APPENDIX A

ACCURACY OF DIARRHEA RECALL

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A.1 Heaping of Responses

Mothers were allowed to respond in days, weeks, or months to the question on when their child's last episode of diarrhea had occurred. The results of the responses reported in days and weeks (if less than 3 weeks), are shown in Table A.1 (unweighted data). More than half of the children with diarrhea in the two weeks preceding the survey had diarrhea at the time of the survey.

Table A-1 Length of time since the last episode of diarrhea: Distribution of mother's responses in days and weeks to a question about child's last episode of diarrhea, Bolivia ENDSA, 1989

Time elapsed since last episode	Percent	Number
DAYS		
0	53.9	839
1	0.5	8
2	2.3	36
3	3.7	57
4	1.9	30
5	1.7	27
6	0.8	12
7	2.4	38
8	0.5	8
9	0.2	3
10	0.6	9
11	0.0	0
12	0.0	0
13	0.0	0
14	0.2	3
15	1.1	17
16	0.0	0
17	0.0	0
WEEKS		
1	15.5	241
2	14.8	230
Current	53.9	839
Days	15.9	248
Weeks	30.2	471
TOTAL	100.0	1558

Note: Includes only responses of less than 18 days or less than 3 weeks.

For children who did not have diarrhea in the 24 hours prior to the interview, but had diarrhea in the two weeks preceding the survey (or slightly longer ago), about one-third of the women responded to the question in days. There was heaping on 2-4 days, and on 7, and 15 days. The latter appears to be common in Latin America, where respondents consider a two-week period as 15 rather than 14 days (Goldman et al., 1989). More important is the large proportion of cases that were recalled as one or two weeks ago. In Bolivia 15 per cent of the answers were "two weeks ago." These will presumably be translated into 14-15 days ago, unless the interviewer makes a special effort to find out exactly which was the last day of the diarrheal episode. What respondents mean by two weeks ago may vary between cultures, however. Assuming that the responses of "two weeks ago" really refer to the period 11-17 days before the survey, if all the "two weeks" responses are included in the recall period, diarrhea prevalence will be overestimated by about 6 percent. Studies with a one-week recall period would have similar problems.

A.2 Underreporting of Diarrhea

The data from Bolivia can be used to study diarrhea reporting in recent and more distant periods preceding the survey. An estimate of the daily prevalence and incidence of diarrhea can be made, since questions were asked both about the length of time which had elapsed since the last diarrheal episode and about its duration.

The daily incidence and prevalence of diarrhea were calculated from the responses to these questions and are presented in Table A.2, and Figures A.1 and A.2. The mother's responses were assumed to refer to the end of the last episode. Responses of "one week ago" were distributed over the period 5-10 days before the survey. Responses of "two weeks ago" were distributed over the period 11-17 days before the survey. Daily prevalence in Bolivia drops from over 150 cases per 1000 children on the first and second days preceding the survey to well under 100 cases by the fourth day preceding the survey (Figure A.1). Incidence also peaks during the three days preceding the survey, with a second, lower peak on the seventh day preceding the survey (Figure A.2). On most days, however, the incidence of diarrhea is less than a third as great as on the three days immediately preceding the survey.

Thus, the results show a dramatic decline in both the incidence and prevalence of diarrhea with increasing number of days preceding the survey. The decline in prevalence is larger than observed in studies in Bangladesh, Ethiopia, and Guatemala (Alam et al, 1989; Freij, 1977; Martorell et al., 1976). In the ENDSA, this may be associated in part with overreporting of children currently having an episode of diarrhea.[1]

The duration of the illness plays a role in the treatment pattern. The percentage of children for whom some kind of medical intervention has been sought is higher if the diarrheal episode has terminated. This may, however, also be due to selective recall: only the more severe episodes are recalled. For current episodes of diarrhea, two days duration appeared to be a cut-off point. If diarrhea had started at least two days before the interview, treatment patterns differed little from treatment patterns for all children with diarrhea in the preceding two weeks. The information on treatment patterns may be more accurate for children who were having an episode of diarrhea at the time of the survey.

[1] A more extensive analysis of this problem which includes data from other DHS countries, can be found in Boerma et al. (1991b).

Table A-2 Incidence and prevalence of diarrhea in the two weeks preceding the survey: Among children under five, the incidence and prevalence of diarrhea in the two weeks preceding the survey (from mothers' report), Bolivia, ENDSA, 1989

Days preceding the survey	Incidence of diarrhea		Prevalence of diarrhea		Number of children exposed (N-starters)
	Number	Per 1,000	Number	Per 1,000	
0	39	7.4	839	160	5247
1	146	28.0	808	155	5208
2	217	42.9	698	138	5062
3	213	44.0	538	111	4845
4	97	20.9	388	84	4632
5	57	12.6	353	78	4535
6	61	13.6	342	76	4478
7	138	31.2	353	80	4417
8	55	12.9	257	60	4279
9	50	11.8	239	57	4224
10	44	10.5	232	56	4174
11	42	10.2	221	54	4130
12	44	10.8	206	50	4088
13	36	8.9	194	48	4044
14	50	12.5	190	47	4008
15	45	11.4	178	45	3958
16	33	8.4	183	47	3913
17	31	8.0	181	47	3880
18	NA	0.0	143	37	3849

Figure A.1
Daily Prevalence of Diarrhea among Children Under Five by Number of Days Preceding the Survey

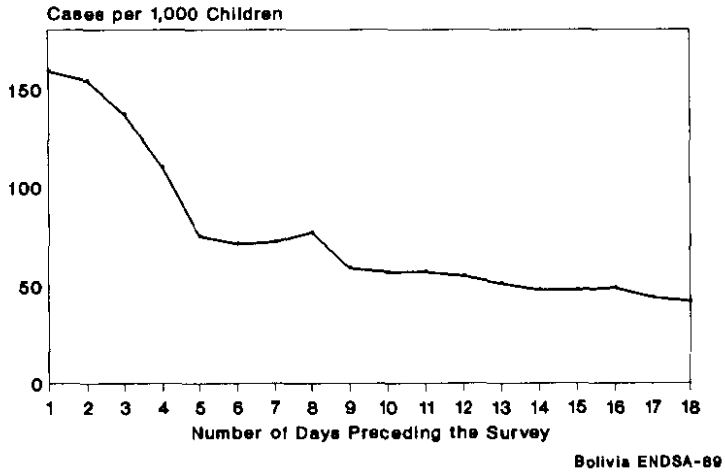

Figure A.2
Daily Incidence of Diarrhea among Children Under Five by Number of Days Preceding the Survey