

## A BREIF REPORT ON VISIT TO TWO VILLAGES ON INVITATION BY RURAL HEALTH DEVELOPMENT CELL OF TVS FACTORY IN HOSUR

### BACKGROUND:

As a part of ongoing Rural Health Development Program & to plan for future collaboration & to define the same in terms of focus, concept & activities, the CHC team was invited by RHDC to visit Andiwadi village to have a direct dialogue with expecting & new mothers of the village. Since we felt it would be more useful to visit one of the ICDS project, we decided to do the same also.

### PURPOSE OF THE VISIT:

1. To have a direct dialogue with expecting & nursing mothers of Andiwadi & Kothagondapalli villages.
2. To visit an ICDS project to have a brief situational picture on nutritional & health status of the attending children.
3. To define & expand the exact nature of collaboration between CHC & RHDC of TVS factory for future works.
4. To collect demographic data & other data, deemed necessary for future activities.

### THE VISIT PROPER:

We, Mr. Chander & Dr. Vinay, the representing team members from CHC had a preparatory discussion<sup>1</sup> with Dr. Thelma Narayan before embarking on the visit. We first met Dr. Rajan Babu, the Chief-Medical-Officer & person-in-charge of RHD of TVS factory, who promised to send a formal request for collaboration with CHC. Later, we visited the ICDS project in Kothagondapalli<sup>2</sup> & had a brief encounter with the staff & children. Lastly, we visited Andiwadi village along with three officers of RHDC, where we had a very satisfying dialogue<sup>3</sup> with expecting & nursing mothers of the above mentioned villages.

### OUTCOME:

1. Dr. Rajan Babu agreed to send a formal request for collaboration.
2. Data pertinent<sup>4</sup> for future action in RHD for Andiwadi & Kothagondapalli villages collected.
3. Partly successful in establishing a meaningful working relationship with anganwadi workers & mothers.
4. A very stimulating & informative discussion with the expecting & nursing mothers of both villages.

### CONCLUSION:

Though we were partly successful in carrying out the objectives of the visit in general, we felt there is a need for defining exactly the nature, scope & terms of collaboration at the earliest; to have a meaningful & fruitful partnership.

<sup>1</sup> Annexure No.1

<sup>2</sup> Details of visit in annexure no.2

<sup>3</sup> Details of visit in annexure no.3

<sup>4</sup> Annexure no.4

## ANNEXURE NO. 1

### PREPARATORY DISCUSSION WITH Dr. THELMA NARAYAN

A very insightful discussion with Dr. Thelma Narayan, for which Dr. Vinay arrived late, during which she gave us an overview of what should be our focus during the visit & oriented us towards the exact job at hand. She even discussed about the various data to be collected & stressed on the need for formal agreement & importance of establishing a good rapport with concerned people. She also cautioned us about carefully selecting the method of pedagogy, appropriate to the group. The discussion gave us that final ounce of orientation.

## ANNEXURE NO. 2

### VISIT TO KOTHAGONDAPALLI ICDS PROJECT

Kothagondapalli, a village, is a 10 min drive from TVS Factory, where RHDC of TVS has been working in various capacities since 1994.

#### OBSERVATIONS:

1. The anganawadi is housed within the campus of Government school with a separate room & kitchen to itself.
2. The building as a whole was constructed by the Government. The 'uplifting' in terms of painting, maintenance, toilet provision, gardening, enclosure construction & maintenance of playfield is undertaken by RHDC.
3. The campus as a whole was well lighted & ventilated with pleasant & salubrious surroundings.
4. The anganawadi was spacious, cleanly maintained with a separate, clean kitchen with a gober gas fuelled stove for cooking.
5. There was enough space for children to play within the room, albeit without enough toys.
6. There is access to drinking water & clean toilet.
7. There was a low attendance of enrolled children. Out of 35 only 24 were present, the reason given was the farness of the anganawadi from their houses. Children present at the time of visit were reasonably healthy & most of them were well nourished. However there were a few malnourished children. There is a need for a detailed study of the same which was postponed due to lack of time. 2-5/95
8. The food being served was hot, but not very inviting. All children were made to wash their hands & say their prayer before being served food, with each child getting a separate plate for eating.
9. The children seemed more than ready to cooperate with a stranger & happily submitted themselves for 'examination' by Dr. Vinay.
10. The staff members were cooperative & friendly with us. They seemed very well informed about their duties & seemed to be doing the same reasonably well. They also seemed to be genuinely interested in their work. They also reported enough support from Government in terms of supply of food & medicines.

Various functions performed by the staff as told by them are as follows:

- > Nutritional supplementation to all children in the age group of 0-6 years & all expecting & lactating mothers. They also followed differential quantity as prescribed by the authorities.
- > ANC for expecting mothers including tetanus immunization every 2<sup>nd</sup> Monday of the month with help of visiting ANM
- > PNC for nursing mothers.

- Immunization of all children, as prescribed by authorities, on every 2<sup>nd</sup> Wednesday of the month with help of visiting ANM.
- Distribution of IFA tablets to expecting mothers & all girls between 11-19 years, administration of Vitamin-A to all children at 6 months of age & then 2ml every 6 months till 5 years of age, distribution of paracetamol, albendazole & clotrimazole to people in need.
- Referral services for sick people.
- Health education to all women between 15-45 years.
- Non-formal education to all children between 2-6 years of age.
- Periodic meetings with women, adolescent girls & with village legislative council.
- Maintenance of records including growth monitoring, general health of children & performing ~~sex~~ <sup>sex</sup> duty.

*To give  
milk 3-  
times a  
child*

*Census*

11. However, the glaring defect was the inability of the staff to maintain growth charts of children, a duty so important, due to acute shortage in the supply of growth charts by the government!
12. The staff was enthusiastic in further improvements of the anganawadi in general & ready to give help in whatever way they can.

**IMPRESSION:**

The anganawadi though well maintained, had further scope for improvement & needs a detailed study before any improvements are suggested.

**ANNEXURE NO.3**

**THE DIALOGUE PROCESS AT ANDIWADI WITH EXPECTING & NURSING MOTHERS OF BOTH VILLAGES**

Andiwadi, a village situated about 8 kms from TVS factory was the rendezvous for our dialogue with expecting & nursing mothers of above mentioned two villages. The meeting was arranged by RHDC & was attended by anganawadi workers of two villages & 9 expecting & nursing mothers. The meeting took place in the beautiful & secure anganawadi of Andiwadi village.

The dialogue was held in a very informal manner, with the participants and resource persons mingling freely. Mr. Chander initiated the dialogue in a captivating manner by asking the participants of the fate of a plantain planted in wilderness & not cared! It helped to break the ice & also gave the woman an ideal platform to start the dialogue. Then on, the dialogue continued with good participation & some of the observations as made by Dr. Vinay are as follows:

1. The participating group was a good mixture of woman from different economic levels, though it cannot be said so of their social class.
2. Only 2-3 participants were very active & others answered only when questioned. There was not much initiation of dialogue from the side of participants.
3. The coordinator was articulate, expressive & tactful, stimulating the women to think & participate.
4. The knowledge of most of the participants regarding child health & rearing was commendable.

Some samples of the dialogue are given below (not an exhaustive list but only a small part representing the effectiveness of dialogue):

- Mr. SJC: Why should you feed children?

Women: "To fill stomach; to help in growth; to maintain health of the children".

- Mr. SJC: When should breast feeding started? Weaning-When & how?

Women: BF just after the birth; no pre-lactal feeds to be given; Weaning to start in 3-6 months with ragi porridge & other soft foods; confusion among the group regarding marketed baby foods & on informing, by us, that they are not necessary, one even questioned us by asking how come then that the doctor prescribes it?; most said they have never bottle fed their babies!

- Mr.SIC: Immunization-When, How many?  
 Women: Most of them know of OPV, BCG, DIT, but not many know of Measles vaccine. Also they were ignorant of number of doses of each & the disease against which different vaccines were used. But most mothers agreed on the importance of vaccination in the promotion of their child's health.
- Mr.SIC: What are their 'unmet needs'?  
 Women: 1. Only rice not enough, variety of food deemed necessary.  
 2. Need more playthings.  
 3. Need to have more plates to serve food for children.  
 4. Make 'anganawadi' attractive to children, so that they 'love' to come there.
- Mr.SIC: Why do they think some children are not attending anganawadi?  
 Women: "Some people think sending their children to anganawadi with all 'other' children will make their children dirty"; some fear that there will be sharing of plates; distance problem; children don't like to be kept 'prisoners' in a closed place, they like to play as 'free birds'
- Mr.SIC: Any other significant problem they wanted to discuss?  
 Women: Most of them strongly felt something is needed to be done to children of coolies, as the children will become 'children of street', literally living on their own in the streets, after anganawadi closes till their parents return home from their work.
- Mr.SIC: Why do people send their children to anganawadi?  
 Women: Food; preschool- so that their children become smart, to see that 'headache' is transferred to someone else for atleast sometime!
- Mr.SIC: How can they help to address the identified problem?  
 Women: (After some minutes of silence) "You give the suggestions.....then we will see how we can help....."

### IMPRESSION

There is an urgent need to address some of the misconceptions of the mothers about anganawadis, the most important being the dangerous misconception of Govt. supplied 'supplementary nutrition' as a 'replacement' to home nutrition, which makes the basic objective of ICDS scheme of 'improving child nutrition', a distant dream. Also there is need to further the health knowledge of mothers regarding doses of immunization & other aspects of child care. It seems necessary to consider how best can we make anganawadis 'attractive' to children & increase the attendance. What seems to be a real problem, but conveniently overlooked is 'the street children' problem. It is an emergency problem which needs to be addressed on a war footing. Also it is pertinent for us to now evolve a strategy for effective 'community participation' if we are to make Rural Health Development a reality.

Dr. Dakshinamurthy - RCH Health Development - <sup>Since 10/94</sup> ~~1994~~, Panchal,  
 Kanakabannan - CD Officer  
 Ganapatharappa - consultant (RCH Leprosy Officer, GOI - from Tumkur)

- ICDS - timing, salary, | 4 staff / centre
- supplementary food. | 2 will go to the new centres
- evening meetings
- ? spend 2-3 days

3 health centers in the 6 villages

	DEMOGRAPHIC DATA		COLLECTED FROM					KOTHAGONDAPALLI VILLAGES					Women				
	Total Population	Sex Ratio (M:F)	Total Families	Total [0-6y]	0-6m	7-12m	13-24m	25-36m	37-6y	0-6y	0-6m	7-12m	13-24m	25-36m	37-6y	ANC	PNC
Kothagondapalli	1963	950:1013	448	234						114:120					17	13	
Andiwadi	1611	850:753	369	149	10	12	20	30	77	93:56	5:5	8:5	13:7	20:10	48:29	5	3

### INFORMATION ABOUT THE ICDS PROJECTS

- Both villages have NBICDS-III Project undertaken by Government of T.N.
- Presently, both villages have 1 anganawadi & there is a proposal for establishing one more anganawadi in each village in near future.

#### Staff:-

	Kothagondapalli	Salary (Per month)	Andiwadi	Salary (Per month)
Anganawadi workers	1) Mrs. Kalyani	Rs. 1436/-	1) Mrs. Jayalaxmi	Rs. 1436/-
	2) Mrs. Kalpana	Rs. 475/-	2) Mrs. Anita	
2) Helpers	1) Mrs. Jayamma	Rs. 440/-	1) Mrs. Variantha	Rs. 440/-
	2) Yet to report		2) Mrs. Seetha	Rs. 440/-

#### OBSERVATION:-

There is a dangerous decline in girl-child population & an alarmingly imbalanced sex ratio of 931:1000 in 0-6 years old child group. There is a need for urgent appraisal of the situation & a need to find the cause & then to plan for an effective implementation to correct the situation.

# SRINIVASAN SERVICES TRUST

Jayalakshmi Estate, No.8, Haddows Road, Nungambakkam, Chennai -6

30.11.2004

To

Dr. Thelma Narayanan,  
Community Health Cell – CHC  
No. 367, Srinivasa Nilaya,  
Jakkasandra I Main, I Block,  
Koramangala,  
Bangalore – 560 034.

Ph : 25531518 (080)

Sub : Nutrition Programme for 5 Villages.

Dear Dr,

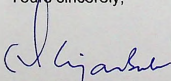
In continuation of discussing we had with Mr. Chandar & Dr. Vinay on the above subject we would request you to assess under 5 children and conduct Nutritional Programmes for the following 5 Villages. We would also request you to send the outline of the program and the cost involved.

- Kothakondapalli
- Bommandapalli
- Bathalapalli
- Andivadi
- Belagondapalli

Expecting an early reply.

Thanking you,

With warm regards  
Yours sincerely,



Dr. A. Rajan babu  
Chief Medical Officer

SJC

This will need to be done by a team  
+ could include yourself, SDR, Abraham  
(whenever he is available) + Vinay (who will  
return in the 3rd week of Dec 04).

Dear Dr Rajan Babu,  
I thank you for your letter. I have been on  
leave due to the serious illness of my father  
+ hence the delay in replying.  
We are also currently busy with a  
training programme + with preparations for  
national public hearing on the right to health  
care being jointly organised by the WHO and  
the Jan Swasthya Abhiyan in mid-December  
in Delhi. We would be able to see you  
in January 2005. Dr Vinay is presently

10/17  
1/12 JS

godchusti in Hobbesville + will be back in the last week of  
December 2004.

From a community health perspective it is better  
for you team with the local health workers to conduct the  
nutritional programmes yourselves. we could conduct the  
survey along with your team so that local skill development  
takes place we could assist in the process of  
participatory planning, ~~design~~ implementation +  
review of the intervention. Baseline + later  
measurements would help the community to know  
if there is any impact based on the intervention.

we will keep in touch with you in this regard  
with best wishes

Y's  
ds  
9/12

Ref : CHC/2004/

10<sup>nd</sup> December 2004

Dr. A. Rajan Babu,  
Chief Medical Officer,  
Srinivasan Services Trust,  
Jayalakshmi Estate, No.7,  
Haddows Road,  
Nungambakkam,  
Chennai 6

Dear Dr. Rajan Babu,

Thank you for your letter. I have been on leave due to the serious illness of my father and hence the delay in replying.

