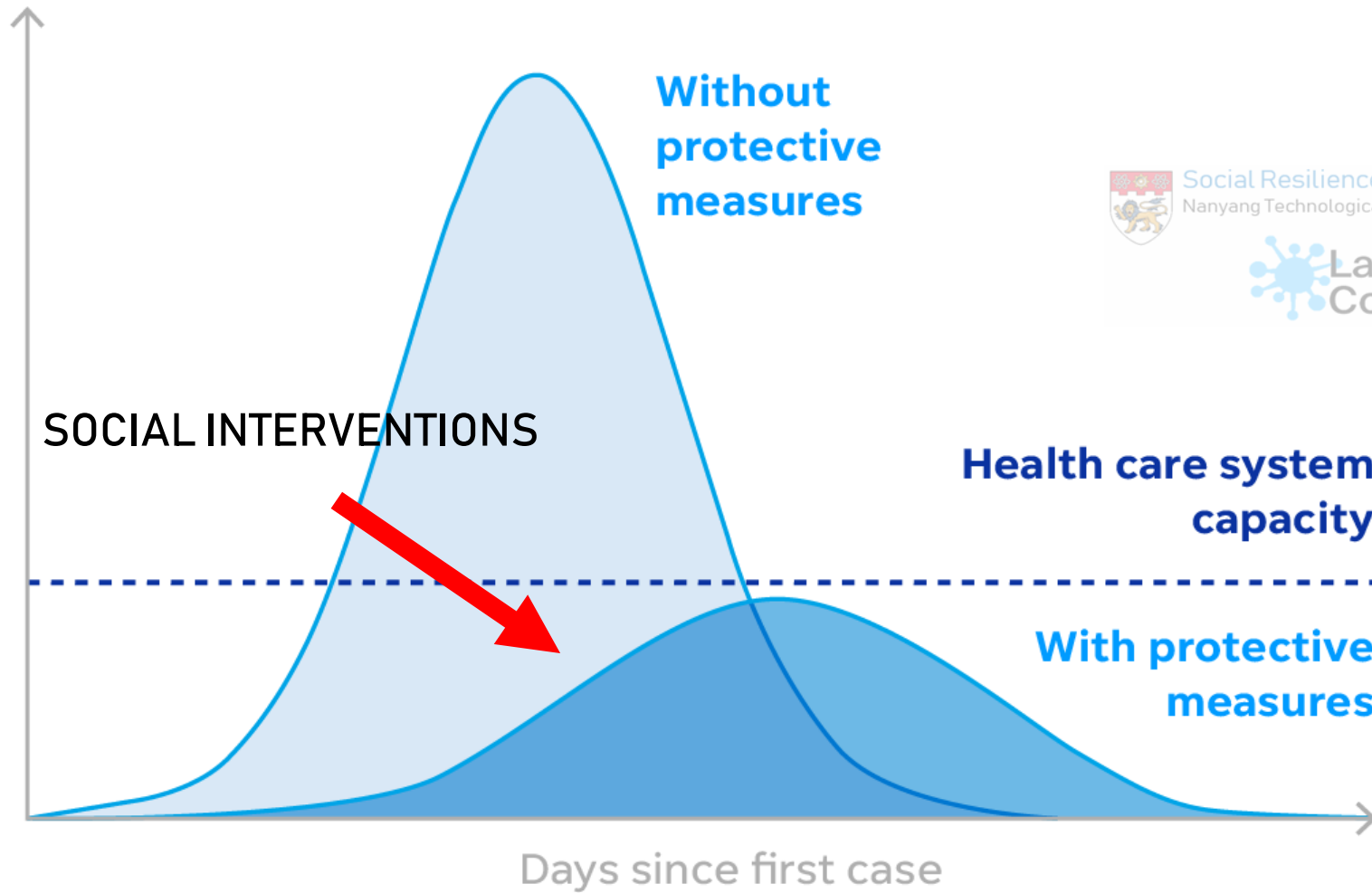


The Rising Covid-19 Infection Cases and the **Breakdown** of Hospitals



Sulfikar Amir, PhD and Fredy Tantri, PhD
Social Resilience Lab
Nanyang Technological University

