Do files

Merge and prepare baseline household data

```
cd "...\Data"

* Treatment Status
	use "raw\treatmentstatus.dta", clear
	gen control = 1 - treatment
	sort hfcode
	save "Modified\HH2004.dta", replace

* Utilization Pattern
	* each row is a household
	use "raw\crc2004_b.dta", clear
	keep hhcode hfcode s1q14a_01-s1q14i_15 //each row is a household

	*make each row a household member (up to 15)
	reshape long s1q14a s1q14b s1q14c s1q14d s1q14e s1q14f s1q14g s1q14h s1q14i,
///
		i(hhcode) j(ID _01 _02 _03 _04 _05 _06 _07 _08 _09 _10 _11 _12 _13 _14
_15)
	drop s1code_02-s1code_15
	rename s1q14a atLeast15Yrs
	egen totalHFVisits = rowtotal(s1q14b-s1q14i) if atLeast15Yrs==1
	gen projectFacility = s1q14b if atLeast15Yrs==1
	gen NGO = s1q14c if atLeast15Yrs==1
	gen pvtForProf = s1q14d if atLeast15Yrs==1
	gen tradHealer = s1q14e if atLeast15Yrs==1
	gen CHW = s1q14f if atLeast15Yrs==1 //Not used in Table 1 (but is in the
measure of "total" for denominator)
	gen selfTx = s1q14g if atLeast15Yrs==1
	gen otherGovt = s1q14h if atLeast15Yrs==1
	gen otherHF = s1q14i if atLeast15Yrs==1
	collapse (sum) totalHFVisits projectFacility NGO pvtForProf ///
		tradHealer CHW selfTx otherGovt otherHF (mean) hfcode, by(hhcode)

	*generating measures of utilization as pctage of total health provider visits
by HH
	gen projectFacilityPct = projectFacility/totalHFVisits
	gen NGOPct = NGO/totalHFVisits
	gen pvtForProfPct = pvtForProf/totalHFVisits
	gen tradHealerPct = tradHealer/totalHFVisits
	gen CHWPct = CHW/totalHFVisits
	gen selfTxPct = selfTx/totalHFVisits
	gen STTHPct = (selfTx + tradHealer)/totalHFVisits
	gen otherGovtPct = otherGovt/totalHFVisits
	gen otherHFPct = otherHF/totalHFVisits

	sort hfcode hhcode
	merge m:1 hfcode using "Modified\HH2004.dta"
	capture drop _merge
	save "Modified\HH2004.dta", replace
```

```
* Rest of HH Data
	use "raw\crc2004_a.dta", clear
	sort  hhcode
	merge 1:1 hhcode using "Modified\HH2004.dta"
	capture drop _merge
	save "Modified\HH2004.dta", replace

	use "raw\crc2004_b.dta", clear
	sort  hhcode
	merge 1:1 hhcode using "Modified\HH2004.dta"
	capture drop _merge
	save "Modified\HH2004.dta", replace


*** GENERATING VARIABLES THAT DON'T REQUIRE RESHAPING
	use "Modified\HH2004.dta", clear

* Other Variables of Interest

	* Waiting time = diff btw time person left facility and time arrived at
facility
		* minus examination time //Table A.1
		* examination time
		gen examinationTime=s3q7

		* time visited the HF: s2q3
		tostring s2q3, generate(visitStartString)
			gen visitStartStringLength = length(visitStartString)
			replace visitStartStringLength=. if visitStartStringLength==1

			*if length is 3
			gen visitStartHour = substr(visitStartString, 1, 1) if
visitStartStringLength==3
			gen visitStartMin = substr(visitStartString, 2, 2) if
visitStartStringLength==3

			*if length is 4
			replace visitStartHour = substr(visitStartString, 1, 2) if
visitStartStringLength==4
			replace visitStartMin = substr(visitStartString, 3, 2) if
visitStartStringLength==4
		destring visitStartHour visitStartMin, replace

		* time left the HF: s2q9
			*note this is coded as 2500 if left another day-they just drop
these people out
		tostring s2q9, generate(visitEndString)
			gen visitEndStringLength = length(visitEndString)
			replace visitEndStringLength=. if visitEndStringLength==1
			*if length is 3
			gen visitEndHour = substr(visitEndString, 1, 1) if
visitEndStringLength==3
			gen visitEndMin = substr(visitEndString, 2, 2) if
visitEndStringLength==3
```

```
                  *if length is 4
                  replace visitEndHour = substr(visitEndString, 1, 2) if
visitEndStringLength==4
                  replace visitEndMin = substr(visitEndString, 3, 2) if
visitEndStringLength==4
            destring visitEndHour visitEndMin, replace

            gen lengthOfVisitHr = visitEndHour - visitStartHour
            gen lengthOfVisitMin = visitEndMin - visitStartMin
            gen waitingTime = 60*lengthOfVisitHr + lengthOfVisitMin -
examinationTime
            replace waitingTime=. if s2q9==2500 //original authors drop out anyone
who says they left another day
            replace waitingTime=. if waitingTime<0
                  tab waitingTime, m

      gen equipmentUsed = . //Table 1/Table A1
            replace equipmentUsed = 1 if s3q8==1
            replace equipmentUsed = 0 if s3q8==2
      gen polite=s3q4 //Table 1/Table A1
      gen paidAttn=s3q5 //Table 1/Table A1
      gen freeToExpress=s3q6 //Table 1/Table A1
      gen informAbtDrugDel = s6q1==1 //Table 1/Table A1
            replace informAbtDrugDel = . if s6q1==.


      ** USER CHARGES
      gen recdDrugs = (s4q2==1 | s4q2==2 | s4q2==4 | s4q2==5)
            replace recdDrugs = . if s4q2==.
      gen drugsCharge = s5q3b1==1
            replace drugsCharge=. if s5q3b1==.
            replace drugsCharge=0 if s5q1==2 //makes denominator too big, but ok
based on how averaged
      bysort hfcode: egen avgDrugCharge = mean(drugsCharge) if recdDrugs==1

      gen recdGenTx = (s2q10a==1 | s2q10b==1 | s2q10c==1 | s2q10e==1  | s2q10f==1
///
             | s2q10g==1 | s2q10h==1 | s2q10i==1 | s2q10j==1 | s2q10k==1 | s2q10l==1
///
              | s2q10m==1 | s2q10n==1)

      * Updated genTxCharge 9/6/15
      gen genTxCharge = s5q3c1==1
            replace genTxCharge=. if s5q3c1==.
            replace genTxCharge=1 if s5q3a1==1
            replace genTxCharge=0 if s5q1==2
      bysort hfcode: egen avgGenTxCharge = mean(genTxCharge) if recdGenTx==1

      gen recdInjection = (s4q2==3 | s4q2==4)
            replace recdInjection = . if s4q2==.
      gen injectionCharge = s5q3g1==1
            replace injectionCharge=. if s5q3g1==.
            replace injectionCharge=0 if s5q1==2
```

```
	bysort hfcode: egen avgInjectionCharge = mean(injectionCharge) if
recdInjection==1

	gen deliveryCharge = s7q19==1
		replace deliveryCharge=. if s7q19==.
	bysort hfcode: egen avgDeliveryCharge = mean(deliveryCharge)

	save "Modified\HH2004.dta", replace


	** IMMUNIZATIONS
	use "Modified\HH2004.dta", clear
	keep hhcode hfcode treatment s8code_01 s8q11a_01 s8q11b_01 s8q11c_01 s8q11d_01
s8q11e_01 s8q11f_01 s8q11g_01 ///
		s8code_02 s8q11a_02 s8q11b_02 s8q11c_02 s8q11d_02 s8q11e_02 s8q11f_02
s8q11g_02 ///
		s8code_03 s8q11a_03 s8q11b_03 s8q11c_03 s8q11d_03 s8q11e_03 s8q11f_03
s8q11g_03 ///
		s8code_04 s8q11a_04 s8q11b_04 s8q11c_04 s8q11d_04 s8q11e_04 s8q11f_04
s8q11g_04 ///
		s8code_05 s8q11a_05 s8q11b_05 s8q11c_05 s8q11d_05 s8q11e_05 s8q11f_05
s8q11g_05 ///
		s8code_06 s8q11a_06 s8q11b_06 s8q11c_06 s8q11d_06 s8q11e_06 s8q11f_06
s8q11g_06 ///
		s8code_07 s8q11a_07 s8q11b_07 s8q11c_07 s8q11d_07 s8q11e_07 s8q11f_07
s8q11g_07 ///
		s8code_08 s8q11a_08 s8q11b_08 s8q11c_08 s8q11d_08 s8q11e_08 s8q11f_08
s8q11g_08 // note there are  few more rows, but no obs

	reshape long s8code_0 s8q11a_0 s8q11b_0 s8q11c_0 s8q11d_0 s8q11e_0 s8q11f_0
s8q11g_0, i(hhcode) j(childNum)

	gen ageInMonths = s8q11a
	keep if ageInMonths!=.

	rename s8q11a_0 s8q11a
	rename s8q11b_0 s8q11b
	rename s8q11c_0 s8q11c
	rename s8q11d_0 s8q11d
	rename s8q11e_0 s8q11e
	rename s8q11f_0 s8q11f
	rename s8q11g_0 s8q11g

	gen measlesImm = s8q11b>=1
		replace measlesImm=. if s8q11b>2

	gen polioImm = s8q11c>=3
		replace polioImm=. if s8q11c>4
	gen polioImmInfant = s8q11c>0

	gen DPTImm = s8q11d>=3
		replace DPTImm=. if s8q11d>3
	gen DPTImmInfant = s8q11d>=1
		replace DPTImmInfant=. if s8q11d>3
```

```
gen BCGImm = s8q11e>=1
       replace BCGImm=. if s8q11e==88

gen vitASupp = s8q11f if s8q11f!=88
gen vitASuppInfant = s8q11f>0
       replace vitASuppInfant=. if s8q11f==88

save "Modified/Immunizations2004_wTx.dta", replace
```

Merge and prepare endline household data

```
cd "...\Data"

* Treatment Status
	use "raw\treatmentstatus.dta", clear
	gen control = 1 - treatment
	sort hfcode
	save "Modified\HH2006.dta", replace


* 2006 Household Data
	use "raw\crc2006.dta", clear

	* For use in Table 2
	gen discFacLCMtgs = s6q24==1
		replace discFacLCMtgs=. if s6q24==.
	gen recdInfoAbtHUMC = s6q27==1

	* For use in Table 3
	* time of arrival and depature
	tostring s2q4 s2q11, replace
	rename s2q4 visitStartString
	rename s2q11 visitEndString
	rename s3q8 visitLength

	replace visitStartString="" if visitStartString=="."
	replace visitEndString="" if visitEndString=="."

	gen visitStartStringLength=length(visitStartString)
	gen visitEndStringLength=length(visitEndString)

	replace visitStartString= visitStartString+"00" if visitStartStringLength==1
	replace visitStartStringLength=length(visitStartString)

	gen visitStartHourString=substr(visitStartString, 1,visitStartStringLength-2)
	gen visitStartMinString=substr(visitStartString,-2,.)
	gen visitEndHourString=substr(visitEndString, 1,visitEndStringLength-2)
	gen visitEndMinString=substr(visitEndString,-2,.)

	destring visitStartString visitEndString visitStartHourString
visitEndHourString  visitStartMinString visitEndMinString, ///
		generate(visitStartNum visitEndNum visitStartHourNum visitEndHourNum
visitStartMinNum visitEndMinNum)

	gen minDiffInHours = (visitEndHourNum-visitStartHourNum)*60
	gen minDiffInMin = visitEndMinNum - visitStartMinNum
	gen totalTime = minDiffInHours+minDiffInMin if visitEndNum<2500 // 2500 = more
than one day
	replace totalTime = . if visitEndNum==2500
	gen waitingTime = totalTime - visitLength
	replace waitingTime=. if waitingTime<0 // 12 changes
	sum waitingTime

	gen equipmentUsed=.