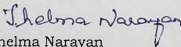
We are also currently busy with a training programme and with preparations for a National Public Hearing on the right to health care being jointly organized by the NHRC and the Jan Swasthya Abhiyan during mid- December in Delhi. We would be able to assist you in January 2005. Dr.Vinay is presently in Gadchiroli in Maharashtra and will be back in the last week of December 2004.

From a community health perspective it is better for your team with the local health workers to conduct the nutritional programmes yourselves. We could conduct the survey along with your team so that local skill development takes place. We could assist in the process of participatory planning, implementation and review of the nutrition intervention. Baseline and later measurements would help the community to know if there is any impact following introduction of the intervention.

We will keep in touch with you in this regard.

With best wishes,

Yours Sincerely,  
For Community Health Cell

  
Thelma Narayan  
Co-ordinator

P.S : Enclosed is a copy of the Peoples Charter on HIV/AIDS launched by the Peoples Health Movement at the International AIDS Conference in Bangkok in July 2004. Enclosed also is a Arogya Kalajatha Book of songs on health issues. It also has a kannada translation of the AIDS charter.



Report on field visit to Kothakondapalli, programme by TVS

Dr. Rajan Babu the chief medical officer and Mr.Kamalakanna the social welfare officer of TVS company in Hosur visited Community Health Cell on 13<sup>th</sup> July 2004. They requested for the support of CHC in addressing the problems pertaining to nutrition and environmental and personal hygiene among the people in the villages where the company is working.

The Community Health Cell team consisting of;

1. Ms. Pamasini Asuri,
2. S.J.Chander.
3. Prasanna Saligram

Visited Kothakondapalli villages near TVS Company in for assessing the nutrition programme on 22<sup>nd</sup> July 2004. We are given to understand that TVS Company is working in six villages around the TVS Company where government is implementing the ICDS Programme. TVS Company is organizing self-help groups in all these villages. These self-help groups make chapathis and supply them to TVS Company's canteen. According the filed worker Mr. Gangadharaiah, he collects information regarding the children's nutritional status from the anganawadi centers and given to the company.

The team was accompanied by Mr.Ganngadhariah to Kothakondapalli as he could not give satisfactory answers to CHC team members, Dr. Rajan Babu was requested to come to the field to provide information regarding the prevailing situation. Before Dr. Rajan Babu could arrive the village the team had interacted with the anganawadi worker and also reviewed the records used for growth monitoring. According to Mr. Gangadharaiah; *"there are no malnourished children. However, all the children were within I & II Degree"*

During our visit, 30 out of 35 children were present at the anganawadi center. The scale against, which the children weighed used, by the ICDS Programme in Tamil Nadu does not contain source and basis. According the CHC team there is errors in the scale for example a child born with 2.5 kgs of birth weight should gain 9kgs of weight at three months, according to the scale 7.5 kgs as acceptable. The

supplementary feeding powder packet supplied by the government does not reveal what it contains for example wheat/corn, it is difficult to infer if it contains wheat or corn.

According to our observation all children seemed undernourished and running low temperatures. It was suggested to have a health check up and monitor the children for general health problems. The anganawadi worker and the field staff of TVS are unable to interpret the data that they have documented regarding children's growth monitoring.

It was suggested to check for helminthes infection and assess types of food children get at home and its quantity in order to overcome calorie gap in diet intake both at home and ICDS center. This is important for preventing brain damage, which could occur during the first 11/2 years of the child's life, as it is difficult to repair later. It appears that the children are not weighed regularly on monthly basis. The food supply during the week to children, during the week the menu seems to be satisfactory and its effect is not documented therefore it is difficult to asses.

It was suggested that not to depend on weight for age indicator alone for measuring the weight for children as a child suffering from mild kwashiorkor could also show an increase in weight.

It was suggested to make a follow up plan for children in two categories separately; one for children below two years and children above two years. This is important to understand the following matters; food habits at home; the quantity of food given its quality and how much is consumed; who normally feeds child and how the family assesses the growth of a child for planning. There might exist misconception regarding diet given to children, which must be identified and addressed.

It would be helpful if medical examination and weighing is done once in two months for all children under two years for assessing their general deacease pattern and monitoring the growth. Finally it was suggested to involve mothers among the group by training them and involve them for creating awareness and support the programme on day-to-day basis.

## Environment hygiene. (Villages covered by TVS, Haritas at Hosur)

Dr. Rajan Babu and Mr. Kamalakannan of TVS came to Community Health Cell on 22nd July and 27th August 2004 to request to help them in addressing the problem of Nutrition and environmental hygiene. During the discussion it was discussed and agreed that a collective process would be evolved with the community than implementing a project to address the problem. Therefore the following visits were proposed to have dialogues with the various groups were necessary.

CHC team members have made three visits so far to Assess the situation. The first visit was made by a team of three people consisting of Ms. Padmasini Asuri Nutrition expert, Mr. S.J.Chander Community Health and Sociology background and Mr. Prasanna Communication background. Following were the observation made during the visit. The first visit was made to Kothakondapalli anganwadi centre. The team had a dialogue with the Anganwadi worker, Dr. Rajan Babu and Mr. Gangadharappa of TVS. The children appeared sickly, running low-grade temperature. It was observed that the chart used for recording the weight of the children is misleading in categorizing the grades of malnutrition as the chart shows less weight for the age.

During the second visit, the CHC team members had in interaction with the anganwadi workers. All the anganwadi workers for the six centers were present for the meeting. Couples of ayahs were also present. All of them expressed their willingness to work together in addressing the nutrition problems of children. They are demotivated by lack of supportive supervision and cooperation from their superiors. They expressed their dissatisfaction over their salaries. They said they are made to work more for less salary. Their knowledge on nutrition seems satisfactory; however an assessment would be helpful before conducting the training programme for fine-tuning their knowledge and skills. Without motivating the anganwadi workers, improving the infrastructure facilities would not make much impact on the health and nutrition status of children.

The third was made to interact with the mothers. Eight mothers were present for the discussion from three villages. In the discussion, it was observed that the mothers were not aware of the importance of nutrition and hygiene for their children.

nutritional needs of their children adequately, later when probed they expressed that there is a problem with the poor families where both the parents are working as coolies. Childcare is a problem after anganwadi center as the children are left on the street or left to care of the elderly until their parents return from work. It was reported that many of the poor families are unable to provide adequate food for their children. The mothers misunderstand that the food given at the anganwadi center is adequate, they do not know it is only a supplementation. The angawadi teachers expressed absenteeism as a problem. They said the following are the reasons; children want to be free, do not want to be confined within four wall, no toys and distance. They said making available more toys and improve the quality food could attract more children. It was observed that there were more boys than girls in the register, we wonder if there is a problem of sex ratio.

Physical structure of anganwadi centers is excellent. TVS has helped in providing toilet and water facilities, they are also providing biogas facilities for cooking. The surrounding of the villages appeared untidy. There is a need to work with the village leaders and if there are any village level committees.

It is not clear, what is the extent of the problem of nutrition. Therefore it is suggested that a sample survey may be necessary. It would also be helpful to assess the knowledge attitude and skills of andganwadi workers and mothers.

Anganwadi workers told us that they regularly monitor the growth of children. However it would be helpful do an assessment of a small sample to know how well growth monitoring is done.

## PROJECT PROPOSAL FOR NUTRITIONAL STATUS OF CHILDREN (0-6 YEARS) IN 6 VILLAGES IN HOSUR TALUKA

**AIM:** Assessment of nutritional status of children between 0-6 years of age in 6 villages of Hosur taluka of Krishnagiri district of Tamilnadu state & to plan & enable measures to mitigate malnutrition in children & to promote the development of children & ensure them a healthy childhood.

### OBJECTIVES:

- To assess the nutritional status of children aged 0-6 years in 6 villages of Hosur taluka where health division of Community Development department of TVS Motors (TVSM) is working.
- To identify the various factors; social, economical, political, educational & cultural; that affect the nutritional status of the children in that area.
- To plan & enable the local community & Community Development department of TVSM to take collective action to adapt & maintain rational & appropriate nutritional practices of the children to restore their nutritional status to normalcy & maintain the same.

### THE PROCESS:

The whole project will be taken in two phases:

1. Assessment phase including collection & analysis of child nutrition data &
2. Post assessment action phase includes evolving a plan to enable the local community & health division of Community Development department of TVSE to take collective action to adapt & maintain rational & appropriate nutritional practices of the children.

### ASSESSMENT PHASE:

It includes the following processes:

- An action based & participatory community approach will be the guiding principle for the whole process. Meeting the local people & building working relationship with them will be the first step of the project. Local people includes the staff at health division of Community Development department of TVS Motors, the community leaders of all 6 villages, representatives from parents, women, men, children & elderly groups of the community, the anganwadi workers & ANMs of the area. The meeting would serve as a place to:
  - Know the willingness of the community to participate in the project
  - Inform & discuss, with all parties involved, the objectives & methodology of the project
  - To understand & build rapport with the community
  - To involve every stake holder in decision making process
  - To finalize the logistics of the assessment phase of the project

- To collect past records, whatever is available, regarding the health status of the children in the community
- To build a causal model of malnutrition
- Methodology used for the assessment of nutritional status of the children would be a 'cross sectional study' of all the children through house to house visits & recording their weight using Salter scale & height (for children >2 years)/length (for children <2 years) using fibre glass scale/infantometer. The data will be collected with the involvement of the local people. The data collected will be collated with the past records of the children to assess the nutritional status. The NCHS values for weight & height of children, as recommended by WHO, will be used as the reference values to draw inferences.
- In addition, based on the causal model of malnutrition, a questionnaire designed to study the various factors; social, economical, political & cultural; that affect the nutritional status of the children in that area will be administered to a representative sample of the different groups in the community.
- The process will be designed & implemented with full participation of the local people. The community will be asked on how best can we involve them in the process (& also will be asked to provide 2 volunteers in each village for the entire process to move forward. Then, the volunteers will be involved in a discussion where the whole process of the project will be discussed with them & their needs identified. In addition, their inputs will be incorporated in the design of the questionnaire. A training program to build capacity of the volunteers to undertake the project themselves will be planned.)

#### COMPONENTS OF THE ASSESSMENT PHASE:

1. **Meeting with the local people:** Meetings will be held with local communities & staff members of RHDC of TVSE with the objectives mentioned earlier. Also, these meetings will be made participatory & will be used to serve the following requirements:
  - Build a team within these villages to assist us in the project. In addition, capacity building of the same to be undertaken during the process of project execution to enable them to continue the work in future
  - Construct a simple & functional hypothetical causal model of malnutrition
2. **Collection of vital statistics:** It is important to have a general picture of the community in which a health program is being planned. Apart from helping us in providing on the demographic profile of the region & an approximate number in the target group (children of 0-6 years), it also helps in giving a broader picture of the overall health status of the children in the region. RHDC can obtain the same from the local governmental authorities. The data deemed pertinent for

the project are number of children in 0-6 year age group, sex ratio in the same age group, IMR, 1-4 mortality rate, vaccination coverage, life expectancy of the area, spacing of the child birth, details of families with 0-6 year old children & any other deemed necessary during actual process.

3. **Collection of previous records of the children:** Such as growth charts, birth certificates, under 5 health records, records from pre primary child care centres & any other records pertaining to the health of the children under study.
4. **Clinical examination:** Clinical examination of all the children to search for specific signs of malnutrition to be carried out. The specific signs of malnutrition that will be looked in each child will be as follows:
  - Hairs: Sparse, thin, easy pluck ability, hypo pigmentation, without sheen, flag sign
  - Eyes: Dry eyes, Bitot's spots, keratomalacia, xerophthalmia, pallor
  - Tongue & mouth: Sore, red & glazed tongue; cheilosis; pallor
  - Skin: Erythema, Hyper pigmentation, raw hypo pigmentation; easy bruisability; dry, inelastic & mosaic skin; phrynoderma
  - General appearance: Wasted muscles & bony prominences; no fat under the skin; protuberant abdomen; generally apathetic or highly irritable child; child which has stopped feeding; oedema;
5. **Anthropometric measurements:** The height & weight of each child is to be measured & then weight for age (under weight), weight for height/ weight for length (acute malnutrition) & height for age/ length for age will be calculated for a sample of children. The age of the child in question will be assessed according to the data in birth record or if no such data is available using the local calendar or an approximate age is calculated using the clinical examination. All measurements are to be obtained under standard conditions using standard equipment & standard techniques. The NCHS values of height & weight for age in children will be used as reference values to draw conclusions. The same will be recorded on a growth chart & the importance of maintaining the same in future will be stressed. If previous records of weight & height are available, the same will be collated with the current measurements to know the trend of nutritional status & to identify the 'at risk age', if any, in the community.
6. **Community survey:** Once a simple & functional causal model of malnutrition is built & major determinants for the cause of malnutrition identified, analysis of the data will be taken up & priority areas for intervention will be identified.

A period of one month is envisaged to be the time period to carry out all the above activities. Once, the above process is over, the project moves into the post- assessment action phase.

## PROJECT PROPOSAL FOR NUTRITIONAL ASSESSMENT OF CHILDREN IN 6 VILLAGES IN COLLABORATION WITH RHDC OF TVSE FACTORY IN HOSUR

**AIM:** Assessment of nutritional status of children between 0-6 years of age in 6 villages of Hosur taluka & to plan & enable measures to mitigate malnutrition in children, if it is prevalent, & to promote the adequate development of children & ensure them a healthy childhood.

850 child.

### OBJECTIVES:

- To map out the magnitude of the burden of malnutrition as a health problem in children between 0-6 years of age in 6 villages of Hosur taluka.
- To identify the various factors; social, economical, political & cultural; that affect the nutritional status of the children in that area.
- To plan & enable the local community & RHDC of TVSE to take collective action to adapt & maintain rational & appropriate feeding practices of the children to restore their nutritional status to normalcy & maintain the same.

### THE PROCESS:

For the sake of convenience, the whole project will be taken in two phases:

1. Assessment phase
2. Post assessment action phase includes analysis of the data collected during the assessment phase & evolving a plan to enable the local community & RHDC of TVSE to take collective action to adapt & maintain rational & appropriate feeding practices of the children.

