Original Research Article

Assessment of community nutrition program performance through data validation in the state of Chhattisgarh

Ashish Sinha¹, Srishti Dixit²*, G. P. Soni³, Somen Kumar Pradhan⁴, Sarwat Naqwi⁵

INTRODUCTION

Globally, 26% of children are moderately to severely underweight, 10% is moderately to severely wasted, and 31% are moderately to severely stunted.¹ In India, 48% of children under 5 years are stunted and 43% are underweight and 20% of children under 5 years in the country are wasted.² Failing to deal effectively with the malnutrition problem in India has dire consequences for children’s development. Through precipitating disease and speeding its progression, malnutrition is a leading contributor of infant and child mortality and morbidity. More than half (54%) of all deaths before the age of 5 years in India are related to malnutrition. Growth assessment is the single most useful tool for defining health and nutritional status in children at both the individual and population levels.² Recognizing the

ABSTRACT

Background: In India data shows that every 3rd child is underweight. There is a similar situation in Chhattisgarh with 37% children underweight. Women and Child Development Department initiated Nawa Jatan ("new care"), a state specific community based intervention by targeting undernourished children for Six month. Strategy of validation by ‘External technical support group’ can be an eye opener for strategic tactical and operational intervention to validate the data of ICDS scheme at field level.

Methods: By systematic random sampling methodology, Out of all targeted 2462 Gram Panchayats (GPs) 246 (i.e. 10%) was included in the survey. One day hands-on demonstration cum training for survey teams mixed with interns, postgraduate and volunteers were organized. Data collection done in pretested proforma.

Results: A total of 7155 children distributed in surveyed Gram Panchayats across 27 districts were covered. About 9.1% (651 out of 7155) children showed gap in reporting as they were reported normal grade of nutrition. Out of all children covered for actual field validation. There was 9.84% disagreement in weight recording in the state. Our analysis reveals 9 districts fall in poor performing districts, followed by below average performing 8 districts and average performing 10 districts.

Conclusions: There is wide gap in recorded result as normal children against the observation which was actually in the field level. In addition, there is significant proportion of disagreement of weight records when compared with actual weighing. Above observations might be possibly due to poor monitoring and supervision of weighing activity at the field level.

Keywords: Integrated child development services, Anganwadi worker, Anganwadi centre, Pre-school education, Nutrition and health education
extensive prevalence of malnutrition and the consequent drain on the country’s human resource, the Government of India started the Integrated Child Development Services (ICDS) Scheme; to respond to the child’s needs in a comprehensive and holistic perspective. The nutritional status of children can be evaluated by their growth. Under nutrition has been measured by anthropometric indicators in terms of stunting, wasting, and underweight. Stunting (low height for age) and wasting (low weight for height) are respectively associated with chronic malnutrition and current nutritional status.

Program description

The Government of India started ICDS Scheme, a centrally sponsored scheme to enhance the health, nutrition, and learning opportunities of children <6 years of age especially targeted for the poor and the deprived. Under the ICDS scheme, Anganwadi Centers (AWCs) are the focal point for the delivery of services and are run by the local community woman, the Anganwadi Worker (AWW) and a helper. Freshly, cooked food supplements are provided at all AWCs to children aged 3-6 years while take-home-ration of food grains are provided every month to children aged 6 months until 3 years (36 months). All children in the eligible age groups can avail of supplementary nutrition provided at the AWCs. The Integrated Child Development Services (ICDS) Scheme is one of the flagship programmes of the Government of India and represents one of the world’s largest and unique programmes for early childhood care and development. It is the foremost symbol of country’s commitment to its children, pregnant women and nursing mothers, as a response to the challenge of providing pre-school non-formal education on one hand and breaking the vicious cycle of malnutrition, morbidity, reduced learning capacity and mortality on the other. ICDS was launched on 2nd October 1975, on the auspicious occasion of the 106th birth anniversary of Mahatma Gandhi, the Father of the Nation.5

Weighing of each child is carried out by the AWW every month and plotted on the growth chart which is a graphical presentation of weight-for-age. Through the strategy of Nutrition and Health Education, ICDS Scheme aims at bringing about an attitudinal change in health and nutrition habits of the mothers and children and improve their nutritional status. Despite the expansion of the ICDS Scheme to cover most of the children in the country, progress in reducing child malnutrition has been slow.5

