Twitter Thread by Simon Nicholls
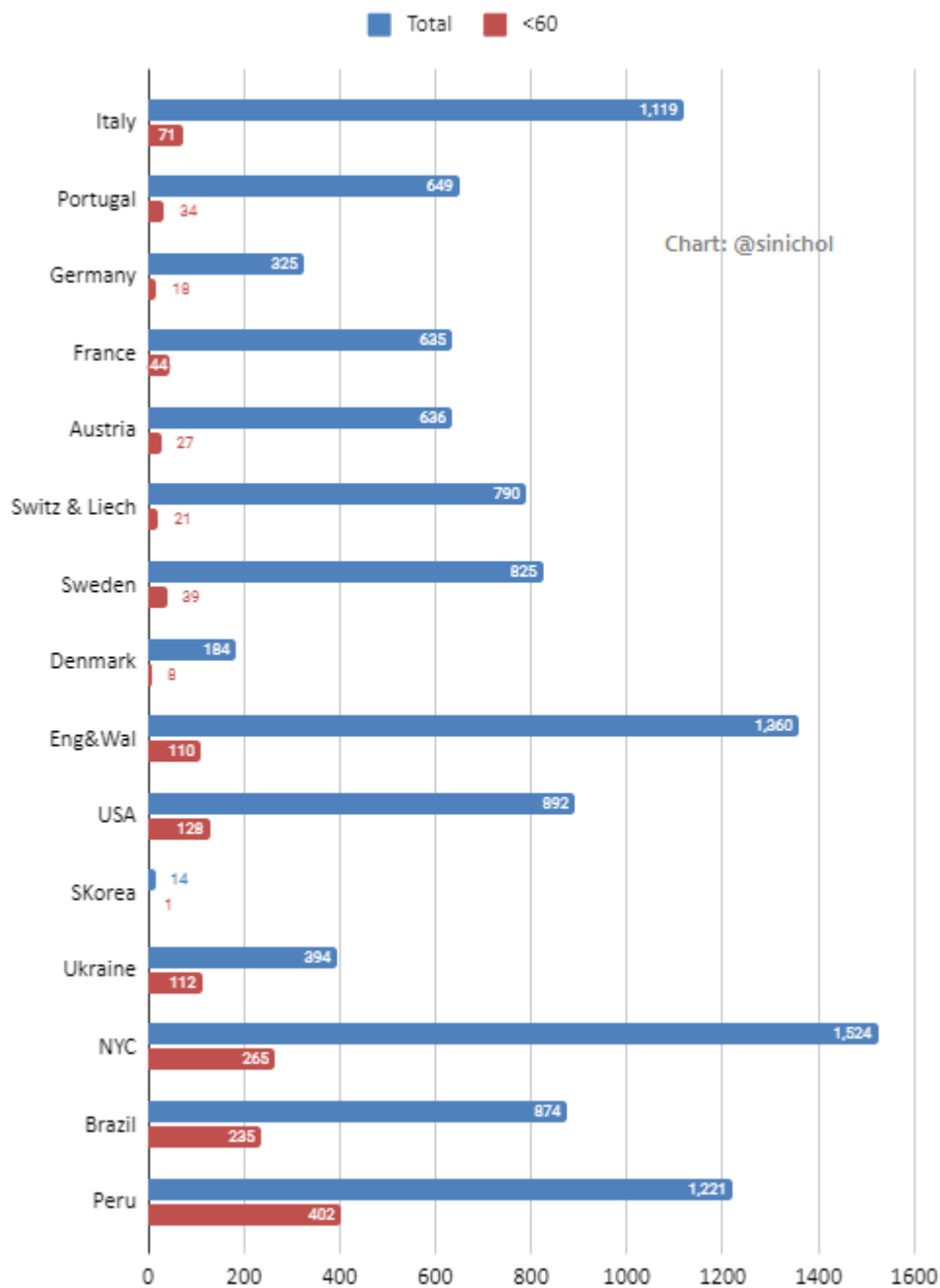
Simon Nicholls
@sinichol

Most ■ comparisons for C19 go wrong as they don't considering demographics.

For countries I've managed to src detailed death data for, here's total d/1m numbers.

