MAHATMA GANDHI INSTITUTE OF MEDICAL SCIENCES, SEVAGRAM

BEST PRACTICES AT MGIMS SEVAGRAM

1. **Title of the Practice: <u>LOW-COST DRUG INITIATIVE</u>**

OBJECTIVES OF THE PRACTICE
The aim of the low-cost drug initiative at MGIMS is to provide appropriate and affordable drugs to our patients.

THE CONTEXT
There are huge differences between the costs of drugs available in the market depending on their brand. The costs of drugs in the market are unreasonably high. Atorvastatin, a cholesterol reducing medication, for instance, sells at the market for Rs 78 per 10 tablets (MRP price printed
on the brand-named leader). Similarly, Piperacillin Tazobactam, an antibiotic that doctors choose to treat their seriously ill patients with sepsis costs Rs 450. The market, obviously, keeps the drug for which they getting the highest commission. This results in unaffordability of drugs by poor patients which may in turn force them to opt out of taking the drugs altogether.

THE PRACTICE
This initiative to reduce the cost of drugs to the patient was made possible by first minimizing the 'supply chain effect' and then by overcoming the 'marketing effect'. We did this by using a multi-pronged strategy. We involved healthcare workers in making a list of essential drugs and surgical items and deleted from the list as many "me too" and irrational drugs as was feasible in our setting. We procured drugs at substantially cheap prices by inviting competitive quotations from drug distributors and used the electronic hospital information system to buy, stock and dispense drugs
and surgical items. We made doctors and public aware of the benefits of the initiative and banned all drug representatives from showcasing their products in the hospital. We encourage our residents to prescribe drugs by their generic names.
Two 24 x 7 pharmacies are opened in the hospital premises to ensure that our registered inpatients and outpatients can access these drugs

at affordable prices. We introduced computerized prescriber order entry (CPOE) to prescribe drugs. We also created e-prescriptions on the iPad app, specially designed for this purpose. The electronic applications help doctors identify drugs by both their generic names, check for their availability in the drug store and display their prices- thus minimizing prescription errors and improving the quality of evidence-based therapies.

EVIDENCE OF SUCCESS

Patients with catastrophic illnesses as well as those with chronic diseases have found significant difference in the cost of medications, they buy at MGIMS compared to the market pharmacies.

The low-cost drug initiative has substantially reduced the cost of medical treatment at Kasturba hospital, both in outpatient and inpatient setting.

- Atorvastatin, a cholesterol reducing medication, for instance, sells at the medical store for Rs 7.60 per 10 tablets instead of Rs 78, MRP price printed on the brand-named leader.

- Similarly, Piperacillin Tazobactam, an antibiotic that doctors choose to treat their seriously ill patients with sepsis costs Rs 132 as against the market price of Rs 450.

- Ceftriaxone 1 g injection used to treat infections is available in the medical store for Rs 19.20 compared to Rs 48 that popular brands command.

- Patients with coronary heart disease, high-cholesterol levels, high-blood pressure and diabetes can have these four disorders treated with five evidence-based drugs (aspirin 75 mg, atorvastatin 10 mg, enalapril 5 mg, amlodipine 5 mg and metformin 1 g) for Rs 145 per month- less than Rs 5 per day.

During the year 2015, a total of 5,73,295 patients have been benefitted by this low-cost drug initiative. We believe that this initiative has reduced the out of pocket expenditure on drugs and has reduced the healthcare costs.

PROBLEMS ENCOUNTERED AND RESOURCES REQUIRED

The biggest challenge to make this initiative work was to stop the interaction between doctors and medical sales representatives that was harming our patients' economic health. Some doctors clearly felt uncomfortable. However, we actively taught our residents and interns that cheaper brands were available and displayed them in our outpatient clinics and in our wards. Eventually residents developed conditioned reflexes, strong enough to drive away expensive brands from our hospital.

We needed good leadership, an efficient hospital information system and electronic innovations to start this good practice.

MAHATMA GANDHI INSTITUTE OF MEDICAL SCIENCES, SEVAGRAM

BEST PRACTICES AT MGIMS SEVAGRAM

AARAMBH: An India-specific model for nurturing care interventions for every child

1. **Title of the Practice**
   <u>Aarambh</u>: an India-specific model for nurturing care interventions for every child

2. **Objectives of the Practice**
   The initiative has been started with the following objectives:
   - To develop a model for delivery of nurturing care interventions to ensure adequate growth and development for every child utilizing existing opportunity available within ICDS, health and other sectors within India
   - To develop partnership with health sector, ICDS and other sectors within India for development of cost-effective model for promotion of early childhood development.

   This initiative is being utilized for medical education for the following purposes:
   - To develop a setting for students to learn delivery of nurturing care intervention for all children
   - To design a setting where the students learn innovations in in-service training of frontline workers, behavior change communication, monitoring, supportive supervision, community participation and other aspects of implementation of a program at block, district and state level
   - To design a setting where the students may conduct research related to early childhood development, implementation science, participatory processes etc.

3. **The Context**
   Millions of young children in India may fail to reach their full potential leading to poor academic success and low employability due to inadequate nutrition, exposure to stress, and limited early learning activities. The WHO/UNICEF nurturing care framework provides a roadmap for action, focusing specifically on the period from conception to year 3. It emphasizes the need to invest in capacity building and empowerment of service providers, families and communities for early childhood development to create a conducive environment for child development.