Growth monitoring is most important tool for community diagnosis. Cross-sectional community nutritional assessment of all children in Chhattisgarh serves as basis to target children. Strategy of validation of any community intervention program by ‘external technical support group’ can be an eye opener for strategic tactical and operational intervention designing by WCD, Govt. of C.G. UNICEF requested Department of Community Medicine to validate the data of end line community nutrition program (i.e. Nawajatan Phase IV) across the state with following objectives:

- To validate end line Nawajatan intervention results through record validation at field level
- To validate the data of ICDS for March 2016 on the basis of actual weighing.

METHODS

On February all the stakeholders (i.e. DWCD, UNICEF and NGO Representatives) of Nawajatan Phase IV validation met in the Dept. of Community Medicine before initiating survey in the state. There after a one day Hands-on Demonstration cum Training of Survey Teams was organized in Dept. of Community Medicine at Pt. JNM Medical College, Raipur. Out of all 2462 Gram Panchayats (GPs) of Nawajatan Phase IV project, 10% of them were included in the study i.e. 246 GPs across the state. These GPs were identified by applying Systematic Random Sampling methodology. A total of 40 teams two member in each were involved in the survey. Data collection was under-taken during April - May 2016. It was decided that team members will collect data from AWW’s register and growth chart entry of February and March 2016 for the targeted children and recorded actual weight of targeted children on the day of visit. If child of identified Gram Panchayat/Anganwadi were not available due to any reason then nearby Gram Panchayat / Anganwadi of Nawajatan was visited and additional no. of children were included in the survey. After obtaining sampled Gram Panchayat list (i.e. desired no. of GPs from each district) we obtained the data of targeted children along with unique code of children given to them by DWCD. Supervision of survey teams was carried out by representatives of DWCD and Faculties/PG Scholars of Department of Community Medicine. Each supervisor had to undertake at least six supervisory visits during survey to monitor and supervise the survey team activity.

RESULTS

A total of 7155 targeted children distributed in 263 Gram Panchayats across 27 districts were covered during survey. While the data for February 2016 (end-line) reported that 52.7% of targeted children were normal, the ICDS records of the same month reported 43.6%. About 9.1% (651 out of 7155) children showed gap in reporting as they were reported normal grade of nutrition. The reported normal (9.1%) children were actually either moderately (6.9%) or severely (2.2%) underweight. We looked into ICDS data of March 2016. Out of all children covered for actual field validation there was 9.84% disagreement in weight recording in the state. Out of these, 37.4% children showed change in nutritional grade. We allocated discredit score to the district. Our analysis reveals 9 districts fall in poor performing districts, followed by below average performing 8 districts and average performing 10 districts.
Table 1: District wise distribution of children covered under Nawa Jatan phase IV end line validation.