Sure,■■■■■■■■■■■■■■■ look similar to ■■■■, but just look at the differences <60, ■■ 4x larger.

So what does this mean?

1/9

Chart: @sinichol

Legend: Total (blue), <60 (red)

Country	Total	<60
Italy	1,119	71
Portugal	649	34
Germany	325	18
France	635	44
Austria	636	27
Switz & Liech	790	21
Sweden	825	39
Denmark	184	9
Eng&Wal	1,360	110
USA	892	128
SKorea	14	1
Ukraine	394	112
NYC	1,524	265
Brazil	874	235
Peru	1,221	402

Basically, fewer >80, means they've had■spread, and ■younger deaths, but■equal.

Here ranking■2■by age are:
■■20 countries
■■NY city
■■The World
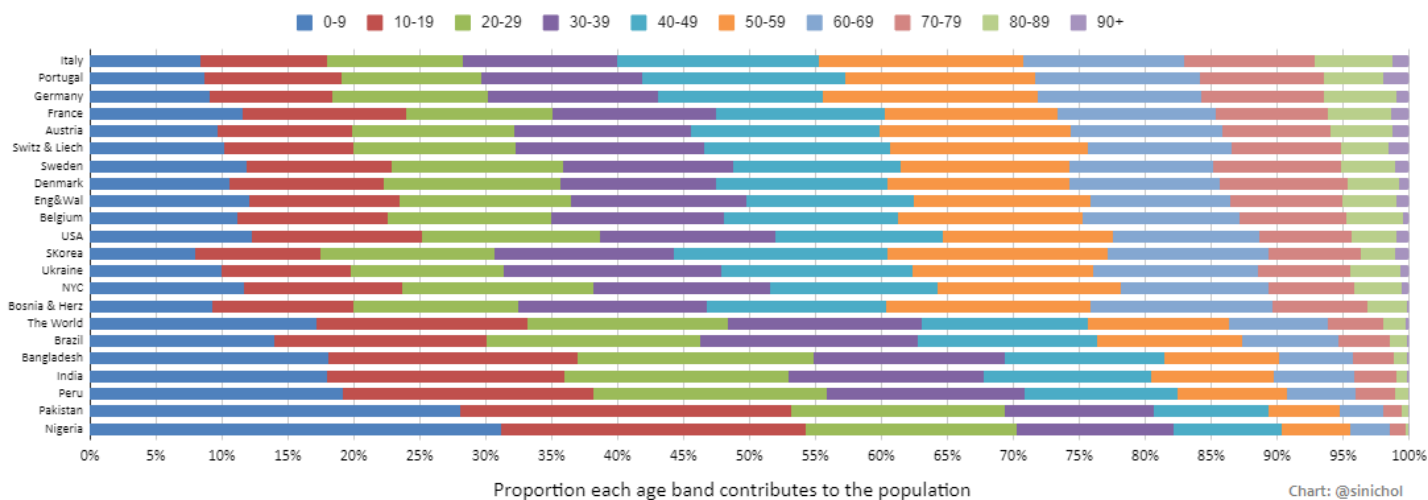That I've ■at so far.

50% marks the median age, e.g.
■■ 47
■■■■■■■■■■■■■■41
■30
■■18

So expecting similar deaths overall is silly.

2/9

Proportion each age band contributes to the population

Chart: @sinichol

So how have deaths actually played out?

Here are the props. by age to late Dec for places with detailed data.

Looks like NYC, ■■ & ■■ have seen far more in the young.

Now these all have younger pops. so is spread the same? Are diff just down to demographics?

