

COVID-19 PANDEMIC: AN OVERVIEW

JUAAN BENKYOKAI, 2020

Kathmandu, Nepal

23 July, 2020 (Thursday)

6:00 pm

Presenter



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Life Member, JUAAN

Zoom Link: Meeting ID- 670 1324 1793
PW is not required

SOURCES OF INFORMATION/ ACKNOWLEDGEMENT

- WHO Report



- John Hopkins University Report



- Center for disease control



- Worldometer Report



- MoHP, Nepal Report



- Others- several web sites



Our World
in Data

CORONA MAP OF THE WORLD

193 COUNTRIES+20 TERRITORIES+2 CONVEYANCES

Daily incidence- >2.78 lakh cases

Daily death- >6800

Total cases- > 1.50 core

Total deaths- >6.25 lakh

- USA
- Brazil
- India
- South Africa
- Mexico, Colombia, Argentina



COVID-19 PANDEMIC – CHRONOLOGICAL EVENTS

- 31 Dec 2019, First reported Corona Virus Infection in Wuhan, China
- 7 Jan 2020, Novel Corona Virus (N-CoV)
- 13 Jan 2020, first case in Nepal
- 20 Jan 2020, first case in USA
- 23 Jan 2020,
 - Wuhan lock down, Nearby cities quarantined
 - 18 million people have been placed in isolation
 - WHO praised China for its commitment to minimize the spread to other countries
- 24 Jan 2020, first case in Europe, France
- 30 Jan 2020 first case in India

COVID-19 PANDEMIC – CHRONOLOGICAL EVENTS

- 30 Jan 2020,
 - CDC confirmed the first US case of human to human transmission
 - WHO declared “Global Public Health Emergency”
- 31 Jan 2020, United States declared Corona Virus a “Public Health Emergency”
- 11 Feb 2020, WHO named
 - The disease – COVID-19
 - The Virus- SARS-CoV-2
- 11 Feb 2020, WHO declared Pandemic
- 24 Mar-15 Jun 2020, (82 days) Lockdown in Nepal
- 215 countries and territories

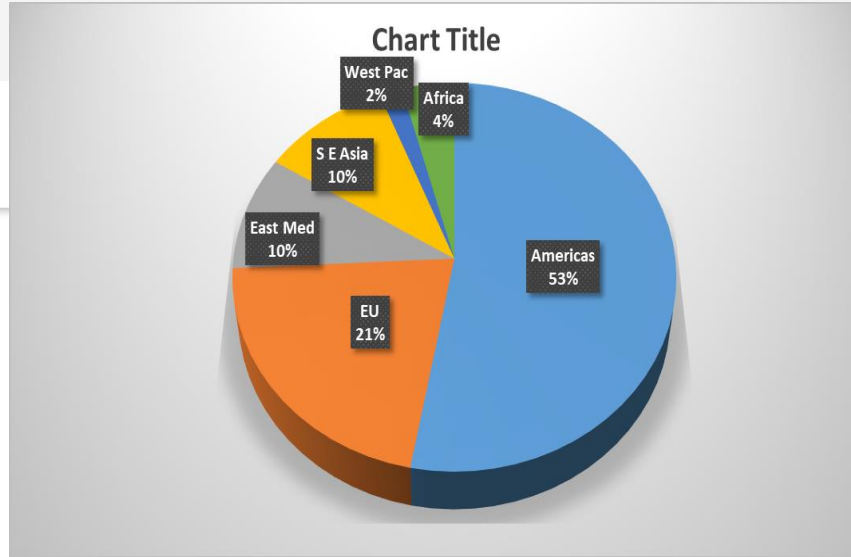
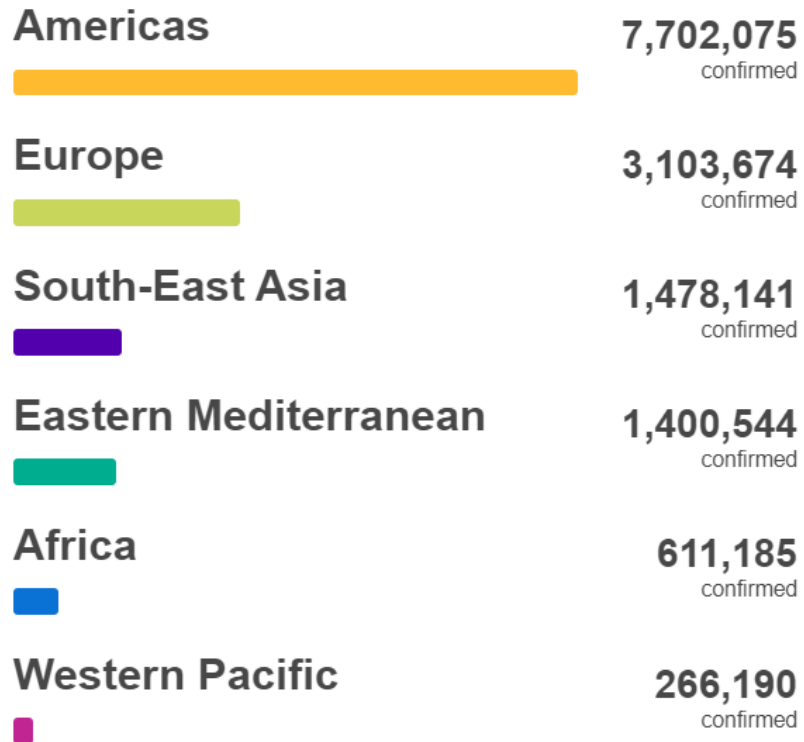
WORLD TREND OF PANDEMIC



Search by Country, Territory, or Area

WHO Coronavirus Disease (COVID-19) Dashboard

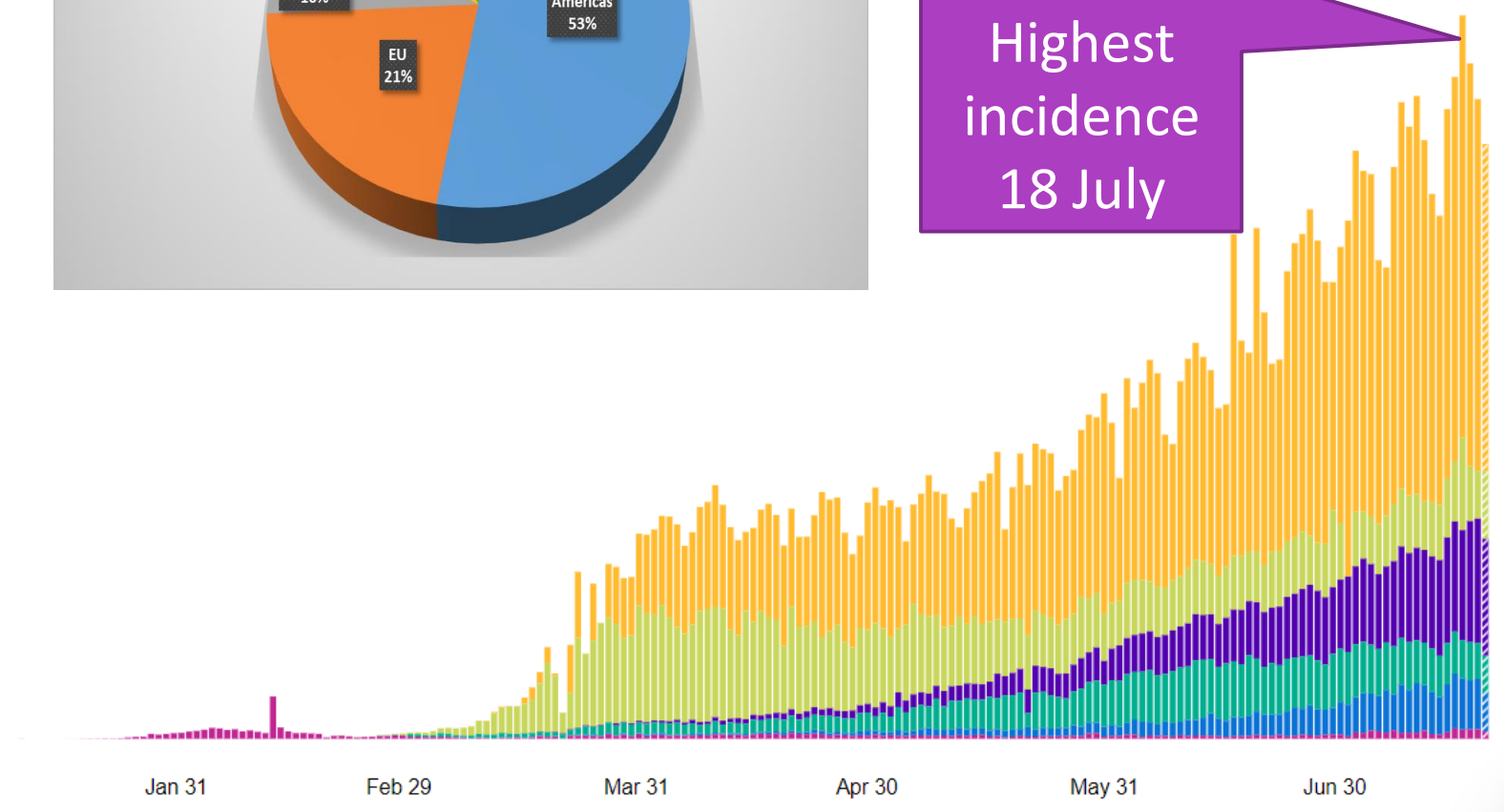
Data last updated: 2020/7/21, 3:49pm CEST



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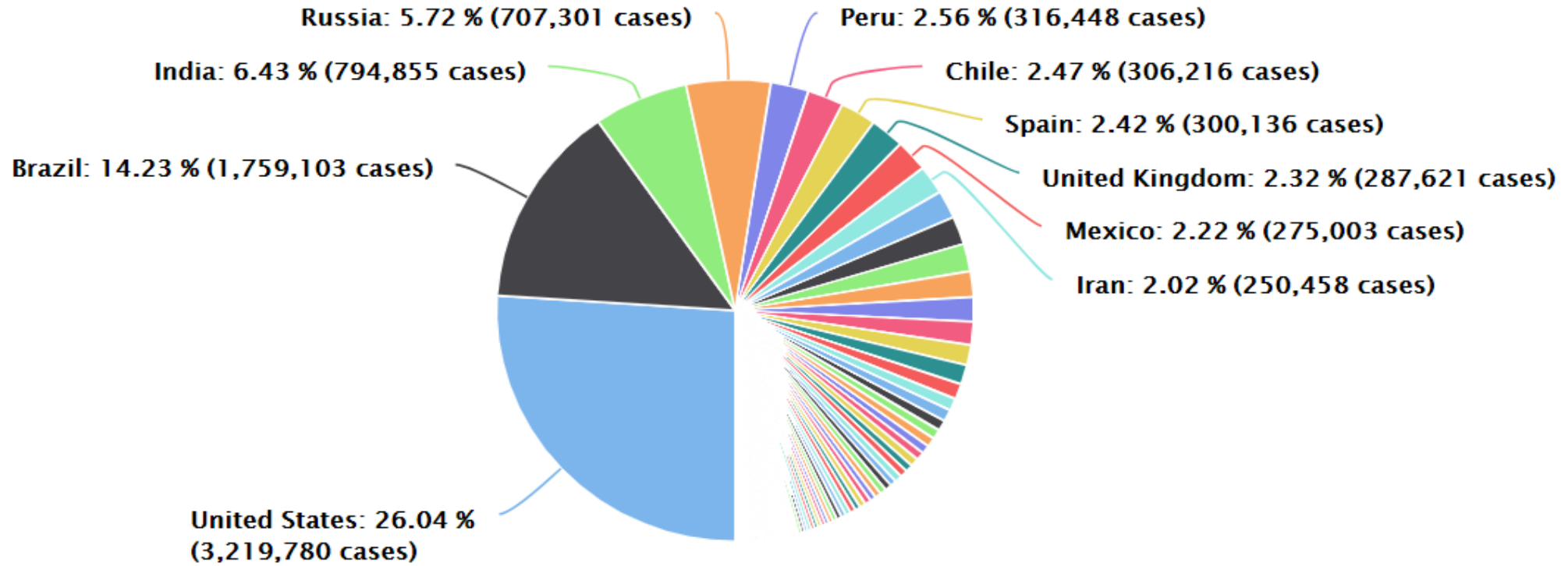
260000/d
Highest incidence
18 July



Source: World Health Organization
Data may be incomplete for the current day or week.