| S. No | District       | Total no. Of Nawa Jatan Gram Panchayats | No of Gram Panchayats covered | Aanganwadi centers covered | Target children | Children covered in validation | % children covered |
|-------|----------------|----------------------------------------|-------------------------------|----------------------------|-----------------|-------------------------------|-------------------|
| 1     | Balod          | 30                                      | 3                             | 7                          | 60              | 47                            | 78.33             |
| 2     | BalodaBazar    | 46                                      | 5                             | 12                         | 155             | 140                           | 90.32             |
| 3     | Balrampur      | 95                                      | 10                            | 63                         | 360             | 548                           | 152.22            |
| 4     | Bastar         | 208                                     | 19                            | 69                         | 900             | 527                           | 58.56             |
| 5     | Bemetara       | 14                                      | 1                             | 5                          | 60              | 43                            | 71.67             |
| 6     | Bijapur        | 90                                      | 7                             | 30                         | 330             | 283                           | 85.76             |
| 7     | Bilaspur       | 62                                      | 8                             | 46                         | 306             | 361                           | 117.97            |
| 8     | Dantewada      | 45                                      | 4                             | 29                         | 170             | 140                           | 82.35             |
| 9     | Dhamtari       | 416                                     | 40                            | 112                        | 635             | 683                           | 107.56            |
| 10    | Durg           | 81                                      | 16                            | 46                         | 240             | 300                           | 125.00            |
| 11    | Gariyaband     | 58                                      | 7                             | 20                         | 190             | 134                           | 70.53             |
| 12    | Janjir-Champa  | 83                                      | 9                             | 25                         | 60              | 193                           | 321.67            |
| 13    | Jashpur        | 17                                      | 2                             | 14                         | 67              | 69                            | 102.99            |
| 14    | Kanker         | 38                                      | 4                             | 18                         | 114             | 118                           | 103.51            |
| 15    | Kawardha       | 13                                      | 2                             | 4                          | 60              | 91                            | 151.67            |
| 16    | Kondagaon      | 182                                     | 22                            | 83                         | 660             | 659                           | 99.85             |
| 17    | Korba          | 13                                      | 3                             | 18                         | 60              | 87                            | 145.00            |
| 18    | Koriya         | 57                                      | 6                             | 31                         | 120             | 164                           | 136.67            |
| 19    | Mahasamund     | 164                                     | 17                            | 55                         | 400             | 393                           | 98.25             |
| 20    | Mungeli        | 70                                      | 7                             | 26                         | 240             | 225                           | 93.75             |
| 21    | Narayanpur     | 76                                      | 7                             | 37                         | 230             | 172                           | 74.78             |
| 22    | Raigarh        | 211                                     | 21                            | 74                         | 480             | 417                           | 86.88             |
| 23    | Raipur         | 9                                       | 3                             | 16                         | 60              | 167                           | 278.33            |
| 24    | Rajanandgaon   | 253                                     | 26                            | 104                        | 710             | 701                           | 98.73             |
| 25    | Sarguja        | 47                                      | 4                             | 16                         | 350             | 147                           | 42.00             |
| 26    | Sukma          | 25                                      | 3                             | 11                         | 60              | 42                            | 70.00             |
| 27    | Surajpur       | 59                                      | 7                             | 38                         | 240             | 304                           | 126.67            |
|       |                | 2462                                    | 263                           | 1009                       | 7317            | 7155                          | 97.79             |

Table 2: Comparison of Nawa Jatan software data Vs Anganwadi register for February 2016 through grade of under nutrition (i.e. normal, moderate and severe) of Nawa Jatan targeted children covered for validation.

| S. No | Grade of children | Children reported in WCD software (February end line data) | Children reported in AWWs register (February end line data) | Deference in observation |
|-------|-------------------|----------------------------------------------------------|--------------------------------------------------------|-------------------------|
|       |                   | No. | %             | No. | %             | No. | %             |                          |
| 1     | Normal            | 3773| 52.73         | 3122| 43.63         | 651 | 9.10          |                          |
| 2     | Moderate          | 2455| 34.31         | 2945| 41.16         | -490| -6.85         |                          |
| 3     | Severe            | 927 | 12.96         | 1088| 15.21         | -161| -2.25         |                          |
| Total |                   | 7155| 100.00        | 7155| 100.00        |      |                |                          |

Table 3: Comparison of Nawa Jatan Anganwadi register data vs validation weight of March 2016 through grade of under nutrition (i.e. normal, moderate and severe) of Nawa Jatan targeted children covered for validation.

| S. No | Grade of children | Children weight in AWW register (March 2016 data) | Children actual validation weight (April data) | Deference in observation |
|-------|-------------------|---------------------------------------------------|------------------------------------------------|-------------------------|
|       |                   | No. | %             | No. | %             | No. | %             |                          |
| 1     | Normal            | 3176| 44.39         | 2557| 35.74         | 619 | 8.65          |                          |
| 2     | Moderate          | 2909| 40.66         | 3112| 43.49         | -203| -2.83         |                          |
| 3     | Severe            | 1070| 14.95         | 1486| 20.77         | -416| -5.81         |                          |
| Total |                   | 7155| 100.00        | 7155| 100.00        |      |                |                          |
Figure 1: Age (at baseline) and sex wise distribution of children covered under Nawa Jatan phase IV end line validation.

