



# The Effects of Brief Intervention In Promoting Smoking Cessation Among People Attending Emergency Departments: A Randomized Controlled Trial

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# Outlines of Presentation

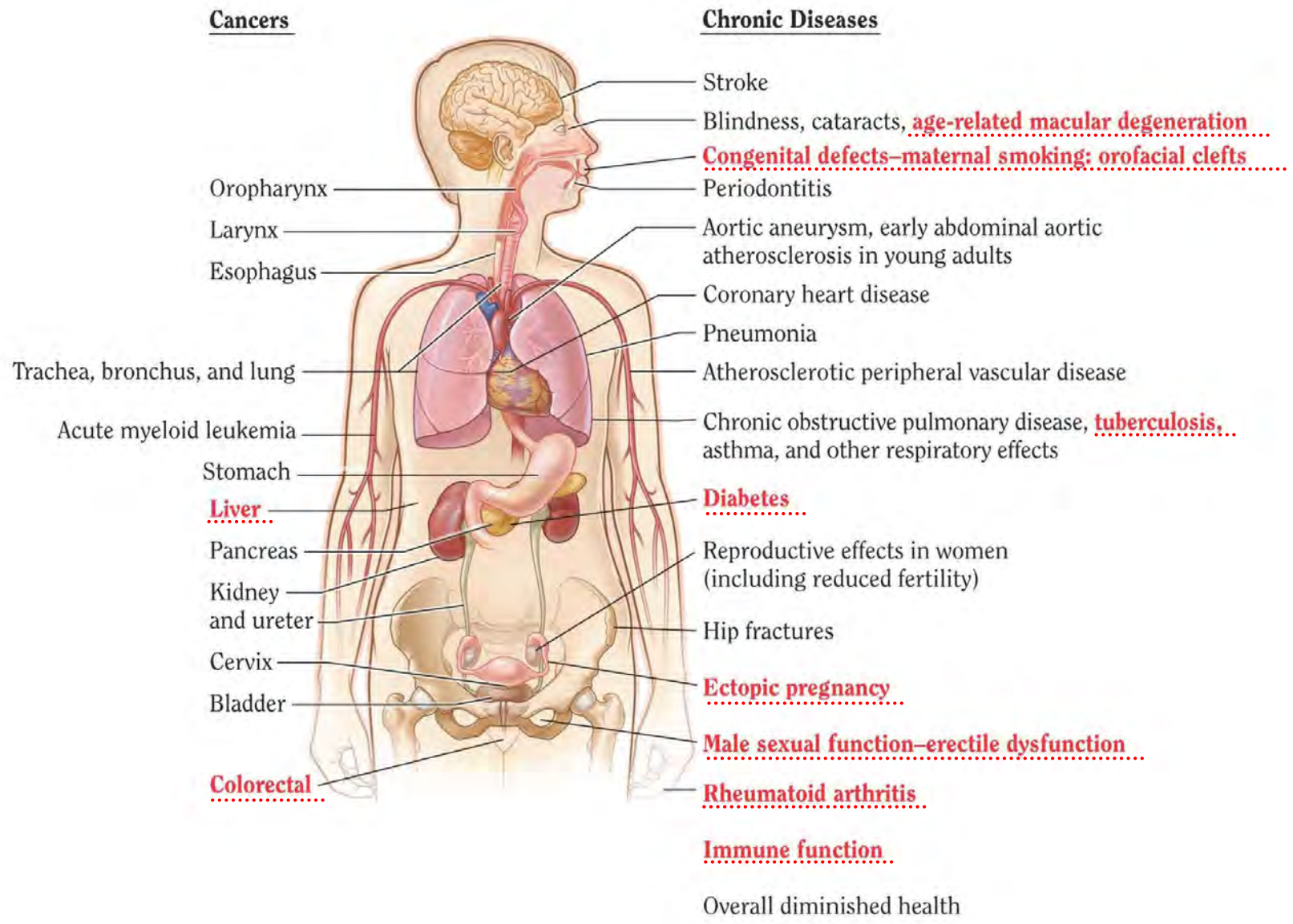


- Briefly describe the *harmful effects* of smoking and the smoking prevalence in Hong Kong
- Describe a RCT on promoting smoking cessation among people attending emergency departments

**7 million**



# The health consequences causally linked to smoking



Source: USDHHS 2004, 2006, 2012.

Note: The condition in red is a new disease that has been causally linked to smoking in this report in 2014.