Countries cases distribution

Distribution of cases



COUNTRIES WITH NO COVID

1. North Korea
2. Turkmenistan
3. Solomon Islands
4. Vanuatu
5. Samoa
6. Kiribati
7. Federated States of Micronesia
8. Tonga
9. Marshall Islands
10. Palau
11. Tuvalu
12. Nauru

COUNTRIES WITH NO COVID

- North Korea
 - First country to close its borders, on January 21st
 - Hasn't re-opened since then
 - Strict measures of isolation and quarantine for a month or two
- Turkmenistan
 - Most of the land borders were closed much earlier
 - In early February Turkmenistan cancelled many flights and all flights to and from China

COUNTRIES WITH NO DEATH

- Uganda
- Eritrea
- Mongolia
- Vietnam
- Cambodia
- Laos
- Bhutan
- Papua New Guinea
- Namibia X
- Lesotho X

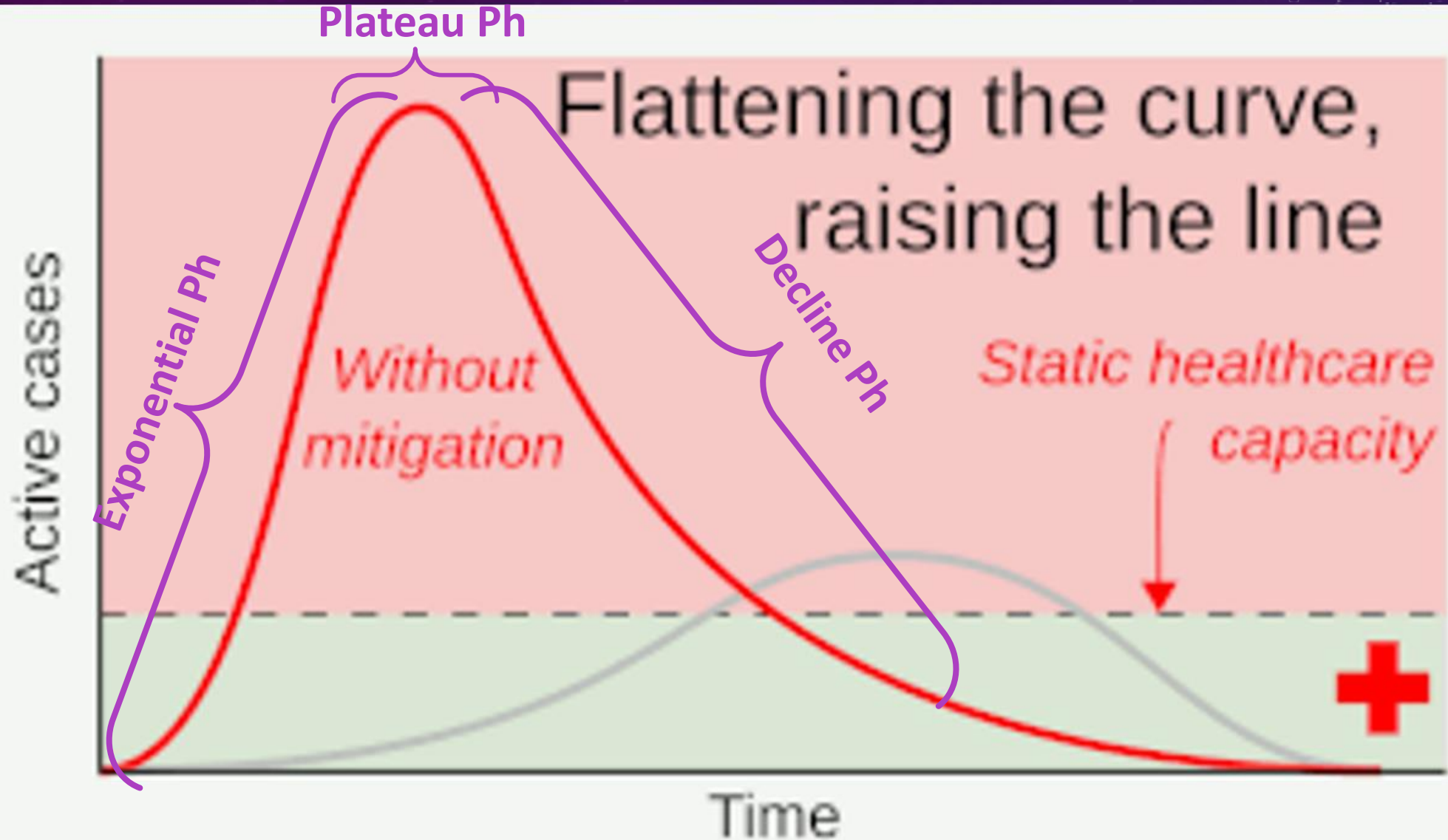
STAGES OF EPIDEMIC

- Stage 1- Initial stage
 - imported cases from epidemic areas
 - easy to control- isolation, quarantine
- Stage 2- Local transmission
 - source of infection is there
 - one infected person transmitting others
 - best stage of control by tracking and tracing, restriction

STAGES OF EPIDEMIC

- Stage 3- Community transmission
 - no known source of infection
 - people without any risk factor turn positive
 - Mass Screening, Mass Quarantine, Mass Isolation
- Stage 4- Full blown epidemic
 - wait for herd immunity
 - $\frac{2}{3}$ of population has to be infected

EPIDEMIC CURVE



WORLD TREND OF COVID-19



Search by Country, Territory, or Area



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WHO Coronavirus Disease (COVID-19) Dashboard

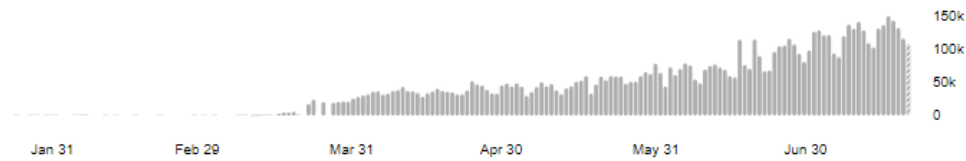
Data last updated: 2020/7/22, 6:18pm CEST