Figure 2: Map of Chhattisgarh showing geographical distribution of surveyed Gram Panchayats for Phase IV end-line validation.
Table 4: For study purpose acceptable level of difference between Nawa Jatan weight and validation weight.

| Age at the time of Nawa Jatan 4th phase | Interval between Nawa Jatan weight and validation weight-grams | < 2 weeks | 2-4 weeks | 4-6 weeks | 6-8 weeks |
|-----------------------------------------|---------------------------------------------------------------|-----------|-----------|-----------|-----------|
|                                         | Lower | Upper | Lower | Upper | Lower | Upper | Lower | Upper |
| Up to 1 month                           | -200  | 600   | -400  | 1200  | -600  | 2000  | -600  | 2250  |
| 1-2 months                              | -200  | 600   | -400  | 1200  | -600  | 1800  | -600  | 2100  |
| 2-3 months                              | -200  | 600   | -400  | 900   | -600  | 1200  | -600  | 1500  |
| 3-4 months                              | -200  | 450   | -400  | 750   | -600  | 1050  | -600  | 1350  |
| 4-5 months                              | -200  | 450   | -400  | 600   | -600  | 800   | -600  | 1050  |
| 5-6 months                              | -200  | 300   | -400  | 450   | -600  | 600   | -600  | 900   |
| 6 months to 50 months                   | -200  | 300   | -400  | 450   | -600  | 600   | -600  | 900   |

Table 5: District wise distribution of disagreement of weight of children covered for actual field validation March 2016 data.

| S. No. | District         | Status of agreement | Total | Disagreement (%) | Grade change with agreement as no. | Percentage (%) |
|--------|------------------|---------------------|-------|------------------|-----------------------------------|----------------|
| 1      | Balod            | No                  | 5     | 42               | 10.64                             | 0              |
| 2      | BalodaBazar      | Yes                 | 2     | 138              | 1.43                              | 1              |
| 3      | Balrampur        | No                  | 49    | 499              | 8.94                              | 10             |
| 4      | Bastar           | No                  | 54    | 473              | 10.25                             | 25             |
| 5      | Betemara         | No                  | 4     | 39               | 9.30                              | 1              |
| 6      | Bijapur          | No                  | 86    | 197              | 30.39                             | 42             |
| 7      | Bilaspur         | Yes                 | 38    | 323              | 10.53                             | 9              |
| 8      | Dantewada        | Yes                 | 16    | 124              | 11.43                             | 8              |
| 9      | Dhantari         | Yes                 | 40    | 643              | 5.86                              | 11             |
| 10     | Durg             | Yes                 | 24    | 276              | 8.00                              | 6              |
| 11     | Gariyaband       | Yes                 | 9     | 125              | 6.72                              | 5              |
| 12     | Jangir-Champa    | Yes                 | 21    | 172              | 10.88                             | 9              |
| 13     | Jashpur          | Yes                 | 5     | 64               | 7.25                              | 4              |
| 14     | Kanker           | Yes                 | 12    | 106              | 10.17                             | 5              |
| 15     | Kawardha         | Yes                 | 3     | 88               | 3.30                              | 0              |
| 16     | Kondagaon        | Yes                 | 97    | 562              | 14.72                             | 40             |
| 17     | Korba            | Yes                 | 2     | 85               | 2.30                              | 0              |
| 18     | Koriya           | Yes                 | 16    | 148              | 9.76                              | 7              |
| 19     | Mahasamund       | Yes                 | 26    | 367              | 6.62                              | 9              |
| 20     | Mangal           | Yes                 | 10    | 215              | 4.44                              | 3              |
| 21     | Naraynapur       | Yes                 | 40    | 132              | 23.26                             | 18             |
| 22     | Raigarh          | Yes                 | 33    | 384              | 7.91                              | 10             |
| 23     | Raipur           | Yes                 | 12    | 155              | 7.19                              | 2              |
| 24     | Rajnandgaon      | Yes                 | 47    | 654              | 6.70                              | 14             |
| 25     | Sarguja          | Yes                 | 20    | 127              | 13.61                             | 13             |
| 26     | Sukma            | Yes                 | 3     | 39               | 7.14                              | 1              |
| 27     | Surajpur         | Yes                 | 30    | 274              | 9.87                              | 10             |
| Total  |                  |                     | 704   | 6451             | 9.84                              | 263            | 37.36|