# Big Risk

Half (50%) of smokers who continue to smoke will die prematurely



World Health Organization

(Peto, et al, 1994)  
(WHO, 2005)



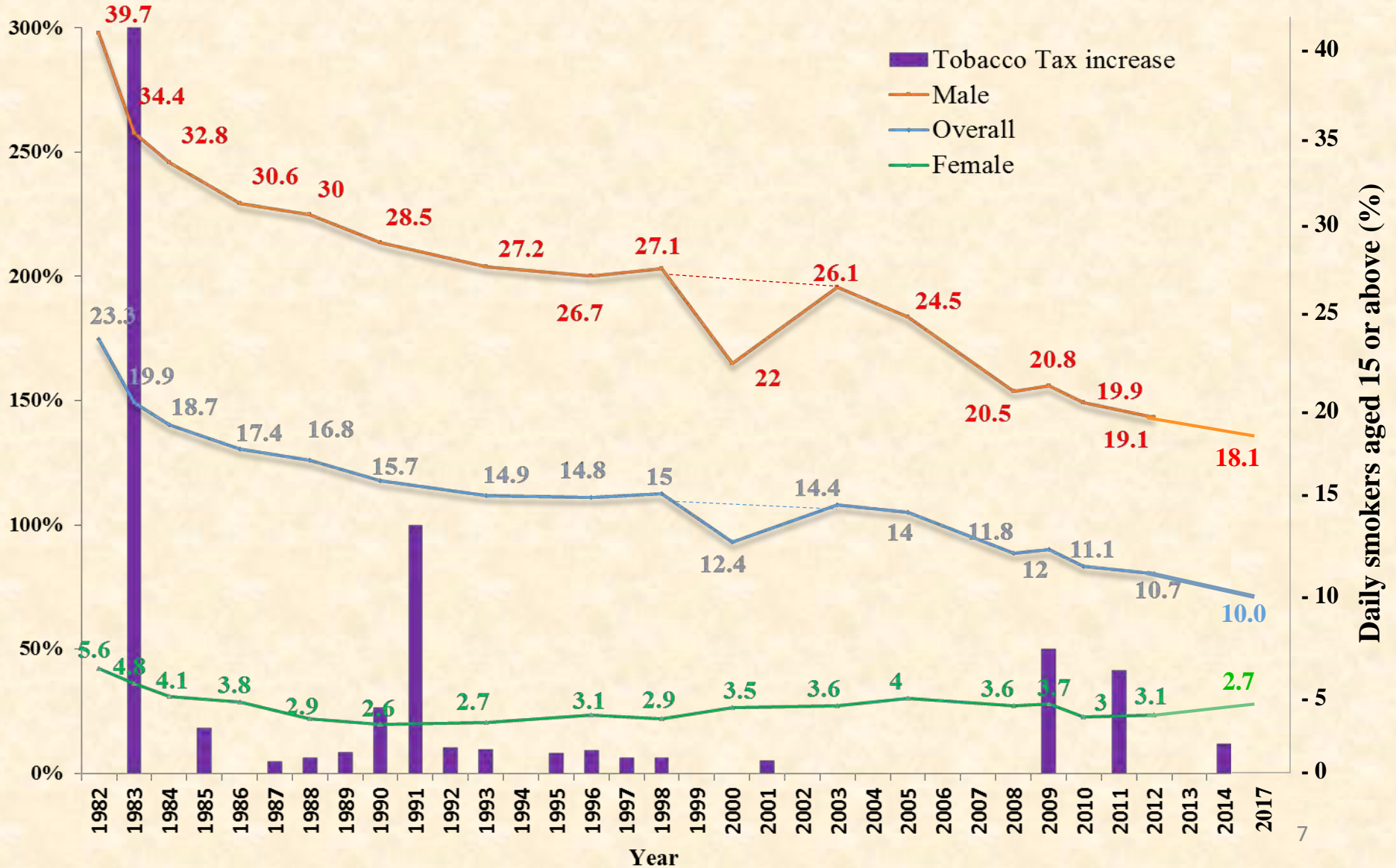
If smoking starts at a young age...