```

```
		replace equipmentUsed=1 if s3q9==1
		replace equipmentUsed=0 if s3q9==2

	* For Table 3
	gen healthInfo = s6q9==1
	gen impOfFP = s6q10==1


	sort hfcode hhcode
	merge m:1 hfcode using "Modified\HH2006.dta"
	capture drop _merge
	save "Modified\HH2006.dta", replace



	* For Table 4 - IMMUNIZATIONS - SEPARATE FILE; determinations of sufficient
immunizations follow authors

		* To get info on HF
		use "raw/crc2006.dta", clear
		keep hhcode hfcode
		sort hhcode

		* Adding in relevant data
		merge 1:m hhcode using "raw/crc2006_s8q10.dta"
		drop if _merge!=3
		capture drop _merge

		gen measlesImm = s8q10b>=1
			replace measlesImm=. if s8q10b>2

		gen polioImm = s8q10c>=3
			replace polioImm=. if s8q10c>4
		gen polioImmInfant = s8q10c>0
			replace polioImmInfant=. if s8q10c>3
			*replace polioImmInfant=0 if s8q10c==4 // need this line in order
to get numbers to match orig authors,
				* doesnt exactly make sense, but doesnt matter since these
kids are all older and will drop out anyway

		gen DPTImm = s8q10d>=3
			replace DPTImm=. if s8q10d>3
		gen DPTImmInfant = s8q10d>=1
			replace DPTImmInfant=. if s8q10d>3
			*replace DPTImmInfant=0 if s8q10d==3 // need this line in order
to get numbers to match orig authors,
				* doesnt exactly make sense, but doesnt matter since these
kids are all older and will drop out anyway

		gen BCGImm = s8q10e>=1
			replace BCGImm=. if s8q10e==88

		gen vitASupp = s8q10f if s8q10f!=88
		gen vitASuppInfant = s8q10f>0
```

```
                replace vitASuppInfant=. if s8q10f==88


            gen ageInMonths = s8q10a
            save "Modified\Immunizations2006.dta", replace

      * For Table 5 - UTILIZATION

            * To get info on HF
            use "raw/crc2006.dta", clear
            keep hhcode hfcode
            sort hhcode

            * Adding in relevant data (each row is a household member)
            merge 1:m hhcode using "raw/crc2006_s1q11.dta" //note one household from
main data is not merged
            drop if _merge!=3
            capture drop _merge
            rename s1q11a atLeast15Yrs
            recode s1q11b s1q11c s1q11d s1q11e s1q11f s1q11g s1q11h s1q11i (88=0)

            egen totalHFVisits = rowtotal(s1q11b - s1q11i) if atLeast15Yrs==1
                  replace totalHFVisits = totalHFVisits - s1q11f
            gen projectFacility = s1q11b if atLeast15Yrs==1
            gen selfTx = s1q11g if atLeast15Yrs==1
            gen tradHealer = s1q11e if atLeast15Yrs==1
            gen STTH = s1q11g + s1q11e if atLeast15Yrs==1

            collapse (sum) totalHFVisits projectFacility selfTx tradHealer STTH ///
                  (mean) hfcode, by(hhcode)

            gen projectFacilityPct = projectFacility/totalHFVisits
            gen tradHealerPct = tradHealer/totalHFVisits
            gen selfTxPct = selfTx/totalHFVisits
            gen STTHPct = (selfTx + tradHealer)/totalHFVisits

            save "Modified\Utilization2006.dta", replace

      * For Table 6, Col 3 - U5 MORTALITY

                  *Live children and their ages

                        * to match hh's to hf's
                        use "raw/crc2006.dta", clear
                        keep hhcode hfcode
                        sort hhcode
                        save "temp/HH_HF.dta", replace

                        * adding in immunization data that involves ages of live
children - each row is a child
                        merge 1:m hhcode using "raw/crc2006_s8q10.dta" //note this
only covers households with children under 5
                        keep hhcode hfcode s8code1 s8q10a
                        rename s8code1 liveChildLineNum
                        rename s8q10a ageInMonths
```

```
                        drop if liveChildLineNum==. // drops the 2074 HH's with no
under 5 children
                        codebook hhcode // left with 2922 HH's that have at least
one under 5 child --> total of 4967 children

                        gen underOneLive = ageInMonths<13
                        gen oneToTwoLive = ageInMonths>12 & ageInMonths<25
                        gen twoToThreeLive = ageInMonths>24 & ageInMonths<37
                        gen threeToFourLive = ageInMonths>36 & ageInMonths<49
                        gen fourToFiveLive = ageInMonths>48 & ageInMonths<61
                        gen live = 1
                        save "temp\liveChildrenCohorts.dta", replace //each row is
a live child

                        collapse (sum) underOne oneToTwo twoToThree threeToFour
fourToFive, by(hfcode) // total number of kids in each cohort, by health facility

                        * each line is a hf; vars have number of live children in
each age group
                        save "temp\numLiveChildrenByAgeGroupHF.dta", replace

                    *Dead children and their ages

                        use "raw/crc2006.dta", clear
                        keep hhcode hfcode  s8q3a s8q3b*
                        gen firstDeadChild = s8q3a>0 & s8q3a<.
                        gen ageInMonths = s8q3b1
                        keep if firstDeadChild==1
                        keep hhcode ageInMonths
                        save "temp\numDeadChildren1.dta", replace // each row is a
child, from HH's that had any child deaths

                        use "raw/crc2006.dta", clear
                        keep hhcode hfcode  s8q3a s8q3b*
                        gen secondDeadChild = s8q3a>1 & s8q3a<.
                        gen ageInMonths = s8q3b2
                        keep if secondDeadChild==1
                        keep hhcode ageInMonths
                        save "temp\numDeadChildren2.dta", replace // each row is a
child, from HH's that had at least 2 child deaths

                        use "raw/crc2006.dta", clear
                        keep hhcode hfcode  s8q3a s8q3b*
                        gen thirdDeadChild = s8q3a>2 & s8q3a<.
                        gen ageInMonths = s8q3b3
                        keep if thirdDeadChild==1
                        keep hhcode ageInMonths
                        save "temp\numDeadChildren3.dta", replace // each row is a
child, from HH's that had at least 3 child deaths

                        append using "temp\numDeadChildren1.dta"
                        append using "temp\numDeadChildren2.dta"
                        merge m:1 hhcode using "temp/HH_HF.dta" // to assign every
dead child to a health facility
```

```
                        keep if _merge==3 // only keep 127 dead children

                        gen underOneDead = ageInMonths<13
                        gen oneToTwoDead = ageInMonths>12 & ageInMonths<25
                        gen twoToThreeDead = ageInMonths>24 & ageInMonths<37
                        gen threeToFourDead = ageInMonths>36 & ageInMonths<49
                        gen fourToFiveDead = ageInMonths>48 & ageInMonths<61
                        save "temp\deadChildrenCohorts.dta", replace // every row
is a child, all assigned to a health facility

                        collapse (sum) underOne oneToTwo twoToThree threeToFour
fourToFive, by(hfcode)
                              // NOTE: only 45/50 facilities have children who
died
                              // total number of dead children in each age range,
for each facility

                        * each line is a hf; vars have number of dead children in
each age group
                        save "temp\numDeadChildrenByAgeGroupHF.dta", replace

                        merge 1:1 hfcode using
"temp\numLiveChildrenByAgeGroupHF.dta"

                        * if there are no values for the dead children, it means
the hf had 0 - fill in here
                        foreach x in underOneDead oneToTwoDead twoToThreeDead
threeToFourDead fourToFiveDead {
                              replace `x' = 0 if _merge==2
                              }

                        gen underOneMort = underOneDead /(underOneLive +
underOneDead)
                        gen oneToTwoMort = oneToTwoDead /(oneToTwoLive +
oneToTwoDead)
                        gen twoToThreeMort = twoToThreeDead /(twoToThreeLive +
twoToThreeDead)
                        gen threeToFourMort = threeToFourDead /(threeToFourLive +
threeToFourDead)
                        gen fourToFiveMort = fourToFiveDead /(fourToFiveLive +
fourToFiveDead)
                        egen deathRate = rowtotal(underOneMort oneToTwoMort
twoToThreeMort threeToFourMort fourToFiveMort)
                        gen deathRatePer1000 = 1000*deathRate
                        capture drop _merge
                        save "Modified\U5DeathRateByHF.dta", replace


            * Table 6, Col 1

                  * 2922 HH's with live u5 children
                  use "temp\liveChildrenCohorts.dta", clear
                  collapse hfcode (sum) underOne, by(hhcode) // total number of
births in each HH (from among live children)
                  rename underOne numBirthsPastYearNowLive
```

```
                    save "temp/temp1.dta", replace

                    * 119 HH's with dead u5 children
                    use "temp\deadChildrenCohorts.dta", clear
                    collapse hfcode (sum) underOne, by(hhcode) // total number of
births in each HH (from among dead children)
                    rename underOne numBirthsPastYearNowDead
                    merge 1:1 hhcode using "temp/temp1.dta" // 119 HH's that had a
death match
                    capture drop _merge

                    merge 1:1 hhcode using "temp/HH_HF.dta"
                    egen numBirthsOverall = rowtotal(numBirthsPastYearNowLive
numBirthsPastYearNowDead)
                    capture drop _merge
                    save "Modified\numBirths.dta", replace // each row is a HH

             * Table 6, Col 2
                    * note: var pregnant = s7q1==1 is defined in Tables do file

             * Table 6, Col 4
                    use "Modified\HF2004.dta", clear // 50 HF's & tx assignment
                    keep treatment hfcode
                    capture drop _merge
                    save "temp\temp2.dta", replace
                    merge 1:m hfcode using "temp/HH_HF.dta" // merge in 4996 HH's
                    capture drop _merge
                    save "temp/temp3.dta", replace // HH's, HF's, and tx assignment

                    use "temp\liveChildrenCohorts.dta", clear // 4967 children from
2922 HH's with live children
                           gen death=0
                    append using "temp\deadChildrenCohorts.dta" // 127 children from
119 HH's with dead children
                           replace death=1 if death==. // each row is a child

                    * indicator for the child being in each of these age groups
                    foreach x in underOne oneToTwo twoToThree threeToFour fourToFive
{
                           gen `x' = `x'Live if `x'Live!=.
                           replace `x' = `x'Dead if `x'Dead!=.
                           tab `x', m
                           }

                           // each row is one of the 5094 (4967 + 127) children

                    capture drop _merge
                    merge m:1 hhcode using "temp\temp3.dta" // doesnt match the 2074
HHs without children
                    drop if _merge!=3

                    keep hhcode hfcode underOne oneToTwo twoToThree threeToFour
fourToFive treatment death

                    gen underOneT = treatment*underOne
```

```
gen oneToTwoT = treatment*oneToTwo
gen twoToThreeT = treatment*twoToThree
gen threeToFourT = treatment*threeToFour
gen fourToFiveT = treatment*fourToFive

save "Modified/Table6Col4.dta", replace

* Table 6, Cols 5 and 6

* to get hfcode
use "raw/crc2006.dta", clear
keep hhcode hfcode
sort hhcode

* weight data
merge 1:m hhcode using "raw/crc2006_s8q12.dta"
drop if _merge!=3
capture drop _merge

* gender data
merge 1:1 cc_s28 using "raw\gender_s28.dta"
capture drop _merge
// net install dm0004.pkg

rename s8q12b weight
gen ageInMonths = s8q12a
gen lnAge = ln(1+s8q12a)
egen WAZ=zanthro(weight, wa, US), xvar(ageInMonths)
gender(female) gencode(male=0, female=1) ageunit(month)

save "Modified/Table6Cols56.dta", replace
```

Merge and prepare baseline facility data

```
cd "...\Data"

* Treatment Status
	use "raw\treatmentstatus.dta", clear
	gen control = 1 - treatment
	sort hfcode
	save "Modified\HF2004.dta", replace

* Section 1: Identification
	use "raw\hs04_1.dta", clear
	sort hfcode
	merge 1:1 hfcode using "Modified\HF2004.dta"
	capture drop _merge
	save "Modified\HF2004.dta", replace

* Section 2: Characteristics of the Health Facility
	use "raw\hs04_2.dta", clear
	gen drankSafely2004=hs2q14==1 //Table 1
	gen daysNoPwr2004=hs2q17c //Table 1
		replace daysNoPwr2004=31 if hs2q16==2
	gen pipedWater = hs2q13a==2 | hs2q13c==2 //Table 1/A1
	gen radio=hs2q19==1 //Table 1/A1
	gen newspaper=hs2q21==1 //Table 1/A1
	gen sepMatUnit = hs2q1==2 //Table 1/A1
	gen distNearestLC1 = hs2q24g //Table 1/A1
	gen distNearestPubProv =hs2q27e //Table 1/A1
		replace distNearestPubProv=hs2q26e if hs2q27e==. //this approach, with
specific ordering
			//instead of actual closest public health facility is not as
described in the appendix
			//but gives same actual values
		replace distNearestPubProv=hs2q28e if distNearestPubProv==.
	egen distNearestPubProvAlt=rowmin(hs2q26e hs2q27e hs2q28e)
	sort hfcode
	merge 1:1 hfcode using "Modified\HF2004.dta"
	capture drop _merge
	save "Modified\HF2004.dta", replace

* Section 3: Services
	* each row appears is a facility month, from
	* skipped in main analysis, possibly because do not have full data on all
facilities
	use "raw\hs04_3.dta", clear

	* fix some facilities having multiple months repeated
	bysort hfcode hs3mth: gen counter=_n
	tab counter
	drop if counter>1
	tab hs3mth //don't have nov and dec for all facilities, so work with averages

	bysort hfcode: egen avgOutreach = mean(hs3q6)
	collapse avgOutreach, by(hfcode)
	sum avgOutreach
```

```
	sort hfcode
	merge 1:1 hfcode using "Modified\HF2004.dta"
	capture drop _merge
	save "Modified\HF2004.dta", replace

* Section 4: Information on Staff
	* each row is a staff member
	use "raw\hs04_4.dta", clear
		*number of staff with advanced A-level education
		gen aLevel=hs4q6a==1 | hs4q6a==2
		tab aLevel
		bysort hfcode: egen totalALevel = sum(aLevel)

		*number of staff with below A-level education
		gen belowALevel=hs4q6a!=1 & hs4q6a!=2
		tab belowALevel
		bysort hfcode: egen totalBelowALevel = sum(belowALevel)

		*number of workers in facility (Table 3)
		gen numWorkers = hs4q1

	collapse totalALevel totalBelowALevel numWorkers, by(hfcode)
	sort hfcode
	merge 1:1 hfcode using "Modified\HF2004.dta"
	capture drop _merge
	save "Modified\HF2004.dta", replace

* Section 5: Information on drugs
	* each row is a facility-month from Jan - Dec 2003
	use "raw\hs04_5.dta", clear
		recode erythromycin chloroquine cotrimoxazole quinine mebendazole
(88888=.) (33333=.)

		bysort hfcode: egen avgEryRecd = mean(erythromycin)
		bysort hfcode: egen avgChlRecd = mean(chloroquine)
		bysort hfcode: egen avgCotRecd = mean(cotrimoxazole)
		bysort hfcode: egen avgQuiRecd = mean(quinine)
		bysort hfcode: egen avgMebRecd = mean(mebendazole)

	collapse avgEry avgChl avgCot avgQui avgMeb, by(hfcode)
	sum avgEry avgChl avgCot avgQui avgMeb
	sort hfcode
	merge 1:1 hfcode using "Modified\HF2004.dta"
	capture drop _merge
	save "Modified\HF2004.dta", replace

* Section 6: Information on Vaccines

	* each row is a facility month, from Aug - Dec 2003 (have all facilities for
all 4 months)
	use "raw\hs04_6.dta", clear
		recode bcg polio measles (88888=.)