DISCUSSION

Despite rapid economic development along with increase in food production in recent decades and several nutritional intervention programmes in operation since the last three decades, childhood under nutrition remains an important public health problem in India. It is one of the important reasons for ill health and child mortality. In present study 97.79% of children were covered out of all sampled children while in a Quick Evaluation Study of Anganwadis under ICDS, done by NITI AAYOG in June 2015 in 19 Districts (one from each State/UT); 50.6% children of total sample size with respect to the total enrolled children were included in study. In this study it was observed that maximum children under the study belonged from the age group of 24-35 months i.e. 32.16%. Silva and Silva in their study found that more than half of the children (64%) belonged to 6-36 month age group. Bhimisetty et al in their study had most of the children from the age group of 0-12 months. While 50.9% children were male in present study, 47.49% were male in study done by Philip et al. Gope et al included
57.7% boys in their study done in urban area of Waynad district. In current study 35.74% children were found normal, 43.49% were moderate and 20.77% were severe underweight. Similarly, it was found in study done by Agrawal et al, in urban slums of Agra city that 32.6% of preschool children were labeled as normal and the rest were underweight; with about 20.5% children were below 3SD weight. While in study done by Bhimisetty et al, among tribal population of Andhra Pradesh 12.7% of children were severe undernourished.

In a quick evaluation study of Anganwadis under ICDS, done by NITI AAYOG in June 2015 in 19 Districts the health status of 78.8%, 17% and 4.2% of the children recorded during the month of February, 2014 was normal, moderately malnourished and severely malnourished respectively. Further, the on the spot weight measurement carried out during April, 2014 revealed that the health status of 77.4% of the children are in normal grade, 17.6% are in moderate grade and 5% are in Severe grade.

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**Figure 3:** District wise distribution of disagreement of weight of children covered for actual field validation March 2016 data.

**Table 6:** Distribution of discredit score on the basis of difference in observation and disagreement in weighing of Nawa Jatan targeted children.

| S. No. | District         | Disagreement status | Difference in observation in nutritional grade WCD software to Anganwadi record |
|--------|------------------|---------------------|-------------------------------------------------------------------------------|
|        |                  | <10% 10-20% >20%   | Severe underweight <5% 5-10% >10%  Moderate underweight <10% 10-20% >20%  Normal weight <10% 10-20% >20%  Total Score |
| 1      | Balod            | B A B A            | 10                                                                           |
| 2      | Baloda Bazar     | A A A B            | 4                                                                            |
| 3      | Balrampur        | A A B A            | 8                                                                            |
| 4      | Bastar           | B A A A            | 6                                                                            |
| 5      | Bemetara         | A A A A            | 4                                                                            |
| 6      | Bijapur          | C B A A            | 10                                                                           |
| 7      | Bilaspur         | B A A A            | 6                                                                            |
| 8      | Dantewada        | B A A A            | 6                                                                            |
| 9      | Dhamtari         | A A A A            | 4                                                                            |
| 10     | Durg             | A A A A            | 4                                                                            |
| 11     | Gariyaband       | A A A A            | 4                                                                            |
| 12     | Janigir Chapa    | B A B B            | 10                                                                           |
| 13     | Jashpur          | A B B C            | 12                                                                           |
| 14     | Kanker           | B B B B            | 12                                                                           |
| 15     | Kawardha         | A A B B            | 8                                                                            |
| 16     | Kondagaon        | B A A B            | 8                                                                            |
| 17     | Korba            | A A B B            | 8                                                                            |
| 18     | Koriya           | A A A A            | 4                                                                            |

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| S. No. | District   | Disagreement status | Difference in observation in nutritional grade WCD software to Anganwadi record | Total score |
|-------|------------|---------------------|---------------------------------------------------------------------------------|-------------|
|       |            | Severe underweight  | Moderate underweight | Normal weight |               |
|       |            | <10% 10-20% >20% | <5% 5-10% >10% | <10% 10-20% >20% | <10% 10-20% >20% |
| 19    | Mahasamund | A       | A       | A       |               | 4             |
| 20    | Mungeli    | A       | A       | A       |               | 4             |
| 21    | Narayanpur | C       | C       | B       |               | 18            |
| 22    | Raigarh    | A       | B       | A       | B             | 8             |
| 23    | Raipur     | A       | A       | C       |               | 12            |
| 24    | Rajnandgaon| A       | A       | A       |               | 4             |
| 25    | Sarguja    | B       | C       | A       |               | 10            |
| 26    | Sukma      | A       | C       | A       |               | 12            |
| 27    | Surajpur   | A       | A       | A       |               | 4             |
|       |            | 17      | 8       | 2       | 20            | 4             |
|       |            | 4       | 3       | 18      | 8             | 15            | 8             |
|       |            | 17      | 8       | 2       | 20            | 4             |