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Americas

7,811,127

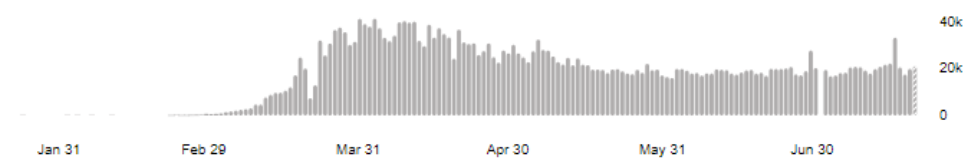
confirmed cases



Europe

3,124,701

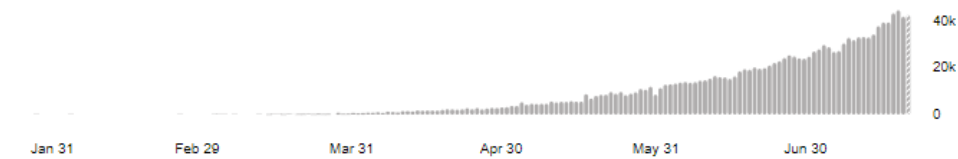
confirmed cases



South-East Asia

1,520,780

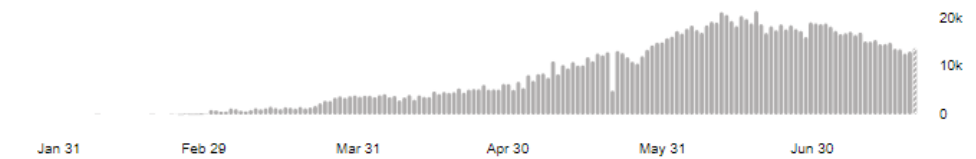
confirmed cases



Eastern Mediterranean

1,414,462

confirmed cases



Africa

623,851

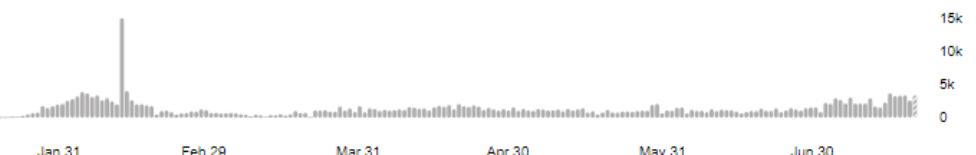
confirmed cases



Western Pacific

269,594

confirmed cases



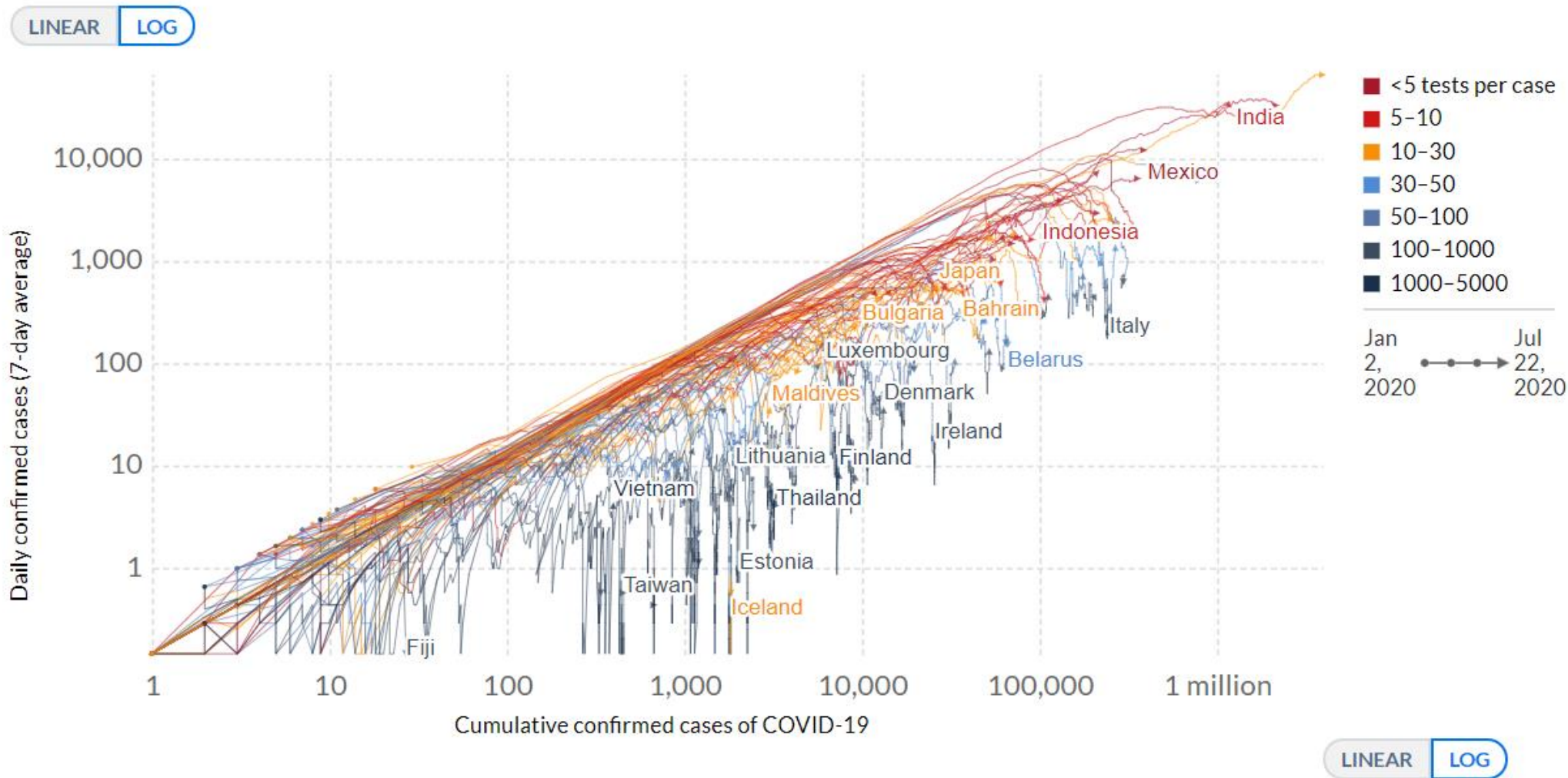
Highest Incidence Rate	Countries	Daily new cases	Daily Incidence Rate	Covid World ranking
1	Argentina	5700	3.92%	20 th
2	Colombia	7000	3.33%	16 th
3	India	45000	3.20%	3 rd
4	Philippines	1600	2.75%	30 th
5	Iraq	2700	2.53%	23 rd

Daily Incidence Rate=
New cases/Total cases

- World Average- 1.58%
- Nepal- 0.83%
- EU- 0.51%
- USA- 1.66%
- China- minimal

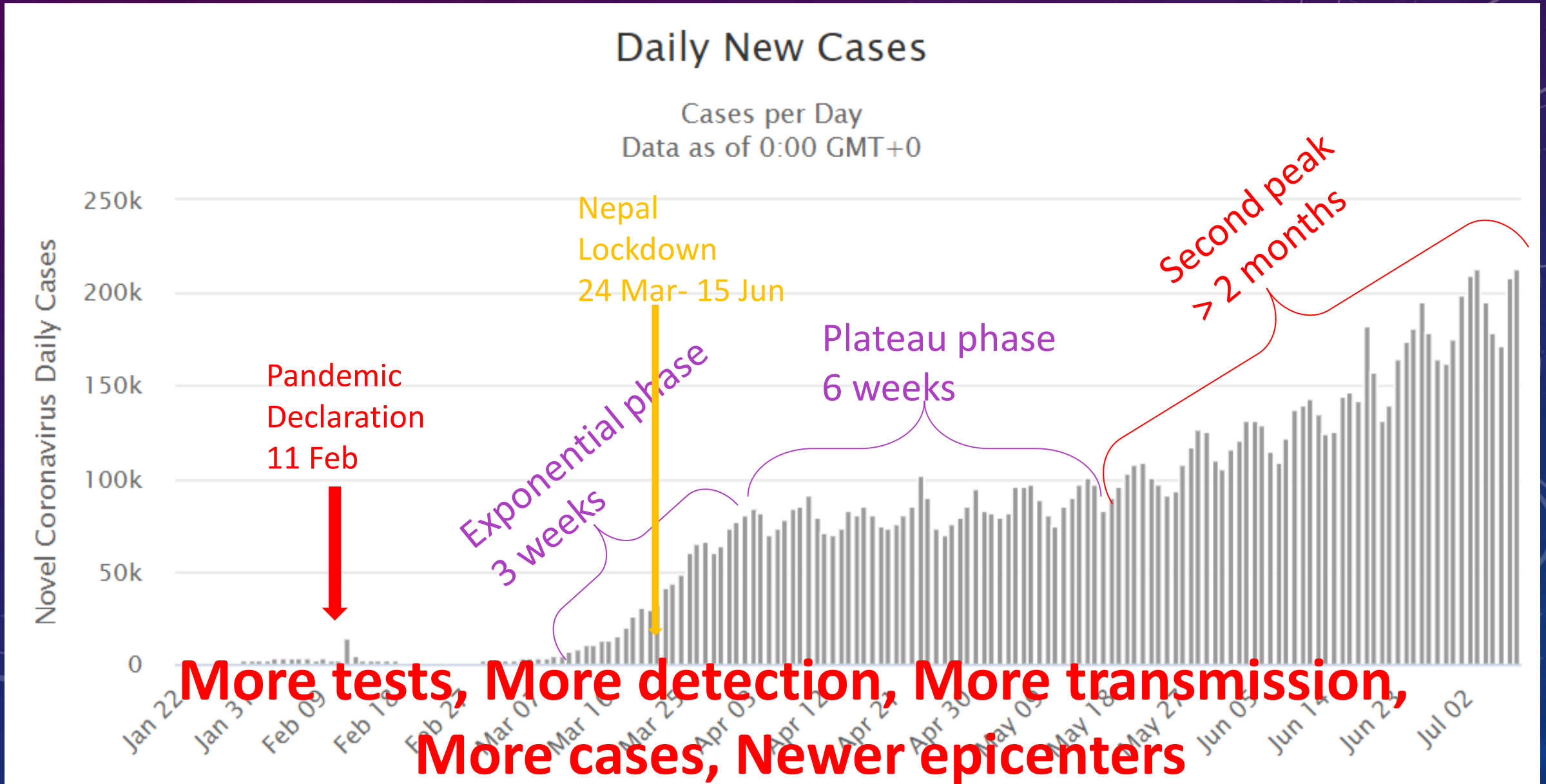
COVID-19: Daily new confirmed cases vs cumulative cases

The line is blue when a country performs many tests relative to the size of the outbreak. Red indicates a low number of tests per case. This suggests that the true number of infections may be far higher than the number of confirmed cases.

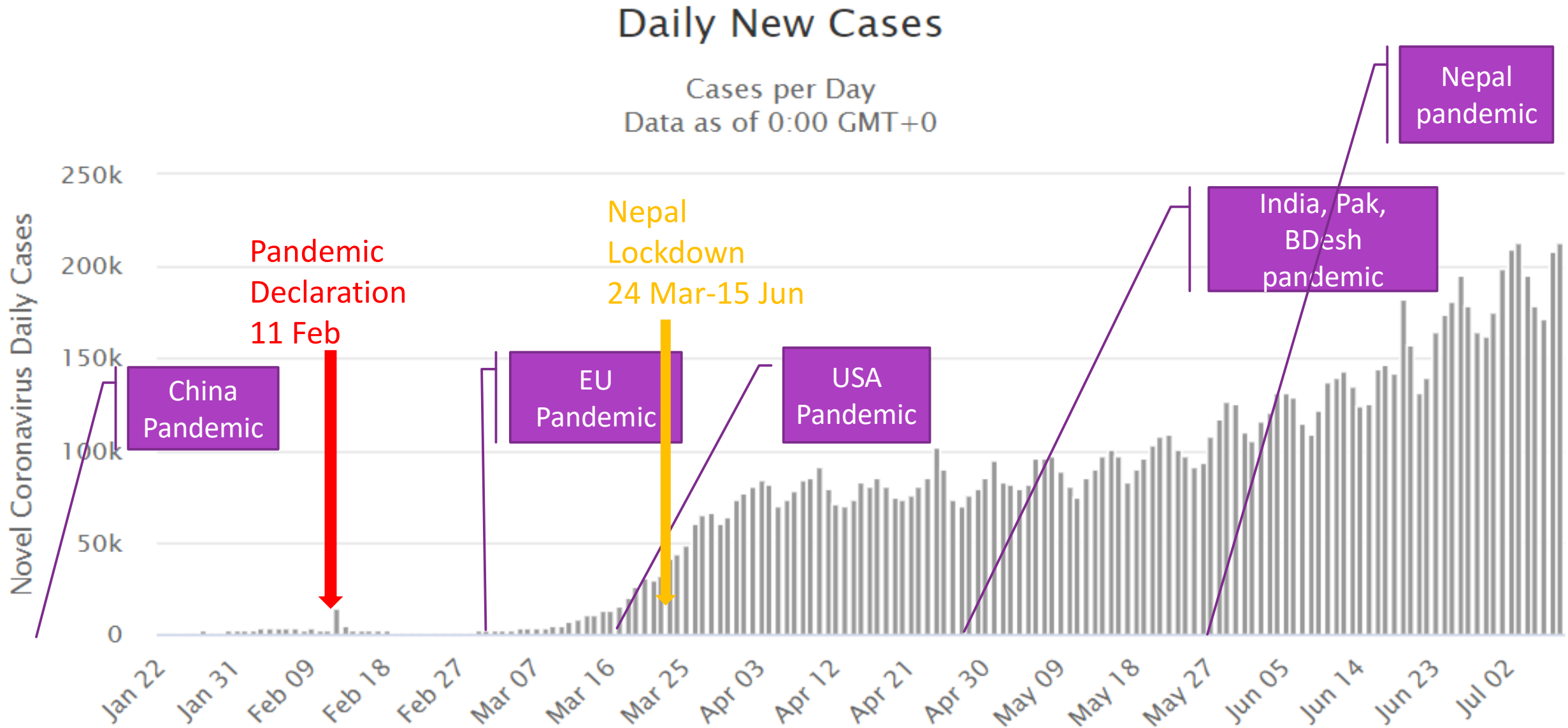


Source: European CDC - Situation Update Worldwide - Last updated 22 July, 10:38 (London time), Official data collated by Our World in Data CC BY
Note: Only countries for which testing data is available are included. Details about this data can be found at OurWorldInData.org/coronavirus-testing.