3/9

Proportion of Covid deaths from each age band: to Dec23

Chart: @sinichol
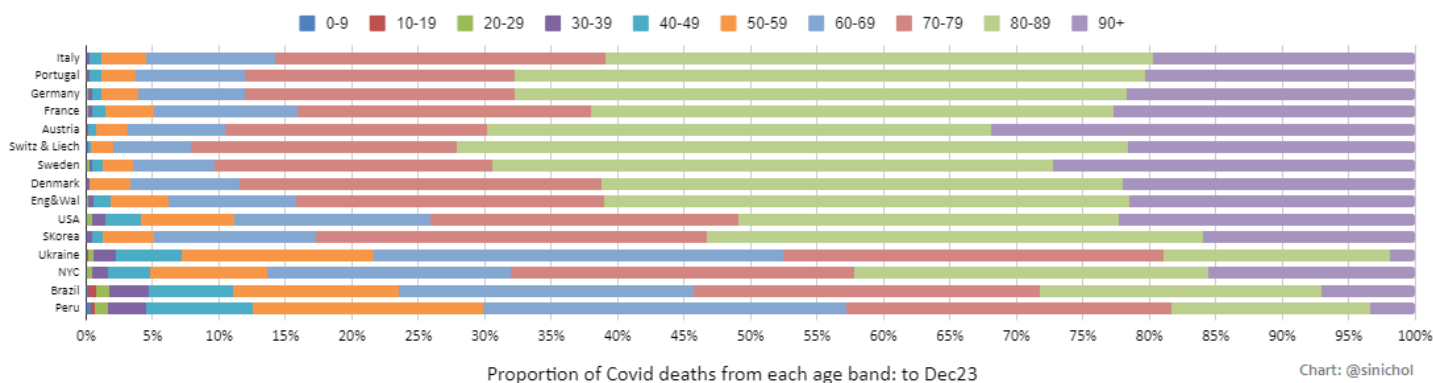
No, many factors, the biggest age, and the likelihood of death in each age band.

■serology studies have sampled a similar risk in each 10yr band, with this going up 3 fold with each band.

Here is a plot of what■avgs are.

So what else do we need to worry about?

4/9
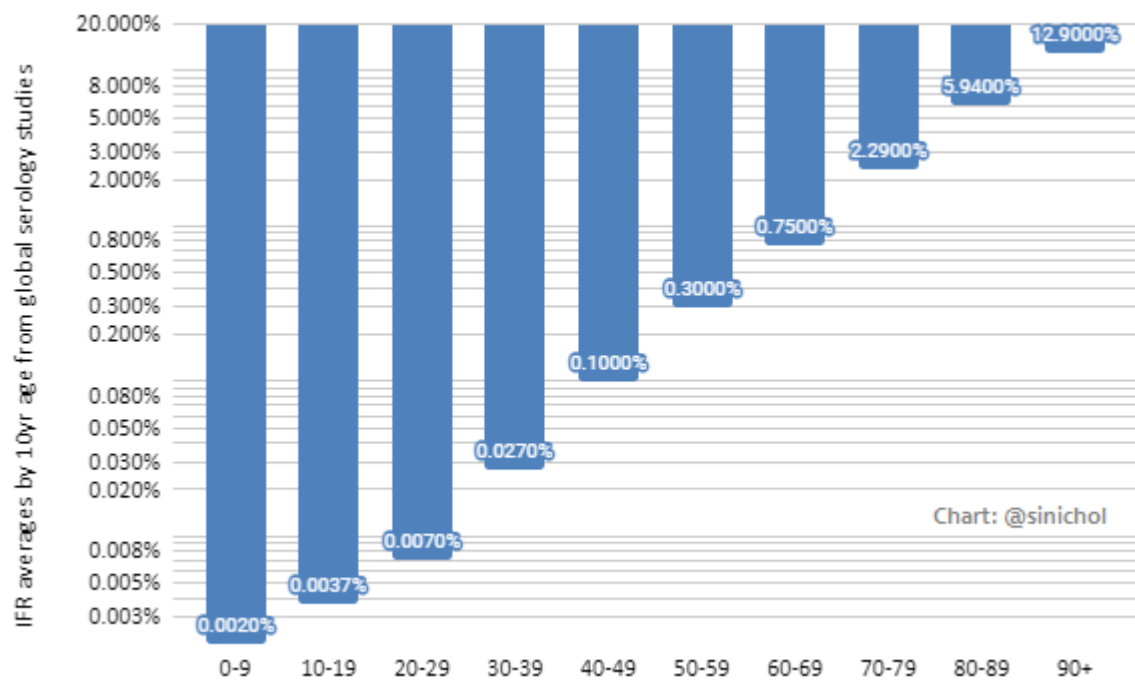
Factors like:

