WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
Ministry of Health

231, de Saram Place, Colombo 01000, Sri Lanka
Tele: + 94 11 2695112, Fax: +94 11 2696583, E mail: epidunit@sltnet.lk
Epidemiologist: +94 11 2681548, E mail: chepid@sltnet.lk
Web: http://www.epid.gov.lk

SRI LANKA 2024

WEER

Vol. 51 No. 44 26th Oct – 01st Nov 2024

Immunization Anxiety; prevent, identify and respond to stress-related responses following immunization

Vaccination is a cornerstone of public health, preventing millions of deaths and keeping populations safe from vaccine-preventable diseases. Immunization is recognized as an essential element of the human right to health, serving as a vital means to protect individuals and communities from infectious diseases. It has significantly contributed to the control, elimination, and eradication of many life-threatening diseases, underscoring its importance in safeguarding public health. This phenomenon, often referred to as Immunization Stress-Related Responses (ISRR), involves various stress reactions associated with vaccination, both physical and psychological. Understanding immunization anxiety and implementing effective management strategies can help maintain public trust and ensure the success of immunization programs.

However, despite its success, immunization can trigger anxiety in individuals, particularly as certain diseases become less common and public attention shifts toward potential vaccine side effects. Adverse Events Following Immunization (AEFIs), though rare, can undermine public trust in vaccines if not effectively addressed. Therefore, ensuring transparent communication, prompt investigation, and proper management of AEFIs is crucial to maintaining confidence in immunization programs. Managing these stress responses is necessary to prevent the spread of fear and misconceptions, especially during mass immunization campaigns or when new vaccines are introduced.

Adverse Events Following Immunization (AEFI)

According to the World Health Organization (WHO), an AEFI is considered any unexpected medical occurrence following immunization, even if it is not causally linked to the vaccine. There are five main AEFI categories:

- **Reaction to the vaccine product**: Symptoms directly resulting from the vaccine's components.
- **Reaction to a vaccine quality defect**: Symptoms due to a quality issue in vaccine production.
- **Immunization error**: Symptoms caused by errors in vaccine storage, handling, or administration.
- **Immunization anxiety**: Responses related to stress or anxiety triggered by immunization.
- **Coincidental events**: Health events unrelated to the vaccine but occurring after immunization.

The proper identification of AEFI categories is essential to distinguish actual adverse effects from unrelated events, and implementation of measures to avoid them in the future and remove unnecessary fears about vaccine safety.

Immunization Stress-Related Responses (ISRR):

ISRR refers to the range of stress responses triggered by the vaccination process. Previously termed "immunization anxiety-related reactions," ISRR comprises both psychological and physiological responses before, during, and after immunization, influenced by individual and social factors. For example, anxiety, fear of needles and social influences like media coverage can contribute to ISRR.

ISRR reactions may also appear in clusters within a community, especially when large groups receive vaccinations simultaneously. These clusters can generate public concern, which might disrupt immunization efforts and lead to vaccine hesitancy. Hence, identifying and managing ISRR effectively is critical for maintaining confidence in immunization programs.

Types of ISRR:

Immunization stress-related responses vary in type and severity.

1. **Acute stress response**: Often termed as the "fight or flight" response, it involves an intensified state of physiological alertness. Symptoms may include increased heartbeat, palpitation, and hyperventilation. The

Contents

sympathetic nervous system drives this response as the body prepares to face a perceived threat.

2. **Vasovagal reaction**: This response may result in dizziness or faintishness due to a sudden drop in heart rate and blood pressure. Symptoms can consist of nausea, sweating, and pallor, with a rapid recovery. Syncope (fainting) and even syncopal seizures are common in adolescents.
3. **Dissociative neurological symptom reactions (DNSRs)**: DNSRs may involve non-epileptic seizures or other physical symptoms without a clear neurological cause. Past trauma, anxiety, or high stress levels can trigger DNSRs, which, while typically transient, may sometimes persist under continuous stress.
4. **Non-epileptic seizures**: These seizures resemble epileptic events but do not involve the neurological discharges associated with epilepsy. In high-stress situations, these are involuntary responses linked to autonomic arousal.

The impact of ISRR on immunization:

ISRR incidents can affect public confidence in vaccines, particularly when they occur in clusters, as seen in school-based HPV vaccination programs. For instance, syncope is more frequent in adolescent girls receiving the HPV vaccine, which has led to hesitation or anxiety about the vaccine's safety. Additionally, when immunization anxiety is improperly managed, it may intensify public uncertainty, further complicating vaccination efforts.

Preventing and managing ISRR:

Healthcare workers have a critical role in preventing and managing ISRR. Preventive strategies include identifying individuals at risk for immunization anxiety and providing supportive communication throughout the immunization process. Other measures, such as creating a calm, private immunization environment and managing social influences, can also reduce ISRR risk.