### ASSESSMENT PHASE:

It includes the following processes:

- Meeting the local people & building working relationship with them. Local people includes the staff at RHDC of TVSE, the community leaders of all 6 villages, representatives from parents, women, men, children & elderly groups of the community, the anganwadi workers & ANMs of the area. The meeting would serve as a place to:
  - Know the willingness of the community to participate in the project
  - Inform & discuss, with all parties involved, the objectives & methodology of the project
  - To understand & build rapport with the community
  - To involve every stake holder in decision making process
  - To finalize the logistics of the assessment phase of the project
  - To collect past records, whatever is available, regarding the health status of the children in the community
  - To build a hypothetical causal model of malnutrition
- Methodology used for the assessment of nutritional status of the children would be a 'cross sectional study' of all the children through house to house visits & recording their weight using <sup>500Kr scale</sup> & height (for children >2 years)/length (for children <2 years) using . The data will be collected with the involvement of the local people. The data collected will be collated with the past records of the children to

By using  
15/12  
• 5 villages come under 3 diff. blocks  
• ? check 2 parakeyats they  
• TVSE file



assess the nutritional status. The WHO/ICMR values of height & weight for age in children will be used as reference values to draw conclusions.

- In addition, based on the hypothetical model of malnutrition, a questionnaire designed to study the various factors; social, economical, political & cultural; that affect the nutritional status of the children in that area will be administered to a representative sample of the different groups in the community.
- The process will be designed & implemented with full participation of the local people. The community will be asked on how best can we involve them in the process (& also will be asked to provide 2 volunteers in each village for the entire process to move forward. Then, the volunteers will be involved in a discussion where the whole process of the project will be discussed with them & their needs identified. In addition, their inputs will be incorporated in the design of the questionnaire. A training program to build capacity of the volunteers to undertake the project themselves will be planned.)

### COMPONENTS OF THE ASSESSMENT PHASE:

1. **Meeting with the local people:** Meetings will be held with local communities & staff members of RHDC of TVSE with the objectives mentioned earlier. Also, these meetings will be made participatory & will be used to serve the following requirements:
  - Build a team within these villages to assist us in the project. In addition, capacity building of the same to be undertaken during the process of project execution to enable them to continue the work in future
  - Construct a simple & functional hypothetical causal model of malnutrition
2. **Collection of vital statistics:** It is important to have a general picture of the community in which a health program is being planned. Apart from helping us in providing on the demographic profile of the region & an approximate number in the target group (children of 0-6 years), it also helps in giving a broader picture of the overall health status of the children in the region. RHDC can obtain the same from the local governmental authorities. The data deemed pertinent for the project are number of children in 0-6 year age group, sex ratio in the same age group, IMR, 1-4 mortality rate, vaccination coverage, life expectancy of the area, spacing of the child birth & any other deemed necessary during actual process.
3. **Collection of previous records of the children:** Such as growth charts, birth certificates, under 5 health records & any other records pertaining to the health of the children under study.
4. **Clinical examination:** Clinical examination of all the children to search for specific signs of malnutrition to be carried out. The specific signs of malnutrition that will be looked in each child will be as follows:

- Hairs: Sparse, thin, easy pluck ability, hypo pigmentation, without sheen, flag sign
- Eyes: Dry eyes, Bitot's spots, keratomalacia, xerophthalmia, pallor
- Tongue & mouth: Sore, red & glazed tongue; cheilosis; pallor
- Skin: Erythema, Hyper pigmentation, raw hypo pigmentation; easy bruisability; dry, inelastic & mosaic skin; phrynoderma
- General appearance: Wasted muscles & bony prominences; no fat under the skin; protuberant abdomen; generally apathetic or highly irritable child; child which has stopped feeding; oedema;

5. **Anthropometric measurements:** The height & weight of each child is to be measured & then weight for age (under weight), weight for height/ weight for length (acute malnutrition) & height for age/ length for age (chronic malnutrition) ? should this also be used to children >2 years? will be calculated for each child. The age of the child in question will be assessed according to the data in birth record or if no such data is available using the local calendar or an approximate age is calculated using the clinical examination. All measurements are to be obtained under standard conditions using standard equipment & standard techniques. The WHO/ICMR values of height & weight for age in children will be used as reference values to draw conclusions. The same will be recorded on a growth chart & the importance of maintaining the same in future will be stressed. If previous records of weight & height are available, the same will be collated with the current measurements to know the trend of nutritional status & to identify the 'at risk age', if any, in the community.

6. **Community survey:** Once a simple & functional hypothetical causal model of malnutrition is built & major determinants for the cause of malnutrition identified, a questionnaire will be designed to study the identified factors; social, economical, political & cultural; & will be administered to a representative sample of the different groups in the community with the help of local people.

A period of one month is envisaged to be the time period to carry out all the above activities. Once, the above process is over, the project moves into the post- assessment action phase.

### Report of visit to TVS community development project in Hosur

On 7<sup>th</sup> March 2005 a meeting was held with the anganwadi workers working in the following five villages; Andhivadi, Kothakondapalli, Bomnadapalli, Belakondapalli and Bathalapalli to finalize the nutritional assessment of under five children. The anganwadi workers clearly indicated that they are de motivated to work as they are paid a very meager salary (honorarium) they said they are not doing their work as per the conceptual framework given by the Integrated Child Development Services project. They said if TVS considers providing them some support it would motivate them to collaborate with the initiative of TVS in improving the health and nutritional status of children. They did not say this as a condition.

Regarding areas of concern for improving the anganwadi centers they said many children are going to private nursery schools and others not motivated to come to the center. For this they said, if TVS could help in providing additional supplementary food like the government gives an egg on Thursdays and the attendance goes high on Thursdays. They also said if they children could be provided with uniform it will motivate the parents sending their children to private nursery schools to send them to the anganwadi centers.

On 19<sup>th</sup> March 2005 it was decided to start the assessment at Kothakondapalli and it was communicated to Dr.Rajanbabu of the Chief Medical Officer of TVS. When we went to Kothakondapalli on 18<sup>th</sup> at 9 am, there were only four children in the center. We waited there for the teacher and the ayah to come, at about 10 am the ayah came with a basin full of cow dung for the Gobargass plant installed for the cooking. The ayah said the teacher had gone for a meeting and she would not be coming. She was busy cutting the vegetables for the food that she was planning to cook and the children were playing on their own in the center. Few mothers and relatives of the children came there to drop the children.

We started the assessment at about 10 am and could not continue after assessing about 10 children, as we could not elicit the information about the name of children and their mothers and also their date of births. Since we had to leave these columns incomplete we decided to stop the assessment and planned to continue when the anganwadi teachers was there and their parents were informed. We met the self-help group members of TVS and explained to them about the proposed nutritional interventional plans. They said they would support the initiative. Some of them said that their children are also in the anganwadi and they were not happy with the way the anganwadi center is functioning as their children not taught well and taken care. After meeting the self-help group members we went to Bomnadapalli, there were about 15 children in the aganwadi and the ayah was busy cooking the food. Here too the anganwadi teachers had gone for the meeting. We went to meet the panchayat president's house to seek his support. Mr. Srinivas Reddy was not there but his family members said they would convey the message to him and gave us his phone number to talk to him. We met the self-help group leader Ms. Prema and two other women, they said they would support the initiative planned by TVS. During the afternoon we had meeting with Dr. Dhakshinamoorthy, he said we had to assess all the

children under five years of age, which was contrary to the plans that we had. We had decided to assess all the children who are coming to anganwasdi and assess about 20% of the children who are not coming to the center. We told him if we have to consider assessing all the under five children, we need to revise our budget. We also told him that we will only assess the nutritional status and build the capacity of mothers, self help group members, anganwadi workers and TVS staff, we will not do the intervention alone for TVS. We also discussed the concern of the anganwadi workers and appointing a female health staff by TVS. Dr. Dhakshinamoorthy said that TVS will not consider appointing such a person and regarding the grievance of the anganwadi workers, he said TVS would not consider offering any support to them too. He suggested that we could have planned their support as part of their budget. Later he took us to Kothakonda palli and Belagondapalli to meet the key informant in the village and to identify the places where we could establish the assessment centers in the village. After this he dropped at the Hosur bus station at 5 pm.

Ref : CHC/2005/jis

June 13, 2005

Ms. Padmasini Asuri  
Nutrition, consultant  
Jayanagar,  
Bangalore

Dear Madam,

Greetings from Community Health Cell!

You have been supporting our nutrition intervention for the Community Development Programme of TVS Motor Company in Hosur during the past few months. Your support is highly appreciated both by CHC and TVS Motor Company. I would like to request you to continue to support in planning and implementing appropriate intervention based on the finding of the recent assessment carried out in five villages. The next meeting with all the anganwadi workers, CDPO and TVS staff is planned for 20<sup>th</sup> June, 2005 at 2.00 pm, at Community Health Cell. Kindly facilitate the discussion and planning process. We shall make arrangement for you conveyance.

With warm regards

Yours sincerely



S.J.Chander  
For Community Health Cell  
Field Training Coordinator

Ref; CHC 003/05

8<sup>th</sup> August, 2005

Dr. Rajan Babu  
Srinivasan Services Trust  
Jayalakshmi Estate  
No.8, Haddows Road  
Nungambakkam  
Chennai - 600 006

Dear Sir

Greeting from Community Health Cell

**Subject: Partial payment for our services towards nutrition intervention project.**

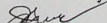
Please find furnished below the details of our service charges towards the nutrition intervention project of TVS Company in five villages in Hosur taluk.

Sl.No	Description of cost	Total
1.	Resource fee for the preliminary visits for 7 days for two people @ Rs. 1000 for one person and Rs. 500 for another person.	Rs. 10,500.00
2.	Equipment for measuring height and weight	Rs. 5,000.00
3.	Travel during the assessment phase For 20 days @ Rs. 400 per visit for two people	Rs. 8,000.00
4.	Resource fee during assessment phase @ Rs. 500 for one person and Rs. 300 for another person <i>for 20 days</i>	Rs. 16,000.00
5.	<b>Total</b>	<b>Rs. 39,500.00</b>

(Rupees thirty nine thousand five hundred only)

With regards

Yours sincerely

  
S. S. Chandar

For Community Health Cell.

TWS fold

from - SFC

Budget for Nutritional assessment and intervention in five villages through TWS - block.

Sl. No	Description of cost	Total
1.	<b>Preliminary visits</b> 7 visits by two resource person @Rs. 1000 per one person and Rs.500.00 per another person 7X1500.00= Rs.10, 500.00  Resource charges during intervention phase For 24 days two visits in month by two people @Rs.1500 per visit 24X1500= Rs.36,000.00	Rs.10, 500.00 ✓   Rs. 36, 000.00
2.	<b>Printing and stationery</b>	Rs. 5,000.00
3.	Equipment for measuring height and weight of children	Rs. 5,000.00 ✓
4.	<b>Travel</b> <u>During assessment Phase</u> For 20 days @ Rs. 400.00 per visit for 2 people 400X20 <u>During intervention phase</u> @Rs.400 per visit for two people for 24 days Rs.400X24 = Rs.	Rs. 8,000.00  Rs. 9,600.00
5.	<b>Training programme</b> Two one day training programmes @ Rs. 2000.00 per day Rs.2x2000= 4,000.00	Rs. 4,000.00
	<b>Total</b>	<b>Rs. 78,100.00</b>

(Rupees seventy eight thousand one hundred only)

This will be undertaken by Mr SJ Chander, Dr Keerti, assisted by Mr Durgin Sarma.

15/3

To VF

12/3/26

26500  
13000  
39500

TVS folder

Technical Comments on the activities of ICDS programme support from TVS Medical Unit Hosur.

This comment has been written after a single visit to the Anganwadi center of Government of TN that has the support of TVS unit at Hosur. Hence it is limited to what had been observed at the time of visit.

The Situation:

The village Kothaguntapalli is about few kms from Hosur Factory. The Anganwadi is one of the centres of ICDS. There was a teacher and an ayah manning the children, A typical Anganwadi center with lackluster in various aspects, this is attached to the primary school of the village. There was a 'Salter Scale' hanging in the middle of the room. (perhaps to indicate that the center was an Anganwadi) There were about 25 children, out of enrolment 35. It was about a month since the centre had been opened for the current year.

The strength of Anganwadi Positive points ;The Govt of TN had provided the teacher with the chart which is almost a ready-reckoner for the teacher to classify the children according to the nutritional status. Naturally the teacher lacked in depth understanding of the purpose of the chart, She merely records the wt and had mentioned that most of the children were normal or in grade I. Similarly the chart had been given for the weight for the expectant mothers, who are also the beneficiary of the centre. Both the charts did not show the reference standards. I could not check the weight recorded as the register was not in the class. The fact that an effort to help the teacher to record the weight, utilising the figures provided in the chart shows the concern of the authorities.

The Ration given to the children as per the Governmental instruction is as under

WEANING FOOD (as found on the label) Composition per 100 g.

Cereal (wheat/Maize/ Bajra)	52 g
Ragi	05 g
Bengal gram	12 g
Jaggery	30 g

Nutritional facts per 100g Calories 350 Protein 8.5 g

by padmasini



The ration permitted of the ready mix to the children . The processed powder is mixed with boiled and cooled water to make into laddoos

50 g ball for the under two yrs and 100 g balls for the above 2 yrs upto 5yrs. As soon as the children arrive the balls are served The under twos have the laddos and return with the mothers while the anganwadi children get the midday meal as well . The ration per child /day are as Rice 80 g , dhal 10 g- oil 2 g In addition on Mondays potatoes are given, Tuesdays Greengram Thursdays 1 egg while on Wednesdays and Fridays no additional item is provided .

Through this meal as per the calculation the children get 290 calories and 6.5 g Protein thus during the day with laddo and meal the anganwadi children get in total 640 calories (RDA 1230 )  
15 g Protein (RDA 25 g)

The food provided during the day gives about 50% of RDA and is quite good. According to the 'consultant' of the team the normal status children in the class is to the extent of 70-80% (!) But the Team had also taken the wt of children who do not attend the anganwas'di class and the wt recorded shows children with normal wt also to the extent of 75 %  
What is the impact of the meal provided ?