■■healthcare: beds nos, better care, etc

■■comorbidity rates: e.g. obesity, OECD 4x India, but only effects 15%

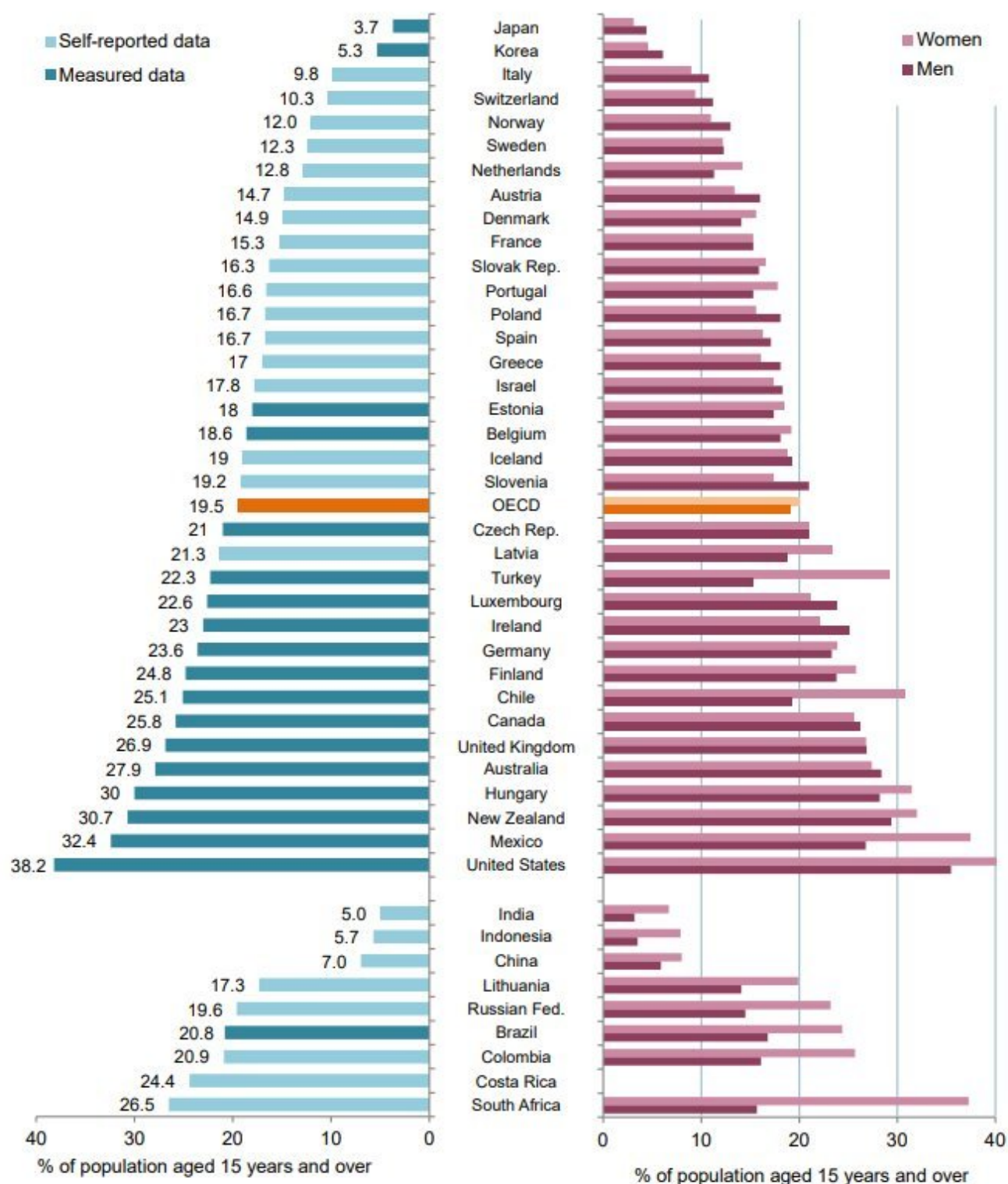■■lifestyle impacts: carehomes VS elderly@home

etc

But, many cancel out.

e.g. 1st■better healthcare, but fatter.

What about a lack of treatment?

