WEEKLY EPIDEMIOLOGICAL REPORT

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Asthma

As the WHO states asthma is a major non communicable disease characterized by recurrent attacks of breathlessness and wheezing. It often starts in childhood but attacks all age groups. Severity and frequency vary from person to person. Symptoms may occur several times in a day or week in affected individuals. Some people become worse during physical activity or at night Asthma is due to inflammation of the air passages in the lungs which affects the sensitivity of the nerve endings in the airways causing it to be easily irritated.

During an asthma attack, the lining of the bronchial tubes swell, causing the airways to narrow and reducing the flow of air into and out of the lungs. Sleeplessness, daytime fatigue, reduced activity levels and school and work absenteeism is common among persons with recurrent asthma symptoms. Asthma fatality rate is relatively low compared to other chronic diseases.

Historical Significance

Earliest recorded of respiratory distress disorder characterized by "noisy breathing" (wheezing?) is found in China in 2600 BC. "Code of Hammurabi" recorded symptoms of breathlessness: "If a man's lungs pant with his work." was described in Babylonian during the 1792-1750 BC.

"Asthma" (Greek word for "wind" or "to blow") was first used by Hippocrates (~400 BC) for panting and respiratory distress. Relationship between the environment and respiratory disease correlating to climate and location with illness was identified by him which has caused some to consider him as the first allergist.

A chemist and physician from Belgium Jean Baptiste Van Helmont (1579-1644), had stated that asthma "originated in the pipes of the lungs." Bernardino Ramazzini (1633-1714) was the first to recognize exercise induced asthma and discovered a link between asthma and organic dust.

About asthma

- 235 million people currently suffer from asthma according to WHO estimates.
- Asthma is the most common non communicable disease among children. While most deaths occur in older adults.
- It's a public health problem for all countries regardless of the level of development while most asthma-related deaths occur in low- and lower-middle income countries.
- Asthma is under-diagnosed and under-treated creating substantial burden to individuals and families.
- Prevalence is increasing in many countries including, Sri Lanka. The prevalence of asthma among 5 to 11 year old children in Sri Lanka varies between 13% to 25%.
- Bronchial asthma is a major cause of school and work absence. It cause very high health care expenditure and is considered an economical burden

Causes

The basic causes of asthma are not entirely understood. A combination of genetic susceptibility with environmental exposure to inhaled substances which may provoke allergic reactions or irritate the airways are the strongest risk factors for developing asthma.

- indoor allergens (for example, house dust mites in bedding, carpets and stuffed furniture, pollution and pet dander)
- outdoor allergens (such as pollens and moulds)
- tobacco smoke
- chemical irritants in the workplace
- air pollution.
- cold air

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- certain medications as aspirin and other non-steroid anti-inflammatory drugs, and beta-blockers (which are used to treat high blood pressure, heart conditions and migraine) can trigger asthma.
- Though urbanization has been associated with an increase in asthma the exact nature of relationship is obscure.

Host

Though asthma is very common during childhood, it can affect any person at any age. People with allergies or a parent or family member with asthma are more likely to have the disease.

Smokers are more prone to get asthma with strong evidence that passive smokers (secondhand smoking) too are extremely vulnerable specially children. They have a higher chance of developing asthma in early life.

Symptoms of asthma

- Cough (especially at night)
- Wheezing
- Breathlessness
- Chest tightness

are the common symptoms of asthma.

Asthma can be a life threatening illness and might need emergency treatment if the patient is too breathless to talk or walk, and if the lips or fingers become blue.

Diagnosing bronchial asthma

The diagnosis of asthma is based on medical history, a physical examination, and a few tests, such as, lung function test called spirometry, chest x-ray and peak flow.

Treatment

There is no permanent cure for asthma. However the disorder can be adequately controlled with drugs. The optimal asthma control includes minimal chronic symptoms, minimal exacerbations, minimal need for use of 2-agonist, no limitations on activities, including exercise and PEFR variability of less than 20 percent. Assessment of severity is important before treatment is initiated. Patient is placed in the highest category of severity based on any of the clinical features or lung function tests.

