



WEEKLY EPIDEMIOLOGICAL REPORT

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Electronic cigarettes: E-smoking among Children and Adolescents

E-cigarettes (also known as e-cigs, e-hookahs, mods, vapes, vape pens, tank systems, or electronic nicotine delivery systems [ENDS]) are battery-operated devices that heat a liquid (a.k.a. juice) to produce an aerosol. Inhalation of this aerosol is called e-smoking or vaping. Nicotine is commonly found in the e-liquid, together with other chemicals such as additives, flavours and toxic substances; formaldehyde, acrolein (a weedicide), diacetyl (causes lung disease), volatile organic compounds (benzene), carcinogens and heavy metals. Though E-cigarettes are said to have fewer than the mix of 7000 deadly chemicals in regular cigarettes, the substances contained in these are also lethal. Moreover, it is difficult for consumers to know exactly what they are inhaling; for example, electronic non-nicotine delivery systems (ENNDS) were found to have harmful levels of nicotine and some e-cigs contained marijuana unknown to the consumer.

Evidence reveals e-cigarettes are unsafe and harmful to active as well as passive smokers. Inhalation of the e-smoke irritates the lungs and causes coughing, wheezing and shortness of breath while increasing the risk of bronchitis, asthma, and chronic obstructive pulmonary disease. Meanwhile, severe lung injuries associated with vaping require chronic oxygen therapy, and a new respiratory disorder known as e-cigarette or vaping-associated lung injury (EVALI) is increasing. ENDS use has also been linked with an increased risk of cardiovascular problems, including high blood pressure, heart

attacks, and strokes.

Nicotine in e-cigarettes is highly addictive and leads to dependence and withdrawal symptoms. Nicotine exposure from e-cigarettes in pregnant women has been associated with harmful effects on the developing fetal brain, while its effects on the developing brains of children and adolescents are associated with adverse outcomes on cognition, attention, mood and impulse control, including anxiety and learning disorders. Burns in users due to explosions, poisoning due to e-liquid leaks, or accidental swallowing have been reported. Aerosols generated by ENNDS contribute to indoor pollution by raising the concentration of particulate matter, and toxic substances. The long-term impact of e-cigarette exposure is largely unknown and more research has been initiated.

E-cigarettes are currently promoted as a tobacco cessation intervention. However, the potential of ENNDS as a population-level tobacco cessation intervention is ambiguous. A systematic review has shown that e-cigarettes with nicotine, have helped adult smokers to quit when compared with non-nicotine e-cigarettes, but the conclusion was doubtful as it was based only on two trials, with small sample sizes and a wide margin of errors. The Centre for Disease Control USA (CDC-USA) discovered, that a majority of adults who use e-cigarettes to quit regular smoking end up using both as “dual users”. Moreover, the US Preventive Service Task Force informed that evidence is insufficient to recommend e-cigarettes as a smoking

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cessation tool among adults. Presently, The World Health Organization and the United States Food and Drug Control Agency of the USA(US-FDA) do not recommend e-cigarettes as a smoking cessation aid and currently recommend that countries scale up policies and interventions that are evidence-based such as brief advice from health professionals, national toll-free tobacco quit support lines, cessation interventions delivered using mobile text messages and nicotine replacement therapies and non-nicotine pharmacotherapies. Individuals who plan to quit smoking are advised to avoid e-cigarettes and to seek help from qualified health workers.

E-smoking has become an emerging public health threat in many countries, among children and adolescents. In 2018, the US FDA warned of an oncoming epidemic among US teenagers due to fruit and candy-flavoured e-cigarettes. Deceptive tactics popularized by the tobacco industry, are driving this epidemic by hooking adolescents towards e-smoking. Marketing strategies include catchy slogans, celebrity endorsements, glamorous actors, models, and cartoon characters as mascots, sponsoring sports events and music concerts, manufacturing a variety of sweet fruity and candy-flavoured e-cigarettes and giving promotional discounts. Government agencies in many countries are taking steps to prevent and mitigate the increasing use among minors. In 2019 the Center for Disease Control (CDC) issued advisories to avoid e-cigarettes due to the outbreak of EVALI. In 2020 the FDA issued an order to prohibit the sale of flavoured e-cigs. In 2022 the US FDA prevented the marketing of e-cigarettes from JUUL Labs Inc. as the manufacturer’s premarket tobacco product application was contradictory and raised concerns regarding genotoxicity. As of March 2023, nearly 6000 class action and personal injury lawsuits have been filed in the US and JUUL Labs has agreed to pay millions of dollars to various US states for deceptive marketing and selling its products to minors.

