Certificate of Appreciation

This certificate is presented to

Dr. dra. Emma Rachmawati, M.Kes

As a panelist in

World Class Professor 2022: Guest Lecture and Workshop

"Current situation on environmental and public health agenda in post-pandemic area focus in Austria, Europe, and Indonesia"

September 14th, 2022

Department of Environmental Health

Faculty of Public Health, Universitas Indonesia

Dr. Al Asyary Upe, SKM., MPH.
Awardee of World Class Professor (WCP)
University of Indonesia

Asoc. Prof. Dr. drg. Ririn Arminsih Wulandari, M. Kes.
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Biro Public Relation

Seminar Series

(Guest Lecture and Workshop) in World Class Professor 2022

"Current situation on environmental and public health agenda in post-pandemic era focus in Austria, Europe and Indonesia"

Free E-certificate

Date : Wednesday, September 14th 2022
Time : 13.30 WIB (GMT+7)
Via : Zoom Meeting
Zoom ID : bit.ly/SEMINARWCP1

No Registration Fee

Panelists

Ramadhan Tosepu, S.KM., M.Kes, Ph.D
Head of Public Health Magister Universitas Halu Oleo

Dr. Emma Rachmawati Dra., M.Kes
MPKU - PP Muhammadiyah

Keynote Speaker

Prof. Doz. Dr. Hanns Moshammer
Medical University of Vienna, Scopus Index

Moderator

Rony Darmawansyah Alnur, SKM, MPH

Meita Veruswati, SKM., MKM.,Ph.D (Cand.)
Lecturer in UHAMKA

Dr. Al Asyary Upe, SKM., MPH
WCP 2021 Awardee UI

Opening Speech

Dr. drg. Ririn Arminsih Wulandari, M.Kes

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COVID-19 and Tobacco Use

SIGNIFICANCE OF CHRONIC DISEASES AND SMOKING BEHAVIOR IN THE DEVELOPMENT OF ARDS :

AN EVIDENCE BASED FOR PUBLIC HEALTH AGENDA ON POST-PANDEMIC FOCUS AREA IN INDONESIA

Presented by:

Dr. Emma Rachmawati, Dra., MKes(UHAMKA)

Team: dr. Ekorini Listiowati, MMR (UMY), Deni Kurniawan Wahyudi, MA (UHAMKA), Izza Suraya, MEpid (UHAMKA), Iqbal Nurmansyah, MSc (UIN), Abdillah Ahsan, SE, MSE (ITCRN-UI), Dian Kusuma, ScD (Imperial College, UK)

ITCRN

JOHNS HOPKINS BLOOMBERG SCHOOL of PUBLIC HEALTH | Institute for Global Tobacco Control

Seminar Series (Guest Lecture and Workshop in World Class Professor 2022 Program. September, 14, 2022. Envihsa FKM UI

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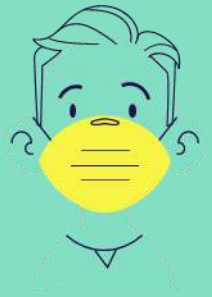
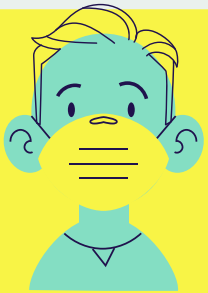




I. BACKGROUND

As a smoker,
Am I likely to get more severe symptom if I get Covid-19?

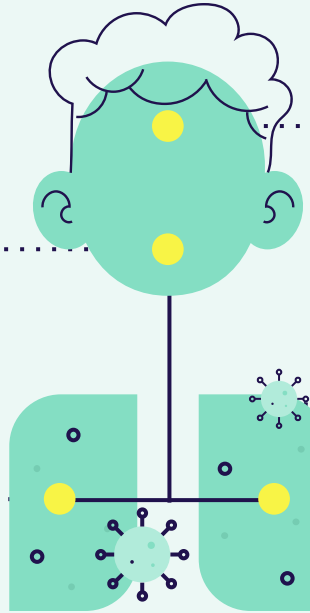
Evidence indicates:

- Tobacco Smoking >> Risk factor for severe disease from many respiratory infections, such as SARS (2003) and MERS-CoV (2012), and it is linked with the poorer outcomes for people with TB and peneumonia (WHO, 2022)
- Acute Respiratory Distress Syndrome (ARDS) is one of the main causes of high mortality among Covid-19 patients. (WHO, 2022)
- Public Health issues in Indonesia: Covid-19 Issues? Health problems priorities (such as TB)? Tobacco smoker in Indonesia?