Reducing the asthma burden

Short-term medications are used to relieve symptoms. Medications such as inhaled corticosteroids are needed to control the progression of severe asthma and reduce asthma exacerbation and deaths. Patients with persistent symptoms must take long-term medication daily to control the underlying inflammation and prevent symptoms and exacerbations.

The important reason for poor control of asthma can be mainly due to inadequate access to medicines and health services. Medication is not the only way to control asthma. It is important to avoid asthma triggers which stimuli or irritate and inflame the airways.

It is essential to know regarding the triggers by the patients as it is a must to avoid them. Although asthma does not kill as chronic obstructive pulmonary disease (COPD) or other chronic diseases, failure to use appropriate medications or to adhere to treatment can lead to death.

Prevention and control

Asthma is a major public health importance. The WHO plays a role in coordinating international efforts against the disease. The aim is to support Member States in their efforts to reduce the disability and premature death related to asthma.

- surveillance regarding the magnitude of asthma, analyse its determinants and monitor trends
- primary prevention to reduce the level of exposure to common risk factors, specially tobacco smoke, frequent lower respiratory infections during childhood, and air pollution (indoor, outdoor, and occupational exposure)
- improving access to cost-effective interventions including medicines
- upgrading standards and accessibility of care at different levels of the health care system.

Global Alliance against Chronic Respiratory Diseases (GARD)

A voluntary global alliance of national and international organizations, institutions, and agencies commited towards the common goal to reduce the global burden of respiratory diseases officially was launched on 28 March 2006 in Beijing, People's Republic of China.

This is a part of the global work to prevent and control chronic diseases. It is a global effort to improve the diagnosis and the medical care as majority of the chronic respiratory diseases are under-diagnosed, under-treated and the access to essential medications in many countries is poor. This contributes to WHO's work to prevent and control chronic respiratory diseases. It focuses on the needs of low- and middle-income countries by tailoring to local needs of the vulnerable populations.

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Source

WHO Asthma- https://www.who.int/en/news-room/fact-sheets/detail/asthma
Allergy and asthma medical group research center- History of Asthma. http://www.allergyandasthma.com/home/articles/history-of-asthma

Table 1: Selected notifiable diseases reported by Medical Officers of Health 01st-07th Dec 2018(49th Week)

