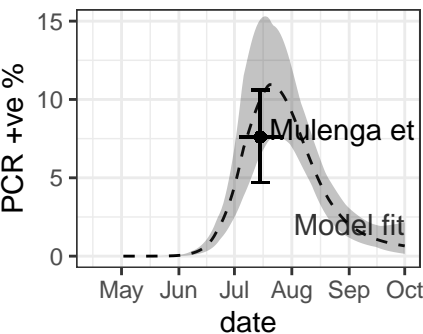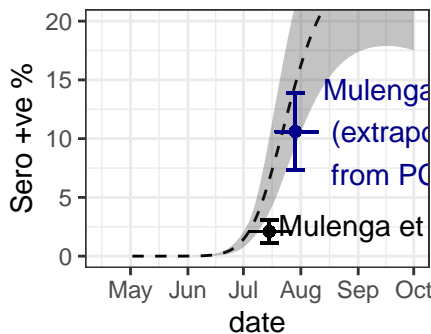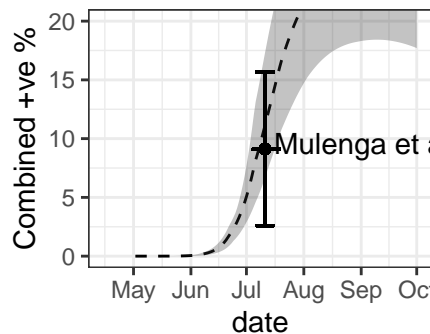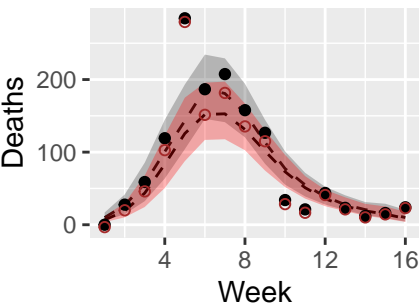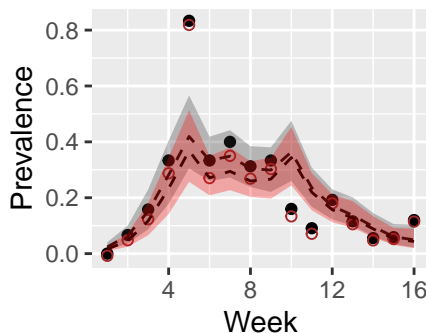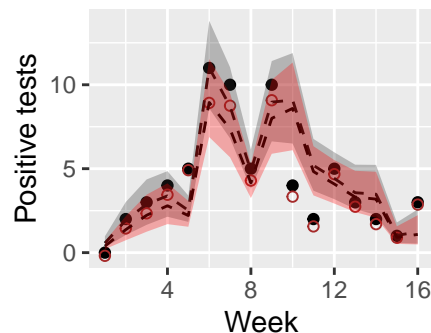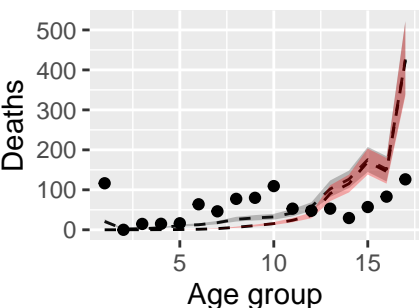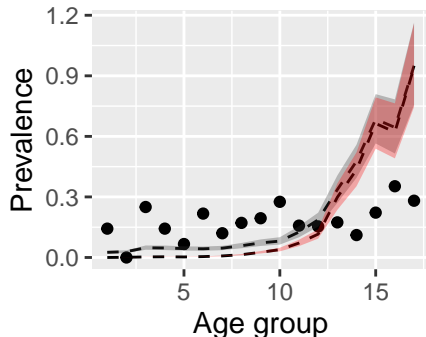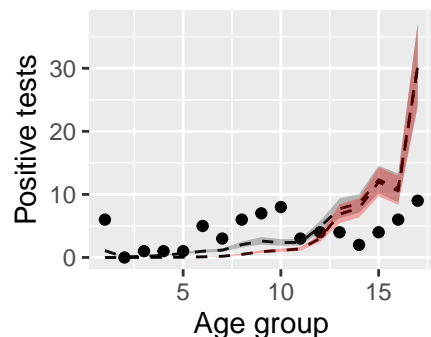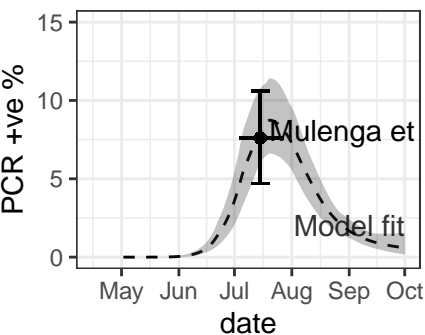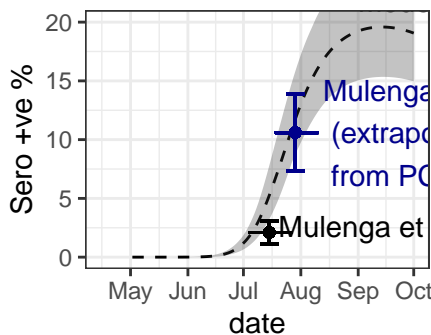