Number of daily cases



Social Resilience Lab
Nanyang Technological University



Lapor
Covid-19



Public Health

versus

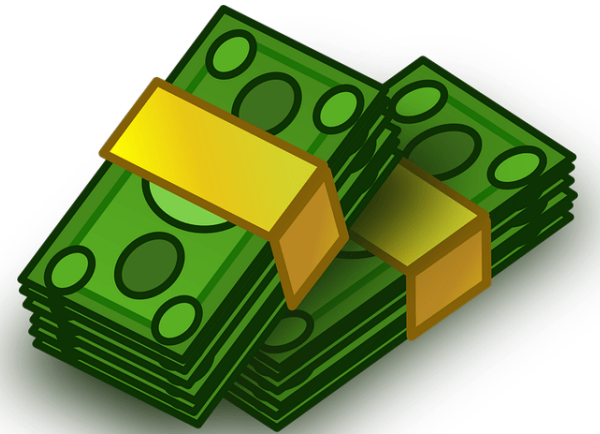
the Economy



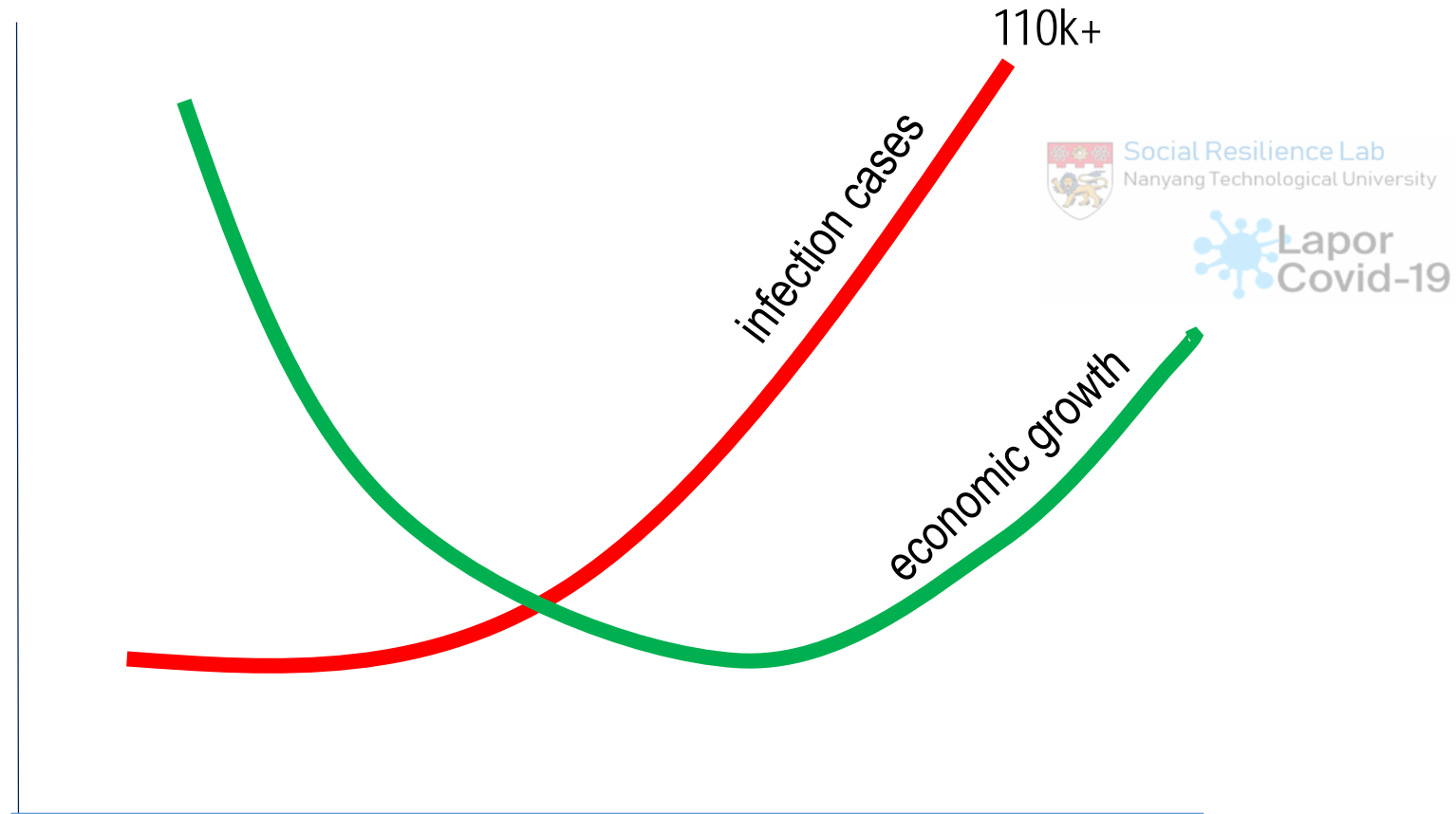
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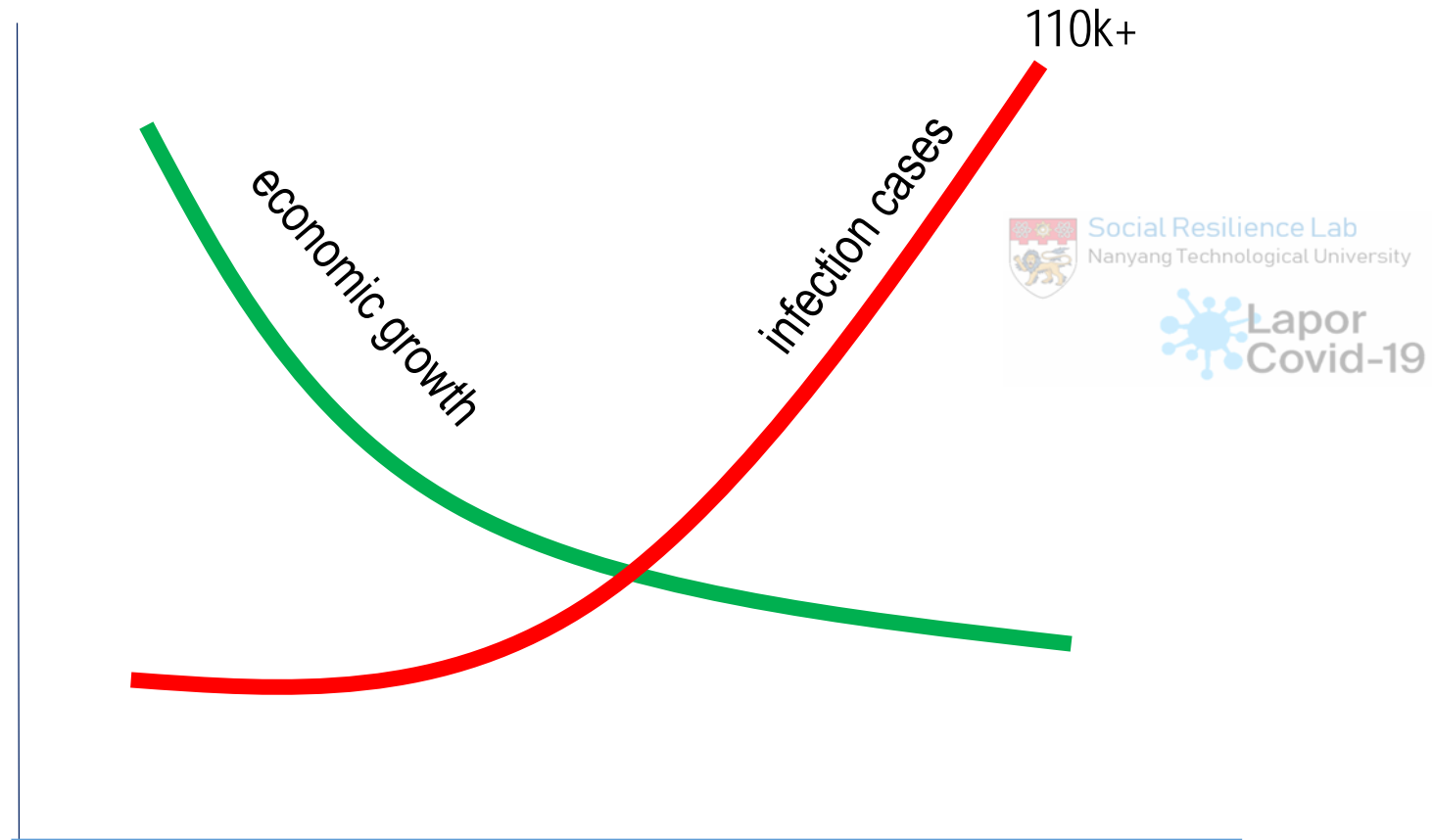
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Covid-19

