**National Survey of Crime and Safety (NSCS)**

**BFOS/IT Implementation Plan**

**2/5/2020**

Contents

[1. Study Background: 1](#_Toc31800181)

[1.1 Schedule 1](#_Toc31800182)

[1.2 Scale 1](#_Toc31800183)

[2. BFOS Basics 2](#_Toc31800184)

[2.1 Sampling Dataset 2](#_Toc31800185)

[2.2 CaseIDs 2](#_Toc31800186)

[2.3 SMS/BFOS Mapping 3](#_Toc31800187)

[3. SMS/Home Office 3](#_Toc31800188)

[3.1 SMS Functionality 3](#_Toc31800189)

[3.2 Case Cards 4](#_Toc31800190)

[3.3 DU Observations & Case Prioritization Process 4](#_Toc31800191)

[3.4 Consent Form Mailing 8](#_Toc31800192)

[3.5 Validation 8](#_Toc31800193)

[3.6 Field Test Production DB Preparation 11](#_Toc31800194)

[3.7 Subsampling/Removing Interim Cases 12](#_Toc31800195)

[4. IMS 13](#_Toc31800196)

[4.1 SP Consent 13](#_Toc31800197)

[4.2 IMS Task Status Setting 14](#_Toc31800198)

[4.3 Status Mapping (Task and Composite) 16](#_Toc31800199)

[4.4 Instrument Development 17](#_Toc31800200)

[4.5 Instrument Extract Interfaces 18](#_Toc31800201)

[4.6 IMS & Data Transmission 19](#_Toc31800202)

[4.7 Data Transmission Reassignments 20](#_Toc31800203)

[4.8 IMS/Laptop GPS 20](#_Toc31800204)

[4.9 IMS Initializing SPs 21](#_Toc31800205)

[4.10 IMS Task Performance 21](#_Toc31800206)

[4.11 NCVS Interview Recordings 22](#_Toc31800207)

[4.12 IMS Audio Recording Settings 23](#_Toc31800208)

[4.13 Drop Point Processing 24](#_Toc31800209)

[5. Related Systems Integration 25](#_Toc31800210)

[5.1 Survey and Related File Processing 25](#_Toc31800211)

[5.2 MFOS 26](#_Toc31800212)

[5.3 M3 Communication 26](#_Toc31800213)

[5.4 CARICode 27](#_Toc31800214)

[5.5 Eagle: 28](#_Toc31800215)

[5.6 PD3 Dashboard: 29](#_Toc31800216)

[5.7 Travel Module: 30](#_Toc31800217)

[6. Condition 3 IT Approach: 30](#_Toc31800218)

[6.1 Enumeration 30](#_Toc31800219)

[6.2 Auto Notification of SPs Requirements 31](#_Toc31800220)

[6.3 Auto-Notifications M3 Communication 33](#_Toc31800221)

[6.4 Self-response web site/landing page 36](#_Toc31800222)

[6.5 SP-Consent 36](#_Toc31800223)

[6.6 PHP instrument 37](#_Toc31800224)

[6.7 Database Changes 38](#_Toc31800225)

[6.8 PHP/BFOS Database Communication 38](#_Toc31800226)

[6.9 JSON data 45](#_Toc31800227)

[6.10 Incentives 46](#_Toc31800228)

[6.11 IMS: Non-response/In person 47](#_Toc31800229)

[6.12 SMS (Help Desk Interface) 48](#_Toc31800230)

[6.13 MFOS 48](#_Toc31800231)

[6.14 DUPriority 49](#_Toc31800232)

[6.15 PHP to SAS: 49](#_Toc31800233)

[6.16 C3 Issues 49](#_Toc31800234)

[7. Field Equipment 50](#_Toc31800235)

[8. Decisions 50](#_Toc31800236)

# Study Background:

Field study to compare the legacy instrument with a redesigned instrument. Westat will draw a national sample and randomize each HH to be targeted with a specific instrument. The survey will consist of a HH roster with the only SP selection criterion being age >= 12. Westat will attempt to administer the survey with all sampled HH members.

## Schedule

* Dress Rehearsal (conditions 1 & 2 only)
  + June 21: Ship laptops (branch code for development during DR))
  + June 24 - July 12: FI home study
  + July 11: Train-the-trainer:
  + July 18, 19: FI assessment
  + July 22–23: Data collection
* Field Test (conditions 1 & 2)
  + Aug 5: Test release 1
  + Aug 19: Test release 2
  + Aug 29: Test release 3
  + Sept 4: FS master
  + Sept 5: FS clone test & signoff
  + Sept 10: FI master
  + Sept 11: FI clone test and signoff
  + Sept 12: FS ship:
  + Sept 26: start FI ship
  + Sept 27 - Oct 11: FI home study
  + Oct 7-8: Train-the-trainer
  + Oct 21-25: FI assessment
  + Oct 28 - March 30: Data collection
* Field Test 2020 (condition 3)
  + Jan 27: start of Enum training
  + Feb 3: start of C3 Enum
  + Mar 6: start of SP invitation letters
  + Apr 14: start of C3 field period
* August 2020: End of data collection

## Scale

Field Test

* Complete persons (SP): 12,000 persons
* Number of FI: 350
* Number of FS/FM: 25/3

Dress Rehearsal

* Complete persons (SP) : 200 completes
* Number of FI: 20
* Number of FS/FM: 2/1

# BFOS Basics

1. Sampling Dataset

* SampN
* Region (geographic, not virtual region)
* PSUID (4-digits, geographic, not virtual)
* Segment
* Address\_1
* Address\_2
* City
* State
* Zip
* Zip4
* DropFlag
* DropCount
* Latitude
* Longitude
* Conditn (CaseType: 1, 2, or 3)
* ScreenerVersion (NCVS-R screener randomization; 1=interleaf, 2=non-interleaf)
* Phone (optional)
* PIN (8-digits, unique across all HH, needed for Condition-3 only)
* Rand1 – Rand4
* CensusTrack (new as of 5/31/2019, for case priorization)

Processing notes

* Sample file contains PSU
* Region is derived from PSU, based on project-provided mapping
* Condition 1 and 2 are in separate virtual regions
* Construct virtual vPSU = Condition || PSU (3-digits)
* Map vPSU to virtual Region: vRegion
* For Condition 3, map vPSU & vRegion to the same as C1 & C2, randomly distributing the cases between the two based on the last digit of DUID (even maps to C2, odd maps to C1)

1. CaseIDs

DU-ID:

abb-cccc-d

where

* a=CaseType (experimental indicator)
* bb=2-digit region
* cccc=4 digit sequential number (no more than 9,999 in a region)
* d=check-digit

Mod ( (a\*1)+(b1\*3)+(b2\*7)+(c1\*1)+(c2\*3)+(c3\*7)+(c4\*1), base-10)

SP-ID: set by IMS on laptop

abb-cccc-d-ff

where ff is a two digit sequential number within HH-ID

1. SMS/BFOS Mapping

* Levels (PanelID): HH, SP
* HH Tasks:
  + HH-Roster (101)
* SP Tasks:
  + SP-Consent (201)
  + Interview (202: SP-Consent as precedent task)
  + Consent Letter-1 & 2 (203 and 204)
  + SP-Debrief (205)
* CaseTypeID: Interview Randomization
  + 1=Legacy (Blaise)
  + 2=Revised CAPI (PHP)
  + 3=Revised Self (PHP)
* Interviewer Type A & B (control by interviewer region assignment)
  + Type A should be manually assigned only to regions of Type can be assigned CaseTypes 1 & 3
  + Type B should be manually assigned only to regions of Type can be assigned CaseTypes 2 & 3

# SMS/Home Office

1. SMS Functionality

* Sample file load,
* Search/browse cases,
* EROCs,
* NIRF for EROC interim refusal
* Assignments (only at the HH level 🡪 no separate SP assignments)
* Reassignments (new interviewer should not access case until old interviewer has transmitted . . . unless ‘Force Transfer’ option has been selected)
* Force Transfer
* Case close-out (Supervisor/HO function only)
* Task and Composite status mapping,
* Case Cards: produce mail merge file for each DU after assigned
* MFOS integration
* Interviewer validation sampling (actual validation activities will be conducted outside the SMS, e.g. PD3, Eagle, CARICode),
* Roles: Admin, Home Office, Field Manager, Supervisor, Interviewer,
* Staff access and role management,
* BFOS Secure Messaging (BSM),
* Links to Dashboard, WARP, Travel Module, Eagle, CARICode.

1. Case Cards

The SMS needs to produce ‘Case Cards’ for each DU after it has been assigned.

Will track this as a DU-level task (TaskID=100).

SMS users can request to produce a mail merge file from the Home Office tab

The task will be initialized in the Sample Load process with status = ‘NWK’

After the DU is output to a mail merge file, the status will be updated to ‘CTK – Task Complete’.

Extract all DUs where:

* STCompositeStatus = ‘NWK for Task=100 AND
* Case is assigned (CaseInfo.InterviewerID is not NULL)

The mail merge file will contain these fields:

* Interviewer ID (is this the LoginID?) – (sort-var-1)
* Region
* PSU
* Segment
* DUID – (sort-var-2)
* Address1
* Address2
* City
* State
* Zip
* LetterType: If CaseInfo.Rand2.Value < 0.5 then "I", else "T"

The file will be sorted by InterviewerID, DUID.

The file name will contain a date-time stamp, stored on the web server.

1. DU Observations & Case Prioritization Process

The operations team would like to add a Priority for each case (DU and SP). The Priority will be based on a statistical algorithm to be run periodically offline. The model will be based on:

* DU observation form,
* EROCs (DU and SP),
* Roster data (for each SP).

The components of the process consist of:

1. New SMS task: DU Observation Qx
   1. TaskID=102
   2. status = NWK (initial and Complete; does not contribute to the DU Composite Status)
2. Sample Load program:
   1. initialize task DU Observation Qx (status ‘NWK’
   2. initializes CasePriority=NULL
3. DU Observation Qx:
   1. Implemented in MFOS
   2. Transmitted via custom Hub API function
   3. Hub API function:
      1. stores the questionnaire data tables:
         1. tblQuestionnaireResult
         2. tblQuestionnaireAnswerResult
      2. updates DU Observation task (TaskID=100) status = ‘CTK’
4. Case Prioritization Algorithm SMS Data: Data is provided by the SMS to the case prioritization model via **SMS database views**. The view returns all cases, unfiltered.

