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III. INFORMATION SYSTEMS (IS)

Pursuant to the Governor's Executive Order and DPHSS Director's Directive the IS staff is under the Systems and Programming Group (under the Bureau of Information and Technology) and is responsible for overseeing all activities associated with automated data processing, data collection, data integrity, data manipulation, data reporting, and security of computer hardware/software for the Guam WIC Program. This unit provides installation and technical support of all system hardware and software, as well as training to end-users.

Health And Nutrition Delivery System (HANDS)

On October 1, 2014 the Guam Arizona In Motion (Guam AIM) computer system was upgraded to the Health And Nutrition Delivery System (HANDS). The Guam HANDS is also an automated data processing (ADP) system, which assists the WIC Program staff with multiple functional requirements including data collection of participation statistics, creation of food instruments, assessment of retail vendor activities, and the production of required reports. Other WIC state agencies that are currently with the HANDS system, along with Arizona WIC, serve as partners and include American Samoa, CNMI and the Navajo Nation. As of March 27, 2018, Guam WIC Program rolled out EBT statewide.

All system problems via the HANDS are coordinated through our Guam WIC MIS Personnel, Help Desk in Arizona, as well as through the CMA personnel.

A. SYSTEM PLANNING AND OPERATION

1. ADP System Planning

a. **WIC State Agency inclusion in comprehensive Statewide ADP plan.**

- Currently the Guam WIC Program is not included in any other comprehensive Statewide ADP plans such as: Title IVa (TANF), Title V (MCH), Title XIX (Medicaid), or the Supplemental Nutrition Assistance Program (Food Stamp Program).

b. **State Agency's written procedures for monitoring and approving local and State Agency requests for ADP goods and services.**

- The state agency utilizes a "Request for Quotation" form which must be completed by local clinic staff and submitted to the Program Coordinator IV. All procurement requests for ADP goods and services is reviewed by the Program Coordinator IV, the Systems and Programming Group, Bureau of Information Technology and the Public Health Nutrition Administrator, prior to distribution to appropriate staff for processing.
- The local clinic staff must complete a "Request for Quotation" form and submit it to the Public Health Nutrition Specialist, via Nutritionist II for approval. Upon approval by the Public Health Nutrition Specialist, via the



Nutritionist II, the request is submitted to the Program Coordinator IV for distribution to the appropriate staff for processing. All procurement requests for ADP goods and services is reviewed by the Program Coordinator IV, the Systems and Programming Group, Bureau of Information Technology System and the Public Health Nutrition Administrator.

2. System Documentation

- a. State system is fully documented.
 - All technical and user manuals are located on the Public Health server phsswic02 (Hagatna) as well as server phsswic03 (Tiyan).
- b. **State agency's overall ADP system documentation includes:**
 - A general design
 - A detailed design
 - Users manual

All of the Overall ADP System Documentation are maintained by AZ WIC and can be accessed at www.azwic.gov.

3. Automated Data Processing Services

a. (1) **WIC ADP Functions performed by State Agency staff**

- Data entry
- Printing of all management reports
- ADP System Hardware (Guam WIC does workstation setup, etc.) Printing forms/FIs
- Custom software maintenance (Guam WIC maintains operating system updates, antivirus updates, Microsoft Office updates, Adobe updates, etc.)

WIC ADP Functions performed by a Contracted Firm

- ADP development
- Custom software development (CMA-writes codes)
- Custom software maintenance (CMA-writes codes)
- Performing "End of Day" process (transmittal of all issuance records and retrieval of all redemption information from the contracted banking services).
- ADP system hardware operation (AZ WIC does server maintenance)
- Submit weekly Peer Group date file (HANDS does this automatically)

(2) **WIC ADP Functions performed by local clinic staff**

- Data entry
- eWic card production
- Printing of eWic cards
- Printing of eWic signature log
- Food instrument production
- Printing of food instrument signature log
- Printing of food instruments