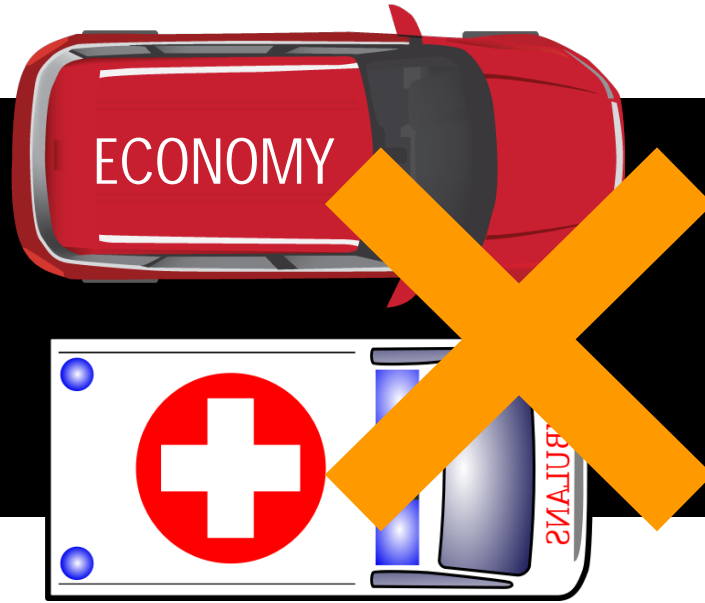


What the government is trying to do



What is happening

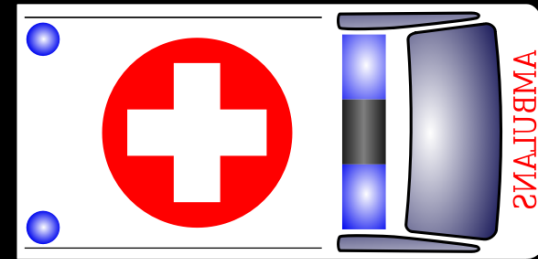




Can **Public Health** and the **Economy** go hand in hand?