DU:  one record/DU, <**vPrioritizationDU**>

* DUID
* SUCompositeStatus
* SUCompositeStatusDT
* CensusTrack
* Latitude
* Longitude
* EligibleForSubSample
* DURoster fields
  + - START\_STOLEN (Condition-3 roster)
    - START\_BROKEN (Condition-3 roster)
    - START\_ATTACK (Condition-3 roster)
    - START\_SAFE (Condition-3 roster)
    - START\_AFRAID (Condition-3 roster)
    - TENURE (InstrumentOutput)
    - TYPEOFHOUSINGUNIT (InstrumentOutput)
    - LANDLINE (InstrumentOutput)
    - INTERNETACCESS (InstrumentOutput)
    - NUMBEROFUNITS (InstrumentOutput)
    - GATEDWALLEDCOMMUNITY (InstrumentOutput)
    - RESTRICTEDACCESS (InstrumentOutput)
* DUObservation fields (multiple):
  + DUOBS1
  + DUOBS2
  + DUOBS3
  + DUOBS4
  + DUOBS5
  + DUOBS6
  + DUOBS7 (multiple-select values in single field)
  + DUOBS8 (text specify)

DU EROC:  one record for all DU EROCs for Task=101 & StatusSourceID=’E’, <**vPrioritizationDUEROC**>

* DUID
* EROC data
  + TaskID
  + ContactDT (user entered)
  + CreateDT (timestamp)
  + AppointmentDT
  + WhoContacted (No One, HH Member 18+, HH Member Under 18, Other)
  + ContactTypeID (In person, Phone)
  + StatusCode

SP: one record for each SP, <**vPrioritizationSP**>

* SPID
* SUCompositeStatus
* SP Roster Data
  + Is-HH-Respondent
  + Relationship (InstrumentOutput)
  + HHMember (InstrumentOutput)
  + HSEMEMURE (reside elsewhere, InstrumentOutput)
  + Age
  + Gender
  + Marital (InstrumentOutput)
  + HHParent (guardian of one or more SPs in the DU)
  + EducationAttain (InstrumentOutput)
  + AttendingSchool (InstrumentOutput)
  + SP\_Origin (InstrumentOutput))
  + Race (InstrumentOutput): separate Boolean fields,
    - * Race\_White,
      * Race\_Black,
      * Race\_Indian\_Native,
      * Race\_Asian,
      * Race\_Hawaiian
      * Race\_Other

SP Tasks: one record for all SP Tasks for Consent and SP-Interview tasks (TaskID=201 and 202), <**vPrioritizationSPTask**>

* SPID
* TaskID (201-Consent & 202-SPInterview)
* STCompositeStatus
* STCompositeStatusDT

SP EROC:  one record for all SP EROCs for TaskID (202-Interview & StatusSourceID=’E’), <**vPrioritizationSPEROC**>

* SPID
* EROC data
  + - TaskID
    - ContactDT (user entered)
    - CreateDT (timestamp)
    - AppointmentDT
    - WhoContacted (No One, HH Member 18+, HH Member Under 18, Other)
    - ContactTypeID (In person, Phone)
    - StatusCode

1. Priority Modeling: runs offline periodically;
2. Load Case Prioritization to SMS: Stored procedure to load CasePriority as a single case transaction update to the SMS. CasePriority is maintained for both DUs and SPs.
   1. Name: **<usp\_PrioritizationUpdate** >
   2. Data structure
      1. CaseInfo.CasePriority (smallint: 1-5 & 9)
      2. CaseInfo.CasePriorityDT
   3. Parameters
      1. ProjectSUID (DUID or SPID)
      2. CaseType: 1=DUID, 2=SPID
      3. CasePriority
   4. Processing
      1. Start transaction
      2. Update CaseInfo.CasePriority and CasePriorityDT.
      3. Commit/rollback transaction
3. MFOS Display: Pass priority to MFOS payload for both DUs and SPs. Set Priority dynamically to NULL if the composite status is Final.
4. SMS Display: Display in CaseDetail header.

The Priority Modeling only runs and updates the SMS database weekly (lengthy process requiring manual steps). During the interim, BFOS should supply rough patch updates to the Case Priority according to this algorithm:

* SMS initializes DUs on sample load with Priority=1
* IMS: complete Enum
  + Initialize each SP Priority=1
  + Set DU Priority=1
* IMS: FI-entered EROC (same process for DUs and SPs):
  + If FI enters a refusal EROC (‘IR1’/‘IR2’ or RefYN=’Y’), set Priority=9.
  + Else if FI enters an appointment EROC (‘IAP’ or ApptYN=’Y’), set Priority=9.
  + Else a case with current CompositeStatus=’NWK’ gets any other EROC, then set Priority=2.
  + Else no update of Priority.
* IMS transmits Case Priority to the SMS for display in MFOS.

1. Consent Form Mailing

The consent module allows SP to request the form be mailed. The IMS creates SampleTask records with initial status = ‘NWK’ for three different tasks for three different consent forms:

Adult Consent (Task 203),

Parent Permission (Task 206),

Child Assent (Task 204)

A periodic SMS program will find all such task records with status = ‘NWK’, output them to an SMS mail-merge file (Excel format) and updates the task status to a ‘CSN-Complete/Sent’ (new code).

For the address,

* Select the **DU** mailing address (from the Enum), if it exists: stored in Custom\_tblSampleContact.
* Otherwise select the DU address from tblSampleAddress.

That is the extent of the SMS.  The actual mailing will occur outside the SMS.

1. Validation

Field Test only.

Basic flow:

* Send to Eagle for GPS validation:
  + All (100% to be validated) completed DU Enum (TaskID=101, Task Status=’FCS’)
  + All (100% to be validated) completed SP Interview (TaskID=202, TaskStatus in (‘CO1’,’CO2’) and InterviewMode=1 (InPeson)
* Eagle status imported (by M3 interface) into SMS database tblEagleCases
  + SUID/TaskID
  + OriginalEagleStatusID and date (remains unchanged after initialization)
  + CurrentEagleStatusID and date (always populated/updated)
* SMS Validation page(s)
  + Roles: SA, HO, FS, VA (new, Validation Specialist)
  + Validation Browse page
  + Validation Detail page
    - Assign validation mode (CARI, Phone, Field)
    - Assign validation staff
    - Launch ‘NSCS Validation Interview’ with appropriate fills
    - Enter validation result and comment for the mode
      * Valid (final)
      * Cannot validate (interim)
      * Cannot validate (final)
      * Potential falsified
* SMS Database
  + Track Custom\_SUValidation
  + Track Custom\_SUValidationMode
  + Trigger off change in EagleStatus
    - OriginalStatus changes to Valid
    - CurrentStatus changes to Valid
* Notes
  + No integration with CARICode – validation specialists will have separate access to CARICode to review audio files.
  + Question: will cases be worked in Eagle after the initial assessment?

Data Model/Data Flow Overview

Keep the existing BFOS tables unchanged.  There is legacy code and knowledge associated with it.  Designing all new core tables for Validation

For the basic flow for NSCS, all cases are instantiated by a trigger on EagleCases (this assumes that Eagle picks them all up, even if they are completed via phone).

The basic table is Custom\_SUValidationMode, which is normalized for each mode.

The high-level Custom\_SUValidation is entirely derived from a trigger on Custom\_SUValidationMode and contains the current overall ValidationStatus (based on a simple status mapping logic).

There is a separate comment table to allow for multiple comments for any mode? Or complex field in Custom\_SUValidationMode?

The assigned staff member is not necessarily the only person who can work a case.  Subject to requirements, we can allow others to work a case and make updates and that RoleID would also be tracked.

Not specifically proposing to track assignment history.  It is not important for this purpose and can be tracked via the audit trail if the data ever needs to be retrieved.

**EagleCases**: Maintained by M3. The trigger on this table is what instantiates a record in the NSCS Validation tables. And the trigger maintains the history record for the Eagle mode.

Note, need to map the EagleStatus values to ValidationStatusCode.

**Trigger** on insert or update

* If no existing record in Custom\_SUValidationMode for Mode=Eagle, then insert:
  + If CurrentEagleStatus not NULL then set ValidationStatusCode = CurrentEagleStatus
  + Else set ValidationStatusCode=OriginalEagleStatus
* Else if record exists in Custom\_SUValidationMode for Mode=Eagle, update the record based on:
  + If CurrentEagleStatus not NULL then set ValidationStatusCode = CurrentEagleStatus
  + Else set ValidationStatusCode=OriginalEagleStatus

**Custom\_SUValidation**: Summary status for the SUID, derived status from a status mapper. This table is maintained by a trigger on SUValidationHistory.

* SUID
* TaskID (FK)
* CurrentValidationStatusCode
* CurrentValidationStatusDT
* SUValidationHistoryID (FK pointing to the record that caused the current status)

**Custom\_SUValidationMode** (tracking current assigned staff, but also track the staff who made the update (gives flexibility that someone other than the assigned person can access and make updates to the record).

* SUValidationHistoryID (identity)
* SUID (FK)
* TaskID (FK)
* ValidationStatusCode (FK)
* ValidationStatusDT
* ValidationModeID
* ModeStartDT
* ModeEndDT
* AssignedRoleID (FK)
* UpdateRoleID
* AssignedDT
* CustomData: varchar(max) for tracking respondent interview data, for instance.

**Trigger** to maintain Custom\_SUValidation: check status values for the SUID and write a record to Custom\_SUValidation.

* Choose the latest ‘Complete’
* Else choose the latest ‘final’
* Else choose the latest ‘interim’

*Values for ValidationModeID*

|  |  |
| --- | --- |
| *1* | *Phone* |
| *2* | *In Person* |
| *3* | *Mail* |
| *4* | *Eagle* |
| *5* | *CARI* |

*Values for ValidationStatusCode*

|  |  |
| --- | --- |
| *1* | *Validated (Final)* |
| *2* | *Suspect (INTERIM)* |
| *3* | *Cannot Validate (INTERIM)* |
| *4* | *Potential Falsification (FINAL)* |
| *5* | *Cannot Validate (FINAL)* |

**Custom\_SUValidationHistoryComment**: one to many comments for each mode

* SUValidationHistoryCommentID
* SUValidationHistoryID (FK)
* Comment
* CommentDT
* CommentRoleID (FK)

ValidationStatusCode: existing table

* Add InterimFinal flag (= ‘I’ or ‘F’)
* Add CompleteYN flag

1. Field Test Production DB Preparation

* SAS Delete – more tables, e.g. audit trail tables - **done**
* Analyze sample file: **done**
  + PSU 🡪 Region mapping correct
  + Region 🡪 Area mapping
  + Cond-3 split into a separate file
  + Reserve sample in separate files
* Maintain PSU 🡪 Region mapping in SAS macro %PSUToRegion **done**
* Enter the regions and areas into TST database **done**
* Load sample file to TST **done**
* Archive DR Audio to a new folder **done**
* Refresh MFOS training database (400 FI): ncvstrn on fossql200
* Construct PRD database:
  + Copy regions and areas from TST to PRD
  + Load PRD with R\_Group 1
  + Check M3Queue records, should have been created via trigger.
* Test the master clones against production
* Reload production.
* Load Field Staff to production: Staff, Role, RoleRegion, StaffAddress
* Update Field Managers: need to manually populate Area and RoleRegion tables
* Update Field Staff in MFOS training database: update Staff (FirstName, LastName) & Role.LoginID.

1. Subsampling/Removing Interim Cases

January 2020: new requirement to subsample and remove interim cases from the field. This applies only to C1/C2 DUs in Release Group 1 (no subsampling at the SP level).

Approach: nightly program that will identify new candidate interim cases and assign a unique/identifiable close-out code.