THE SEVERITY OF COVID-19 PATIENT

admission >>> intensive care units >>>death

RISK FACTORS OF COVID-19



01. AGE

02. GENDER

03. Comorbidities

04.Smoking Behaviour

Smokers are more likely to cause an increase in the severity of COVID-19 disease than non-smokers (WHO, 2019)

PREVIOUS STUDIES

There are 33.1% smokers for Covid-19 patients who need a ventilator are admitted to the ICU and died. (Guan et al., 2020).

Risk factors: Age (OR:8.546; 95% [CI]: 1.628–44.864; P = 0.011), smoking behaviour **(OR, 14.285;** 95% CI: 1.577–25.000; P = 0.018).**(Liu et al., 2020)**

Acute respiratory distress syndrome (ARDS) is one of the main causes of high mortality among coronavirus disease 2019 (COVID-19) patients (Hasan SS, Capstick T, Ahmed R, et al., 2020)

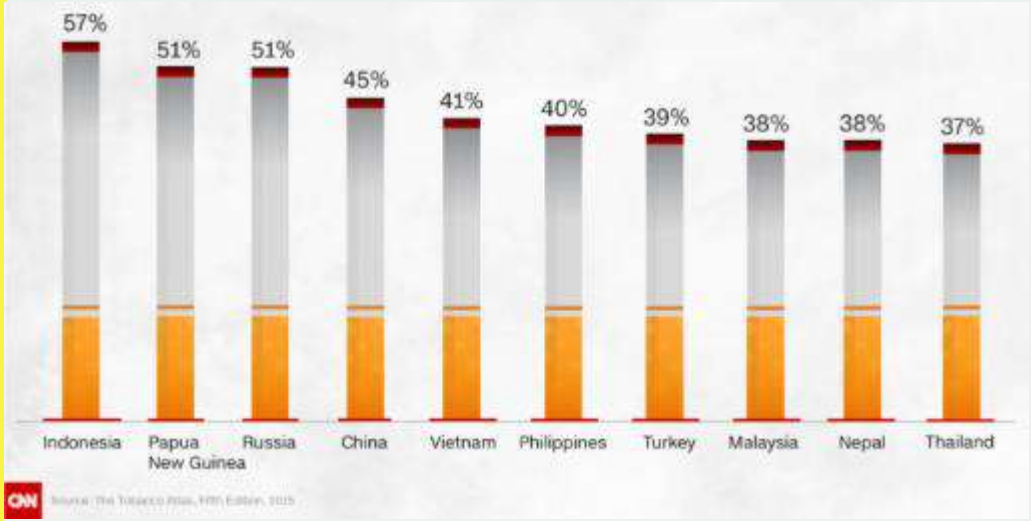
Smoking Issues in **INDONESIA**

The highest smoking rate in the world for the male group. . The number of smokers >15 years old: 33,8 % (62,9 % man and 4,8% woman).(Riskesdas, 2018).

The increase in number of smokers is accompanied by an increase in the proportion of (NCD/Chronic: hipertension, stroke, diabetes, CVD, Cancer, ARDS).

Tobacco and Covid-19 research in Indonesia ???

Medical Records of Covid-19 in Hospitals (including RSMA) without including smoking status



https://sbfphc.wordpress.com/2019/03/10/banning-tobacco-advertisements-in-indonesia-to-reduce-adolescent-smoking/

RESEARCH LOCATION: MUHAMMADIYAH-'AISYIYAH HOSPITALS (RSMA)

During the pandemic, 117 Muhammadiyah-Aisyiyah Hospitals (RSMA) served confirmed Covid-19 patients in many provinces in Indonesia

02. RESEARC OBJECTIVES

to explore the effects of smoking behavior on the development of ARDS among hospitalized COVID-19 patients. >>the first study in Indonesia

03. METHOD (I)

Population: Covid-19 confirmed (PDP) patient being treated in 83 RSMA (March-July 2020)

>>>> 16 RSMA (5 Provinces: **DKI Jkt, Jateng, DIY, Jatim, Kalteng):**

Sample: **490 Covid-19 patients (response rate 60,12%),** Inclusion criteria: registered, complete data, willong to be a respondent for smoking status

Location: RS Muhammadiyah-'Aisiyah: DKI, Jatim, Jateng, Yogya, Kalteng

Design: Cross-Sectional

Analysis: Chi Square, Logistic Regression

Data : **Secondary(Medical records Covid-19 Patients); Primer (smoking status)**

Time: April-Sept, 2020

03. METHOD (2)

SMOKING STATUS/BEHAVIOUR

(Adjusted from the Centers for Disease Control and Prevention (CDCP), and it was divided into three groups based on National Health Statistics Reports, Number 145, July 22, 2020.)

"**Never Smokers**" : never smoked or have smoked less than 100 cigarettes in their lifetime."