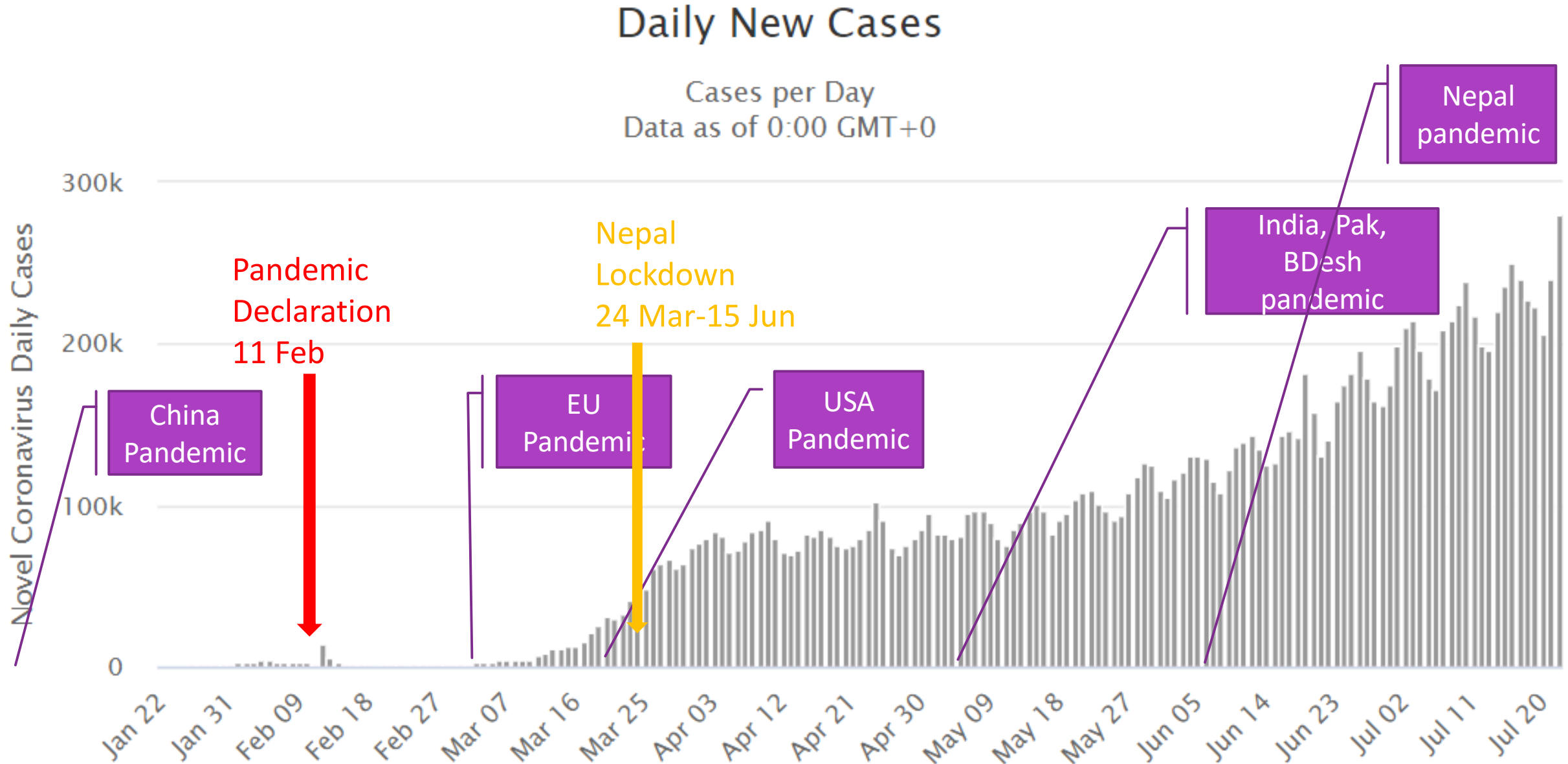
COVID-19 – WORLD TREND, >10 ML^N PEOPLE AFFECTED



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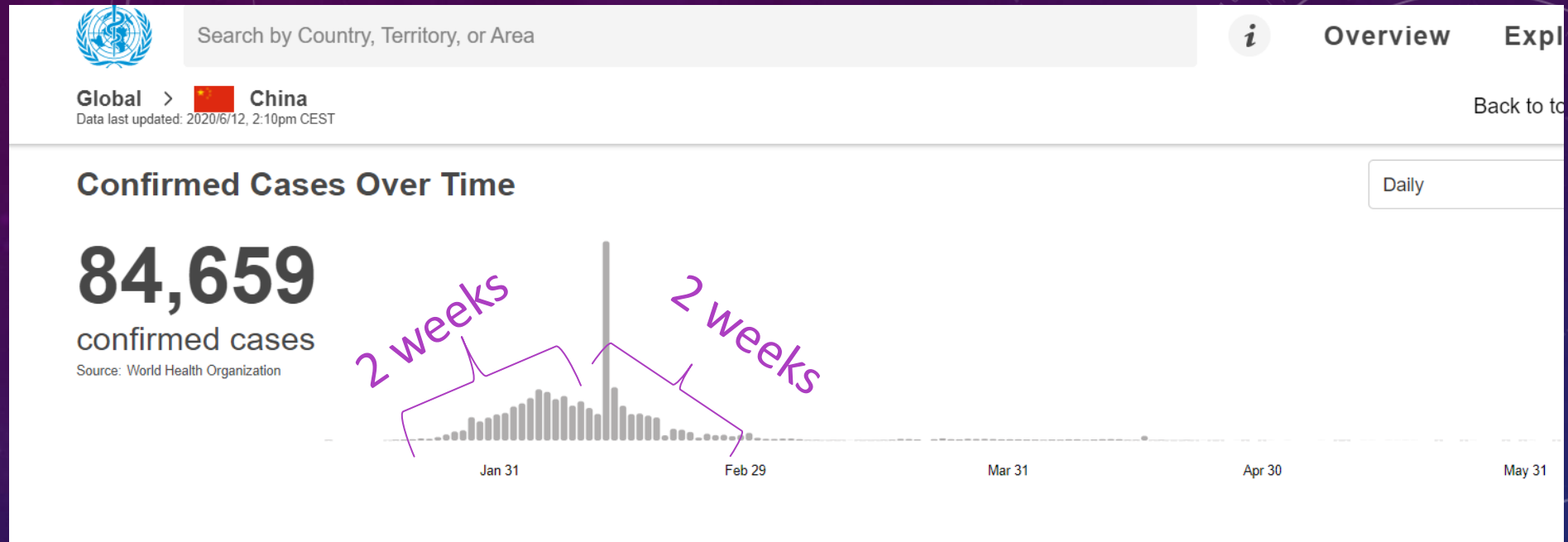


COVID-19 – WORLD TREND, >10 ML^N PEOPLE AFFECTED



WORLD TREND

CHINA

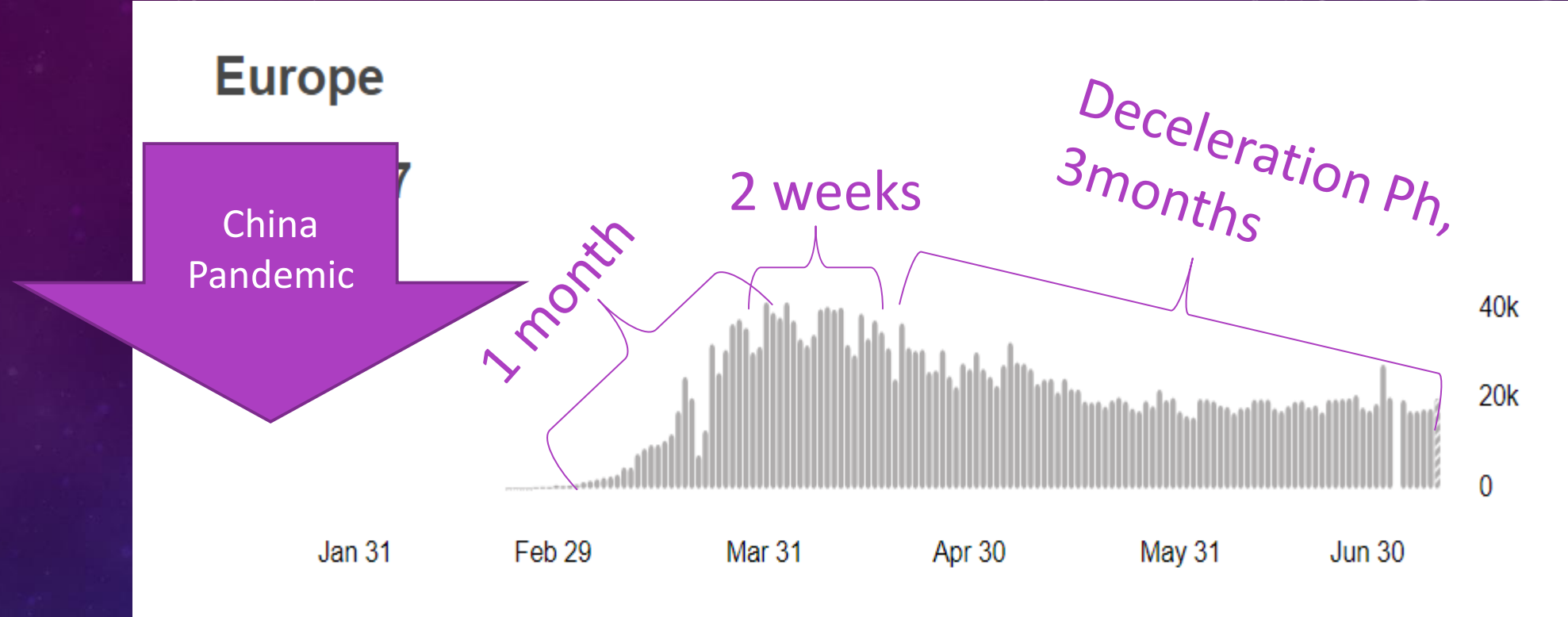


- Start of pandemic
 - Earliest
 - Early –Mid JAN 2020
- Pandemic curve-acute
- Exponential phase- 2 Wks
- Plateau phase- No/very short
- Decline phase
 - Immediate
 - Very short- few weeks
- Social life- New Normal