		// there are some outliers in measles

	collapse bcg polio measles, by(hfcode)
```

```
	rename bcg avgBCG
	rename polio avgPolio
	rename measles avgMeasles
	sum avgBCG avgPolio avgMeasles
	sort hfcode
	merge 1:1 hfcode using "Modified\HF2004.dta"
	capture drop _merge
	save "Modified\HF2004.dta", replace

* Section 7: HIV/AIDS service delivery and contraceptives
	* each row is a health facility
	use "raw\hs04_7.dta", clear
	sort hfcode
	merge 1:1 hfcode using "Modified\HF2004.dta"
	capture drop _merge
	save "Modified\HF2004.dta", replace

* Section 8: Outputs/Patients Data
	* each row is a facility month, from Jan - Dec 2003
		* Note: only have full 12 months for some vars
	use "raw\hs04_8.dta", clear
		recode hs8q5 (888=.)
		recode hs8q2 hs8q10 h8q11a h8q11b h8q11c (88888=.)
	gen adultOP = hs8q3 - hs8q4
		replace adultOP=. if hs8cmh==12 //excluding December - doesn't actually
make a diff for balance
	gen adultOPwDec = hs8q3 - hs8q4 // checks
	gen OP = hs8q3 // checks
		replace OP=. if hs8cmh==12 //excluding December to match authors' choice
	gen delWDec = hs8q5
	replace hs8q5=. if hs8cmh==12 //excluding December
	collapse adultOP adultOPwDec OP hs8q2 hs8q3 hs8q4 hs8q5 delWDec, by(hfcode)
//generates mthly avg # of OP's, etc., excluding Dec
	rename adultOP avgAdultOP //Table 1
	rename OP avgOP // Table 1 checks (includes young kids)
	rename adultOPwDec avgAdultOPwDec // Table 1 checks
	rename hs8q2 avgOPHMIS
	rename hs8q3 avgOPPtRecords
	rename hs8q4 avgOPUnder5
	rename hs8q5 avgDel //Table 1
	rename delWDec avgDelWDec // Table 1 checks
	//skipping lab tests done (hs8q10, h8q11a, h8q11b)
	sort hfcode
	merge 1:1 hfcode using "Modified\HF2004.dta"
	capture drop _merge
	save "Modified\HF2004.dta", replace

* Section 9: financing
	* skipped

* Catchment Area Data //Table 1
	use "raw\catchment_area.dta", clear
	gen hhsPerVill=hhs/villagen
	sort hfcode
	merge 1:1 hfcode using "Modified\HF2004.dta"
```

```
	capture drop _merge
	save "Modified\HF2004.dta", replace


** Separate Dataset with 2004 controls
	use "Modified\HF2004.dta", clear
	keep hfcode hdcode treatment villagen daysNoPwr2004 sepMatUnit
distNearestPubProv ///
		totalBelowALevel drankSafely2004 avgQuiRecd
	sort hfcode
	save "Modified\HF2004Controls", replace

** Separate Dataset with 2004 number of workers
	use "Modified\HF2004.dta", clear
	keep hfcode numWorkers
	save "Modified\NumWorkers2004.dta", replace
```

Merge and prepare endline facility data

```
cd "...\Data"

* Treatment Status
	use "raw\treatmentstatus.dta", clear
	gen control = 1 - treatment
	sort hfcode
	save "Modified\HF2006.dta", replace

* HF 2006 Data
	use "raw\hf2006.dta", clear

	* For use in Table 2
	gen suggestionBox = hs12q10==1
	gen numWaitingCards = hs12q9==1
		replace numWaitingCards=0 if hs12q9==3
	gen posterFreeServices = hs12q5==1
	gen posterPtRts = hs12q4==1

	* For use in Table 3
	merge 1:1 hfcode using "Modified\NumWorkers2004.dta" //from end of HF04
cleaning do file
	capture drop _merge
	gen numStaffPresent = hs1q1
	gen numStaffPresent2 = hs13q7 //if no staff were present on first visit, use
second visit
	gen numStaffOutreach = hs5q8
	gen absenceRate = (numWorkers - numStaffPresent -
numStaffOutreach)/(numWorkers - numStaffOutreach)
		replace absenceRate = (numWorkers - numStaffPresent2 -
numStaffOutreach)/(numWorkers - numStaffOutreach) ///
			if numStaffPresent==0
		replace absenceRate=. if absenceRate<0 //following orig authors' lead
	sum absenceRate

	* following authors' lead, don't use chloroquine or quinine
	gen allMissingErth = 1
```

```
	foreach x of varlist hs8q1b1-hs8q1b9 {
		replace allMissingErth = 0 if `x'!=.
		}
	gen allMissingCotr = 1
	foreach x of varlist hs8q3b1-hs8q3b9 {
		replace allMissingCotr = 0 if `x'!=.
		}
	gen allMissingMeb = 1
	foreach x of varlist hs8q5b1-hs8q5b9 {
		replace allMissingMeb = 0 if `x'!=.
		}

	egen erthStockouts = anycount(hs8q1b1 - hs8q1b9), values(0)
		replace erthStockouts=. if allMissingErth==1
		replace erthStockouts = erthStockouts/9
	egen cotrStockouts = anycount(hs8q3b1 - hs8q3b9), values(0)
		replace cotrStockouts=. if allMissingCotr==1
		replace cotrStockouts = cotrStockouts/9
	egen mebStockouts = anycount(hs8q5b1 - hs8q5b9), values(0)
		replace mebStockouts=. if allMissingMeb==1
		replace mebStockouts = mebStockouts/9

	gen stockoutsCount = (erthStockouts+cotrStockouts+mebStockouts)/3
	sum stockoutsCount

	** note: variables for management of clinic are generated in Tables do file
		* floorCondition (hs13q15), wallCondition (hs13q16), furnitureCondition
(hs13q17), smell (hs13q18)


	* For use in Table 5
		 //ALL exclude Jan and Dec, following authors' lead
	egen avgAdultOP = rowmean(hs7q3c hs7q3e hs7q3g hs7q3i hs7q3k)
	egen avgDel = rowmean(hs7q5b hs7q5c hs7q5d hs7q5e hs7q5f hs7q5g hs7q5h hs7q5i
hs7q5j hs7q5k)
	egen avgANC = rowmean(hs7q6b hs7q6c hs7q6d hs7q6e hs7q6f hs7q6g hs7q6h hs7q6i
hs7q6j hs7q6k)
	egen avgFP =  rowmean(hs7q7b hs7q7c hs7q7d hs7q7e hs7q7f hs7q7g hs7q7h hs7q7i
hs7q7j hs7q7k)
	egen avgUnder5 =  rowmean(hs7q4c hs7q4e hs7q4g hs7q4i hs7q4k hs7q4l)

	* For use in Table 7
	gen freeHC = hs3q18a==1
		replace freeHC = . if hs3q18a==.
	gen attendOneHr = hs3q18b==1
		replace attendOneHr = . if hs3q18b==.
	gen confidentialTx = hs3q18c==1
		replace confidentialTx = . if hs3q18c==.
	gen politeTx = hs3q18d==1
		replace politeTx = . if hs3q18d==.
	gen infoOnDrugs = hs3q18e==1
		replace infoOnDrugs = . if hs3q18e==.
	gen patRightsIndex=0 if hs3q17==2 //0 if answered "no" to knowing any rights
		replace patRightsIndex = (freeHC + attendOneHr + confidentialTx +
politeTx + infoOnDrugs)/5 ///
```

```
            if hs3q17==1

sort hfcode
merge 1:1 hfcode using "raw\cbo_presence.dta"
capture drop _merge
gen CBOBefore = cbo_present_before


sort hfcode
merge 1:1 hfcode using "Modified\HF2006.dta" // adding in tx status
capture drop _merge
save "Modified\HF2006.dta", replace
```

Pure replication

```
cd "...\Data"


** TABLE 1 **

      ** TABLE 1, PANEL 1 **
            use "Modified\HF2004.dta", clear
            cd "...\Tables"

            putexcel A1=("Variables") B1=("Treatment Group") C1=("Control Group")
D1=("Difference") ///
                  A2=("Key characteristics") ///
                  using "Table 1 Panel 1", replace

            * Row 1: Outpatient Care
                  reg avgAdultOP treatment control, nocons robust
                  putexcel A3=("Outpatient care") ///
                              B3=(round(_b[treatment])) B4=(round(_se[treatment]))
///
                              C3=(round(_b[control])) C4=(round(_se[control])) ///
                              using "Table 1 Panel 1", modify

                  reg avgAdultOP treatment, robust
                  putexcel D3=(round(_b[treatment])) D4=(round(_se[treatment])) ///
                              using "Table 1 Panel 1", modify

            * Row 2: Delivery
                  reg avgDel treatment control, nocons robust
                  putexcel A5=("Delivery") ///
                              B5=(round(_b[treatment],.1))
B6=(round(_se[treatment],.1)) ///
                              C5=(round(_b[control],.1))
C6=(round(_se[control],.1)) ///
                              using "Table 1 Panel 1", modify

                  reg avgDel treatment, robust
                  putexcel D5=(round(_b[treatment],.1))
D6=(round(_se[treatment],.1)) ///
                              using "Table 1 Panel 1", modify

            * Row 3: No. of households in catchment area
                  reg hhs treatment control, nocons robust
                  putexcel A7=("No. of households in catchment area") ///
                              B7=(round(_b[treatment])) B8=(round(_se[treatment]))
///
                              C7=(round(_b[control])) C8=(round(_se[control])) ///
                              using "Table 1 Panel 1", modify

                  reg hhs treatment, robust
                  putexcel D7=(round(_b[treatment],.1)) D8=(round(_se[treatment]))
///
                              using "Table 1 Panel 1", modify
```

```
            * Row 4: No. of households per village
                  reg hhsPerVill treatment control, nocons robust
                  putexcel A9=("No. of households per village") ///
                                    B9=(round(_b[treatment],.1))
B10=(round(_se[treatment],.01)) ///
                                    C9=(round(_b[control],.1))
C10=(round(_se[control],.01)) ///
                                    using "Table 1 Panel 1", modify

                  reg hhsPerVill treatment, robust
                  putexcel D9=(round(_b[treatment],.01))
D10=(round(_se[treatment],.01)) ///
                                    using "Table 1 Panel 1", modify

            * Row 5: Drank safely today
                  reg drankSafely2004 treatment control, nocons robust
                  putexcel A11=("Drank safely today") ///
                                    B11=(round(_b[treatment],.01))
B12=(round(_se[treatment],.01)) ///
                                    C11=(round(_b[control],.01))
C12=(round(_se[control],.01)) ///
                                    using "Table 1 Panel 1", modify

                  reg drankSafely2004 treatment, robust
                  putexcel D11=(round(_b[treatment],.01))
D12=(round(_se[treatment],.01)) ///
                                    using "Table 1 Panel 1", modify

            * Row 6: No. of days without electricity in past month
                  reg daysNoPwr2004 treatment control, nocons robust
                  putexcel A13=("No. of days without electricity in past month")
///
                                    B13=(round(_b[treatment],.1))
B14=(round(_se[treatment],.01)) ///
                                    C13=(round(_b[control],.01))
C14=(round(_se[control],.01)) ///
                                    using "Table 1 Panel 1", modify

                  reg daysNoPwr2004 treatment, robust
                  putexcel D13=(round(_b[treatment],.01))
D14=(round(_se[treatment],.01)) ///
                                    using "Table 1 Panel 1", modify



      ** TABLE 1, PANEL 2 **
      * All of these follow Eq. 3 in the text; all are supposed to be based on
            * health facility averages, according to notes on A.1 (though not all
            * averages are actually health facility level - many are not collapsed
down)
      * Follow authors' revised code, and do not collapse individual-level outcomes
            * down to hf level (means that user charges move from being marginal sig
to insig)
      cd "...\Data"
```

```
set more off
use "Modified\HF2004.dta", clear
merge 1:m hfcode using "Modified\HH2004.dta"


* Utilization (outpatient care, delivery) - HF04
      preserve
      collapse treatment avgAdultOP avgDel, by(hfcode)
      mysureg (avgAdultOP treatment) (avgDel treatment), vce(robust)
      sum avgAdultOP if treatment==0
            global avgAdultOPSD = r(sd)
      sum avgDel if treatment==0
            global avgDelSD = r(sd)
      lincom .5*([avgAdultOP]treatment/$avgAdultOPSD +
[avgDel]treatment/$avgDelSD)
      mat tab1Pan2 = round(r(estimate),.01) \ round(r(se),.01)
      mat list tab1Pan2
      restore

* Utilization pattern (facilities visited, reverse sign of TH and Self
Tx) - HH04
      * note: dropped otherHFPct to avoid collinearity
      mysureg (projectFacilityPct treatment) (NGOPct treatment) ///
            (pvtForProfPct treatment) (tradHealerPct treatment) ///
            (selfTxPct treatment) (otherGovtPct treatment) (otherHFPct
treatment) ///
            , cluster(hfcode)
      sum projectFacilityPct if treatment==0
            global projectFacilityPctSD = r(sd)
      sum NGOPct if treatment==0
            global NGOPctSD = r(sd)
      sum pvtForProfPct if treatment==0
            global pvtForProfPctSD = r(sd)
      sum tradHealerPct if treatment==0
            global tradHealerPctSD = r(sd)
      sum selfTxPct if treatment==0
            global selfTxPctSD = r(sd)
      sum otherGovtPct if treatment==0
            global otherGovtPctSD = r(sd)
      sum otherHFPct if treatment==0
            global otherHFPctSD = r(sd)
      lincom (1/7)*([projectFacilityPct]treatment/$projectFacilityPctSD
///
            + [NGOPct]treatment/$NGOPctSD ///
            + [pvtForProfPct]treatment/$pvtForProfPctSD ///
            - [tradHealerPct]treatment/$tradHealerPctSD ///
            - [selfTxPct]treatment/$selfTxPctSD ///
            + [otherGovtPct]treatment/$otherGovtPctSD ///
            + [otherHFPct]treatment/$otherHFPctSD )
      mat tab1Pan2 = tab1Pan2 \ round(r(estimate),.01) \
round(r(se),.01)
      mat list tab1Pan2

* Quality Measures (waiting time and equipment used) - HH04
```

```
                    mysureg (waitingTime treatment) (equipmentUsed treatment),
cluster(hfcode)
                    sum waitingTime if treatment==0
                           global waitingTimeSD = r(sd)
                    sum equipmentUsed if treatment==0
                           global equipmentUsedSD = r(sd)

                    lincom (1/2)*(-[waitingTime]treatment/$waitingTimeSD ///
                           + [equipmentUsed]treatment/$equipmentUsedSD )
                    mat tab1Pan2 = tab1Pan2 \ round(r(estimate),.01) \
round(r(se),.01)
                    mat list tab1Pan2

             * Catchment Area Stats - HF04
                    * to exactly match what authors sent in revised code
                    preserve
                    collapse treatment hhs hhsPerVill villagen village1 village3,
by(hfcode)