2/3

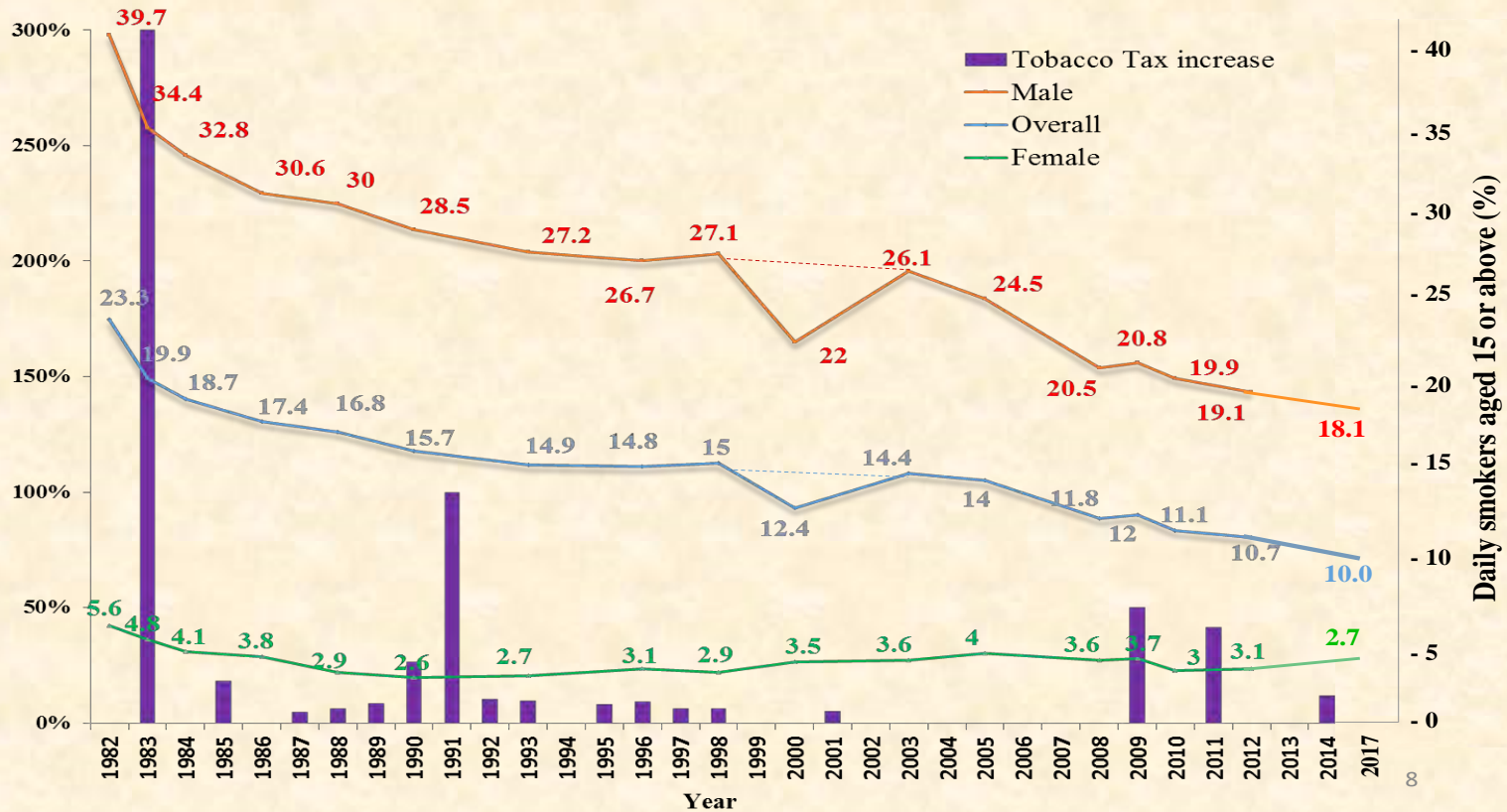
will be killed



# Smoking Prevalence in Hong Kong over the past 30 Years



# Smoking Prevalence in Hong Kong over the past 30 Years



- ❖ Raising tobacco tax
- ❖ Introducing legislation
- ❖ Law enforcement
- ❖ Anti-smoking campaigns