- Printing of “List of Appointments report (AAR_APPOINTMENT_LIST)
 - Printing of “Daily Schedule” report (AAR_DAILY_SCHEDULE)
 - Printing of “List of Missed Appointments” report (AAR_MISSED_APPT_LIST)
- b. **State Agency’s blanket purchase agreement**
- The Guam WIC Program attempts to obtain blanket purchase order agreements for ADP in place. This is handled by the state agency.
 - In regards to the HANDS, per MOA with the Arizona WIC Program, the Guam WIC Program will “Maintain Workstations and Printers for Guam WIC users. All equipment will be purchased with a 3 year warranty. In addition, the Guam WIC program will develop and submit to the USDA a three year hardware replacement plan and guidelines for general maintenance of workstations and printers.”
 - Also per MOA with the Arizona WIC Program, “Guam WIC will be responsible for the additional maintenance to the HANDS. Reimbursement may come directly from the Guam WIC Program or as an operational adjustment from the USDA for the increased costs. Apportionment of costs will be reviewed annually.”
- c. **State Agency’s methods for ensuring cost of equipment/services used for programs other than WIC are equitably prorated.**
- Currently all ADP services and equipment are used solely for the Guam WIC Program. This is inclusive of the new upgrades, hardware and software, as well as those to be purchased under the HANDS project.
- d. **State agency periodic review of system costs billings**
- The Program Coordinator IV and the Management Analyst II review all system costs billings prior to approval for payment.
 - In regards to the HANDS, per MOA with the Arizona WIC Program, “Guam WIC will be responsible for the additional maintenance to the HANDS system Reimbursement may come directly from the Guam WIC Program or as an operational adjustment from the USDA for the increased costs. Apportionment of costs will be reviewed annually.”
- e. **State agency acquired banking services**
- The state agency acquires banking services through competitive bids among in-State and out-of-State banks.
 - The current banking vendor is Customs Data Processing, Inc. located in Romeoville, Illinois.
4. System Security/Data Confidentiality
- a. (1) **WIC data files and computer programs are protected at the State agency by the following:**
- There is a separate organizational area/individual to control access to tapes, disk packs, CD-Roms, etc.



- Access to WIC Program data files is controlled through password access, closely monitored by the IS Unit staff.
- Operational personnel are limited to only those jobs for which they are responsible.
- State and local clinic staff passwords are protected.
- State and local clinic staff passwords are changed periodically.
- System access procedures are audited at least once a year.
- Biennial security reviews are performed by AZ/CMA.
- Periodic risk assessment is performed by AZ/CMA
- IS Computer Operator III or Computer Systems Analyst I (funded under the Guam WIC Program) completes all requests submitted for removal of staff access upon their departure from the Guam WIC Program.

(2) WIC data files and computer programs are protected at the local clinics by the following:

- Access to WIC Program data files is controlled through password access, closely monitored by the IS Unit staff.
- Operational personnel are limited to only those jobs for which they are responsible.
- Local clinic staff passwords are protected.
- Local clinic staff passwords are changed periodically.
- Local clinic supervisor submits request for removal of staff access upon their departure from the Guam WIC Program.

b. File storage and backup hardware procedures for system recovery

- Backup copies of files and program are stored off-site in a secure location. One copy is stored on the Guam server in Tucson, AZ., and another copy is stored on a backup server located in Phoenix, AZ.
- Backup copies are kept up-to-date.
- A contingency plan is in place in the event of service interruption. (See 3.02 IS Appendix MOA GU WIC w/AZ WIC)

5. Description of IS changes that occurred in the past year:

Santa Rita 50MB line upgrade with PBX phones. (In Process)

6. Description of IS changes planned for the upcoming year:

- Continue to work with Arizona WIC in our goal towards WIC EBT as well as goals/objectives in our IS Goals/Objectives Section. (On-going)
- Migrate Tiyan to new scope for increase in IP addresses (On-going)
- Replace workstations for Dededo and Tiyan clinics.
- IT Training for Systems Analyst I and Computer Operator III.

B. PARTICIPANT CHARACTERISTICS MINIMUM DATA SET (MDS)

Policy: The MDS contains data items which are reported to FCS electronically by state



agencies for one report month on all or a sample of participants. The MDS has required data items which must be collected and reported. This data is collected and entered into the HANDS by the local clinic staff, and monitored by the state agency IS staff.

