Objective: The study aimed to evaluate, in programmatic settings, the impact of a yearlong capacity building, of Integrated Child Development Services (ICDS) frontline workers, on Infant and Young Child Feeding (IYCF) practices and Growth Monitoring and Promotion (GMP), on the status of under twos IYCF practices. Methods: Two ICDS sectors having total 17 and 19 community based Anganwadi centers (AWCs), from tribal dominated region, were selected as intervention and control respectively. The IYCF practices were assessed using WHO 2008, 8 core and 7 optional, indicators. The pre and post, cross sectionals, assessment covered all children below 6 months and 170 children 6 to 23 months, selected randomly, from children listed by the respective AWCs. Results: At baseline, the study identifies gaps in acceptance & transformation of feeding practices such as ever breastfeed, breastfeeding till 1 years and initiation of complementary feeding by 6-8 months, to optimal feeding practices such as early initiation of breastfeeding (EIBF), exclusive breastfeeding (EBF) & minimal acceptable diet. Overall, in the intervention group the core and optional indicators improved by 35.9 and 5.5 percent respectively; in conditions where there was reduction by 7.5 & 6.9 percent, in control group. The capacity building significantly improve EIBF, EBF, age appropriate breastfeeding rates and initiation of complementary feeding at 6-8 months, within 1 year. No major impact was noted on minimum dietary diversity and minimum acceptable diet rates. Conclusions: Long term capacity building of ICDS frontline workers on IYCF and GMP could be an important IYCF programmatic strategy.