



Dr Babu George, Director, CDC handing over the 'Report on evaluation of welfare schemes in Attappady' prepared by CDC to Ms T.V Anupama IAS, Director, Women & Child Development Department, Government of Kerala in the presence of Ms. Premna Sankar, State Programme Officer, WCD and Dr Remadevi S, Principal investigator & Project Manager- Evaluation Project Attappady.

Developmental Assessment Scale for Indian Infants (DASII) workshop



A four day training programme was conducted at CDC on DASII from 29th February to 3rd March 2020. Nearly 30 participants including Pediatricians, Physiotherapists and Developmental Therapists attended the program. Ms. Bindu Patni, Dr. Ujjwal Nene and Ms. Madhavi Deshpande from Child Development Unit, TDH Morris Centre, KEM Hospital, Pune conducted the training sessions.



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Workshop on Training Module on POCSO Act

A three day workshop on preparation of training module for POCSO Act was conducted at CDC on 20th, 21st and 22nd lanuary in association with General Education Department. Dr.Suseela Mathew, (Psychotherapist & Counsellor) Former Associate Professor, Dept. of Psychiatry, MCH, was the Consultant & Co-ordinator of this Module Preparation Workshop. The workshop had discussions on the content of the training module which included - strategies for primary prevention, secondary prevention, sexual offences against children, rights of children in the context of POCSO Act, process which needs to be followed in the implementation of the Act and Sexual offences and Cybercrime. The draft module was discussed and finalized during the third day of the workshop.



Scientific Discourse

Reader's Corner **BARKER HYPOTHESIS** DEMYSTIFIE FETAL ONSET ADL DISEASES

M.Zulfikar Ahamed | Babu George

however. They include hypertension, intrauterine growth. dyslipidemia, obesity, diabetes, smoking, diet, alcohol and physical **Take Three** : In 1988, a British activity.

The many modifiable CVD risk factor babies born between 1915 and 1919 often have a clustering effect. It in UK and traced them forward to means that more than one risk factor present time UK (The eighties). He co exist, perhaps many. On top of showed that those babies born with them, there are certain lifestyle weight less than 2500 gms (LBW) changes which involve activity, stress, had a high risk for developing food intake etc. They together hypertension, dyslipidemia, obesity produce a metabolic decontrol. All and NIDDM and consequently these phenomena can have a genetic higher CVD events. This link component. Now there is a growing between LBW and increased CVD is conviction that fetal factors may also termed Barker hypothesis. lead to CVD risk factors and subsequently CVD. I would call this as **Take Four** : Barker hypothesis states an "Onion Peel" effect in which the that reduced fetal growth leads to inner most core is fetal factor. The LBW, which in turn is related to concept of fetal origins of adult CVD is future CVD risk. There are many now perceived as a real challenge to intrauterine risk factors (IURF) CV health profile of people, especially which could be genetic or environof South Asian Countries.

of a term baby ranges between 2500 future CVD risk factors are indepengms and 3500 gms. Low birth weight dent of tobacco use, diet, exercise, (LBW) is defined as birth weight less social class and family history. that 2500 gms. In India 25% of new born babies are LBW and in Kerala, it Take Five : The basic tenet of Barker prematurity or intra uterine growth programming, if there are intrauterretardation (IUGR).

matical model proposed by Penrose programming. Fetal programming

Prologue : Cardiovascular Diseases and Karn, birth weight of a baby is (CVD) are now perhaps the most contributed by intrauterine environcommon causes of death in India. ment (62%), Maternal gene (20%) There are many CVD risk factors. and Fetal gene (18%). So there is a Some are non modifiable like, age, predominant influence of intrautergender and family history. There are ine environment on birth weight, very specific modifiable risk factors, which in fact is a snap shot of

> epidemiologist, DJP Barker, in his famous Hertfordshire study, studied

mental (Genetic or phenotypical). Adverse influence of these factors Take One : The average birth weight leads to IUGR and hence LBW. The

is 15%. LBW could be either due to hypothesis is based on fetal ine risk factors operating which have an adverse nutritional and metabol-Take Two : According to a mathe- ic impact on fetus, there is fetal

Shri. Shajahan, IAS, Secretary, Gen Education, Shri. Jeevan Babu, IAS, Director, Gen Education Department, Kerala and Dr Babu George, Director, CDC during the inaugural session on 20th January 2020



Take Ten : Chronic disease attributable to Developmental origins of Barker are :-

Diabetes Mellitus	CKD
Obesity	CLD
Dyslipidemia &	Lung abnormalities
CAD	Immune dysfunction
Stroke	Neuropsychiatric
Hypertension	Cancer

Take Eleven : Is Barker hypothesis operating elsewhere? The answer is yes. There have been major studies in US (1997), South Wales (1996), Finland (1997), Sweden (1998) and Denmark (2008), supporting the hypothesis. In India the famous Mysore study in 1996 demonstrated the replication of the hypothesis in 517 people.