Selection Requirements:

FOR EACH **DU** where

* Condition = 1 or 2 AND
* ReleaseGroup (Wave) = 1 AND
* DU composite status is interim (and not ‘FCS’ – i.e. not Enum complete) AND
* DU composite status not ‘IAP’ (no current appointment) AND
* Number of FI entered EROCs (StatusSourceID=’E’) more than 1 hour apart >= 3
  + for the one hour rule, do not count EROCs of the same StatusCode within one hour of the most previous EROC.
  + The date/time is computed by the date manually entered by FI – ContactDT.
  + Do not count EROCs with DeletedYN=’Y’
* EligibleForSubsample not True AND

THEN DO

* Set EligibleForSubsample = True
* If Rand3 <= **.3** THEN DO
  + Set DU Status = ‘FSM’ (ActivityLog (TaskID=101), SampleTask (TaskID=101), SampleUnit)
  + Set TransmitYN = ‘Y’ (cause case to be transmitted to FI)

Database:

* New final status code for Task 101 (Enum): ‘FSM – Final, Subsampled Out of Field’.
* Download new code to IMS
* New field to track CaseInfo.EligibleForSubsample.

# IMS

1. SP Consent

* Consent is a separate SP task to be performed for all SPs.
* To be implemented as a separate Blaise instrument.
* All consent questions are to be required.  Once the instrument is complete, all the appropriate consents are explicitly either ‘consent/assent’ or ‘refuse’.
* For parent:
  + asked for consent of the respondent and consent all related child SPs (age < 18).
  + Parent only asked about children not already consented by other parent (check Consent Task Status for child = ‘NWK’).
  + Parent can un-confirm guardian status. If all (one or both) parents from the roster are un-confirmed, then the child is closed-out.
  + Parent is asked for child cell phone and email address.
* For non-parent adult:  consent the respondent.
* For child:  asked for respondent assent; either designated parent must consent for child before child may assent.
* Consent to Record:
  + SP will respond with Yes or No (code as 1=yes, 2=no)
  + Parent will respond for related child with consent to ask child which will have a separate code in the RecordConsent field. (3=Parent consented)
* Results (consent/assent or refuse) are communicated back to the IMS and the consent task and SP composite status are updated accordingly.
* There are no EROCs nor Final codes associated with the Consent task – all result codes are automated by the consent module
* If after consenting (either for self or child) an SP later wants to withdraw consent/assent, this is done in the IMS with an interim ‘Refuse Consent’ EROC for the **Survey Task**.  We would retain the result for the Consent task, then close out the survey task with a separate code (TBD, new codes?)

Consent is implemented as a Blaise instrument

* Input parameters
  + Respondent SP-ID
  + Array of child SP-ID and ChildName:  for each child whose consent task status is ‘NWK’ or ‘INP’ (i.e. not determined by the other parent yet) and who is linked to this person (Guardian1SUID or Guardian2SUID)
* Output parameters
  + Respondent ConsentStatus:  1=consent, 2=refused
  + Respondent ConsentToRecordStatus:  1=consent, 2=refused
  + Array of Child ConsentStatus:  1=consent, 2=refused; one for each of the linked children
  + Respondent ConsentToRecord:  1=consent, 2=refused, 3=Parent consents to ask child (if parent does not consent the it is coded as ‘2’)

The Consent instrument asks the respondent if they would like to receive a copy of the form through the mail. There are three (maybe 3) separate forms:

* Adult Consent form (Task=203)
* Child Consent form (Task=204)
* Parental Permission form (Task 206):

The IMS instantiates these SampleTask records if answered YES in the consent module.

Home office SMS process (on the Home Office screen) to produce mail merge files.

When the record is extracted, the task status changes to ‘CTK-Complete Task’.

Use the following filter to **suppress** extracting the SP to the mail merge file (task status remains ‘NWK’):

* Adult Consent & Youth Assent: if the SPs SUCompositeStatus is FinalYN=’Y’ and CompleteYN=’N’
* Parental Permission: always generated

1. IMS Task Status Setting

When launching instruments, inserts auto-EROCs with StatusSourceID=’I’.

* HH-Roster Task Status
  + When user starts instrument, result = **‘INP’ (in-process)**
  + On exit from Blaise, if instrument is complete,
    - = **‘FCS’ (HH-roster-complete)** if at least one person >= 12 years old)
    - else = **‘FUA’ (HH-roster-complete, no SPs)** if no one >= 18 years old) [not FUA which is presumably set by the sup?]
* SP-Consent Task Status
  + When user starts the instrument, result = **‘INP’ (in process)**
  + On exit from Blaise, if the instrument is complete,
    - For SP consent task status (child or adult)
      * = **‘CCN’ (complete: consented/assented)** for the SP if consented/assented
      * **= ‘FRF’ (refused consent/assent)** for SP if SP refused consent (adult or child)
    - For each related child
      * =**’ICN’ (interim, parent consented)** if the parent consented
      * =**’FRP’ (refused parental consent)** if the parent refused consent
      * **=’FNP’ (no parent identified)** if this parent not confirmed as a parent and no other Parent/Guardians exist for the child.
* SP-Interview Task Status
  + When user starts instrument, result = **‘INP’ (in-process)**
  + On exit from Blaise or PHP, if instrument is complete
  + =**’CO1’ (complete/incident)** if at least one incident
  + Else = **‘CO2’ (complete/no-incident)** if no incidents
* SP-Debrief Task Status
  + Initialized (for each SP out of Roster) to **‘NWK’ (new work)**
  + On IMS start, updated to **‘INP’ (in process)**
  + On completion, updated to **‘CTK’ (complete task)**

1. Status Mapping (Task and Composite)

* Status mapper executes all new ActivityLog entries for that specific task (EROCs, supervisor close-out, survey integration) AND during data transmission/upload
* Task Status (all tasks): Set STCompositeStatus to the corresponding ActivityLog.StatusCode based on this hierarchy:
  + If StatusSource=’I’ and StatusCode.CompleteYN=Y
  + Else if StatusSource=’S’ and StatusCode.FinalYN=Y
  + Else if StatusSource=’S’
  + Else get the later of StatusSource = ‘E’ / StatusSource = ‘I’ (i.e. instrument ‘started’ would override an earlier EROC, but a later EROC would override an instrument ‘started’)
  + Else leave STCompositeStatus unchanged.
* SP Composite Status
  + = SP-Interview task status if the task status is FinalYN=’Y’
  + Else = SP-Consent task status if the task status is FinalYN=’Y’ **OR** SP-Interview task status category is ‘2’ (initial/not worked)
  + Else = SP-Interview task status

Note: **“CCN-Consent-Complete” is an interim status**, otherwise a ‘CCN’ SP-Composite would be viewed as a complete on the HH-Composite algorithm.

* HH Composite Status
  + =**’CC1’ (complete/incident)** if all related SPs are CompleteYN=’Y’ and at least one SP composite=’CO1’ (complete/incident)
  + Else = **‘CC2’ (complete/no-incident)** if all related SPs are CompleteYN=’Y’ and no SP composite=’CO1’ (complete/incident)
  + Else = **‘CP1’ (partial complete/incident)** if all related SPs are FinalYN=’Y’ and at least one SP is CompleteYN=’Y’ and at least one SP-composite=’CO1’ (complete/incident)
  + Else = **‘CP2’ (complete/no-incident)** if all related SPs are FinalYN=’Y’ and at least one SP is CompleteYN=’Y’ and no SP-composite=’CO1’ (complete/incident)
  + Else = **‘CON’ (final-non-response)** if all related SPs are FinalYN=’Y’ and no SPs are CompleteYN=’Y’
  + Else set to HH-Roster task status

1. Instrument Development

* HH-Roster: roster everyone in the HH. Sample all persons >= 12 years old.
* SP-Consent: Blaise instrument for each sampled person.
* NCVS-C:
  + adapt the Blaise code provided.
  + Remove superfluous sections.
  + Input Parameters: entire Blaise Roster instrument
* NCVS-R:
  + Input Parameters
    - Household and Person ID: 10 digits
    - Screener Version: 1=interleaf, 2=non-interleaf (from sample file)
    - Ask All Section: 1=police, 2=community
    - Sex: 1=Male, 2=Female, 3=Missing/unknown
    - Age: 1 or more digits
    - Household Respondent (HHR): 1=yes, 2=no
    - Campus Student: 1=yes, 2=no
    - Regular Student: 1=yes, 2=no
    - Apartment Dweller: 1=yes, 2=no
    - Children between 0 & 11: 0 or more digits
    - Solo HHM (Resp Lives Alone): 1=yes, 2=no
    - Condition: 2=Interviewer-administered, 3=Self-administered
    - Recording Consent: 1=yes, 2=no
  + if recording has been consented in the Blaise Consent instrument), start separate Windows app to control the audio recording function

1. Instrument Extract Interfaces

Roster data extract:

HH-Level

* Status: IMS initializes to InProgress, status=Complete is the only status read from the instrument
* HHRespondentName: Store in CaseInfo.RespondentFName & RespondentLName for the corresponding HH SUID.
* HH-Phone (one general number for the HH, phone type unspecified, stored in SampleAddress)
* HHAddress (5 fields, optional, if different than current address, in SampleAddress, cancel the current address and insert a new address)
* HHMailingAddress (5 fields, optional, if populated and different than current address, insert into Custom\_tblSampleContact
* NumberOfChildren (<12)

For each SP (Age >= 12)

* Sex (1=male, 2=female, 3=unknown)
* Age (select the lower bound if an age range is indicated)
* IsHHRespondent (1=yes, 2=no)
* Guardian RosterRowNum1 (child SP points to first parent record)
* Guardian RosterRowNum2 (child SP points to second parent record)
* Apartment Dweller (1=Yes, 2=No):

*((NUMBEROFUNITS <= 6) AND (NUMBEROFUNITS >= 2)) AND (TYPEOFHOUSINGUNIT = House)*

* CampusStudent (1=Yes, 2=No): *‘Yes’ if LiveOnCampus = ‘Campus’*
* RegularStudent (1=Yes, 2=No): *‘Yes’ if AttendingSchool=’RegularSchool’*
* SoloHHM (1=Yes, 2=No): *roster count=1*
* SP-Cell-Phone (only expected for 18+), to store in SampleAddress
* SP-EmailEmail (only expected for 18+), to store in SampleAddress

SP Consent data extract (if the form is complete)

* For the SP
  + SurveyConsentStatus (Consent task status): 1=yes (‘CCN’), 2=no (‘FRF’)
  + RecordConsentStatus (SP): 1=yes, 2=no
  + If AC1\_3 (mail adult consent form) = 2, instantiate a SampleTask record for TaskID=203 and initial STCompositeStatus=’NWK’
  + If PC1\_2 (mail child consent form) = 2, instantiate a SampleTask record for TaskID=204 and initial STCompositeStatus=’NWK’. Note, this question is only asked if there is one or more children for whom this adult was designated as a guardian in the roster and it is only asked once, regardless of the number of children.
* For each related child SP
  + Guardian Confirmation: if indicated that this adult is not a guardian
    - Remove this parent’s SUID from either Guardian1SUID or Guardian2SUID.
    - If both Guardian1SUID and Guardian2SUID are NULL, then set the child’s Consent task status = ‘FNP’ (final, no parent)
  + SurveyConsentStatus (Consent task status): 0/many: 1=yes (‘ICN’), 2=no (‘FRP’),
  + Update the CaseInfo.ConsentingGuardianSUID with the parent SP-SUID
  + Child cell phone and email address
  + RecordConsentStatus: 1=yes, 2=no; [yes maps to RecordConsentStatus=’3’ in IMS]

SP Interview data extract

* Status
  + NCVS-C (Blaise)
    - CompletionStatus:
      * 0 = Not Started
      * 1 = Incomplete
      * 2 = Complete with No Incidents
    - Incidents: number of incidents, with 0 meaning none
    - InterviewMode: in-person or phone (how coded?)
* NCVS-R (PHP)
  + CompletionStatus:???
  + Incidents: ???
  + ???InterviewMode: in-person or phone

1. IMS & Data Transmission

Standard IMS and data transmission with the following enhancements.