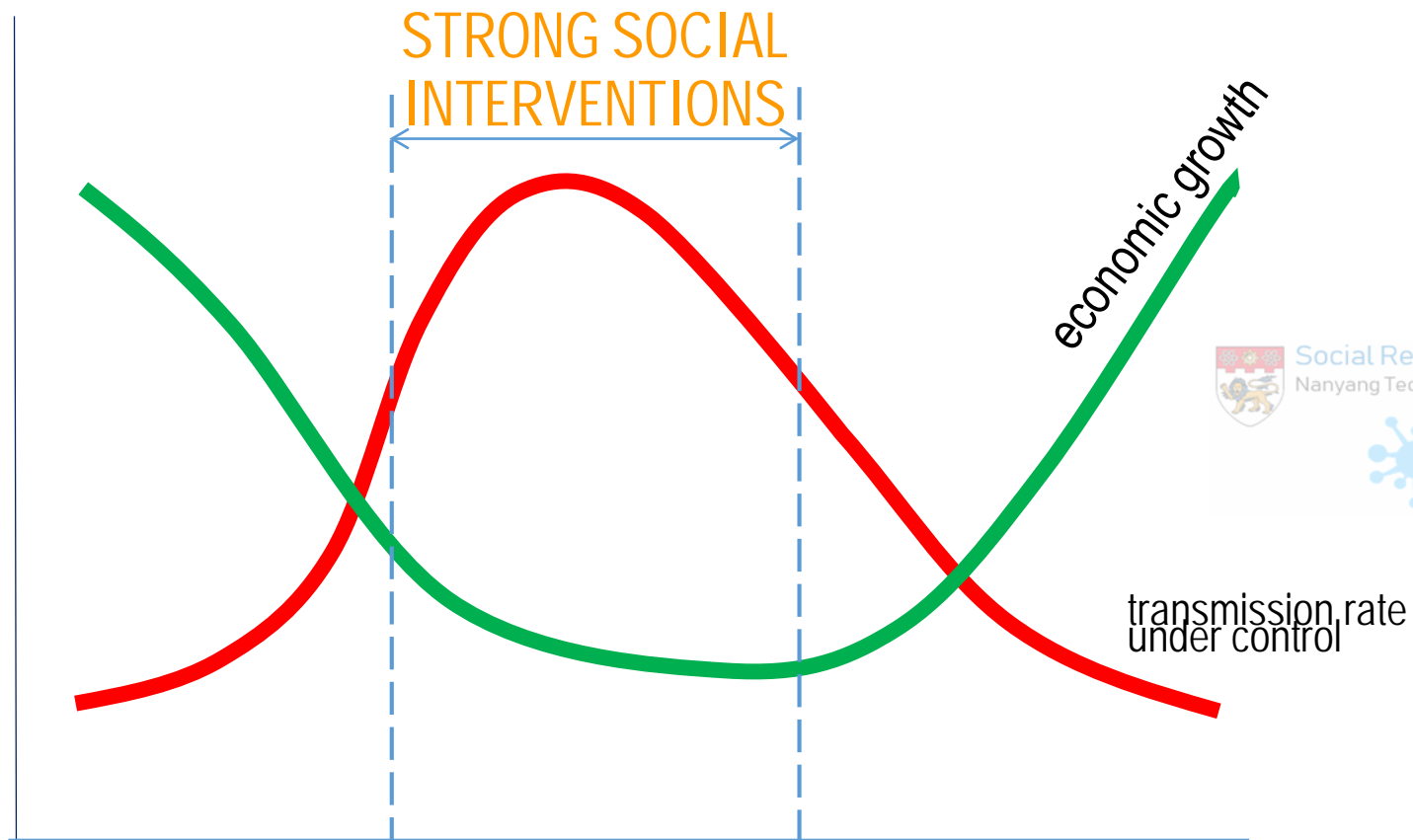


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Public Health first, the **Economy** follows!

