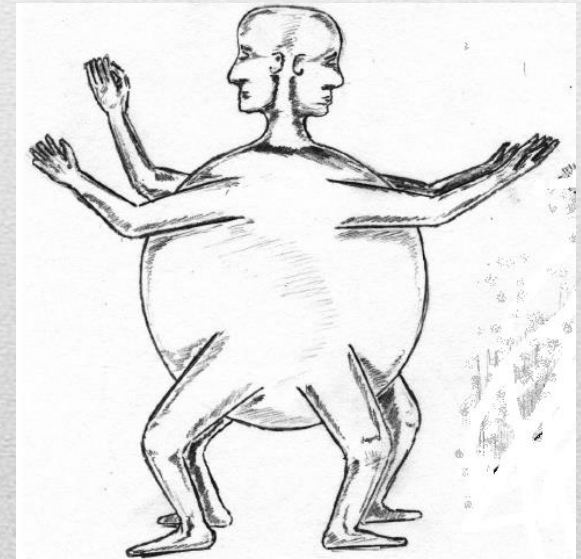


BETWEEN VAPOTHEOSIS AND VAPOCALYPSIS

MAKING SENSE OF SCARCE EVIDENCE

Armando Peruga, MD, DrPH
Programme Manager (retired)
WHO Tobacco Free Initiative



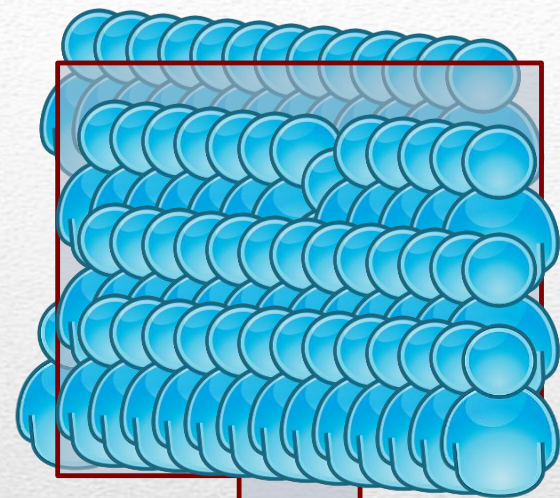
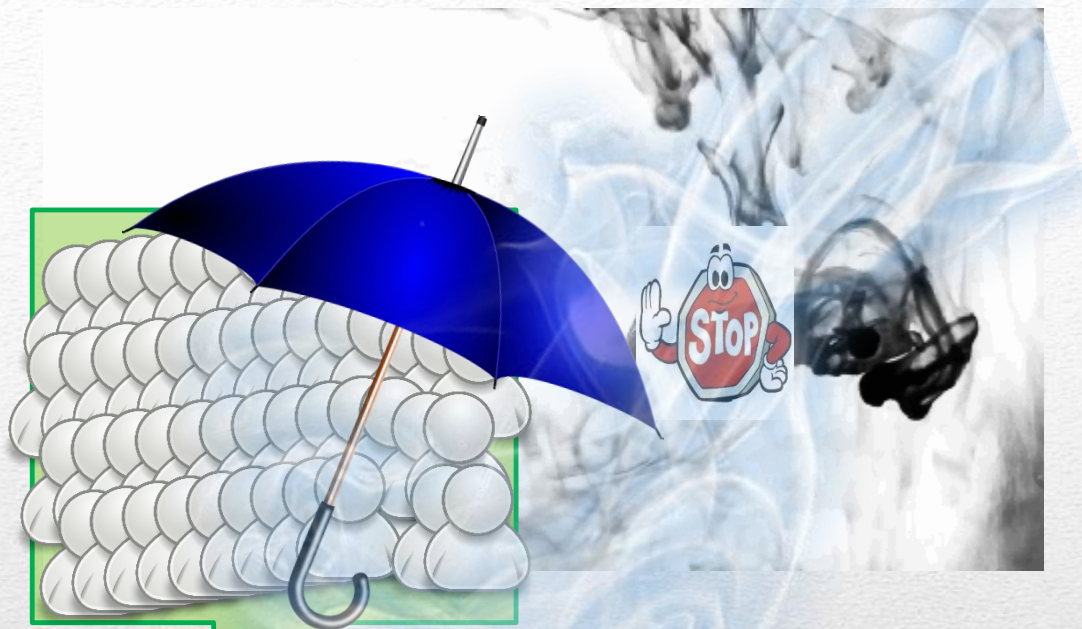
DECLARATION OF INTERESTS