My observations: The support given by the Government of TN in providing a ready reckoner is a good start. But beyond this there were no information whether the the children are given any vitamin /mineral supplements. Whether the medical checkup was done or not, was not known. The children looked rather weak and stunted in growth. Though it is difficult to weigh the children of that age certain care need to be taken during weight recording. Since we did not see any data of individual child's growth rate one does not know whether the normal child is on the borderline or well above. There was no individual weight card. When the children are getting the calorie gap filled in with the meal and laddoos, there should be some difference between the anganwadi and non-anganwadi attending children. Weight alone is inadequate to rate the child's nutritional status. Some of the standards, recommended maintained in India and elsewhere are stated below.

Standards available to assess the nutritional status of the children :

On the recommendations of the WHO the standards of National Centre for Health Statistics (NCHS) is the reference point recommended in India. The median value of NCHS is taken as Indian reference standard (copies enclosed) Normally the classification of nutritional status are Ht for age wt for age as well as wt for ht.

1. According to Gomez standard the classification details are :

Normal	above 90% of Indian standard
I st degree mal-nutrition	75-90 %
II nd degree	60-75
III rd degree	<60 %

Reference is 50<sup>th</sup> centile

2 The Indian Academy of Pediatrics (IAP)

Normal	above 80%
I st degree	70-80 %
II nd	60-70
III rd	50-60
Iv th	< 50%

To confirm the nutritional status weight alone is inadequate. Height for age is also essential and weight for ht as well as wt for age (refer to the table) A proper medical checkup need to be done at the beginning to check for possible infection or infestation ,other factors that would inhibit the absorption of the nutrients by the body,

With the average availability of 650 calories even the mal nourished should be able to show some improvement and move up in the scale. Since the teacher appears to be not so trained in the technical details including the weighing of the child in the balance ,A close observation whether the children are eating what is served would give more information about the children and the instruction received from their mothers.

It is said that every child has the same growth potential if properly nourished. It is thus necessary as not to accept lower standards as "Indian "

With my handicap of limited information received on the spot, I make the following suggestion for the TVS team who are graciously supporting the Government's effort in the area of child development. The suggestions are:

1. Check the scale used by the Anganwadi as the spring needs to be strengthened.
2. Weigh the children individually as to wt for age ,measure the ht for age with reference to the NCHS 50<sup>th</sup> centile (as per the chart) of the Anganwadi group and record their status. Measurement of arm-girth would be also useful if the doctors have the time. This data of individual child , the team could keep in their office and not share with the teacher till certain facts could be deduce
- 3 The teacher can continue her exercise. This can be corrected once the doctors are sure of the data. For this reason a close supervision of the anganwadi school children need to be done'
 

As to their eating habits alertness and interest. A close observation of children's eating habit is required to find out whether they do get their share and consume the food served. This one of the team members can do continuously for a week or two during the meal time The same person should make enquiries about the food that is given by the mothers at home to compute the food availability for the growing child
4. Provide the medical check up for possible corrections if required
  5. The children should be weighed periodically (once in three months) to observe the growth during the period and also see the difference between Anganwadi and outside.
  6. To weigh the other children bathroom scale (platform type) should be avoided..
  7. Conduct under two advisory centers as this age is very crucial to promote the potential growth factor in the child
  8. To conduct this it should be considered as Health-nutrition education programme.
    - 8.1 Select intelligent mothers and train them on few facts of nourishment and health care of the under two yrs, and make them as para- teachers/mother-teachers to teach minimum of five mothers in their peer group,

- 8.2 Conduct nutrition and health education classes to give a holistic information on water ,hygiene and food requirements
- 8.3 The clinical classes should be a positive under two Programme and not just cater to the sick children alone. This would enable the mothers to a understand and help in maintaining the weight chart as well as provide possible adequate nourishment at home
- 8.4 Encourage the mother- teachers to participate and help the anganwadi specially during meal time. This can be done by the selected mother-teachers in turn A comparative findings of local situation with that of anganwadi will be useful for other areas alsowhere anganwadi programme is executed. In TN

With time bound project the TVS team can show the way to organize Under Twos in Anganwadi centres

The above activities are only a suggestion to improve the condition of the children and the approach to anganwadi with TVS support.

Table 1: Median Values (50th centiles) of Heights and Weights of Boys and Girls (0-60 months) — NCHS

Age	Boys		Girls	
	Height (cms)	Weight (kg)	Height (cms)	Weight (kg)
Months				
0	50.5	3.3	49.9	3.2
3	61.1	6.0	59.5	5.4
6	67.8	7.8	65.9	7.2
9	72.3	9.2	70.4	8.9
12	76.1	10.2	74.3	9.5
15	79.4	10.9	77.8	10.2
18	82.4	11.5	80.9	10.8
21	85.1	12.0	83.8	11.5
24	87.6	12.3	86.5	11.8
27	88.1	12.9	87.0	12.4
30	90.4	13.5	89.5	13.0
33	92.7	14.1	91.7	13.6
36	94.9	14.6	93.9	14.1
39	97.0	15.2	96.0	14.6
42	99.1	15.7	97.9	15.1
45	101.0	16.2	99.8	15.5
48	102.9	16.7	101.6	16.0
51	104.8	17.2	103.4	16.4
54	106.6	17.7	105.1	16.8
57	108.3	18.2	106.7	17.2
60	109.9	18.7	108.4	17.7
Years				
5.0	109.9	18.7	108.4	17.7
5.6	113.1	19.7	111.6	18.6
6.0	116.1	20.7	114.6	19.5
6.6	119.0	21.7	117.6	20.6
7.0	121.7	22.9	120.6	21.8
7.6	124.4	24.0	123.5	23.3
8.0	127.0	25.3	126.4	24.8
8.6	129.6	26.4	129.3	26.6
9.0	132.2	28.1	132.2	28.5
9.6	134.8	29.7	135.2	30.5
10.0	137.5	31.4	138.3	32.5
10.6	140.3	33.3	141.5	34.7
11.0	143.3	35.3	144.8	37.0
11.6	146.4	37.5	148.2	39.2
12.0	149.7	39.8	151.5	41.5
12.6	153.0	42.3	154.6	43.8
13.0	156.5	45.0	157.1	46.1
13.6	159.9	47.8	159.0	48.3
14.0	163.1	50.8	160.4	50.3
14.6	166.2	53.7	161.2	52.1
15.0	169.0	56.8	161.8	53.7
15.6	171.5	59.5	162.1	55.0
16.0	173.5	62.1	162.4	55.9
16.6	175.2	64.4	162.7	56.4
17.0	176.2	66.3	163.1	56.7
17.6	176.7	67.8	163.4	56.7
18.0	176.8	68.9	163.7	56.6

Ref : WHO. Measuring change in nutritional status. Guidelines for assessing the nutritional impact of supplementary feeding programmes for vulnerable groups. WHO, Geneva, 1983.

Table 2: Median Values (50th percentile) Weight for Height for Boys and Girls

Height (cms)	Expected Weight (kg)		Height (cms)	Expected Weight (kg)	
	Boys	Girls		Boys	Girls
50	3.3	3.4	94	14.2	13.9
51	3.5	3.5	95	14.5	14.1
52	3.7	3.7	96	14.7	14.3
53	3.9	3.9	97	15.0	14.6
54	4.1	4.1	98	15.2	14.9
55	4.3	4.3	99	15.5	15.1
56	4.4	4.7	100	15.7	15.4
57	5.0	5.0	101	16.0	15.6
58	5.4	5.3	102	16.3	15.9
59	5.7	5.7	103	16.6	16.2
60	6.0	6.0	104	16.9	16.5
61	6.3	6.3	105	17.1	16.7
62	6.6	6.6	106	17.4	17.0
63	6.9	6.9	107	17.7	17.3
64	7.2	7.1	108	18.0	17.6
65	7.5	7.4	109	18.3	17.9
66	7.7	7.7	110	18.7	18.2
67	8.0	7.9	111	19.0	18.6
68	8.3	8.2	112	19.3	18.9
69	8.5	8.4	113	19.6	19.2
70	8.8	8.6	114	20.0	19.5
71	9.0	8.9	115	20.3	19.9
72	9.2	9.1	116	20.7	20.3
73	9.5	9.3	117	21.1	20.6
74	9.7	9.5	118	21.4	21.0
75	9.9	9.7	119	21.8	21.4
76	10.1	10.0	120	22.2	21.8
77	10.4	10.2	121	22.6	21.8
78	10.6	10.4	122	23.0	22.7
79	10.8	10.6	123	23.4	23.1
80	11.0	10.8	124	23.9	23.6
81	11.2	11.0	125	24.3	24.1
82	11.5	11.2	126	24.8	24.6
83	11.7	11.4	127	25.2	25.1
84	11.9	11.6	128	25.7	25.7
85	12.1	11.8	129	26.2	26.2
86	12.3	12.0	130	26.8	26.8
87	12.6	12.3	131	27.3	27.4
88	12.8	12.5	132	27.8	28.0
89	13.0	12.7	133	28.4	28.7
90	13.3	12.9	134	29.0	29.4
91	13.5	13.2	135	29.6	30.1
92	13.7	13.4	136	30.2	30.8
93	14.0	13.6	137	30.9	31.5

Ref : WHO. Measuring change in nutritional status. Guidelines for assessing the nutritional impact of supplementary feeding programmes for vulnerable groups. WHO, Geneva, 1983.

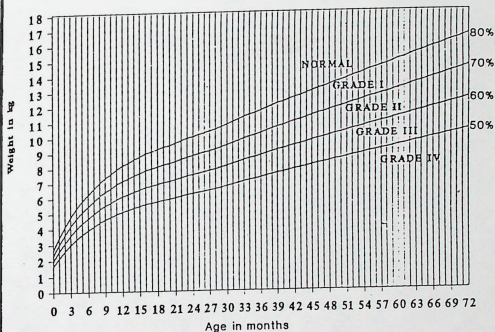
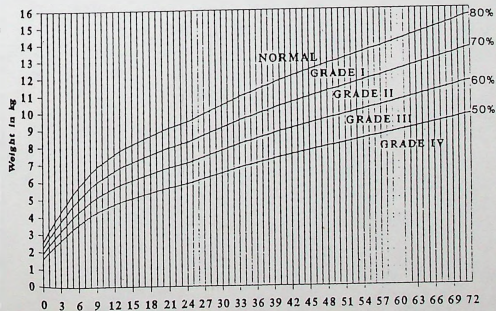
## CLASSIFICATION OF NUTRITIONAL STATUS

Relatively speaking, weight, height and arm circumference have come to be considered the most sensitive parameters for assessing nutritional status of under fives. Several methods have been suggested for the classification of nutritional status based on these measurements.

The anthropometric data can be expressed in a number of ways in relation to reference data: (a) by the use of mean and standard deviation values, (b) by calculating percentages of the median value of reference population which is assigned as 100 per cent, and (c) by comparing with percentiles of the reference data, where median value is the 50th centile.

## Weight for Age

Various methods have been suggested to classify children into various nutritional grades using the body weights. The most widely used classification is the Gomez classification (Gomez et al., 1956), in which the children are classified as having first, second or third degree malnutrition if their weight for age is in the range of 75–90%, 60–75% or less than 60% respectively of the reference median. All children whose weight is 90% and above are categorised as normal. The selection of cut-off levels was based on the clinical/hospital experience in Mexico. Gomez et al. (1956) observed a marked difference in mortality during first 48 hours between children with second degree malnutrition (60–75% of median) and those with third degree malnutrition (< 60% of median). The Indian Academy of Paediatrics (IAP) recommends the following classification: 80%, 70–80%, 60–70%, 50–60% and < 50% as normal, first, second, third and fourth grade of malnutrition respectively (IAP, 1972). This classification is currently used by the Integrated Child Development Scheme (ICDS) for selecting beneficiaries and growth monitoring (Chart 1). As such, most of the classifications, based on weight for age use arbitrary cut-off points. Normal growth is considered to encompass values within two standard deviations of the mean. Since body weight does not follow Gaussian distribution, use of mean and standard deviations for classifying children into different grades of nutritional status may not be appropriate. To overcome these problems, Ramnath, et al. (1993), recommend use of 5th percentile of reference values as the cut-off point to classify children as normal and malnourished. They suggest that the weight below the 10th percentile values of the community (ICMR data) may be considered as indicative of severe degree of malnutrition. When these criteria were used, their analysis indicated that 80% of NCHS median appeared appropriate to decide whether children were normal or malnourished. The current criterion of 60% of reference median for grading the children as suffering from severe degree of malnutrition and 80% of reference median as cut-off between 'normals' and malnourished, appears to be the most reasonable. A summary of these classifications is given in Table-3.

GROWTH CHART - BOYS  
(IAP-Classification - NCHS standards)GROWTH CHART - GIRLS  
(IAP classification - NCHS standards)

Sl. No	Name of the Village	Number of houses	Population	Male	Female	0-5 population			Non SC		Scheduled Caste	
						Male	Female	Total	Male	Female	Male	Female
1.	Andhivadi	356	1551	838	713	134	86	220	97	63	37	23
2.	Kothakondapalli I	289	1345	665	680	54	70	124				
3.	Kothakondapalli II	167	640	312	328	52	56	108				
4.	Bathalapalli	370	1829	937	892	110	115	225				
5.	Bomandapalli	182	992	514	478	44	40	84				
6.	Belagondapalli	433	2132	1033	1099	103	89	192				

8489

953

TVS 505 children without Aadhar

$$\begin{array}{r} 565 \\ 312 \\ \hline 457 \end{array}$$

$$\begin{array}{r} 1345 \\ 610 \\ \hline 1955 \end{array}$$

$$\begin{array}{r} 289 \\ 162 \\ \hline 451 \end{array}$$

$$\begin{array}{r} 670 \\ 728 \\ \hline 1408 \end{array}$$

$$\begin{array}{r} 70 \\ 52 \\ \hline 126 \end{array}$$

$$\begin{array}{r} 57 \\ 53 \\ \hline 106 \end{array}$$

$$\begin{array}{r} 124 \\ 108 \\ \hline 232 \end{array}$$

Preliminary discussion on the finding of the nutritional assessment carried out in five villages covered by TVS motor company, held at Community Health Cell on 9<sup>th</sup> June 2005

Minutes of the meeting

1. The following people from TVS company were present
2. Dr. Rajan Babu Chief Medical Officer
3. Dr. Dhkshina Murthy, Medical officer r
4. Mr. Gangadharappa, Consultant
5. Mr. Kamalakannan, Community Development Officer
6. Mr. Amitab, Community Development officer

The following people from CHC were present

1. Ms. Padmasini Asuri, Nutrition Consultant
2. Mr. S.J.Chander, Field Training Coordinator
3. Dr. Vinay, Community Health Fellow

Before starting the presentation on the findings of the study, Ms. Padmasini clarified with the TVS team to what extent the concept of ICDS is being understood by the project staff of the ICDS. The TVS team gave the feed back that it is not well understood by them. She said ICDS is not merely a nursing teaching the number and rhymes to the children, it was started to help in the over all development of the child. It is not training centre but correctional centre, helping addressing the child's health and development needs. ICDS should focus on personal hygiene, food hygiene and socialization. ICDS should take two years children too, and asked if they take them; the answer was no.

