



# WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit  
Ministry of Health, Nutrition & Indigenous Medicine

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## Household Air Pollution

### Indoor air pollution and household energy

Everyday activities such as cooking, cleaning, painting and decorating can cause indoor air pollution. The use of polluting fuel for cooking, burning of garbage, paint particles, and chemical sprays, largely contribute to household indoor air pollution. Household air pollution was responsible for an estimated 3.2 million deaths across the world in the year 2020, which included 237,000 deaths among children. Most of these are in low- and middle-income countries. It is found that women and children are the most affected by household indoor pollution.

### Impacts on health

Particular matter and other pollutants in household air inflame the lungs and airways and reduce the oxygen-carrying capacity of the blood resulting in several diseases. It is estimated that 3.2 million people a year die prematurely from illness attributable to household air pollution caused by the inefficient use of solid fuels (2020 data). Among these deaths:

- 21% are due to lower respiratory tract infection
- 23% from stroke
- 32% from ischaemic heart disease
- 19% from chronic obstructive pulmonary disease (COPD), and
- 6% from lung cancer.

### Pneumonia

Exposure to household air pollution almost doubles the risk for childhood pneumonia. 44% of all deaths among children less than 5 years old from acute lower respiratory infections (ALRI) are due to particulate matter inhaled from indoor

air pollution from household solid fuels. Indoor air pollution also contributes to nearly 22% of deaths among adults due to pneumonia.

### Stroke

Approximately 12% of all deaths due to stroke can be attributed to chronic exposure to household air pollution caused by cooking with solid fuels.

### Ischaemic heart disease

Approximately 12% of all deaths due to ischaemic heart disease, which accounts for over a million premature deaths per year, can be attributed to exposure to household air pollution.

### Chronic obstructive pulmonary disease

Over one-fifth or 23% of all deaths from chronic obstructive pulmonary disease (COPD) among adults in low and middle-income countries are due to exposure to household air pollution. Women exposed to high levels of indoor smoke are 2.3 times as likely to suffer from COPD than women who use cleaner fuels. Among men, exposure to indoor smoke nearly doubles that risk.

### Lung cancer

Approximately 11% of lung cancer deaths in adults are attributable to exposure to carcinogens from household air pollution caused by cooking with solid fuels like wood, charcoal, or coal. The risk for women is higher, due to their role in food preparation.

### Other health impacts and risks

More generally, small particulate matter and other pollutants in indoor smoke inflame the airways and lungs, impairing immune response

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and reducing the oxygen-carrying capacity of the blood. Household air pollution contributes to the loss of an estimated 86 million healthy life years in the year 2019.

Almost half of the deaths among children less than five years are due to lower respiratory tract infection. There is also evidence of links between household air pollution and low birth weight, tuberculosis, cataract, nasopharyngeal and laryngeal cancers. Mortality from ischemic heart disease and stroke are also affected by risk factors such as high blood pressure, unhealthy diet, lack of physical activity and smoking. Some other risks for childhood pneumonia include suboptimal breastfeeding, underweight and second-hand smoke. For lung cancer and chronic obstructive pulmonary disease, active smoking and second-hand tobacco smoke are also main risk factors.

**Impacts on health equity, development, and climate change**

It is required to have significant policy changes to achieve the sustainable development goals for 2030, increase the number of people having access to clean fuels and technologies and mitigate climate change.

- Fuel gathering consumes considerable time for women and children, limiting other productive activities and taking children away from school. In less secure environments, women and children are at risk of injury and violence during fuel gathering.
- The use of kerosine oil for cooking, lighting, and heating is also linked to the risk of burns and injuries, ingestion, and poisoning.
- Black carbon (sooty particles) and methane emitted by inefficient stove combustion are powerful climate change pollutants.
- The lack of access to electricity for over 750 million people has forced them to depend on polluting fuels that cause household air pollution.
- Household air pollution is largely contributing to outdoor air pollution.

**WHO's response**

WHO is leading to evaluate of which new household cooking technologies and fuels produce the least emissions and thus are most optimal for health. WHO also provides technical support to countries in their evaluations and scale-up of health-promoting stove technologies.

Other WHO activities include the following:

**New indoor air quality guidelines for household fuel combustion**

To ensure healthy air in and around the home, WHO's new indoor air quality guidelines for household fuel combustion provide health-based recommendations about the performance of fuels, and stoves as well as strategies for the effective dissemination of such home energy technologies to protect the health.

**Household energy database**

The WHO Household Energy Database is used to monitor global progress in the transition to cleaner fuels and improved

stoves as well as contribute to assessments of disease burden from household energy and the energy access situation in developing countries.

**Research and programme evaluation**

WHO is working with countries, researchers, and other partners to harmonize methods of evaluation across settings so that health impacts are assessed consistently and rigorously and incorporate economic assessment of health benefits.

**Convenes Global health and energy platform of action (HEAP)**

This helps to strengthen the corporation between the health and energy sectors to ensure universal access to clean energy sources for households and health care facilities.