                    mysureg (hhs treatment) (hhsPerVill treatment) (villagen
treatment) ///
                           (village1 treatment) (village3 treatment), vce(robust)
                    sum hhs if treatment==0
                           global hhsSD = r(sd)
                    sum hhsPerVill if treatment==0
                           global hhsPerVillSD = r(sd)
                    sum villagen if treatment==0
                           global villagenSD = r(sd)
                    sum village1 if treatment==0
                           global village1SD = r(sd)
                    sum village3 if treatment==0
                           global village3SD = r(sd)

                    lincom (1/5)*([hhs]treatment/$hhsSD ///
                           + [hhsPerVill]treatment/$hhsPerVillSD ///
                           + [villagen]treatment/$villagenSD ///
                           + [village1]treatment/$village1SD ///
                           + [village3]treatment/$village3SD )
                    mat tab1Pan2 = tab1Pan2 \ round(r(estimate),.01) \
round(r(se),.01)
                    mat list tab1Pan2
                    restore

                    * to do what the paper says
                    preserve
                    collapse treatment villagen village1 village3 village5,
by(hfcode)
                    set more off
                    mysureg (village1 treatment) (village3 treatment) (village5
treatment), vce(robust)
                    sum village1 if treatment==0
                           global village1SD = r(sd)
                    sum village3 if treatment==0
                           global village3SD = r(sd)
                    sum village5 if treatment==0
                           global village5SD = r(sd)
```

```
                lincom (1/3)*([village1]treatment/$village1SD ///
                        + [village3]treatment/$village3SD ///
                        + [village5]treatment/$village5SD )
                mat tab1Pan2 = tab1Pan2 \ round(r(estimate),.01) \
round(r(se),.01)
                mat list tab1Pan2
                restore

            * Health Facility Chars (10 things) - HF04
                preserve
                collapse treatment pipedWater radio newspaper sepMatUnit
distNearestLC1 distNearestPubProv ///
                        totalALevel totalBelowALevel drankSafely2004
daysNoPwr2004, by(hfcode)
                mysureg (pipedWater treatment) ///
                        (radio treatment) ///
                        (newspaper treatment) ///
                        (sepMatUnit treatment) ///
                        (distNearestLC1 treatment) ///
                        (distNearestPubProv treatment) ///
                        (totalALevel treatment) ///
                        (totalBelowALevel treatment) ///
                        (drankSafely2004 treatment) ///
                        (daysNoPwr2004 treatment), vce(robust)
                foreach var in pipedWater radio newspaper sepMatUnit
distNearestLC1 distNearestPubProv ///
                        totalALevel totalBelowALevel drankSafely2004 daysNoPwr2004
{
                                sum `var' if treatment==0
                                global `var'SD = r(sd)
                        }
                lincom (1/10)*([pipedWater]treatment/$pipedWaterSD ///
                        + [radio]treatment/$radioSD ///
                        + [newspaper]treatment/$newspaperSD ///
                        + [sepMatUnit]treatment/$sepMatUnitSD ///
                        - [distNearestLC1]treatment/$distNearestLC1SD ///
                        + [distNearestPubProv]treatment/$distNearestPubProvSD ///
                        + [totalALevel]treatment/$totalALevelSD ///
                        + [totalBelowALevel]treatment/$totalBelowALevelSD ///
                        + [drankSafely2004]treatment/$drankSafely2004SD ///
                        - [daysNoPwr2004]treatment/$daysNoPwr2004SD )
                mat tab1Pan2 = tab1Pan2 \ round(r(estimate),.01) \
round(r(se),.01)
                mat list tab1Pan2
                restore

            * Citizen Perceptions - HH04
                mysureg (polite treatment) ///
                        (paidAttn treatment) ///
                        (freeToExpress treatment) ///
                        (informAbtDrugDel treatment), cluster(hfcode)
                foreach var in polite paidAttn freeToExpress informAbtDrugDel {
                                sum `var' if treatment==0
                                global `var'SD = r(sd)
```

```
                        }
                  lincom (1/4)*([polite]treatment/$politeSD ///
                        + [paidAttn]treatment/$paidAttnSD ///
                        + [freeToExpress]treatment/$freeToExpressSD ///
                        + [informAbtDrugDel]treatment/$informAbtDrugDelSD )
                  mat tab1Pan2 = tab1Pan2 \ round(r(estimate),.01) \
round(r(se),.01)
                  mat list tab1Pan2


            * Supply of drugs - HF04
                  preserve
                  collapse treatment avgEryRecd avgChlRecd avgCotRecd avgQuiRecd
avgMebRecd, by(hfcode)
                  mysureg (avgEryRecd treatment) ///
                        (avgChlRecd treatment) ///
                        (avgCotRecd treatment) ///
                        (avgQuiRecd treatment) ///
                        (avgMebRecd treatment), vce(robust)
                  foreach var in avgEryRecd avgChlRecd avgCotRecd avgQuiRecd
avgMebRecd {
                              sum `var' if treatment==0
                              global `var'SD = r(sd)
                        }
                  lincom (1/5)*([avgEryRecd]treatment/$avgEryRecdSD ///
                        + [avgChlRecd]treatment/$avgChlRecdSD ///
                        + [avgCotRecd]treatment/$avgCotRecdSD ///
                        + [avgQuiRecd]treatment/$avgQuiRecdSD ///
                        + [avgMebRecd]treatment/$avgMebRecdSD )
                  mat tab1Pan2 = tab1Pan2 \ round(r(estimate),.01) \
round(r(se),.01)
                  mat list tab1Pan2
                  restore

            * User charges - HH04
                  * facility level (matching authors)
                  preserve
                  collapse treatment avgDrugCharge avgGenTxCharge
avgInjectionCharge avgDeliveryCharge, by(hfcode)
                  mysureg (avgDrugCharge treatment) ///
                        (avgGenTxCharge treatment) ///
                        (avgInjectionCharge treatment) ///
                        (avgDeliveryCharge treatment), vce(robust)
                  foreach var in avgDrugCharge avgGenTxCharge avgInjectionCharge
avgDeliveryCharge {
                              sum `var' if treatment==0
                              global `var'SD = r(sd)
                        }
                  lincom (1/4)*(-[avgDrugCharge]treatment/$avgDrugChargeSD ///
                        - [avgGenTxCharge]treatment/$avgGenTxChargeSD ///
                        - [avgInjectionCharge]treatment/$avgInjectionChargeSD ///
                        - [avgDeliveryCharge]treatment/$avgDeliveryChargeSD )
                  mat tab1Pan2 = tab1Pan2 \ round(r(estimate),.01) \
round(r(se),.01)
                  mat list tab1Pan2
```

```
                    restore

                    * individual level (following pattern in all other rows)
                    mysureg (drugsCharge treatment) ///
                           (genTxCharge treatment) ///
                           (injectionCharge treatment) ///
                           (deliveryCharge treatment), cluster(hfcode)
                    foreach var in drugsCharge genTxCharge injectionCharge
deliveryCharge {
                                  sum `var' if treatment==0
                                  global `var'SD = r(sd)
                           }
                    lincom (1/4)*(-[drugsCharge]treatment/$drugsChargeSD ///
                           - [genTxCharge]treatment/$genTxChargeSD ///
                           - [injectionCharge]treatment/$injectionChargeSD ///
                           - [deliveryCharge]treatment/$deliveryChargeSD )


** TABLE 2
       * Columns 1-5
              use "Modified\HF2004.dta", clear
              merge 1:1 hfcode using "Modified\HF2006.dta"

              gen lndist = ln(distNearestPubProv)

              tab hdcode, gen(dist)

              mysureg (suggestionBox treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                           totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                           (numWaitingCards treatment villagen daysNoPwr2004
sepMatUnit lndist ///
                           totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                           (posterFreeServices treatment villagen daysNoPwr2004
sepMatUnit lndist ///
                           totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                           (posterPtRts treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                           totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                           , vce(robust)


              foreach var in suggestionBox numWaitingCards posterFreeServices
posterPtRts {
                                        sum `var' if treatment==0
                                        global `var'SD = r(sd)
                                  }

              ** Since variance on suggestionBox in control group is zero, can do this
excluding the var:
              lincom (1/3)*([numWaitingCards]treatment/$numWaitingCardsSD ///
```

```
                  + [posterFreeServices]treatment/$posterFreeServicesSD ///
                  + [posterPtRts]treatment/$posterPtRtsSD )

            ** or creating a new var, the sum of suggestionBox and numWaitingCards
(based on author suggestion):
            gen suggAndWaiting = suggestionBox + numWaitingCards
                  sum suggAndWaiting if treatment==0
                  global suggAndWaitingSD = r(sd)
            mysureg (suggAndWaiting treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (posterFreeServices treatment villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (posterPtRts treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        , vce(robust)
            lincom (1/3)*([suggAndWaiting]treatment/$suggAndWaitingSD ///
                              +
[posterFreeServices]treatment/$posterFreeServicesSD ///
                              + [posterPtRts]treatment/$posterPtRtsSD)



      * Columns 6 and 7
            use "Modified\HF2004.dta", clear // for controls
            merge 1:m hfcode using "Modified\HH2006.dta" //for outcomes

            gen lndist = ln(distNearestPubProv)

                  reg discFacLCMtgs treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                              totalBelowALevel drankSafely2004 avgQuiRecd
i.hdcode, robust cluster(hfcode)
                  sum discFacLCMtgs if treatment==0
                  reg recdInfoAbtHUMC treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                              totalBelowALevel drankSafely2004 avgQuiRecd
i.hdcode, robust cluster(hfcode)
                  sum recdInfoAbtHUMC if treatment==0

** TABLE 3
      * Rows 1, 3
            set more off
            cd "...\Data"

            use "Modified\HH2004.dta", clear
                  keep hhcode hfcode treatment year waitingTime equipmentUsed
                  save "Modified\HHWaitEquip.dta", replace
            use "Modified\HH2006.dta", clear
            keep hhcode hfcode treatment year waitingTime equipmentUsed
```

```
            append using "Modified\HHWaitEquip.dta"

            gen year06=year==2006
            gen txAnd06 = treatment*year06
            reg equipmentUsed txAnd06 year06 i.hfcode, robust cluster(hfcode)
                  sum equipmentUsed if treatment==0 & year==2006
            reg waitingTime txAnd06 year06 i.hfcode, robust cluster(hfcode)
                  sum waitingTime if treatment==0 & year==2006

      * Rows 2, 4
            use "Modified\HH2006.dta", clear
            merge m:1 hfcode using "Modified\HF2004.dta"

            gen lndist = ln(distNearestPubProv) // makes a big diff on waiting time
to use ln(dist) instead of just dist

            reg equipmentUsed treatment villagen daysNoPwr2004 sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode, robust cluster(hfcode)
            sum equipmentUsed if treatment==0
            reg waitingTime treatment villagen daysNoPwr2004 sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode, robust cluster(hfcode)
            sum waitingTime if treatment==0

      * Row 5: Absence Rate
            use "Modified\HF2004.dta", clear
            keep treatment villagen daysNoPwr2004 sepMatUnit ///
                  distNearestPubProv totalBelowALevel drankSafely2004 avgQuiRecd
///
                  hdcode hfcode

            gen lndist = ln(distNearestPubProv)

            sort hfcode
            merge 1:1 hfcode using "Modified\HF2006.dta"
            reg absenceRate treatment villagen daysNoPwr2004 sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode, robust
            sum absenceRate if treatment==0

      * Row 6
            generate floorCondition = 4 - hs13q15 //approach follows authors' lead
            generate wallCondition = 4 - hs13q16
            generate furnitureCondition = 4 - hs13q17
            generate smell = 4 - hs13q18
            pca  floorCondition wallCondition furnitureCondition smell