"**Former smokers**": have smoked at least 100 cigarettes in their lifetime but had quit smoking.

"**Current smokers**": have smoked 100 cigarettes in their lifetime and in the past 30 days

03. METHOD (3)

SEVERITY OF COVID-19 DISEASE, ARDS

- Grouped into: **1) Outpatient (for patients with no symptoms and mild symptoms, 2) Inpatients (for patients with severe symptoms, and 3) Intensive Care Unit or ICU (for patients with critical conditions).**
- **Tested positive for COVID-19** using the reverse transcriptase polymerase chain reaction tests during the laboratory examination in the respective hospitals
- **ARDS** was defined based on the fifth edition of the Guidelines on the Prevention and Control of COVID-19 issued by the Ministry of Health of Indonesia.

04 Results (1)

Tabel 1. Distribusi Jumlah Responden/Pasien berdasarkan asal Rumah Sakit

		Frequency	Percent	Cumulative Percent
Valid	RS Ahmad Dahlan Kediri	3	.6	.6
	RS PKU Muhammadiyah Gombong	9	1.8	2.4
	RS PKU Muhammadiyah Roemani Semarang	61	12.4	14.9
	RS PKU Muhammadiyah Wonosobo	10	2.0	16.9
	RS PKU Sruweng	11	2.2	19.2
	RS Siti Khotijah Sepanjang Sidoarjo	9	1.8	21.0
	RS Universitas Muhammadiyah Malang	3	.6	21.6
	RSI Jakarta Cempaka Putih	28	5.7	27.3
	RSI PKU Muhammadiyah Palangkaraya	62	12.7	40.0
	RS Aisyiyah Kudus	43	8.8	48.8
	RSI Jakarta Pondok Kopi	27	5.5	54.3
	RS PKU Muhammadiyah Mayong	95	19.4	73.7
	RSI Muhammadiyah Kendal	20	4.1	77.8
	RS PKU Muhammadiyah Temanggung	21	4.3	82.0
	RS Aisyiyah Malang	66	13.5	95.5
	RS PKU MUHAMMADIYAH Gamping	22	4.5	100.0
	Total	490	100.0	

04. Results (2)

Of the 148 people (31.2%) of Covid patients who smoked: men **140 (94.6%).**

Average smoking of “current smoker” patient group: **8 cigarettes per day**

The highest number of smokers in the group of Covid-19 patients with comorbid diseases: **Hypertension 82 people (34.74%), Diabetes 75 people (31.77%),**

Smokers in the group of patients aged 60 years: 118 people (30.49%).

Smokers in the Covid-19 severity category:

148 smokers (33.71%) in hospitalization(439 people)

13 smokers (25%) in ICU care (52 people)

04 Results (3)

Analysis of Factors Associated With the Development of ARDS Among Hospitalized COVID-19 Patients.

Table 2. Analysis of Factors Associated With the Development of ARDS Among Hospitalized COVID-19 Patients.

	Acute respiratory distress syndrome					
	Yes		No			
Variable	n	%	n	%	Odds ratio (95% CI)	*P*
Gender						
Male	13	5.7	217	94.3	3.055 (1.072-8.706)	.037
Female	5	1.9	255	98.1	Ref	
Age group (years)						
>60	7	7.7	84	92.3	2.939 (1.107-7.805)	.030
<60	11	2.8	388	97.2	Ref	
Diabetes						
Yes	10	13.3	65	86.7	7.827 (2.979-20.561)	.000
No	8	1.9	407	98.1	Ref	
Coronary heart diseases						
Yes	7	17.1	34	82.9	8.198 (2.986-22.504)	.000
No	11	2.4	438	97.6	Ref	
Hypertension						
Yes	9	11.0	73	89.0	5.466 (2.099-14.233)	.001
No	9	2.2	399	97.8	Ref	
Obstructive chronic lung diseases						
Yes	1	6.3	15	93.8	1.792 (0.224-14.364)	.583
No	17	3.6	457	96.4	Ref	
Chronic liver diseases						
Yes	2	28.6	5	71.4	11.675 (2.103-64.801)	.005
No	16	3.3	467	96.7	Ref	
Smoking status						
Current	8	9.5	76	90.5	5.025 (1.773-14.286)	.002
Former	3	4.7	61	95.3	2.352 (0.592-9.346)	.224
Never	7	2.0	335	98.0	Ref	—
Time smoking was stopped by former smoker						
Less than 1 year	1	3.6	27	96.4	2.45 (0.14-42.82)	.538
1-5 years ago	1	4.2	23	95.8	2.09 (0.12-36.63)	.614
More than 5 years ago	1	8.3	11	91.7	Ref	—
Duration of smoking among current smoker (years)	28.75 ± 18.84[a]		29.78 ± 12.94[a]		1.026[b]	0.884
Daily number of cigarettes consumed among current smoker	40.30[c]		63.44[c]		−2.606 (Z)	.009

Abbreviations: ARDS, acute respiratory distress syndrome; COVID-19, coronavirus disease 2019; CI, confidence interval; SD, standard deviation.
[a]Mean ± SD.
[b]Mean difference.
[c]Mean rank.