Mahatma Gandhi Institute of Medical Sciences, Sevagram in partnership with WHO (2010-14) and UNICEF (2017 – 2021 (continued)) has been involved in the development, piloting and scale-up activities for nurturing care interventions for early childhood development. 'Aarambh' (meaning 'the beginning'), a model for empowering parents and primary caregivers developed under this initiative utilizes existing opportunities within Integrated Child Development Services (ICDS), the health sector and other service delivery channels. The initial pilot was implemented in a population of approximately 100,000 in Wardha district of Maharashtra state in India. The learnings from the pilot were utilized to initiate the 'Aarambh' (the Beginning) project in partnership with UNICEF and was implemented in 10 ICDS projects (around 1200,000 population) in two districts of Maharashtra during 2018-20. Based on the cumulative experience and benefits in child growth and development, the Department of Women and Child Development (DWCD), and the health department, Government of Maharashtra respectively in Jan 2021 and Dec 2021 decided to further scale-up the Aarambh model across all districts of the state with government resources.

4. The Practice
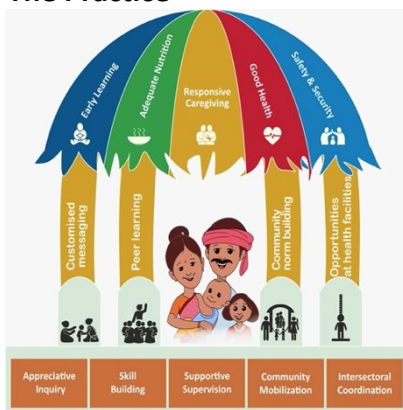
Aarambh utilizes existing human resources and opportunities within the ICDS and health department, such as AWWs, ASHAs and ANMs and their contact points with parents, other caregivers and communities (e.g., home visits, mothers' meetings, growth monitoring, monthly early childhood care and education (ECCE) days, village health and nutrition days (VHNDs), community group meetings and opportunities available through health facilities) to promote responsive caregiving and early learning activities.

The package includes a cascade model of training where the supervisors of frontline workers (ICDS supervisors along with Block Community Mobilizer and ASHA facilitators) act as trainers for the frontline workers. A team of 12-20 master trainers combined from ICDS and health will be created in each district of Maharashtra in a 3-cycle training (5-4-3 days). These master trainers will train all Anganwadi supervisors, Block Community Mobilizers, and ASHA facilitators; who in turn will provide training to all frontline workers (ASHA and AWWs) using an incremental learning approach (ILA). The critical elements of the training designed for Aarambh included - establishing supervisors as trainers, joint training for ICDS and health sector, playful nature of the training, and demonstration of all approaches. Apart from a framework of training for the frontline workers, the model will also utilize opportunities available through health facilities at different levels.

5. Evidence of Success

We witnessed improvement in the nutritional and developmental outcomes of children in the implementation area. The proportion of children with underweight, stunting and wasting declined from 39.1%, 42.8% and 17.4% in Nov-Dec 2018, to 32.5%, 41.0% and 12.4% respectively conducted in Nov-Dec 2019. During the same period, the mean development quotient (measured by Development Screening Test) and the mean social quotient (measured using an Indian adaptation of the Vineland Social Maturity Scale) among children 24-36 months increased respectively from 107 (±36 SD) to 137 (±26 SD) [p-value = <0.0001] and from 152 (±47 SD) to 162 (±54 SD) [p-value = <0.027].

An analysis of reasons for the ownership by ICDS and the health sector suggests that participatory processes, an appreciative environment, as well as space for innovation available within these approaches hugely contributed to this. The core principle of 'Appreciative Inquiry' adopted in this initiative helped create an environment of appreciation and gave a sense of responsibility and accountability at each level in the system so that they derive pleasure and feel excited while delivering the interventions. Due to the aspirational nature of the concept that nurturing care is critical for brain development, families and communities not only highly value it, but are also ready to further innovate. The pleasurable nature of play and communication activities makes this the best entry point for all social and behavior change communication messages related to child health.

6. Problems Encountered and Resources Required

Problems encountered

Some of the challenges encountered during the pilot phase of the program in two districts included:

- COVID pandemic posed a huge challenge for implementation of the core interventions, e.g. parents' meetings and parents' fair at village level.
- Vacant positions of supervisors and mid-level managers
- Challenges of supportive supervision
- Periodic campaigns; e.g. Pulse Polio interrupt schedules
- Multiple training programs being rolled over together
- No provision for travelling allowance for ASHAs if an additional day of training is required
- Centralised MIS with no flexibility for adding indicators for an innovative program

Resources required

The program is being implemented utilizing resources available through different government departments. However, a team of project staff is being maintained at Mahatma Gandhi Institute of Medical Sciences, Sevagram through UNICEF support.

7. Notes

We acknowledge the support provided under various projects from UNICEF, WHO. These supports were critical in developing the model of nurturing care interventions and taking it from pilot phase to scale-up.

For more details, refer to the article published in Indian Pediatrics:
Gupta SS, Raut AV, Kothekar P, Maliye CH, Kalantri A, Bahulekar PV, Anshu, Garg BS. Nurturing Care Interventions for Realizing the Development Potential of Every Child: From Pilot to Scale Up in Maharashtra. Indian Pediatrics. 2021 Oct;58(1):46-52.