RDHS Division	Dengue Fever		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Chickenpox		Meningitis		Leishmania-sis		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	331	9256	0	93	0	9	1	43	6	43	7	229	0	14	0	10	0	1	26	700	2	68	0	5	**62**	**100**
paha	201	5321	2	73	0	9	1	23	0	168	2	222	0	10	0	14	0	0	12	712	1	47	3	60	**64**	**100**
Kalutara	89	2894	0	89	0	5	1	16	1	62	24	663	1	7	0	15	0	0	12	692	0	103	0	9	**55**	**100**
Kandy	120	3613	3	118	0	7	1	6	0	28	3	115	3	108	0	23	0	1	7	321	0	42	2	39	**59**	**100**
Matale	20	866	0	23	0	1	0	6	0	42	5	104	1	5	0	10	0	0	2	58	0	17	7	174	**60**	**100**
NuwaraEliya	2	194	2	59	0	5	0	14	0	159	0	48	1	135	0	28	0	0	2	205	1	47	0	0	**24**	**100**
Galle	20	912	4	64	0	13	0	6	0	25	14	414	3	65	0	4	0	1	9	364	2	58	0	5	**31**	**100**
Hambantota	24	895	1	28	0	4	0	3	0	7	2	79	5	88	0	3	0	1	12	275	0	15	14	729	**71**	**100**
Matara	40	1047	0	41	0	6	0	9	0	23	11	272	2	63	0	21	0	0	7	289	0	14	14	480	**55**	**100**
Jaffna	206	3333	10	209	0	6	1	53	0	224	2	17	23	328	0	1	0	2	2	273	0	13	0	3	**36**	**93**
Kilinochchi	4	319	2	39	0	1	0	20	0	5	0	7	0	16	0	0	0	1	0	32	1	4	0	6	**52**	**100**
Mannar	0	202	0	26	0	0	0	3	0	2	0	1	0	12	1	1	0	0	0	28	0	4	1	4	**36**	**100**
Vavuniya	13	566	0	18	0	4	4	52	0	16	1	49	0	7	0	0	0	1	1	50	1	9	0	13	**56**	**100**
Mullaitivu	1	109	0	8	0	0	0	12	0	26	1	12	0	7	0	0	0	1	1	12	0	2	0	2	**26**	**99**
Batticaloa	48	4674	5	198	0	5	0	11	0	33	3	53	0	3	1	7	0	3	2	187	0	21	0	0	**63**	**100**
Ampara	3	236	0	79	1	6	0	3	0	11	3	53	0	0	0	7	0	1	1	287	0	31	0	3	**64**	**100**
Trincomalee	37	1076	0	41	0	2	2	8	0	15	2	60	1	24	0	4	0	0	0	197	0	10	1	21	**30**	**100**
Kurunegala	38	2306	3	146	1	18	0	16	0	13	28	351	0	27	0	23	0	2	16	594	3	87	24	459	**61**	**100**
Puttalam	51	1896	5	88	0	7	0	6	0	10	0	55	0	11	0	3	0	0	2	145	0	87	1	4	**63**	**100**
Anuradhapura	16	841	1	92	0	7	1	9	1	45	22	223	0	23	1	16	0	2	3	413	1	52	5	489	**44**	**95**
Polonnaruwa	11	302	4	49	0	5	0	0	0	20	23	155	0	1	0	4	0	1	14	309	0	22	6	246	**56**	**88**
Badulla	15	564	5	144	0	10	1	14	0	18	8	176	2	92	1	66	0	0	4	489	10	138	2	12	**48**	**100**
Monaragala	13	813	2	85	0	2	0	1	0	4	24	376	5	141	3	51	0	0	1	185	10	175	2	49	**66**	**100**
Ratnapura	44	2132	10	196	1	43	0	29	0	5	21	714	2	29	0	28	0	2	2	316	4	128	5	214	**46**	**100**
Kegalle	41	1438	3	62	0	13	0	11	4	97	21	349	2	77	2	19	0	0	8	413	1	48	0	14	**64**	**100**
Kalmune	21	1682	1	61	0	4	0	3	0	35	0	9	0	1	0	1	0	0	2	207	1	19	0	1	**50**	**100**
SRILANKA	**1409**	**47487**	**63**	**2129**	**3**	**192**	**13**	**377**	**12**	**1136**	**22**	**4806**	**51**	**1294**	**9**	**359**	**0**	**20**	**148**	**7753**	**38**	**1261**	**87**	**3041**	**53**	**99**

Source: Weekly Returns of Communicable Diseases (WRCD).

*T=Timeliness refers to returns received on or before 07th December , 2018 Total number of reporting units 353 Number of reporting units data provided for the current week: 348 C**-Completeness

A = Cases reported during the current week. **B** = Cumulative cases for the year.

Table 2: Vaccine-Preventable Diseases & AFP

01st -07th Dec 2018 (49th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2018	Number of cases during same week in 2017	Total number of cases to date in 2018	Total number of cases to date in 2017	Difference between the number of cases to date in 2018 & 2017
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	01	00	01	00	00	00	00	00	01	03	00	63	66	- 4.5 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	01	00	01	01	00	01	01	02	01	08	01	346	285	21.4 %
Measles	02	00	00	00	01	01	00	00	00	04	02	118	190	- 37.8 %
Rubella	00	00	00	00	00	00	00	00	00	00	00	08	10	- 20 %
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	01	0%
Tetanus	00	00	00	00	00	00	00	00	00	00	00	19	16	18.7 %
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Japanese Encephalitis	00	00	00	01	00	00	00	00	00	01	01	26	27	- 3.7 %
Whooping Cough	00	00	01	00	00	00	00	00	00	01	00	48	22	118.1 %
Tuberculosis	122	04	06	13	12	20	00	18	29	224	86	8337	7841	6.3 %

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

Dengue Prevention and Control Health Messages

Look for plants such as bamboo, bohemia, rampe and banana in your surroundings and maintain them free of water collection.

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ON STATE SERVICE

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