* Shall enable users to select a case at HH-level, and drill-down to related SP if the roster has been completed
* For the selected case, shall force the user to enter the control code (last 4-digits of the case ID).
* Shall enable Drop-Point processing for the HH. Present interviewer with a control that permits entry of an enumeration (>1) HH text descriptions (of multiple units). Sample exactly one of the entries; use the text description to update the HH AddressLine2. Save the enumerated list in a HH-level field (JSON?), along with the date/time of the processing. The presence of this variable implies that Drop-Point processing was performed.
* Shall enable EROCs for HH and SP
* Shall enable recording the SP interview, control starting and stopping the microphone and packaging the resulting audio file. Will determine which cases to record, something like (0% of Condition-1 and 10% of Condition-2 – TBD).
* Shall to interface with HH Roster, determine each roster entry for eligibility, then spawn Person records.
* Shall set the HH-Task-Status to ‘INP-InProgress’ when first launched, and HH-Task-Status=’FCS-RosterComplete’ when finished.
* Shall set the AskAllSection variable for each SP when the roster is complete, based on
  + - If RAND1<.5, HHR gets 1=police; if RAND1 >=.5, HHR gets 2=community
    - Then systematically alternate the remaining HH SPs.
* Shall enable launching the SP-Consent instrument.
* Shall not enable launching SP-Survey until the SP-Consent status is CompleteYN=’Y’.
* For Child survey,
  + Shall ensure that the HH-Roster respondent survey is done first.
  + Shall ensure that the SP-Consent has been granted by the consenting adult.
  + Shall ensure that consenting parent has already completed the survey.
* Shall determine what survey instrument and in what application to launch the Person survey: NCVS-C (Blaise) or NCVS-R (browser/PHP)
* Shall set the SP-Task Status = ‘CM-Complete’ when the survey is completed.
* Data transmission: only transmit HH as a full bundle
* Data transmission: shall package data files from Blaise and PHP interviews and audio tiles, to be transmitted in a standard package.
* A daemon process will run on a Westat server to unpackage data transmitted and deliver to the project network folder.

1. Data Transmission Reassignments

Reassignments are designed to be controlled by SUInterviewerHistory.TransmissionReqYN.

* Should be set to 'Y' for the new interviewer.
* Transmission should not be done for the new interviewer until the TransmitYN is 'N'
* When the old interviewer transmits, the TransmitYN for the new interviewer should be set to 'N', triggering transmission to the new interviewer
* If TransmitYN='Y' for the new interviewer, then the SMS user has the option to 'Force Transfer', which sets it to 'N' for the new interviewer, triggering transmission

1. IMS/Laptop GPS

* Eagle: is able to integrate with both sources (MFOS and Laptop GPS) simultaneously, showing the ‘bread-crumbs’ for each in different colors (we should confirm this when we meet with the Eagle team).
* Laptop: the software to interface with the laptop GPS device can be obtained from the Eagle team (Kiran Amireneni). It writes a CSV file that is resides locally.
* Data Transmission: We have to update the standard data transmission software to pick up the GPS file and unbundle in the home office and put in an appropriate place in the BFOS database.

1. IMS Initializing SPs

The IMS ‘samples’ the roster and initialized SPs for all HH members 12+ years of age.

* Sample persons (Age>=12) and spawn Person records,
  + SampleUnit (SUID=HH-SUID + increments by 10)
  + CaseInfo
  + SampleAddress (initialize same as HH)
  + Custom\_SampleContact (one contact/SP for foreign key for email and phone)
  + Custom\_SampleEmail (optional email from roster)
  + Custom\_SamplePhone (optional phone from roster)
  + SampleTask
    - Consent task (TaskID=201), StatusCode = ‘NWK’
    - SP-Interview task (TaskID=202), initialized with StatusCode = ’NWK’.
    - SP-Debrief task (TaskID=205),initialized with StatusCode=’NWK’

1. IMS Task Performance

The Fujitsu 902 laptops are at least 5 years old, designed for Windows-7 (PATH) then converted to Windows-10 (which also implicitly switched the encryption from PGP to BitLocker). The performance was very slow. The main bottleneck appears to be related to the BFOS file handling infrastructure. To initialize a task, it essentially did the following. The steps in strikeout could elimintated)

1a. IF NO STUDY DATA FILE (i.e., DU ENUM task, SP Consent):

InitializeProjectData

InitializeBlaiseData() - API init data, in the work area

LoadBlaiseData() - Set mDatabase.Field values

~~ZipFiles() (zip workarea to projectdata)~~

~~EncryptData() (encrypt projectdata file)~~

~~GetProjectData - Decrypt, UnZip, and Move the Data from the Study Data Area to the Work Area~~

~~Make backup of file~~

~~Decrypt study data file~~

~~Unzip back to workarea~~

1b. IF STUDY DATA FILE (i.e., SP Interview, Debrief):

GetProjectData against the current encrypted study data file (containing Consent/SP interview):

Make backup of file

Decrypt study data file

Unzip to workarea

InitializeProjectData

If Blaise task database does not yet exist:

InitializeBlaiseData() - API init data

LoadBlaiseData() - Set mDatabase.Field values

~~ZipFiles() (zip workarea to projectdata)~~

~~EncryptData() (encrypt projectdata file)~~

1. NCVS Interview Recordings

Dress Rehearsal

HH-Roster: not recorded

SP-Consent: not recorded

SP-Consent: Interviewers will request permission to record the SP-Interview (SP-Consent module). This will be tracked by the IMS.

SP-Interview: if consent to record has been obtained & interview mode is in person.

MFOS: Interviewer manually starts the recording for the SP

IMS - Condition-1:

no action by the IMS – Blaise controls recording the designated questions.

If InterviewMode = InPerson (question in instrument), then Blaise records the RecordingConfirmation question that respondent confirms to be recorded.

If the RecordingConfirmation question is YES, then Blaise records each Q174 (incident response description).

IMS – Condition-2:

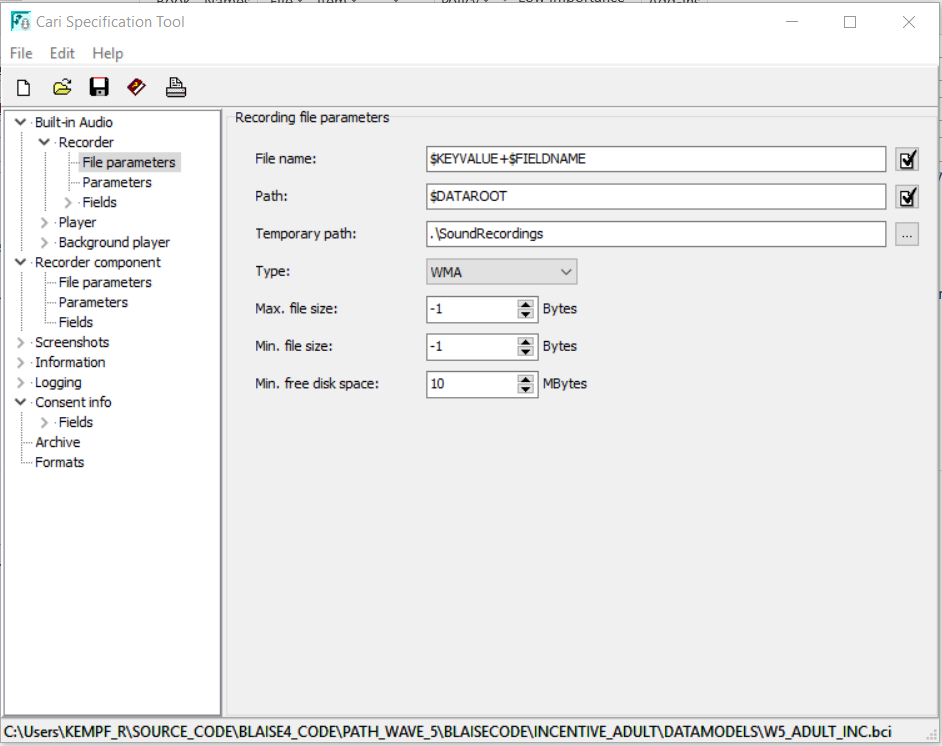
IMS auto-starts the laptop microphone.

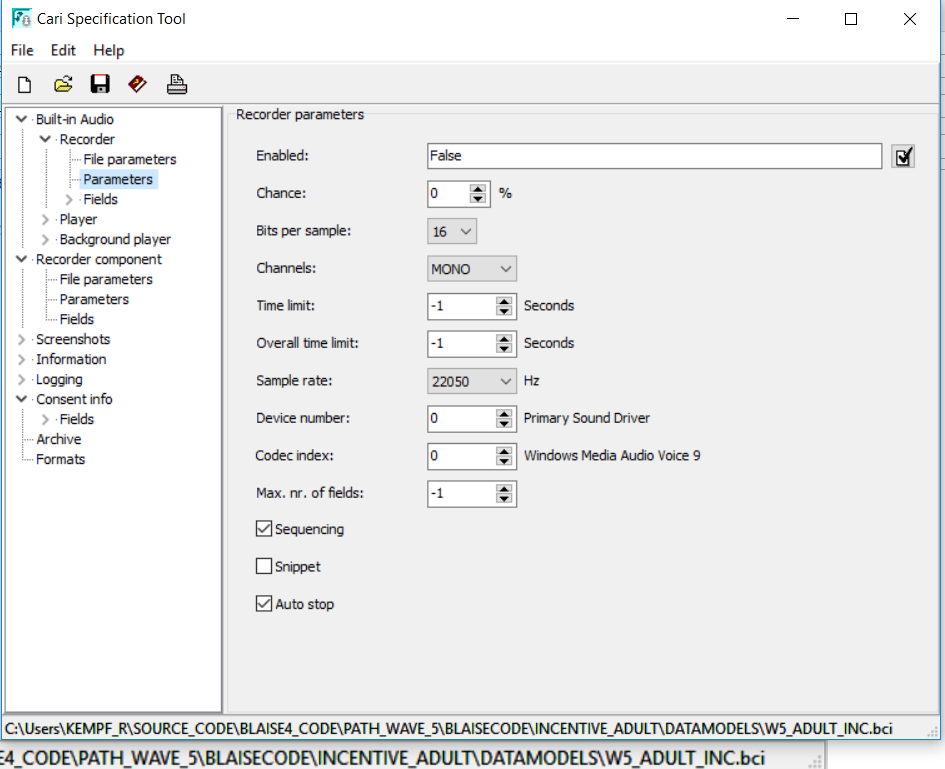
If InterviewMode = Phone or RecordingConfirmation question is NO, FI manually stops the recording. IMS needs an accessible control to manually stop the microphone.

1. IMS Audio Recording Settings

The IMS records question by question for the two SP surveys (Condition-1 and Condition-2).

Condition-1: Recording parameters are consistent with PATH settings.