What we should do



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SOCIAL INTERVENTIONS

LAYER 1

Enforced Social Distancing
COLLECTIVE LEVEL

stronger
impact

LAYER 2

Voluntary Safe Behavior
INDIVIDUAL LEVEL

lower
impact



TRANSMISSION RATE

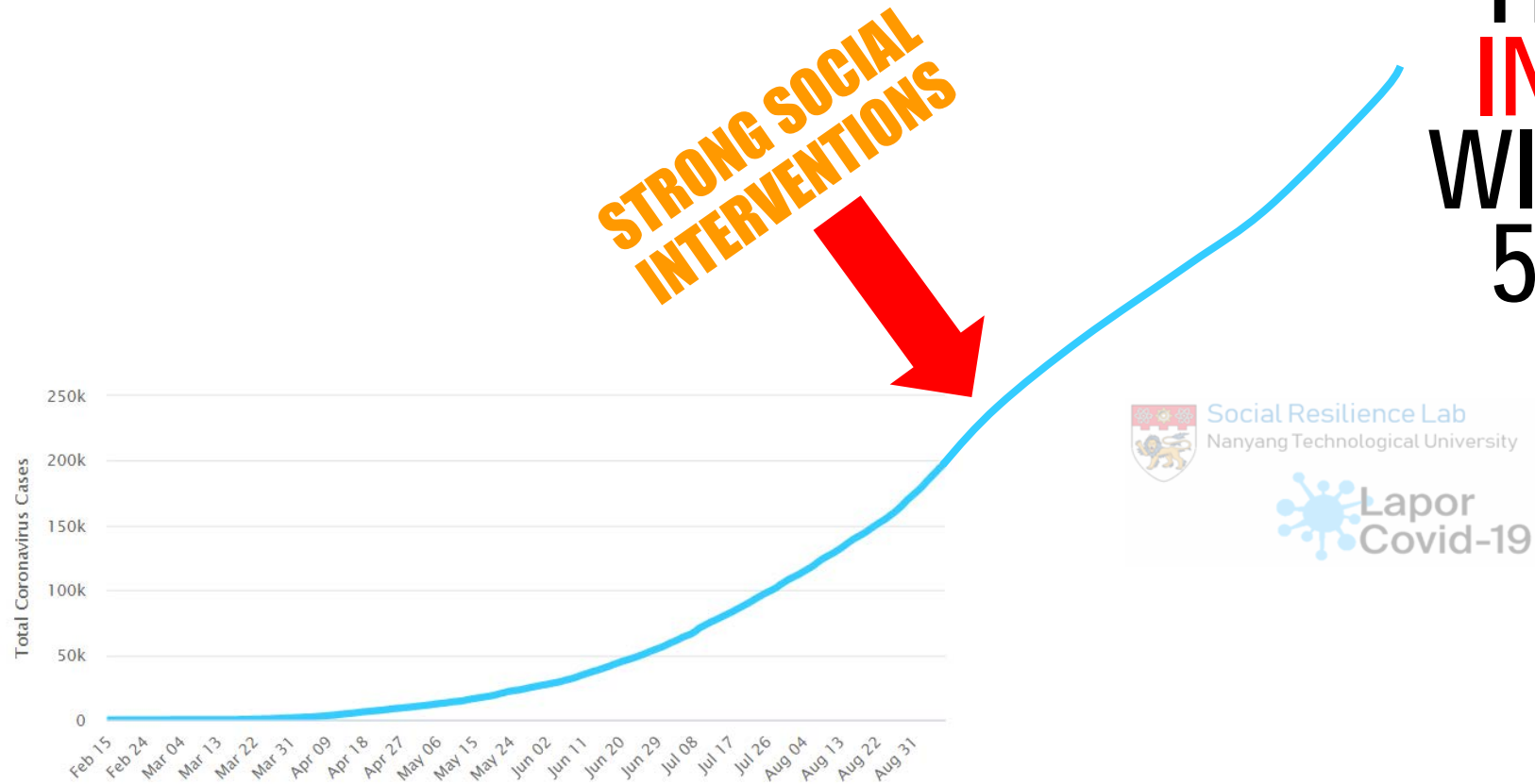


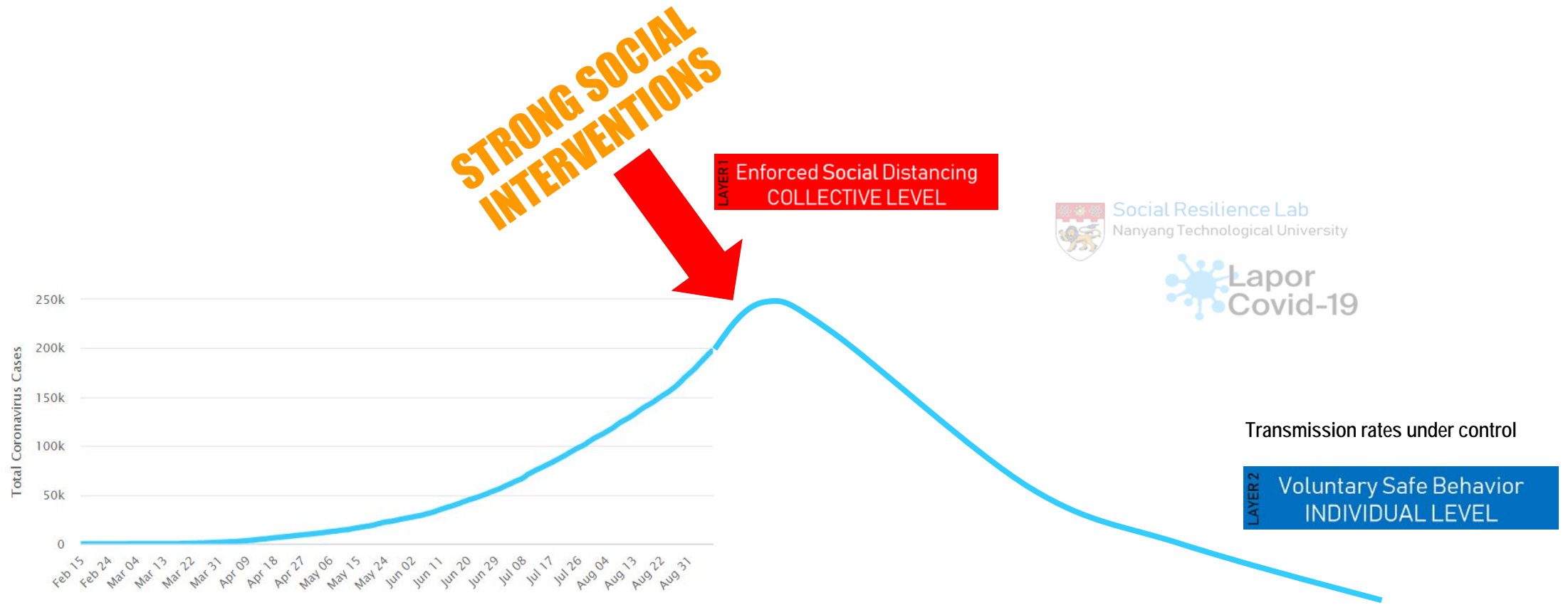
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HOW HIGH
INDONESIA
WILL GO UP?
500k? 1m?





Not strong
enough to
suppress the
**TRANSMISSION
RATES
of Indonesia**

”

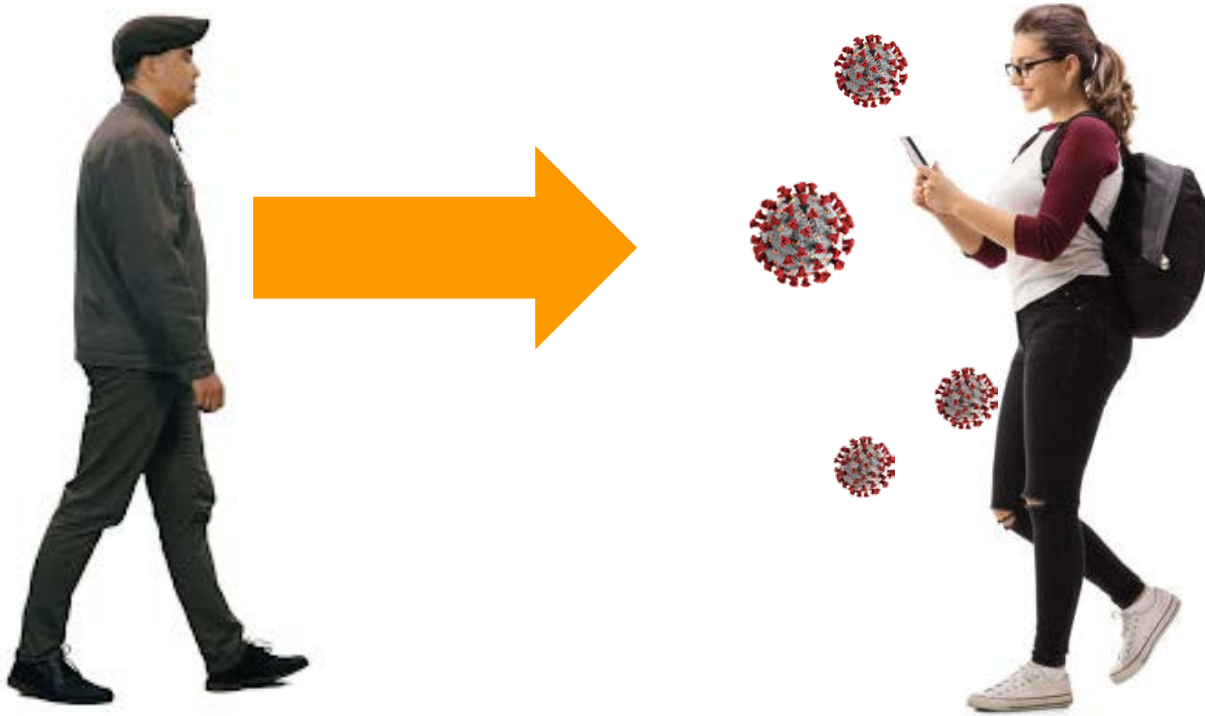
Pilih **Lockdown** atau pilih masker?
Pilih **PSBB** atau **masker**?

