**Supplemental File 3**

**CommCare logic for using the ‘case management’ function to track completion status of the household**

To track the visit number, we created a visit number variable that was hidden from the form display (a ‘hidden value’ in CommCare). The visit number variable calculated how many forms for each household member had been completed. To do this, we created the following ‘hidden values’:

* One variable for each person-visit, to calculate whether that person-visit had been completed. For example, one variable was called ‘v1pw’, to track the completion of the first visit of the pregnant woman, and another variable was called ‘v2ma’ for the second visit of the mother-in-law.
* Similar variables with the prefix ‘old’ saved the status of the last visit (e.g. oldv1pw contained the information stored in ‘v1pw’ from the last recall conducted within the household. These values would be empty if no household member had been interviewed yet, and were updated during the recall. After submitting the forms, they would automatically update the case information on completion status.
* A variable ‘visit’ to calculate whether the interviewer was on visit 1, 2 or 3.
* A variable ‘done’ to calculate overall completion status for the household (i.e. whether three dietary recalls had been completed for all three household members).

In ‘v1pw’, we included the following calculation:

if(permission1 != 1 and visit = 1, '', if(oldv1pw = 1, 1, if(visit = 1 andhousehold\_member = '1', 1, '')))

This syntax means that, if the woman did not give permission and it is the first visit, keep the v1pw variable empty; otherwise, if the old value of v1pw (a variable saving the status of ‘v1pw’ from the last visit) was 1, then give v1pw the value ‘1’. Otherwise, if it is the first visit (visit=1) and the household member is the pregnant woman (household\_member='1'), give v1pw the value 1. For all other situations keep the v1pw variable empty.

We could then count the visit number (variable ‘visit’):

if(oldv1pw != 1 or oldv1hh != 1 or oldv1ma != 1, 1, if(oldv2pw != 1 or oldv2hh != 1 or oldv2ma != 1, 2, 3))

and close the case if all visits were complete (variable ‘done’):

if(v1pw = 1 and v1hh = 1 and v1ma = 1 and v2pw = 1 and v2hh = 1 and v2ma = 1 and v3pw = 1 and v3hh = 1 and v3ma = 1, 1, 0)