- **State Agency ID:** This data field requires a unique two digit number that permits linkage to the WIC state agency where the participant was certified.
- **Local Agency ID:** This data field requires a unique two digit number that permits linkage to the local clinic where the participant was certified as eligible for WIC benefits.
- **Service Site ID:** A unique number that permits linkage to the service site where certified. Either local agency ID or service site ID may be reported according to the level the state agency feels appropriate. At a minimum, State agencies must provide agency names and addresses for each ID provided on their files.
- **Case ID:** This is a unique six digit identification number issued by the local agency staff to each individual client, and entered into the HANDS at the time of actual certification. This unique ID number maintains individual privacy at the national level. Client new to the Guam WIC Program will receive an eleven (11) digit unique ID number per the HANDS. Existing clients will still maintain their original six (6) digit ID number from the old GWIS. All clients (new and existing) will also receive a nine (9) digit unique family ID number. New client ids will receive an 11 digit unique id number.
- **Client Date of Birth:** The data for the date of birth must be entered in the following format - “MM/DD/YYYY.”
- **Client Race/Ethnicity:** The client race code must be one of the six (6) racial categories on the HANDS (White), Black or African American, Hispanic, American Indian or Alaskan Native, Asian; Native Hawaiian or Pacific Islander,). The ethnicity code is one of two choices: Not Hispanic or Latino, or Hispanic or Latino.
- **Certification Category:** Data selection for this category must be from one of the categories in the HANDS. There are 5 categories for women, 3 for children and 3 for infants.
- **Expected Date of Delivery or Weeks Gestation:** For pregnant women, the expected date of delivery as determined at WIC Program certification must be entered. The data for the date must be entered in the following format - “MM/DD/YYYY.” The number of weeks gestation is automatically calculated by the HANDS.
- **Date of Certification:** The date the person was declared eligible for the most current WIC Program certification. The data for the date of certification must be entered in the following format - “MM/DD/YYYY.” When the date is not entered by the local clinic staff, the system automatically defaults to the current system date.
- **Sex:** There are only two options available on the HANDS, male or female.
- **Priority Level:** The WIC participant’s priority level is initially automatically assigned by the HANDS based on the nutrition risk factors identified and



entered into the WIC participants record. The WIC participant's priority level can be manually overridden by a WIC Nutritionist when appropriate.

- **Participation in TANF/AFDC, Food Stamps, Medicaid and other programs:** WIC participant's reported participation in any of the 14 programs listed on the GWIS, at the time of the most recent WIC Program certification.
- **Migrant Status:** Participant migrant status according to the federal WIC Program definition of a migrant farm worker. Selection is made from 3 options on the HANDS (Migrant, Refugee, and Not Applicable).
- **Number in Family/Household or Economic Unit:** The number of persons in the family/household or economic unit upon which WIC income eligibility was based. Local clinic staff must enter a 2 digit number indicating the number of persons living in the economic unit.
- **Family/Household or Economic Unit Income:** This amount is automatically transferred from the income calculator available on the HANDS. The income amount is one factor in determining eligibility for participation in the WIC Program. Zero should not be used to indicate income values that are missing or not available. Zero should indicate only an actual value of zero.
- **Nutritional Risks Present at Certification:** The HANDS allows for an unlimited number of nutritional risk factors using USDA uniform coding.
- **Hemoglobin or Hematocrit:** That value for the measure of iron status that applies to the WIC Program certification. The measure entered can be up to sixty (60) days from the date test was performed.
- **Date of Blood Measurement:** This date is inputted in the MMDDYYYY format. Dates for blood measures older than 90 days are needed for medical interpretation.
- **Weight:** The participant's weight measured according to the CDC nutrition surveillance program standard [nearest one-quarter (1/4) pound]. If weight is not collected in pounds and quarter pounds, weight may be reported in grams.
- **Height:** The participant's height measured according to the CDC nutrition surveillance program standards [nearest one-eighth (1/8) inch]. If height is not collected in inches and eighth inches, height may be reported in centimeters
- **Date of Height and Weight Measure:** The date of the height and weight measures that were used during the most recent WIC Program certification period. The data for the date must be entered in the following format - "MM/DD/YYYY."
- **Currently Breastfed:** For all infants (6-13 months), whether or not the participant is currently receiving breast milk. This data is captured when staff enter yes or no in the "Has Baby Been Breastfed" field. If yes is entered, staff must input days, weeks, or months, or a combination of the 3.
- **Ever Breastfed:** For all infants (6-13 months), whether or not the infant was ever breast fed. This data is captured in the field "Weeks Formula Started" on the HANDS, indicating at how many weeks infant formula feeding started.
- **Length of Time Breast fed:** For all infants (6-13 months), the number of weeks the infant received breast milk. This data is captured in the field "Has Baby Been Breastfed" on the HANDS, indicating number of weeks infant has breast



fed up to the time of WIC certification.

- **Date Breast feeding Data Collected:** The date of certification. The data for the date must be entered in the following format - “MM/DD/YYYY.”
- **Food Packages:** The food package code(s) for the WIC food package prescribed for the WIC participant during the issuance month. The standard food packages are used unless otherwise specified, according to procedures.

SUPPLEMENTAL DATA SET (OPTIONAL)

Policy: The Supplemental Data Set contains the following data items. Most of this data is collected and entered into the HANDS by the local agency staff and monitored by state agency IS staff.