**Kita
Pilih Pakai
Masker!**

Presiden Jokowi
Bandung, 11 Agustus 2020



Virus does not move. PEOPLE MOVE.
People do not wear mask 24hr a day.



Transmissions likely to occur
in micro-scale interactions;
-Households
-Work places

Hospital Resources Analysis and Prediction on Fatality Number in Jakarta



Introduction

ICU Beds

Is it enough? What if it doesn't? What's the impact (total deaths)?

Mathematical Modeling

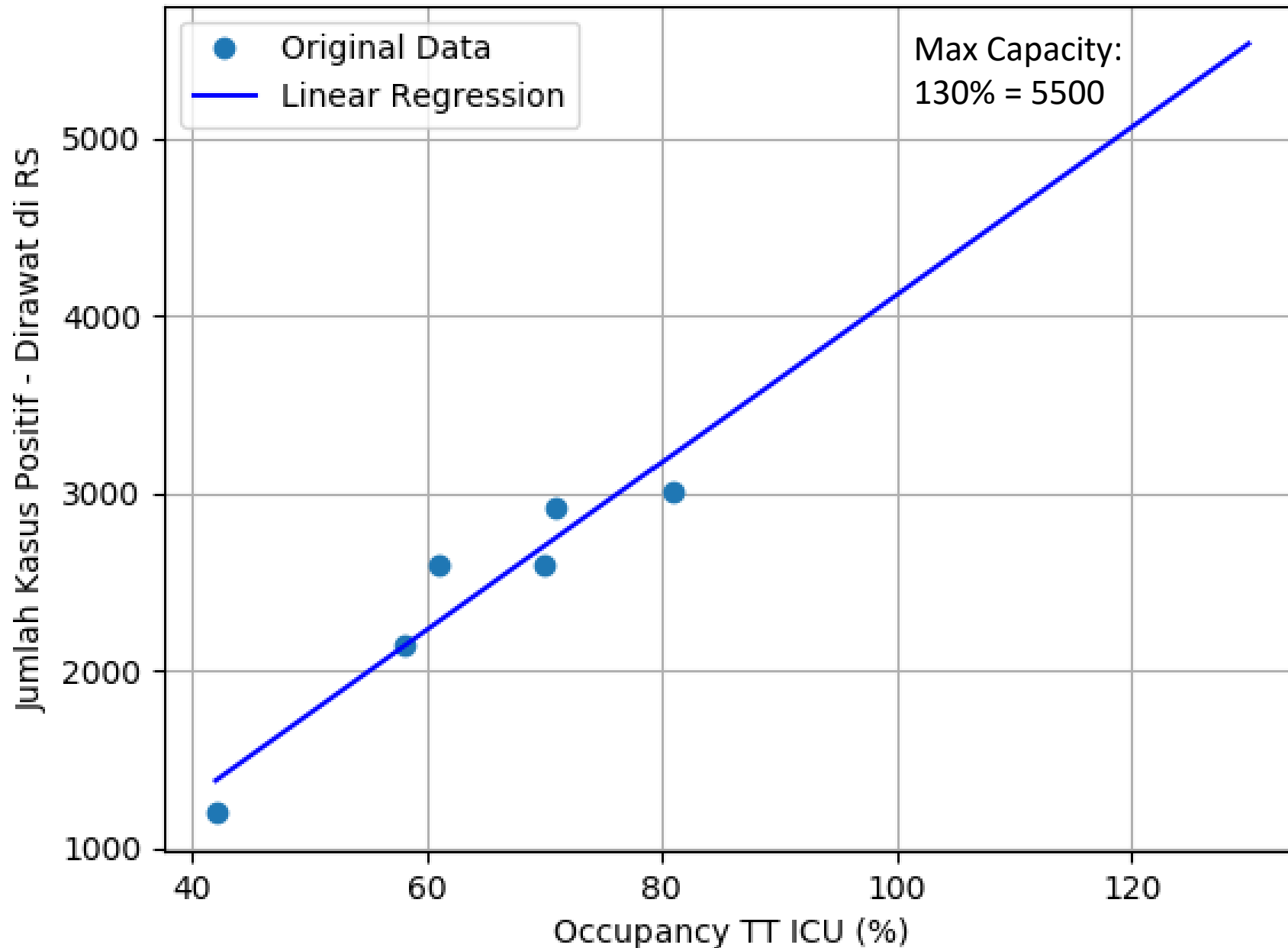
ICU Beds vs Inpatient correlation → Max inpatient capacity → Fatality Number Prediction

Data and Assumptions

- Data from 1st August – 3 September 2020
- Confirmed cases (*Suspect* and *Probable* are not included)
- Data from *wisma atlet* are not included
- Prediction curve follows Gaussian function
- 22% Fatality rate without hospitalizations



BOR RS Rujukan Covid (23 Juli - 30 Agustus)