Ms. Padmasini wanted to know if the ICDS project of the Krishnagiri district has a medical officer to look into the health needs of the children. She said if the government does not have one they should accept the role of TVS medical officers.

Later she explained the standard used for assessing the nutritional status by the National Centre for Health Statistics. She explained what is percentile, particularly the 50<sup>th</sup> percentile used as a standard in India.

Later Mr S.J.Chander of CHC made a presentation on the finding of the study. The total number of children covered by the study was 640 which include 313 girls and 327 boys between 0-60 months of age.

Total children assessed: 640

Nutritional status	Total
Normal	17.3%
Mild	46.4%
Moderate	32.2%
Severe	4.1%

• Compare these in AWS vs these in AWS.



Nutritional status	Normal	Mild	Moderate	Severe
Boys	7.7%	25.3%	15.5%	2.7%
Girls	9.7%	21.1%	16.7%	1.4%
Total	17.3%	46.4%	32.2%	4.1%

It was noted that only 17% are normal and 78.6% were mild and moderate and 4.1 percent were severe. Data on each village was also presented with comparison between boys and girls. It was found that Bathala palli was the lowest and Andhiwadi was the highest. The TVS team explained that residents of Andhiwadi are economically better off and the residents of Bathalapalli are poor. It was observed that over all the girls seems to be better than the boys. It was observed that the malnutrition was present more in the 12-24 months age frequency. This was explained as that this could be due to the increasing need of dietary intake as the play activity of the child increase but the child may not be getting sufficient food. The TVS team members asked why some children eat mud. It was explained that the children that the children could be suffering from calcium deficiency.

*village wise table.*

Ms. Padmasini said regarding the causes of mild malnutrition, it could be that the children are not getting adequate food; as they children are growing the mother's milk may not be sufficient for the children and parents may not be aware of the required dietary intake for children. Mother's health status is important for delivering a normal child is important. Children, who have experienced many episodes of diarrhoea, should be fed double the amount of food. It is important to know if the mothers know this and can they afford. Education of diarrhoea and food hygiene is important in preventing. Worm infestation also could be one of the causes. A sick child may drop in growth but should regain in the next few months. Others causes such as the economic status of the family particularly the mother's is important for the nutritional status of a child.

*data from FGDs to be written up. + of field observations*

Regarding the moderate state, it is likely to remain the same unless something drastic is done.

Regarding growth monitoring, she said it is not necessary that the children be weighed every month; it is OK if they are weighed once in two or three months but weighing is important. She said weighing is important; it is like the child's horoscope.

#### Action plan

It was suggested that the mothers and community development staff of TVS should focus on normal and mild children in preventing further mal nutrition. Moderately malnourished children should be attended by the anganwadi workers and the severely malnourished children should be attended by a doctor. It was suggested to send a report with the findings of the study to Tamil Nadu government. The meeting concluded with the decision that on 20<sup>th</sup> TVS team with the anganwadi workers and CDPO's will come to CHC for discussion and drawing up a joint action plan.

By: S.J.Chander  
9<sup>th</sup> June 2005

*It would be good to write a report with all the findings & circulate it for comments.*

Risks & Benefits  
Justice  
Informed consent  
Public Health Research

### **Ethics in Nutrition Intervention Research**

Common infections precipitate malnutrition, which in turn reduces resistance. This facilitates further infections, which again lead to increased nutrition deficit. The 1960s was a period of developing awareness of interactions between infections and malnutrition. Up to then the research on and organisation of programmes for these two issues were separate enterprises. So a national medical research institute, with multi-disciplinary participation of scholars/researchers, decided to undertake a nutrition intervention study in a Primary Health Centre area somewhere in North India with financial support from the International - UN and state agencies and Indian government. The main objective/purpose of the study was to determine if there was a synergism in the programmes to control malnutrition and infections similar to the known synergism between these problems. The child nutrition programmes at that time (1960s) placed emphasis on nutritional rehabilitation, which treated children with severe conditions like marasmus and kwashiorkor. This study was a step forward to examining the synergism between malnutrition and infections to practical policy and programmes.

The researchers felt that the only way that the synergy between malnutrition and infection in the young infants and children could be examined was to find groups with high prevalence of malnutrition and common infections and then study them to see what happens when efforts were made to selectively reduce each type of condition. The nutrition project was conducted in four clusters of 10 villages. Care was taken to ensure comparability between different groups of villages and also sufficient separation in order to minimise communication among villagers who received different service packages. To avoid random events particular to a specific village from affecting the research process, at least two villages were selected from each experimental or control group.

The total population covered in the two nutrition and population studies was 35,000 people in 26 villages distributed in clusters as experimental groups within 3 community development blocks. On an average in the 10 nutrition study villages there were 1000 children below 3 years of age with each experimental group having an average of 200-300 children. In the neighbourhood PHC, in 1955-60, the death rate for infants below age 1 was 156 per 1000 live births. For the children 0-4 years of age, the mortality rate was 27 per 1000 population.

The researchers sought the cooperation of the villages and negotiated with them until the combination of service interventions assigned to the village was accepted. There was no compulsion for families to cooperate, but all village leaders agreed to help persuade all the families to participate in the survey.

The following interventions were undertaken - the three nutrition villages received nutrition care; the 2 health care villages received health care mainly for infection control and the third received services for both. There were two control villages. The nutritional input consisted of twice daily food supplements consisting of calorie fortified milk in the mid morning and porridge made from crushed wheat, milk powder, raw sugar and oil in the mid after noon, with a combined nutrient value of 400 calories and 11 grams of protein.

**Findings:** The study found that nutrition care alone or in combination with health care significantly improved both weight and height of study children beyond 17 months of age. At 36 months, children from the Nutrition intervention villages or the Nutrition and Health Care intervention villages weighed on an average 560 gms. more and were 1.3 cm taller than those in control villages. A male higher caste child from a nutritional input village or a nutrition and health care input village averaged about 2 kilogrammes more in weight and 6 cm more in height at 36 months than a female, lower caste child from the control village. Perinatal mortality was significantly reduced in the nutrition and nutrition and health care input villages compared with only health care villages (31 vs 45 perinatal deaths per 1000 live and still births) and it was higher in the control villages ((57 per 1000 live and still births). This was due to the supplementation of all mothers with iron and folic acid and additional feeding for mothers at nutritional risk. Neonatal mortality and post-neonatal mortality significantly reduced by one third to half in villages where health care or nutritional inputs were provided vis-à-vis control villages.

Many years after the study was conducted, some Indian researchers expressed reservations about the idea of undertaking a study in such settings and the ethical justification for continuing to study a control group even though the implications of nutritional deprivation on child survival were clearly established. The study researchers contended that even in control villages, if the health workers found that a child was dying, going blind or suffering from other illnesses that would leave permanent damages, the worker was instructed to call the doctor to start intensive care. Others have justified the study saying that, (a) in the late 60s and early 70s this was the understanding of scientific and ethical research. The scientists had done their best to ensure scientific validity by conducting and documenting the study carefully and drawing appropriate and cautious conclusions. (b) The study did not cause any additional harm and all that researchers did was to make use of an existing condition/situation.

#### **Questions for discussion**

1. Who are the participants in this study and how would the researchers should obtain their informed consent for participation?
2. What are the risks and benefits of participation in each arm of this study?
3. What standard of care in each arm should be mandatory in order to conduct this study?
4. Do the participants in each arm have a right to receive additional benefits after the conclusion of the study, and if so, what and for how long?
5. What kind of community engagement would be required for a study of this kind?
6. In order to do this study, who all must consent? In order to obtain their consent, what information each one needs to be provided? Would the researchers require different kinds of consent for form for each?

(By Mala Ramanthan and Amar Jesani)

## An Indian study of the natural history of cervical cancer

Cancer of uterine cervix is the most frequent neoplasm among women in India. The epidemiological evidence available in mid-1970s supported a spectrum of heterogeneous epithelial lesions antedating invasive cervical cancer. The biological behaviour of these pre-cancerous lesions was not clearly understood. It was felt that identification of relevant risk factors and the detection and management of the pre-cancerous lesions were important in the prevention and control of invasive cancer of the uterine cervix, more so in a resource poor setting of India. Such knowledge will help the health services to selectively intervene early only in those women having high-risk cervical lesions. This would enable the country to use its scarce health resources more efficiently.

**Study design and methods:** With such a goal, scientists of a national institute in India designed a multi-disciplinary study. The study was carried out from 1976 to 1990. From 1976 to 1986, 120,471 women attending the gynaecologic outpatient departments of six major hospitals in a metropolitan city were screened, and cervical smears of 117,411 collected along with clinical history and other parameters. All women were called to the hospital clinics after 15 days to take reports of their cervical smears. Of 117,411 cervical smears collected, 30,399 (25.9%) were negative, 84,889 (72.3%) showed inflammation, 1,910 (1.6%) had dysplastic lesions and 213 (0.2%) were malignant.

As women reported back to clinics of hospitals after 15 days to collect their reports, those women who were having dysplasia were approached for recruitment in a study to observe or follow them up for long time in order to understand the causative factors and biological behaviour of the dysplasia. Some of those without any dysplasia and malignancy were recruited as matching control. On recruitment the researchers collected detailed epidemiological information as well as biological material for cytological (study of cells), histo-pathological (study of tissues to study manifestations of disease), serological (study of body fluids) and immunological studies from all participants.

The recruitment of these participants started a fortnight after the first batch of women was screened in 1976, and the last batch of women was recruited following the last screening in 1986. Of the 1,910 women who showed cervical dysplastic lesions in the screening, 1,163 (61%) were "registered"/recruited for long term "follow up"/observation of their cervical lesions. Moderate and severe dysplasia cases were followed every three months, mild dysplasia every six months and controls annually. At each of the follow up, biologic material for cytopathologic and serologic investigations was collected. Biopsy was not mandatory during the course of follow up. However, 50% of the dysplasia cases, included in the long-term follow up category, were randomly subjected to biopsy. Any woman in non-biopsy group showing a higher grade of cytologic abnormality and/or clinical suggestion of higher grade of lesion underwent biopsy.

No follow up of women was done after the study ended in 1990.

A paper of the researchers published in an international journal in 1987 stated that, "A formal informed consent in writing from subjects included in the study is not standard practice in India. However, all women registered for long-term follow up were informed about the objective and the purpose of the study and also the cooperation that would be required from them. The individual registered as a dysplasia case was informed that she had a lesion that could either regress to normalcy or progress to higher grades of atypicality and was then given the option of either being followed or of being discharged from the study. Patients choosing the latter alternative (15%) were

appropriately managed". It also stated that, "For obvious ethical reasons, the end point of the study in any case was carcinoma *in situ* (CIS) at which time appropriate treatment was offered".

**Findings:** Analysis of the data up to the end of March 1986 by researchers showed that progression rates (from dysplasia cases to malignancy) per 100 women-years of follow up was 0.65 for mild, 17.7 for severe and 2.7 for all dysplasia. The corresponding figure in the control group was 0.21. The cumulative risk for developing malignancy during any time of follow-up over a period of 72 months was 5.11% for the mild and 27.91% for moderate dysplasia and 13.76% for all dysplasia. In moderate dysplasia group, one out of 3 would develop malignancy in 72 months and in severe dysplasia group 41.86% or almost one out of two in 30 months (few women with severe dysplasia were followed up beyond 30 months as majority were moved out of the cohort due to undergoing of hysterectomy or cone-biopsy). The diagnosis at detection of malignancy (total 71 cases) was: "Carcinoma *In Situ*" (CIS – a localised cancer not yet invading surrounding tissues) in 35 (49.3%), CIS with spread in lymph glands in 20 (29.2%), CIS with micro-invasion in 7 (9.8%) and CIS with invasive cancer in the remaining 9 (12.6%).

**Contribution to the policy making:** Reportedly, by 1986 the findings of this study on cervical cancer with special reference to its natural history had been extensively used in the planning of National Cancer Control Programme for India for control of cervical cancer. Several socio-demographic and biological parameters studied in this project indicated pointers for identifying "high risk" group of pre-cancerous lesions from those of relatively "low risk". This is of considerable relevance for control of cervical cancer and for optimisation of limited specialised health services in India.

**Controversy:** In 1997, a national daily front-paged a report saying that the national institute that conducted this study had not obtained proper informed consent of the women participants as per the ICMR's guidelines of 1980 which provided an elaborate procedure and written documentation of the consent. Besides, they had allowed so many women to develop cancer without offering best treatment for the dysplasia available at that time. The health and women activists and some leading professionals criticised the study. The researchers defended by saying that at that time written informed consent was not considered mandatory for doing the study and the women were mostly illiterate so it was difficult to take written consent. They claimed that though many women developed malignancies, during the study period none of them died, and so there was no harm caused to them. And over and above everything, the research provided very valuable information that eventually went into the making of a national programme and thus in long run saving lives of scores of women.

