

Diarrhea Recall Error Check- Kenya

Andrew Mertens

December 13, 2016

Examine overlap between primary outcomes definition of diarrhea, and a definition that constrains 3+ stool and watery stool to occur on the same day.

(Only using 2 day recall because no information on the day the abnormal stool occurred between days 3-7.)

Table of primary outcome diarrhea definition compared to stricter, alternative definition:

Primary outcome def			
Alt def	0	1	
0	9765	152	
1	0	2708	

There are 152 less 2-day recall diarrhea cases in the analysis population if the diarrhea definition is constrained to have 3+ stool and watery stool occur on the same day (5.6% of cases used in the primary outcomes analysis).

Create a variable for terminated diarrhea cases between 7d and 2d recall periods

```
ad$diart <- ifelse(ad$diar2d == 0 & ad$diar7d == 1, 1, 0)
table(ad$diar2d, ad$diart, dnn = c("2d diarrhea", "Terminated diarrhea"))
```

Terminated diarrhea			
2d diarrhea	0	1	
0	9233	532	
1	2860	0	

There were 532 terminated cases where diarrhea was reported over the last 7 days, but not within the last 2 days.

Examine the ratio between current and terminated diarrhea across treatment arms:

Passive Control	Water	Sanitation	Handwashing
5.821429	4.818182	5.517857	5.788462
WSH	Nutrition	Nutrition + WSH	Control
5.237288	5.500000	5.400000	5.238095

Roughly 5/1 ratio of ongoing (or recent) diarrhea cases to terminated cases within the last week.

Cross-tabs of final observations in the analysis, by survey round and study arm

, , Study Year = 1

	2-day diarrhea recall	
	0	1
Passive Control	516	181
Water	502	170
Sanitation	489	159
Handwashing	506	156
WSH	526	171
Nutrition	488	159
Nutrition + WSH	531	185
Control	1020	373

, , Study Year = 2

	2-day diarrhea recall	
	0	1
Passive Control	561	145
Water	568	148
Sanitation	577	150
Handwashing	545	145
WSH	574	138
Nutrition	553	127
Nutrition + WSH	585	166
Control	1224	287

, , Study Year = 1

	7-day diarrhea recall	
	0	1
Passive Control	500	198
Water	474	198
Sanitation	471	177
Handwashing	483	179
WSH	506	191
Nutrition	468	179
Nutrition + WSH	506	210
Control	982	412

, , Study Year = 2

	7-day diarrhea recall	
	0	1
Passive Control	522	184
Water	530	186
Sanitation	540	188
Handwashing	516	174
WSH	535	177
Nutrition	521	159
Nutrition + WSH	545	206
Control	1137	374

, , Study Year = 1

	Terminated diarrhea recall	
	0	1
Passive Control	681	17
Water	644	28
Sanitation	630	18
Handwashing	639	23
WSH	677	20
Nutrition	627	20
Nutrition + WSH	691	25
Control	1355	39

, , Study Year = 2

	Terminated diarrhea recall	
	0	1
Passive Control	667	39
Water	678	38
Sanitation	690	38
Handwashing	661	29
WSH	673	39
Nutrition	648	32
Nutrition + WSH	711	40
Control	1424	87

Results of bootstrap the Current diarrhea/Terminated diarrhea ratio by re-sampling randomization blocks with replacement:

	CTratio	CTratio diff	Lower 95% CI	Upper 95% CI
Control	5.291488	NA	NA	NA
Passive Control	5.946044	0.654555662	-1.228549	2.924068
Water	4.934047	-0.357440904	-2.313604	1.936319
Sanitation	5.671606	0.380117832	-1.665504	2.686488
Handwashing	5.935006	0.643517561	-1.266406	3.090250
WSH	5.297116	0.005627936	-1.709924	1.877650
Nutrition	5.621608	0.330119662	-1.697647	2.571256
Nutrition + WSH	5.481023	0.189535347	-1.320907	1.931713

No evidence for significant difference in diarrhea recall between study arms.