Figure 1: Obesity among adults, 2015 or nearest year

Self-reported data
Measured data

Women
Men

	Left (% of population aged 15 years and over)	Country
	3.7	Japan
	5.3	Korea
	9.8	Italy
	10.3	Switzerland
	12.0	Norway
	12.3	Sweden
	12.8	Netherlands
	14.7	Austria
	14.9	Denmark
	15.3	France
	16.3	Slovak Rep.
	16.6	Portugal
	16.7	Poland
	16.7	Spain
	17	Greece
	17.8	Israel
	18	Estonia
	18.6	Belgium
	19	Iceland
	19.2	Slovenia
	19.5	OECD
	21	Czech Rep.
	21.3	Latvia
	22.3	Turkey
	22.6	Luxembourg
	23	Ireland
	23.6	Germany
	24.8	Finland
	25.1	Chile
	25.8	Canada
	26.9	United Kingdom
	27.9	Australia
	30	Hungary
	30.7	New Zealand
	32.4	Mexico
	38.2	United States
	5.0	India
	5.7	Indonesia
	7.0	China
	17.3	Lithuania
	19.6	Russian Fed.
	20.8	Brazil
	20.9	Colombia
	24.4	Costa Rica
	26.5	South Africa

% of population aged 15 years and over

% of population aged 15 years and over

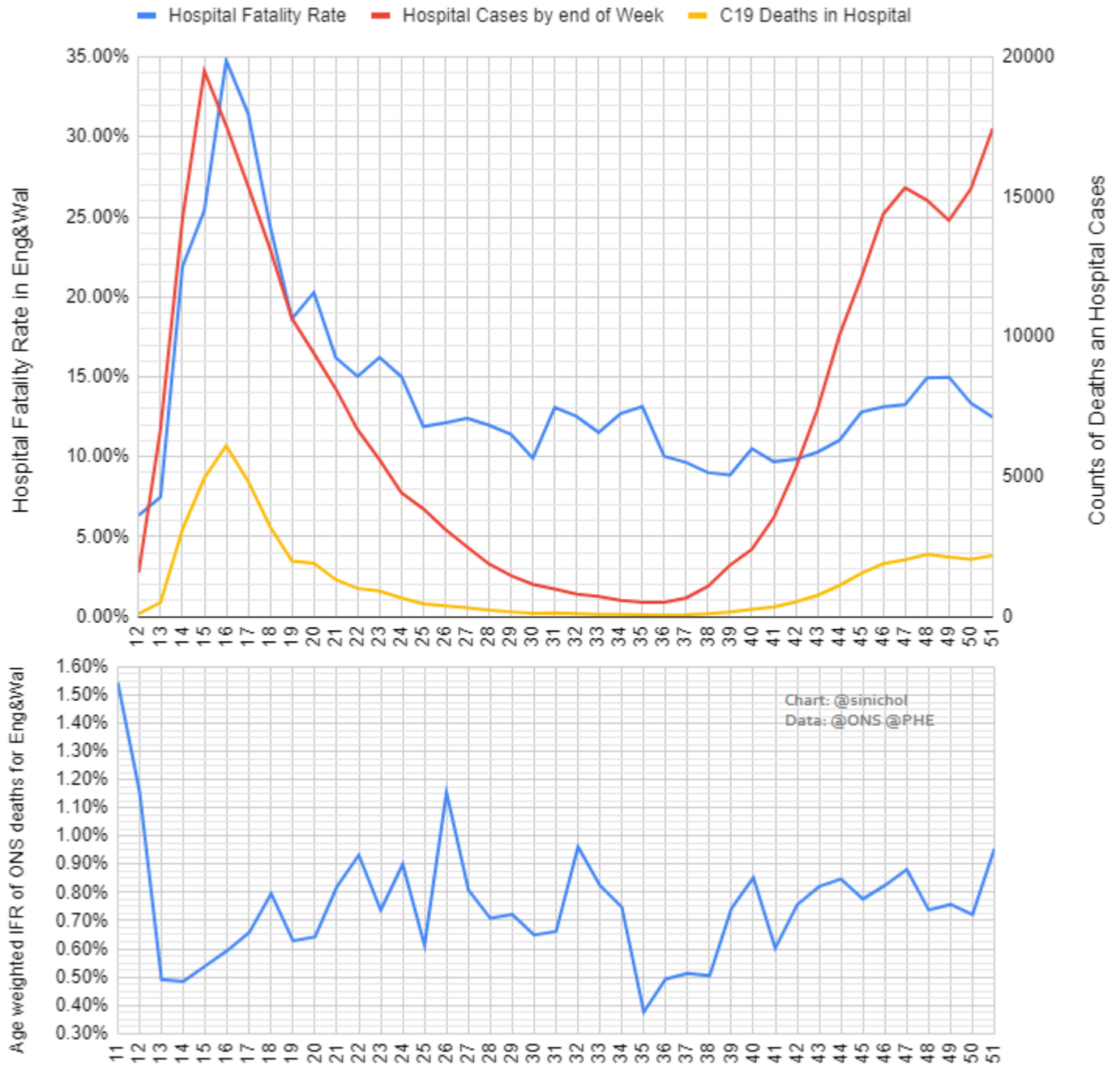Worst case, ■■ HFR is 15%, with 50% needing O2, so 3x die without hosps.