615,000  
daily smokers



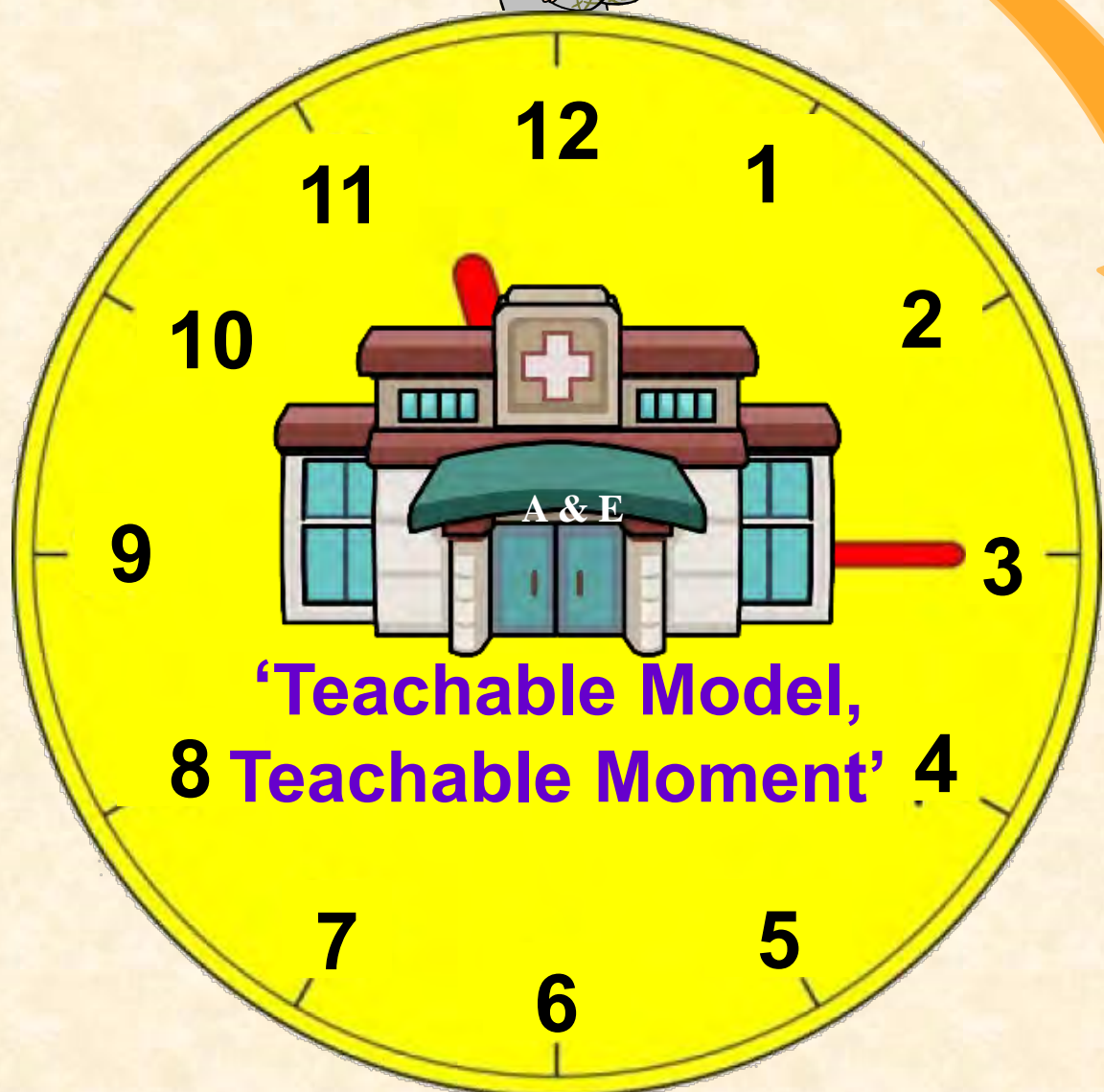
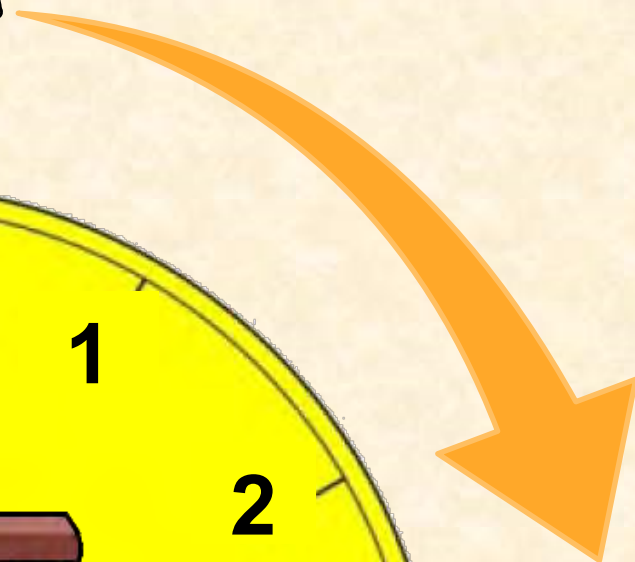


400,000 hospitalizations per year





**Help!**



**'Teachable Model,  
8 Teachable Moment'**





Accident &  
Emergency

2 million people  
attend a year





<b>1</b>	<b>Resuscitation</b>
<b>2</b>	<b>Emergent</b>
<b>3</b>	<b>Urgent</b>
<b>4</b>	<b>Less Urgent</b>
<b>5</b>	<b>Non Urgent</b>

68%

### 大約候診時間:

Approximate Waiting Time for consultation :

分流類別 Triage Category	等候時間 Waiting Time	
緊急 Urgent	0.5	小時 hour
次緊急 Semi-Urgent	3	小時 hours
非緊急 Non-Urgent	4	小時 hours