04** Results (3)

Table 4. Results of Ordinal Regression Analysis of Smoking Status and Severity of COVID-19 Patient, stratified by age

Variable	≥ 60 years		< 60 years	
	AOR (95% CI : Lower - Upper)	p-value	AOR (95% CI : Lower -Upper)	p-value
Current	**6,68 (1,17-38,31)**	**0,033**	0,62 (0,30 – 1,31)	0,216
Former	**6,45 (1,00 -41,49)**	**0,050**	1,34 (0,53 – 3,39)	0,527
Never	Ref		Ref	

**after being controlled by comorbidities (Diabetes, Coronary Heart Disease (CHD), Hypertension, COPD (Chronic Obstructive Pulmonary Disease, Chronic Liver disease, Chronic Kidney disease, Malignancy, and Immunological Disorder)

04** Results (4)

Table 6. Cross Tabulation and Results of Ordinal Regression Analysis of Smoking Status and Severity of COVID-19 Patient

Variable	Severity Level			Crude		Adjusted**	
	ICU	Inpatients	Outpatients	Crude OR (95% CI : Lower -Upper)	p-value	AOR (95% CI : Lower -Upper)	p-value
Current	5	68	11	1,04 (0,53-2,03)	0,902	0,97 (0,49 – 1,90)	0,919
Former	5	57	2	**2,65 (1,2 -5,87)**	**0,016**	1,82 (0,81 -4,08)	0,147
Never	12	291	39				

**after being controlled by comorbidities (Diabetes, Coronary Heart Disease (CHD), Hypertension, COPD (Chronic Obstructive Pulmonary Disease, Chronic Liver disease, Chronic Kidney disease, Malignancy, and Immunological Disorder)

05. Conclusion (1)

Current evidence showed that the presence of chronic illness and smoking behavior could be used as an early prediction of the development of ARDS among hospitalized COVID-19 patients

05. Conclusion (2)

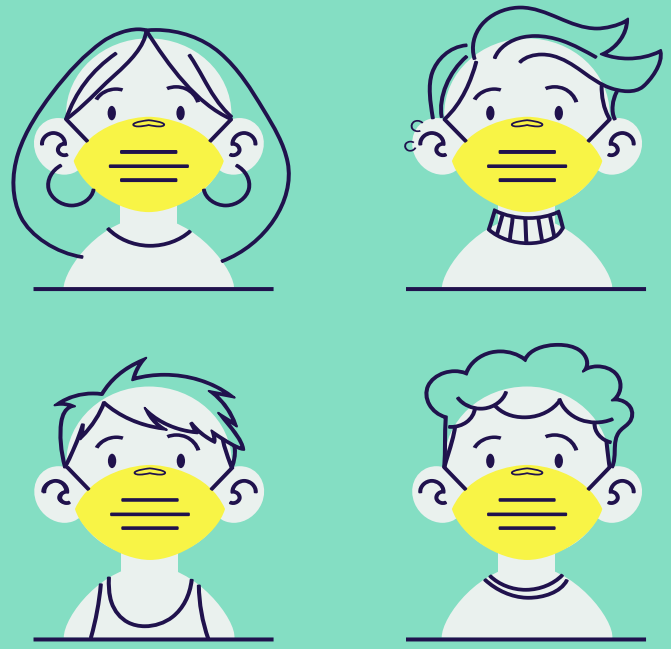
Smoking status of “current & former smoker” patients in the age group 60 years is significantly related to the severity of Covid-19 patients

Smoking status of “former smoker” patients is significantly related to the severity of Covid-19 patients

06. REKOMENDASI

The smoking status of patients needs to be included in Medical records of Covid-19 Patients, so that the prevention of it's severity can be detected earlier (especially at the high risk group: comorbidities, age, man>60 years)

Promotive efforts in the form of precise information regarding the impact of smoking on the severity of COVID-19 can be supported by the results of other similar studies that are more accurate and complete



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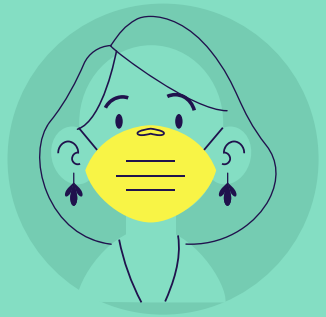

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