Discredit score on the basis of difference in observation and disagreement in weighing:

- **Composite score grade**
  - **A=1**
    - 0 - <5
    - 10
    - Average
    - Green
  - **B=3**
    - 5 - <10
    - 8
    - Below Average
    - Yellow
  - **C=5**
    - ≥10
    - 9
    - Poor
    - Pink

**Figure 4:** Map showing categorization of district on the basis of performance based on difference in observation and disagreement in weighing during validation.
CONCLUSION

All though Survey findings showed that community Nutrition intervention program was operational in all visited Gram Panchayats/Anganwadis. As per survey finding there is wide gap in recorded result as normal children against the observation which was actually in the field level (i.e. Anganwadi register). This may be probably either due to wrong data entry, over reporting and/or incorrect weighing. In addition, there is significant proportion of disagreement of weight records when compared with actual weighing. Out of all disagreement more than one third children showed change in their nutritional grade. Above observations might be possibly due to poor monitoring of weighing activity leading to significant level of gap in observation in grade of malnutrition as well as recording of weight.

Recommendations

Based on these observations, Department of Woman and Child Development undertakes a review of district’s performance based on the above findings to find out 1) the reasons for the disagreements, 2) to understand whether these observations are limited to the sampled panchayats or across all targeted areas in the respective districts, and 3) suggested measures to guard from such inaccuracies in the future. The Department should consider a stratified approach to further capacity building and monitoring, such that the poor performing (in terms of accuracy) should receive intense capacity building and monitoring of weighing and recording, the below average performing should receive monitoring and average performing should receive routine services.

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REFERENCES

1. UNICEF, The State of the World’s Children Report. New York: UNICEF; 1998.
2. International Institute for Population Sciences (IIPS) and Macro International. National Family Health Survey (NFHS-3), 2005-06. Vol. I. India: International Institute for Population Sciences; 2007.
3. Salgank J. Variance estimation, design effects, and sample size calculations for respondent-driven sampling. J Urban Health Bull New York Acad Med. 2006;83:98-112.
4. Wong's Nutritional assessment - Nursing care of Infants and children. 7th edition. Missouri: Mosby company; 2002: 1692.
5. Mamata T, Sarada D. 2009 Child Right, Discovery Publishing House Private Limited, New Delhi: p.6.
6. Nandy S, Irving M, Gordon D. Poverty, child under nutrition and morbidity: new evidence from India. Bull World Health Organ. 2005;83:210-6.
7. A Quick Evaluation Study of Anganwadis under ICDS, NITI AAYOG, Programme Evaluation Organisation Government of India New Delhi-110001 June 2015, PEO Report No.227.
8. Silva VG, Silva SG. Nutritional status of Anganwadi Children under the Integrated Child Development Services Scheme in a Rural Area in Goa. Int J Scientific Study. 2015;3(7):217-20.
9. Bhimisetti SC, Pamarthi K, Srinivasa PJ. Nutritional Status of Under 5 Children Belonging to tribal Population Living in Visakhapatnam District, Andhra Pradesh. J Evidence based Med Healthcare. 2015;2(33):4975-80.
10. Philip RR, Vijayakumar K, Indu PS, Shrinivasa BM, Sreelal TP, Balaji J. Prevalence of undernutrition among tribal preschool children in Wayanad district of Kerala. Int J Adv Med Health Res. 2015;2(1):33.
11. Gope A, Baruah KK, Ojah J. An Assessment of Nutritional Status of 1 to 5 Year Old Children in Slum Area under Urban Health Training Centre Guwahati. Int J Health Sci Res (IJHSR). 2016;6(8):29-33.
12. Agarwal L, Jain A, Pankaj JP, Jain A, Paruthy S. Current status of nutrition among under five children of slum areas of Agra. J Evol Med Dental Sci. 2014;3(58):13120-6.

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