- X **Date of First WIC Certification:** Date the participant was first certified for the WIC Program. For pregnant, breast feeding and postpartum women this applies to the current/most recent pregnancy and not to prior pregnancies. The data for the date must be entered in the following format - “MM/DD/YYYY.”
- Educational Level:** For pregnant, breast feeding and postpartum women, the highest grade or year of school completed. For infants and children, the highest grade or year of school completed by mother or primary caretaker. The number entered must be only two digits between 00 and 25.
- X **Number in family/household on WIC:** The number of people in the participant’s family/household receiving WIC benefits. This is automatically calculated by the HANDS under the “Family ID” field based on the entered authorized representative’s “Family ID number”. This field holds only two digits.
- X **Date Previous Pregnancy Ended:** For pregnant women, the date previous pregnancy ended. The data for the date must be entered in the following format - “MM/DD/YYYY.”
- X **Total Number of Pregnancies:** For pregnant women, the total number of times the woman has been pregnant, including this pregnancy, all live births and any pregnancies resulting in miscarriage, abortion or stillbirth. This field holds only two digits.
- X **Total Number of Live Births:** For pregnant women, the total number of babies born alive to this woman, including those who may have died shortly after birth. This field holds only two digits.
- X **Pre-pregnancy Weight:** For pregnant women only, the participant’s weight immediately prior to pregnancy. Pre
- X pregnancy weight must be reported and entered in pounds on the HANDS.
- X **Participant’s Weight Gain During Pregnancy:** For breast feeding and postpartum women, the participants weight gain during pregnancy as taken immediately at or prior to delivery. Weight gain during pregnancy must be reported and entered in pounds on the HANDS.
- X **Birth Weight:** For infants and children, the participant’s weight at birth measured according to the CDC nutrition surveillance program standards (lbs/ounces). Birth weight may be reported in either pounds or ounces or in grams.
- X **Birth Length:** For infants and children, the participant’s length measured according to the CDC nutrition surveillance program standards (1/8 inches). Birth length may be



reported in either inches and eighth inches or in centimeters

C. WIC SYSTEMS FUNCTIONAL REQUIREMENTS CHECKLIST

The following checklists were taken from the WIC Functional Requirements Document (FRED) which was provided as guidance to State agencies on functions they should consider incorporating in their Information Systems. The following are functions and capabilities, which the HANDS currently performs or plans to perform within the next two years. Ensuring WIC systems functional requirements is the responsibility of the Guam WIC state agency.

1. Calculates the date certification is due to expire.
2. Assigns the participant a nutritional risk code and assigns a priority level. (CPA confirms the code is correct.)
3. Calculates the applicant's household income and flags individuals whose income exceeds program standards.
- 3a. Converts incremental income (monthly) to an annual figure. (HANDS breaks down by annual then monthly).
4. Associates family members.
5. Statewide data is maintained to facilitate families transferring within the State.
6. Transfers certification data to the central computer facility electronically in real time.
7. Captures the nutrition education provided each participant as well as the topics covered.
8. Uses table-driven food packages.
- 8a. Uses standard pre-defined food packages.
- 8b. System is tailored to enable easy food package tailoring.
- 8c. Performs edits to prevent over-issuance during food package creation.
9. Enable food benefits to be printed when the participant is present for pick-up, i.e., on-demand.
10. System is tailored to capture the name of the programs to which the participant was referred.
11. Performs food benefits reconciliation.
12. Produces standard Dual Participation Report.
13. The HANDS is able to produce the standard Integrity Profile (TIP) Report.
14. Produces standard Rebate Billing Report.
15. Produces standard Participation Report
16. Produces Participant Characteristics Datasets.
17. Captures basic transaction data by vendor.
18. Flags high-risk vendors through peer group analysis of redemption data.
- 18a. Identifies vendors with high average food instrument redemptions.
- 18b. Identifies vendors with a narrow variation in redemptions.
19. Assigns a maximum value for each food instrument type.
- 19a. Checks redeemed price against maximum and rejects any food benefits exceeding the maximum amount.
20. The HANDS is able to capture source of income.

III. MANAGEMENT INFORMATION SYSTEM (MIS)



21. The HANDS is able to perform automated dietary assessment. (HANDS breaks down by annual then monthly).
22. The growth chart is captured in the certification process.
23. Has point of certification data entry, i.e., a personal computer at each “station” within the clinic.
24. Allows for ad hoc reporting.