Field Test: If recording consent obtained (TBD)

1. Drop Point Processing

For the field test only.

The sample load file will contain a DropPoint indicator. This will be treated as an FYI field to the interviewer, alerting the interviewer to verify that the address is a drop point and initiate Drop-Point Processing. The interviewer will be able to initiate Drop-Point Processing regardless. Drop-Point Processing: FI enumerates all HH within a drop-point (a list of free-form text descriptions). The IMS randomly selects exactly 1. The text description of the selected HH is appended to Address-2. The IMS captures and transmits the entire Drop-Point list, along with the date of the Drop-Point Processing.

The Sample Load File

* will be de-duped for drop point addresses that were sampled more than once.
* Will contain:  DropFlag and DropNumSampled (new field)

The IMS

* Display the DropFlag and DropNumSampled
* Enable the FI to initiate Drop Point Processing (regardless of whether the DropFlag is set).  If initiated for a HH w/o DropFlag, then DropNumSampled is set to 1.
* The IMS prevents Drop Point processing if Drop Point Processing has already been done: IF CaseInfo.DropPointProcessingDT is not NULL.
* If the DropFlag is set, enable the FI to ‘Bypass Drop Point Processing’, in the event that they find that the address is not actually a drop point (if not bypassed, the FI is required to perform Drop Point Processing before the HH-Enum)
* For Drop Point Processing, FI enumerates 1-many HH within a Drop Point (a list of free-form text descriptions).
* The IMS randomly sampled exactly DropNumSampled of the enumerated rows (or all if the number of enumerated is < DropNumSampled.

# Related Systems Integration

1. Survey and Related File Processing

Data transmission delivers unencrypted ZIP files, one for each DU, at a single location on the network. The files are named <SUID>.ZIP.

Periodic job to process the incoming survey data ZIP files. The program parses the different files into separate locations (representative, not exact folder paths):

\NSVSRedesign\IT

\ProcessLogs (Excel log files itemizing cases processed)

\SASData (master database, with these SAS data libraries)

\Enum

\Consent

\Condition-1

\Condition-2

\SP-Debrief

\AuditTrail (audit trail files, ZIP files for each instrument with CaseID (DU or SP) in the file name

\Enum

\Consent

\Condition-1

\Condition-2

\Debrief

\MFOSAudio: MFOS audio files automatically directed here, with the name including the SPID and a date/time stamp.

\CARIExport (contains one ZIP file per SP, named <SPID>.zip, containing all audio files screen capture)

NCVSRedesign\DM (isolated copies of files specifically for data management)

\ProcessLogs (copy of \ NSVSRedesign\IT\ProcessLogs)

\SASData (copy of \ NSVSRedesign\IT\SASData)

1. MFOS

* MyDay/GPS
* MyCases
  + Link to Apple Maps based on DU address
  + Audio
  + DU Observational Qx
* BSM (push notification only)

1/16/2020: Update the Payload functionality to hide DUs that are still in the ‘hold’ period. This logic has been incorporated in the daemon since the start of data collection. For the IMS, after the first assignment, the DUs are not transmitted to the FI until X hours have elapsed (runtime parameter, generally set to 96 in BFOSParameters). Determine that there is only one assignment and the date/time of that assignment based on the record count in tblSUInterviewerHistory.

1. M3 Communication

Transactions for M3 will be communicated via the tblM3Queue table. From these transactions, M3 constructs a parallel database and is able to control the flow to corporate resources: Eagle and PD3.

The table will be populated for select events via database trigger on the appropriate table(s). TransmitYN must be set to ‘Y’ for M3 to pick up, after which M3 sets the M3 variables.

Events/Transaction Types:

#1: Case Creation: On insert into SampleUnit (covers both DU and SP)

#2: Assignment Change: On update of CaseInfo.InterviewerID

#3: Task Status Update: On update of SampleTask.STCompositeStatus, only for these tasks:

101: HH-Roster

102: DU-Observation

201: SP-Consent

202: SP-Interview

205: SP-Debrief

#4: Incentives: On insert into SampleTask TaskID=207 & STCompositeStatus is a Complete (probably just Status = ‘CTK’)

* IncentiveAmount = [BFOSParameter: “IncentiveAmount” = 20]
* DebitLast4: last 4 digits of Custom\_tblIncentiveCard.CardNumber
* DebitSeqno: Custom\_tblIncentiveCard.ProxyID

#5: CaseInfo Update: On update of RespondentName, Age

#8: Case Status Update: on update of SampleUnit.SUCompositeStatus.

#15: Address change: on insert into SampleAddress if there is already at least one SampleAddress record for the SUID (address changes are always inserted, not updated)

[Note: Insert/update of EROC not needed. M3 pulls directly from the ActivityLog.

1. CARICode

Integration is via M3.

M3 needs a view (vM3CARITasks) containing:

Create a view (vM3CARITasks) for M3 to integrate with CARICode.  The view should contain the records that should be exported to CARICode:  completed SP interviews.

The basic view has these fields (but will very likely be modified with additional fields once the CARICode requirements are refined):

SUID,

ProjectSUID,

Round,

Region,

PSU,

Mode (CaseInfo.InterviewMode:  1=InPerson, 2=Phone),

InterviewerID (RoleID),

DateOfInterview (STCompositeStatusDT)

InterviewMode (CaseInfo; ‘I’=InPerson, ‘P’=Phone)

InterviewerName

NumberOfContacts (count ActivityLog where StatusSourceID=’E’)

<list of Condition-2 fields from InstrumentOutput> (see below)

WHERE STCompositeStatus in ('CO1','CO2' and TaskID=202

Audio and screen files stored in the \CARIExport directory, one zip file/SP, with the ProjectSUID as the name of the file. The zip files contain WMA files (audio) and JPG files (screen shots).

For Condition-2, CARICode needs response data from the instrument. The fields will be extracted on the IMS to InstrumentOutput and transmitted. M3 will pick up the response-level data directly from tblInstrumentOutput. The fields required are:

|  |
| --- |
| S\_01B1 |
| S\_01B2 |
| S\_02A1 |
| S\_02A2 |
| S\_02A3 |
| S\_03A1 |
| S\_03A2 |
| S\_03A3 |
| S\_03A4 |
| S\_03A5 |
| S\_03A6 |
| S\_03A7 |
| S\_03B |
| S\_04A1 |
| S\_04A2 |
| S\_04A3 |
| S\_05A1 |
| S\_05A2 |
| S\_06A1 |
| S\_06A2 |
| S\_06A3 |
| S\_06A4 |
| S\_06A5 |

1. Eagle:

Eagle can be used to monitor field staff to detect potential falsification,

* Eagle: is able to integrate with both sources of GPS (MFOS and Laptop) simultaneously, showing the ‘bread-crumbs’ for each in different colors (we should confirm this when we meet with the Eagle team).
* Laptop GPS: the software to interface with the laptop GPS device can be obtained from the Eagle team (Kiran Amireneni). It writes a CSV file that is resides locally. GPS updates are time-based, which ensures that GPS coordinates continue to update during an interview session while the FI is not necessarily in motion. **This was scrapped because the Fujitsu GPS driver was not compatible with the laptop’s upgrade to Windows 10.**
* MFOS GPS: Integrated with MyDay. Via the MFOS Hub, the data is written to SMS table **tblLocationData**. GPS updates are motion-based, writing when the user moves more than X feet. This is not as reliable during an interview session while the FI may be relatively motionless
* Data Transmission: We have to update the standard data transmission software to pick up the GPS file and unbundle in the home office and put in an appropriate place on the network. **Not needed because not utilizing laptop GPS**
* M3: is able to pick up the GPS CSV files and feed to Eagle.
* M3 to pass to Eagle all cases such that:
  + TaskID=101 (DU-level), TransType=3 (task status update) and tblSampleTask.STCompositeStatus = ‘FCS’
  + TaskID=202 (SP-level), TransType=3 and tblSampleTask.STCompositeStatus in (‘CO1’,’CO2’)
* **No Single-Signon**, but can have an SMS link that takes user to Eagle login page (log in with FOS credentials?)
* **Store Eagle Original and Updates status in the SMS**: maintained in the **tblEagleCases**, which can be joined to
* **Potential time synchronization issues**. Laptop is local time, MFOS is UTC time.
* Eagle evaluates time-zone based on staff address, not case address. Upgrading to evaluate case address would be an enhancement.

1. PD3 Dashboard:

The PD3 Dashboard site can be used to track field staff in real time and to monitor their overall completion performance.

1. Travel Module:

# Condition 3 IT Approach:

Condition 3 is dual mode: web self-interview with a fielding for in-person laptop self-interview for non-respondents.

1. Enumeration
   * Data transmission of Enum creates random/unique PIN for each SP. The PIN should be unique and sparse (false positives will be prohibitively unlikely).

8-digit PIN: a random 7-digit integer (ensure no leading 0) with an added check digit.

Check digit:

Mod ( (a1\*1)+(a2\*3)+(a3\*7)+(a4\*1)+(a5\*3)+(a6\*7)+(a7\*1), base-10)

Ensure uniqueness or else generate another value.

Store in SampleTask.PIN for TaskID=202

Sets TransmitYN to immediately transmit the PIN back to the IMS (only reliable event to ensure the PIN is accessible for display during in-person visit).

* + Support the child Consent task status. Same status codes as currently in the Consent module + new one for ‘Maybe’ response.
  + Contains parental permission for each child. Possible values: Yes, No, Maybe, blank (if one of the parents is not the HH-R)
  + Update GuardianRespondentSUID – parent who provided permission.
  + Extract Contact Preference: new SampleAddress field: ContactPreference, FK to tblContactType (‘M’=Mail, ‘E’=Email, ‘T’=text, ‘P’=Phone
  + Extract to InstrumentOutput
    - START\_STOLEN (Condition-3 roster)
    - START\_BROKEN (Condition-3 roster)
    - START\_ATTACK (Condition-3 roster)
    - START\_SAFE (Condition-3 roster)
    - START\_AFRAID (Condition-3 roster)

1. Auto Notification of SPs Requirements

Basic requirements: approximately one month after enumeration, send all SPs a series of notifications and reminders for a 30-day period, providing the PIN and requesting they complete web-based self-response C3 survey.

**SP Survey Invitation**:  **27 days** after Enum

Selection:

* All adult SPs with status = ‘NWK’ PLUS
* Interim child SPs whose Consent (Task=201) task status=’ICN’ and Survey (Task=202) task status = ‘NWK’

Mode: mail

TaskID=210

SP Survey Invitation **Reinforcement**:  **5 days** after ‘SP Survey Invitation’

Selection:

* All interim adult SPs PLUS
* Interim child SPs whose Consent (Task=201) task status=’ICN’ and Survey (Task=202) task status = ‘NWK’

Mode:

* If phone, email, and preference all exist, use preference
* Else if phone and email exist, use email
* Else if one is available, use whichever is available.
* Else no notification sent
* If the email or text are returned undeliverable, then if there the other contact info exists, resend via the opposite mode.

TaskID: 220

SP Survey Invitation **First Follow-up**:  **10 days** after ‘SP Survey Invitation’

Selection

* Survey (Task=202) task status = ‘NWK’

Mode:

* If phone, email, and preference all exist, use preference
* Else if phone and email exist, use email
* Else use what is available.
* If the email or text are returned undeliverable, then if there the other contact info exists, resend via the opposite mode.