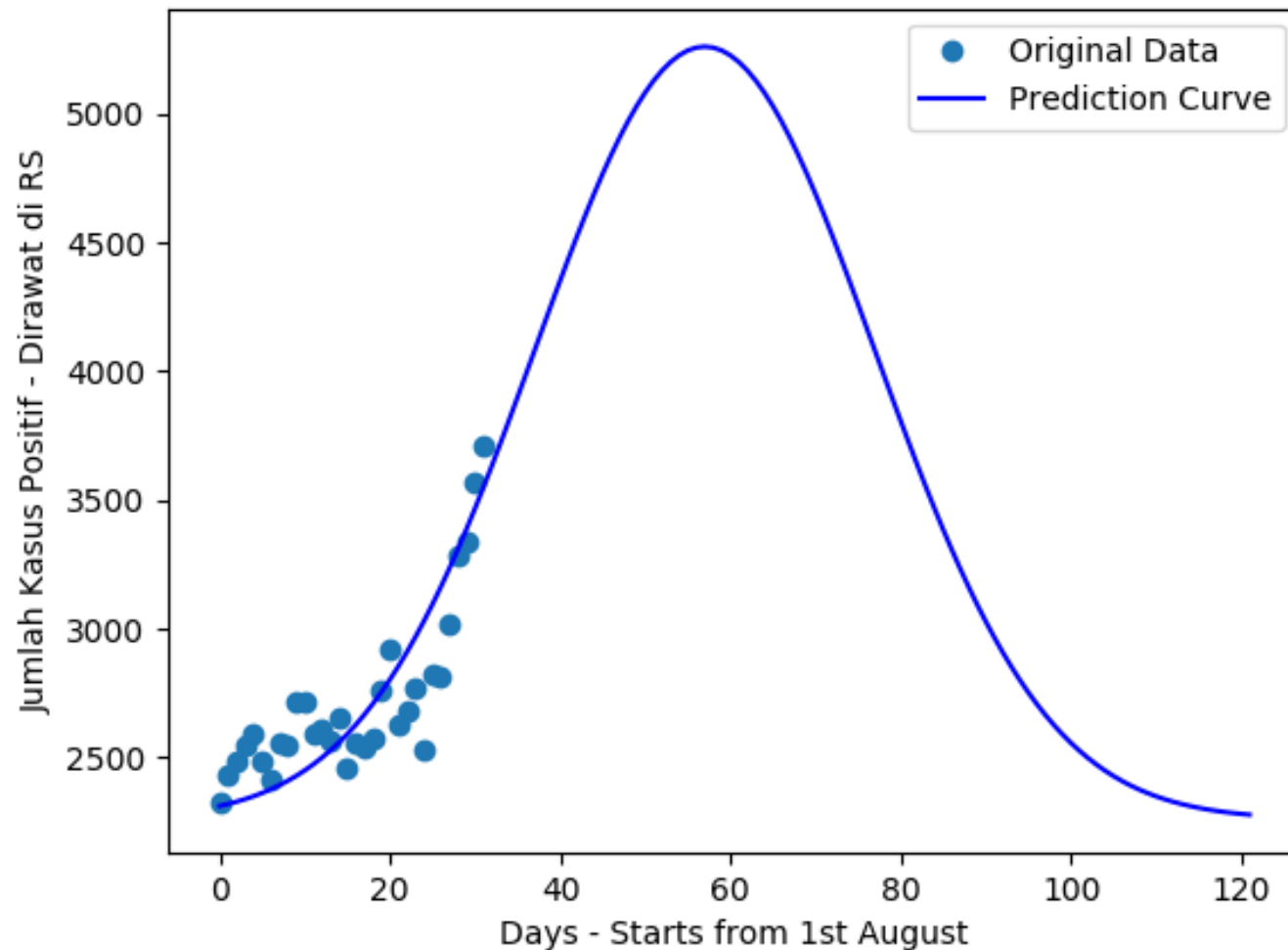
Korelasi
Antara
Keterpakaian
TT ICU dan
Pasien
Dirawat di RS

Penambahan Kapasitas Rumah Sakit COVID-19

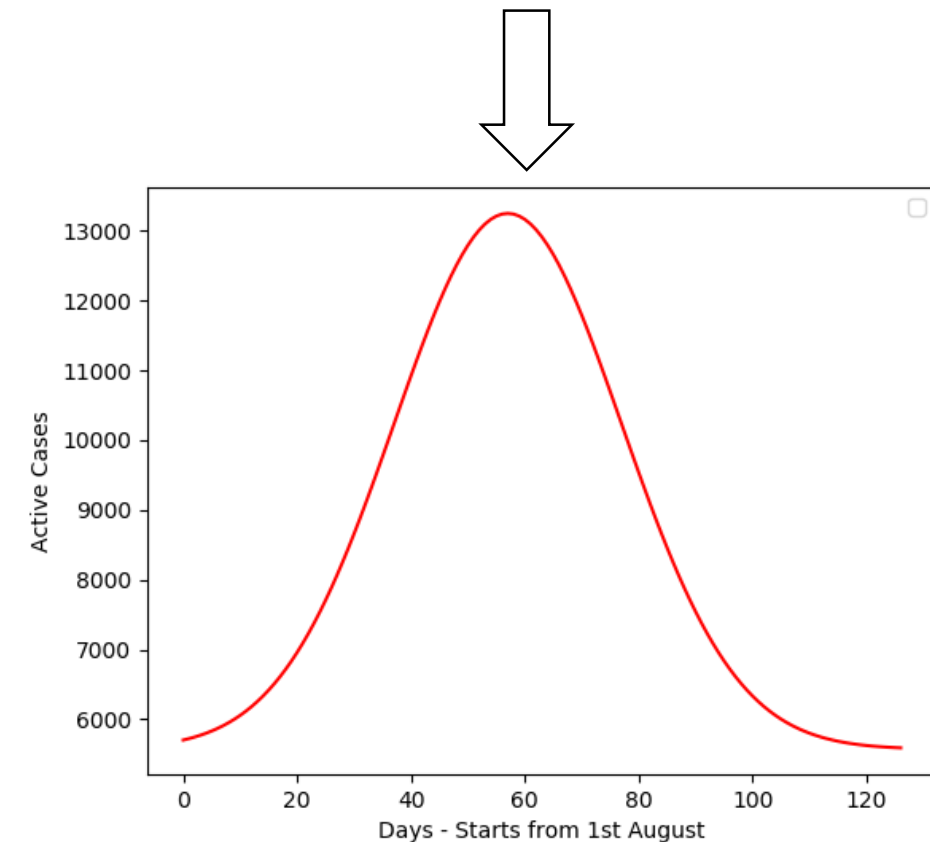
No	Wilayah	Bed Eksisting COVID-19			Pengembangan 13 RSUD Full COVID-19		Penambahan RS Rujukan		Total Bed COVID
		Isolasi	ICU	Total Eksisting	Isolasi	ICU	Isolasi	ICU	
1	Jakarta Pusat	1.018	176	1.194	79	4	52	2	1.329
2	Jakarta Utara	411	36	447	85	3	43	1	578
3	Jakarta Barat	724	82	806	123	72	13	2	1.014
4	Jakarta Selatan	923	150	1.073	188	17	10	0	1.288
5	Jakarta Timur	977	84	1.061	62	1	99	6	1.223
TOTAL		4.053	528	4.581	537	97	217	11	5.432