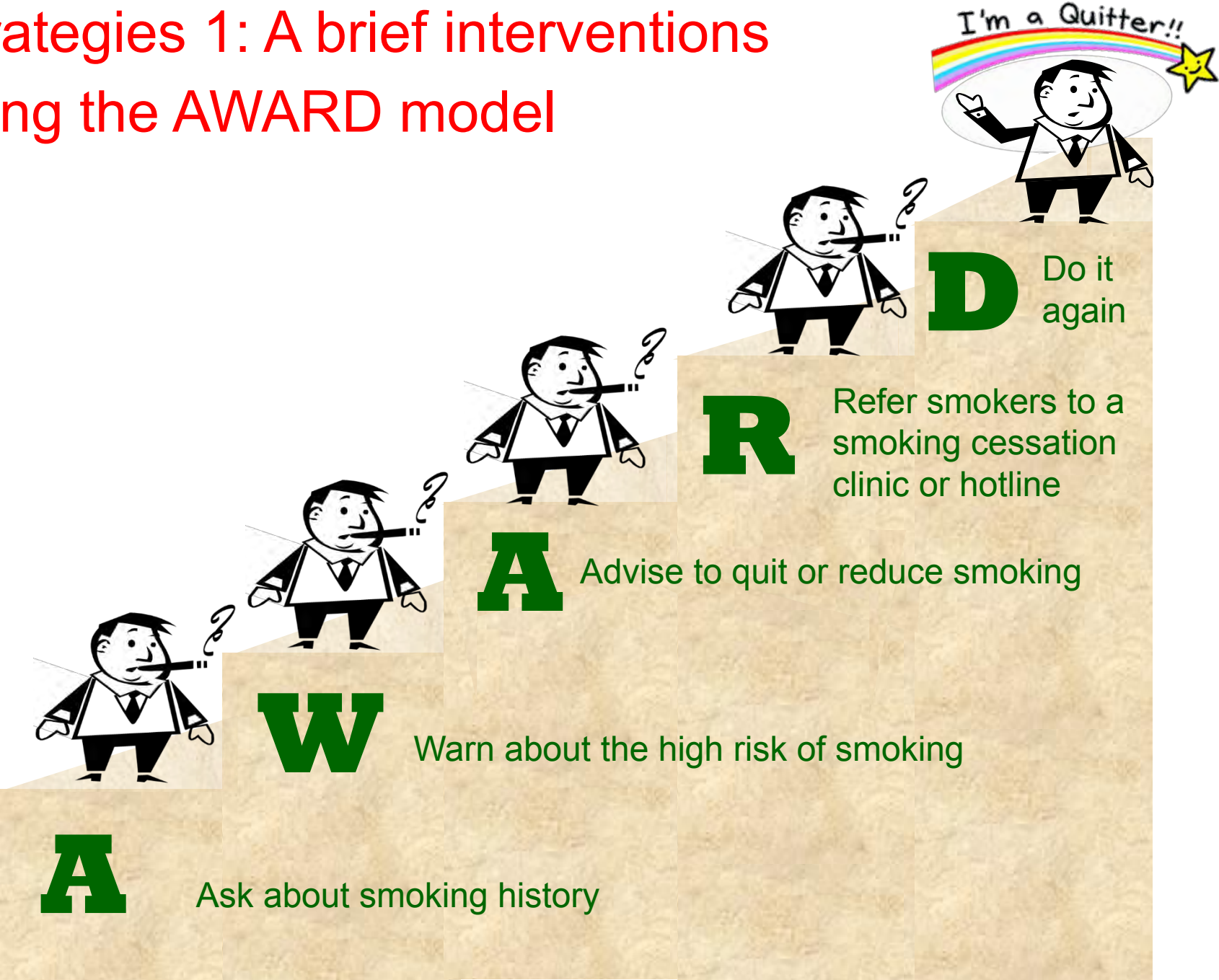


## Potential barriers to provide smoking cessation in hospitals

- Very busy clinical settings in Hong Kong;
- Lack of time, training and confidence;
- smokers are too impatient to undergo a long intervention;
- Some smokers are reluctant to participate for fear that they might miss or experience delays in their medical consultation



# Strategies 1: A brief interventions using the AWARD model



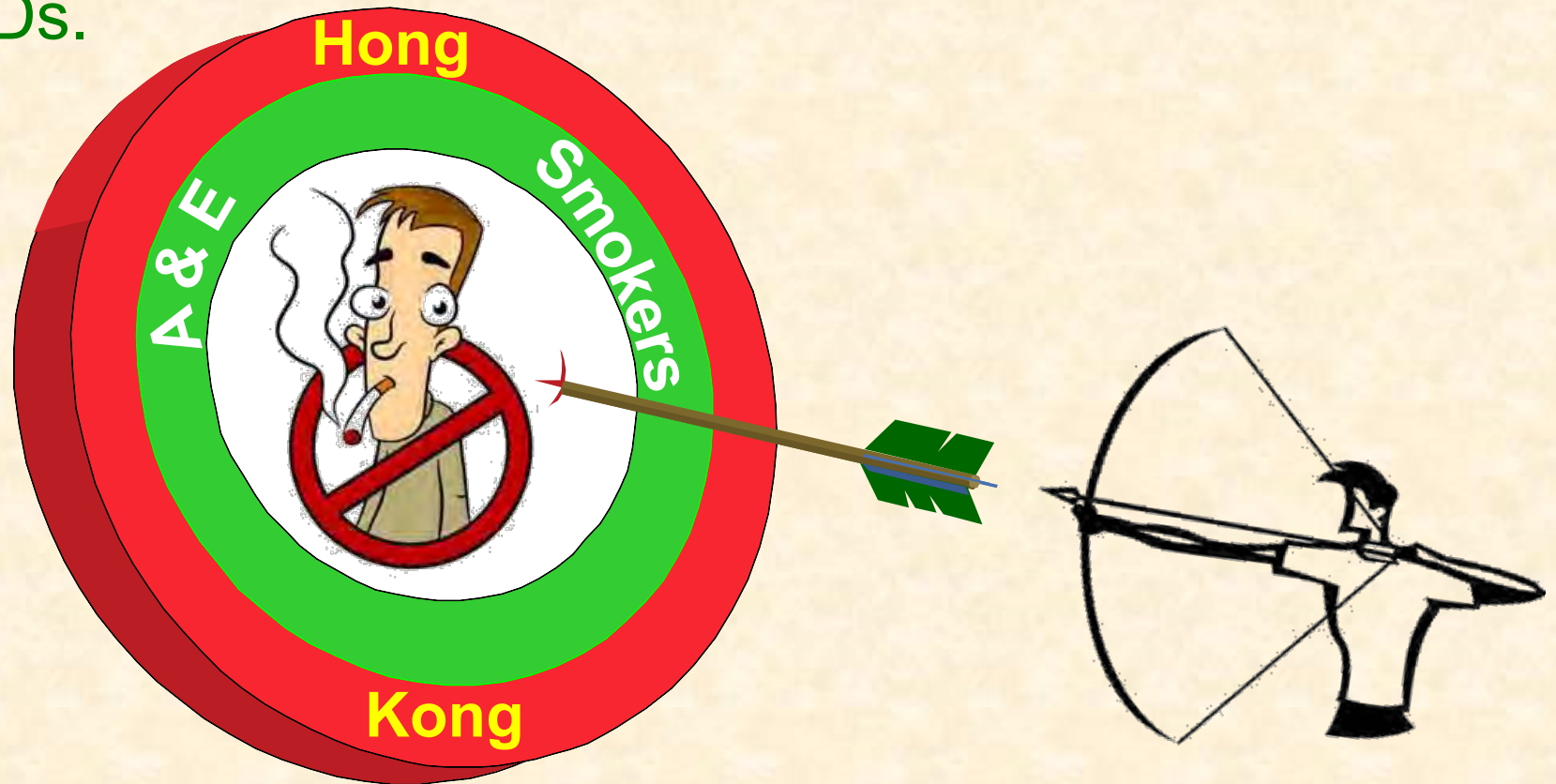
# Strategies 2: Self-determination Intervention for Smoking Cessation (Immediate or Progressive)