TaskID: 230

SP Survey Invitation **Second Follow-up**:  **15 days** after ‘SP Survey Invitation’

Selection

* Survey (Task=202) task status = ‘NWK’

Mode:  (flip mode, if possible)

* If phone and email both exist, use the alternate one from First Follow-up
* Else use phone or email, if either exists.
* Else post-card (i.e. mode=mail)
* If the email or text are returned undeliverable, then if there the other contact info exists, resend via the opposite mode.

TaskID: 240

SP Survey Invitation **Third Follow-up**:  **21 days** after ‘SP Survey Invitation’

Selection

* Survey (Task=202) task status = ‘NWK’

Mode:

* Mail

TaskID: 250

**Partial Complete Reminder**: **7 days** after survey has last been accessed

Selection: All interim SPs whose survey task status status <> ‘NWK’ and <> interim refusal (‘IR1’/’IR2’)

Mode

* If phone, email, and preference all exist, use preference
* Else if phone and email exist, use email
* Else if one is available, use whichever is available.
* Else no notification (**no** mail mode)

TaskID: 260

**Ad-hoc Notification**:

Help Desk has the ability to resend notifications on request from either SP or FI.

User logs into M3 to initiate an ad-hoc notification.

If there is a contact update (email or phone), the user must enter the update into both the SMS and M3.

TaskID: 270

Can send

* + Text: use ‘Reinforcement’ template
  + Email: use ‘Reinforcement’ template
  + Mail: use ‘SP Survey Invitation’ template

Task Status Codes:

CSN: Communication Sent

FUN: Communication Undeliverable

Message templates:

Each message has separate templates depending on all permutation of:

* Adult vs. Child (Child: CaseInfo.Age < 18)
* Incentive (1) vs No-Incentive (0) (based on value of CaseInfo.IncentiveGroup)
* Text vs. Email
* Letter type: ‘I’ if (Rand2<.25) or (Rand2>=.5 and Rand2<.75); ‘T’otherwise

Notes:

* Communications fulfilled by M3.
* Child SPs who receive parental permission during the parent’s C3 instrument will receive an immediate ‘SP Survey Invitation’ and follow the general protocol. The exception is if the parental permission is during an in-person session and the child has already completed the SP-Survey.
* all notifications need to appear in the SMS/IMS ActivityLog and be transmitted to the FIs.

1. Auto-Notifications M3 Communication

**v\_M3C3Notifications**

One record for each C3 SP

* + - SUID (for the SP)
    - ProjectSUID (for the SP)
    - SurveyTaskStatus (STCompositeStatus for Task=202)
    - SurveyTaskStatusDT (STCompositeStatusDT for Task=202)
    - SUCompositeStatus
    - SUCompositeStatusDT
    - StatusICF (‘I’=Interim, ‘C’=Complete, ‘F’=Final/non-response)
    - EnumCompDT (Task 101 for the DU STCompositeStatusDT)
    - PIN (from SampleTask, TaskID=202)
    - SPType
      * ‘A’ if age>=18,
      * ‘Y’ otherwise
    - YouthPermissionYN (NULL if SP is not a youth)
      * ‘Y’ if ConsentTaskStatus = ‘ICN’ ~~and SurveyTaskStatus = ‘NWK’~~
      * ‘N’ otherwise
    - IncentiveYN (based on related DU CaseInfo.IncentiveGroup)
      * ‘Y’ if IncentiveGroup=1
      * ‘N’ otherwise
    - LetterFormat (based on CaseInfo.Rand2)
      * ‘I’ if (Rand2<.25) or (Rand2>=.5 and Rand2<.75)
      * ‘T’ otherwise

**sp\_M3SendCommunication**

Parameters:

* + - SUID
    - TaskID
    - Mode (‘M’=mail, ‘T’=Text, ‘E’=Email)
    - CommunicationDT
    - PhoneNumber
    - EmailAddress

Processing

* Insert into ActivityLog
  + TaskID=[Task parameter]
  + ContactTypeID=[Mode parameter]
  + StatusCode=’CSN’
  + IDSeries=’H’
  + StatusSourceID=’A’
  + ContactDT = [CommunicationDT parameter]
  + CompletedBy=[designated M3 RoleID]
  + EROCComment=’Processed by M3’ + [PhoneNumber] or [EmailAddress] if either not NULL
  + ActionType = ‘16’ – send communication (new)?
  + ContactDT, CreateDT = [current date/time]
* Insert or Update SampleTask
  + TaskID=[Task parameter]
  + STCompositeStatus=’CSN’ (note, could be updating an undeliverable status if, e.g. email undeliverable followed by a text, as per the specs.
  + BeginDT, STCompositeStatusDT, CreateDT=[current date/time]

**sp\_M3SetCommunicationUndeliverable**

Parameters:

* + - SUID
    - TaskID
    - Mode (‘M’=mail, ‘T’=Text, ‘E’=Email)
    - UndeliverableDT
    - PhoneNumber
    - EmailAddress

Processing:

* + - Insert ActivityLog
      * TaskID=[Task parameter]
      * ContactTypeID=[Mode parameter]
      * StatusCode=’FUN’
      * IDSeries=’H’
      * StatusSourceID=’A’
      * ContactDT = [UndeliverableDT parameter]
      * CompletedBy=[designated M3 RoleID]
      * EROCComment=’Processed by M3’ + [PhoneNumber] or [EmailAddress] if either not NULL
      * ActionType = ‘16’ – send communication (new)?
      * ContactDT, CreateDT = [current date/time]
    - Update into SampleTask
      * TaskID=[Task parameter]
      * STCompositeStatus=’FUN’
      * STCompositeStatusDT=[current date/time]

**sp\_M3CommunicationNotSent**

Desc: to be used when a scheduled communication is not sent because there is insufficient contact information.

Parameters:

* + - SUID
    - TaskID
    - NotSentDT

Processing:

* + - Insert ActivityLog
      * TaskID=[Task parameter]
      * StatusCode=’FNS’
      * IDSeries=’H’
      * StatusSourceID=’A’
      * ContactDT = [NotSentDT parameter]
      * CompletedBy=[designated M3 RoleID]
      * EROCComment=’Processed by M3’
      * ActionType = ‘16’ – send communication (new)
      * ContactDT, CreateDT = [current date/time]
    - Update into SampleTask
      * TaskID=[Task parameter]
      * STCompositeStatus=’FNS’
      * STCompositeStatusDT=[current date/time]

**sp\_M3WithdrawTextPermission**

Parameters:

* + - SUID

Processing:

* + - Update SampleAddress for the SP: Update PermissionToText = 2

1. Self-response web site/landing page
   * URL: www.nscs2020.org
   * Prompt for PIN, check SMS database for the related SPID (***Authenticate*** function)
   * Pass through directly to the survey if the PIN is provided in a link (query string provided in text or email)
   * Pass parameters to PHP instrument (see below)
2. SP-Consent
   * Initial child’s parental permission is contained in Enum, possible values (YES, NO, MAYBE, or unanswered)
   * If MAYBE, must track the parent who responded (CaseInfo.GuardianRespondentSUID)
   * SP self-consent/assent is administered within PHP instrument (adult/youth) – for both on-line and in-person (same code)
   * For youths where parental permission is not provided during enumeration,
     + If no parent answered ‘Maybe’ in the Enum, then the first identified parent to access the SP-interview and route to the parental-permission questions is prompted for youth consent. [The other parent will not be prompted]
     + If one parent answered ‘Maybe’ in the Enum, then only that parent can provide parental permission.
   * Youth Consent status codes
     + FRP=Parent refused child permission (existing code)
     + FCW=Consent Withdrawn (existing code – used if consent withdrawn during SP’s own interview. Presumably this can only happen in-person or if the parent calls the Westat)
     + ICN=Parental Permission Given (existing code)
     + **ICU=Parental Permission ‘Undecided’ from enumeration (new)**
     + NWK (no parent available during enumeration)
     + CCN=Assent give during SP-interview (existing code)
     + **Need to track the parent who answered ‘Maybe’ in the Enum (new feature, CaseInfo.GuardianRespondentSUID)**
   * Adult-Consent status codes: unchanged from C1/C2 (CCN)
3. PHP instrument
   * Parameters to instrument – in addition to existing C2 parameters (via web service)
     + Condition (2 or 3)
     + Mode: Web or In-Person
     + IncentiveGroup
     + IncentiveCardStatus (‘C-Complete’ or ‘I-Interim’) – used for possible routing of a completed survey to the Incentive Activation question)
     + Collection of SPID/youth-name of youths who need parental permission during this SPs interview.
     + Other new parameters needed?
   * Must administer consent. Must write consent/assent to the SMS (via stored procedure call).
   * Must administer parental permission for youths passed in the query string.
   * Want one or more ‘**fence-posts**’, with the instrument setting an interim task status (and status mapper) when an interim survey question is answered (at least should know if SP made it through the screener)?
   * Status codes
     + **‘ISA-Interim Survey Access’ (new),**
     + **‘ISC-Interim Screener Complete’ (new)**
     + More fenceposts?
     + ‘CO1’ or ‘CO2’ for complete.
   * Provides a ‘Thank you’ message if the SP-interview is already complete. **(is this in web site or PHP instrument?)**
   * **Dual mode**, can be called from laptop in the field. IMS controls access, constructing the same query string format.
   * **When logged as ‘complete’ in the SMS?** Completed survey (‘CO1’/’CO2’): in self-response mode, **more forgiving** than requiring the final ‘Submit’ button (what question should trigger a ‘complete’?)
   * **Prompting for Incentive Card:**
     + Prompt for ProxyID (13 digits) and last 4 digits of card number.
     + Check the SMS database (via stored procedure call) that the entry is valid and the card has not already been activated. [note: general procedure, but in in-person mode, the local database will generally not be up-to-date with card activations. For in-person mode, this conflict will be handled within the home-office.
     + If the SP cannot enter a valid number:
       - SP would be able to submit the complete survey
       - SP task would be complete but not have an associated incentive card.
       - Providing debit card incentive card would be managed outside the C3 instrument.
       - ~~SP can re-enter the survey and be routed accordingly, directly to the incentive question.~~
4. Database Changes
   * CaseInfo.IncentiveGroup (from load file): int
   * Custom\_tblIncentiveCard.OriginalSUID (SUID card mailed to)
   * JSON data table(s)
   * CaseInfo.GuardianRespondentSUID: guardian who gave ParentalPermission in Enum (C3). Must be one of Guardian1SUID or Guardian2SUID
   * SampleAddress.ContactPreference (FK to tblContactType): extracted from C3 Enum
   * ContactType:
     + add EROCYN variable;
     + table should have the following valuesused for EROC contacts and InterviewMode.
       - I=in-person
       - P=phone
       - T=text
       - E=email (new)
       - M=mail (new)
       - W=web (self-interview) (new)
   * Custom\_tblIncentiveCardStatus: alter reference table
     + 1=initial
     + 2=Activate Requested
     + 3=Activated
     + 4=Deactivated
   * New StudyTask: C3 Incentive (207=’C3 Incentive’)
     + **Initialized during PHP instrument or load process?**
     + Status codes: NWK, **IFL (interim fail, new),** CTK
   * New Status:
     + **‘ISA-Interim Survey Access’ (new),**
     + **‘ISC-Interim Screener Complete’ (new),**
     + **‘ICU=Parental Permission Undecided’ from enumeration (new)**
     + **IFL: interim incentive card – fail**
   * TaskType
     + 4=Incentive (new)
5. PHP/BFOS Database Communication

Integration with SMS/IMS database. These methods should operate in dual mode (web self-response and in-person field modes) . Some of these methods may operate differently based on mode.