Best Case Scenario

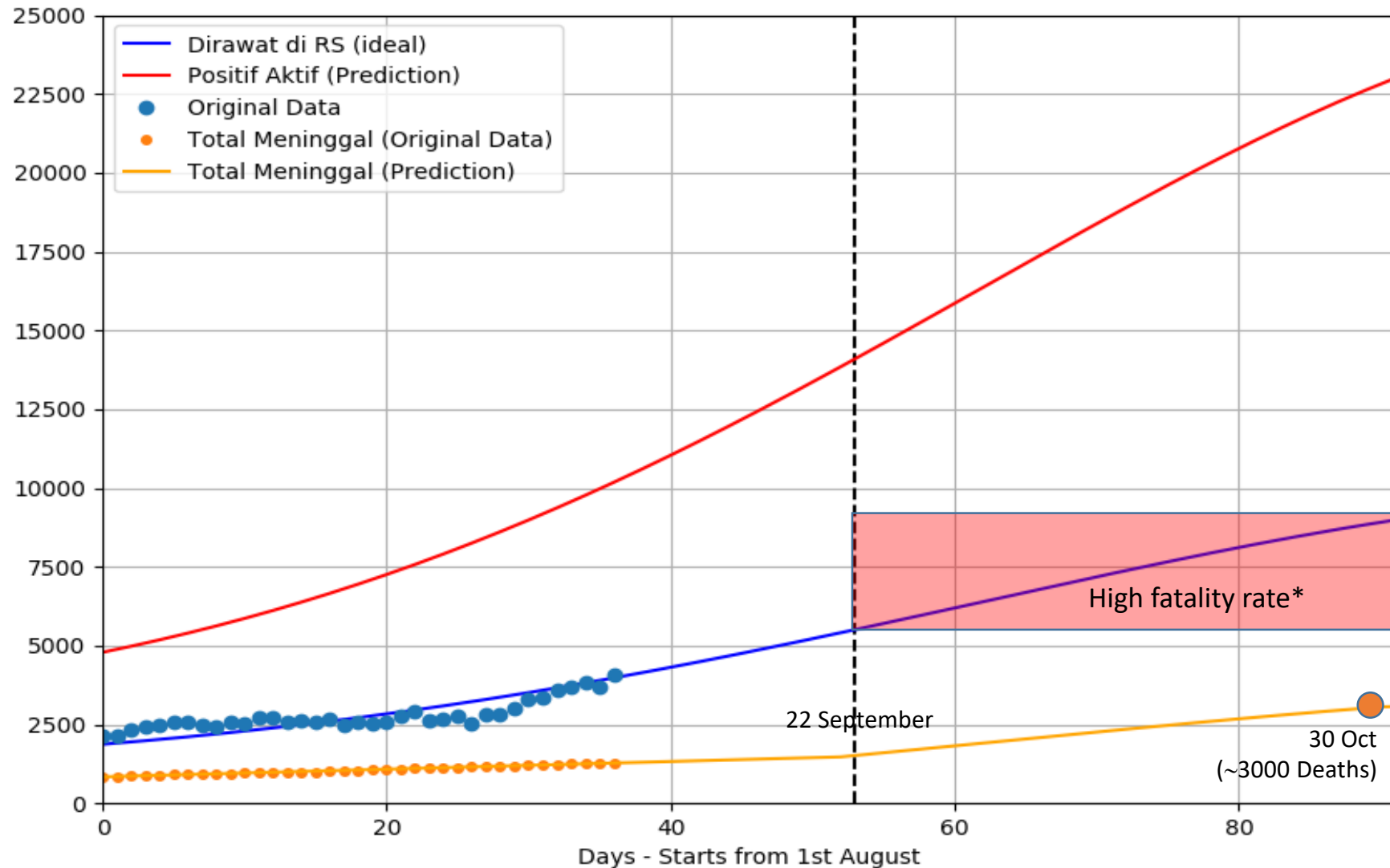
Peak at 30 Sept, below max capacity



Asumsi jika yang dirawat 38% dari kasus positif aktif.



Worst Case Scenario



(RE)MITIGATION AS THE ONLY WAY OUT



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The later we act,
the more difficult to beat pandemic,
the more lives it will take!



#staysafe

