Starting Interventions Early in NCD – A way forward

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Association of Adolescent and Child Care in India.

Founded in 2008 - We are a group of Doctors - Pediatricians & Physicians of all specialties (including mental health professionals)

Doing URBAN based work with parents, teachers and students in school and college

Our MISSION is
Promotion of HEALTHY LIFE STYLE & Prevention of LIFE STLE associated diseases

Our MOTTO for kids ------is LIFE STYLE is AS WE MAKE IT

We have presented many Research papers on Youth life style and behaviour at National and international forum
LIFE COURSE MEANS ....FROM PRE-CONCEPTION TO DEATH

We need to do Early interventions in childhood & Adolescence to prevent Adult NCD’s

Which makes the role of Pediatricians' & Teen Specialists in NCD Prevention VERY IMPORTANT

We need to increase awareness in the community about this and also do capacity building of the stake holders for the same
| 1 | **Preconception stage** – Nutrition and health of Adolescent girls – Healthy mother- Healthy New born |
| 2 | **Infancy** - Breast feeding & Complementary Feeding |
| 3 | **Toddlers /Children** – Promoting physical Activity & prevention of consumption of HD/ HS/ HS Food |
| 4 | **Adolescence and youth** – In addition to above factors prevent addiction to tobacco & Alcohol |
Preconception - Maternal health

Barker's Hypothesis Fetal origins of adult-onset diseases (FOAD)

• Malnourished mothers produce low birth weight babies which have hyperinsulinism and high risk of Type 2 diabetes and coronary heart disease

Interventions:

1) Prevent malnutrition in Girl child
2) Prevent Malnutrition in adolescent girls
3) Prevent early Teen age pregnancies
4) Prevent Gender discrimination that leads to above
Hypothesis for DOHaD

- Multi phasic Nutritional Insult
- Genes + early Under nutrition + subsequent Over nutrition
- Fetal origins or later lifestyles or both

THIS EMPHASISES THE IMPORTANCE OF PROMOTING HEALTHY LIFE STYLE (Nutrition sleep & exercise) RIGHT FROM TODDLER AGE TO ADOLESCENCE

Early intervention in Infancy

• **Intervention**: Encourage Exclusive breast feeding for 6 months in all women and introduce healthy weaning food to prevent obesity in young.

• **Educate the community and young mothers that** breast fed babies have very low risk of Obesity, Hypertension, diabetes and some cancers.
Tracking of BMI from New born to Adolescence

**Intervention**: Tracking of BMI chart from Birth to adolescence in every child is the best way to prevent OBESITY which is the precursor for many NCDs’. Crossing of centiles should be prevented.

LBW are at higher risk of metabolic syndrome if they gain weight suddenly.

The concept of THIN FAT BABY – LBW which have high Adipose tissue.
ENCOURAGE USE OF BMI CHARTS

• We need to spread awareness that BMI tracking is part of Well Adolescent Monitoring
• BMI charts should be used by ALL physicians not just pediatricians dealing with Adolescents including family Physicians
• IAP has come out with standardized Growth
  – ( height /weight ) and BMI charts for Indian Children in 2015 which are available free in downloadable versions on
  – IAP website www.iapindia.org
5 to 18 Years: IAP Girls Height and Weight Charts
Father's Height ________, Mother's Height ________, Target Height ________

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Challenges in Youth in India

Increasing incidence of obesity in children and Adolescents

• Reduced physical Acitivity :
  – Academic pressures- less time to play, unsafe playgrounds, Electronic gadgets, Internet and social media addictions

• Increasing incidence of tobacco and alcohol consumption starting in the very young
Central Obesity: waist circumference
> 90 cms for males > 80 cms for females

Criteria for the diagnosis of the metabolic syndrome are:
Central obesity + any two of the following four factors*

• Raised serum triglycerides > 150 mg/dl
• Reduced serum HDL cholesterol < 45 mg/dl
• Raised blood pressure (BP systolic > 130, and diastolic ≥ 85 mm Hg)
• Raised fasting blood sugar level (> 100 mg/dl)

Indian population is genetically at high risk for metabolic syndrome - obesity, Type 2 Diabetes, Hypertension and cardiovascular diseases

SCREENING of YOUNG People very important – increasing incidence in obese adolescents
Screening for NCD in Youth