The name for each stored procedure will be prefixed with ‘**usp\_C3**’

**UpdateStatus:** Simulated Status Mapper

The stored procedures will not be able to invoke the .NET DLL status mapper. Rather, it should simulate what the status mapper would have done. The simulated status mapper will ignore FS final codes and already completed cases. The web site and IMS will prevent these cases from being launched when appropriate.

Parameters:

* SUID
* TaskID
* StatusCode
* CAIVersion
* InterviewMode (1=in-person, 6=web)
* RoleID (optional – from in-person only)
* TotalTime (optional, from IMS; maybe NULL from web)

Insert record into tblActivityLog

SUID

ActivityLogGUID (generate)

StatusCode=<StatusCode>

IDSeries=’H’ for web mode , ‘F’ for in-person

TaskID=<TaskID>

StatusSourceID=’A’

CompletedBy=<RoleID or ‘0’ if RoleID is NULL>

ActionType=4

CreateDT=<current date/time>

If SUCompositeStatus is not Complete (Status.CompleteYN <> ‘Y’), then

[*this allows SP to re-authenticate after completing the survey - for purpose of entering debit card or inadvertently. Do not want to change a complete to an interim*]

Update tblSampleTask where TaskID=<TaskID>

CAIVersion (parameter passed from survey)

STCompositeStatus=<StatusCode>

STCompositeStatusDT=<current date/time>

UpdateDT=<current date/time>

TotalTime (**add** to existing value)

Update tblSampleUnit

SUCompositeStatus=<StatusCode>

SUCompositeStatusDT=<current date/time>

UpdateDT=<current date/time>

**Authenticate**:

Description: Authenticates based on PIN. Provide back SPID or error, write to ActivityLog (SP Accessed the Site), get C3 PHP parameters

Returns:

* SUID (to use as parameters to all other stored procedure calls)

-1 if invalid PIN

-2 if youth does not have parental permission (or permission withdrawn)

* ProjectSUID (char(10), write to JSON survey data)
* SurveyStatus (‘C’ (Complete), ‘P’ (Partial), or ‘I’ (Initial’), see below)
* Collection of SPID/Youth Names: youths needing parental permission see below
* JSONSurveyData (NULL if new survey)
* JSONStateMergeData (NULL if new survey)
* SVersion (CaseInfo.ScreenerVersion, 1=interleaf, 2=non-interleaf)
* UT/UT\_AskAll (CaseInfo.AskAllSection: 1=police, 2=community)
* UT6/UT\_RESP\_GENDER (CaseInfo.Gender: 1=male, 2=Female, 3=Missing/unknown)
* UT7/UT\_AGE (CaseInfo.Age: 2 or more digits)
* UT\_HHR (CaseInfo.IsHHRespondent: 1=Household respondent, 2=Not HHR)
* PC8/CStudent (CaseInfo.CampusStudent: 1=Campus Student, 2=Not CS)
* PC8a/RStudent (CaseInfo.RegularStudent: 1=Regular Student, 2=Not RS)
* PC3a (CaseInfo.ApartmentDweller: 1=Apartment Dweller, 2=Not AD)
* UT\_HHM\_KIDAGE\_A/H28A (CaseInfo.NumberOfChildren: bwtn 0 and 11)
* SOLO\_HHM (CaseInfo.SoloHHM: 1=Respondent lives alone, 2=Not HHM)
* Condition (always = 3)
* Recording (always 2=no)
* Hispanic (vSPInstrumentOutput where VariableName=SP\_Origin’: 1=yes, 2=no)
* Incentive (CaseInfo.IncentiveGroup for the related DU: 1=incentive group, 0=not inventive group)
* IncentiveCardStatus (‘C-Complete’ or ‘I-Interim’, see below)

Parameters:

* PIN (8-digits)
* InterviewMode (1=in-person, 6=web)
* CAIVersion

Processing:

* Lookup SP SUID based on PIN
* If SP SUID is NULL, then return -1
* Get SurveyStatus

STCompositeStatus (taskID=202) joined to tblStatus.CompleteYN.

If CompleteYN=’Y’ then ‘C’

Else if STCompositeStatus=’NWK’ then ‘I’

Else ‘P’

* If a youth (CaseInfo.Age < 18) then return -2 if (no parental permission or subsequently closed out as non-response):

Consent task status (STCompositeStatus for Task=201) <> ‘ICN’

OR

SampleUnit.SUCompositeStatus is FinalYN=’Y’ and CompleteYN=’N’

* Get Collection of youth SUID/Names:

All SUIDs such that:

(

CaseInfo.GuardianRespondentSUID=[SUID of the PIN] AND

SampleTask.STCompositeStatus=’ICU’ for TaskID=201

)

OR

(

~~CaseInfo.GuardianRespondentSUID is NULL AND~~

(

CaseInfo.Guardian1SUID=<SUID of the PIN> OR

CaseInfo.Guardian2SUID=<SUID of the PIN>

) AND

SampleTask.STCompositeStatus=’NWK’ for TaskID=201

)

Get the YouthName from CaseInfo.RespondentName

* Get IncentiveActiviationStatus from SampleTask (TaskID=207):

= ‘C’ if STCompositeStatus=’CTK’

= ‘I’ otherwise

* If STCompositeStatus <> ‘NWK’ then call *GetJSONData*() to get latest JSON data.
* Call *UpdateStatus* with StatusCode=’ISA’ & TaskID=202
* Set TransmitYN = ‘Y’ for the DU

**GetJSONData**

Returns:

* JSONSurveyData
* JSONStateMergeData

Parameters:

* SUID
* InterviewMode (1=in-person, 6=web)

Processing:

Get latest JSON data from NSCS\_tblSurveyData. If there is data from both modes, select the mode with the **latest UpdateDT**.

**GetJSONAuditData**

Returns:

* JSONContent

Parameters:

* SUID
* FileName (optional)
* InterviewMode (1=in-person, 6=web)

Processing:

* If FileName not NULL, retrieve the record from SurveyDataAuditTrail on the matching SUID/InterviewMode/FileName
* Else retrieve the latest record from SurveyDataAuditTrail matching on SUID/InterviewMode

**PutJSONFile**

Returns: 0 or -1

Parameters:

* SUID
* InterviewMode (1=in-person, 6=web)
* CodeVersion
* JSONSurveyData
* JSONStateMergeData
* PageLabel
* Directory
* FileName
* JSONContent

Processing:

* Insert or Update NSCS\_tblSurveyData
* Insert or Update NSCS\_tblSurveyDataAuditTrail
* Update CaseInfo for the related DU: transmitYN=Y (to ensure survey data gets to FI)

**ProvideParentalPermission**

Returns: 0 or -1

Parameters:

* ChildSUID
* ParentalPermissionStatus (something like ‘Y’ or ‘N’ or NULL)
* InterviewMode (1=in-person, 6=web)
* CAIVersion

Processing:

* If ParentalPermissionStatus is NULL and GuardianRespondentSP is not NULL (i.e. this is the only parent who can provide permission as per protocol), then set ParentalPermissionStatus = ‘N’.
* Call *UpdateStatus* for the ChildSUID, TaskID=201, StatusCode: (based on ParentalPermissionStatus, ‘FRP’ for ‘N’ or ‘ICN’ for ‘Y’ parental permission given)
* Update child’s SUCompositeStatus
* Set TransmitYN for the DU.

**ProvideConsent**

Returns: 0 or -1

Parameters:

* SUID
* ConsentStatus (‘Y’ or ‘N’)
* InterviewMode (1=in-person, 6=web)
* CAIVersion

Processing:

* Call *UpdateStatus* with

-TaskID=201

-If ConsentStatus=’Y’ then StatusCode=’CCN’

-Else StatusCode=’FRF’

* Update TransmitYN=’Y’ for the DU

**~~CompleteScreener (probably not needed – no survey ‘fence-posts’)~~**

~~Returns: 0 or -1~~

~~Parameters:~~

* ~~SUID~~

~~Processing:~~

* ~~Call~~ *~~UpdateStatus~~*~~: TaskID=202, StatusCode=’CO1’ or ‘CO2’ depending on whether there are incidents.~~
* ~~Set TransmitYN=’Y’ for the DU~~

**ActivateIncentive**:

Returns: 0 or

-1 (bad SP),

-2 (DU not targeted),

-3 (invalid entry)

-4 (card already activated)

Parameters:

* SUID
* ProxyID
* CardSuffix (last 4 digits of CardID)
* CAIVersion

Processing:

* Verify IncentiveCard record, matching on ProxyID and CardSuffix
* If SUID is not a valid SP, return -1
* Else if the related DU is not targeted for an incentive (IncentiveGroup<>1), then return -2
* If invalid card,
  + Insert/Update SampleTask with study task (207) with status=IFL
  + Return -3
* If card is already activated return -4
  + Insert/Update SampleTask with study task (207) with status=IFL
  + Return -4
* If valid,
  + update Custom\_tblIncentiveCard with
    - SUID
    - IncentiveCardStatus=3 (activated)
    - StatusDT
  + Insert SampleTask with study task (207) with status = ‘CTK’

**CompleteSurvey**:

Returns: 0 or -1

Parameters:

* SUID
* NumberOfIncidents
* InterviewMode (1=in-person, 6=web)
* CAIVersion

Processing:

* Call *UpdateStatus*: TaskID=202, StatusCode=’CO1’ (NumberOfIncidents>0) or ‘CO2’ (NumberOfIncidents=0).
* Update CaseInfo, set InterviewMode
* Set TransmitYN=’Y’ for the DU

1. JSON data
   * For self-response mode, write the JSON to the database [In the database is more secure.]
   * In field mode, data written to the same database structure.
   * The database retains the Interview Mode: web or in-person. Data may be retained for both simultaneously.
   * Need to set the SampleTask.DaemonProcessDT for the nightly job (done in the database method for InterviewMode=web.
   * **Restart from partial complete data (based on requirements – TBD)??** If we choose to, this is a recommendation:
     + If InterviewMode=web
       - If there exists partial data from the web, restart with this data.
       - Else if there exists partial data from in-person, restart with this data.
       - Else start fresh interview.
     + If InterviewMode=in-person
       - If there exists partial data from in-person, restart with this data.
       - Else if there exists partial data from the web, restart with this data.
       - Else start fresh interview.
     + **OR if a conflict between web and in-person, get the latest one.**
   * Transmission of web-partial data to the laptop (**if needed for a restart TBD**): Update the daemon process to once/day (middle of night) search for web partial data that has not yet been transmitted, and if it exists, set TransmitYN=Y and transmit.
   * Table structure for JSON data:

NSCS\_SurveyData

* SurveyDataID (PK, identifier)
* SurveyDataGUID (guid): index
* SUID (FK, i.e. SP case ID): index
* InterviewMode (1=in-person, 6=web)
* CreateDT (DT record initialized)
* UpdateDT (DT record last updated)
* CodeVersion (varchar(10))
* JSONSurveyData (varchar(max))
* JSONStateMergeData (varchar(max))

NSCS\_SurveyDataAuditTrail (child table)

* SurveyDataAuditTrailID (PK, identifier)
* SurveyDataGUID (FK)
* CreateDT
* PageLabel (varchar(20) – e.g. ‘PC1’ or ‘PROXY’; easier retrieval though presumably the string is contained in the filename)
* Directory varchar(30)
* Filename varchar(50)
* JSONContent varchar(max)

1. Incentives

**Basic requirements**

* + For Condition=3 only, DUs are randomized to $0 or $20.
  + For incentive group ($20), selected via Sample Load file (Incen column): CaseInfo table

**Initial processing**

* + Load SWIFT cards to SMS database (Custom\_tblIncentiveCard) table,
    - IncentiveCardStatus = ‘Initial’
    - StatusDT=<current date/time>
    - <missing SPID>
  + SWIFT cards mailed to each SP (inactive, $0 cards). Tracking of which card is mailed to which SP will be only tracked outside the system (Excel, perhaps)

**C3 Instrument**

* + Condition-3 instrument (PHP) needs to know Incentive group (0/1 not-sampled, sampled for incentive) for routing. Part of the query string.
  + Will prompt for ProxyID & last-4-digits of the card number; do edit check (call *ActivateIncentive* function);
  + Provide error message if invalid; update the SMS IncentiveCard record with the SP-SUID and IncentiveCardStatus=’ActivationRequested’.