            predict mgtOfClinic
            reg mgtOfClinic treatment villagen daysNoPwr2004 sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode, robust
                  sum mgtOfClinic if treatment==0


      * Rows 7-8: health info and importance of family planning
```

```
            use "Modified\HH2006.dta", clear
            merge m:1 hfcode using "Modified\HF2004.dta"
            gen lndist = ln(distNearestPubProv)

            reg healthInfo treatment villagen daysNoPwr2004 sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode, robust cluster(hfcode)
            sum healthInfo if treatment==0
            reg impOfFP treatment villagen daysNoPwr2004 sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode, robust cluster(hfcode)
            sum impOfFP if treatment==0


      * Row 9: stockouts
            use "Modified\HF2004.dta", clear
            keep treatment villagen daysNoPwr2004 sepMatUnit ///
                  distNearestPubProv totalBelowALevel drankSafely2004 avgQuiRecd
///
                  hdcode hfcode
            sort hfcode
            merge 1:1 hfcode using "Modified\HF2006.dta"
            gen lndist = ln(distNearestPubProv)

            reg stockouts treatment villagen daysNoPwr2004 sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode, robust
            sum stockouts if treatment==0



** Table 4: Immunizations
            set more off
            use "Modified\HF2004.dta", clear
            keep treatment villagen daysNoPwr2004 sepMatUnit ///
                  distNearestPubProv totalBelowALevel drankSafely2004 avgQuiRecd
///
                  hdcode hfcode
            sort hfcode
            merge 1:m hfcode using "Modified\Immunizations2006.dta"

            gen lndist = ln(distNearestPubProv)

      * Col 1: Newborns (< 3 months): N = 174
            tab hdcode, gen(dist)
            mysureg (DPTImmInfant treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (BCGImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (polioImmInfant treatment villagen daysNoPwr2004
sepMatUnit lndist ///
```

```
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (vitASuppInfant treatment villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        if ageInMonths<3, cluster(hfcode)
            foreach var in DPTImmInfant BCGImm polioImmInfant vitASuppInfant {
                                    sum `var' if treatment==0 & ageInMonths<3
                                    global `var'SD = r(sd)
                                }
            lincom (1/4)*([DPTImmInfant]treatment/$DPTImmInfantSD ///
                  + [BCGImm]treatment/$BCGImmSD ///
                  + [polioImmInfant]treatment/$polioImmInfantSD ///
                  + [vitASuppInfant]treatment/$vitASuppInfantSD )
                  mat Table4 = round(r(estimate),.01) \ round(r(se),.01) \ 173

      * Col 2: Under 1 year: N = 937
            mysureg (DPTImm treatment villagen daysNoPwr2004 sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (BCGImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (polioImm treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (vitASupp treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        if ageInMonths<13, vce(robust)
            foreach var in DPTImm BCGImm polioImm vitASupp {
                                    sum `var' if treatment==0 & ageInMonths<13
                                    global `var'SD = r(sd)
                                }
            lincom (1/4)*([DPTImm]treatment/$DPTImmSD ///
                  + [BCGImm]treatment/$BCGImmSD ///
                  + [polioImm]treatment/$polioImmSD ///
                  + [vitASupp]treatment/$vitASuppSD )
            mat Table4Col2 = round(r(estimate),.01) \ round(r(se),.01) \ 937
            mat Table4 = Table4 , Table4Col2
            mat list Table4

      * Col 3:  1 year: N = 940
            mysureg (measlesImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (DPTImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
```

```
                        (BCGImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (polioImm treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (vitASupp treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        if ageInMonths>12 & ageInMonths<25, cluster(hfcode)
            foreach var in measlesImm DPTImm BCGImm polioImm vitASupp {
                                    sum `var' if treatment==0 & ageInMonths>12 &
ageInMonths<25
                                    global `var'SD = r(sd)
                                }
            lincom (1/5)*([measlesImm]treatment/$measlesImmSD ///
                  + [DPTImm]treatment/$DPTImmSD ///
                  + [BCGImm]treatment/$BCGImmSD ///
                  + [polioImm]treatment/$polioImmSD ///
                  + [vitASupp]treatment/$vitASuppSD )
            mat Table4Col3 = round(r(estimate),.001) \ round(r(se),.001) \ 940
            mat Table4 = Table4 , Table4Col3
            mat list Table4

      * Col 4:  2 years: N = 951
            mysureg (measlesImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (DPTImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (BCGImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (polioImm treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (vitASupp treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        if ageInMonths>24 & ageInMonths<37, cluster(hfcode)
            foreach var in measlesImm DPTImm BCGImm polioImm vitASupp {
                                    sum `var' if treatment==0 & ageInMonths>24 &
ageInMonths<37
                                    global `var'SD = r(sd)
                                }
            lincom (1/5)*([measlesImm]treatment/$measlesImmSD ///
```

```
                + [DPTImm]treatment/$DPTImmSD ///
                + [BCGImm]treatment/$BCGImmSD ///
                + [polioImm]treatment/$polioImmSD ///
                + [vitASupp]treatment/$vitASuppSD )
          mat Table4Col4 = round(r(estimate),.01) \ round(r(se),.0 1) \ 951
          mat Table4 = Table4 , Table4Col4
          mat list Table4

    * Col 5:  3 years: N = 1110
          mysureg (measlesImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (DPTImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (BCGImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (polioImm treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (vitASupp treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        if ageInMonths>36 & ageInMonths<49, vce(robust)
          foreach var in measlesImm DPTImm BCGImm polioImm vitASupp {
                                  sum `var' if treatment==0 & ageInMonths>36 &
ageInMonths<49
                                  global `var'SD = r(sd)
                              }
          lincom (1/5)*([measlesImm]treatment/$measlesImmSD ///
                + [DPTImm]treatment/$DPTImmSD ///
                + [BCGImm]treatment/$BCGImmSD ///
                + [polioImm]treatment/$polioImmSD ///
                + [vitASupp]treatment/$vitASuppSD )
          mat Table4Col5 = round(r(estimate),.01) \ round(r(se),.0 1) \ 1110
          mat Table4 = Table4 , Table4Col5
          mat list Table4

    * Col 6: 4 years: N = 526
          mysureg (measlesImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (DPTImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (BCGImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
```

```
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (polioImm treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (vitASupp treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        if ageInMonths>48 & ageInMonths<61, cluster(hfcode)
            foreach var in measlesImm DPTImm BCGImm polioImm vitASupp {
                                    sum `var' if treatment==0 & ageInMonths>48 &
ageInMonths<61
                                    global `var'SD = r(sd)
                                }
            lincom (1/5)*([measlesImm]treatment/$measlesImmSD ///
                  + [DPTImm]treatment/$DPTImmSD ///
                  + [BCGImm]treatment/$BCGImmSD ///
                  + [polioImm]treatment/$polioImmSD ///
                  + [vitASupp]treatment/$vitASuppSD )
            mat Table4Col6 = round(r(estimate),.01) \ round(r(se),.0 1) \ 526
            mat Table4 = Table4 , Table4Col6
            mat list Table4


** Table 5
      * Cols 1 - 5: HF Load, OLS: HF 2004 controls and HF 2006 outcomes
            set more off
            use "Modified\HF2004.dta", clear
            keep treatment villagen daysNoPwr2004 sepMatUnit ///
                  distNearestPubProv totalBelowALevel drankSafely2004 avgQuiRecd
///
                  hdcode hfcode
            sort hfcode
            merge 1:m hfcode using "Modified\HF2006.dta"

            gen lndist = ln(distNearestPubProv)
            tab hdcode, gen(dist)
            mysureg (avgAdultOP treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (avgDel treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (avgANC treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (avgFP treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
```

```
                  , vce(robust)
        foreach var in avgAdultOP avgDel avgANC avgFP {
                              sum `var' if treatment==0
                              global `var'SD = r(sd)
                        }
        lincom (1/4)*([avgAdultOP]treatment/$avgAdultOPSD ///
              + [avgDel]treatment/$avgDelSD ///
              + [avgANC]treatment/$avgANCSD ///
              + [avgFP]treatment/$avgFPSD )
              mat Table5 = round(r(estimate),.01) \ round(r(se),.01) \ 50

        keep hfcode hdcode treatment year avgAdultOP avgDel
        save "Modified\HFLoad06.dta", replace

  * Cols 9 - 11: HF Load, DD
        use "Modified\HF2004.dta", replace
        gen year=2004
        keep hfcode hdcode treatment year avgAdultOP avgDel
        append using "Modified\HFLoad06.dta"
        save "Modified\HFLoadStackedTab5.dta", replace

        tab hfcode, gen(hf)
        gen year06=year==2006
        gen txAnd06 = treatment*year06
        mysureg (avgAdultOP txAnd06 year06 hf2-hf50) ///
                  (avgDel txAnd06 year06 hf2-hf50), vce(robust)

        foreach var in avgAdultOP avgDel {
                  sum `var' if treatment==0 & year==2006
                  global `var'SD = r(sd)
              }
        lincom (1/2)*([avgAdultOP]txAnd06/$avgAdultOPSD ///
              + [avgDel]txAnd06/$avgDelSD )
              mat Table5Col11 = round(r(estimate),.01) \ round(r(se),.01) \ 100


  * Cols 6 - 8: Utilization, OLS (collapsed by catchment area)

        set more off
        use "Modified\HF2004.dta", clear
        gen lndist = ln(distNearestPubProv)
        keep treatment villagen daysNoPwr2004 sepMatUnit ///
              lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
              hdcode hfcode
        sort hfcode
        merge 1:m hfcode using "Modified\Utilization2006.dta"
        collapse projectFacilityPct STTHPct  ///
              treatment villagen daysNoPwr2004 sepMatUnit ///
              lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
              hdcode, by(hfcode)

        tab hdcode, gen(dist)
        mysureg (projectFacilityPct treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
```

```
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (STTHPct treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        , vce(robust)
            foreach var in projectFacilityPct STTHPct {
                                    sum `var' if treatment==0
                                    global `var'SD = r(sd)
                                }
            lincom (1/2)*([projectFacilityPct]treatment/$projectFacilityPctSD ///
                  - [STTHPct]treatment/$STTHPctSD )
                  mat Table5Col8 = round(r(estimate),.01) \ round(r(se),.01) \ 50
                  mat Table5 = Table5 , Table5Col8
            gen year = 2006
            drop dist1 - dist9
            save "Modified\Utilization06Controls.dta", replace

      * Cols 12 - 14: Utilization, DD
            cd "...\Data"

            *Create Stacked Panel Dataset
            use "Modified\HF2004.dta", clear
            gen lndist = ln(distNearestPubProv)
            keep treatment villagen daysNoPwr2004 sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  hdcode hfcode
            sort hfcode
            merge 1:m hfcode using "Modified\HH2004.dta"
            collapse projectFacilityPct STTHPct ///
                  treatment villagen daysNoPwr2004 sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  hdcode year, by(hfcode)
            append using "Modified\Utilization06Controls.dta"
            save "Modified\UtilizationControlsStackedTab5.dta", replace

            * DD Regressions
            use "Modified\UtilizationControlsStackedTab5.dta", clear
            tab hdcode, gen(dist)
            tab hfcode, gen(hf)
            gen year06=year==2006
            gen txAnd06 = treatment*year06
            mysureg (projectFacilityPct txAnd06 year06 hf2-hf50) ///
                        (STTHPct txAnd06 year06 hf2-hf50), vce(robust)

            foreach var in projectFacilityPct STTHPct {
                        sum `var' if treatment==0 & year==2006
                        global `var'SD = r(sd)
                  }
            lincom (1/2)*([projectFacilityPct]txAnd06/$projectFacilityPctSD ///
                  - [STTHPct]txAnd06/$STTHPctSD )