Pre-immunization measures:

1. **Identifying at-risk individuals**: Certain individuals, including those aged 10 -19 or with a history of vasovagal syncope or anxiety, are more prone to immunization anxiety. A brief medical history can help identify those at risk, allowing healthcare providers to take suitable interventions.
2. **Environmental preparation**: A calm, ordered setting with controlled noise and privacy can lower anxiety levels. These adjustments

During immunization:

1. **Supportive communication**: Communicating calmly and explaining the procedure without using fear-inducing terms like "pain", "needle" or "puncture" can help reduce anxiety. For instance, using neutral language to signal the beginning of an injection and providing reassurance throughout the process can be helpful.
2. **Proper positioning**: Seating or lying down individuals can help manage fainting episodes. For children and adolescents, a seated position with support from a parent or caregiver can help lower stress levels.
3. **Use of distraction**: Distraction techniques, such as engaging in conversations about favourite topics or breathing exercises, are effective for reducing stress, particularly in school-age children and adolescents.

Post-immunization management:

1. **Differentiating ISRR from other reactions**: Clear communication is essential to differentiate ISRR from serious adverse events like anaphylaxis, reassuring individuals and families that ISRR symptoms are generally benign and resolved on their own.
2. **Education**: Providing accurate information about ISRR to individuals and caregivers post-immunization can help prevent overreaction to symptoms and encourage confidence in the vaccination process.

The following approaches are based on guidelines from the WHO for reducing pain and managing anxiety during immunization, especially for school-age children, adolescents, and adults.

1. **Communication:**
   - Use neutral language to describe the procedure across all age groups.
   - Encourage distraction by talking about topics unrelated to the procedure (e.g., favourite foods or events for children, school for adolescents, and work or holidays for adults).
   - Avoid saying "It won't hurt" and provide simple, calm reassurances without excessive repetition.
2. **Physical positioning:**
   - Children, adolescents, and adults should generally remain upright unless there's a risk of fainting.
   - Muscle tension techniques are recommended to reduce vasovagal responses.
3. **Distraction and breathing techniques:**
   - Age-appropriate distraction strategies, such as stories or bubbles for children, should be used. For adolescents, techniques such as listening to music or engaging them in casual conversation about a topic of interest (e.g., hobbies, sports, or upcoming events) can serve as effective distractions.
   - Adolescents and adults can use breathing techniques, like coughing or taking deep breaths, to reduce pain.

Communication strategies to sustain public trust:

Immunization anxiety poses a significant challenge to the success of vaccination programs, especially as vaccine-preventable diseases become less common and public awareness of AEFIs increases. Effective communication strategies and proactive management of ISRR are crucial to maintaining public trust in vaccines. Training healthcare providers to handle ISRR cases tactfully, addressing incidents promptly, and implementing environmental adjustments and tailored communication approaches ensure that immunization programs continue to foster confidence and protect communities from preventable diseases

Compiled by:

Dr Aruni Hathamuna
Senior Registrar
Epidemiology Unit

References:

1) *Immunization stress-related response: a manual for program managers and health professionals to prevent, identify and respond to stress-related responses following immunization.*Www.who.int. https://www.who.int/publications/i/item/9789241515948

2) *World Health Organization. (2019). Immunization stress-related response: a manual for program managers and health professionals to prevent, identify and respond to stress -related responses following immunization. Who.int.* https://doi.org/9789241515948

Table 1: Selected notifiable diseases reported by Medical Officers of Health 19th – 25th Oct 2024 (43rd Week)