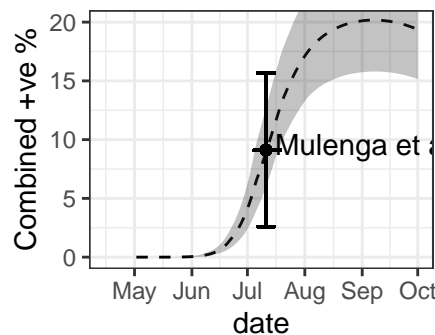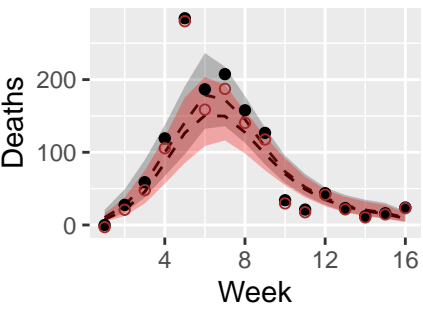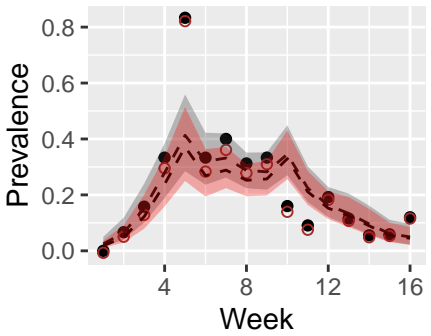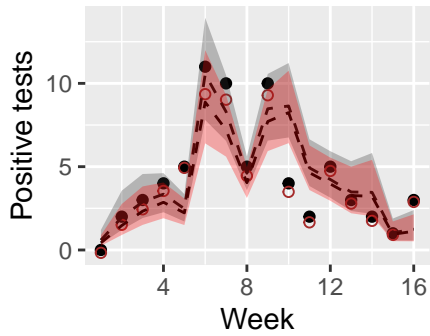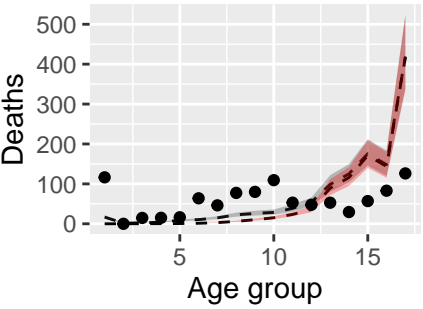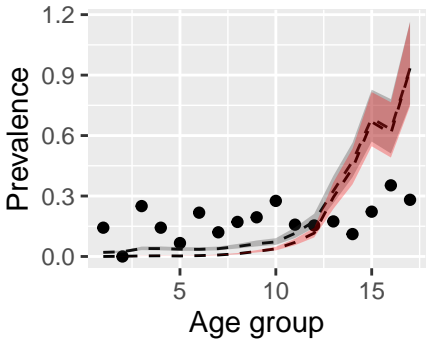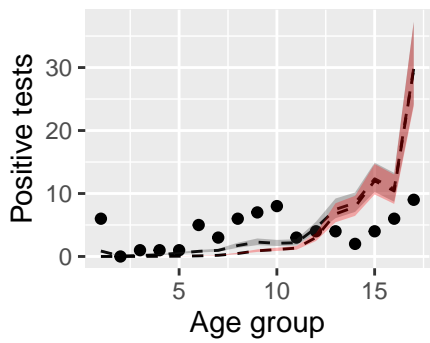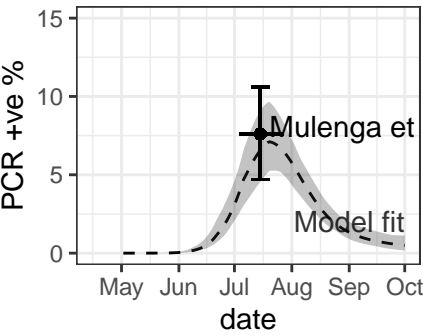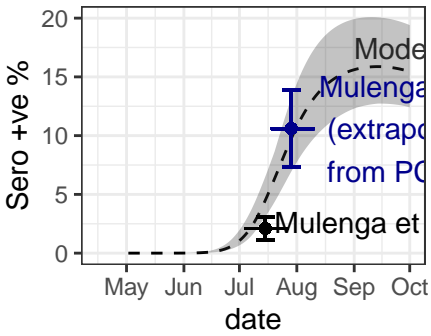
Combined prevalence binom ll = −4.9

IFR x 1.2, Slope x 1.8