                  mat Table5Col14 = round(r(estimate),.01) \ round(r(se),.01) \ 100
```

```
** Table 6
	* T6: Col 1

		* control vars
		use "Modified\HF2004.dta", clear
		gen lndist = ln(distNearestPubProv)
		keep treatment villagen daysNoPwr2004 sepMatUnit ///
			lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
			hdcode hfcode
		sort hfcode
		capture drop _merge

		merge 1:m hfcode using "Modified\numBirths.dta"

		*using number "under one" as equivalent to number of births
		reg numBirthsOverall treatment villagen daysNoPwr2004 sepMatUnit ///
			lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
			i.hdcode, robust cluster(hfcode)

		sum numBirthsOverall if treatment==0

	* T6: Col 2
		set more off
		use "Modified\HF2004.dta", clear

		keep treatment villagen daysNoPwr2004 sepMatUnit ///
			distNearestPubProv totalBelowALevel drankSafely2004 avgQuiRecd
///
			hdcode hfcode
		sort hfcode
		merge 1:m hfcode using "Modified\HH2006.dta"
		gen pregnant = s7q1==1
		gen lndist = ln(distNearestPubProv)
		reg pregnant treatment villagen daysNoPwr2004 sepMatUnit ///
			lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
			i.hdcode, robust cluster(hfcode)
		sum pregnant if treatment==0


	* T6: Col 3
		set more off
		use "Modified\HF2004.dta", clear
		keep treatment villagen daysNoPwr2004 sepMatUnit ///
			distNearestPubProv totalBelowALevel drankSafely2004 avgQuiRecd
///
			hdcode hfcode
		sort hfcode
		merge 1:1 hfcode using "Modified\U5DeathRateByHF.dta"
		gen lndist = ln(distNearestPubProv)
		reg deathRatePer1000 treatment villagen daysNoPwr2004 sepMatUnit ///
			lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
			i.hdcode, robust
		sum deathRatePer1000 if treatment==0

	* T6: Col 4
```

```
            set more off
            use "Modified\HF2004.dta", clear
            keep treatment villagen daysNoPwr2004 sepMatUnit ///
                  distNearestPubProv totalBelowALevel drankSafely2004 avgQuiRecd
///
                  hdcode hfcode
            sort hfcode
            merge 1:m hfcode using "Modified\Table6Col4.dta"
            gen lndist = ln(distNearestPubProv)

            reg death underOneT oneToTwoT twoToThreeT threeToFourT fourToFiveT ///
                  underOne oneToTwo twoToThree threeToFour fourToFive ///
                  villagen daysNoPwr2004 sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode, robust cluster(hfcode)
            sum death if treatment==0



      * T6: Cols 5,6
            set more off
            use "Modified\HF2004.dta", clear
            keep treatment villagen daysNoPwr2004 sepMatUnit ///
                  distNearestPubProv totalBelowALevel drankSafely2004 avgQuiRecd
///
                  hdcode hfcode
            sort hfcode
            merge 1:m hfcode using "Modified\Table6Cols56.dta"

            gen lndist=ln(distNearestPubProv)

            reg WAZ treatment villagen daysNoPwr2004 sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode ///
                  if ageInMonths < 18 & WAZ > -4.5 & WAZ < 4.5 & weight < 12 ///
                  , robust cluster(hfcode)

            areg WAZ treatment villagen daysNoPwr2004 sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  if ageInMonths < 18 & WAZ > -4.5 & WAZ < 4.5 & weight < 12 ///
                  , robust cluster(hfcode) a(hdcode)

            reg WAZ treatment lnAge female villagen daysNoPwr2004 sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode ///
                  if ageInMonths < 18 & WAZ > -4.5 & WAZ < 4.5 & weight < 12 ///
                  , robust cluster(hfcode)

            sum WAZ if treatment==0 & ageInMonths < 18 & WAZ > -4.5 & WAZ < 4.5 &
weight < 12

** Table 7
      set more off
      * Generate Community monitoring index
      use "Modified\HF2004.dta", clear
```

```
	rename avgAdultOP avgAdultOP2004
	keep hfcode avgAdultOP2004

	merge 1:1 hfcode using "Modified\U5DeathRateByHF.dta"
	capture drop _merge

	merge 1:1 hfcode using "Modified\HF2006.dta"
	capture drop _merge
	keep hfcode dcode treatment suggestionBox numWaitingCards ///
		posterFreeServices posterPtRts avgAdultOP avgAdultOP2004 ///
		deathRatePer1000 patRightsIndex CBOBefore
	save "temp/Table7_1.dta", replace

	use "Modified\HH2006.dta", clear
	collapse discFacLCMtgs recdInfoAbtHUMC, by(hfcode)
	merge 1:1 hfcode using "temp/Table7_1.dta"
	capture drop _merge
	tab dcode, gen(dist)
	gen distTx1 = dist1*treatment
	gen distTx2 = dist2*treatment
	gen distTx3 = dist3*treatment
	gen distTx4 = dist4*treatment
	gen distTx5 = dist5*treatment
	gen distTx6 = dist6*treatment
	gen distTx7 = dist7*treatment
	gen distTx8 = dist8*treatment
	gen distTx9 = dist9*treatment

	pca suggestionBox numWaitingCards posterFreeServices ///
		posterPtRts discFacLCMtgs recdInfoAbtHUMC
	predict monitoringIndex


	pca discFacLCMtgs recdInfoAbtHUMC
	predict monitoringIndex2


	foreach var in monitoringIndex monitoringIndex2 avgAdultOP avgAdultOP2004
deathRatePer1000 patRightsIndex {
		sum `var' if treatment==0
		gen `var'Std = `var'/r(sd)
		}

	* T7: Column 1: Outpatients
	ivreg2 avgAdultOPStd avgAdultOP2004Std dist1-dist9 ///
		(monitoringIndexStd = distTx1 - distTx9), robust nocon

	ivreg2 avgAdultOPStd avgAdultOP2004Std dist1-dist9 ///
		(monitoringIndex2Std = distTx1 - distTx9), robust nocon

	* T7: Column 2: U5MR
	ivreg2 deathRatePer1000Std dist1-dist9 ///
		(monitoringIndexStd = distTx1 - distTx9), robust nocon

	ivreg2 deathRatePer1000Std dist1-dist9 ///
```

```
       (monitoringIndex2Std = distTx1 - distTx9), robust nocon


* T7: Column 3: OP + tx indicator
ivreg2 avgAdultOPStd avgAdultOP2004Std treatment dist1-dist9 ///
       (monitoringIndex = distTx1 - distTx9), robust nocon

* T7: Column 4: U5MR + tx indicator
ivreg2 deathRatePer1000Std treatment dist1-dist9 ///
       (monitoringIndexStd = distTx1 - distTx9), robust nocon

* T7: Column 5: OP + staff knowledge
ivreg2 avgAdultOPStd avgAdultOP2004Std dist1-dist9 ///
       (monitoringIndexStd patRightsIndexStd = distTx1 - distTx9), robust nocon


* T7: Column 6: U5MR + staff knowledge
ivreg2 deathRatePer1000Std dist1-dist9 ///
       (monitoringIndexStd patRightsIndexStd = distTx1 - distTx9), robust nocon

* T7: Cols 7 and 8: OP + tx and CBO presence
gen CBOTx = CBOBefore*treatment
mysureg (avgAdultOP treatment CBOBefore CBOTx) ///
            (deathRatePer1000 treatment CBOBefore CBOTx), vce(robust)
test [avgAdultOP]treatment [deathRatePer1000]treatment
test [avgAdultOP]CBOBefore [deathRatePer1000]CBOBefore
test [avgAdultOP]CBOTx [deathRatePer1000]CBOTx
```

Replication Extension

```
cd "...\Data"


** Table 8: Balance on HH Char's
              use "Modified\HH2004.dta", clear

              * Number of adults s1q3
              gen numAdults = s1q3
              reg numAdults treatment control, nocons robust
              reg numAdults treatment, robust cluster(hfcode)

              * Number of children under 15 years s1q4 - not reported
              gen numChildren = s1q4
              reg numChildren treatment control, nocons robust
              reg numChildren treatment, robust cluster(hfcode)

              * Any children under 5 years s8q1
              gen childUnder5InHH = s8q1==1 if s8q1!=.
              reg childUnder5InHH treatment control, nocons robust
              reg childUnder5InHH treatment, robust cluster(hfcode)

              * Number of children under 5 years s8q2
              gen numChildrenUnder5 = s8q2
                    replace numChildrenUnder5=0 if s8q2==.
              reg numChildrenUnder5 treatment control, nocons robust
              reg numChildrenUnder5 treatment, robust cluster(hfcode)


              * Has anyone in your HH been pregnant since Jan 2003? s7q1
              gen pregnant = s7q1==1 if s7q1!=.
              reg pregnant treatment control, nocons robust
              reg pregnant treatment, robust cluster(hfcode)

              * Respondent's highest level of edu s9q6
              gen secondaryEdu = s9q6==8 if s9q6<10 // 18% of sample
              reg secondaryEdu treatment control, nocons robust
              reg secondaryEdu treatment, robust cluster(hfcode)

              * Wall materials
              gen lowQualWalls = s9q8<3 if s9q8!=. & s9q8<7 // dropping "other", 58%
of sample
              reg lowQualWalls treatment control, nocons robust
              reg lowQualWalls treatment, robust cluster(hfcode)

                    * to see if way of specifying the "low quality" is driving the
result
                    gen lowQualWalls2 = s9q8<2 if s9q8!=. & s9q8<7
                    reg lowQualWalls2 treatment control, nocons robust
                    reg lowQualWalls2 treatment, robust

              * Roof material
              gen lowQualRoof = s9q9<2 if s9q9<5
```

```
reg lowQualRoof treatment control, nocons robust
reg lowQualRoof treatment, robust cluster(hfcode)

keep hhcode hfcode childUnder5InHH lowQualWalls lowQualRoof
save "Modified\HHControls.dta", replace


** TABLE 9 - PRETREATMENT BALANCE ON APPROPRIATE VACCINES/VITAMIN A SUPP COUNT
use "Modified\Immunizations2004_wTx.dta", clear // each observation is a
child

* create indicators for "appropriate" num of immunizations (i.e.,
account for infant immunizations)
gen polioAppropriate = polioImm
      replace polioAppropriate = polioImmInfant if ageInMonths<3
gen DPTAppropriate = DPTImm
      replace DPTAppropriate = DPTImmInfant if ageInMonths<3

gen control = 1 - treatment
reg measlesImm treatment control if ageInMonths>2, nocons robust //
measles only relevant for children 3 months and older
reg measlesImm treatment  if ageInMonths>2, robust  cluster(hfcode) //
measles only relevant for children 3 months and older

reg polioAppropriate treatment control , nocons robust
reg polioAppropriate treatment , robust cluster(hfcode)

reg DPTAppropriate treatment control , nocons robust
reg DPTAppropriate treatment , robust cluster(hfcode)

reg BCGImm treatment control , nocons robust
reg BCGImm treatment , robust cluster(hfcode)

reg vitASupp treatment control , nocons robust
reg vitASupp treatment , robust cluster(hfcode)

** Table 10: redoing Table 4 (Program Impact on Immunization), but with baseline imm
data (to see that it looks very similar)

set more off
use "Modified\HF2004.dta", clear
keep treatment villagen daysNoPwr2004 sepMatUnit ///
      distNearestPubProv totalBelowALevel drankSafely2004 avgQuiRecd
///
      hdcode hfcode
sort hfcode
merge 1:m hfcode using "Modified\Immunizations2004_wTx.dta"

gen lndist = ln(distNearestPubProv)

* Col 1: Newborns (< 3 months): N = 127
tab hdcode, gen(dist)
mysureg (DPTImmInfant treatment villagen daysNoPwr2004 sepMatUnit lndist
///
```

```
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (BCGImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (polioImmInfant treatment villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (vitASuppInfant treatment villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        if ageInMonths<3, cluster(hfcode)
            foreach var in DPTImmInfant BCGImm polioImmInfant vitASuppInfant {
                                    sum `var' if treatment==0 & ageInMonths<3
                                    global `var'SD = r(sd)
                                }
            lincom (1/4)*([DPTImmInfant]treatment/$DPTImmInfantSD ///
                  + [BCGImm]treatment/$BCGImmSD ///
                  + [polioImmInfant]treatment/$polioImmInfantSD ///
                  + [vitASuppInfant]treatment/$vitASuppInfantSD )

            * Col 2: Under 1 year: N = 827
            mysureg (DPTImm treatment villagen daysNoPwr2004 sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (BCGImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (polioImm treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (vitASupp treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        if ageInMonths<13, vce(robust)
            foreach var in DPTImm BCGImm polioImm vitASupp {
                                    sum `var' if treatment==0 & ageInMonths<13
                                    global `var'SD = r(sd)
                                }
            lincom (1/4)*([DPTImm]treatment/$DPTImmSD ///
                  + [BCGImm]treatment/$BCGImmSD ///
                  + [polioImm]treatment/$polioImmSD ///
                  + [vitASupp]treatment/$vitASuppSD )


      * Col 3:  1 year: N = 875
            mysureg (measlesImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
```

```
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (DPTImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (BCGImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (polioImm treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (vitASupp treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        if ageInMonths>12 & ageInMonths<25, cluster(hfcode)
            foreach var in measlesImm DPTImm BCGImm polioImm vitASupp {
                                    sum `var' if treatment==0 & ageInMonths>12 &
ageInMonths<25
                                    global `var'SD = r(sd)
                                }
            lincom (1/5)*([measlesImm]treatment/$measlesImmSD ///
                  + [DPTImm]treatment/$DPTImmSD ///
                  + [BCGImm]treatment/$BCGImmSD ///
                  + [polioImm]treatment/$polioImmSD ///
                  + [vitASupp]treatment/$vitASuppSD )


      * Col 4:  2 years: N = 871