But, ■■■■etc data is hosp data, they don't have near realtime all-cause like 1st■.

So■the IFRs of deaths per band likely far more similar.

We'll see for NYC vs ■■ likely, ■■ not so sure.
■of■

So, keeping that in mind, let's est:
■■Pop. IFR for equal spread (IFRp)
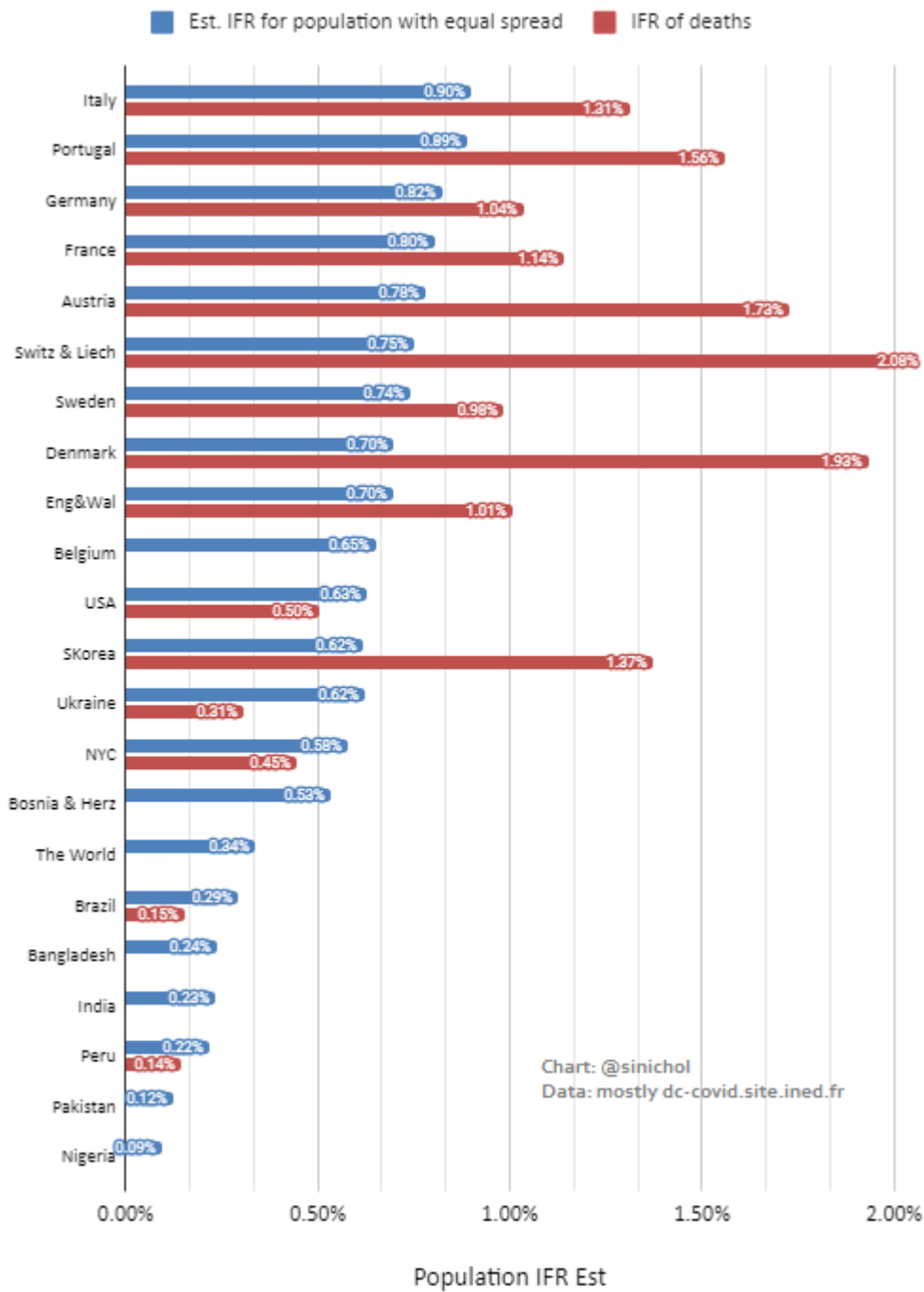■■The wgted IFR of deaths, where avail (IFRd)