- **Obese** children and adolescents specially with a high risk **family history** – need to be screened
- **Physical examination** – BP, Tracking of BMI
- **Investigations** for metabolic syndrome – Lipid profile, Diabetes type 2 etc
- Any abnormalities detected need treatment

**In routine**
- Pediatric clinics

**In Hospital**
- Adolescent clinics

**School & college based Surveys**

**Community based medical camps** for out of school adolescents
Challenges - NCD in Youth in India

- Most people are not aware of the importance of Early NCD prevention. Most programs focus on >30yrs.
- IAP has made a National Task force on prevention of NCD to increase awareness and capacity building of Pediatricians. Dr Bhave is the International Co-ordinator.
- AACCi is trying to work with policy makers and other stake holders working for adolescents to BEGIN prevention and screening for NCD to include young people.
- AACCi is part of NCD Global and National Alliances which are working for youth intervention in NCD.
NCD child

- NCD child is a global multi-stakeholder coalition, championing the rights and needs of children, adolescents, and youth who are living with or at risk of developing NCDs
- Activities include global advocacy, UNICEF collaboration, and champions training with AAP.
- Focus activities on Advocacy, Communication, and Youth Voices
- High level political engagement with the United Nations, World Health Organization, and Ministries

Follow @NCDChild on Twitter and join the listserv by e-mailing ncdchild@aap.org

Dr Swati Y Bhave is On the Governing Council of NCD child
AACCI did a school project with NCD child in 2015 on “Awareness for NCD in School children”.

It showed that a short 6 week project was very effective in making a behavioral change in both staff and students to start bringing healthy home lunch and reduction in the junk food consumption and increased willingness to take part in sports and physical activity classes.

NCD – child AACCI -COLLABORATION

• In January 2016 NCD Child held a Pre conf training workshop for NCD champions at the
• APPA (Asia Pacific Pediatric Associations) and Pedicon Dr Bhave was a faculty
Healthy India Alliance

The Alliance fosters engagement of multi-sectoral Civil Society Organizations (CSOs) to tackle NCDs by generating awareness, building capacity, empowering patients and advocating for health promoting norms.

AACCI is a partner in this Alliance

AACCI conducted a demonstration workshop for NCD awareness in schools - Jointly with HRIDAY in the National Consultative meeting of Civil societies held by HIA in April 2016 in New Delhi
AACCI Demo -workshop at HIA consultation- April 2016 New Delhi

- Faculty
- Role Play
- Participants photographing role plays
- Group Discussion
AACCI work on NCD – Youth

We do interactive workshops with students using the WHO Life skill approach to help them understand the importance of Healthy life style and prevention of NCDS.

We have modules on various aspects:
- Healthy Life style
- Healthy weight loss
- Life skills for positive mental health
- Depression Prevention of suicides
- Substance abuse prevention etc etc

Similar workshops are also held for teachers and parents also
Various faculty groups

Pune with DY Patil Medical college

Nagpur

Jaipur

Delhi

Nagpur with CIBS

Gurgaon

Mumbai

Mumbai
Healthy life style

- For maintaining healthy weight
- **Prevention of obesity/over weight**
- Prevention of life style diseases
- Awareness and screening of metabolic syndrome

- We have a graphic power-point that explains each life skill in detail.
- Then we have attractive slides that teach about healthy life style and gives information about BMI, normal BP and waist hip circumference and ratios etc.

- The participants undergo a physical examination before the workshop and are aware of their own BMI, BP etc which makes it personalised.

- For target group of overweight and obese we have a additional half or one day customized program which is more individually oriented with self help plan.
Methodologies

• Next few slides will show pictures of the various methodologies we use
• Short didactic lectures
• VIPP sessions
• Debates
• Groups discussion
• Faculty role plays
• Case Scenarios and Role plays by participants
• Relaxation Techniques
Short lectures on Healthy Life Style

Students Enjoying the lectures
Visual In Participatory Program Is a very good methodology for group training
DEBATES in GROUPS and PAIRS
Group discussions
Presentations by group leaders
Role Plays by Faculty
Role plays in case scenarios make learning fun and educative.
RELAXATION TECHNIQUES
• School based programs are a very good way of creating awareness about NCD and instituting interventional strategies
• AACCI has been successfully doing this for last 8 years
• We need to create awareness in all doctors, Adolescent stake holders and in the community with to institute early interventions to Prevent NCD - right from preconception stage- Nutrition of adolescent girls to promoting healthy life style from infancy to adolescence