# Aims of the Study

To test the effectiveness of using a brief, self-determination intervention on smoking cessation (immediate or progressive) for smokers attending AEDs.



# Sampling Method



1571



# Sample

## **Inclusion criteria**

- aged 18 years or above
- triaged as semi-urgent or non-urgent
- current smokers, either occasional or daily and
- express a willingness to quit smoking

## **Exclusion criteria**

- poor cognitive state or mental illness and
- participation in other smoking cessation programmes or services.

# Primary Outcome

- biochemically validated abstinence at 6 months

# Secondary Outcomes

- biochemically validated abstinence at 12 months
- self-reported 7-day point prevalence of abstinence at 6 and 12 months
- self-reported reduction of  $\geq 50\%$  in cigarette consumption at 6 and 12 months
- self-efficacy against tobacco at 6 and 12 month
- quality of life at 6 and 12 months

Approached (N= 80755)

Assessed for eligibility (N= 80755)

- Did not meet inclusion criteria (N= 76527)
- Refused to participate (N= 2657)
- Response rate: 37.2%

Reasons

- Busy schedule
- Little interest to participate in 1-year program
- Already joined other smoking cessation programmes or services

Randomized (N= 1571)

Intervention group (N= 787)

During each telephone follow-up at 1<sup>st</sup> month, 3<sup>rd</sup> month, 6<sup>th</sup> month and 12<sup>th</sup> month of the smoking cessation program, subjects received a brief, self-determination intervention that contained a very brief (<30 s) smoking cessation intervention warning.

Completed 1-month follow up (N=568)

Retention= 568/787= 72.2%

Completed 3-month follow up (N=568)

Retention= 568/787= 72.2%

Completed 6-month follow up (N=571)

Retention= 571/787= 72.6%

Completed 12-month follow up (N=488)

Retention= 488/715= 68.3%

(excluding 72 cases that are undue to follow up)

Reasons for dropping out

- No longer interested to participate
- Busy schedule

Control group (N= 784)

During each telephone follow-up at 1<sup>st</sup> month, 3<sup>rd</sup> month, 6<sup>th</sup> month and 12<sup>th</sup> month of the smoking cessation program, subjects received a “placebo control intervention” of the same duration as the intervention group on increasing physical activity and fruit and vegetable intake.

Completed 1-month follow up (N=507)

Retention= 507/784= 64.7%

Completed 3-month follow up (N=519)

Retention= 519/784= 66.2%

Completed 6-month follow up (N=495)

Retention= 495/784= 63.1%

Completed 12-month follow up (N=409)