            mysureg (measlesImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (DPTImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (BCGImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (polioImm treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (vitASupp treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        if ageInMonths>24 & ageInMonths<37, cluster(hfcode)
            foreach var in measlesImm DPTImm BCGImm polioImm vitASupp {
```

```
                                    sum `var' if treatment==0 & ageInMonths>24 &
ageInMonths<37
                                    global `var'SD = r(sd)
                              }
            lincom (1/5)*([measlesImm]treatment/$measlesImmSD ///
                  + [DPTImm]treatment/$DPTImmSD ///
                  + [BCGImm]treatment/$BCGImmSD ///
                  + [polioImm]treatment/$polioImmSD ///
                  + [vitASupp]treatment/$vitASuppSD )


      * Col 5:  3 years: N = 893
            mysureg (measlesImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (DPTImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (BCGImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (polioImm treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (vitASupp treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        if ageInMonths>36 & ageInMonths<49, vce(robust)
            foreach var in measlesImm DPTImm BCGImm polioImm vitASupp {
                                    sum `var' if treatment==0 & ageInMonths>36 &
ageInMonths<49
                                    global `var'SD = r(sd)
                              }
            lincom (1/5)*([measlesImm]treatment/$measlesImmSD ///
                  + [DPTImm]treatment/$DPTImmSD ///
                  + [BCGImm]treatment/$BCGImmSD ///
                  + [polioImm]treatment/$polioImmSD ///
                  + [vitASupp]treatment/$vitASuppSD )


      * Col 6: 4 years: N = 315
            mysureg (measlesImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (DPTImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
```

```
                        (BCGImm treatment villagen daysNoPwr2004 sepMatUnit lndist
///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (polioImm treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (vitASupp treatment villagen daysNoPwr2004 sepMatUnit
lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        if ageInMonths>48 & ageInMonths<61, cluster(hfcode)
            foreach var in measlesImm DPTImm BCGImm polioImm vitASupp {
                                    sum `var' if treatment==0 & ageInMonths>48 &
ageInMonths<61
                                    global `var'SD = r(sd)
                                }
            lincom (1/5)*([measlesImm]treatment/$measlesImmSD ///
                  + [DPTImm]treatment/$DPTImmSD ///
                  + [BCGImm]treatment/$BCGImmSD ///
                  + [polioImm]treatment/$polioImmSD ///
                  + [vitASupp]treatment/$vitASuppSD )



** TABLE 11 - Diff-in-diff approach, by collapsing down to facility level

      ** Facility-level averages of immunizations, by cohort - 2004

            * NB 2004
            use "Modified\Immunizations2004_wTx.dta", clear
            keep if ageInMonths<3
            collapse treatment polioImmInfant DPTImmInfant BCGImm vitASuppInfant,
by(hfcode)
            gen year=2004
            save "Modified\FacLevelImmNB_2004.dta", replace

            * Under 1 year 2004
            use "Modified\Immunizations2004_wTx.dta", clear
            keep if ageInMonths<13
            collapse treatment polioImm DPTImm BCGImm vitASupp, by(hfcode)
            gen year=2004
            save "Modified\FacLevelImmUnder1_2004.dta", replace

      ** Facility-level averages of immunizations, by cohort - 2006

            * set up 2006 imm file
            use "Modified\HF2004.dta", clear
            keep treatment hfcode
            sort hfcode
            merge 1:m hfcode using "Modified\Immunizations2006.dta"
            capture drop _merge
            save "Modified\Immunizations2006_wTx.dta", replace
```

```
            * NB 2006
            use "Modified\Immunizations2006_wTx.dta", clear
            keep if ageInMonths<3
            collapse treatment measlesImm polioImmInfant DPTImmInfant BCGImm
vitASuppInfant, by(hfcode)
            gen year=2006
            save "Modified\FacLevelImmNB_2006.dta", replace

            * Under 1 year 2006
            use "Modified\Immunizations2006_wTx.dta", clear
            keep if ageInMonths<13
            collapse treatment DPTImm BCGImm polioImm vitASupp, by(hfcode)
            gen year=2006
            save "Modified\FacLevelImmUnder1_2006.dta", replace

      ** DIFF-IN-DIFF ESTIMATIONS, BY COHORT (for first two cohorts, that are
reasonable comparisons)

            * NEWBORN
            use "Modified\FacLevelImmNB_2004.dta", clear
            append using "Modified\FacLevelImmNB_2006.dta"

            tab hfcode, gen(hf)
            gen year06=year==2006
            gen txAnd06 = treatment*year06

            mysureg (DPTImmInfant txAnd06 year06 hf2-hf50) ///
                        (BCGImm txAnd06 year06 hf2-hf50) ///
                        (polioImmInfant txAnd06 year06 hf2-hf50) ///
                        (vitASuppInfant txAnd06 year06 hf2-hf50)

            foreach var in DPTImmInfant BCGImm polioImmInfant vitASuppInfant {
                        sum `var' if treatment==0 & year==2006
                        global `var'SD = r(sd)
                  }
            lincom (1/4)*([DPTImmInfant]txAnd06/$DPTImmInfantSD ///
                  + [BCGImm]txAnd06/$BCGImmSD ///
                  + [polioImmInfant]txAnd06/$polioImmInfantSD ///
                  + [vitASuppInfant]txAnd06/$vitASuppInfantSD )


            * UNDER 1 YEAR
            use "Modified\FacLevelImmUnder1_2004.dta", clear
            append using "Modified\FacLevelImmUnder1_2006.dta"

            tab hfcode, gen(hf)
            gen year06=year==2006
            gen txAnd06 = treatment*year06

            mysureg (DPTImm txAnd06 year06 hf2-hf50) ///
                        (BCGImm txAnd06 year06 hf2-hf50) ///
                        (polioImm txAnd06 year06 hf2-hf50) ///
                        (vitASupp txAnd06 year06 hf2-hf50)
            foreach var in DPTImm BCGImm polioImm vitASupp {
```

```
                        sum `var' if treatment==0 & year==2006
                        global `var'SD = r(sd)
                  }
            lincom (1/4)*([DPTImm]txAnd06/$DPTImmSD ///
                  + [BCGImm]txAnd06/$BCGImmSD ///
                  + [polioImm]txAnd06/$polioImmSD ///
                  + [vitASupp]txAnd06/$vitASuppSD )


** TABLE 12 - Redoing Table 6 with control for prior CBO presence

      * T12: Col 1-2

            * control vars
            use "Modified\HF2004.dta", clear
            gen lndist = ln(distNearestPubProv) // update Aug 2015
            keep treatment villagen daysNoPwr2004 sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  hdcode hfcode
            sort hfcode
            capture drop _merge

            merge 1:m hfcode using "Modified\numBirths.dta"
            capture drop _merge
            merge m:1 hfcode using "Modified\HF2006.dta"

            gen CBOTx = CBOBefore*treatment

            reg numBirthsOverall treatment CBOBefore villagen daysNoPwr2004
sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode, robust cluster(hfcode)
            test treatment CBOBefore


            reg numBirthsOverall treatment CBOBefore CBOTx villagen daysNoPwr2004
sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode, robust cluster(hfcode)
            test CBOBefore CBOTx
            test treatment CBOBefore CBOTx


            sum numBirthsOverall if treatment==0

      * T12: Col 3-4
            set more off
            use "Modified\HF2004.dta", clear

            keep treatment villagen daysNoPwr2004 sepMatUnit ///
                  distNearestPubProv totalBelowALevel drankSafely2004 avgQuiRecd
///
                  hdcode hfcode
            sort hfcode
            merge 1:m hfcode using "Modified\HH2006.dta"
```

```
            capture drop _merge
            merge m:1 hfcode using "Modified\HF2006.dta"
            gen pregnant = s7q1==1
            gen lndist = ln(distNearestPubProv)
            gen CBOTx = CBOBefore*treatment

            reg pregnant treatment CBOBefore villagen daysNoPwr2004 sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode, robust cluster(hfcode)
            test treatment CBOBefore

            reg pregnant treatment CBOBefore CBOTx villagen daysNoPwr2004 sepMatUnit
///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode, robust cluster(hfcode)
            test CBOBefore CBOTx
            test treatment CBOBefore CBOTx

            sum pregnant if treatment==0


      * T12: Col 5-6
            set more off
            use "Modified\HF2004.dta", clear
            keep treatment villagen daysNoPwr2004 sepMatUnit ///
                  distNearestPubProv totalBelowALevel drankSafely2004 avgQuiRecd
///
                  hdcode hfcode
            sort hfcode
            merge 1:1 hfcode using "Modified\U5DeathRateByHF.dta"
            capture drop _merge
            merge 1:1 hfcode using "Modified\HF2006.dta"
            gen lndist = ln(distNearestPubProv)
            gen CBOTx = CBOBefore*treatment

            reg deathRatePer1000 treatment CBOBefore villagen daysNoPwr2004
sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode, robust
            test treatment CBOBefore

            reg deathRatePer1000 treatment CBOBefore CBOTx villagen daysNoPwr2004
sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode, robust
            sum deathRatePer1000 if treatment==0

            test CBOBefore CBOTx
            test treatment CBOBefore CBOTx


      * T12: Col 7
            set more off
            use "Modified\HF2004.dta", clear
            keep treatment villagen daysNoPwr2004 sepMatUnit ///
```

```
                  distNearestPubProv totalBelowALevel drankSafely2004 avgQuiRecd
///
                  hdcode hfcode
            sort hfcode
            merge 1:m hfcode using "Modified\Table6Col4.dta"

            gen lndist = ln(distNearestPubProv)
            capture drop _merge
            merge m:1 hfcode using "Modified\HF2006.dta"
            reg death CBO underOneT oneToTwoT twoToThreeT threeToFourT fourToFiveT
///
                  underOne oneToTwo twoToThree threeToFour fourToFive ///
                  villagen daysNoPwr2004 sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode, robust cluster(hfcode)
            sum death if treatment==0



      * T12: Cols 8-11
            set more off
            use "Modified\HF2004.dta", clear
            keep treatment villagen daysNoPwr2004 sepMatUnit ///
                  distNearestPubProv totalBelowALevel drankSafely2004 avgQuiRecd
///
                  hdcode hfcode
            sort hfcode
            merge 1:m hfcode using "Modified\Table6Cols56.dta"
            capture drop _merge
            merge m:1 hfcode using "Modified\HF2006.dta"
            gen lndist=ln(distNearestPubProv)
            gen CBOTx = CBOBefore*treatment

            * Col 8
            reg WAZ treatment CBOBefore villagen daysNoPwr2004 sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode ///
                  if ageInMonths < 18 & WAZ > -4.5 & WAZ < 4.5 & weight < 12 ///
                  , robust cluster(hfcode)
            test treatment CBOBefore

            * Col 9
            reg WAZ treatment CBOBefore CBOTx villagen daysNoPwr2004 sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode ///
                  if ageInMonths < 18 & WAZ > -4.5 & WAZ < 4.5 & weight < 12 ///
                  , robust cluster(hfcode)
            test CBOBefore CBOTx
            test treatment CBOBefore CBOTx

            * Col 10
            reg WAZ treatment CBOBefore CBOTx lnAge female villagen daysNoPwr2004
sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode ///
```

```
                  if ageInMonths < 18 & WAZ > -4.5 & WAZ < 4.5 & weight < 12 ///
                  , robust cluster(hfcode)
            test treatment CBOBefore

            * Col 11
            reg WAZ treatment CBOBefore CBOTx lnAge female villagen daysNoPwr2004
sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode ///
                  if ageInMonths < 18 & WAZ > -4.5 & WAZ < 4.5 & weight < 12 ///
                  , robust cluster(hfcode)
            sum WAZ if treatment==0 & ageInMonths < 18 & WAZ > -4.5 & WAZ < 4.5 &
weight < 12
            test CBOBefore CBOTx
            test treatment CBOBefore CBOTx



** TABLE 13 - Section 4.4 Process Measures

            * Col 1:  D in D on average number of outreach visits per month
            use "Modified\HF2004.dta", clear
            gen year=2004
                  keep hfcode treatment year avgOutreach
                  save "temp\Outreach.dta", replace
            use "Modified\HF2006.dta", clear

            * only use Sept - Dec to be comparable with baseline
            egen avgOutreach = rowmean(hs4q16c hs4q16d hs4q16e hs4q16f)
            keep  hfcode treatment year avgOutreach
            append using "temp\Outreach.dta", force

            gen year06=year==2006
            gen txAnd06 = treatment*year06
            reg avgOutreach txAnd06 year06 i.hfcode, robust
            sum avgOutreach if treatment==0 & year==2004

            * Col 2: OLS on program awareness
            use "Modified\HH2006.dta", clear
            merge m:1 hfcode using "Modified\HF2004.dta"

            gen lndist = ln(distNearestPubProv)

            gen awareOfCBM = s6q19==1 if s6q19!=.