Wuhan lockdown on 23 Jan, 18 Mln quarantined

An example of good control of an epidemic

EUROPE

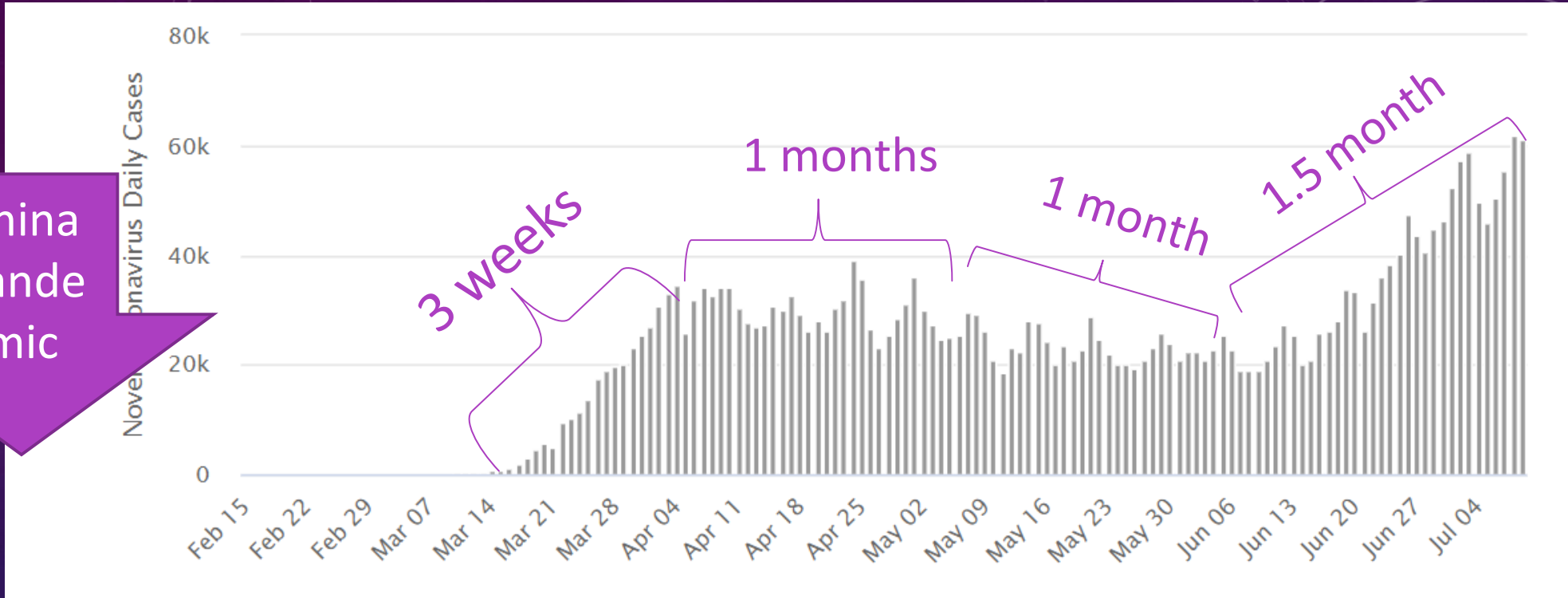


- Start of pandemic
 - Later- 2 months
 - Late FEB, 2020
- Exponential phase
 - 1 month

- Plateau phase- 2 weeks
- Decline phase- >3 months- Early, Slow, Prolonged
- Social life- Near New Normal

An example of typical epidemic curve with some mitigation- Mass Screening, Mass Quarantine, Mass Isolation

USA



- Start of pandemic
 - Late - <3 months
 - Mid March, 2020
- Exponential phase- 1 month
- Plateau phase- 1.5 months
- Decline phase- expected to be
 - Slow
 - Prolonged
- Social life- still jeopardized

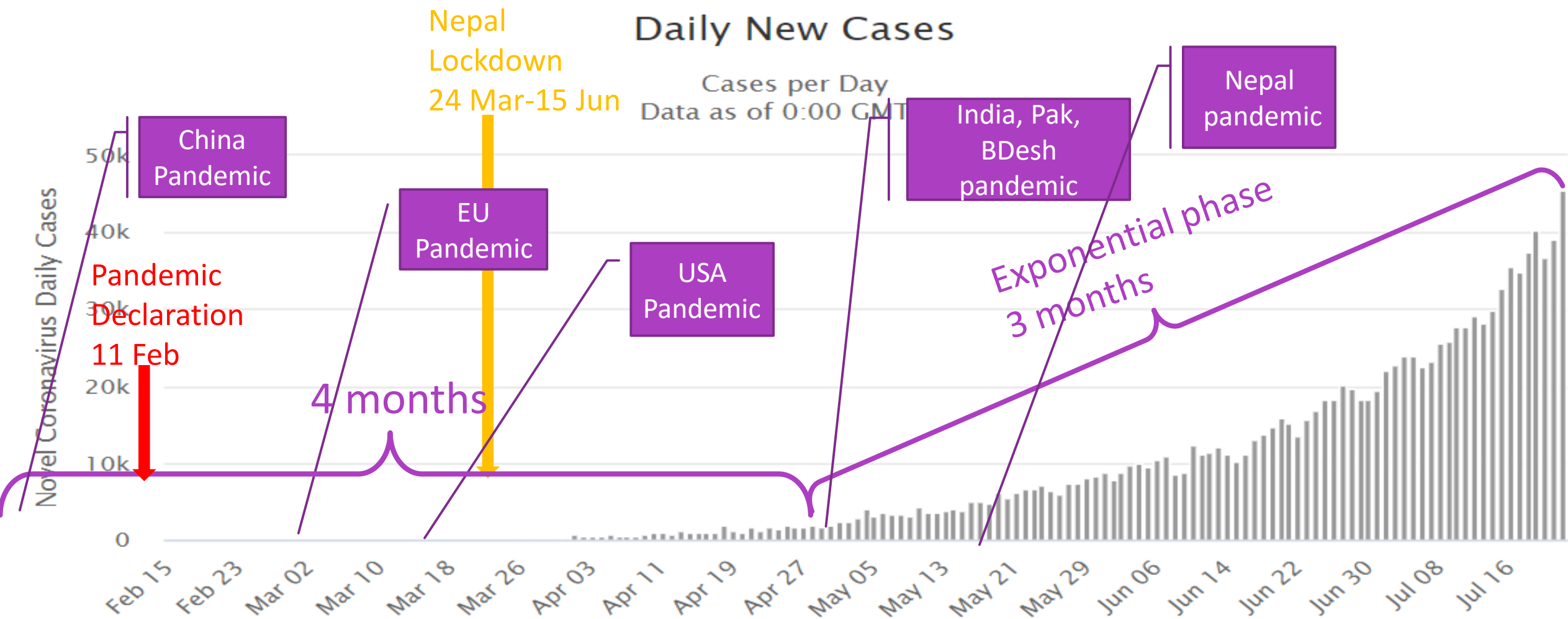
An example of poorly controlled epidemic without adequate mitigation

SOUTH ASIAN PERSPECTIVE

- India, Pakistan, Bangladesh, Afghanistan, Nepal, Maldives, Sri Lanka, Bhutan
- India, Pakistan, Bangladesh
 - Significantly rising trend of daily new cases and daily deaths
- Bhutan – best controlled
 - Very few new cases reported, <92 cases, 0 death
- Nepal- highly vulnerable
 - Very high incidence rate, recently due to cross-border movement
 - Poor health care system, Poor public awareness, Poor resources

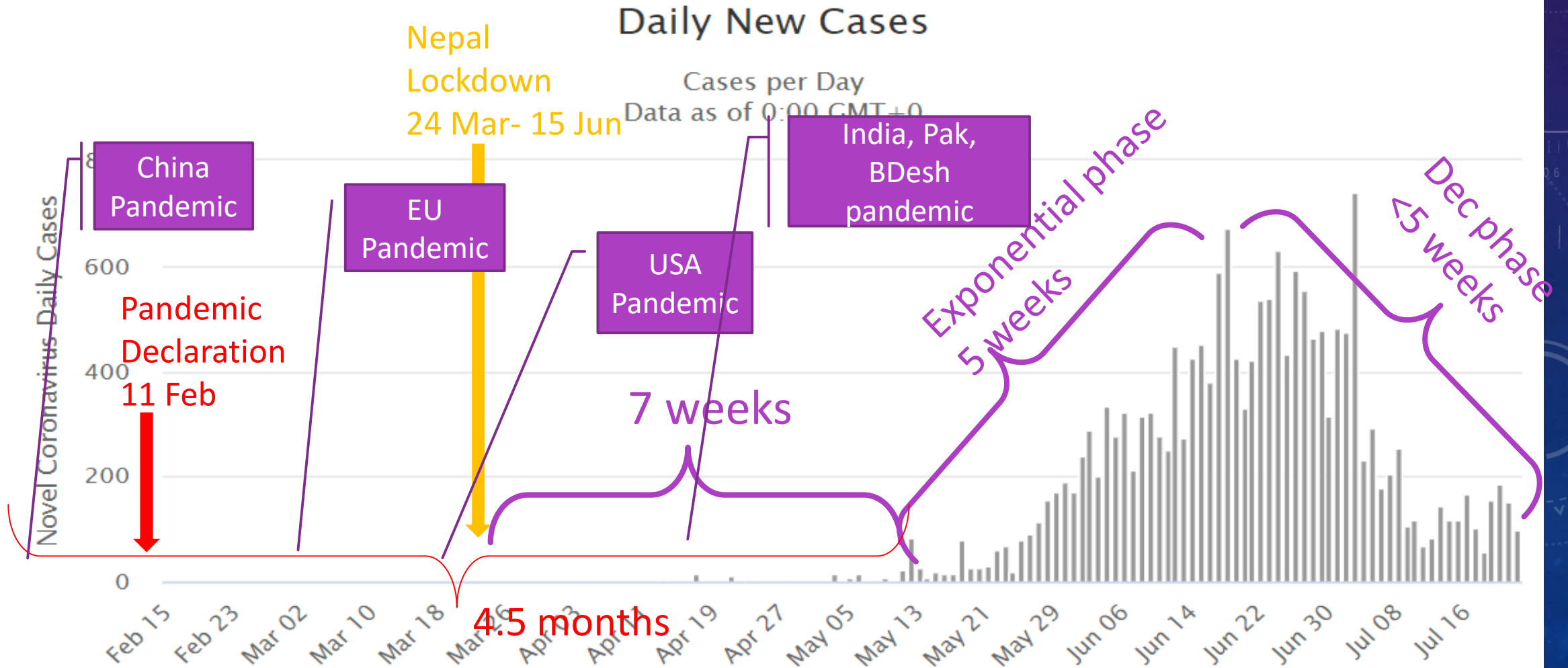
COVID-19 IN INDIA- <1240000 CASES, >30000 DEATHS (JULY 23)

