

# STATUS OF MATERNAL, INFANT, AND YOUNG CHILD NUTRITION (MIYCN) IN MEDICAL COLLEGES & HOSPITALS

## KEY FINDINGS BASELINE ASSESSMENT – 2017 UTTAR PRADESH & BIHAR



## Introduction

Despite a favorable policy environment for maternal, infant, and young child nutrition (MIYCN), frontline delivery of critical MIYCN interventions has been a sustained challenge in India's public health nutrition programs.

Among the diverse group of stakeholders, medical colleges and hospitals<sup>1</sup> are strategically placed in the health care delivery system to lead the policy and program advocacy agenda for the 1,000 days (conception until the child is two years of age). Through their academic, research, and public health linkages, these institutions can play a significant role in influencing the MIYCN content of medical college curricula and creating future generations of well-trained practitioners. They can also aid in generating evidence to inform policy decisions, developing best practice models, and supporting public health and nutrition systems through capacity building, quality assurance, and monitoring.

Alive & Thrive (A&T) is a global initiative that aims to save lives, prevent illness, and ensure healthy growth by promoting optimal MIYCN. In India, A&T provides high quality and strategic technical assistance at the national and state levels to accelerate effective coverage of key MIYCN interventions at scale, facilitate system change, and maximize impact for beneficiaries. As a knowledge and technical assistance partner<sup>2</sup> to the Bill & Melinda Gates Foundation, A&T works to strengthen MIYCN practices in Uttar Pradesh (UP) and Bihar by supporting the development of an evidence-based model for effective integration of MIYCN into the curricula of medical colleges, and the promotion of a greater role for medical colleges in supporting health systems in the delivery of MIYCN programs

A&T and the Deepak Foundation conducted a baseline assessment as part of the evaluation strategy in eight selected medical colleges in Uttar Pradesh and Bihar. The study objectives were to:

- assess changes in the degree to which MIYCN is addressed in the pre-service curricula of medical colleges, including the attached nursing colleges.
- assess changes in the degree to which MIYCN interventions are included in the routine delivery of services offered by the departments of Obstetrics and Gynecology, Pediatrics, and Preventive and Social Medicine.
- understand how medical colleges contribute to research, planning, implementation, and monitoring of MIYCN programs.

## Baseline assessment

The goal of the baseline assessment was to understand the status of the MIYCN in the curricula of medical colleges and teaching hospitals, as well as the current engagement of medical colleges in supporting state health systems in the effective planning and implementation of public health nutrition programs. Key assessment areas were:

- Knowledge of MIYCN amongst undergraduate, post-graduate medical, and nursing staff and students.
- Systems/processes in place to improve the knowledge and practices of the medical undergraduate students on MIYCN.
- Systems/processes in place for inclusion and strengthening of MIYCN interventions in the routine delivery of services.
- Contribution of medical colleges in planning, implementing, monitoring, and evaluating public health nutrition programs and their research activities in MIYCN.

## Study methodology

A quantitative cross-sectional baseline survey with a pre-post study design was conducted in eight medical college and hospitals (and their attached nursing colleges); 4 each in the states of Bihar and UP. The study involved in-depth interviews with respondents from pre-identified categories;

- heads of department and teaching faculty from the Obstetrics and Gynecology, Pediatrics and Preventive and Social Medicine departments of the medical college;
- undergraduate and post graduate medical students;
- undergraduate nursing students;
- nursing staff from the Obstetrics and Gynecology and pediatrics out patient department and
- family planning counselors.

### Categories of beneficiaries included:

- pregnant women visiting the antenatal care OPD;
- recently delivered women who were admitted in the Postnatal Care ward; and
- mother with children 0-2 months, 0-6 months and 7-12 months who visited the immunization/pediatrics OPD.