Range is:
■■0.9%
■■0.09%

Just 1/10 the pop. capacity!

FYI, a■dIFR/pIFR means they've had relatively■older deaths.
e.g. ■■■■, caveat most have■deaths.
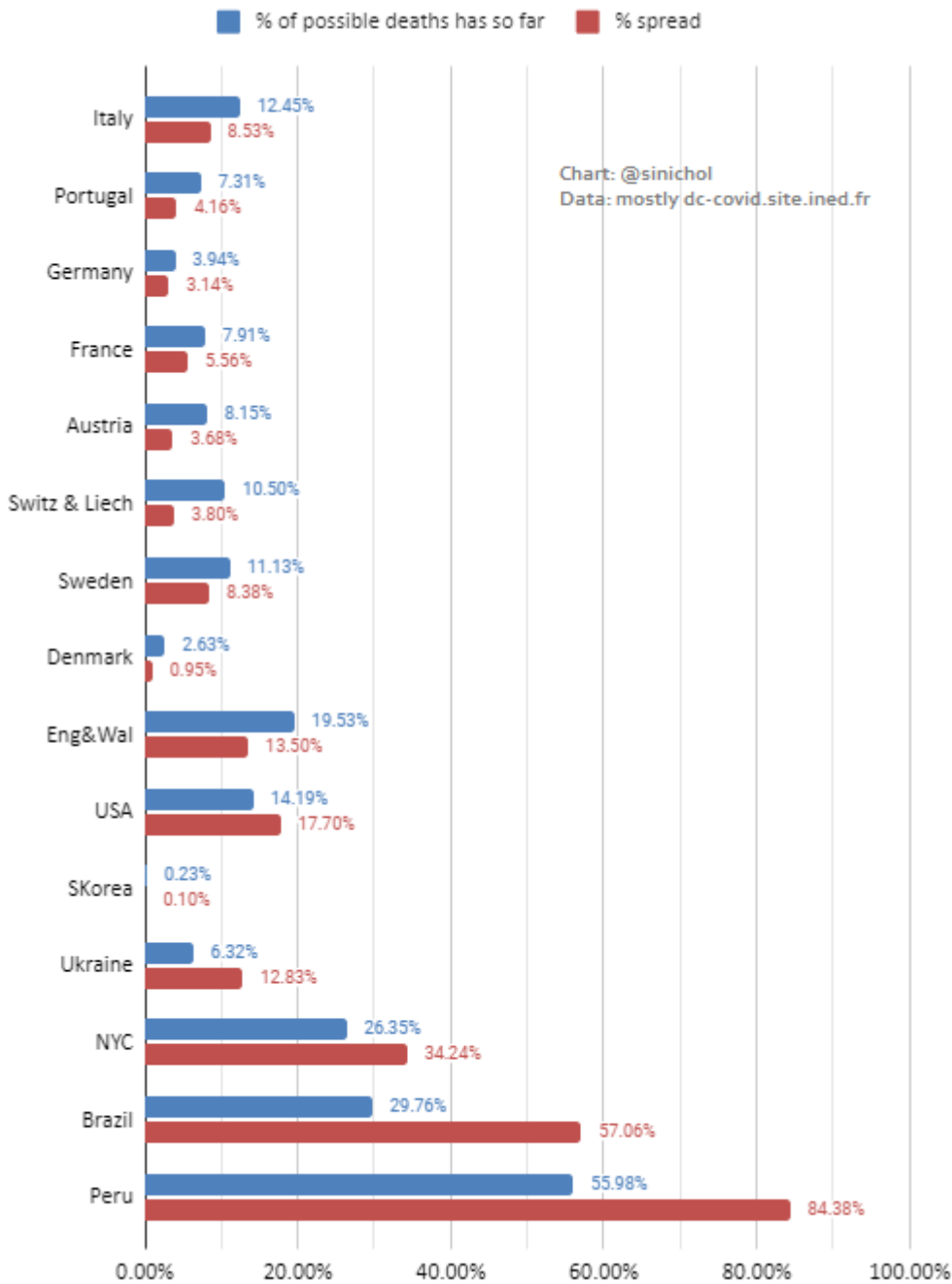
Chart: @sinichol
Data: mostly dc-covid.site.ined.fr

