WEEKLY EPIDEMIOLOGICAL REPORT

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Ministry of Health, Nutrition & Indigenous Medicine

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Screening of Chronic Kidney Disease in Sri Lanka (Part I)

Screening of Chronic Kidney Disease in Sri Lanka

During the recent past, high prevalence of Chronic Kidney Disease was observed in some geographic areas of Sri Lanka. Especially the North Central Province (NCP) was noted as an endemic area for CKD. Some areas outside the NCP, but geographically adjacent, were later on detected to have similarly high prevalence of CKD.

A fair proportion of CKD cases were not attributable to known aetiological factors. This scenario has led to coining a term "Chronic Kidney Disease of Uncertain aetiology" (CKDu). The unknown aetiology has hampered implementation of effective preventive measures over the years.

The World Health Organization (WHO) report on "Kidney Disease of Uncertain Aetiology (CKDu) in Sri Lanka" says that the age standardized prevalence of CKDu among females in the age group of 15 to 70 years of age is 16.9% and that of males in the same age category is 12.9%.

The Screening Programme for CKD/CKDu is intended to detect asymptomatic individuals in the early stages of CKD. The screening programme will serve as a comprehensive and active epidemiological surveillance with provisions for mapping and analyzing attributes and possible aetiologies.

Surveillance on Chronic Kidney Disease in Sri Lanka

The Epidemiology Unit of the Ministry of Health, Sri Lanka has established surveillance on chronic kidney disease since October 2013. Thirty hospitals were declared as sentinel sites initially with further expansion not the total number is 50. The rationale of selecting the hospitals as sentinel sites was the available statistics on the disease burden and the media reports and public concerns of the presence of the disease in geographic locations.

Objectives of the Screening Programme

Detect asymptomatic individuals in the preclinical stages of the chronic kidney disease

Assess the disease burden of CKD/CKDu in entire country giving priority to CKDuendemic areas

Refer those found positive in the screening to the curative care system for further medical evaluation, and if found to have the disease, for clinical care.

Study the factors associated with the chronic Kidney Disease with uncertain aetiology

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Screening Method

The programme will aim at screening "high risk group" defined by age limits giving priorities to endemic areas. Chemical assays will be carried out on urine and blood to detect CKD/ CKDu.

High risk geographic areas

Following a series of consultative meetings, the panel of experts decided "high risk" (Table 1) considering the present pattern of geographic distribution of cases.

Table 1: High risk areas for CKDu

Province	District	DS Division
North Central	Anuradhapura	All
	Polonnaruwa	All
North Western	Kurunegala	Polpithigama & Giribawa
Eastern	Ampara	Dehiattakandiya
	Trincomalee	Padavi Sripura
Uva	Badulla	Mahiyanganaya & Rideemaliyadda
North	Mullaitivu	Welioya
	Vavuniya	Vavuniya & Vavuniya South
Central	Matale	Wilgamuwa

Primary Target Group

Those who are above the age of twenty years are eligible to be screened in endemic areas and above the age of thirty are eligible in non-endemic arrears.

Exclusion Criteria

Those who are suffering from acute illness, pregnant women and women during menstruation are not eligible for screening. Suitable measures need to be assured to screen them once they recover from contraindications.

Screening Settings

Screening will be carried out in community settings on pre determined dates with prior notification given to the target population. Screening will be carried out at Field Screening Clinics conducted in places easily accessible to the catchment population.

Screening Tool

The screening tool is a package consisting of a combination of tests, testing for Serum Creatinine with calculating estimated Glomerular Filtration Rate (eGFR), measuring urine albumin creatinine ratio (UACR) on an early morning urine sample and measuring blood pressure. The tool is expected to be administered in a field screening clinic.

Collecting and Dispatching of Blood Samples

The responsibility of venipuncture and proper labeling of samples of blood is vested upon the Public Health Nursing Sister and Nursing Officer. Venipuncture should follow the routine procedure practiced in hospital settings.

Either plain tubes or Serum Separating Tubes (Serum separating tubes are preferred) should be used for collecting blood. 3 ml of blood is required. If plain tubes are used, the separated serum needs to be transferred to a secondary tube taking precautions to label properly.The secondary tubes or the Serum Separating Tubes (SST) should be stored in cool boxes with ice packs in a temperature ranging from 10 to 15^{0}C. The properly stored samples should reach the laboratory within a maximum of six hours.

Collecting and Dispatching Urine Samples

Urine sample of 30 ml, preferably from the first or second void needs to be collected in a screw capped container. Overnight rest with a good sleep need to be ensured before collecting the sample. Practice of proper labelling needs to be adhered to. Samples should be stored in Igloo type cool boxes in the temperature range of 2 to 8^{0}Cas soon as they reach the field screening clinic. Urine samples should not be stored with blood/serum samples

Dr. Chamly Premajayantha and Dr. T.A.P. Perera

Source; Screening Guidelines, Chronic Kidney Disease Sri Lanka, 2017.

to be continued…

Table 1: Selected notifiable diseases reported by Medical Officers of Health 04th – 10th Feb 2017 (06th Week)