**M3 Interface**

* + M3 will be notified that an incentive is due to an SP by a record written to **tblM3Queue, TransTypeID=4**. (see *M3 Communication* section)
  + M3 will notify the SMS when a card has been Activated. The SMS will change the status to Activated. (question: is it necessary to write back the Activated status from M3 to SMS? Or can it be assumed? Probably not doing this – it will be assumed and details will be available in the M3 system.)

**Self-response mode considerations**

* + If SP does not know the card number or has lost the card, SP has these choices:
    - Re-enter the completed survey (web, online) at a later time. If the incentive card is not activated, the survey will route directly to the Activation question.
    - Call Help Desk which will have an M3 interface to enable associating a new card with an SP; the M3 update interfaces with SMS to synchronize the data. This will prevent the SP from re-entering the survey online and entering the Activation Code (error message: ‘card already activated’). The Help Desk mails a new [already-activated] card.
  + M3 notifies the SMS when the card is Activated. (is this needed or implicit?)

**In-Person/Disconnected mode considerations**:

* + All cards need to loaded onto each laptop, allowing for a basic ProxyID/card-number validation (ProxyID is a 13-digit number without check-digit – we need this validation or else too many will be mis-keyed).
  + The IncentiveCard record that is updated for the SP-SUID and will be transmitted back to the SMS.
  + Transmission needs to reject incentive requests if the card has already been activated by another SP – need to alert the Help Desk to mail a new card (presumably a very small number of requests requiring manual follow-up).
  + Transmission rejects the incentive request if the SP already has an activated card (presumably from an online completed survey).
  + If SP does not have the card at the time of the survey, there are two options:
    - SP can wait until the data is transmitted after which the SP can enter the survey online and enter the Activation Code
    - SP or FI can call the Help Desk.
  + If SP or FI call the Help Desk for a new card after a completed survey, Help Desk uses the M3 interface to enable associating a card with an SP, which interfaces the SMS to synchronize the data.
  + If a new batch of incentive cards are received after the first batch, all laptops need to be updated.

**If card lost or stolen after activation**:

* SP contacts the help desk, which uses the M3 UI to deactivate the old card and activate/mail a new card with the balance transferred (card is sent in a Activated state)
* M3 notifies SMS of the old card (de-activated) and the new card (activated).

1. IMS: Non-response/In person
   * Keep the DU assigned to the Enum interviewer (unless/until reassigned in the SMS – same process)
   * IMS controls when able to launch the SP interview: SP-Interview active only after X days after case becomes visible (e.g. 30 days after the 87 days).
   * IMS hides SP-Consent Blaise task for C3
   * Hide Debriefing task for C3.
   * Data transmission auto-downloads the subsequent web Complete (or close-out) status, which disables in the field (for that SP).
   * FIs will be able to see their un-activated SP cases.
   * No audio recording, no screen-shots.
   * HH-R does not need to have completed the SP-interview for other HH members to be eligible.
   * Parent does not need to have completed the SP-interview before related children.
   * Child SP-Interview disabled unless the Child Consent Task Status = ‘ICN’ (parental permission provided).
   * Add to IMS (DT#523)
     + PIN (SPs)
     + Condition
     + Incentive flag
   * **Do we need new EROC codes for C3 reminder calls?**
   * IMS can start on the same landing page as web-mode. That is, the Home page that prompts for the PIN and passes through if the PIN is provided on the query string. Home page calls Authenticate and starts the survey. ensuring the home page is bypassed.
   * Restarts from incomplete self-response: stored procedure Authenticate calls GetJSONData, which returns the correct data for a restart.
   * Training Database (DT#535)
2. SMS (Help Desk Interface)
   * Activate Incentive Card:

Screen that accepts: SPID, ProxyID, CardSuffix and invokes the *ActivateIncentive* stored procedure (same procedure as called from PHP)

* + Update Contact Information: ability to update Phone and Email and PermissionToText.

Trigger to M3Queue, M3TransID=5

* + Send communication: TBD

1. MFOS
   * Propose adding ‘Send Text’ and ‘Send Email’ options to MyCases for C3.
   * Add Condition, SP-PIN, LetterType, IncentiveFlag
   * ~~Hide SPs before eligible for SP-interview: embed the logic in the hub access methods~~. [Not a requirement]
   * Sort DUs by Priority
   * Disable recording feature for C3 DUs

**Action Items**

* C3: MFOS Hub Payload - new fields (#534)
* ~~C3: MFOS Hub -- Hide SPs~~
* C3: MFOS Hub -- hide Case Priority for some of the FIs

1. DUPriority
   * Will be derived for C3 cases (DU and SP), same as C1 and C2
   * Available in MFOS, SMS.
   * Experiment: one third of FIs will have the priority hidden
2. PHP to SAS:

Alter the program to extract JSON data only for the mode for which the survey was completed. Note, in the rare case that the survey was completed in both modes, the last one will be the one tracked in CaseInfo. That is the one that will be written to the SAS database.

**Actions Items**

* Update PHP program to get data from SQL Server for C3 (#533)

1. C3 Issues

* Specs for Reminder calls, text, email
* Rules for restarts: if web, use any web partial data first, then in-person partial data? If in-person, use any in-person partial data first then web partial data?

OR

If both web and in-person, get the latest one

OR

No restarts cross-mode?

* Fence-posts (Screener Complete? Others?)
* Web mode: ‘Complete’ status more forgiving?
* Training database
* Age-up question: SMS only stores age. It will not know if a youth ages up.
* Auto-notification of SPs

Should the SMS assume that M3 will send the notifications, i.e., the SMS does not need to reflect it in the activity log? Home office could check the M3 UI for any confirmation?

OR

Does the SMS and IMS need to explicitly need to know what communications were sent, what mode and when?

* Child SPs who receive parental permission in the C3 instrument: how are they notified?
* Protocol/requirements for FI follow-up: phone calls with EROCs requesting text or email?
* New EROC codes for reminder calls/text/email
* Incentives: resolve issues in the SMS or the M3 interface? Issues, such as ‘lost card’, ‘In-Person ProxyID Discrepancy’, ‘Self-Respondent not having a card’

# Field Equipment

Interviewers:

* Windows 10 Laptop (Fujitsu T902), with GPS capability
* iPhone (NO mobile wifi needed)
* Peripherals (e.g. mouse, carrying case)

Supervisors:

* Windows 10 Laptop (Fujitsu T902)
* iPhone (with mobile wifi enabled)
* Peripherals (e.g. mouse, carrying case)
* MSOffice/All-in-one (printer, scanner)

# Decisions

* **Blaise survey specs**: no formal specs for the dress rehearsal. Testing will be holistic, performed by content specialists.
* **PHP survey specs**: no changes for dress rehearsal after 12/11/18
* Will **record HH Roster interview**, using MFOS (for DR, FT TBD)
* **Assignments**: only assign **at the HH level**. No separate SP assignment. That is, cannot split SPs across more than one interviewer.
* **EROCs in the field**. Problem: MFOS does not have the sampled Persons until the data is transmitted. Interviewer will not be able to pick up the person in MFOS. **Decision: we will implement all three EROC options.**
  + SMS at home
  + MFOS for HH
  + IMS for Person?
* **To control interviewer assignments** such that each interviewer gets only type 1 or type 2 cases: we will configure different **virtual regions** for each physical region.  For example, ‘Region 1’ could be subdivided into 101 and 201.  All type 1 cases are assigned to region 101 and all type 2 cases are assigned to region 201.  Each supervisor will be assigned to both regions and each interviewer to only one. Type 3 cases could be Region 301.
* **Hidden DU**: Will NOT have a separate Hidden-DU process. If interviewer discovers multiple family units at an address prior to the rostering, interviewer can select general drop-point processing to select one family unit.
* **Segments:** envisioned to have partition CaseType. **Not needed** because the CaseType will be embedded within the virtual region.
* **CaseType3 PIN**: IMS or data transmission needs to compute 8-digit PIN for SP Interview task for CaseType=3. **Decision: Enum data transmission will generate PINs for each SP.**
* Travel Module? **Decision: YES**
* **Cost to Complete/T&E: reporting not needed**
* Do we need to permit paper consent if respondent refuses e-consent? **Decision: NO**
* Field devices
  + Will supervisors need them prior to training (e.g. for recruitment)?
  + E-Signature: touchscreen or external signature pad? **Decision: touchscreen laptop model**
* **Generate advance HH letters**. Will be generated **outside the SMS**, using the sample load file. The SMS will assume that the letter has been generated at around the same time as the file is loaded.
* **Refusal letters**: For FT only. Mail merge files will be generated in the SMS and tracked in the ActivityLog. Still need formal requirements.
* **No HH-Consent task needed.** It is implicitly part of the HH-Roster task.
* **SP Consent task** is needed, task spawned by the IMS, and given an ‘NA’ complete code if the CaseType is 3; else initialized with ‘01’ status which forces the IMS to complete the task prior to the SP-interview
* **Interview Recording**: IMS: research ideal **sampling rate for recordings**. Plan to develop program within IMS to record PHP interviews. Plan to test iPhone vs. laptop audio quality in the dress rehearsal.
* **Training plans**:
  + Dress Rehearsal training: two 3-day trainings, equipment to be distributed during training
  + Strictly offline, interviewers to only access the IMS, no data transmission.
  + Local training database will consist of HH records only. Trainees will need to complete the roster to generate local SPs.
  + Main data collection equipment will be shipped directly to each field person prior to training.
  + Training database for each interviewer should have only the type of cases for that interviewer: Condition 1 or 2. The cases will be the same, just varying the condition.
* Survey data variable names, labels, and formats:
  + PHP specs to closely match what has already been programmed
  + Blaise names and labels will be taken from Census code