#### **Questions:**

1. Please identify potential risks all participants would be exposed to during and after the completion of the study.
2. What were the measures taken by the researchers to minimise potential risks? What more could have been done?
3. What are the benefits to the participants from the study? What are the benefits to the society and science from the study? What could be done to increase these benefits?
4. How far the autonomy of women participants respected in the study? What difference the written informed consent could have made on the conduct and outcome of the study?
5. If you were asked to do research on natural history of a disease using the design and methods of this study, would you do it? Why?

(By Amar Jesani)

### Sadhavis, Sexuality and Societal morality

In a medium sized city in India with two medical colleges, a religious sect was having a group of *sadhavis* undertaking religious as well as social work. This sect has a very sizeable following in the city. Some of these *sadhavis* were working in collaboration with an NGO doing work among children for last two decades. One of the works of the NGO was to educate and rehabilitate street children in few Children's Homes established by it. *sadhvis* of this sect were managing one of these homes for last five years. They had left their homes in their early age and fully dedicated themselves to religious and social work. One of them was 45 years and another 38 years old. They were very popular in the community for their dedication, caring nature and simple life-style. The children's home run by them had two rooms – one big room was serving as dormitory to sleep at night and in the day-time place for educational classes 21 children (all boys) housed in the Home. The second small room had two coats and tables and chairs where these two *sadhavis* used to live. A door connected both the rooms, and both rooms had a door each opening to the outside courtyard independently. At night the children slept in the dormitory, the room connecting two rooms used to remain locked from the side of the *sadhvis* room and if any child needed assistance of theirs, he had to knock. The young inmates of the were provided basic education and taught skills – most of them started doing some work in the city or elsewhere using such skills by the age of 14 or 15 years and used to leave this Home. The *sadhavis* and the NGO used to maintain contact with them as these rehabilitated children looked at the Home as their own home and *sadhavis* like their mother.

One day, at around 5 in the morning a small child needed assistance of the *sadhavi*, he knocked at the door of *sadhavis'* room several times, but did not get any response. Hearing noise other children got up and they all knocked. The children went to the courtyard and knocked another door of the *sadhvis'* room, found it not-locked, went inside, and found both *sadhavis* in a pool of blood and dead. The children were panicky they shouted for help, the neighbours came rushing. The news spread like wildfire in the town, the priest and other *sadhavis* of the sect gathered in no time. They all and children were crying around the dead bodies when police reached the scene. The police had hard time to get all of them out, cordon off the area and look for the clues. Both *sadhavis* were stabbed but no weapon was found. A team of forensic experts also visited the scene of crime.

Next day morning, there was a *bandh* in the city to pay respect to the deceased, and the newspaper ran the front-page story of the murder, and wrote with superlative language articles on the dedication and popularity of the *sadhavis*, and above all, blasted the police for deterioration of the law and order. Speculations were rife about the involvement of a powerful underworld gang having political connections and the cause talked about was its attempt to get the Children's Home which had, with small building, courtyard and garden; large amount of land. The police said that they were on the trail of murderers but they would be able to say more after the post-mortem were conducted on the bodies. The Chief Minister of the State gave a statement expressing sympathy with the head of the sect to which these *sadhavis* belonged to, and severely pulled up the police chief for inefficiency and negligence. The post-mortem of both bodies was conducted by early afternoon.

On the second day after the murder, three of the four newspapers published in the city front-paged different story on the murders and the *sadhavis*. Citing a reliable source, they said that the autopsy had revealed they were not raped but at the same time it showed that they were

used to sexual intercourse and one of them was also suffering from a sexually transmitted disease. They also stated that perhaps police was investigating *sadhavis*' relationship with ex-inmates of the Home – the boys who grew up there and subsequently moved to some other towns; and also with some *sadhus* or priests of the sect who were frequent visitors of the Home and with the head of the NGO. In these stories there were indirect references to the licentious behaviour of the men and women who were supposed to remain pure. With the publication of these stories, the public outcry on the murder suddenly died down, even the priests of the sect stopped giving statements, and in the next few days the furore was gone, the media shifted the story to inside pages and mainly reported statements of police about the progress of investigation.

After about three months of the murder a meeting of the *sadhavis* took place where all of them revealed that since the murder, their image in the community had gone down, people were regarding them as of loose moral character and they were finding it difficult to continue with their work. At that time, a lawyer, journalist and a doctor along with few other public-spirited individuals constituted an investigation team. These *sadhavis* provided them with a copy of the autopsy report and they went around for two weeks interviewing doctors, who were involved in doing autopsy, police officers, newspaper reporters and many others. It was discovered that apart from findings of injuries that killed them there were only two other positive findings. In both the hymen was found absent or torn, and vaginas were patulous; and there was a small inaugural wart near vagina of the younger woman. The autopsy report was dated seven days after the murder and the doctor, who did the autopsy refused to take responsibility of the kind of interpretation given by the media. He also said that at the time of autopsy his senior professor was present and he actually had taught five students from medical college on these bodies. The said professor had actually said some uncharitable things about women in general and the morality of *sadhavis* and *sadhus* in religious sects. The professor refused to talk to the team saying that he had not done autopsies. The team also discovered that few years back both *sadhavis* had undergone D&C at the public hospital due to some severe menstrual problems. The reporters of the newspapers claimed that they had written truthfully whatever was reported to them but they refused to divulge their source.

When the investigation team released its report there was furore in public. While acrimonious debates continued in the media, the followers of the sect that had kept quiet for so long, suddenly felt that the *sadhavis* of their religion were deliberately maligned, and they protested. However, the murderers of *sadhavis* were never found and the police closed the files.

#### QUESTIONS:

1. Did doctors and reporters do anything wrong? What? Why did they do it? Were they correct in refusing to apologise?
2. Was it correct for a citizens' team to do its own investigation in this episode? Why? What are the rights and ethical responsibilities of the team?
3. What are the ethical obligations of forensic doctors?

(By Amar Jesani)

Community & Culture  
Privacy and confidentiality  
Publication & dissemination  
Qualitative research

### **Research, community and culture**

An NGO working with lower caste and class people in 40 villages in an economically underdeveloped North Indian hilly state (province) obtained funding for commencing public health work on HIV/AIDS. One of the objectives of the project was to design intervention strategies for prevention of the spread of HIV by training members of large number of NGOs in the state. In order to design its training programme, it decided to undertake a study in its villages to understand the socio-economic and behavioural factors responsible for the spread. A qualitative study using Focus Group Discussion (FGDs) and In-depth Interview techniques was designed. The study was completed in six villages covered by the NGO, a quick data analysis done, and using this data, a small booklet in Hindi was prepared, and 500 copies printed in Sept 1999 for use as background material for the training. No paper was written for publication in the journal. Some copies were sent out to other NGOs and individuals. The short-course training programme commenced, in few months after the publication of the booklet.

Seven months after the publication, a copy of the booklet reached one of the Hindi newspapers published from the state. The newspaper accused the NGO of publishing pornographic and obscene material, and maligning and polluting Indian culture. Soon other newspapers in the region picked up the story. A left-wing political group was first in criticising them in order to show the kind of work foreign funding agencies were encouraging on low-priority-issue of the HIV/AIDS in the region. But it was soon sidelined and replaced by extreme-right wing political parties and Hindu religious fundamentalist organisations. A week after the newspaper reports, mobs comprising the latter groups simultaneously attacked the head office of the NGO in the city and one of its community centres at a village where training sessions were on. During the attack, the Police arrested 11 persons, including the heads of the NGO and even visitors to the NGO. Ostensibly, this was done to protect them from being lynched by the crowd. At the police station, however, they were booked under provisions dealing with obscenity (a bailable offence), making of statements provoking public mischief (a non-bailable offence), etc. The Bar Council of the city resolved that no lawyer would appear on behalf of those arrested. The NGO was ordered to stop all activities (whether or not these were related to the booklet in question) and bank accounts, including personal accounts of the workers and their family members were frozen. The bail application for six arrested members of the NGO was rejected, they were handcuffed and paraded through the streets of the city on their way from the prison to the Court. The litigation to get them released lasted 40 days, and when it became clear that they could not be kept in the prison, the state government made unsuccessful attempt to invoke National Security Act to keep them in the prison. On their release, the work in those villages continued with the community support, but the NGO was forced to shift its office to a neighbouring state.

The study finding contained in the booklet explained that being an economically underdeveloped region, majority of people were very poor and many men had left their families and migrated to prosperous region to find work. These men, while visiting home were bringing STD and HIV.



Absence of men and the insufficient money received by families were forcing some women to promiscuous activities and also forcing them to sell their bodies, particularly, to the high-risk groups of men like the truck drivers passing on the highways. It also found that protection during sex was virtually absent because most women did not know about it or they had no control over it. Besides, while the high prevalence of STD was known, the community did not have much understanding about the HIV. The booklet did not give names of the participants and the villages where the study was conducted. However, the study covered only six villages and there were certain indirect references to individuals in those as well as other villages. There was no report of any participant of the study protesting or joining the protests by political and religious groups. The obscenity charge related to three passages in the booklet (total of 2-300 words in booklet of 20,000 words), all of them direct quotes from the qualitative data collected. These passages explicitly described the sexual behaviour using colloquial language without any refinement.

At the time of this episode the state government, was controlled by the right-wing Hindu fundamentalist party. The new elections were approaching and there were reports that this party was losing support. Besides, one of the powerful central (federal) government ministers of this party hailed from this region, and his authority in the state party was under pressure. He took deep interest in this episode. Interestingly, around the time of this episode about half a dozen qualitative studies on sexual behaviour were published as reports or journal papers. All of them used more sexually explicit quotes and were more lax in preserving anonymity of the respondents than the booklet of the NGO. However, all of them were published in English, and none of them faced any protest.

#### **Questions:**

1. Did researchers violate rights of the participants and the community while undertaking and reporting the research? What is the specific nature of each violation?
2. Unlike therapeutic research, the academic behavioural research is often not accompanied or followed by action for behavioural change. What are the dilemmas and pitfalls involved when the community based action group undertakes research on sensitive issue with an intention to affect changes in the community?
3. At the community level, there is a big overlap of cultural, social and political dimensions. What kind of competencies required for undertaking research on sensitive issues in the community?
4. Should the researchers share major findings of their study with the community in the language they understand? If so, what precautions need to be taken in disseminating findings of the study to participants and the community?
5. Ethics attempt to protect human rights of the participants. The researchers are also vulnerable to human rights violation. What are the ways to protect human rights of the researchers?

**(By Amar Jesani)**

*mm*

PRESENTED BY  
Dr. M.N. KULKARNI

# NUTRITION PAPER OF THE MONTH

## April 1995

***New global perspectives on overcoming malnutrition<sup>1-3</sup>***

***V. Ramalingaswami***

***American Journal of Clinical Nutrition, 1995; 61:259-63***

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**UNICEF New York  
Nutrition Section  
April 1995**

## New global perspectives on overcoming malnutrition<sup>1-3</sup>

V Ramalingaswami

### The ICN process

I am honored to be asked to make this presentation in the aftermath of the International Conference on Nutrition (ICN), held in December 1992 and reflect on the perspectives gained in the process before this august gathering. The ICN is a critical step in the continuing process of strengthening commitment and action to prevent and alleviate nutritional problems wherever they occur. The preparatory committee meeting held in August of 1992, which was technical in nature, reviewed the main background document of the conference: *Nutrition and Development—A Global Challenge* and the draft of the "World Declaration" and "Plan of Action for Nutrition." These and numerous other documents were the result of a synthesis of information, experience, and ideas gleaned from a variety of sources through an unprecedented historic process spread over two years, representing the coalescence of two main streams of activity (Figure 1). One stream, the Ground Reality Stream, started in countries with the preparation of 116 country papers constituting a unique repertoire of country scenarios, both developed and developing, followed by regional meetings of technical representatives of the countries of each region, finally ending in the preparatory committee meeting. Country participation was a signal feature of the ICN preparatory process. Countries have been primed and poised for real action at the ground level.

The other stream was the Stream of Science. Its output was a critical analysis of eight priority areas for policy and action so as to enable planners and policymakers in different sectors to have a shared perception and common understanding of the spectrum of causality for a coherent approach to interventions at the national level. Experts from around the world, a specially designated Advisory Group of Experts (AGE), the Sub-Committee on Nutrition of the Administrative Coordination Committee of the United Nations (UN; ACC/SCN), the UN agencies, Bilateral and International Development Agencies, the International Union of Nutrition Societies (IUNS), and Non-governmental Organizations (NGOs) provided valuable inputs throughout the preparatory phase. The ICN itself, which met in December 1992, was attended by more than 1000 country representatives from 159 member states and the European Community, as well as by representatives of 15 organizations and bodies of the UN system and more than 150 other inter-governmental and nongovernmental organizations. Indeed, the active participation of nongovernmental organizations in such large numbers was an outstanding feature of ICN. "The World Declaration" and "Plan of Action for Nutrition" were reviewed in depth and adopted by this high-level ministerial mini-sum-

mit, providing the political driving force needed to move from rhetoric to action (1). The ICN thus represents an upward synthesis of knowledge and experience in nutrition in a bottom-up approach, starting with countries, followed now by downward support and action ending in countries.

After the ICN, action has shifted almost immediately to countries and regions. The goal is to develop in each country a national action plan, sharpen, correct, and fine-tune the plans already made by countries at the beginning of the ICN process, with priorities, goals, targets, time scales, monitoring, identification of resource needs, and their mobilization, and above all, national capacity building.

### The World Declaration and Plan of Action

The World Declaration is about what needs to be done and the "Plan of Action" is about how it is to be done. The Declaration identifies the root causes of malnutrition as poverty, deprivation, social inequality, lack of education, and growth of population out of proportion to the natural resource endowment. It recognizes that nutritional well-being is an essential prerequisite to effective learning and a key objective of human development. Despite appreciable worldwide improvements in nutritional status, life expectancy, and adult literacy, the ICN viewed with deep concern the fact that 780 million people in developing countries—20% of their combined populations—still do not have access to enough food to meet their basic daily needs. There is a high prevalence and an increasing number of malnourished children under 5 y of age in parts of Africa, Asia, Latin America, and the Caribbean, 192 million. More than 2 billion people still suffer from or are at risk of micronutrient deficiencies producing an array of disabilities and developmental disorders on an unprecedented scale. The prevalence of low birth weight, the single most powerful predictor of death in the first few months of life, still stands at 19% for developing countries as a whole with figures reaching 30% and beyond among the teaming millions of South Asia, whereas for developed countries this figure stands at 6%. At the same time, there is a changing global picture of chronic noncommunicable diseases related to excessive or imbalanced dietary intakes often leading to premature death (Figure 2).