I have received no payment or contribution, monetary or in-kind, from any commercial entity or done any unpaid work for them

I do not have current investments in a commercial entity with an interest related to the subject of the presentation

I do not have any intellectual property rights related to the subject of the presentation

I have not provided paid or unpaid expert opinion or testimony, to or on behalf a commercial entity related to the subject of the presentation but ~~did to governmental and parliamentary policy makers~~



NICOTINE PRODUCTS' RISK CONTINUUM



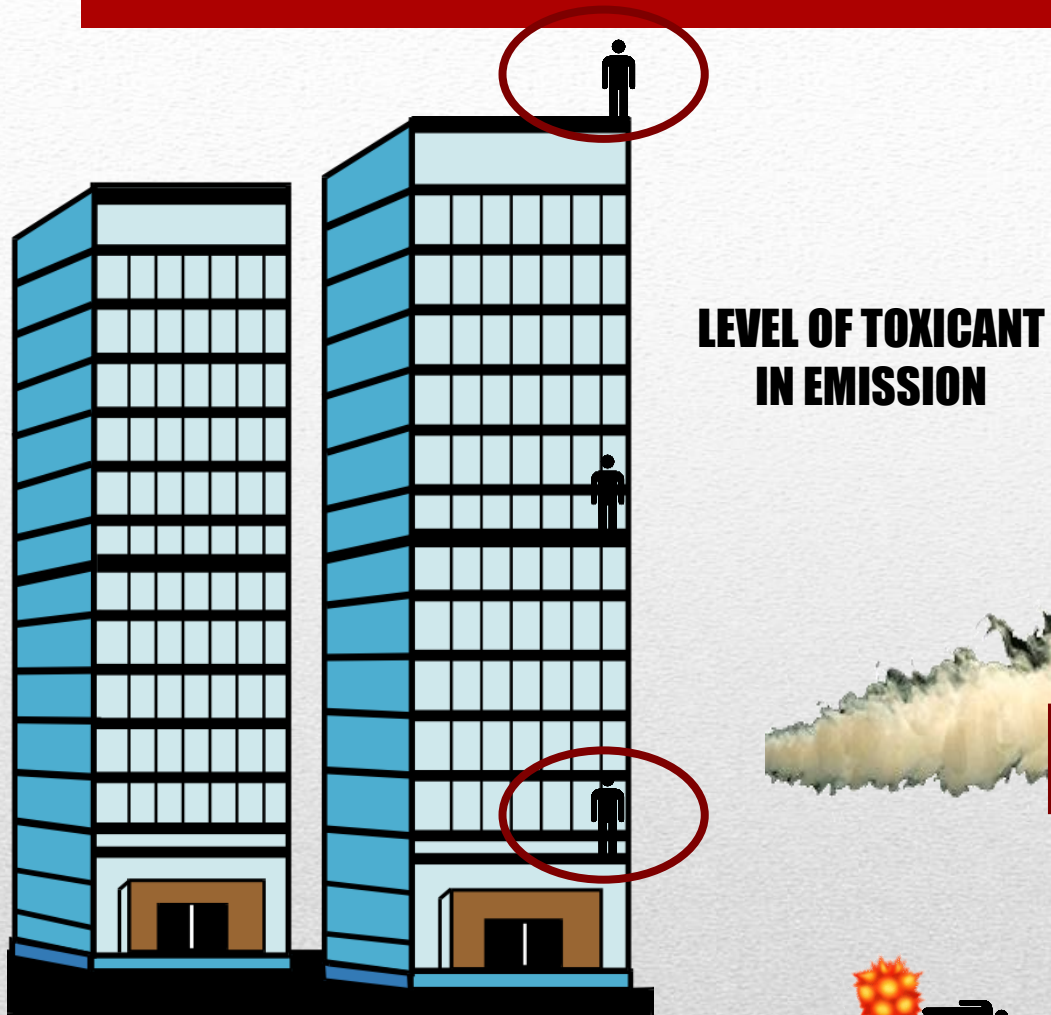
8 000
FLAVORS



HOW MUCH SAFER ARE ECIGS
THAN SMOKING?