The 2022 National Youth Tobacco Survey for the USA showed that e-cigarettes are the most commonly used form of tobacco product among 2.5 million middle and high school students with 46% of high school students using them regularly and more than 1 in 4 using them daily. Never-smoker children who use ENDS have been found to have twice the probability of smoking regular tobacco later in life. According to National Authority on Alcohol and Tobacco in Sri Lanka, e-cigarettes are regulated under the NATA Act No 27 of 2006, which bans the manufacture, import, sale and offer for sale of nicotine-containing products, where e-cigarettes are regulated under Schedule II. E-Cigarettes are being marketed and sold openly on the internet and social media platforms and e-cigarette use is said to be gradually gaining popularity among the Sri Lankan youth. Early and urgent action is needed by enforcing regulations, and formulating and implementing evidence-based public health strategies to prevent and mitigate future e-smoking

epidemics among the younger generation.

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References

Centers for Disease Control and Prevention. About Electronic Cigarettes (E-Cigarettes) Retrieved from https://www.cdc.gov/tobacco/basic_information/e-cigarettes/about-e-cigarettes.html on 17.06.2023
 Dailymirror.lk. 60 people die daily due to tobacco consumption: NATA, Spotlight on E-cigarettes. Retrieved from <https://www.dailymirror.lk/medicine/60-people-die-daily-due-to-tobacco-consumption-NATA/308-228536> on 16.06.2023
 Drugwatch. E-cigarette lawsuits. retrieved from <https://www.drugwatch.com/e-cigarettes/lawsuits/> retrieved on 17.06.2023
 Federal Drug Agency. FDA Denies Authorization to Market JUUL Products. Retrieved from <https://www.fda.gov/news-events/press-announcements/fda-denies-authorization-market-juul-products> on 18.06.2023
 The National Authority On Tobacco and Alcohol Act, No.27 of 2006. Retrieved from https://www.nata.gov.lk/web/images/downloads/1982-33_E.pdf on 16.06.2023

**Table 1 : Water Quality Surveillance
Number of microbiological water samples May 2023**

District	MOH areas	No: Expected *	No: Received
Colombo	15	90	NR
Gampaha	15	90	NR
Kalutara	12	72	86
Kalutara NIHS	2	12	17
Kandy	23	138	10
Matale	13	78	27
Nuwara Eliya	13	78	72
Galle	20	120	NR
Matara	17	102	5
Hambantota	12	72	NR
Jaffna	12	72	115
Kilinochchi	4	24	NR
Manner	5	30	NR
Vavuniya	4	24	40
Mullatvu	5	30	30
Batticaloa	14	84	NR
Ampara	7	42	34
Trincomalee	11	66	NR
Kurunegala	29	174	NR
Puttalam	13	78	NR
Anuradhapura	19	114	NR
Polonnaruwa	7	42	NR
Badulla	16	96	NR
Moneragala	11	66	81
Rathnapura	18	108	NR
Kegalle	11	66	8
Kalmunai	13	78	NR

* No of samples expected (6 / MOH area / Month)
NR = Return not received

Table 1: Selected notifiable diseases reported by Medical Officers of Health 10th- 16th June 2023 (24th Week)