*The sample size was calculated to detect a 15-percentage point increase in indicator “% new-born receiving breastfeeding within an hour (early initiation of breastfeeding (EIBF) in normal births and cesarean (C-section) births” in proportion between baseline and end line, with 80 percent power, an alpha or (0.05) and beta (0.2) thus 187 was estimated (including 10% for probable dropouts after data collection) for each of the categories.*



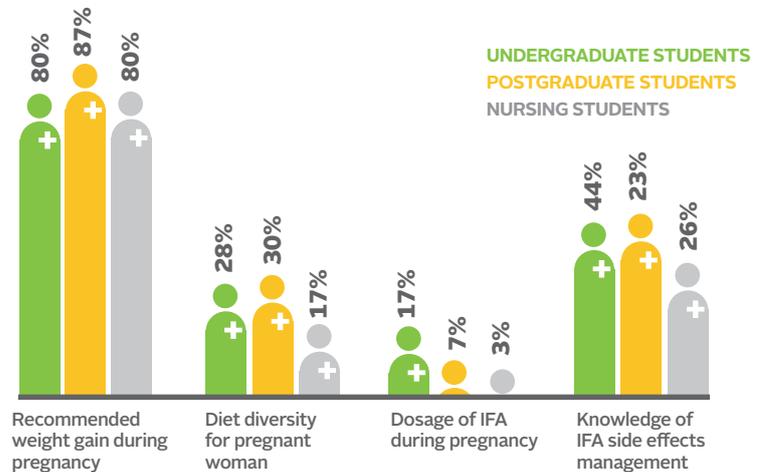
Image: Velocity Creative

# Key findings

## SECTION 1: MIYCN KNOWLEDGE & PRACTICAL EXPOSURE OF UNDERGRADUATE, AND POST-GRADUATE MEDICAL AND NURSING STUDENTS

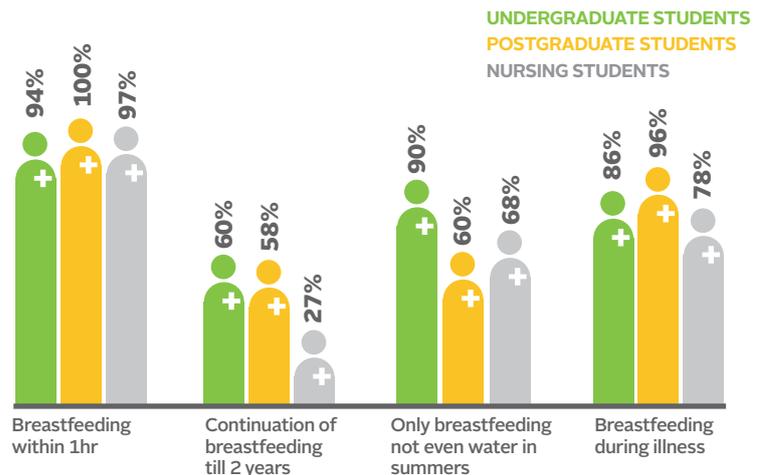
**GRAPH 1**  
MATERNAL NUTRITION

- ▶ Knowledge was inadequate amongst students, especially knowledge on dosage of iron-folic acid (IFA) tablets and diet diversity of pregnant women.



**GRAPH 2**  
BREASTFEEDING

- ▶ Most students were aware of early and exclusive breastfeeding.
- ▶ High rate of knowledge of breastfeeding during illness for 0-6 months old infants.
- ▶ Rate of knowledge of continuation of breastfeeding was average amongst medical students, yet only 27% for nursing students.



### PERCEPTIONS OF DEPARTMENT HEADS AND TEACHING FACULTY ON INTEGRATION OF MIYCN INTO THE MEDICAL COLLEGE CURRICULUM



**49%** felt that infant and young child feeding (IYCF) was adequately covered

**40%** felt that maternal nutrition was adequately covered

**53%** had taken a class on maternal nutrition for undergraduate students in past 1 year

**59%** had taken a class on IYCF

### PRACTICAL EXPOSURE OF STUDENTS TO MIYCN SERVICES & COUNSELING

**53%** of medical and **59%** of nursing students observed or provided key information to pregnant mothers on maternal nutrition.