Daily New Cases in India



COVID-19 IN NEPAL - >16500 CASES, 35 DEATHS

Daily New Cases in Nepal



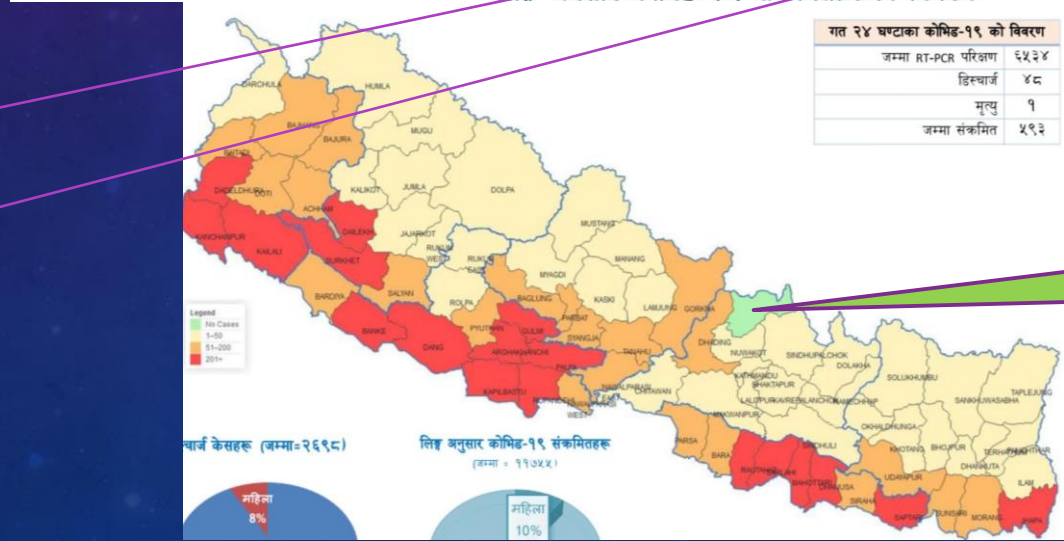
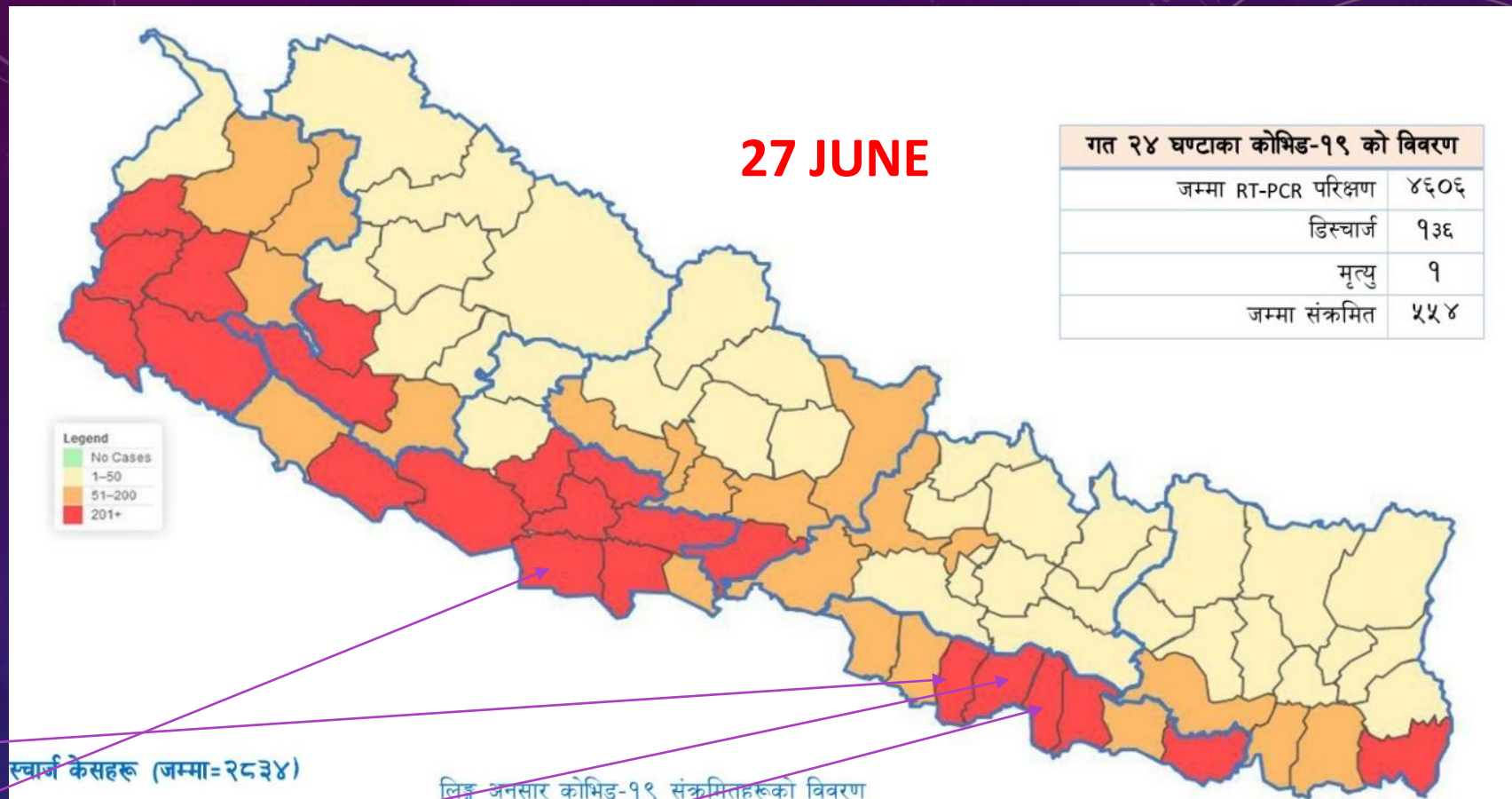
PANDEMIC IN NEPAL

MOPH, Nepal government

- >94% of cases are imported cases
- Nepal is still in stage 2 of epidemic
 - Children and old people less affected
 - Females are less effected

PANDEMIC IN NEPAL

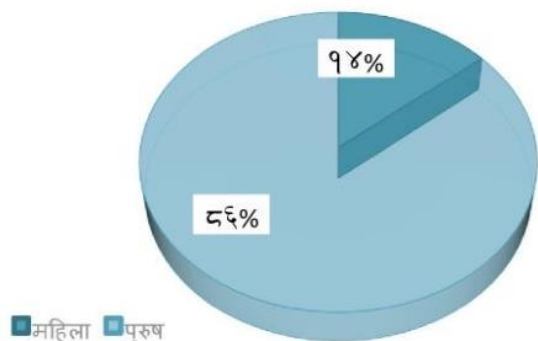
- 77/77 districts affected
- Rasuwa latest
- Most affected districts
 - Rautahat-1146
 - Kapilvastu ->700
 - Sarlahi- 614
 - Mahottari- 527



NEPAL-

COVID CONTROL

लिङ्ग अनुसार कोभिड-१९ संक्रमितहरूको विवरण



■ महिला ■ पुरुष



नेपाल सरकार

स्वास्थ्य तथा जनसंख्या मन्त्रालय

SitRep

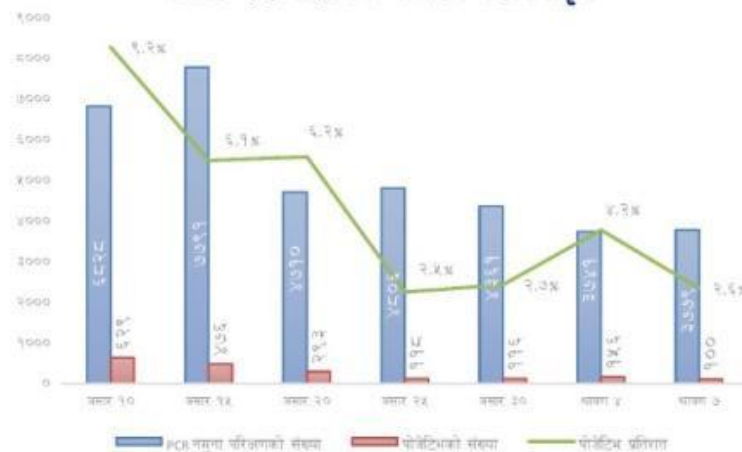
#१६४

कोभिड-१९ (COVID-19) सम्बन्धी स्वास्थ्य क्षेत्रको प्रतिकार्य

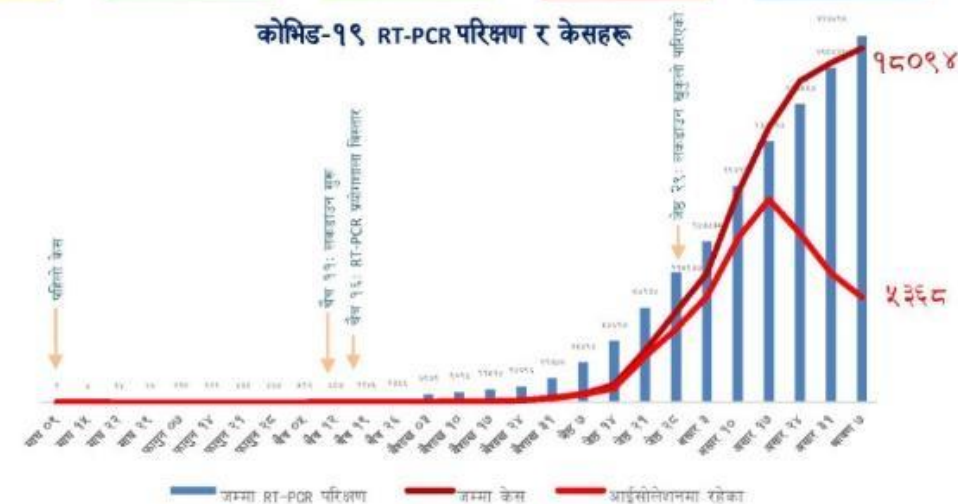
बुधबार | ७ श्रावण २०७७ (२२ जुलाई २०२०)

RT-PCR परिक्षण	RT-PCR परिक्षण /१० लाखमा	जम्मा पोजेटिभ केसहरू	आइसोलेशनमा पुटी भएका केसहरू	निको भएका केसहरू	निको भएको दर	मृत्यु	क्वारेन्टाइनमा रहेका व्यक्तिहरू
३२७६१४	११२३३	१८०९४	५३६८	१२६८४	७०.१%	४२	२०८४२

कोभिड-१९ परिक्षणमा पोजेटिभ दरको प्रवृत्ति



कोभिड-१९ RT-PCR परिक्षण र केसहरू



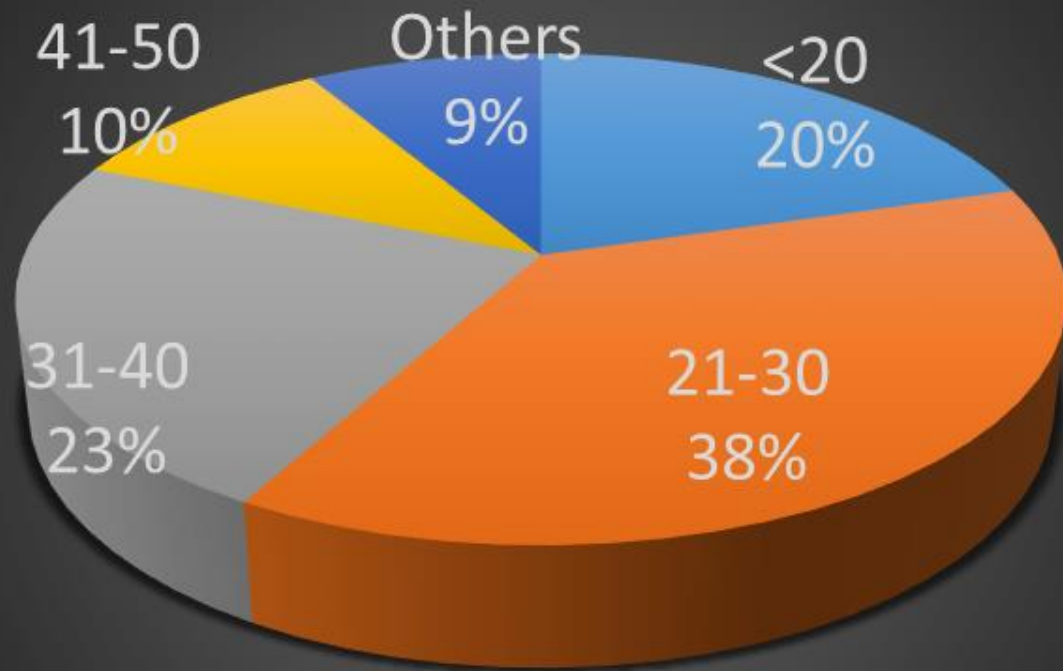
गत २४ घण्टाका कोभिड-१९ को विवरण

जम्मा RT-PCR परिक्षण	३७७९
निको भएको	२०७
मृत्यु	२
संक्रमित	१००
RT-PCR परिक्षण मध्ये संक्रमण दर (प्रतिशतमा)	२.६