RDHS	Dengue Fever		Dysentery		Encephaliti		Enteric Fever		Food Poi-		Leptospirosis		Typhus		Viral Hepa-		Human		Chickenpox		Meningitis		Leishmania-		WRCD	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	T*	C**
Colombo	579	8312	1	6	0	9	0	1	0	6	10	166	0	0	0	3	0	0	7	158	1	23	0	5	24	10
Gampaha	433	8630	0	7	1	12	0	1	0	2	8	300	0	6	0	9	0	0	3	137	1	37	0	25	1	99
Kalutara	190	2795	0	14	0	1	0	0	5	30	442	0	1	1	3	0	1	1	13	246	4	44	0	1	10	2
Kandy	278	2872	2	20	0	0	3	7	0	12	7	139	0	36	0	2	0	1	3	140	1	12	0	15	84	10
Matale	40	763	0	2	0	0	0	1	3	8	9	95	1	10	0	3	0	0	0	30	1	4	2	161	20	10
Nuwareliya	10	121	3	75	0	1	0	2	0	38	4	57	2	37	0	4	0	0	0	59	0	8	0	0	57	10
Galle	76	1237	1	26	0	11	0	5	1	19	14	506	1	27	0	1	0	1	4	184	1	12	0	1	33	10
Hambantota	76	889	2	6	0	3	0	1	0	8	19	193	0	46	0	7	0	0	3	88	1	15	23	331	23	10
Matara	65	941	0	19	0	6	0	0	1	10	17	334	1	19	0	2	1	2	7	148	2	12	10	97	50	10
Jaffna	57	1584	3	47	0	1	0	8	0	16	0	8	5	468	0	1	0	1	1	111	1	6	0	2	61	93
Kilinochchi	1	66	0	4	0	0	0	0	0	16	0	7	0	6	0	0	0	0	1	9	0	0	0	0	18	10
Mannar	2	68	0	6	0	0	0	1	0	0	0	27	0	5	0	0	0	0	1	0	4	0	0	0	29	10
Vavuniya	4	111	0	5	0	1	0	0	0	0	0	25	0	7	0	1	0	0	0	13	0	3	1	7	5	10
Mullaitivu	6	77	0	8	0	0	0	3	0	11	0	28	1	5	0	0	0	0	0	10	0	0	0	5	21	10
Batticaloa	90	1738	4	131	0	6	1	4	1	17	1	59	0	1	0	3	0	1	1	39	1	24	0	1	54	10
Ampara	0	68	0	1	0	1	0	0	0	0	0	20	0	0	0	1	0	0	0	19	0	11	0	2	13	52
Trincomalee	70	1774	2	7	0	1	0	0	4	0	54	0	13	0	0	0	0	0	3	33	0	17	0	1	22	10
Kurunegala	127	1800	3	23	0	7	0	0	1	3	17	220	0	9	1	9	0	2	10	265	9	85	17	248	20	10
Puttalam	45	2527	0	7	0	1	0	1	0	0	2	30	0	7	0	1	0	0	3	71	0	32	0	14	15	10
Anuradhapur	45	465	1	4	0	0	0	1	0	2	7	201	1	25	0	2	0	0	7	141	4	29	25	296	20	99
Polonnaruwa	33	414	0	10	0	5	0	0	0	6	5	120	0	5	0	12	0	0	3	47	0	13	1	228	33	99
Badulla	28	614	2	19	0	3	0	0	1	27	11	173	2	28	2	60	0	0	5	98	4	25	2	16	63	10
Monaragala	21	342	0	14	1	5	0	0	0	0	7	380	0	28	1	17	0	0	2	42	1	40	1	93	22	10
Ratnapura	94	1221	3	26	0	10	0	2	1	13	31	637	0	16	0	12	0	1	0	101	1	98	0	98	33	10
Kegalle	128	1685	1	13	0	1	0	2	0	8	17	369	1	20	0	3	0	0	11	230	1	34	0	18	28	10
Kalmune	32	1481	6	40	0	7	0	0	0	0	3	33	0	0	0	0	0	0	5	40	4	20	0	0	39	10
SRI LANKA	2530	42595	34	540	2	92	4	40	9	231	219	4623	15	825	5	156	1	10	92	2460	38	608	82	1665	34	98

Source: Weekly Returns of Communicable Diseases (esurveillance.avid.gov.lk). T=Timeliness refers to returns received on or before 16th June, 2023 Total number of reporting units 358 Number of reporting units data provided for the current week: 328 C**=Completeness. A = Cases reported during the current week. B = Cumulative cases for the year.

Table 2: Vaccine-Preventable Diseases & AFP

10th– 16th June 2023(24th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2023	Number of cases during same week in 2022	Total number of cases to date in 2023	Total number of cases to date in 2022	Difference between the number of cases to date in 2023 & 2022
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	00	00	00	00	00	00	01	43	39	10.2 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	00	02	00	00	00	00	01	02	01	06	00	101	28	260.7 %
Measles	01	02	00	00	00	00	00	00	00	03	00	26	12	116.6 %
Rubella	00	00	00	00	00	00	00	00	00	00	00	01	00	0 %
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Tetanus	00	00	00	00	00	00	00	00	00	00	00	05	05	0 %
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Japanese Encephalitis	00	00	00	00	00	00	00	00	00	00	00	02	07	- 71.4 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	00	04	01	300 %
Tuberculosis	128	29	20	05	12	32	05	02	21	254	28	4251	2903	46.4 %

Key to Table 1 & 2

Provinces: W: Western, C: Central, S: Southern, N: North, E: East, NC: North Central, NW: North Western, U: Uva, Sab: Sabaragamuwa.
RDHS Divisions: CB: Colombo, GM: Gampaha, KL: Kalutara, KD: Kandy, ML: Matale, NE: Nuwara Eliya, GL: Galle, HB: Hambantota, MT: Matara, JF: Jaffna, KN: Killinochchi, MN: Mannar, VA: Vavuniya, MU: Mullaitivu, BT: Batticaloa, AM: Ampara, TR: Trincomalee, KM: Kalmunai, KR: Kurunegala, PU: Puttalam, AP: Anuradhapura, PO: Polonnaruwa, BD: Badulla, MO: Moneragala, RP: Ratnapura, KG: Kegalle.
Data Sources:
Weekly Return of Communicable Diseases: Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,
Special Surveillance: AFP* (Acute Flaccid Paralysis), Japanese Encephalitis
CRS** =Congenital Rubella Syndrome
NA = Not Available

Influenza Surveillance in Sentinel Hospitals - ILI & SARI							
Month	Human				Animal		
	No Total	No Positive	Infl A	Infl B	Pooled samples	Serum Samples	Positives
June							

Source: Medical Research Institute & Veterinary Research Institute

Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to chepid@sitnet.lk. **Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

ON STATE SERVICE

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