**79%** of medical and **93%** of nursing students observed or provided information to mothers on early initiation of breastfeeding

## SECTION 2: MIYCN KNOWLEDGE OF NURSING STAFF

### OBGY DEPARTMENT NURSING STAFF WHO HAD KNOWLEDGE OF MIYCN PRACTICES

16%

dose of iron-folic acid (IFA) tablets

34%

rate of weight gain during pregnancy

19%

management of side effects of IFA tablets

30%

minimum diet diversity for pregnant women

12%

dosage of calcium supplements during pregnancy

► Knowledge amongst nursing staff from the OBGY department on maternal nutrition indicators was low overall and awareness about IFA and calcium supplementation was below 20%. Knowledge on recommended weight gain and minimum diet diversity during pregnancy was below 40% amongst the nursing staff.

► Knowledge about early initiation of breastfeeding amongst the nursing staff from the paediatrics department was high (98%), yet only 41% had the knowledge about correct breastfeeding positioning and latch.

### PAEDIATRICS DEPARTMENT NURSING STAFF WHO HAD KNOWLEDGE OF BREASTFEEDING PRACTICES

38%

babies <2.5 Kg need to be provided with Kangaroo Mother Care (KMC)

76%

exclusive breastfeeding for 6 months (no water in summers)

98%

early initiation of breastfeeding in case of a normal delivery

41%

correct breastfeeding positioning and infant latch



**ONLY 18% OF NURSING STAFF**

HAD CORRECT KNOWLEDGE ABOUT COMPLEMENTARY FEEDING PRACTICES FOR AN 8-MONTH OLD INFANT.

## SECTION 3: MIYCN SERVICES PROVIDED AND RECEIVED

### SERVICES AND COUNSELLING PROVIDED/RECEIVED ON MATERNAL NUTRITION DURING ANTENATAL CARE (ANC)/OUTPATIENT DEPARTMENT (OPD) VISITS

71%

of post-graduate students reported assessing nutritional status/ dietary practices of pregnant women

20%

of pregnant women reported receiving counselling on importance of iron-folic acid and side effect management



15%

of post-graduate students reported assessing counselling on maternal diet diversity and early initiation of breastfeeding (EIBF)

21%

of pregnant women reported receiving counselling on diet diversity

14%

of nursing staff reported providing advice on maternal diet diversity and EIBF

53%

of teaching faculty provided advice/ counseling on maternal nutrition in ANC OPD



**MINIMAL COUNSELLING**

PROVIDED ON MATERNAL DIET DIVERSITY & EIBF BY POST GRADUATE STUDENTS AND NURSING STAFF

**ONLY 46% AND 37%**

OF PREGNANT WOMEN RECEIVED IFA AND CA TABLETS RESPECTIVELY



**ONLY 1%**

OF PREGNANT WOMEN REPORTED RECEIVING COUNSELLING ON PREPARING FOR BREASTFEEDING.

## SERVICES AND COUNSELLING PROVIDED/RECEIVED AFTER DELIVERY

**73%**

of post-graduate students reported routinely facilitating immediate skin to skin contact of mother and infant

**79%**

of recently delivered women reported being assisted to put baby to breast immediately after delivery

**65%**

of nursing staff reported providing skin to skin contact of mother and infant immediately after delivery

**41%**

of recently delivered women reported breastfeeding within one hour of delivery



**ONLY 41%**  
WOMEN REPORTED  
BREASTFEEDING  
WITHIN ONE HOUR  
OF DELIVERY

## SERVICES/COUNSELLING PROVIDED/RECEIVED ON BREASTFEEDING AT POSTNATAL CARE WARD

**43%**

Teaching Faculty reported providing any breastfeeding counselling

**66%**

of post-graduate students reported counselling on exclusive breast feeding, including proper positioning and latch