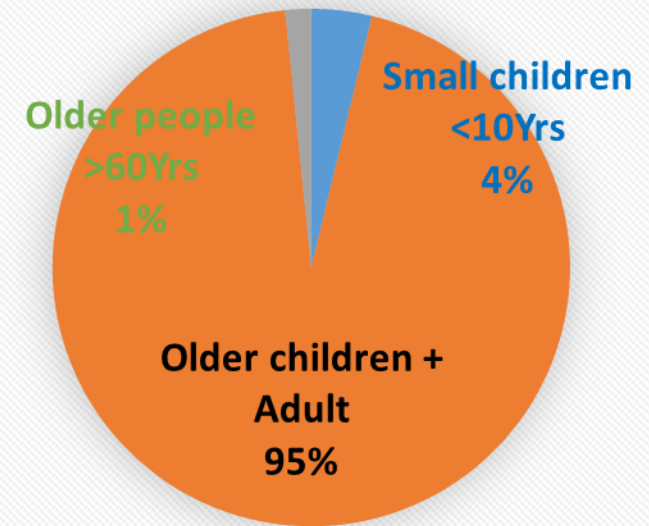
उमेर समूह अनुसार संक्रमितहरूको विवरण



AGE DISTRIBUTION OF COVID IN NEPAL (JULY 23)



Age Distribution



July 22 Covid Free Districts

Dhankuta
Panchthar
Bhojpur
sankhuasabha
Rasua
Manag
Mustang

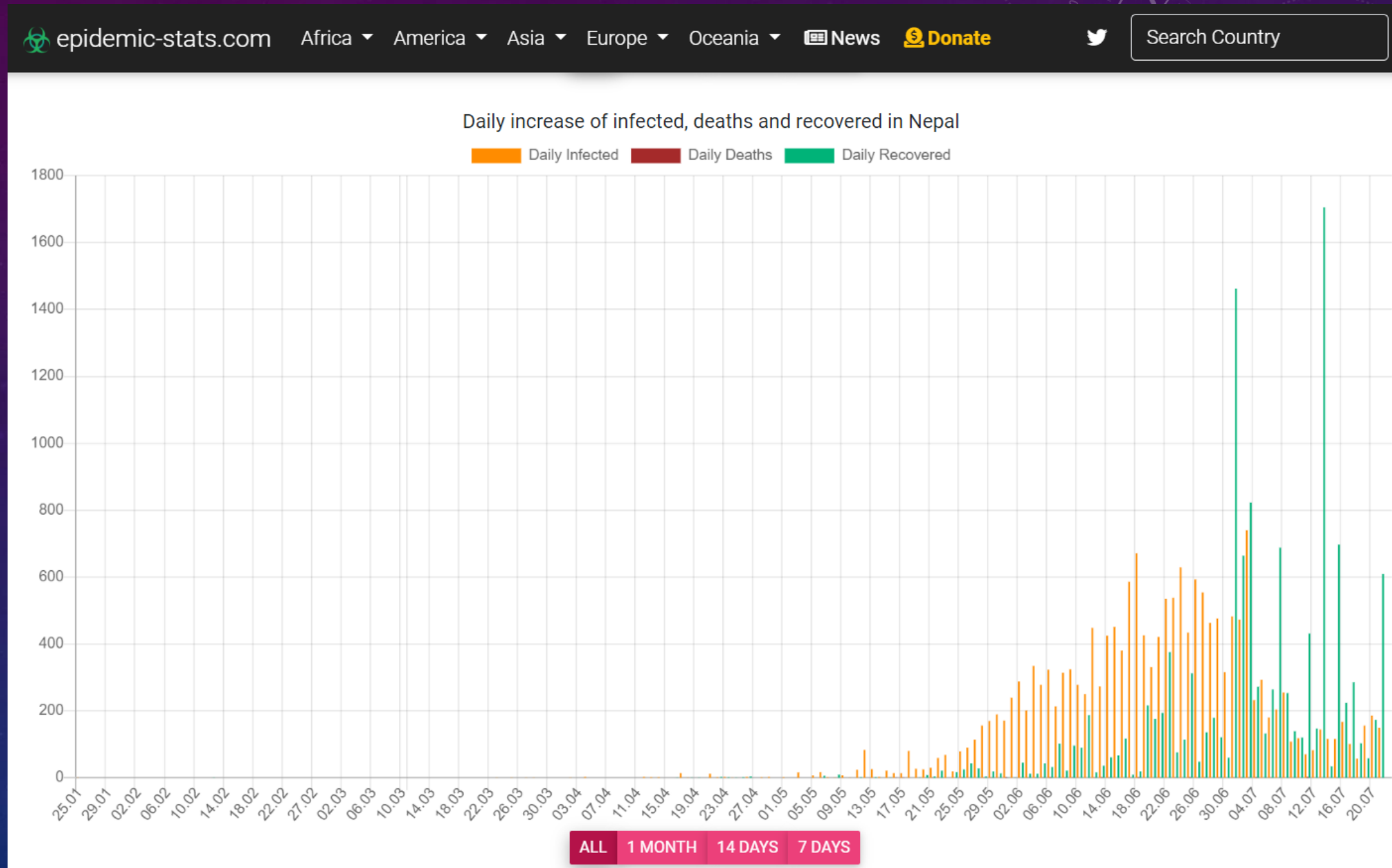
जिल्ला अनुसार कोभिड-१९ का सक्रिय संक्रमितहरूको विवरण

प्रदेश अनुसार कोभिड-१९ का सक्रिय संक्रमित, डिस्चार्ज र मृत्युको विवरण

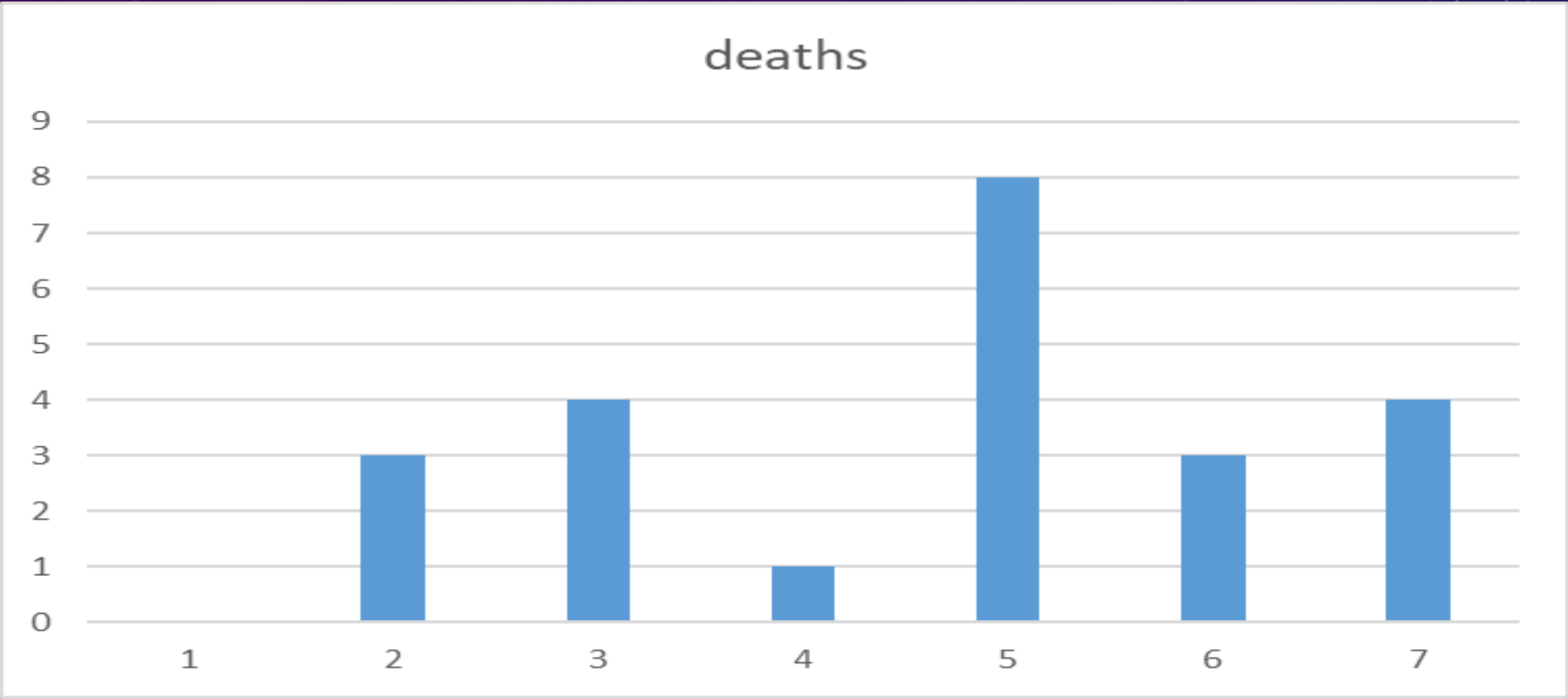


*एक चिनिया नागरिकको मृत्यु पनि समावेश गरिएको

COVID IN NEPAL



COVID DEATHS IN NEPAL- 7 PROVINCES



COVID IN SAARC

Highest tests in Denmark, Russia,
UK and Spain- >160000/M Popⁿ
USA-120000



नेपाल सरकार

स्वास्थ्य तथा जनसंख्या मन्त्रालय

SitRep

#१५२

श्रात: <http://www.covid19-sdmc.org/>

प्रति १० लाख	अफगानिस्तान	बंगलादेश	भुटान	भारत	माल्दिभ्स	नेपाल	पाकिस्तान	श्रीलंका
परिक्षण	२१३४	६१७६	५२२०२	९९८९	१२३१२७	१०८२७	७७८८	६३२७
संक्रिमित	९०६	१२२६	११३	७८१	५४१६	६००	११९२	१२६
मृत्यु	३०	१६	०	१९	२८	१.४	२५	०.५