Retention= 409/713= 57.4%

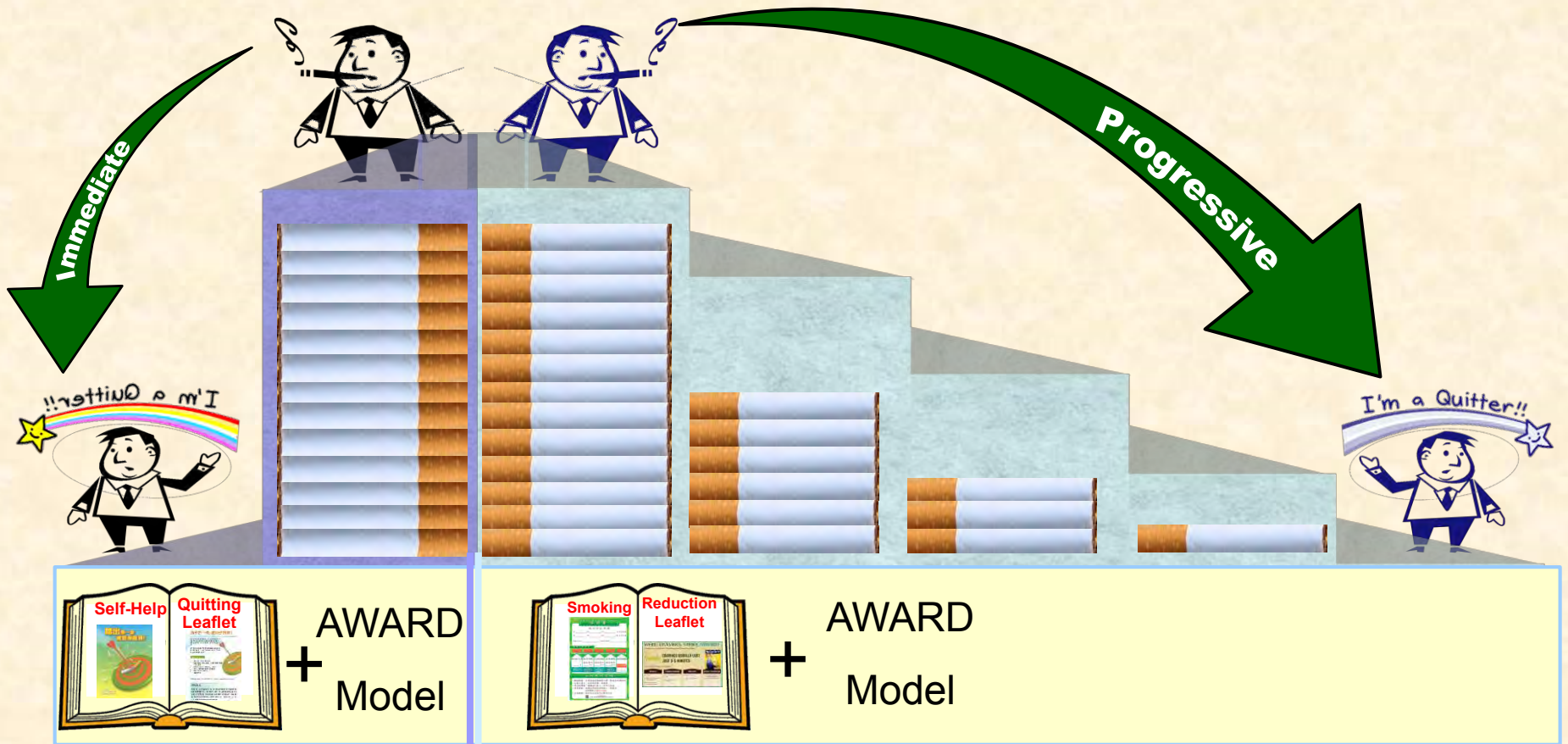
(excluding 71 cases that are undue to follow up)

Reasons for dropping out

- No longer interested to participate
- No longer reside in Hong Kong
- Busy schedule



# Intervention Group



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# Control Group

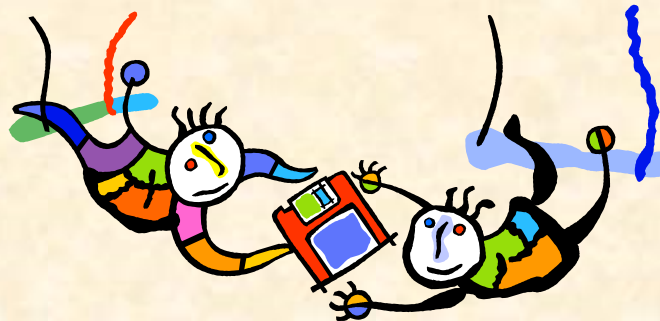
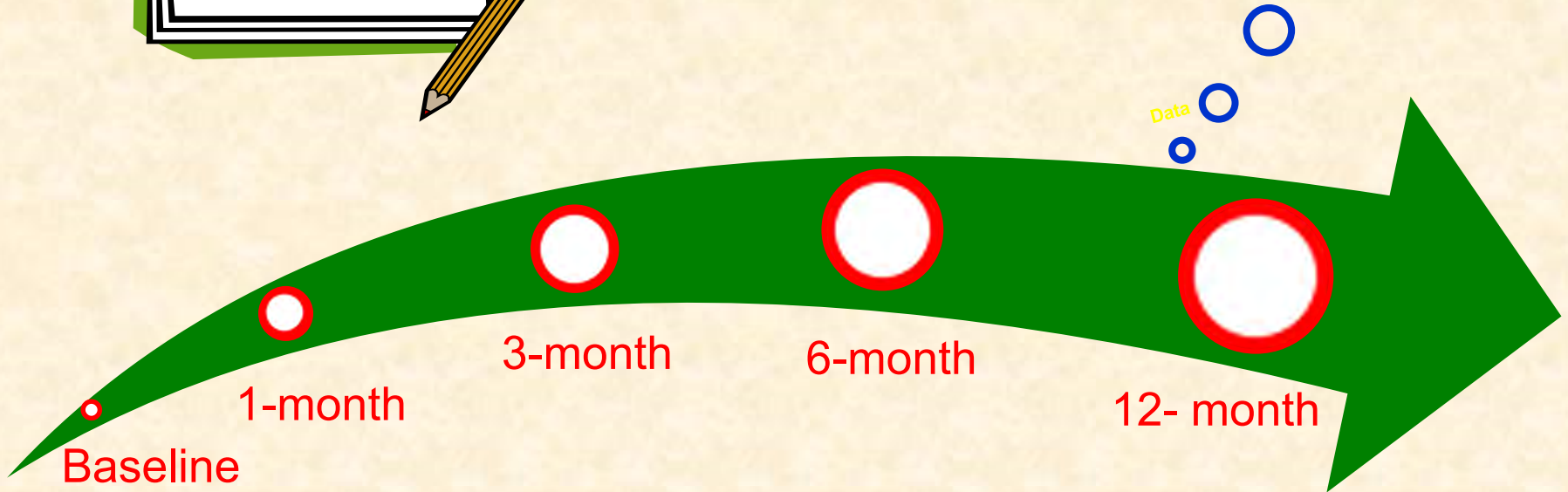
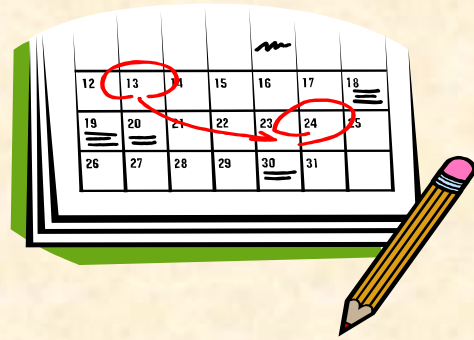
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+