**ONLY 26%** OF NURSING  
STAFF IN OBSTETRICS  
& GYNECOLOGY  
DEMONSTRATED  
CORRECT BREASTFEEDING  
POSITIONING

**42%**

Teaching Faculty provided women information on breastfeeding during discharge of new born baby after delivery

**61%**

of recently delivered women reported being assisted with breastfeeding their babies



**ONLY 40%** OF POST-  
GRADUATE STUDENTS  
AND **24%** OF NURSING  
STAFF PROVIDED  
COUNSELLING ON  
MATERNAL NUTRITION  
AND EXCLUSIVE  
BREASTFEEDING AT  
DISCHARGE.

## SERVICES RECEIVED/PROVIDED IN THE IMMUNIZATION/PAEDIATRIC OUTPATIENT DEPARTMENTS

**73%**

of post-graduate of medical students reported assessing for sick infants during Immunization OPD visits

**70%**

of paediatric nursing staff reported breastfeeding counselling is part of their advice at immunization OPD visits



**ONLY 42%**  
OF MOTHERS WITH 0-6  
- MONTH - OLD INFANTS  
WERE COUNSELLED  
FOR EXCLUSIVE  
BREASTFEEDING.

**70%**

of post-graduate medical students reported assessing infants during immunization OPD visits

**11%**

Mothers with 0-6 month-old infants reported receiving a prescription for formula milk



**19%** OF MOTHERS  
RECEIVED COUNSELING  
FOR BREASTFEEDING  
DURING ILLNESS.

**76%**

of paediatric nursing staff reported complementary feeding counseling is part of their advice at immunization visits

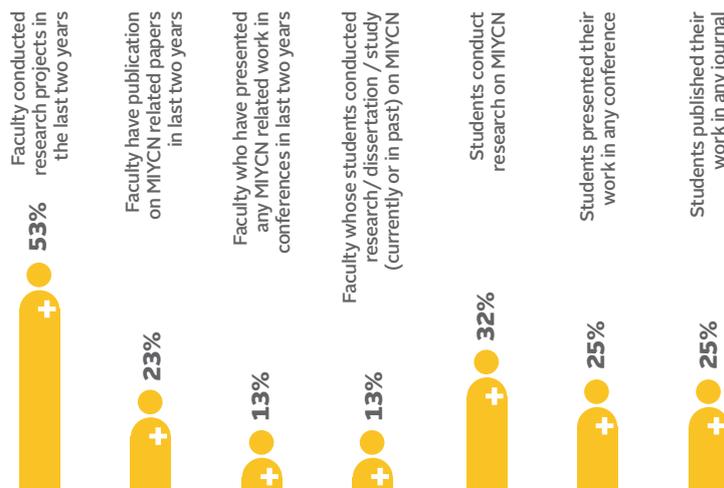
**36%**

Teaching faculty provided advice/ counselling to mothers on breastfeeding and 34.9% provided advice/ counselling to mother /care givers on complementary feeding during their visit to the Paediatrics OPD.

## SECTION 4: MIYCN-RELATED RESEARCH CAPACITIES AND SUPPORT TO STATE HEALTH SYSTEMS

**GRAPH 3  
RESEARCH, PUBLICATION, AND  
DISSEMINATION ON MIYCN**

- ▶ Research on MIYCN remains a neglected area
- ▶ Only 23% of surveyed teaching faculty published any paper on MIYCN topics in the last two years and only 25% of the post-graduate students presented their research at conferences or published it in journals



### ONLY 22% OF THE DEPARTMENT HEADS AND TEACHING FACULTY

SERVE ON EXPERT GROUP/  
COMMITTEES ON HEALTH AND  
NUTRITION PROGRAMS



### IN THE LAST TWO YEARS, 53% OF DEPARTMENT HEADS AND TEACHING FACULTY

CONDUCTED TRAINING FOR  
HEALTH CARE PROVIDERS  
FROM HEALTH SYSTEMS AND  
**ONLY 9% FOR**  
INTEGRATED CHILD  
DEVELOPMENT SERVICES  
(ICDS) PROVIDERS.