<sup>1</sup> From the All India Institute Of Medical Sciences, New Delhi, India.

<sup>2</sup> Presented to the XV International Congress of Nutrition, Adelaide, Australia, on September 27, 1993.

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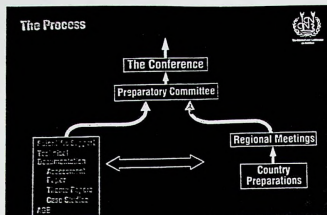


FIGURE 1. The International Conference on Nutrition process. The Ground Reality Stream on the left, the Stream of Science on the right. AGE, Advisory Group of Experts.

In reality, the "World Declaration on Nutrition" is about human development—about human vulnerability, care and caring, natural and manmade disasters, historical negligences, and ecological handicaps of women resulting in excessive time losses and energy drain, lifestyles and behavior, debt and adjustment, General Agreement on Tariffs and Trade (GATT) and the Uruguay Round, household food security and productive assets of the poor, and about food aid not only for human survival during emergencies but also as a stepping stone to development and self reliance.

The Declaration calls on member states to make all-out efforts to eliminate the following before the end of the decade: 1) famine and famine related deaths, 2) starvation and nutritional deficiency diseases in communities affected by natural and manmade disasters, and 3) iodine and vitamin A deficiencies.

### Causes of Death

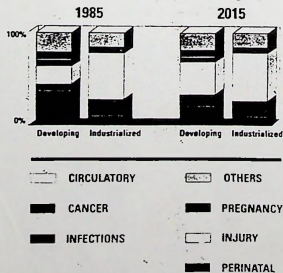


FIGURE 2. Estimated and projected distribution of the major causes of death in developing and industrialized countries, 1985 and 2015. Adapted with permission from Bulutao, Lopez, and Stevens. 1989.

TABLE 1  
Factors influencing nutrition—the trioka

Factor	Elements
Food	Availability
	Access
	Quality
	Safety
Health	Health services
	Lifestyles
Care	Mothers
	Households
	Communities

The member states also pledged to reduce substantially within this decade widespread chronic hunger and undernutrition especially among women, children, and elderly people; other micronutrient deficiencies including that of iron; diet-related communicable and noncommunicable diseases; social and other impediments to optimal breast-feeding; and inadequate sanitation and poor hygiene, including unsafe drinking water. The approach was broad, resting on the tripod of food, health, and care (Table 1).

### Health and care

The Plan of Action for Nutrition provides a technical framework for the preparation of national plans of action and identifies nine strategies. The key is competent local action following a strategy that is flexible and sensitive to local factors. The emphasis is on location specificity; building on existing structures; on ongoing activities; on what people already know; on identification of technically sound, implementable activities; and on choices of areas that are amenable to immediate intensification. Much enthusiasm was generated by the ICN, which should not be allowed to dissipate by too much time being spent on elaborate planning exercises in a "planning dream." The science and experience gathered at this historic XV International Congress of Nutrition could serve as a most valuable catalyst to the implementation of post-ICN follow-up activities.

### Global perspectives

Permit me now to step aside from the content of the Declaration and Plan of Action for Nutrition to reflect on some global perspectives for overcoming malnutrition arising out of the ICN experience.

### The concept of care

Of the three cornerstones of nutritional well-being, food, health, and care, which were expanded into nine strategies in the ICN Plan of Action, special mention may be made of the care and caring concept. The vulnerable include not only infants, young growing children, and mothers, but also often-neglected adolescent girls, elderly people, and disabled and displaced people. One may ask: What is left of the human life cycle? The entire life cycle seems to have vulnerabilities all along, from womb to tomb. Perhaps a case can be made for paying special attention to young school-age children as well, for malnutrition and poor health in this group are linked to low rates of enrollment, high absenteeism, early dropping out, and

low achievement (2-4). Enhanced child survival and the post-Jomtien Conference activities spurring enrollment for primary education are enlarging the pool of primary school learners. There is evidence relating a child's attention deficits, learning disabilities, and sensory impairments to general and micronutrient malnutrition and intestinal helminth infestation. There are safe, effective, and logistically feasible approaches available at low cost and it is hoped that the post-ICN activities will give due emphasis to the collective health and educational benefits of improved nutrition and health of school-age children. Such an approach will be synergistic to the other ongoing improvements in the quality of teachers and educational infrastructure. When health and nutrition interventions in school children are coupled with the incorporation of the corresponding knowledge base into the school curriculum, a sustainable behavioral change can be effected in children and when children, teachers, and parents are involved together, great change can occur (2-4).

To go back for a moment to the care concept, it is rather daring and extends beyond children across the whole spectrum of vulnerability in the human life cycle. It is an enabling transition from dependency to independency, autonomy, and maturity. Of particular importance is breast-feeding and adequate weaning practices, the success of which depends on good nurturing and emotional support given by mothers, caretakers, family members, and the society in general. Early psychosensorial and affective stimulation in conjunction with nutritional inputs can accelerate recovery from severe marasmus (5). The International Code of Marketing of Breastmilk Substitutes, the breast-feeding data banks, the baby-friendly hospitals, the lactation training centers, and the training materials are instruments for enlarging and strengthening care. Improvement of complementary feeding of infants and young children by using locally available foods that are safe and fulfill nutritional needs in major ecological zones in different socioeconomic groups is paramount to overcome the hazards of the weaning process. The first and most dangerous year of life still remains a challenge and is being addressed by the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF).

#### *Monitoring and surveillance*

The ICN makes a strong plea for regular assessment and nutrition monitoring by each country, within its resource limitations, especially of its vulnerable groups, and leading to positive policy and project responses. It advocates innovative efforts such as risk mapping, sentinel sites, and rapid appraisal techniques, in addition to using traditional indicators such as anthropometry, birth weights, breast-feeding prevalence, dietary intakes, and biochemical markers of nutrients and clinical signs. As an example, some of the indicators used in monitoring and evaluation of control of iodine-deficiency disorders are given in Table 2. The study of socioeconomic status and distress factors is of value in disaster prediction and preparedness against ecological catastrophes such as lack of or excess rainfall, seasons of wasting and increased disease transmission, and abundance of disease vectors. Emergency preparedness requires solid technical support in countries to build national capabilities for coping with nutritional emergencies (6).

TABLE 2  
Monitoring and evaluation of iodine-deficiency diseases

Monitoring
Urine iodine
Blood spot thyroid-stimulating hormone
Evaluation
Control of cretinism
Control of goiter
Intelligence tests of children
Social indications

#### *Micronutrient malnutrition*

Micronutrient malnutrition is represented by the vicious trioka of deficiencies of iodine, iron, and vitamin A (7). Their continued persistence (Table 2) leads one to ask why society is failing to utilize optimally some of the commonplace contributions of science and technology. The answer is clear; technology yields its full benefits only when used within a framework of social development and community organization. The ultimate barrier to knowledge application in developing countries is management, with its complement of information, informed judgement, continuous tuning of policy, surveillance, and a participatory approach. In dealing with the problem of micronutrient malnutrition, diversification of diets to provide the micronutrients in requisite quantities on a continuing daily basis as a long-term measure, indeed, as an all-time measure, is advocated strongly, whereas short-term measures such as supplementation for immediate alleviation are to be regarded not as ends in themselves but as preludes to sustainable solutions.

The International Council for the Control of Iodine-deficiency Diseases (ICCIDD), WHO, and UNICEF have updated projections of numbers of people living in areas considered to be at risk of iodine deficiency from 1 billion persons estimated last year at the time of The World Health Assembly to 1.6 billion persons at the present time. Iodine deficiency is a community disease that affects virtually all of a community's members to some degree and is regarded as the greatest single cause of preventable brain damage and mental retardation (8). The good news is that there is acceleration of efforts in every region of the world in the control of iodine-deficiency diseases, so much so that thought is now being given to verifiable criteria that indicate the elimination of iodine-deficiency diseases by the year 2000. This is a track reminiscent of that followed for smallpox eradication in the past and now being followed in the Americas for polio eradication. Actions against iodine-deficiency diseases are afoot in many African countries. The WHO has just launched a Micronutrient Deficiency Information System and the first working paper on iodine-deficiency diseases jointly produced by WHO, ICCIDD, and UNICEF has just come out. At this point I would like to pay a tribute to that distinguished Australian, Dr Basil Hetzel, for the crucial role he is playing in iodine-deficiency disease control. It looks as if the total elimination of this ancient scourge of humankind is likely to be achieved by the end of this decade, this century, and this millennium. May Adelaide and this Congress signify the final ascent!

We are not so happily situated with regard to iron deficiency, although here too there are signs of significant movement. The numbers of anemic or iron-deficient subjects continue to be in

the high range of over 2 billion, with devastating effects on the physical, social, and economic fabric of society. There is an extraordinary opportunity for a determined attack on iron deficiency. The elimination of this single micronutrient deficiency can do more than any other program to achieve the goals of human development because all age groups and both sexes are affected. Greater attention paid to the logistics of uninterrupted supply and flow of iron supplements, and to counseling and confidence-building in the recipients of tablets, are hopeful signs of possible progress in this area. The recent study in China that showed that the discomfort from iron tablets can be drastically reduced when they are given on a weekly schedule adds to the optimism on this front. The weekly dosage schedule is not only a convenient unit of time, it also exceeds the time it takes for intestinal mucosal cells to turn over in humans. Administering a supplementary dose every 7 d will enable the intestinal mucosal cells loaded with iron from a previous dose to be shed. WHO, United Nations University, and UNICEF are proposing to do a major study to determine the practicality and likely effectiveness of adopting country-wide weekly dosage schedules based on primary health care systems, as is used in China (9).

I have little to add with respect to vitamin A deficiency, perhaps the most dramatic of the micronutrient deficiencies. A lasting solution to the problem of vitamin A deficiency lies in the context of overall development and in fostering the increased cultivation and consumption of carotene-rich foods. School gardens and kitchen gardens are essential for increasing the intake of dark-green leafy vegetables and orange-colored vegetables and fruits. Red pumpkins, carrots, yellow sweet potatoes, tomatoes, papayas, mangos, and bananas with yellow cores in addition to dark-green leafy vegetables provide an answer and exclusive breast-feeding is essential. It is clear that small children can meet their vitamin A requirements by eating green leafy vegetables (10). Leaves can save children's eyes and lives. Each country will have to determine the place of short-term solutions and immediately available means such as massive dosing with vitamin A for improving vitamin A status of groups that continue to be at greatest risk. A surveillance system to monitor the micronutrient status of the vulnerable population and their diets is an essential prerequisite for an effective policy for the control of micronutrient deficiencies and for the interaction and phasing out between short- and long-term approaches (11).

#### Nutrition and noncommunicable diseases— a question of behavior and lifestyle

The social affirmation of preventive and promotive practices will be needed to tackle chronic noncommunicable diseases. Human lifestyles and behavior hold the key to the future health of humans. The fact that declines in mortality from noncommunicable disease had occurred to a considerable extent through preventive actions including diet changes in several industrialized countries is an argument for initiating similar programs in an anticipatory way in developing countries in demographic and epidemiological transition or in the posttransitional phase. Complete understanding of all factors cannot be a precondition to intervention or else health development would not have advanced to the extent that it has (12). We have

the scientific knowledge to create a world in which some of the chronic diet-related afflictions such as coronary heart disease and stroke can be made to decline through policies related to smoking and physical activity, dietary energy intake, the intake of total and saturated fats, salt and free sugars, complex carbohydrates, dietary fiber, and stress reduction. I exclude pharmacological means from the pursuit of behavior and lifestyle interventions.

Economic growth is essential for development, but while pursuing it, it is possible through preventive and promotive action to avoid the ascent of "diseases of affluence." Free enterprise, market economics, and Thatcherism are the economic orthodoxies today, but the desire is for economic growth with environmental sustainability and equity as was addressed in the Rio Conference. Does equity occur by gravity, by a trickle-down phenomenon, or by active social development policy? At any rate, we are back to the basics, namely promotion of balanced, wholesome, safe, culturally acceptable, and aesthetically attractive diets.

#### Nutrition and public health in transition— what lessons have we learned from history?

##### *A journey through nutritional history*

The growing frequency of diet-related noncommunicable diseases in developing countries and the coexistence of pre- and posttransitional disease spectra in population groups in several developing countries, the so-called "double burden," is all too familiar. For instance, obesity is already prevalent in some developing countries, among the poor in middle income countries, and among the well-to-do in low income countries. There is a rerun of patterns of nutritional diseases of affluence, if I may use that term, in those developing countries entering the posttransitional phase at an accelerated rate over the past 30-40 y. The McCarrison Society in the United Kingdom discussed this subject in Oxford. Sir Robert McCarrison, who was the founder of India's National Institute of Nutrition, and whom I had the privilege to know in his postretirement years at Oxford in the late 1940s and early 1950s, influenced me in developing an interest in iodine deficiency diseases in the Himalayas. He served as a young Indian Medical Service officer in Gilgit in the western Himalayas in the early years of this century. He was struck by the fine physique, powers of endurance, and relative freedom from disease of the local people and conceived the idea that those characteristics might be related to their diet. He spent a good part of his professional life pursuing this idea and his experiments with Sikh, Bengali, and Madras diets are well known. He wrote in 1932 that a diet most likely to maintain physical efficiency and health is "a diet composed of any whole cereal grain or mixture of cereal grains, milk and milk products, legumes, green leafy vegetables, root vegetables, fruit and water, with meat occasionally added" on festive occasions (13). McCarrison advocated the Oslo breakfast, reputed to be good for Norwegian children, which was similar to his own prescription. The breakfast served free to Norwegian children in those days consisted of 500 mL milk, whole-meal bread with butter, whole-meal rusks or raw carrot, an apple or orange, and whey cheese.