‘placebo’ Intervention  
on increasing physical  
activity and fruit and  
vegetable intake.

# Data Collection



# Results

<b>6 months</b>	Intervention group	Control group	Odds ratio (95% CI)	<i>p</i>
	( <i>N</i> = 787)	( <i>N</i> = 784)		
<b>Self-reported abstinence</b>				
7-day PP (CC)	96 (16.8)	71 (14.3)	1.207 (0.865 – 1.685)	.269
7-day (ITT)	96 (12.2)	71 (9.1)	1.395 (1.009 – 1.929)	.044*
<b>Self-reported smoking reduction</b>				
>50% (CC)	121 (21.2)	123 (24.8)	0.813 (0.611 – 1.083)	.157
>50% (ITT)	121 (15.4)	123 (15.7)	0.976 (0.743 – 1.283)	.864
>50% + 7-day PP (CC)	217 (38.0)	194 (39.2)	0.912 (0.713 – 1.167)	.463
>50% + 7-day PP (ITT)	217 (27.6)	194 (24.7)	1.158 (0.924 – 1.450)	.202
<b>Validated abstinence</b>				
Validated quit rate (CC)	53 (9.3)	22 (4.4)	2.200 (1.318 – 3.672)	.003**
Validated quit rate (ITT)	53 (6.7)	22 (2.8)	2.501 (1.506 – 4.154)	<.001***

\* Significant at  $p < .05$ ; \*\* significant at  $p < .01$ ; \*\*\* significant at  $p < .001$ .

# Results

	Intervention group ( <i>N</i> =715) <sup>a</sup>	Control group ( <i>N</i> =713) <sup>a</sup>	Odds ratio (95% CI)	<i>p</i>
<b>12 months</b>				
<b>Self-reported abstinence</b>				
7-day PP (CC)	94 (19.3)	57 (13.9)	1.473 (1.029 – 2.110)	.034*
7-day (ITT)	94 (13.1)	57 (8.0)	1.742 (1.232 – 2.464)	.002**
<b>Self-reported smoking reduction</b>				
>50% (CC)	124 (25.4)	93 (22.7)	1.158 (0.851 – 1.575)	.352
>50% (ITT)	124 (17.3)	93 (13.0)	1.399 (1.045 – 1.872)	.024*
>50% + 7-day PP (CC)	218 (44.7)	150 (36.7)	1.394 (1.065 – 1.824)	.002**
>50% + 7-day PP (ITT)	218 (30.5)	150 (21.0)	1.646 (1.295 – 2.094)	<.001***
<b>Validated abstinence</b>				
Validated quit rate (CC)	45 (9.2)	23 (5.6)	1.705 (1.013 – 2.870)	.045*
Validated quit rate (ITT)	45 (6.3)	23 (3.2)	2.015 (1.206 – 3.367)	.008**

\* Significant at  $p < .05$ ; \*\* significant at  $p < .01$ ; \*\*\* significant at  $p < .001$ .

Note <sup>a</sup> Excluding the subjects who are undue to follow-up.



# Conclusion

- Medical attention at AEDs of smokers who are in physical discomfort is a “golden opportunity” to promote smoking cessation
- The brief, self-determination intervention was shown to be effective in promoting smoking cessation for people attending emergency departments. Such intervention should therefore be a more cost-effective and sustainable approach to helping smokers quit smoking, and consequently may save more lives.



*Thank You*

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LIVE IT, LOVE IT

SINOPEC