DAILY TEST

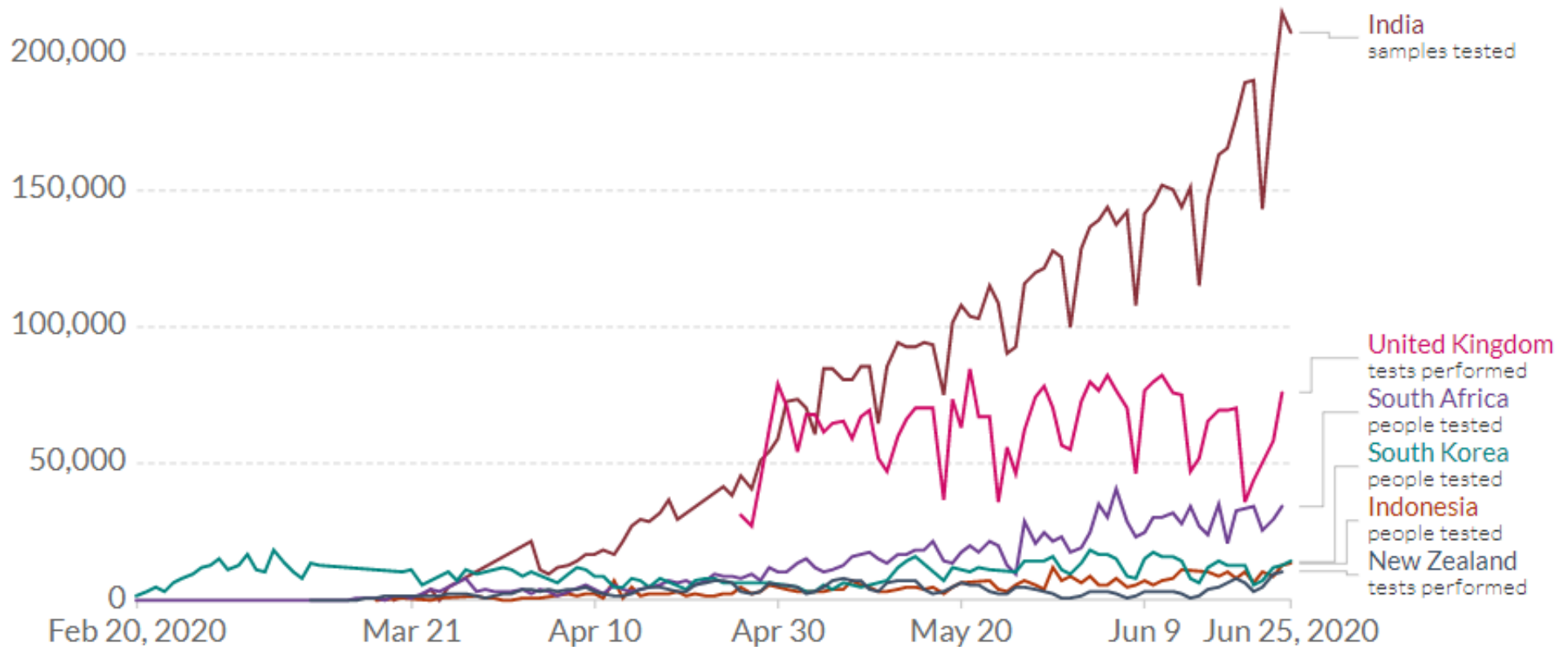
Daily COVID-19 tests

Because not all countries report testing data on a daily basis, daily test figures are not available for some countries in our dataset.

Our World
in Data

LINEAR LOG

+ Add country



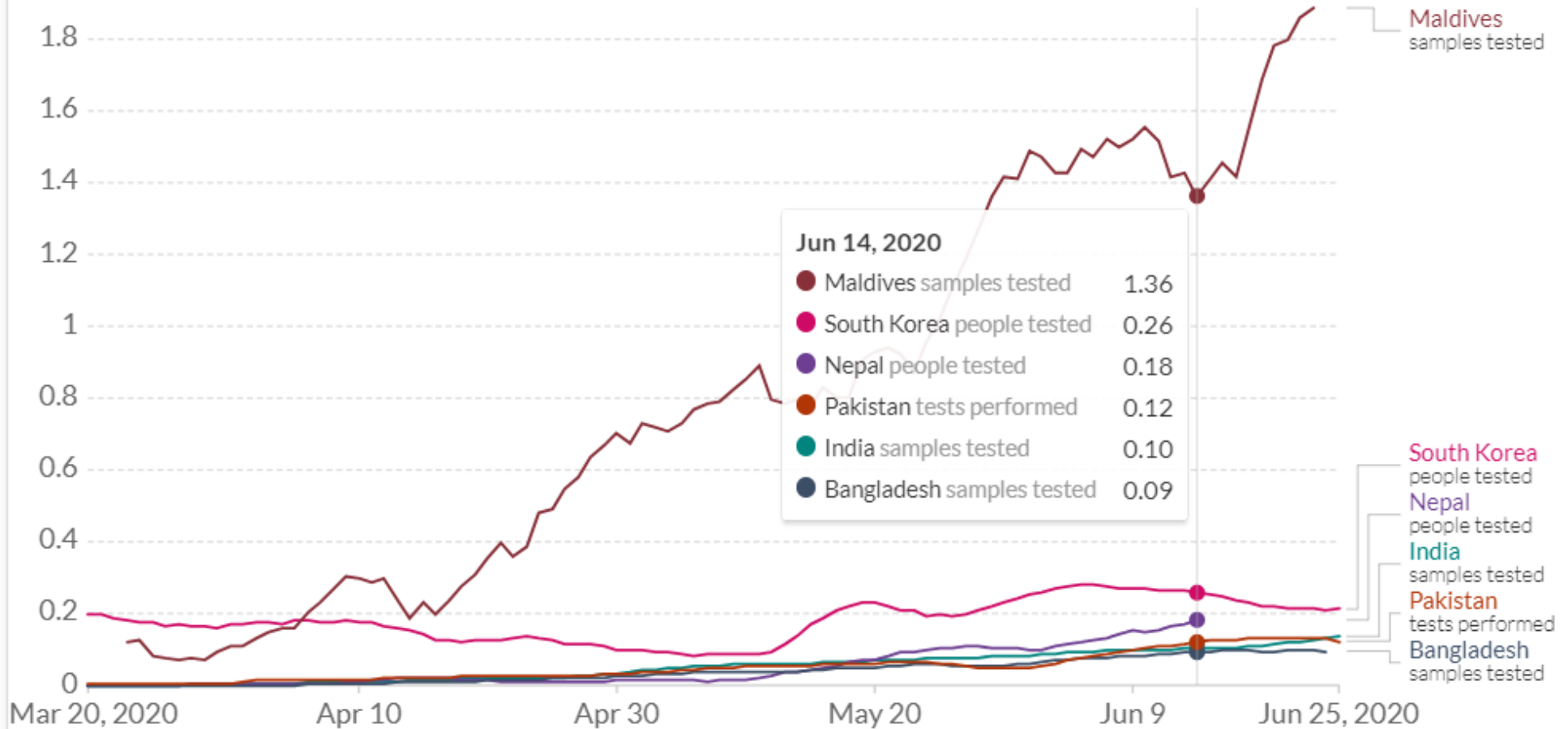
TEST POPULATION RATIO

Daily COVID-19 tests per thousand people

The figures are given as a rolling 7-day average.

Our World
in Data

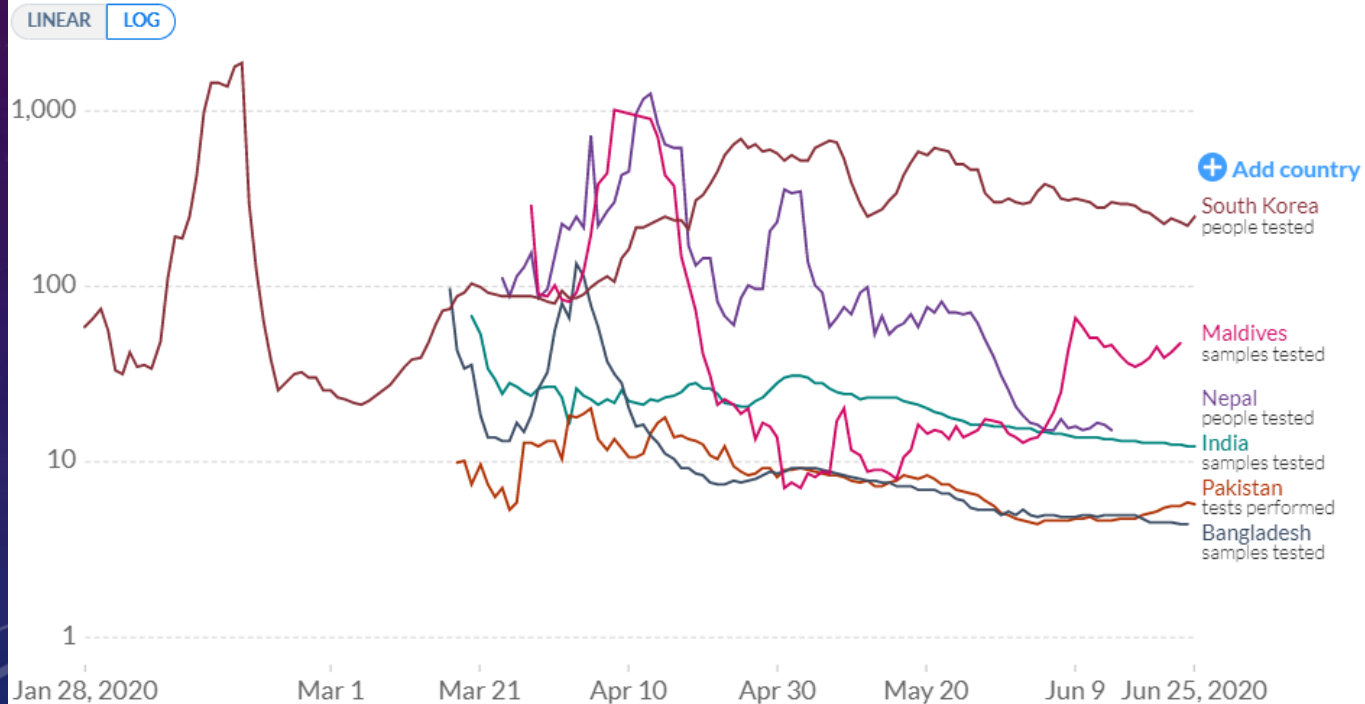
+ Add country



TEST PER NEW CASE

Tests conducted per new confirmed case of COVID-19

Shown is the daily number of tests for each new confirmed case. This is a rolling 7-day average.



To be able to properly monitor the spread of the virus, countries with more widespread outbreaks need to do more testing.

So one important way to understand if countries are testing sufficiently is to ask: **How many tests does a country do to find one COVID-19 case?** This is what the map chart here shows.

We see enormous differences across countries.

- Some countries, like Australia, South Korea and Slovenia do hundreds, or even thousands of tests for each case they find.
- Others, such as Mexico and Nigeria, only do a handful of tests – five or fewer – for every confirmed case.

Countries that do very few tests per confirmed case are unlikely to be testing widely enough to find all cases. The WHO has suggested around 10 – 30 tests per confirmed case as a general benchmark of adequate testing.¹

CONCLUSIONS

- South Asia is currently a new epicenter of COVID-19
- Nepal is highly vulnerable at the moment
- However, there are signs of deceleration phase
- **Test, Track, Trace and Test**
- Self protection is the best policy

CONCLUSIONS

Researchers, Clinicians, Practitioners

- Continue investigations on Covid
- We need to share information
- Disseminate known and proven facts
 - to medical colleagues
 - to patients and their families

So that we can overcome the pandemic easily, sooner

धन्यवाद

ありかざとう

Thank you