            reg awareOfCBM treatment villagen daysNoPwr2004 sepMatUnit ///
                  lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
                  i.hdcode, robust cluster(hfcode)
            sum awareOfCBM if treatment==0

*******************************************************************************

****************************** APPENDIX ************************************
*******************************************************************************
*** APPENDIX TABLE 1 - Diff-in-diff approach to imm, by collapsing down to facility
level
```

```
      ** Facility-level averages of immunizations, by cohort - 2004

            * NB 2004 - done above

            * Under 1 year 2004 - done above

            * 1 year 2004 (for appendix)
            use "Modified\Immunizations2004_wTx.dta", clear
            keep if ageInMonths>12 & ageInMonths<25
            collapse treatment measlesImm DPTImm BCGImm polioImm vitASupp,
by(hfcode)
            gen year=2004
            save "Modified\FacLevelImm1Year_2004.dta", replace

            * 2 years 2004 (for appendix)
            use "Modified\Immunizations2004_wTx.dta", clear
            keep if ageInMonths>24 & ageInMonths<37
            collapse treatment measlesImm DPTImm BCGImm polioImm vitASupp,
by(hfcode)
            gen year=2004
            save "Modified\FacLevelImm2Year_2004.dta", replace

            * 3 years 2004 (for appendix)
            use "Modified\Immunizations2004_wTx.dta", clear
            keep if ageInMonths>36 & ageInMonths<49
            collapse treatment measlesImm DPTImm BCGImm polioImm vitASupp,
by(hfcode)
            gen year=2004
            save "Modified\FacLevelImm3Year_2004.dta", replace

            * 4 years 2004 (for appendix)
            use "Modified\Immunizations2004_wTx.dta", clear
            keep if ageInMonths>48 & ageInMonths<61
            collapse treatment measlesImm DPTImm BCGImm polioImm vitASupp,
by(hfcode)
            gen year=2004
            save "Modified\FacLevelImm4Year_2004.dta", replace


      ** Facility-level averages of immunizations, by cohort - 2006

            * NB 2006 - done above

            * Under 1 year 2006 - done above

            * 1 year 2004 (for appendix)
            use "Modified\Immunizations2006_wTx.dta", clear
            keep if ageInMonths>12 & ageInMonths<25
            collapse treatment measlesImm DPTImm BCGImm polioImm vitASupp,
by(hfcode)
            gen year=2006
            save "Modified\FacLevelImm1Year_2006.dta", replace

            * 2 years 2004 (for appendix)
```

```
            use "Modified\Immunizations2006_wTx.dta", clear
            keep if ageInMonths>24 & ageInMonths<37
            collapse treatment measlesImm DPTImm BCGImm polioImm vitASupp,
by(hfcode)
            gen year=2006
            save "Modified\FacLevelImm2Year_2006.dta", replace

            * 3 years 2004 (for appendix)
            use "Modified\Immunizations2006_wTx.dta", clear
            keep if ageInMonths>36 & ageInMonths<49
            collapse treatment measlesImm DPTImm BCGImm polioImm vitASupp,
by(hfcode)
            gen year=2006
            save "Modified\FacLevelImm3Year_2006.dta", replace

            * 4 years 2004 (for appendix)
            use "Modified\Immunizations2006_wTx.dta", clear
            keep if ageInMonths>48 & ageInMonths<61
            collapse treatment measlesImm DPTImm BCGImm polioImm vitASupp,
by(hfcode)
            gen year=2006
            save "Modified\FacLevelImm4Year_2006.dta", replace


      ** DIFF-IN-DIFF ESTIMATIONS, BY COHORT (for first two cohorts, that are
reasonable comparisons; rest are included in appendix)

            * NEWBORN - done above

            * UNDER 1 YEAR - done above

            * 1 YEAR
            use "Modified\FacLevelImm1Year_2004.dta", clear
            append using "Modified\FacLevelImm1Year_2006.dta"

            tab hfcode, gen(hf)
            gen year06=year==2006
            gen txAnd06 = treatment*year06

            mysureg (measlesImm txAnd06 year06 hf2-hf50) ///
                        (DPTImm txAnd06 year06 hf2-hf50) ///
                        (BCGImm txAnd06 year06 hf2-hf50) ///
                        (polioImm txAnd06 year06 hf2-hf50) ///
                        (vitASupp txAnd06 year06 hf2-hf50)
            foreach var in measlesImm DPTImm BCGImm polioImm vitASupp {
                        sum `var' if treatment==0 & year==2006
                        global `var'SD = r(sd)
                  }
            lincom (1/5)*([measlesImm]txAnd06/$measlesImmSD ///
                  + [DPTImm]txAnd06/$DPTImmSD ///
                  + [BCGImm]txAnd06/$BCGImmSD ///
                  + [polioImm]txAnd06/$polioImmSD ///
                  + [vitASupp]txAnd06/$vitASuppSD )
```

```
* 2 YEARS
use "Modified\FacLevelImm2Year_2004.dta", clear
append using "Modified\FacLevelImm2Year_2006.dta"

tab hfcode, gen(hf)
gen year06=year==2006
gen txAnd06 = treatment*year06

mysureg (measlesImm txAnd06 year06 hf2-hf50) ///
             (DPTImm txAnd06 year06 hf2-hf50) ///
             (BCGImm txAnd06 year06 hf2-hf50) ///
             (polioImm txAnd06 year06 hf2-hf50) ///
             (vitASupp txAnd06 year06 hf2-hf50)
foreach var in measlesImm DPTImm BCGImm polioImm vitASupp {
             sum `var' if treatment==0 & year==2006
             global `var'SD = r(sd)
       }
lincom (1/5)*([measlesImm]txAnd06/$measlesImmSD ///
       + [DPTImm]txAnd06/$DPTImmSD ///
       + [BCGImm]txAnd06/$BCGImmSD ///
       + [polioImm]txAnd06/$polioImmSD ///
       + [vitASupp]txAnd06/$vitASuppSD )



* 3 YEARS
use "Modified\FacLevelImm3Year_2004.dta", clear
append using "Modified\FacLevelImm3Year_2006.dta"

tab hfcode, gen(hf)
gen year06=year==2006
gen txAnd06 = treatment*year06

mysureg (measlesImm txAnd06 year06 hf2-hf50) ///
             (DPTImm txAnd06 year06 hf2-hf50) ///
             (BCGImm txAnd06 year06 hf2-hf50) ///
             (polioImm txAnd06 year06 hf2-hf50) ///
             (vitASupp txAnd06 year06 hf2-hf50)
foreach var in measlesImm DPTImm BCGImm polioImm vitASupp {
             sum `var' if treatment==0 & year==2006
             global `var'SD = r(sd)
       }
lincom (1/5)*([measlesImm]txAnd06/$measlesImmSD ///
       + [DPTImm]txAnd06/$DPTImmSD ///
       + [BCGImm]txAnd06/$BCGImmSD ///
       + [polioImm]txAnd06/$polioImmSD ///
       + [vitASupp]txAnd06/$vitASuppSD )



* 4 YEARS
use "Modified\FacLevelImm4Year_2004.dta", clear
append using "Modified\FacLevelImm4Year_2006.dta"

tab hfcode, gen(hf)
```

```
gen year06=year==2006
gen txAnd06 = treatment*year06

mysureg (measlesImm txAnd06 year06 hf2-hf50) ///
             (DPTImm txAnd06 year06 hf2-hf50) ///
             (BCGImm txAnd06 year06 hf2-hf50) ///
             (polioImm txAnd06 year06 hf2-hf50) ///
             (vitASupp txAnd06 year06 hf2-hf50)
foreach var in measlesImm DPTImm BCGImm polioImm vitASupp {
             sum `var' if treatment==0 & year==2006
             global `var'SD = r(sd)
      }
lincom (1/5)*([measlesImm]txAnd06/$measlesImmSD ///
      + [DPTImm]txAnd06/$DPTImmSD ///
      + [BCGImm]txAnd06/$BCGImmSD ///
      + [polioImm]txAnd06/$polioImmSD ///
      + [vitASupp]txAnd06/$vitASuppSD )



** TABLE 13 - Section 4.4 Process Measures

      * Col 1:  D in D on average number of outreach visits per month
      use "Modified\HF2004.dta", clear
      gen year=2004
            keep hfcode treatment year avgOutreach
            save "temp\Outreach.dta", replace
      use "Modified\HF2006.dta", clear

      * only use Sept - Dec to be comparable with baseline
      egen avgOutreach = rowmean(hs4q16c hs4q16d hs4q16e hs4q16f)
      keep  hfcode treatment year avgOutreach
      append using "temp\Outreach.dta", force

      gen year06=year==2006
      gen txAnd06 = treatment*year06
      reg avgOutreach txAnd06 year06 i.hfcode, robust
      sum avgOutreach if treatment==0 & year==2004

      * Col 2: OLS on program awareness
      use "Modified\HH2006.dta", clear
      merge m:1 hfcode using "Modified\HF2004.dta"

      gen lndist = ln(distNearestPubProv)

      gen awareOfCBM = s6q19==1 if s6q19!=.
      reg awareOfCBM treatment villagen daysNoPwr2004 sepMatUnit ///
            lndist totalBelowALevel drankSafely2004 avgQuiRecd ///
            i.hdcode, robust cluster(hfcode)
      sum awareOfCBM if treatment==0


*** APPENDIX TABLE 2
      ** Immunizations at baseline, including CBO presence
            set more off
```

```
            use "Modified\HF2004.dta", clear
            keep treatment villagen daysNoPwr2004 sepMatUnit ///
                  distNearestPubProv totalBelowALevel drankSafely2004 avgQuiRecd
///
                  hdcode hfcode
            sort hfcode
            merge 1:1 hfcode using "temp/HF_CBO.dta"
            capture drop _merge
            merge 1:m hfcode using "Modified\Immunizations2004_wTx.dta"


            gen lndist = ln(distNearestPubProv) // added Aug 2015

      * Col 1: Newborns (< 3 months): N = 127
            tab hdcode, gen(dist)
            mysureg (DPTImmInfant treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (BCGImm treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (polioImmInfant treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (vitASuppInfant treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        if ageInMonths<3, cluster(hfcode)
            foreach var in DPTImmInfant BCGImm polioImmInfant vitASuppInfant {
                              sum `var' if treatment==0 & ageInMonths<3
                              global `var'SD = r(sd)
                        }

            lincom (1/4)*([DPTImmInfant]treatment/$DPTImmInfantSD ///
                  + [BCGImm]treatment/$BCGImmSD ///
                  + [polioImmInfant]treatment/$polioImmInfantSD ///
                  + [vitASuppInfant]treatment/$vitASuppInfantSD )


            lincom (1/4)*([DPTImmInfant]CBOBefore/$DPTImmInfantSD ///
                  + [BCGImm]CBOBefore/$BCGImmSD ///
                  + [polioImmInfant]CBOBefore/$polioImmInfantSD ///
                  + [vitASuppInfant]CBOBefore/$vitASuppInfantSD )




            * Col 2: Under 1 year: N = 827
            mysureg (DPTImm treatment CBOBefore villagen daysNoPwr2004 sepMatUnit
lndist ///
```

```
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (BCGImm treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (polioImm treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (vitASupp treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        if ageInMonths<13, vce(robust)
            foreach var in DPTImm BCGImm polioImm vitASupp {
                                    sum `var' if treatment==0 & ageInMonths<13
                                    global `var'SD = r(sd)
                                }
            lincom (1/4)*([DPTImm]treatment/$DPTImmSD ///
                  + [BCGImm]treatment/$BCGImmSD ///
                  + [polioImm]treatment/$polioImmSD ///
                  + [vitASupp]treatment/$vitASuppSD )


            lincom (1/4)*([DPTImm]CBOBefore/$DPTImmSD ///
                  + [BCGImm]CBOBefore/$BCGImmSD ///
                  + [polioImm]CBOBefore/$polioImmSD ///
                  + [vitASupp]CBOBefore/$vitASuppSD )



      * Col 3:  1 year: N = 875
            mysureg (measlesImm treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (DPTImm treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (BCGImm treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (polioImm treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (vitASupp treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        if ageInMonths>12 & ageInMonths<25, cluster(hfcode)
            foreach var in measlesImm DPTImm BCGImm polioImm vitASupp {
```

```
                                    sum `var' if treatment==0 & ageInMonths>12 &
ageInMonths<25
                                    global `var'SD = r(sd)
                              }
            lincom (1/5)*([measlesImm]treatment/$measlesImmSD ///
                  + [DPTImm]treatment/$DPTImmSD ///
                  + [BCGImm]treatment/$BCGImmSD ///
                  + [polioImm]treatment/$polioImmSD ///
                  + [vitASupp]treatment/$vitASuppSD )


.



            lincom (1/5)*([measlesImm]CBOBefore/$measlesImmSD ///
                  + [DPTImm]CBOBefore/$DPTImmSD ///
                  + [BCGImm]CBOBefore/$BCGImmSD ///
                  + [polioImm]CBOBefore/$polioImmSD ///
                  + [vitASupp]CBOBefore/$vitASuppSD )



      * Col 4:  2 years: N = 871
            mysureg (measlesImm treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (DPTImm treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (BCGImm treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (polioImm treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (vitASupp treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        if ageInMonths>24 & ageInMonths<37, cluster(hfcode)
            foreach var in measlesImm DPTImm BCGImm polioImm vitASupp {
                                    sum `var' if treatment==0 & ageInMonths>24 &
ageInMonths<37
                                    global `var'SD = r(sd)
                              }
            lincom (1/5)*([measlesImm]treatment/$measlesImmSD ///
                  + [DPTImm]treatment/$DPTImmSD ///
                  + [BCGImm]treatment/$BCGImmSD ///
                  + [polioImm]treatment/$polioImmSD ///
                  + [vitASupp]treatment/$vitASuppSD )
```

```
            lincom (1/5)*([measlesImm]CBOBefore/$measlesImmSD ///
                  + [DPTImm]CBOBefore/$DPTImmSD ///
                  + [BCGImm]CBOBefore/$BCGImmSD ///
                  + [polioImm]CBOBefore/$polioImmSD ///
                  + [vitASupp]CBOBefore/$vitASuppSD )




      * Col 5:  3 years: N = 893
            mysureg (measlesImm treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (DPTImm treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (BCGImm treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (polioImm treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (vitASupp treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        if ageInMonths>36 & ageInMonths<49, vce(robust)
            foreach var in measlesImm DPTImm BCGImm polioImm vitASupp {
                                    sum `var' if treatment==0 & ageInMonths>36 &
ageInMonths<49
                                    global `var'SD = r(sd)
                              }
            lincom (1/5)*([measlesImm]treatment/$measlesImmSD ///
                  + [DPTImm]treatment/$DPTImmSD ///
                  + [BCGImm]treatment/$BCGImmSD ///
                  + [polioImm]treatment/$polioImmSD ///
                  + [vitASupp]treatment/$vitASuppSD )

            lincom (1/5)*([measlesImm]CBOBefore/$measlesImmSD ///
                  + [DPTImm]CBOBefore/$DPTImmSD ///
                  + [BCGImm]CBOBefore/$BCGImmSD ///
                  + [polioImm]CBOBefore/$polioImmSD ///
                  + [vitASupp]CBOBefore/$vitASuppSD )
```

```
      * Col 6: 4 years: N = 315
            mysureg (measlesImm treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (DPTImm treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (BCGImm treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (polioImm treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        (vitASupp treatment CBOBefore villagen daysNoPwr2004
sepMatUnit lndist ///
                        totalBelowALevel drankSafely2004 avgQuiRecd dist2-dist9)
///
                        if ageInMonths>48 & ageInMonths<61, cluster(hfcode)
            foreach var in measlesImm DPTImm BCGImm polioImm vitASupp {
                                    sum `var' if treatment==0 & ageInMonths>48 &
ageInMonths<61
                                    global `var'SD = r(sd)
                                }
            lincom (1/5)*([measlesImm]treatment/$measlesImmSD ///
                  + [DPTImm]treatment/$DPTImmSD ///
                  + [BCGImm]treatment/$BCGImmSD ///
                  + [polioImm]treatment/$polioImmSD ///
                  + [vitASupp]treatment/$vitASuppSD )


            lincom (1/5)*([measlesImm]CBOBefore/$measlesImmSD ///
                  + [DPTImm]CBOBefore/$DPTImmSD ///
                  + [BCGImm]CBOBefore/$BCGImmSD ///
                  + [polioImm]CBOBefore/$polioImmSD ///
                  + [vitASupp]CBOBefore/$vitASuppSD )
```