**Compiled by.**

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**Table 1 : Water Quality Surveillance  
Number of microbiological water samples December 2021**

District	MOH areas	No: Expected *	No: Received
Colombo	15	90	NR
Gampaha	15	90	NR
Kalutara	12	72	NR
Kalutara NIHS	2	12	NR
Kandy	23	138	NR
Matale	13	78	NR
Nuwara Eliya	13	78	NR
Galle	20	120	NR
Matara	17	102	NR
Hambantota	12	72	NR
Jaffna	12	72	NR
Kilinochchi	4	24	NR
Manner	5	30	NR
Vavuniya	4	24	NR
Mullatvu	5	30	NR
Batticaloa	14	84	NR
Ampara	7	42	NR
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	NR
Rathnapura	18	108	NR
Kegalle	11	66	NR
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 08<sup>th</sup>- 14<sup>th</sup> Jan 2022 (02<sup>nd</sup> Week)**

RDHS	Dengue Fever		Dysentery		Encephaliti		Enteric Fever		Food Poi-		Leptospirosis		Typhus		Viral Hep-		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	31	788	1	1	0	0	0	0	0	0	2	7	0	0	0	0	0	0	0	0	0	0	1	3	100		
Gampaha	32	801	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	2	0	2	0	0	0	72	
Kalutara	75	177	0	0	0	0	0	0	0	0	6	13	0	0	0	0	0	0	0	4	5	0	0	0	0	100	
Kandy	78	179	0	2	0	0	0	0	0	0	4	10	0	0	1	1	0	0	0	2	4	0	0	0	2	98	
Matale	12	30	0	0	0	0	0	0	0	0	3	6	0	0	0	0	0	0	0	1	0	0	12	19	4	100	
NuwareEliya	6	8	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4	100	
Galle	59	139	0	0	0	0	0	0	0	0	7	32	1	2	0	0	0	0	1	1	0	1	0	0	0	100	
Hambantota	17	57	0	2	0	0	0	0	0	0	2	11	0	3	0	1	0	0	0	0	0	0	15	36	0	100	
Matara	25	42	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	1	1	7	14	6	100	
Jaftna	91	202	0	1	0	0	7	8	0	3	1	4	20	63	0	0	0	0	0	4	6	0	0	0	32	88	
Kilinochchi	1	10	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	25	100	
Mannar	18	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	33	90	
Vavuniya	3	6	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	100	
Mullaitivu	2	4	0	0	0	0	1	2	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	17	100	
Batticaloa	30	64	1	5	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	1	1	2	4	0	25	100	
Ampara	5	21	1	2	0	0	0	0	0	0	0	9	0	0	0	0	0	0	1	5	0	1	0	0	21	100	
Trincomalee	19	52	0	1	0	0	0	1	0	0	0	1	0	0	0	4	0	0	0	0	0	2	0	0	23	92	
Kurunegala	11	309	0	1	1	1	0	0	0	0	4	12	1	2	0	0	0	0	2	2	1	1	10	24	0	100	
Puttalam	87	222	0	0	0	0	0	0	0	0	1	5	0	1	0	0	0	0	0	0	2	3	0	0	13	92	
Anuradhapur	14	29	0	0	0	0	0	0	0	0	8	19	0	1	0	1	0	1	0	1	0	2	16	32	0	93	
Polonnaruwa	5	13	1	1	0	0	0	0	0	0	3	17	0	0	0	0	0	0	0	0	0	0	7	17	0	88	
Badulla	47	128	1	3	0	0	0	0	0	0	13	20	1	2	2	7	0	0	1	1	0	1	1	1	0	100	
Monaragala	4	13	0	0	0	0	0	1	0	0	3	22	0	0	1	2	0	0	0	0	1	2	4	5	0	100	
Ratnapura	72	144	1	2	0	2	1	1	4	6	23	69	2	2	1	1	0	0	1	1	0	0	5	8	0	95	
Kegalle	49	98	1	1	0	0	1	1	0	2	17	48	0	0	0	0	0	0	1	1	1	3	1	1	0	100	
Kalmune	10	13	1	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	19	100	
<b>SRI LANKA</b>	<b>14</b>	<b>3604</b>	<b>8</b>	<b>25</b>	<b>1</b>	<b>4</b>	<b>10</b>	<b>14</b>	<b>4</b>	<b>11</b>	<b>10</b>	<b>322</b>	<b>25</b>	<b>77</b>	<b>5</b>	<b>17</b>	<b>0</b>	<b>1</b>	<b>15</b>	<b>31</b>	<b>8</b>	<b>28</b>	<b>78</b>	<b>158</b>	<b>6</b>	<b>95</b>	

Source: Weekly Returns of Communicable Diseases (esurveillance.epid.gov.lk). T=Timeliness refers to returns received on or before 14<sup>th</sup> Jan , 2022 Total number of reporting units 361 Number of reporting units data provided for the current week: 345 C\*\*-Completeness

**Table 2: Vaccine-Preventable Diseases & AFP**

08<sup>th</sup> – 14<sup>th</sup> Jan 2022 (02<sup>nd</sup> Week)

Disease	No. of Cases by Province									Number of cases during current week in 2022	Number of cases during same week in 2021	Total number of cases to date in 2022	Total number of cases to date in 2021	Difference between the number of cases to date in 2022 & 2021
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	00	00	00	00	00	00	00	72	01	100 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	00	00	01	00	00	00	00	00	00	01	03	01	03	- 66.6 %
Measles	00	00	00	00	00	00	00	00	00	00	01	00	01	0 %
Rubella	00	00	00	00	00	00	00	00	00	00	00	00	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	01	01	00	01	00	0 %
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Japanese Encephalitis	00	00	00	00	00	01	00	00	00	01	00	01	00	0 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Tuberculosis	27	06	01	09	01	00	00	02	09	55	106	171	181	- 5.5 %

**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
January							

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@sltnet.lk](mailto:chepid@sltnet.lk). **Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

**ON STATE SERVICE**

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