RDHS Division	Dengue Fever		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Chickenpox		Meningitis		Leishmani-asis		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	408	3540	0	14	0	0	0	4	0	3	1	8	0	1	1	5	0	0	3	25	1	6	0	1	**75**	**81**
Gampaha	85	1780	0	6	0	5	0	5	0	0	0	8	0	0	0	1	0	0	1	25	0	10	0	4	**33**	**47**
Kalutara	72	725	1	7	0	0	0	1	0	6	5	31	0	2	0	0	0	0	12	55	2	13	0	0	**79**	**79**
Kandy	60	362	0	8	0	2	0	0	0	0	0	7	0	23	0	3	1	1	6	44	0	8	0	0	**87**	**100**
Matale	18	164	0	3	0	0	0	0	0	0	0	9	1	1	1	3	0	0	1	3	0	17	0	2	**46**	**92**
NuwaraEliya	3	64	0	5	0	1	0	2	0	0	3	7	2	23	0	2	0	0	4	21	3	8	0	0	**77**	**92**
Galle	108	1043	1	8	0	2	0	3	0	5	6	27	2	11	0	0	0	0	3	42	1	7	0	0	**60**	**85**
Hambantota	36	314	0	11	0	1	1	3	0	0	2	12	1	9	0	2	0	0	10	36	0	3	1	30	**83**	**92**
Matara	88	634	0	7	0	2	0	0	0	2	3	11	1	6	0	1	0	1	7	21	0	1	3	8	**94**	**94**
Jaffna	81	739	7	53	0	2	1	9	1	18	2	11	18	192	0	2	0	0	1	57	0	7	0	0	**100**	**100**
Kilinochchi	1	77	0	5	0	0	0	1	0	0	0	1	0	8	0	2	0	0	0	0	0	0	0	3	**50**	**75**
Mannar	22	189	1	2	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	**60**	**100**
Vavuniya	10	89	0	4	0	0	0	5	0	1	1	3	0	0	0	1	0	0	3	10	0	0	0	2	**50**	**100**
Mullaitivu	5	44	0	1	0	0	0	2	0	0	0	7	0	2	0	0	0	0	0	1	0	4	0	0	**60**	**100**
Batticaloa	76	394	2	24	1	5	1	2	0	0	0	5	0	0	0	2	0	0	6	30	0	9	0	1	**57**	**71**
Ampara	1	62	0	4	0	0	0	0	0	0	0	3	0	0	0	1	0	0	0	28	0	4	0	1	**57**	**100**
Trincomalee	139	661	1	2	1	1	0	1	0	1	0	3	0	5	0	3	0	0	9	32	0	3	0	0	**83**	**92**
Kurunegala	51	545	0	15	0	0	0	0	0	2	1	16	1	13	0	1	0	0	18	73	0	10	2	18	**72**	**93**
Puttalam	15	252	0	10	0	1	0	0	0	0	0	2	0	9	0	1	0	0	5	25	0	11	0	1	**64**	**86**
Anuradhapura	32	206	0	4	0	1	0	0	0	2	0	17	0	9	0	2	0	0	5	51	0	8	2	33	**53**	**79**
Polonnaruwa	16	90	0	5	0	1	0	0	0	0	0	10	0	1	0	1	0	0	6	29	1	3	1	18	**86**	**86**
Badulla	14	288	2	18	0	3	0	2	0	1	0	11	1	7	2	7	0	0	2	51	1	32	0	1	**71**	**88**
Monaragala	13	133	1	10	0	1	0	0	0	1	1	17	5	25	1	4	0	0	1	23	0	11	1	4	**73**	**91**
Ratnapura	79	557	5	19	6	21	1	3	0	0	3	45	1	6	4	13	0	0	9	29	7	28	0	0	**78**	**89**
Kegalle	33	299	0	9	0	0	0	0	2	7	0	5	1	11	0	1	0	0	5	33	1	13	0	2	**82**	**91**
Kalmune	22	452	0	15	0	3	0	1	0	4	0	2	0	0	0	0	0	0	6	44	0	3	0	0	**46**	**69**
SRILANKA	**1488**	**13703**	**21**	**269**	**8**	**52**	**4**	**45**	**3**	**53**	**28**	**278**	**34**	**365**	**9**	**58**	**1**	**2**	**123**	**789**	**17**	**219**	**10**	**129**	**70**	**87**

Source: Weekly Returns of Communicable Diseases (WRCD).

*T=Timeliness refers to returns received on or before 10th February , 2017 Total number of reporting units 337 Number of reporting units data provided for the current week: 302 C**-Completeness

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

Table 2: Vaccine-Preventable Diseases & AFP

04th – 10th Feb 2017 (06th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2017	Number of cases during same week in 2016	Total number of cases to date in 2017	Total number of cases to date in 2016	Difference between the number of cases to date in 2017 & 2016
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	02	02	01	00	00	00	01	00	00	06	02	15	07	114.2%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Mumps	00	01	01	00	00	00	00	00	00	02	08	34	44	-23.1%
Measles	01	00	00	00	01	01	01	02	00	06	11	43	98	-56.1%
Rubella	00	00	00	00	00	00	00	00	00	00	00	01	03	-66.6%
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Tetanus	00	00	00	00	01	00	00	00	00	01	01	02	01	+100%
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	04	00	0%
Whooping Cough	00	00	01	00	00	00	00	00	00	01	02	02	15	-86.6%
Tuberculosis	59	27	20	10	07	10	18	09	02	162	102	971	969	+0.2%

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

Dengue Prevention and Control Health Messages

Look for plants such as bamboo, bohemia, rampe and banana in your surroundings and maintain them

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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

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