**95% SAFER
THAN
CIGARETTES?**

HEALTH EFFECTS



RELATIVE RISK

INDIVIDUAL RISK PER UNIT EXPOSURE



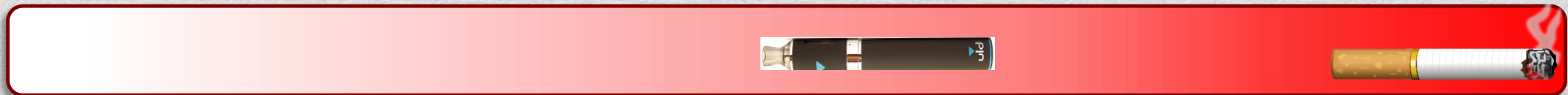
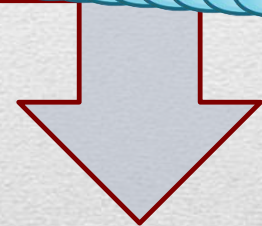
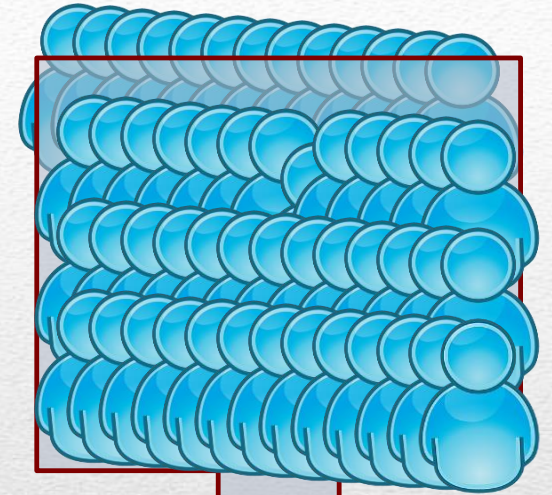
- **The only two RCTs show low efficacy**
- **Most of the few longitudinal studies show that ecig use prevents quitting smoking**
- **DAILY USE OF OPEN SYSTEM ECIGS MAY HELP SOME SMOKERS**

Ecig established use



Most of it dual use

Ecig experimentation



SWITCHING FROM SMOKING TO ECIGS

TOXICANT	TIMES OVER BACKGROUND LEVEL
PM 1.0/PM 2.5	14-40 / 6-86
Nicotine	10-115
Formaldehyde	1.2
Acetaldehyde	2-8
Nickel	Above SHS levels

- **SHA from ENDS is a new indoor air contamination source for**
 - **1,2-propanediol,**
 - **PM, ultrafine particles,**
 - **some VOCs, some metals and**
 - **nicotine**
- **Except for metals, at lower concentrations than in SHS**
- **short- and long-term risks to health empirically unknown**

PASSIVE EXPOSURE TO AEROSOL FROM ECIGS



The interest of the tobacco industry

- is to attract new users to alternative products not reducing their tobacco sales
- promote smoking through advertising and promotion to adults and children.
- allege their potential benefits as an excuse to engage and influence policymakers, scientists and advocates in tobacco control, while at the same time build credibility in corporate social responsibility initiatives.

COMMERCIAL INTERESTS

DO E-CIGARETTES REPRESENT A BARRIER TO EFFECTIVE TOBACCO CONTROL?

- **LIKELY TO BE SAFER THAN CIGARETTES BUT WE DO NOT KNOW BY HOW MUCH**
- **MOSTLY LEADS TO DUAL USE, PERHAPS WILL HELP QUIT SMOKING**
- **GREATLY INCREASE THE UPTAKE OF NICOTINE IN KIDS IN SOME COUNTRIES**
- **SOME LEVEL OF PASSIVE EXPOSURE TO EXHALED AEROSOL**

SO FAR NOT THE DISRUPTIVE TECHNOLOGY HOPED FOR BIG PUBLIC HEALTH IMPACT WHILE ALLOWING THE TOBACCO INDUSTRY, WHICH CAUSES 6 M DEATHS ANNUALLY, TO SAY THEY ARE PART OF THE SOLUTION, NOT OF THE PROBLEM