Further:
■■% of possible deaths
■■% of spread

100% susceptibility unlikely. Sure, IgA/Tcell resistance possible, but, regardless:
■■implied spread varies hugely
■■NYC's alone suggests ■■ more spread likely

■■If ■■, not healthcare diffs, likely only one near true HIT.

Finally, here's how each age fared rel. to■■■■■■■■■■■■■■■■■■

■■Per 2/9 1/5 >80, means ■■■■ much■per band

■■NYC worse, likely■density & slower LD speed

■■NYC&■■ so similar!? Favellas as dense? Same work ethic?

■■■■similar to■■■■■■■■■■■■■■■, protected old better

■■■■ more LD, bad at CHs

■■■■ best
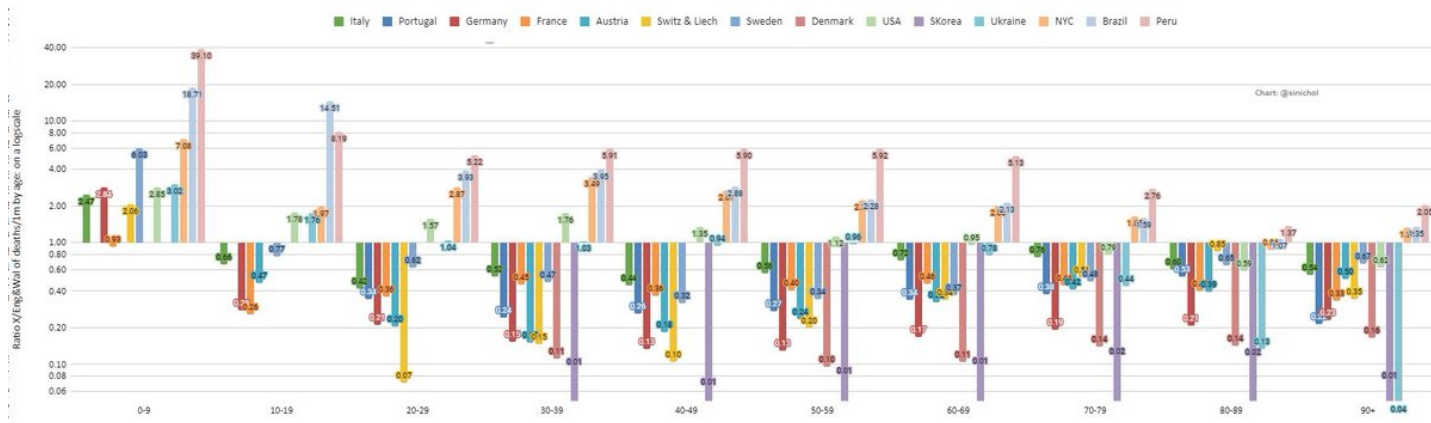
Summary, all correlated, not causal.

But, all comparisons must remove big factors for diff■
e.g. demographics.

Once you do, assumption flaws become evident.
e.g. ■■ either
■■worse healthcare outcomes
■■or, LD was not effective

Reality, spread■in 2nd/3rd■than deaths imply.