### 33% OF TEACHING FACULTY

ARE INVOLVED IN MONITORING/  
SUPERVISION OF EITHER HEALTH OR  
INTEGRATED CHILD DEVELOPMENT  
SCHEME (ICDS) PROGRAMS



Image: Velocity Creative

# Emerging Issues

## **Prioritization of MIYCN in undergraduate curricula especially maternal nutrition is required.**

- ▲ Maternal nutrition requires prioritized attention in the undergraduate curricula. Less than half of the faculty in medical colleges felt that that maternal nutrition topics were adequately covered in curriculum.
- ▲ Knowledge among both medical and nursing students pertaining to maternal nutrition interventions like IFA and calcium supplements and diet counselling is inadequate, while almost all the students and nursing staff have knowledge on early and exclusive breast feeding.

## **Effective integration of maternal nutrition services & counselling in service delivery is essential.**

- ▲ Knowledge among nursing staff pertaining to maternal nutrition interventions like IFA and calcium supplements and diet counselling is suboptimal.
- ▲ Provision of IFA (46%) and calcium supplements (37%) to pregnant women remains below desired levels.
- ▲ Antenatal care (ANC) services do not adequately focus on maternal diet counselling, with only 1 in 5 pregnant women receiving counselling on IFA and diet.
- ▲ Discharge practices of post-graduates and nurses do not emphasize counselling on the diet of lactating mothers.

## **Improving optimal IYCF service delivery is critical by translating existing knowledge into practice.**

- ▲ Despite awareness of the recommendations for early initiation of breastfeeding among students and doctors/nurses, only 2 out of 5 women reported initiation of breastfeeding within one hour of delivery.
- ▲ Antenatal care services hardly address breastfeeding preparedness.
- ▲ Discharge practices of post-graduates and nurses do not emphasize counselling on exclusive breastfeeding.
- ▲ A gap in service delivery and counselling on exclusive breastfeeding and feeding during illness for mothers with infants below 6 months of age, and complementary feeding practices pertaining to quantity and frequency of meals and diet diversity was noted at immunization and pediatric OPD visits.
- ▲ Knowledge on complementary feeding practices is also below desired levels among nursing staff.
- ▲ Awareness of the India Infant Milk Substitutes (IMS) Act provisions remains suboptimal, with less than half of the students being aware of it.

## **Operational research on relevant MIYCN topics is needed to inform program decisions.**

- ▲ Less than 25% of faculty have published any papers on MIYCN topics in the last two years.

## **An increasing role of medical colleges in supporting the public health system and nutrition service delivery is highly relevant for improving quality and ensuring robust monitoring and review processes for public health nutrition programs.**

- ▲ There is considerable potential to expand the role of medical college faculty as expert committee members and to support state health and ICDS systems strengthening (planning, supportive supervision and monitoring, quality assurance, and evaluation).
- ▲ Their expertise is currently utilized for capacity building of health providers. The ICDS system can benefit immensely from engaging /optimizing the expertise from medical colleges.

## References

1. As per the Medical Council of India, a 300-bed on campus hospital is a pre-requisite for setting up a medical college. All government medical colleges in India are attached to government and civic hospitals. For the purpose of this brief the term 'medical college' denotes medical college and hospital facility
2. A&T's role as a knowledge partner is to facilitate knowledge sharing (i.e. a convening role), generate knowledge, synthesize scientific and program evidence for advocacy, and provide technical assistance to drive the development of evidence-based policy and program design and implementation.



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For further information visit [www.aliveandthrive.org](http://www.aliveandthrive.org).