Take Twelve: There has been strong epidemiological proof for Barker hypothesis through two man made disasters - The Dutch Famine study and The Leningrad study. In the Dutch study, babies who were exposed early to severe maternal malnutrition due to famine had a CVD prevalence of 8.8% in adulthood compared to 3.2 % in non-exposed, providing proof beyond doubt that intrauterine malnutrition leads to LBW which in turn causes premature CVD.

Take Thirteen : Reducing IUGR and hence LBW in our country should improve the risk of premature CVD. This needs not only primary and secondary prevention but also primordial and most likely lifetime preventions, starting at adolescent girl's nutritional and environmental health. The Nobel Laureate Amartya Sen in his book "The Argumentative Indian", Spoke about Gender inequality and Adult Diseases, "Interestingly enough, since men suffer disproportionately more from cardiovascular diseases than women, the suffering of women (particularly in the form of maternal undernourishment) ultimately hits men even harder than women (through heart disease and premature deaths). The extensive penalties of neglecting women's interests rebound, it appears, on men with a vengeance".

"The fetal origins of Adult Diseases are no longer just a hypothesis and Epilogue may be critically important in South Asia" -R Robinson [Editorial in BM] 2001



Dr MKC Nair, founder director and former Vice Chancellor, KUHS talking to the parents about parenting.

Children's Day 2019

The children's day at CDC was celebrated at the Gulmohar auditorium of CDC. The special invitees of this children's day celebration was 100 children and their parents conceived by IVF at the Dept. of Reproductive Medicine, SATH. Ms.Indira M.S., Clinical Psychologist, CDC and Dr.Deepa Bhaskaran, Asst. Professor in Developmental Pediatrics interacted with the parents. Dr.Susha Janardanan and Ms.Aroline K. Tom from the Strategic planning & Training Bright Ray Training Research & Consulting Services talked to the parents on Parenting.

Dr Babu George, Director, Child Development Centre spoke about the Growth and Developmental profile of 100 babies born through IVF-ICSI whose growth and developmental status was evaluated by the CDC team. In the findings he described that the outcome of pregnancy in terms of growth and development of children were good. He also added that regular growth and development monitoring is warranted. IVF-ICSI facilities and services available at SAT Hospital was described by Dr.Sheila Balakrishnan, Professor and Head, Dept. of Reproductive Medicine, SATH. In the afternoon session, Dr.M.K.C.Nair Founder Director, CDC & Former Vice Chancellor, KUHS chaired a question answer session with the parents.

Conclave on Preventive Cardiology in the Young and 20th CDC-Family Day Oration

A conclave on Preventive cardiology in the Young was conducted at CDC on 10th November 2019. 20th The CDC- family day oration was delivered by the internationally acclaimed Cardiac Epidemiologist Dr. D Prabhakar, professor of chronic disease epidemiology at the Public Health Foundation of India, and Executive Director of the Centre for Chronic Disease Control (CCDC). He spoke on Preventive Cardiology in the Young; Translating Principles to Practice and stressed the urgent need of a road map to prevent or retard CVD in our future generation. The keynote address was given by Dr. Rajan N. Khobragade I A S, Principal Secretary H&FWD, on Managing Non Communicable Diseases; Preventing CVD in the Young and the State. The key players in the field of Preventive Cardiology; Dr M.Zulfikar Ahamed, Dr S. Sivasankaran, , Dr Babu George, Dr V Raman Kutty, Dr K. E. Elizabeth, Dr. Sunitha Viswanathan, Dr I.Riaz, Dr Sajan Ahmad and Dr Manu Raj spoke to the audience. The meeting summed up by emphasizing the need to begin a new journey together to make the children's heart smart.



Dr Babu George, Director, CDC inaugurating the delay/disability. CDPOs and supervisors and talking to the participants

Training programs for CDPOs and supervisors

Two day training programs for CDPOs and ICDS Supervisors on Early Detection of Disability was conducted at CDC in association with Women and Child Development Department, Government of Kerala, Multiple batches consisting of 50 CDPOs /Supervisors from all over the State were trained in each programme. Experts in the field of growth and development assessment, monitoring and intervention led the sessions. The major topics covered in the programme were introduction to growth and development of children, early detection and intervention for nutrition issues among children, detection of growth retardation, immunization, early detection and early intervention for developmental delay/disability, developmental assess ment and interventions and Community surveillance of developmental The programme Training programs for received good feedback from the participants and was found to be useful for their routine work.

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