RDHS	Dengue Fever		Dysentery		Encephalitis		En. Fever		F. Poisoning		Leptospirosis		Typhus F.		Viral Hep.		H. Rabiies		Chickenpox		Meningitis		Leishmania-		Tuberculosis		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	A	B	T*	C**
Colombo	161	9893	0	35	0	11	1	49	0	22	19	462	0	8	0	9	0	0	15	500	4	42	0	2	43	1819	100	100
Gampaha	98	4684	1	39	2	35	0	14	0	77	60	748	0	11	1	11	0	0	14	406	5	125	2	25	0	997	67	100
Kalutara	31	2436	1	30	0	2	0	36	0	37	13	740	0	8	0	11	0	1	25	572	1	57	0	2	0	494	100	100
Kandy	74	3953	0	34	0	5	0	9	0	59	9	229	2	33	0	11	1	3	5	361	0	13	1	55	0	528	100	100
Matale	43	742	3	17	0	1	0	8	0	27	4	92	1	6	0	8	0	0	1	136	1	20	12	308	4	108	92	100
Nuwara Eliya	4	319	3	130	0	7	1	11	3	208	3	155	2	41	0	9	0	0	6	228	0	17	0	1	5	234	100	100
Galle	21	1860	2	47	0	22	0	12	3	101	21	792	2	112	0	10	0	1	29	726	1	82	0	4	5	379	100	100
Hambantota	9	759	0	28	0	4	1	6	0	48	7	429	1	47	0	7	0	2	4	281	1	28	2	441	0	131	100	100
Matara	29	1030	1	11	0	6	0	2	0	28	32	500	2	27	3	23	0	0	6	328	1	70	0	104	4	146	88	100
Jaffna	7	5289	3	62	0	2	0	27	12	47	0	18	5	477	0	7	0	1	1	204	0	30	0	1	5	227	100	93
Kilinochchi	1	292	0	17	0	0	0	2	0	2	1	20	0	11	0	0	0	2	0	12	0	6	0	1	0	25	100	100
Mannar	7	294	0	14	0	0	0	1	0	6	2	27	0	13	0	1	0	0	0	10	0	5	0	1	0	56	100	100
Vavuniya	1	171	0	13	0	1	0	2	0	22	5	98	0	5	0	4	0	0	0	41	1	24	1	10	0	34	75	100
Mullaitivu	1	206	0	9	0	0	0	0	0	18	0	68	0	11	0	0	0	2	1	9	0	5	0	13	0	30	100	100
Batticaloa	7	1467	1	116	0	15	0	7	0	64	1	70	0	2	2	23	0	2	6	130	0	45	0	4	5	139	100	100
Ampara	3	243	1	33	1	4	0	0	0	23	1	174	0	2	0	5	0	1	4	116	0	36	0	22	1	105	86	100
Trincomalee	4	644	0	16	0	1	0	3	0	11	2	138	0	12	0	3	0	0	2	82	0	22	0	18	0	105	100	100
Kurunegala	21	2033	0	47	0	35	0	3	0	351	28	618	0	30	1	8	0	4	17	526	4	245	8	561	9	424	100	100
Puttalam	15	1031	0	11	0	4	0	3	0	3	5	227	1	36	0	4	0	1	1	121	5	72	1	34	4	186	92	100
Anuradhapura	6	675	0	33	0	6	0	2	0	43	6	394	0	30	0	14	0	1	3	262	2	57	9	779	3	243	87	100
Polonnaruwa	6	357	4	26	0	3	0	1	5	31	2	239	0	2	2	54	0	1	2	135	0	30	4	447	0	91	100	100
Badulla	14	772	1	36	1	9	0	8	0	56	6	450	3	43	1	45	0	0	13	341	2	37	0	39	7	213	100	100
Monaragala	28	843	1	19	1	5	0	3	0	86	3	597	0	31	5	50	0	1	4	152	0	94	5	227	1	106	82	100
Ratnapura	54	2509	4	106	0	8	1	9	1	31	57	1729	3	30	0	28	0	2	4	332	3	122	1	150	8	315	85	100
Kegalle	24	1813	3	26	1	10	0	10	0	14	31	692	0	30	0	12	0	1	20	784	3	68	2	26	5	313	100	100
Kalmunai	3	683	0	17	0	0	0	2	0	28	0	67	0	5	0	4	0	0	2	209	1	17	0	0	4	126	100	100
SRILANKA	**672**	**44998**	**29**	**972**	**6**	**196**	**4**	**230**	**24**	**1443**	**318**	**9773**	**22**	**1063**	**15**	**361**	**1**	**26**	**185**	**7004**	**35**	**1369**	**48**	**3275**	**113**	**7508**	**94**	**99**

Source: Weekly Returns of Communicable Diseases (esurvillance.epid.gov.lk). **T=**Timeliness refers to returns received on or before 25th Oct, 2024 Total number of reporting units 358 Number of reporting units data provided for the current week: 358 **C****-Completeness

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

Table 2: Vaccine-Preventable Diseases & AFP

19th – 26th Oct 2024 (43rd Week)

Disease	No. of Cases by Province									Number of cases during current week in 2024	Number of cases during same week in 2023	Total number of cases to date in 2024	Total number of cases to date in 2023	Difference between the number of cases to date in 2024 & 2023
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	02	01	00	00	00	00	00	00	00	02	02	65	79	-17.7%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	02	00	01	00	00	04	00	00	00	07	05	243	201	20.9 %
Measles	00	00	00	00	01	00	00	00	00	01	39	287	677	-57.6 %
Rubella	00	00	00	00	00	00	00	00	00	00	00	02	08	-75%
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	02	-100 %
Tetanus	00	00	00	00	00	00	00	00	00	00	00	05	06	-16.6 %
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	02	00	00	0 %
Japanese Enceph-alitis	00	00	00	00	00	00	00	00	00	00	00	11	02	450 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	00	56	07	700 %

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

Take prophylaxis medications for leptospirosis during the paddy cultivation and harvesting seasons.

It is provided free by the MOH office / Public Health Inspectors.

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. Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

ON STATE SERVICE

Dr. H. A. Tissera
Actg. CHIEF EPIDEMIOLOGIST
EPIDEMIOLOGY UNIT
231, DE SARAM PLACE
COLOMBO 10