The return of outbreaks of the ancient scourges of pellagra, beriberi, and scurvy in refugees today is a negation of the

history of human progress. Food for refugees, their health, nutrition, and survival, are issues troubling human conscience today. The numbers of these refugees have risen despite the end of the Cold War.

In nutrition, one sees a repetition of history in time and space. It would seem a wise policy to go back to some of the nutritionally sound and wholesome principles and practices in indigenous and traditional systems before they are lost in the avalanche of modernity. Mahatma Gandhi once said, "I have nothing to teach the world; truth and non-violence are as old as the hills." Some part of poor peoples' traditional diets may be worth emulating, for example, less meat and more vegetables. (R Longhurst, personal communication, 1993).

### The UN system

The UN agencies have a special responsibility for the follow-up of ICN. They need to strengthen greatly their collaborative and cooperative mechanisms at all levels, from global to local, especially at national and local levels (14). The ACC/SCN is assigned an important role in promoting interagency linkages. The new ethic is decentralization to provinces, districts, and local areas with communities taking more leadership and responsibility. An overall intersectoral framework is essential for nutritional improvement, fully recognizing the essential role that individual sectors have to play. Decentralization means taking action closer to people with the involvement of local government and local community leaders, accountability, and community empowerment through the effective use of communication and education. Someone told me the other day to "Take health away from the hands of the accountants and put it in the hands of the people." It is not that we need accountants less but that we need accountability more! There should be greater reconciliation and harmonization of Agency mandates. Rapid response to country needs is one of the secrets of success and dependency on local or regional expertise wherever feasible is conducive to progress.

### Conclusion

As I come to the end of this presentation, a kaleidoscope of images impinges on my mind. The post-ICN follow-up approach is to view the problem of nutrition in a holistic, interdisciplinary, and intersectoral manner. It conceives nutrition as a means, a measure, a fruit of development, and as part of an ethic in which people and communities hold the master key. A dominant image is a shift from central to provincial and district levels. Increased access to and control of resources by women is another dominant image and is also the biological and psychosocial needs of adolescents. Yet another image is that chronic endemic food insecurity, uncontrolled population growth, degradation of the environment, rapid unplanned urbanization, and inequities are critical determinants of malnutrition to be addressed. The nutritional status of a population is

an exquisite indicator of overall development, and nutrition monitoring and surveillance and a systematic flow of information are essential prerequisites for disaster preparedness, for targeting vulnerable groups, and for longer-term policy and program development. Our policies must reflect the growing ethic of lifestyle change and personal responsibility for health. More effective use must be made of research guiding policy and action and for finding solutions to unresolved problems.

The link between scientific evidence, popular concern, and political response is sought to be strengthened by the ICN process. Despite the prevailing conflicts, much destruction, and death, there is a conducive new international environment. There is renewed faith in the UN system. The search for hope is urgent and promising in a world less divided.

I am grateful to the authorities of the XV International Congress on Nutrition in Adelaide for permission to publish this presentation.

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## A Tragedy Unfolding: Tribal Children Dying in Attappady

Vol - XLIX No. 2, January 11, 2014 | Manikandan A.D

*The continuing deaths of infants and children due to malnutrition in Attappady, the only tribal block in Kerala, reflects the state government's apathy towards addressing issues germane to the tribals residing in the region.*

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### Introduction

Malnutrition deaths of infants/children are highly prevalent in India. The country accounts for 29 % (3.09 lakh) of all first-day deaths globally (Singh: 2013). The extent and severity of malnutrition deaths of infants/children, however, differs among various social groups and states. For instance, malnutrition deaths are highly prevalent among socially marginalised groups such as tribals, fisherfolk and dalits, and rampant in socio-economically backward states such as Bihar, Jharkhand, Madhya Pradesh, Rajasthan and Uttar Pradesh (Khera: 2008). But it is shocking to see in Kerala – a state with superb achievements in human development, people's planning, governance, and women's literacy – an alarming rate of malnutrition deaths of tribal infants/children. The UNICEF Report (2013) observed that a total of 39 deaths had been reported from Attappady tribal block in Palakkad district between April 2012 and May 2013. Major causes included asphyxia, *acute respiratory distress syndrome*, aspiration, apnoea, preterm and low birth weight, development growth delay, and intrauterine growth retardation (IUGR). C D Rozario (2013) noted that 36 children had died in the past 16 months (from January 2012 to April 2013) as compared to 25 and 32 starvation deaths in 1996 and 1999 respectively.[1] *The Times of India* (2013) came up with the more shocking estimate of "58 malnutrition deaths in the past 20 months" in Attappady tribal block. The Ekbal Committee Report (2013) said that in 2013 about 30 children died within a few hours/days of their birth. A team of experts from the National Institute of Nutrition (2013) visited Attappady tribal block for studying infants or children deaths and reported that the infant mortality rate (IMR) there was 66 as compared to 14.1 deaths per 1000 live births in the rest of the state.[2]



In light of these facts some pertinent questions need to be addressed. Why is the infant/ children mortality rate very high among the tribal groups in Kerala? Why is the government unable to stop this phenomenon even after implementing so many social security/welfare schemes and laws, including the Forest Right Act, Restriction of Transfer of Land and Restoration of Alienated Land Act?

### **Incidence and Intensity of Health and Nutritional Problems in Attappady**

Attappady tribal block, established in 1962, is located in Palakkad district of Kerala, east of the Silent Valley in the Western Ghats, one of the world's most famous biodiversity hotspots. In 1901, this region was mostly forested and inhabited exclusively by hills tribes. Forest coverage which was 82% in 1959, came down to 19.7 % in 1996. The share of tribal population came down to 40.9% in 2001 from 90% in 1951. The share of scheduled caste (SC) population among the total population was 4% while that of general category was 55%. According to 2001 figures, a total of 66,171 persons reside in Attappady, of which 27,121 persons are tribals (40.9). Out of 27,121 tribals, 20,883 persons (77%) belong to the Irula group (non-primitive), 3,487 persons (13%) belong to Muduga group (non-primitive) and 2,755 persons (10%) belong to Kurumba group (primitive). There are 189 tribal hamlets with a total of 8,585 tribal households. As per a study, 83% of the tribal population was poor in 1997 (Institute for Societal Advancement 2006). According to the Kerala Institute of Local Administration (KILA) (2008), there are 8,589 tribal households in Attappady block, of which 6,180 tribal households have ration cards; out of these 25.34% of households hold APL (Above Poverty Line) ration cards, and rest of them hold BPL (Below Poverty Line) ration cards. What is more shocking is that around 2,400 tribal households do not even have ration cards. The literacy rates of tribal males and females is 64% and 56% respectively (KILA 2008) while male and female literacy rates in the rest of Kerala stand at 96% and 92% respectively (Census 2011).

Kerala, a state with a robust performance in the health sector, received a jolt from a report of the Comptroller and Auditor General (CAG) of India, which stated that as per the World Health Organisation (WHO) growth standard the percentage of malnourished and severely malnourished children in Kerala as on March 2011 stood at 36.9% and 0.8% respectively (The Hindu: 2013). This is not surprising because the situation of malnutrition and related health problems is

abmysal among socially vulnerable groups in the state of Kerala. For instance, the incidence and intensity of malnourishment and health problems are high among tribal groups, fisherfolk and the like in Kerala. C D Rozario (2013) has observed that among adivasi children of 12 months or less, 9.1% are severely underweight, 32.2% suffer from severe stunting and 7% suffer from severe wasting. At the same time, it was found that 54% of children from the fisherfolk community below the age of 6 were malnourished.[3]

The status of nutrition of tribal children is appalling in Attappady tribal block in the Palakkad district of Kerala. One of the first tribal blocks to be established in India, Attappady is one of the most backward blocks in Kerala. Tribal groups are suffering from extreme starvation and malnourishment even after 50 years of its formation. A study by Kerala Institute of Local Administration (KILA) (2008) reveals that 48% of the total tribal households are poor. Kerala has received another pertinent jolt from the CAG after a report prepared by the National Institute of Nutrition showed that the overall prevalence of underweight, stunting and wasting among the children attending a health camp at Tribal Specialty Hospital at Kottathara in Attappady tribal block was very high –78.6%, 77.8%, and 53% respectively. The overall prevalence of anaemia was 85% among women, with 56% having mild anaemia, 28% moderate anaemia and 1% severe anaemia.

A recent survey conducted by Thampu, a non-governmental organisation (NGO) dealing with tribal rights, found that out of the 300 tribals affected by malnutrition 200 were children. K.Venugopal, the district medical officer, said that 412 cases of anaemia and 67 cases of malnutrition had been noticed by the health department (The Hindu: 2013). The Integrated Tribal Development Programme conducted a survey between 11 April 2013 and 19 April 2013 in Attappady, covering 7,565 households and a population of 23,599, and found that the number of tribal people with anaemia/malnutrition was 463/69, the number of children aged below five with anaemia/ malnutrition was 68/57 and lactating mothers with anaemia and malnutrition was 62/ 0 (The Hindu: 2013). The UNICEF Report (2013) observed that weight of the mothers at delivery ranged between 39 and 45 kgs. The Ekbal Committee (2013) said that most women had undergone abortion more than once and almost all children examined suffered from anaemia and malnutrition. Difference between the nutritional status of Kerala's general rural populace and

that of Attappady could be as high as 50% (Suchitra: 2013). Considering these dismal statistics, Attappady can be called Kerala's "sub-Saharan Africa".[4]

#### **Causes of Malnutrition Deaths**

The death toll of infants due to malnutrition and related health problems has risen between January and December 2013 (The Hindu: 2013). The newspapers have come up with shocking estimates of infant deaths in Attappady. According to *The Hindu*, 52 infant deaths were reported from Attappady in the past 17 months (3 July 2013). *The Times of India* said that as many as 58 malnutrition deaths were reported in the tribal hamlets in the past 20 months (27 September 2013).

A survey of literature on malnutrition and related health problems in Attappady points towards several reasons for extreme poverty and malnutrition deaths in the region. The most pertinent among them are as follows[5]: land alienation of the tribals; loss of traditional shifting cultivation; loss of traditional food items such as *ragi*, *chama*, *cholam*, *veraku*, *thina*, *thuvava*, honey, tubes, roots, medicinal vegetables, etc.; neglect of the tribal people and inaction by the departments of Tribal and Social Welfare and Health; failure of public distribution system; poor performance of Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS); contrary to the practices in other places, the anganwadis do not distribute eggs, milk, and bananas among tribal children; lack of essential drug supplies such as Mesoprestol and Magsulf for delivery and childbirth related medical emergencies; disempowerment of the adivasi communities; failure of Attappady Hill Area Development Society (AHADS), a Japanese funded project, which works towards ensuring a sustainable livelihood and ecology; and institutional delays and inefficiency in implementing the laws, schemes and projects meant for tribal groups in Attappady.

#### **Conclusions**

It is well understood that malnutrition and related health problems are some of the most important issues facing the country. Socially marginalised groups, women and children in particular, in many states are the worst victims of this problem. It is shocking to note that Kerala – a state with the remarkable achievements in human, and social (health) indicators – has excluded the tribal groups from its so-called achievements[6]. It shows that development in

human and social (health) sectors is as not inclusive as claimed by the state. For instance, more than 60 tribal infant/children died due to the combined impacts of loss of indigenous food items, poor public distribution system, unavailability of alternate nutritious food and the loss of employment opportunities, which led to widespread starvation along with high malnutrition and related health problems (Ekbal Committee: 2013) in the past 24 months in Attappady, the only tribal block in the state of Kerala.

In order to increase livelihood opportunities and ensure health of tribal groups in Attappady, the following suggestions may be useful. Right to common property resources or right to commons needs to be implemented keeping in mind that many indigenous/traditional communities have depended upon the common property resources for centuries or even millennia. This right should meet long-term livelihood and health security of the tribal groups in India. Right to health needs to be enacted. A Special Land Distribution Act for Attappady needs to be implemented since the tribal groups have lost more than 10,000 acres of land (The Hindu 2013, Ekbal Committee: 2013, Rozario: 2013). Deployment of a Central Development Force (CDF), a special police wing to capture or arrest those who are not the implementing schemes/programmes meant for socially weaker sections should be considered seriously. A culturally sensitive approach to the implementation of MGNREGS should be looked into. This essentially means that the chief *ormooppan* of each tribal hamlet should be granted powers to plan, execute, monitor and evaluate the rural employment guarantee scheme in tribal areas/ belts. Formation of tribal sabhas or hamlet sabhas and tribal self-help groups should be encouraged. Engineering, medical and higher education institutions with special provisions for tribal students should be opened in the area. Investment in the transportation sector should be enhanced to improve the accessibility and connectivity of tribal groups. The quality and quantity of health services provided by both public and private sector in Attappady should be upgraded.[7]

#### Notes

[1] Attappady had experienced starvation deaths among tribal groups in the past, but its intensity was relatively low (Rozario 2013: 16).

[2] Recent estimate shows that Kerala's infant mortality rate is 12/ 1000 live births (The Hindu, 28 Dec. 2013: 9); Bakshi (2010).

[3] RIGHTS, in their submission, have referred to the above survey conducted by National Nutrition Monitoring Bureau (NNMB) on children from Adivasi communities up to the age of 12 months. Theeradesha Samrakshna Samithi has made a submission referring to its survey in Alappad Panchayat, a marine fisher Grama panchayath in Alappuzha district, which has 8 fishing villages and found that more than 50% of the children there are malnourished.

[4] See Manikandan (2013a).

[5] See for more details The UNICEF Report (2013), National Institute of Nutrition Report (2013), Dr. B. Ekbal Committee Report (2013), Rozario (2013), the newspapers such as The Hindu, The Times of India, Deepika and Deshabhimani.

[6] See for more details Soman and Rajasree (1994), Kerala Calling (2005), Kerala Human Development Report (2005), Shivakumar (2010), Bakshi (2010) Raman (2010), Vasanth (2013), Ittyipe (2013), and Ekbal (2013a,b).

[7] See for more details the UNICEF Report (2013) and Suchitra (2013)